REPORT TO: **COUNCIL MANAGEMENT TEAM**
10 OCTOBER 2017

REPORT ON: **PUBLIC BODIES CLIMATE CHANGE DUTIES – ANNUAL REPORT 2016/17**

REPORT BY: **SUSTAINABILITY AND CLIMATE CHANGE MANAGER**

1. PURPOSE OF REPORT

1.1 To inform Management Team of the work undertaken over the period April 2016 to March 2017 in support of the Council's duties under the Climate Change (Scotland) Act 2009.

1.2 To agree the 2016/17 'Public Bodies Climate Change Duties' (PBCCD) Report.

2. RECOMMENDATIONS

2.1 It is recommended that Management Team:

(a) Agrees the content of the 2016/17 Public Bodies Climate Change Duties Report.
(b) Agrees to submit the Annual Report to Policy and Resources Committee for approval.

3. FINANCIAL IMPLICATIONS

3.1 Any anticipated costs associated with the implementation of the PBCCD will be contained within existing capital and revenue budgets.

4. BACKGROUND

4.1 In 2009 the Scottish Parliament passed the Climate Change (Scotland) Act, Part 4 of which states that a public body must, in exercising its functions, act:

- in the way best calculated to contribute to the delivery of Scotland's climate change targets;
- in the way best calculated to help deliver any Scottish adaptation programme; and
- in a way that it considers most sustainable.

4.2 In July 2014 the Scottish Government announced that the country's 2012 annual CO_2 emissions target had been missed for the third consecutive year. This led Scottish Ministers to use powers in the Climate Change (Scotland) Act 2009 to introduce a Public Bodies Climate Change Duties (PBCCD) reporting requirement for all 151 'major players' reflecting the expectation that the public sector will lead by example in tackling climate change.

4.3 The PBCCD reporting process supersedes voluntary climate change performance reporting that all Scottish Local Authorities had undertaken since 2007 as part of their obligations as signatories to Scotland's Climate Change Declaration.

4.4 The Council's first mandatory report (for 2014/15) was approved at Policy and Resources Committee in November 2016 (Article III of the Minute of Meeting of Policy and Resources Committee 14 November 2016, Report no. 344-2016 refers).

5. THE 2016/17 PUBLIC BODIES CLIMATE CHANGE DUTIES REPORT

5.1 The Council's PBCCD Report for 2016/17 is appended as appendix 1 and contains six sections:

Part 1: Organisational Profile
Part 2: Governance, Management & Strategy in relation to climate change
Part 3: Corporate Emissions, Targets and Projects
Part 4: Adaptation to the impacts of climate change
Part 5: Procurement actions and achievements regarding climate change
Part 6: Data Validation and sign-off Declaration

5.2 In order to improve performance on each of these sections the Council carried out a self-evaluation exercise against the 'Climate Change (Scotland) Act: Public Sector Duties' and subsequently identified the following key priorities and actions:

- clearly defining the Council's carbon management boundary;
- the need to overhaul the Council's processes relating to carbon emissions and establish a system to store and manage consumption data; and
- create a project register so that progress towards the Council's emissions reduction target can be better measured.

5.3 Additional support to assist the Council in progressing its priorities was procured from Carbon Forecast Ltd in 2016 and Carbon Change Ltd in May 2017. Progress on the priorities is outlined below.

5.4 **Carbon Management Boundary**

5.4.1. The boundary was fully re-scoped and extended in 2016 as shown in Figure 1. This shows emission sources by scope:

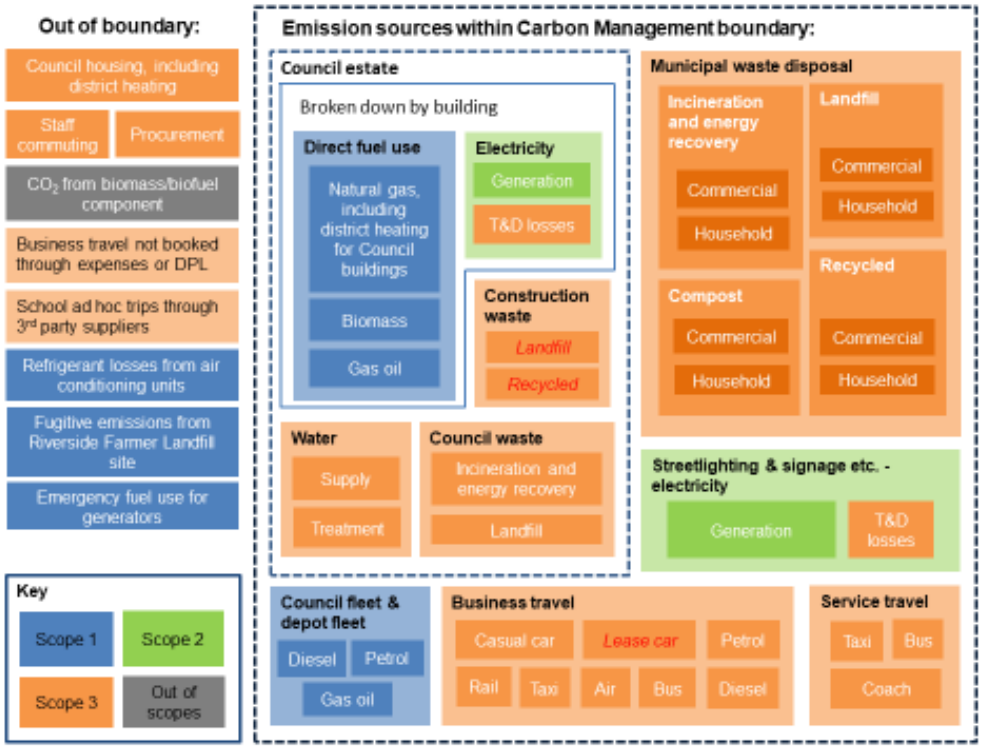
- Scope 1: Direct greenhouse gases (GHG) emissions are emissions from sources that are owned or controlled by the Council e.g. fossil fuels used in boilers
- Scope 2: Indirect GHG emissions from generation of grid electricity, heat or steam.
- Scope 3: Other indirect emissions, such transport-related activities in vehicles not owned or controlled by the Council, electricity-related activities (e.g. transmission and distribution (T&D) losses), outsourced activities, waste disposal, etc.

5.4.2. It should be noted that defining the boundary at this point does not mean that it will not change over time as, over the target period 2007/08 to 2019/20, assets will be disposed of, new assets will be acquired and the functions of the organisation are likely to evolve. Therefore the boundary should be reassessed on an annual basis, along with the asset list, to make sure that the carbon management boundary is applied consistently to new sources.

5.4.3. From 2014/15 onwards, the Council has used Resource Efficient Scotland's Carbon Footprint Project Register tool (CFPR tool) to calculate its carbon footprint. This tool is publically available and uses the appropriate year's Defra carbon factors to convert from consumption units to tonnes of carbon dioxide equivalents (tCO_2e are a way of expressing all GHG emissions in common units). The CFPR tool also allows organisations to overwrite the unit costs to enable the tool to more accurately reflect the costs of the organisation.

5.4.4. The Council's defined carbon management boundary is consistent with other organisations within the public sector and is an accurate representation of the controllable sources in the carbon footprint at this point in time.

Figure 1: DCC Carbon Management Boundary 2016/17



5.4.5. Sources highlighted in red are currently outstanding from the 2016/17 carbon footprint:

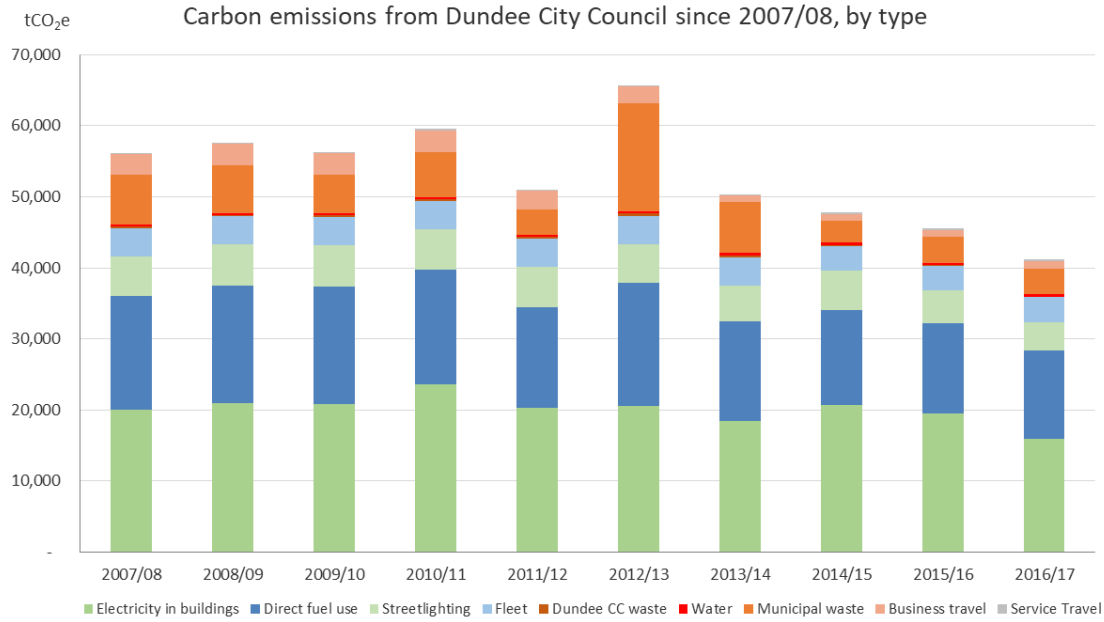
- Car data does not appear to be broken down into casual and lease car use, however, it has been confirmed that the total mileage is correct.
- Construction waste – this has not been available for the past three years, however this makes up an insignificant proportion of the overall footprint and is therefore not considered material.

5.5 Carbon Footprint Data

5.5.1. In order to provide consistency, a decision was taken in 2015 to rebaseline the organisation back to 2007/08, rather than reset the baseline year. Where possible, actual data from the correct time period was used. Actual data was available back to 2007/08 for energy use in buildings and waste, which make up the majority of the Council's footprint. Some emissions sources were only available for a shorter time series and therefore earlier years were estimated using appropriate methodologies. The Council has produced an estimate of its carbon footprint for each year between 2007/08 and 2016/17, based on the carbon management boundary shown in figure 1 above. As with the baseline year, some minor emission sources have been estimated in earlier years.

5.5.2. The progress of Dundee City Council's footprint is shown in Figure 2.

Figure 2: Historical data series



5.5.3. This graph shows that emissions peaked in 2012/13, mainly due to an increase in waste emissions as the waste to energy plant was offline and therefore the waste had to be landfilled, leading to higher emissions.

5.5.4. **Emissions in 2016/17 have dropped significantly compared to the previous year – there has been a 10% overall decrease in the carbon footprint**. Some of the decrease is due to a reduction in the grid emission factor (-10% between 2015 and 2016) but there have also been decreases in energy consumption (electricity and natural gas are down compared with the previous year), waste quantities (although the emission factor for commercial waste to landfill was higher than the previous year) and casual car mileage. Some areas of the footprint have increased, including service travel, public transport business travel and fleet but these are very minor increases. In the case of business travel, the emissions are estimated from cost expenditure and annual public transport unit costs and conclusions should not be drawn from small increases that are likely to be due to methodology rather than actual miles travelled.

5.5.5. Table 1 shows the Council carbon footprint and cost comparison for 2015/16 and 2016/17, however, it should be noted that the cost figures for waste services are generic costs provided from the CFPR tool and might not be representative of Council expenditure on waste disposal.

Table 1: DCC carbon footprint and cost for 2015/16 and 2016/17

Category	2015/16		2016/17	
	tCO_2e	Cost (£)	tCO_2e	Cost (£)
Stationary (energy in buildings and water)	37,150	£8,612,365	32,681	£8,488,748
Waste	3,695	£3,791,038	3,648	£4,857,597
Transport (fleet and business travel)	4,710	£4,070,686	4,802	£4,120,266
Total	**45,555**	**£16,474,088**	**41,131**	**£17,466,610**

5.5.6. From the baseline year of 2007/08, the total carbon footprint has reduced from 56,156 tCO_2e to 41,131 tCO_2e representing a reduction of 26.8%. For stationary sources only, the reduction has been from 41,774 tCO_2e to 32,681 tCO_2e, representing a reduction of 21.8%.

5.6 Targets

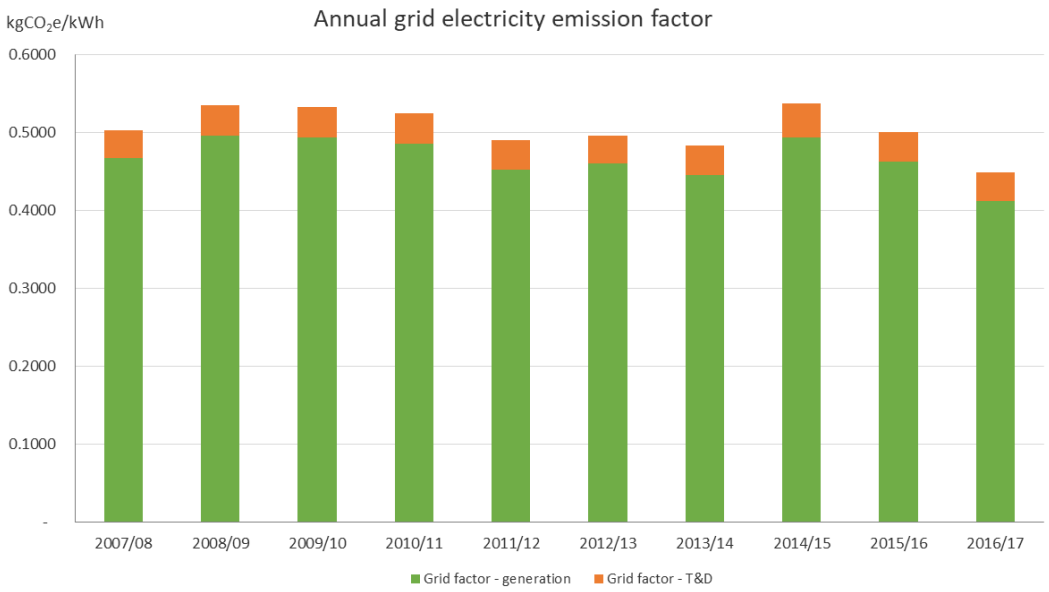
5.6.1. The Council has a set of targets as shown in Table 2 below.

Table 2: DCC targets

Target	Type of target	Boundary	Current progress
Carbon management plan target (primary)	Annual 5 percent reduction	Energy use in buildings measured in tCO_2e	12% reduction between 2015/16 and 2016/17
Fleet target	Annual 5 percent reduction	Transport fuels in fleet measured in tCO_2e	1% increase in emissions between 2015/16 and 2016/17
Reduction in construction waste	95% of construction waste to be recycled	All construction waste arising from Engineering, Construction and Demolition Projects	Not able to be measured currently as construction waste data is not available

5.6.2. It should be noted that it would be possible to meet the Carbon Management plan target but still increase energy consumption, or vice versa. This is because the grid electricity factor is not fixed, but varies year on year as the mix of generation capacity in the grid varies. While it is anticipated that as renewable capacity increases, overall grid carbon intensity will come down, it cannot be guaranteed. There is an average variation of around +/- 10% currently in the grid factor. However, for the past three years, there has been a significant reduction in the emission factor for grid electricity as shown in Figure 3.

Figure 3: Grid electricity emission factor over time



5.6.3. However, the Council's Carbon Management Plan target was met and exceeded in 2016/17 due to both a reduction in the grid factor and a reduction in consumption of the two key energy sources; grid electricity, natural gas and gas oil.

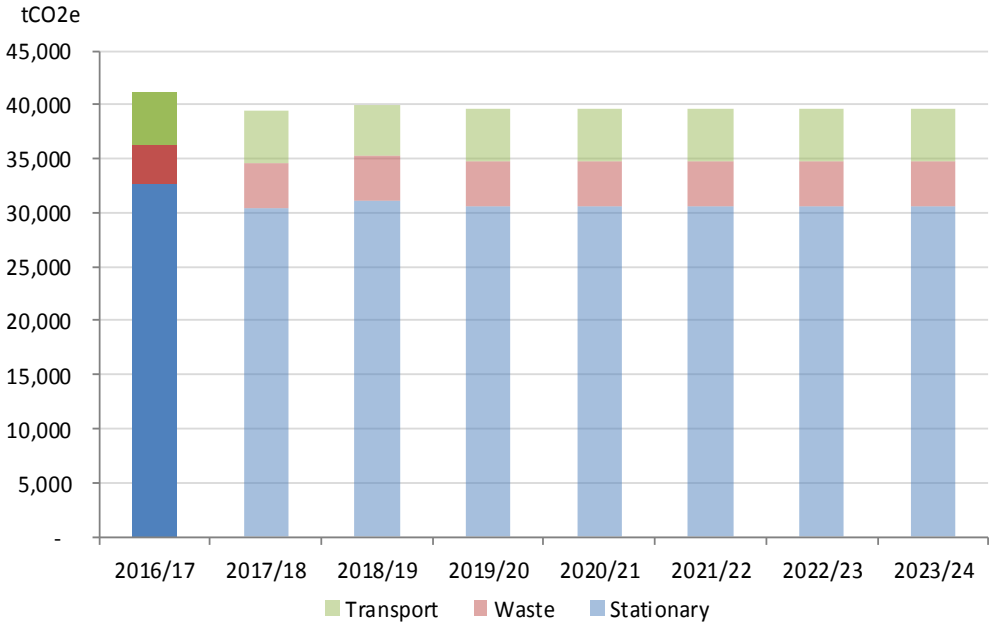
5.6.4. The Council's existing carbon management target will continue until 2019/20 at which a full redraft of the Council's Carbon Management Plan will take place. In the interim, it is anticipated that the Carbon Footprint Projects Register (see below) will act as an interim action plan.

5.7 Business as Usual Forecast

5.7.1. The Council has invested more resources in 2017 to develop a detailed Business As Usual (BAU) forecast to better understand what policies and interventions it should take in order to meet its carbon reduction targets. The forecast was created inputting detail about key future building changes (including new buildings, removal of buildings and movement of staff). In total around 30 estate changes between 2017/18 and 2019/20 were mapped.

5.7.2. Figure 4 shows that in terms of carbon emissions, in the absence of projects to reduce emissions, they are still likely to fall. However, this is purely due to the grid electricity factor reducing significantly in 2017/18 (this figure is published and therefore known for the year ahead). The actual consumption of grid electricity and natural gas is due to increase in 2017/18 and again in 2018/19, before coming down again in 2019/20. This is due partly to overlaps in the estate as buildings are opened before the previous building was closed. Therefore, a key measure of success for the carbon management process in 2017/18 will be to keep energy consumption static compared to 2016/17 through the implementation of carbon reduction projects.

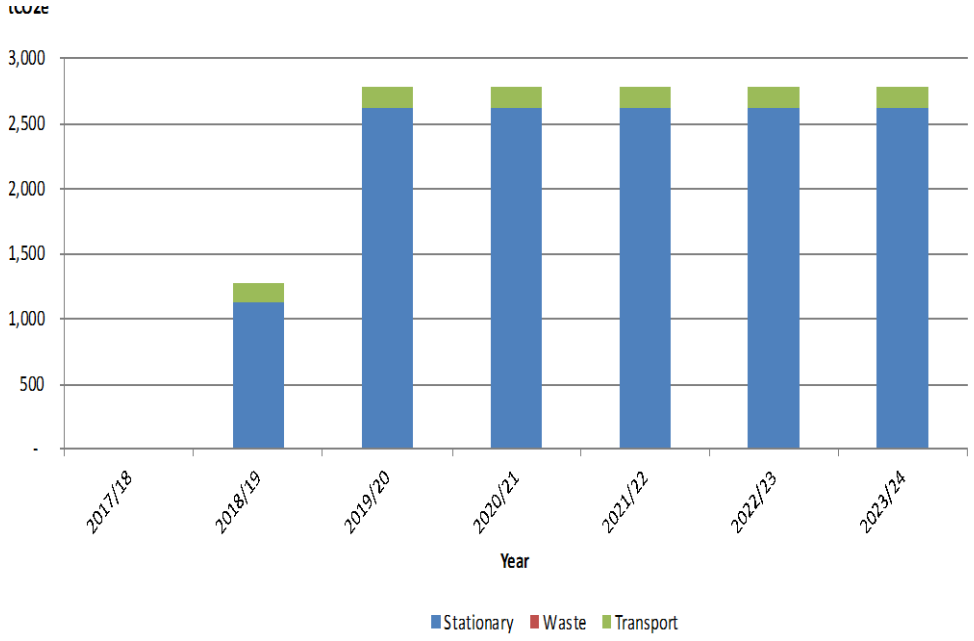
Figure 4: Business as Usual carbon footprints - split by source ($_{tCO2e}$)



5.8 Carbon Reduction Project Register

5.8.1. As part of the 2016 re-scoping exercise, a preliminary Carbon Footprint Register was prepared using the CFPR tool. This register is being more fully developed by identifying and including existing and proposed Council projects that will help the Council better measure and manage progress of carbon reduction interventions. Council officers have identified a list of 314 carbon saving projects covering all emissions sources. Twenty four of these projects have been fully scoped with capital costs and savings identified. If these projects are commissioned in the year specified and deliver the identified savings, the future savings are as shown in Figure 5.

Figure 5: Projects Carbon Savings - split by source in tCO_2e



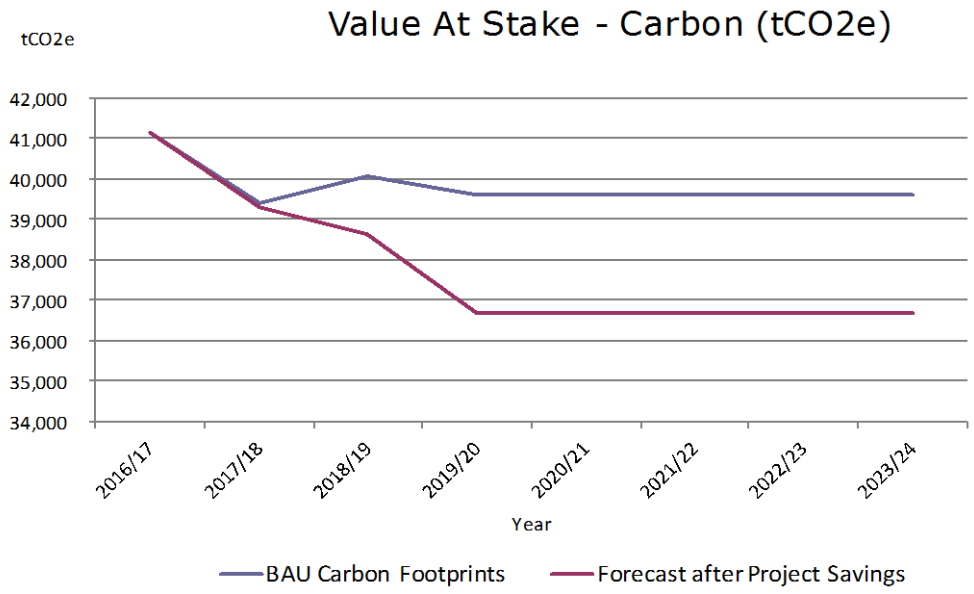
5.8.2. It can be seen that projects with stationary source savings (electricity and gas) represent the bulk of savings. Waste projects have been identified, but these are generating minimal carbon savings. Total savings in 2018/19 are 1,408 tCO_2e and in subsequent years are 2,915 tCO_2e (this figure remains the same as the emission factors are held constant and no new projects have been entered from 2020/21 onwards). The large increase in savings in 2019/20 is due to the Street Lighting LED Project which is due to save 1,507tCO_2e.

5.8.3. The remainder of the 314 projects are electricity and gas saving projects which are considered as 'future basket' projects to be implemented by contractors under the Non-Domestic Energy Efficiency (NDEE) scheme. These projects have the potential of saving 3,310 tCO_2e over the next few years if fully implemented.

5.9 Overall Future Carbon Forecasts

5.9.1. The figure below provides an indication of the BAU (as previously discussed) and projects on the future carbon footprints. The blue line denotes the BAU and the red line denotes the forecast carbon footprint if all twenty four projects are implemented. The area between the lines is known as the Value at Stake.

Figure 6: Value at Stake – Carbon (tCO_2e)



5.9.2. It can be seen that projects will help reduce the Council's carbon footprint to 36,676 tCO_2e by 2019/20 where it will remain for subsequent years. This represents a reduction of 7.3% on the BAU figure. The Value at Stake of the above graph is 16,425 tCO_2e which represents a cost saving of £6,992,804 from 2017/18 to 2023/24. Should the remaining 314 projects be implemented, greater carbon and cost savings will be realised.

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Head of Design and Property

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Sustainability & Climate Change Manager

PUBLIC BODIES CLIMATE CHANGE DUTIES – 206/17 ANNUAL REPORT

1 PROFILE OF REPORTING BODY

1a) Name of reporting body

Dundee City Council

1b) Type of body

Local Authority

1c) Highest number of full-time equivalent staff in the body during the report year

6,098

1d) Metrics used by the body

Specify the metrics that the body uses to assess its performance in relation to climate change and sustainability.

Metric	Units	Value	Comments
Population Size Served	population	148,270.00	NRS, 2016 Mid-Year Estimate
Other (specify in comments)			

1e) Overall budget of the body

Specify approximate £/annum for the report year.

£344,664,000

1f) Report year

Specify the report year

2016/17 (financial year)

1g) Organisational context

Provide a summary of the body's nature and functions that are relevant to climate change reporting.

Dundee City Council has a strong role to play in reducing emissions from its own estate and from the services it provides; influencing emission reduction across the city; managing risk and building resilience to a changing climate. Functions include:

Land Use Planning - Regulation of planning applications and development; forward planning policies which should support climate change mitigation and adaptation goals.

Economic development and low carbon economy – Support to develop business opportunities in the low carbon/clean technology market. Strategic targeting and support for key business developments in terms of locations, property developments and support for skills planning and low carbon training.

Infrastructure / major capital projects - Investment decisions for new buildings should be carbon/climate proofed to deliver greatest efficiency and act as demonstration projects.

Housing Strategy – tackling fuel poverty; development and delivery of energy efficiency investment programmes; providing home energy advice service.

Property Management - Energy use in Council buildings; refurbishments/upgrades and renewables options; street lighting, energy efficiency retrofit and climate change adaptations.

Passenger Transport - Regional transport policy and planning; shared mobility and smart city integration; active travel and behaviour change programmes for modal shift; staff business travel.

Fleet Management – Maintenance and management of Council fleet; investment and promotion in low carbon vehicles and infrastructure; driver training and awareness; fleet telematics and rationalisation.

Waste – Municipal and corporate, re-use, recycling and composting.

*Land and Open Sp*ace - Land use strategy and development of green networks; habitat management and biodiversity opportunities; trees and woodland management.

Emergency Planning and Resilience – planning for and responding to severe weather events.

Flood Risk Management - development of a Local Flood Risk Management Plan and delivery of Flood Protection Schemes.

Education Services – implementation of staff and pupil low carbon behaviours; developing Eco-Schools activity; acting as leader within the community.

Administration - Green office activity; staff awareness and engagement including resource use, energy efficiency and travel.

Procurement - Embedding Sustainable procurement considerations into spending and investment decisions to help to reduce waste and emissions; stimulate the market for more sustainable products and set an example to Council partners and the wider community.

Community Planning - demonstrating leadership in partnership working to increase impact through joint initiatives and knowledge transfer.

Communication - Better integration of sustainability messages into communications through all media at the Council's disposal is critical for bringing about real and positive change to encourage more sustainable and climate friendly behaviour by all stakeholders.

2 GOVERNANCE, MANAGEMENT AND STRATEGY

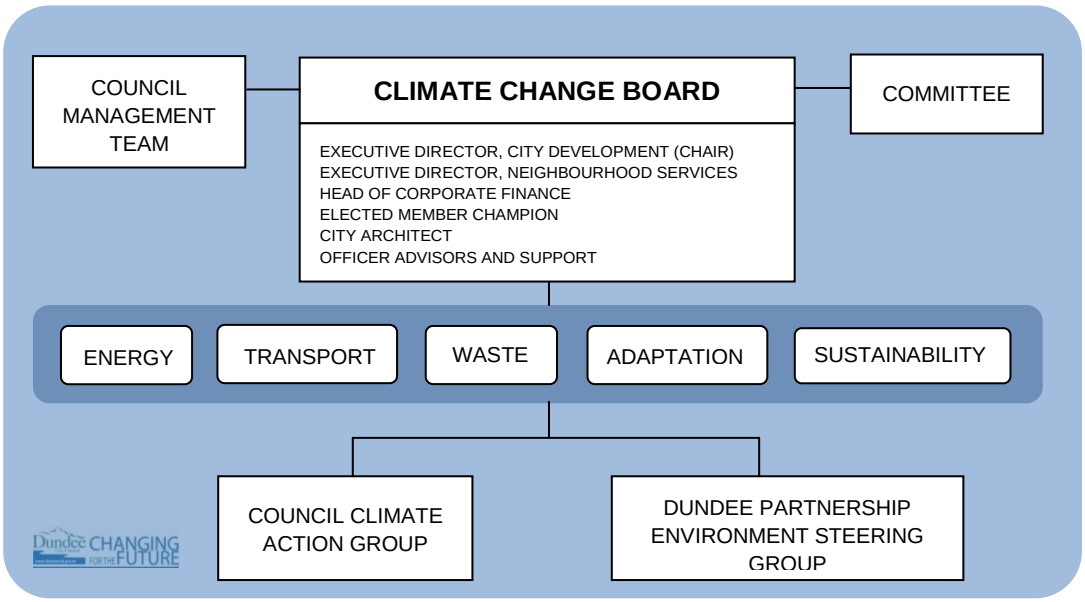
Governance and management

2a) How is climate change governed in the body?

Provide a summary of the roles performed by the body's governance bodies and members in relation to climate change. If any of the body's activities in relation to climate change sit outside its own governance arrangements (in relation to, for example, land use, adaptation, transport, business travel, waste, information and communication technology, procurement or behaviour change), identify these activities and the governance arrangements.

The Council's Climate Change Board is responsible for overseeing progress on climate change activity and in turn reports to the Council Management Team and Policy and Resources Committee. The Board is chaired by the Executive Director for City Development and comprises chief officers from relevant departments, who are responsible for leading on aspects of climate change work as well as Elected Member representation. The Board meets every two months to discuss Energy, Transport and Waste issues. Wider sustainability issues (e.g. policy, procurement, biodiversity) are considered when required and annual reports are provided on Adaptation and Air Quality. Support to the Board is provided in the form of advisors, officers involved in the day to day implementation of climate change related activities. Performance is reported via the Council's Covalent database.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2016/17



2b) How is climate change action managed and embedded by the body?

Provide a summary of how decision-making in relation to climate change action by the body is managed and how responsibility is allocated to the body's senior staff, departmental heads etc. If any such decision-making sits outside the body's own governance arrangements (in relation to, for example, land use, adaptation, transport, business travel, waste, information and communication technology, procurement or behaviour change), identify how this is managed and how responsibility is allocated outside the body.

For reporting period 2016/17, the Council was structured as five Strategic Service Areas with main roles in climate change activity categorised as follows:

- City Development (sustainable development/climate change strategy, monitoring/reporting, strategic environmental assessment, adaptation, behaviour change, asset management, energy management, flooding and coastal, land use planning, transport planning, street lighting, fleet);
- Corporate Services (procurement, ICT, staff travel);
- Neighbourhood Services (housing, community facilities, waste, air quality, greenspace).

Responsibility for Climate Change activity is led by the City Development Department. An internal Climate Action Group meets every 6 weeks to embed carbon management across departments and assist with the communication, facilitation and promotion of initiatives.

<u>Carbon Emissions</u>

- The Council's **carbon footprint boundary** was re-scoped in 2016 by officers from a range of Council services (shown below). Data for each emission source within the defined boundary is collated annually and calculated, identifying scope 1, scope 2 and scope 3 emissions. The data is presented to Council Management Team and Committee as part of the Council's overall 'Public Bodies Climate Change Duties' report.

- To better understand what policies and interventions the Council should take in order to meet its energy and carbon reduction targets a **Business as Usual forecast** is being prepared by the Energy Management Team which assesses the Council's future estate plans and relevant unit cost projections.

- As part of the 2016 re-scoping exercise, a preliminary **Carbon Footprint Projects Register** was prepared using the 'Carbon Footprint Forecast & Projects Register Tool' (2016 version) as developed by Resource Efficient Scotland. This register is being further developed during 2017 by identifying and including existing and proposed Council projects that will help the Council better measure and manage progress of carbon reduction interventions.

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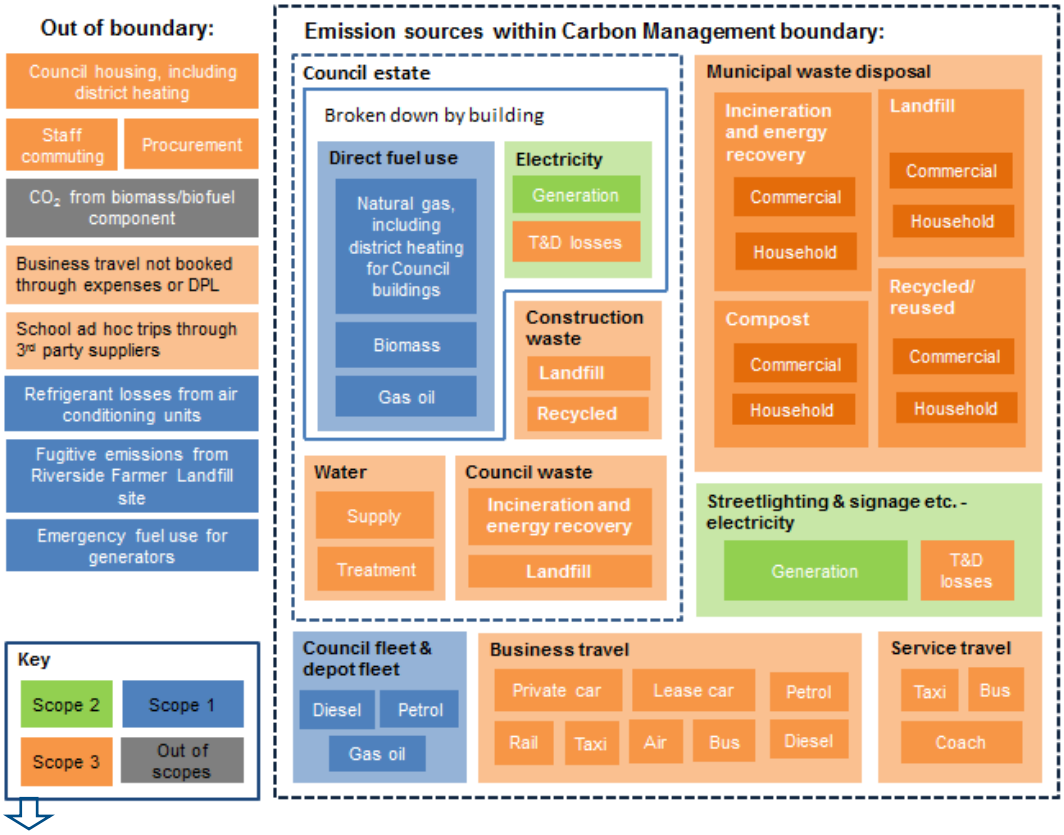
Dundee City Council Carbon Footprint Boundary 2016/17:



***Scope 1**: Emissions that arise directly from sources that are owned or controlled by the Council, for example from fuels used in our boilers or the vehicles that we own;*

***Scope 2:** Emissions generated by purchased electricity consumed by the Council;*

***Scope 3:** Emissions that are a consequence of the activities of the Council but occur from sources not owned or controlled by the Council. E.g. emissions associated with waste, water, business travel, commuting and procurement.*

Embedding Climate Change within the organisation

- Current arrangements for assessing committee reports prior to submission require officers to screen their reports for any policy implications in respect of Sustainability and Strategic Environmental Assessment. A new **Integrated Impact Assessment tool** was launched in August 2017 that incorporates climate change mitigation and adaptation impacts into the committee reporting process.

- A **Sustainable Development E-Learning module** is available that enables staff to better understand the statutory and other drivers for the Council regarding sustainability; what strategic action the Council is taking to meet its sustainability duties and what actions staff can take to help make Dundee more sustainable.

- The Council's Design and Property Division is working to expand its **current ISO14001 Environmental Management (EMS) accreditation** across the whole Division. This promotes the development, embedding and monitoring of environmental procedures including engagement with colleagues across the Division in their development.

Provide a diagram to show how responsibility is allocated to the body's senior staff, dept. heads etc.

See Strategic Service Areas above.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2016/17

Strategy

2c) Does the body have specific climate change mitigation and adaptation objectives in its corporate plan or similar document?

Provide a brief summary of objectives if they exist.

Wording of objective	Name of document
5% CO_2 reduction target from Council properties (per annum to 2020).	Energy Management Policy (2012-2020) – p.1 http://www.dundeecity.gov.uk/reports/reports/470-2012.pdf
Outcome 10: Our People will live in a low carbon, sustainable city.	Dundee Partnership Single Outcome Agreement (2013-2017) - p.96 http://www.dundeepartnership.co.uk/content/single-outcome-agreement
	Council Plan (2012-2017) - p.28 http://www.dundeecity.gov.uk/dundeecity/uploaded_publications/publication_3480.pdf
Outcome 10a: Dundee mitigates and adapts to the effects of climate change for the transition to a low carbon economy.	Dundee Partnership Single Outcome Agreement (2013-2017) - p.99 http://www.dundeepartnership.co.uk/content/single-outcome-agreement
	Council Plan (2012-2017) - p.28 http://www.dundeecity.gov.uk/dundeecity/uploaded_publications/publication_3480.pdf
Outcome 10b: Dundee has an accessible, integrated and sustainable travel network.	Dundee Partnership Single Outcome Agreement (2013-2017) - p.99 http://www.dundeepartnership.co.uk/content/single-outcome-agreement
	Council Plan (2012-2017) - p.28 http://www.dundeecity.gov.uk/dundeecity/uploaded_publications/publication_3480.pdf
Outcome 10c: Dundee has sustainable waste management systems that reduce environmental impacts of waste production.	Dundee Partnership Single Outcome Agreement (2013-2017) - p.99 http://www.dundeepartnership.co.uk/content/single-outcome-agreement
	Council Plan (2012-2017) - p.28 http://www.dundeecity.gov.uk/dundeecity/uploaded_publications/publication_3480.pdf
Outcome 10d: Dundee has a clean, healthy and safe environment with improved air, land and water quality.	Dundee Partnership Single Outcome Agreement (2013-2017) - p.99 http://www.dundeepartnership.co.uk/content/single-outcome-agreement
	Council Plan (2012-2017) - p.28 http://www.dundeecity.gov.uk/dundeecity/uploaded_publications/publication_3480.pdf
Outcome 10e: Dundee has an attractive and sustainable natural environment where the built heritage is valued and protected.	Dundee Partnership Single Outcome Agreement (2013-2017) - p.99 http://www.dundeepartnership.co.uk/content/single-outcome-agreement
	Council Plan (2012-2017) - p.28 http://www.dundeecity.gov.uk/dundeecity/uploaded_publications/publication_3480.pdf

2d) Does the body have a climate change plan or strategy?

If yes, provide the name of any such document and details of where a copy of the document may be obtained or accessed.

No strategic 'Climate Change Plan' as such although commitment to develop a city-wide 'Sustainable Energy & Climate Action Plan' via the Dundee Partnership. The Council's first Carbon Management Plan was adopted in 2009 with the Energy Management Policy and target revised in 2012. The Carbon Footprint Projects Register will act as an interim action plan until a full redraft of the Carbon Management Plan takes place in 2019/20.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2016/17

2e) Does the body have any plans or strategies covering the following areas that include climate change?

Provide the name of any such document and the timeframe covered.

Topic Area	Name of document	Time period covered	Comments
Adaptation	Dundee Coastal Study Stage 2	2013-	Identifies a framework within which local flood alleviation and coastal erosion defence schemes are developed at different locations along Dundee's 16.9km of coastal frontage. http://www.dundeecity.gov.uk/reports/reports/256-2013.pdf
	Tay Estuary and Montrose Basin Local Flood Risk Management Plan	2016-2022	In partnership with other responsible authorities, the plan has been developed to detail the actions adopted to reduce the impact of flooding in the Tay Estuary and Montrose Basin (TEAMB) local plan district (LPD) as required by the Flood Risk Management (Scotland) Act. http://www.angus.gov.uk/sites/angus-cms/files/2017-07/Tay_Estuary_and_Montrose_Basin_Local_Flood_Risk_Management_Plan.pdf
Energy efficiency	Energy Management Policy	2012-2020	The adoption of the Energy Policy demonstrates the City Council's commitment to the principles of responsible energy and water management in its operational buildings. The City Council will aim to improve its energy and water efficiency and reduce its energy and water consumption in line with the targets set out in this policy. http://www.dundeecity.gov.uk/reports/reports/470-2012.pdf
	Local Housing Strategy (LHS)	2013-2018	The LHS is the primary strategy for the provision of housing and associated services to address homelessness, meeting housing support needs and tackling fuel poverty. Tackling climate change has been identified as one of a number of main areas for consideration within the strategy given the major role housing can play in reducing emissions. http://www.dundeecity.gov.uk/sites/default/files/publications/LHS%202013%20-%2018%20Final.pdf
Renewable energy/ Sustainable/ Renewable heat -			Local Development Plan contains a number of policies that act as enablers to the development and generation of renewable energy and low carbon heat technologies: - Policy 29:Low and Zero Carbon Technology in New Development - Policy 30: Biomass Energy Generating Plant - Policy 31: Wind Turbines These policies are to be reviewed as part of the new LDP2 in line with Scottish planning policy. http://www.dundeecity.gov.uk/localdevplan

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Land use	TAYplan	2016-2036	Recognises the long term implications of climate change and sea level rise. It supports the switch to a low carbon economy and zero waste economy by providing for appropriate infrastructure and improvements in our resilience to climate change and other potential risks. It seeks to deliver better quality development and places which respond to climate change by ensuring resilience built into the natural and built environments through a presumption against development in areas vulnerable to coastal erosion, flood risk and rising sea levels. http://www.tayplan-sdpa.gov.uk
	Local Development Plan	2014-2019	In considering the delivery of the TAYplan vision there are several cross-cutting issues relating to climate change resilience that have informed the preparation of the Dundee Local Development Plan: - Recognising that new developments will have to contribute positively to mitigating the causes of climate change and put in place adaptation measures to future proof places. - Recognising the need to ensure that climate change resilience is built into the natural and built environment. - Recognising the need to ensure that high resource efficiency and low/zero carbon energy generation technologies are incorporated within development to reduce carbon emissions and energy consumption to meet Scottish Government standards. http://www.dundeecity.gov.uk/localdevplan
	Proposed Local Development Plan 2 August 2017	2019-2019	The Proposed Local Development Plan seeks to deliver the TAYplan vision in relation to climate change resilience. Climate change policies have been strengthened with an emphasis on delivering green networks and supporting heat networks in the City. It should be noted that the content of the Proposed Plan is subject to consultation and examination and therefore may change. http://www.dundeecity.gov.uk/localdevplan2
Staff travel (commuting)	TACTRAN Regional Transport Strategy (RTS) refresh	2015-2036	RTS refresh sets out a vision for improving the region's transport infrastructure, services and other facilities to 2036. Formally approved by the Minister for Transport and Islands on 23 July 2015, it updates policies and proposals and now identifies 31 Strategic Actions which are aimed at supporting regional economic prosperity; connecting our communities and being socially inclusive; and promoting environmental sustainability and improved health and wellbeing. The horizon of 2036 aligns with the second TAYplan Strategic Development Plan covering much of the Tactran region. http://www.tactran.gov.uk/documents/RTSRefresh-FinalReport.pdf

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Business travel	Staff Travel Policy	2011-	This policy will reduce staff need to travel for work and, when they do need to travel, explicitly prioritise walking, cycling, public transport and car share over single-occupancy car. This will not only reduce carbon emissions from travel, but also contributed to cost savings and the Council's duty of care to its employees and others. The increased use of Electric Vehicle pool cars also ensures that those trips made by car are as sustainable as possible. http://www.dundeecity.gov.uk/reports/reports/413-2011.pdf
Fleet transport	Plant/Vehicle Asset Management Plan		Internal document, unpublished.
ICT	Corporate Asset Management Strategy	2011-2015	Guides the acquisition, use and disposal of the Council's assets to make the most of their service delivery potential and manage the related risks and costs over their entire life. The six key areas of asset ownership (Buildings and Property; Roads Infrastructure; Council Housing; Open Space; Vehicle Fleet and ICT) recognise the need to minimise their impact on the environment and reduce carbon emissions.
	Digital Strategy	2016-2020	Outlines how the Council aims to innovate and re-design services to provide them in the most effective way, makes best use of its spending power and maximises the use of new technologies so that it can become a digital council. https://www.dundeecity.gov.uk/sites/default/files/publications/2017%20Digital%20Strategy.pdf
Waste management	Internal Waste Management Strategy	2014-	Adopted in 2014 to ensure the Council becomes more resource efficient, compliant with new legislation, lessen our impact on the environment and ensure that the Council leads by example. Site Waste Management Plans have also been made mandatory on all Engineering Construction and Demolition Projects.
Water/Sewerage	Tay Estuary and Montrose Basin Local Flood Risk Management Plan	2016-2022	Developed in close partnership between all responsible authorities, SEPA and Scottish Water to set the objectives to tackle flooding and identify actions which will make a real difference to managing the risk of flooding and recovering from any future flood events. http://www.angus.gov.uk/sites/angus-cms/files/2017-07/Tay_Estuary_and_Montrose_Basin_Local_Flood_Risk_Management_Plan.pdf
Other	Dundee Air Quality Action Plan	2011-	Defines the scope for the Air Quality Management Area (AQMA) and sets out measures together with targets and indicators to achieve the compliance with the objectives for PM_{10} and NO_2. It supports the integration of local air quality considerations within the Council's wider policies, strategies and plans to deliver co-benefits, particularly those relevant to sustainable development, reduction in greenhouse gases and carbon emissions. http://www.dundeecity.gov.uk/environment/airquality

2f) What are the body's top 5 priorities for climate change, governance, management strategy for the year ahead?

Provide a brief summary of the body's areas and activities of focus for the year ahead.

1) Develop a city-wide **'Sustainable Energy & Climate Action Plan'** (SECAP) which will provide the leadership, commitment and planning necessary for the transition to a low carbon future. The strategy will align with the Scottish Government's new 'Climate Change Plan' and 'Scottish Energy Strategy' and the Cleaner Air for Scotland Strategy. It will have a shared vision and objectives with the Tay Cities Deal of supporting sustainable economic growth, reducing social inequality, and enabling entrepreneurship and innovation.
2) Develop a Council **District Heating Strategy** to set out the Council's vision for the delivery of district heating in the Dundee City Council area, identifying potential heat network opportunities, stakeholder engagement plans and next steps required to realise its ambitions.
3) Further develop the **Carbon Reduction Projects Register** to better measure and manage progress of carbon reduction projects. This will include identifying and collating existing carbon reduction projects across the Council's carbon footprint boundary and new carbon reduction projects to assist with carbon forecasting.
4) Review and update the Council's **Sustainability/Environment Policy** to clearly set out the organisation's commitment to improve its environmental performance, ensure that set principles are met.
5) Introduce an online **Integrated Impact Assessment (IIA) tool** to assist Committee report authors to consider the likely impacts of their report (including climate related issues) and provide details on any required mitigating action to overcome negative impacts.

2g) Has the body used the Climate Change Assessment Tool (a) or equivalent tool to self-assess its capability / performance?

If yes, please provide details of the findings and resultant action taken.

This refers to the tool developed by Resource Efficient Scotland for the purposes of self-assessing an organisation's capability / performance in relation to climate change.

An internal CCAT workshop was held in August 2015 with officers present from a wide range of Council services. Its purpose was to help the Council self-evaluate its performance under the Climate Change (Scotland) Act Public Sector Duties, identify the key priorities and actions for improvement.

The CCAT uses the organisational responses to 28 questions on Governance, Emissions, Adaptation, Behaviour and Procurement to create a targeted and achievable action plan to help guide the short-term improvement plan. The results of the self-assessment are shown below:

Overall results				
	Organisation score	Total score available	Percentage score	Traffic light assessment
Governance	12	28	43%	43%
Emissions	9	30	30%	30%
Adaptation	13	28	46%	46%
Behaviour	6	20	30%	30%
Procurement	6	16	38%	38%
Overall	**46**	**122**	**38%**	**38%**

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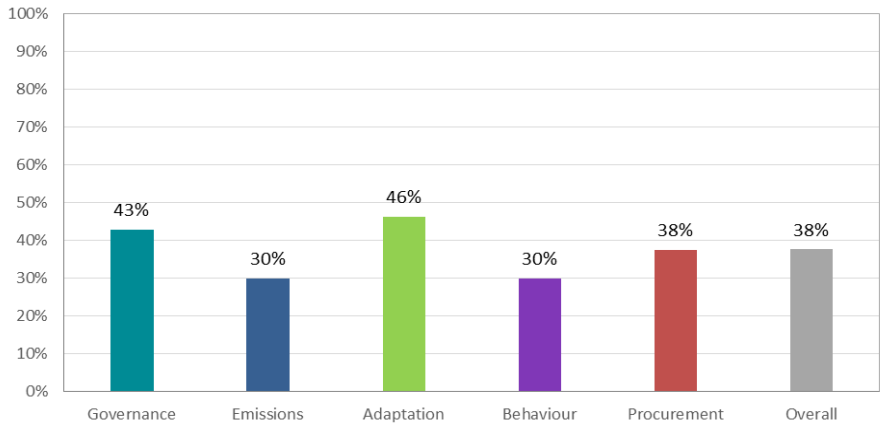

Twelve actions were suggested by the tool and a follow-up meeting was held in November 2015 to prioritise these actions.

Action Priority 1 – is to clearly define the Council's carbon footprint in terms of organisational and operational boundary in a way that can be easily communicated. This action was completed during 2016.

Action Priority 2 - is to develop a more accurate Business As Usual forecast to help engage and alert the Council Management Team to risks relating to resource consumption, especially in terms of future costs. The Resource Efficient Scotland Carbon Footprint and Project Register tool will be used to develop this forecast. This action is currently being progressed.

Action Priority 3 and 4 - focus on reviewing the governance and operational structure for climate change; this should include a very clear remit in terms of roles, responsibilities and decision-making powers of both the Climate Change Board and the Climate Action Group and an updated timetable for meetings that considers the timing of activities that require input or sign-off. This action is scheduled for winter 2017.

Further actions were identified for developing Adaptation. In particular, further action could be taken by agreeing internal governance arrangements for Adaptation action and making sure that adaptation risk is being incorporated explicitly into the Council's corporate risk arrangements.

Once the above actions are complete and time given to embed them, it is the intention to re-run the CCAT workshop in Spring 2018 to evaluate perceived improvements.

Supporting Information

2h) Supporting information and best practice

Provide any other relevant supporting information and any examples of best practice by the body in relation to governance, management and strategy.

Dundee City Council, in partnership with Angus Council and Perth & Kinross Council, submitted a Strategic Outline Case for the Tay Cities Deal in January 2017. The proposal aims to foster regional collaboration and expertise through the development of a regional Energy Services Company, attracting investment to build innovative district heating schemes in Dundee, Forfar and Perth using renewables or low carbon technologies.

3 CORPORATE EMISSIONS, TARGETS AND PROJECTS

Emissions

3a) Corporate emissions from start of baseline year to end of report year

Complete the following table using the greenhouse gas emissions total for the body calculated on the same basis as for its annual carbon footprint / management reporting or, where applicable, its sustainability reporting. Include greenhouse gas emissions from the body's estate and operations (a) (measured and reported in accordance with Scopes 1&2 and, to the extent applicable, selected Scope 3 of the Greenhouse Gas Protocol (b). If data is not available for any year from the start of the year which is used as a baseline to the end of the report year, provide an explanation in the comments column.

(a) No information is required on the effect of the organisation on emissions which are not from its estate and operations.
(b) This is the "The Greenhouse Gas Protocol. A corporate accounting and reporting standard (revised edition)", World Business Council for Sustainable Development, Geneva, Switzerland / World Resources Institute, Washington DC, USA (2004), ISBN:1-56973-568-9.

Reference Year	Year	Year Type	Scope 1	Scope 2	Scope 3	Total	Units	Comments
Baseline carbon footprint	2007/08	Financial (April to March)	20,029	23,664	12,472	56,165	tCO_2e	As detailed in the previous report, the boundary of DCC has been set and applied consistently across the 10 year dataset. NB: The construction waste data is not available for 2016/17 as has been the case for the past 3 years. This makes up an insignificant proportion of the overall footprint and is therefore not considered material. All consumption data has been converted using the appropriate DEFRA Conversion Factor (DCF) for the time period.
Year 1 carbon footprint	2008/09	Financial (April to March)	20,520	24,815	12,247	57,582	tCO_2e	
Year 2 carbon footprint	2009/10	Financial (April to March)	20,551	24,662	11,077	56,290	tCO_2e	
Year 3 carbon footprint	2010/11	Financial (April to March)	20,208	27,032	12,284	59,524	tCO_2e	
Year 4 carbon footprint	2011/12	Financial (April to March)	18,197	23,857	8,939	50,993	tCO_2e	
Year 5 carbon footprint	2012/13	Financial (April to March)	21,215	24,159	20,320	65,693	tCO_2e	
Year 6 carbon footprint	2013/14	Financial (April to March)	17,991	21,579	10,815	50,385	tCO_2e	
Year 7 carbon footprint	2014/15	Financial (April to March)	16,845	24,097	6,819	47,761	tCO_2e	
Year 8 carbon footprint	2015/16	Financial (April to March)	16,144	22,321	7,090	45,555	tCO_2e	
Year 9 carbon footprint	**2016/17**	**Financial (April to March)**	**15,980**	**18,244**	**6,908**	**41,131**	**tCO_2e**	

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3b) Breakdown of emission sources

Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3(a) above. Use the comments column to explain what is included within each category of emission source entered in the first column. If, for any such category of emission source, it is not possible to use a simple emissions factor (a), leave the field blank and provide the total emissions for that category of emission source in the 'Emissions' column.

(a) Emissions factors are published annually by the UK Government for environment, Food and Rural Affairs (DEFRA).

Emission Source	Scope	Consumption Data	Units	Emission Factor	Units	Emissions (tCO_2e)	Comments
Natural Gas	Scope 1	64,452,097	kWh	0.184	kg CO2e/kWh	11,859	Natural gas use in Council buildings
Gas oil	Scope 1	2,012,160	kWh	0.276	kg CO2e/kWh	556	Gas oil use in Council buildings
Biomass	Scope 1	380,212	kWh	0.013	kg CO2e/kWh	5	Heat contract output data available for biomass. Assume 85% efficiency to estimate input value.
Diesel	Scope 1	1,066,755	Litres	2.612	kg CO2e/litre	2,855	Fleet. Assuming 6.0% for additional fuel not included and contingency.
Petrol	Scope 1	12,813	Litres	2.197	kg CO2e/litre	28	Fleet. Assuming 6.0% for additional fuel not included and contingency.
Gas oil	Scope 1	2,448,674	kWh	0.276	kg CO2e/kWh	677	Fleet. Converted from litres to kWh using conversion factor of 10.7 kWh per litre in order to use gas oil emission factor.
Grid Electricity (generation)	Scope 2	35,365,403	kWh	0.412	kg CO2e/kWh	14,572	Grid electricity used in Council buildings
Grid Electricity (transmission &distribution losses)	Scope 3	35,365,403	kWh	0.037	kg CO2e/kWh	1,318	Grid electricity used in Council buildings
Grid Electricity (generation)	Scope 2	8,910,508	kWh	0.412	kg CO2e/kWh	3,672	Grid electricity used in streetlighting and other sources (car parks, signage etc.)
Grid Electricity (transmission &distribution losses)	Scope 3	8,910,508	kWh	0.037	kg CO2e/kWh	332	Grid electricity used in streetlighting and other sources (car parks, signage etc.)

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Water use	Scope 3	359,512	m3	0.344	kg CO2e/m3	124	Estimated from 2015/16 figure - awaiting actual data for 2016/17
Water treatment	Scope 3	341,536	m3	0.708	kg CO2e/m3	242	Estimated at 95% of water use total for same year.
Waste disposal – landfill - commercial	Scope 3	2,429	tonnes	199	kg CO2e/tonne	483	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - incineration - commercial	Scope 3	7,511	tonnes	21	kg CO2e/tonne	158	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - composting - commercial	Scope 3	2,437	tonnes	6	kg CO2e/tonne	15	Commercial waste
Waste disposal - recycling - commercial	Scope 3	1,232	tonnes	21	kg CO2e/tonne	26	Commercial waste
Waste disposal - landfill - municipal	Scope 3	4,581	tonnes	421	kg CO2e/tonne	1,929	Household waste
Waste disposal - incineration - municipal	Scope 3	33,075	tonnes	21	kg CO2e/tonne	695	Household waste
Waste disposal - composting - municipal	Scope 3	8,697	tonnes	6	kg CO2e/tonne	52	Household waste
Waste disposal - recycling - municipal	Scope 3	13,883	tonnes	21	kg CO2e/tonne	292	Household waste
Business travel - private car	Scope 3	2,411,598	km	0.187	kg CO2e/km	451	No information available about car size or fuel so unknown size/unknown fuel factor used
Business travel - lease car	Scope 3		km		kg CO2e/km		Data for lease cars not split from casual car use in 2016/17
Business travel - taxi	Scope 3	22,058	passenger km	0.163	kg CO2e/passenger km	4	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should

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							be treated as an estimate.
Business travel - bus	Scope 3	326,917	passenger km	0.120	kg CO2e/passenger km	39	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.
Business travel - rail	Scope 3	743,563	passenger km	0.049	kg CO2e/passenger km	36	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.
Business travel - air	Scope 3	40,403	passenger km	0.298	kg CO2e/passenger km	11	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.
Business travel - diesel	Scope 3	97,497	litres	2.612	kg CO2e/litre	261	Assumed to be separate from fleet petrol and therefore assigned to Scope 3.
Business travel - petrol	Scope 3	99,236	litres	2.197	kg CO2e/litre	218	Assumed to be separate from fleet diesel and therefore assigned to Scope 3.
Service travel - taxi	Scope 3	363,551	passenger km	0.163	kg CO2e/passenger km	59	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.
Service travel - bus	Scope 3	338,561	passenger km	0.120	kg CO2e/passenger km	41	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.
Service travel - coach	Scope 3	459,799	passenger km	0.266	kg CO2e/passenger km	122	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate. Average van EF used as this is for coach km rather than passenger km and also for consistency with previous years.
					Total	**41,130**	

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3c) Generation, consumption and export of renewable energy

Provide a summary of the body's annual renewable generation (if any), and whether it is used or exported by the body.

	Renewable Electricity		Renewable Heat		
Technology*	**Total consumed by the body (kWh)**	**Total exported (kWh)**	**Total consumed by the body (kWh)**	**Total exported (kWh)**	**Comments**
Solar PV					
Solar Thermal					
Wind					
Hydro					
Wave					
Tidal					
Biogas CHP					
Landfill Gas CHP					
Biomass			323,180		Biomass is supplied through a heat supply contract – input figure is estimated using a figure of 85% boiler efficiency. All heat is consumed by DCC.
Biogas					
Air Source Heat Pump					
Ground Source Heat Pump					
Water Source Heat Pump					

**These are the list of entries provided within the form that can be selected from the dropdown menu and the corresponding consumption / export data can be entered under the appropriate heading.*

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Targets

3d) Organisational targets

List all of the body's targets of relevance to its climate change duties. Where applicable, overall carbon targets and any separate land use, energy efficiency, waste, water, information and communication technology, transport, travel and heat targets should be included.

Name of target	Type of target	Target	Units	Boundary /scope of target	Progress against target	Year used as baseline	Baseline figure	Units of baseline	Target completion year	Comments
Carbon Management Plan target	Annual %	5	Annual % reduction	Energy use in buildings	28,310	2015/16	32,163	tCO_2e	2019/20	This target is based on energy use in buildings (electricity, natural gas, gas oil and biomass); although the carbon footprint boundary has been widened to include other sources, for consistency, reporting against this target will continue until 2019/20. The target was exceeded in 2016/17, with emissions from energy use in buildings decreasing by 12% (compared to the target reduction of 5%). This was partly due to the drop in the grid electricity factor but also due to reduction in consumption for electricity, natural gas and gas oil.

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Project and changes

3e) Estimated total annual carbon savings from all projects implemented by the body in the report year

If no projects were implemented against and emissions source, enter "0". If the organisation does not have any information for an emissions source, enter "Unknown" in the comments box. If the organisation does not include the emissions source in its carbon footprint, enter "N/A" in the comments box.

Emissions source	Total estimated annual carbon savings (tCO_2e)	Comments
Electricity	104	All projects carried out at Dundee Contemporary Arts
Natural Gas	24	All projects carried out at Dundee Contemporary Arts
Other heating fuels	0	
Waste	0	Diversion of Household and Schools food waste from combustion to Anaerobic digestion – minimal carbon impact
Water and sewerage	0	
Business Travel	0	
Fleet transport	14	Change to electric vehicles
Other 1 (specify in comments)	-	
Total	**142**	

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3f) Detail the top 10 carbon reduction projects to be carried out by the body in the report year

Provide details of the 10 projects which are estimated to achieve the highest carbon savings during the report year.

Project name	Funding source	First full year of CO_2e savings	Estimated or actual savings	Capital cost (£)	Operational cost (£/annum)	Project lifetime (years)	Primary fuel/ emission source saved	Estimated carbon savings per year (tCO_2e/annum)	Estimated costs savings (£/annum)	Behaviour Change aspects	Comments
Replace Existing Lamps to Designated Areas with Low Energy Alternatives (DCA)	CEEF	2017/18	Estimated	66,156		10	Grid Electricity (generation)	37	12,220	No	
Install a new lighting control system (DCA)	CEEF	2017/18	Estimated	100,000		10	Grid Electricity (generation)	29	9,543	No	
Upgrade of AHU's 1,3,4,5 & 6 and BEMS renewal (DCA)	CEEF	2017/18	Estimated	90,000		10	Grid Electricity (generation)	27	8,819	No	
Install De-Stratification fans outside galleries and level 5 office (DCA)	CEEF	2017/18	Estimated	14,000		20	Natural Gas	17	2,207	No	
Chiller Replacement (DCA)	CEEF	2017/18	Estimated	90,000		10	Grid Electricity (generation)	8	2,646	No	
Hot water. Upgrade water services & install solar panel Installations (DCA)	CEEF	2017/18	Estimated	20,000		10	Natural Gas	7	970	No	
LED lighting in reception (DCA)	CEEF	2017/18	Estimated	2,000		10	Grid Electricity (generation)	3	838	No	
Diversion of Household food waste from Combustion to AD	Internal	2017/18	Estimated	334,000		15	Municipal Refuse	0	48,756	Yes	
Electric Vehicles	Internal	2017/18	Estimated	n/a		5	Diesel	14	33,152	Yes	
Reduction in CO_2 due to new lease cars	Internal	2017/18	Estimated	n/a		5	Diesel	1	2,483	No	

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3g) Estimated decrease or increase in the body's emissions attributed to factors (not reported anywhere else in this form) in the report year.

If the emissions increased or decreased due to any such factor in the report year, provide an estimate of amount and direction.

Emissions source	Total estimated annual emissions (tCO_2e)	Increase or decrease in emissions	Comments
Estate change			Unknown
Service provision			
Staff Numbers			
Other (specify in comments)	2,100	Decrease	The reduction in the grid emissions factor between 2015/16 and 2016/17 has had the impact of reducing the carbon footprint of DCC by around 2,300 tCO_2e. However, there was also a slight increase in the footprint from the changing EF for commercial waste to landfill of around 200 tonnes.
Total	2,100		

3h) Anticipated annual carbon savings from all projects implemented by the body in the year ahead.

If no projects are expected to be implemented against an emissions source, enter "0". If the organisation does not have any information for an emissions source, enter "Unknown" into the comments box. If the Organisation does not include the emissions source in its carbon footprint, enter "N/A" into the comments box.

Emissions source	Total estimated annual carbon savings (tCO_2e)	Comments
Electricity	818	Various projects (ECM1 - ECM14) plus 3 Solar PVs and streetlighting.
Natural gas	269	Various projects (ECM1 - ECM14)
Other heating fuels	0	
Waste	0	Diversion of Household waste from combustion to recycling – minimal carbon impact.
Water and sewerage	0	
Business Travel	0	
Fleet Transport	180	Electric vehicles and campaigns
Other 1 (specify in comments)		
Total	1,267	

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3i) Estimated decrease or increase in the body's emissions attributed to factors (not reported elsewhere in this form) in the year ahead.

If the emissions are likely to increase or decrease due to any such factor in the year ahead, provide an estimate of the amount and the direction.

Emissions source	Total estimated annual emissions (tCO_2e)	Increase or decrease in emissions	Comments
Estate changes	1,196	Increase	Detailed estate modelling of key building closures and opening indicates that next year (2017/18), DCC footprint will increase by around 1,200 tCO_2e, mainly from increases in electricity and natural gas consumption. Some of the impact is from increased service provision e.g. street lighting but this is not separated out in the forecasting model.
Service provision			
Staff numbers			
Other (specify in comments)	2,933	Decrease	The impact of the decreasing grid factor in 2017/18 will have a significant impact on the overall footprint.
Total	1,737	Decrease	The net effect will be a reduction in emissions but there is likely to be an increase in consumption of electricity and natural gas.

3j) Total carbon reduction project savings since the start of the year which the body uses as a baseline for its carbon footprint.

If the body has data available, estimate the total emissions savings made from projects since the start of that year ("the baseline year").

Total savings	Total estimated emissions savings (tCO_2e)	Comments
Total project savings since baseline year	7,739	This is the total reduction since the baseline year of 2007/08 for energy use in buildings. However, it is not certain that all of this is due to carbon reduction projects or alternatively that this figure does not also include some increases from estate changes, therefore underestimating the savings from energy efficiency projects. It also does not include savings from waste, water, fleet and business travel which are all likely to have been considerable.

3k) Supporting information and best practice

Provide any other relevant supporting information and any examples of best practice by the body in relation to its emissions, targets and projects.

DCC has made progress against the 5% annual emissions from energy use in buildings target. The target was achieved and exceeded (12% reduction made compared to 2015/16). This was partly due to a reduction in the grid emission factor but was also due to a reduction in consumption of grid electricity and natural gas.

4 ADAPTATION

Assessing and managing risk

4a) Has the body assessed current and future climate-related risks?

If yes, provide a reference or link to any such risk assessment(s).

- In partnership with the Scottish Cities Alliance and Jacobs, a '**Low Carbon and Climate Change Adaptation Opportunity Assessment'** was published in February 2015 which provides a high level indicative assessment of the economic risks of potential adaptation impacts at the city level.
- With support from Resource Efficient Scotland a **Climate Change Assessment Tool** workshop was held on August 2015. Part of the assessment covers a self-evaluation of the Council's adaptation performance, with five questions centred on Adaptation Scotland's 5 Steps to managing climate risks. Key priority areas and actions for improvement were identified which are outlined for future action in 4g below.
- Detailed analysis of long term climate trends were used to prepare the **Dundee Coastal Study Stage 2** (Aug 2013) as part of ongoing coastal flood risk management. The Study identifies a framework within which local Flood Protection Schemes/Works and coastal erosion defence schemes are developed at different locations along Dundee's 16.9km of coastal frontage. As part of the development of the programme, an Options Workshop was held to consider the types of coastal defences in each of the nine geographical management sections. The study identifies that there is a risk of coastal flooding within Central Dundee, Broughty Ferry, Riverside Drive and Dundee Airport.
- The **Tayside Integrated Catchment Study** is well underway and a Model has been developed. This models the sewer system and it's interaction with watercourses within Dundee and Tayside. The next stage of the Study is to prioritise the numerous flood risk areas identified throughout Dundee to be taken through to the optioneering stage. The optioneering stage will consider alternative solutions and costs and will be followed by outline design of the selected option and confirmation of the necessary funding. Thereafter, and subject to the availability of funding, detailed design will be taken forward by the appropriate authority or jointly depending on the solution proposed. Outputs will also be used to prepare a Surface Water Management Plan for Dundee.
- In partnership with other responsible authorities, the Council has prepared a **plan to reduce flood risk** within Dundee City as required by the Flood Risk Management (Scotland) Act.
- The Council has prepared and operates a **Flood Emergency Plan** that is periodically updated. The plan identifies known areas of flooding and measures to be taken when Flood Alerts are received and clearly assigns roles and responsibilities within the organisation for mitigating these events.

4b) What arrangements does the body have in place to manage climate-related risks?

Provide details of any climate change adaptation strategies, action plans and risk management procedures, and any climate change adaptation policies which apply across the body.

- The Council's **Generic Emergency and Business continuity Plans** are wide enough in scope to apply to risks associated with:
  - Disruption to energy, transport, water and ICT infrastructure and delivery networks;
  - Rising sea levels for coastal communities
  - Impacts on health and well being of individuals and communities
- **Departmental Risk Registers** may include 'climate-related' risks but are more likely to be referenced as severe weather impacts.

- The Council has prepared and operates a **Flood Emergency Plan** that is updated annually. The plan identifies known areas of flooding and measures to be taken when Flood Alerts are received and clearly assigns roles and responsibilities within the organisation for mitigating these events.

- All Council strategies, plans and programmes continue to undergo **Strategic Environmental Assessment** (SEA) to assess their environmental impact including climate change adaptation risk and opportunities.

- The Council's **Integrated Impact Assessment** (IIA) tool assists Committee report authors to consider the likely climate change adaptation impacts of their report and provide details on any required mitigating action to manage or overcome negative impacts.

Taking Action

4c) What action has the organisation taken to adapt to climate change?

Include details of work to increase awareness of the need to adapt to climate change and build the capacity of staff and stakeholders to assess risk and implement action.

Building adaptive capacity

- The Council joined Adaptation Scotland's **'Adaptation Learning Exchange'** (ALE) in May 2015 to help officers better understand and manage climate-related impacts. The programme ran from June to December and consisted of three one-day workshops and support to help build the business case for a planned approach, using the "Five Steps to Managing your Climate Risks" guidance.

- As part of the ALE programme, an **Adaptation briefing paper** was prepared for the Council's Climate Change Board in June 2015 providing info on the policy context, terminology, data projections, potential impacts on services and resources available to help the organisation.

- A briefing meeting on adaptation was held with the Council's new Elected Member champion for climate change in August 2015 and, in partnership with Adaptation Scotland, a **lunchtime briefing** was held in November 2015 for elected members and senior officers on the topic of *'Resilient communities: impacts and opportunities from a changing climate'*. The session provided information on understanding climate change terminology, trends and projections; the impacts and risks of extreme weather on our communities and services and managing climate risks and taking local action.

- Two **climate change adaptation workshops** were held in 2013 in partnership with Adaptation Scotland to raise awareness and train TAYplan colleagues on adaptation, as well and identify where policy changed could be made to promote greater integration of climate change adaptation measures.

Delivering adaptation action

- The **Tay Estuary and Montrose Basin Local Flood Risk Management Plan** was published on 22nd June 2016 in co-ordination with Angus, Aberdeenshire, PKC, Scottish Water and SEPA. The plan is to be reviewed and updated every 6 years after publication.

- The **Tayside Integrated Catchment Study Model** has been developed to assist with the above. It models the sewer system and it's interaction with watercourses within Dundee and Tayside. The next stage of the Study is to prioritise the numerous flood risk areas identified throughout Dundee to be taken through to the optioneering stage. The optioneering stage will consider alternative solutions and costs and will be followed by outline design of the selected option and confirmation of the necessary funding. Thereafter, and subject to the availability of funding, detailed design will be taken forward by the appropriate authority or jointly depending on the solution proposed. Outputs will also be used to prepare a Surface Water Management Plan for Dundee.

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- Following on from the Dundee Coastal Study Stage 2, **two Flood Protection Schemes** are currently underway:
  - *City Quay to Central Waterfront* and *Central Waterfront to Dundee Airport*. Construction works creating set back walls and flood gates commenced in March 2017 and are due to be completed in May 2018.
  - *Broughty Ferry Town - Douglas Terrace to Broughty Castle*. It is proposed to construct a new river wall and steps along with walkway and a combination of setback wall and gates that will provide flood protection. Design stage currently well underway. It is anticipated that these works will commence in summer 2018 subject to the successful promotion of a Flood Protection Scheme. This Scheme will also include soft flood protection measures utilising the existing sand dunes along Broughty Ferry Esplanade from the car park to the Glass Pavillon and the installation of a gabion matress or equivalent to protect the Grassy Beach area.

- Greenspace / Biodiversity / Green infrastructure:
  - **Annual Wildflower meadows** – strategic introduction of annual wildflowers for pollinators and people using existing green infrastructure.
  - **Community Growing** – establishment of community growing opportunities for local people in areas of deprivation contributing to health and wellbeing, as well as reducing food miles / carbon footprint of fruit and vegetables.
  - Development of active travel opportunities for local people using **green infrastructure** and greenspaces.

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4d) Where applicable, what progress has the body made in delivering the policies and proposals referenced N1, N2, N3, B1, B2, B3, S1, S2 and S3 in the Scottish Climate Change Programme(a) ("the Programme") ?

If the body is listed in the Programme as a body responsible for the delivery of one or more policies and proposals under the objectives N1, N2, N3, B1, B2, B3, S1, S2 and S3, provide details of the progress made by the body in delivering each policy or proposal in the report year. If it is not responsible for delivering any policy or proposal under a particular objective enter "N/A" in the 'Delivery progress' column for that objective.

(a) The Programme aims to address impacts identified for Scotland in the UK-wide climate change risk assessment which are not otherwise addressed by the UK-wide National Adaptation Programme through policy in relation to reserved matters.

Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
[N1] Understand the effects of climate change and their impacts on the natural environment	Natural Environment	[N1-8] Understand the risks associated with coastal flooding through development and implementation of local flood risk plans.	Dundee City Council has engaged in the development of the Local Flood Risk Management Plan through membership of the Tay Estuary and Montrose Basin (TEAMB) Local Plan District.
		[N1-10] Developing datasets to support flood risk, river and coastal management. A requirement of the Flood Risk Management (Scotland) Act is to develop a programme to integrate necessary data.	Analysis of long term trends used to inform Dundee Coastal Study Stage 2 and as part of ongoing flood risk management. The Tayside Integrated Catchment Study is well underway and a Model has been developed. This models the sewer system and it's interaction with watercourses within Dundee and Tayside. The next stage of the Study is to prioritise the numerous flood risk areas identified throughout Dundee to be taken through to the optioneering stage. The optioneering stage will consider alternative solutions and costs and will be followed by outline design of the selected option and confirmation of the necessary funding. Thereafter, and subject to the availability of funding, detailed design will be taken forward by the appropriate authority or jointly depending on the solution proposed. Outputs will also be used to prepare a Surface Water Management Plan for Dundee. Local Development Plan – Policy 41 recognises the implications of climate change and sea level rise and there is a presumption against development in areas vulnerable to coastal erosion, flood risk and rising sea levels.

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[N2] Support a healthy and diverse natural environment with capacity to adapt	Natural Environment	[N2-2] The Scottish Planning Policy includes green networks, green space, street trees and other vegetation, green roofs, wetlands and other water features, and coastal habitats in helping Scotland to mitigate and adapt to climate change. [N2-11] Embed climate change adaptation considerations, and potential responses such as habitat networks and green networks, into wider land use planning decisions through the use of Forestry and Woodland Strategies, regional land use strategies, and Strategic and Local Development Plans and development master-plans.	The Local Development Plan (LDP) contains policies on green networks, habitat enhancement. The LDP non-statutory planning guidance on the Dundee Green Network was published in 2016. Key development principles are outlined in relation to climate change adaptation and mitigation; improve quality of place; facilitate people to lead healthier lives; protect and enhance the city's green and blue assets. The City Council's Biodiversity Duty report was agreed in June 2017. Commitment made for production of Biodiversity Duty Action Plan in 2018.
		[N2-18] Support the development of Local Flood Risk Management Plans. This will manage waters and coasts at a river catchment level and include local flood risk management plans. [N2-20] Assess and manage coasts, promoting adaptive coastal management that works with natural processes.	Dundee City Council has engaged in the development of the Local Flood Risk Management Plan through membership of the Tay Estuary and Montrose Basin (TEAMB) Local Plan District.

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Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
[N3] Sustain and enhance the benefits, goods and services that the natural environment provides	Natural Environment		N/A Dundee City Council is not listed as a responsible authority for this objective
[B1] Understand the effects of climate change and their impacts on buildings and infrastructure networks	Buildings and infrastructure networks	[B1-13] Flood Risk Management Plans - The Flood Risk Management (Scotland) Act 2009 requires the development of Flood Risk Management Strategies (FRMS) and Local Flood Risk Management Plans (LFRMP).	Dundee City Council has engaged in the development of the Local Flood Risk Management Plan through membership of the Tay Estuary and Montrose Basin (TEAMB) Local Plan District. Local Development Plan Policy 41 recognises the implications of climate change and sea level rise and there is a presumption against development in areas vulnerable to coastal erosion, flood risk and rising sea levels. The Tayside Integrated Catchment Study is well underway and a Model has been developed. This models the sewer system and it's interaction with watercourses within Dundee and Tayside. The next stage of the Study is to prioritise the numerous flood risk areas identified throughout Dundee to be taken through to the optioneering stage. The optioneering stage will consider alternative solutions and costs and will be followed by outline design of the selected option and confirmation of the necessary funding. Thereafter, and subject to the availability of funding, detailed design will be taken forward by the appropriate authority or jointly depending on the solution proposed. Outputs will also be used to prepare a Surface Water Management Plan for Dundee.
[B2] Provide the knowledge, skills and tools to manage climate change impacts on buildings and infrastructure	Building and infrastructure networks		N/A Dundee City Council is not listed as a responsible authority for this objective

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Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
[B3] Increase the resilience of buildings and infrastructure networks to sustain and enhance the benefits and services provided	Buildings and infrastructure networks	[B3-3] Scottish Planning Policy (SPP) (Climate Change) identifies that short and long term impacts of climate change should be taken into account in all decisions throughout the planning system.	Adopted LDP policies encourage installation of low and zero carbon generating technology in new buildings, active travel and development of network of green infrastructure. Review in forthcoming Main Issues Reports/SEA process and supplementary planning guidance. New non-statutory planning guidance published for public consultation on the Dundee Green Network to promote opportunities to enhance and protect.
		[B3-6] Home Energy Efficiency Programme for Scotland. Delivering heating and insulation measures across Scotland to help improve energy efficiency and reduce energy demands of existing housing stock in the most fuel poor areas. [B3-7] The Energy Efficiency Standard for Social Housing sets a minimum standard for energy efficiency in social housing. All social housing will be expected to meet the standard by 2020.	Council continues to maximise impact of the Home Energy Efficiency Programme Scotland – Area Based Schemes (HEEPS:ABS) funding by combining with its own capital budget and ECO funding from SSE to externally insulate mixed tenure blocks of flats in former Council estates that are either solid wall or non-traditional construction. Over 2,500 properties (split 50/50 between social and private) have been externally insulated since inception in areas such as Clepington Road, Byron Street, Maitland Street, Graham Street (Woodlands), Hospital Street and Hospital Park. These properties have been visibly transformed, resulting in reduced (fossil) fuel use and increased comfort and warmth for householders. Project areas have been identified, prioritised by most Fuel Poor first, and a process review undertaken in order to enable quick mobilisation in partnership with SSE and start on site should new funding become available. The Council's HEEPS:ABS allocation for 2015/16 was £2,647,500 and an additional £647,000 was secured near year end which has helped to mitigate the lower 2016/17 allocation of £1,238,929 by allowing a 2016/17 priority area, Sandeman Street, to be brought forward. The 2017/18 HEEPS:ABS allocation was £1.345m (with a subsequent additional £75k allocated), meaning fewer private properties can be insulated. Council will fully utilise the £10.7m set aside for its own properties by directing some of it to Council cottages which can be insulated independently of private neighbouring properties. Dundee Energy Efficiency Advice Project (DEEAP) advisors, Private Sector Services Unit (PSSU), Care and Repair and Asset Management staff continue to raise awareness and make referrals to Home Energy Scotland (HES) for private owners and tenants.

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Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
		[B3-8] Improve Housing Quality by ensuring all houses meet the tolerable standard, and that all social housing meets the Scottish Housing Quality Standard (SHQS) by 2015.	At the end of 2015, Dundee City Council required only 143 abeyances for the energy efficiency component of SHQS out of a stock of 12750 properties. This amounts to 1.12% and therefore 98.88% of the stock was energy-efficient. Measures carried out over the course of the year towards achievement of SHQS included installation of: – New roofs (including loft insulation of 300mm) at 36 properties; – New, energy-efficient windows at 129 properties; – 1353 new, energy-efficient gas heating systems; and External Wall insulation (EWI) at 475 solid-wall and non-traditional properties both Council and private using a blend of HEEPS:ABS, ECO and Council's own capital funding.
[S1] Understand the effects of climate change and their impacts on people, homes and communities	Society		N/A Dundee City Council is not listed as a responsible authority for this objective, however its Flood Emergency Plan is identifies known areas of flooding and measures to be taken when Flood Alerts are received and clearly assigns roles and responsibilities within the organisation for mitigating these events.
[S2] Increase the awareness of the impacts of climate change to enable people to adapt to future extreme weather events	Society		N/A Dundee City Council is not listed as a responsible authority for this objective however, in partnership with other responsible authorities, the development and implementation of the Local Flood Risk Management Plan includes elements of awareness raising.
[S3] Support of our health services and emergency responders to enable them to respond effectively to the increased pressures associated with a changing climate	Society		N/A Dundee City Council is not listed as a responsible authority for this objective however, the Council support health service and emergency responders within the duties of the Civil Contingencies (Scotland) Act 2005.

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Review, monitoring and evaluation

4e) What arrangements does the body have in place to review current and future climate risks?

Provide details of arrangements to review current and future climate risks, for example, what timescales are in place to review the climate change risk assessments referred to in Question 4(a) and adaptation strategies, action plans, procedures and policies in Question 4(b).

- The Council is committed to developing a city-wide **'Sustainable Energy & Climate Action Plan'** (SECAP) which will provide the leadership, commitment and planning necessary for the transition to a low carbon future. Resilience and Adaptation has been identified as one of the plan's six strategic programme areas and to assist in plan preparation, a 'Climate Change Risk and Vulnerability Assessment' will be undertaken to determine the nature and extent of climate-related risks by analysing potential hazards and assessing the vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment of Dundee.
- Participation in Adaptation Scotland's **'Adaptation Learning Exchange'** continues to assist officers in climate change, risk & resilience and planning related fields to build their knowledge base and capacity to respond to adaptation at an organisational level and provide them with the support to communicate adaptation issues and present robust business cases for taking action.
- The Council's **Integrated Impact Assessment** (IIA) tool assists Committee report authors to consider the likely climate change adaptation impacts of their report and provide details on any required mitigating action to manage or overcome negative impacts.

4f) What arrangements does the body have in place to monitor and evaluate the impact of the adaptation actions?

Please provide details of monitoring and evaluation criteria and adaptation indicators used to assess the effectiveness of actions detailed under Question 4(c) and Question 4(d)

- **Surface Water Management Planning Group** will be set up to monitor the effectiveness of flood protection measures carried out. Annual surveys are also carried out to monitor coastal erosion and assess bodies of water.
- The **Flood Emergency Plan** requires the Council to record effectiveness of implementation of mitigation measures and record new areas that require attention.
- The Council will work in partnership with SEPA to review and update their **Flood Maps**.

Future priorities for adaptation

4g) What are the body's top 5 priorities for the year ahead in relation to climate change adaptation?

Provide a summary of the areas and activities of focus for the year ahead.

1) Prepare a 'Climate Change Risk and Vulnerability Assessment' to determine the nature and extent of climate-related risks.
2) Via the Dundee Partnership, commence preparation of the city's Sustainable Energy and Climate Action Plan, including the 'Adaptation & Resilience' strategic programme.
3) Investigate opportunities for collaborative working on climate change adaptation with the city's universities and neighbouring Councils.
4) Develop a Biodiversity Duty Action Plan by the end of 2018 which incorporates adaptation and resilience, and considers the ecosystems service functions of Dundee's greenspaces.
5) Continue to participate in the 'Adaptation Learning Exchange'.

4h) Supporting information and best practice

Provide any other relevant supporting information and any examples of adaptation best practice.

None.

5 PROCUREMENT

5a) How have procurement policies contributed to compliance with climate change duties?

Provide information relating to how the procurement policies of the body have contributed to its compliance with climate changes duties.

- The **Tayside Procurement Consortium** (TPC) is a collaborative procurement team created by Dundee City, Angus and Perth and Kinross Councils, to manage collaborative procurement activity on behalf of the three Tayside Councils.

- The TPC **'Sustainable Procurement Policy'** (http://www.taysideprocurement.gov.uk/strategy) was introduced to support the Council comply with its climate change duties and commits to buying more sustainably, which in turn can offer whole life cost efficiency, supports the commitment to Corporate Social Responsibility and can promote health improvements amongst stakeholders. Key sustainable procurement objectives addressed by the policy are:

  - Seek to reduce carbon emissions through developing improved specification.
  - Seek to contribute to climate change adaptation through procurement activity.
  - Embed sustainability at the heart of procurement activity and deliver a number of specific sustainable outcomes.

- Examples of where procurement policy has delivered on climate change aims include:

  - **Electric Vehicle Charging Points** - a TPC collaborative framework is available allowing the City Council and others to increase of the number of charge points in the Tayside area allowing wider use of electric vehicles and positively contributing to our climate change commitment.
  - **Street Lighting** - Bulk Renewal of Luminaries - a collaborative framework is available allowing the City Council with includes opportunity to secure the following benefits:
    - Reduced expenditure on energy costs;
    - Reductions in carbon emissions due to the higher energy efficiency of LED luminaires;
    - Replacing traditional lamps with LED lanterns will result in operational efficiencies through reduction in travel and material costs as LED lanterns have a 12 year warranty lifespan;
    - Suppliers are required to dispose of all waste equipment in accordance with the WEEE regulations.

- Dundee became Scotland's first **Fairtrade City** in 2004 and updated it Fairtrade Policy in 2012. The Council continues to undertake activities in support of its policy:

  - Only fair trade tea and coffee is now provided by the City Chambers when providing hospitality for meetings and events;
  - Tendering procedures for caterers at the annual Food Festival run by the Council have been strengthened to ensure they provide fair trade products, and we have given a free stall at the Festival to Dundee Fair Trade Forum to promote fair trade products;
  - The Council's Community Benefits Officer is working with Dundee Fair Trade Forum to explore ways to promote fair trade among private sector contractors working on major Council projects.
  - Information about fair trade on the Council's website and staff intranet has been expanded and high profile 'we are a fair trade city' signs have been installed on the three main routes into the city;
  - The Council has hosted fair trade breakfasts and a stall aimed at staff during Fair Trade Fortnight as well as paying for window stickers issued by Dundee Fair Trade Forum to local cafes and shops which sell fair trade products;
  - Fair trade footballs have been purchased by the Council and its leisure partner Leisure and Culture Dundee;
  - Further information: http://www.dundeecity.gov.uk/fairtrade

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5b) How has procurement activity contributed to compliance with climate change duties?

Provide information relating to how procurement activity by the body has contributed to its compliance with climate change duties.

- Sustainable outcomes are included in TPC specifications. Examples of positive outcomes delivered in 2011/176 include:
  - The **Vehicle parts Framework** includes outcomes a range of sustainable measures including reusing packaging, using biodegradable packaging materials ,recycling of all general waste, waste fuel, oils and oil filters, uplifting old batteries from customers for collection direct to the manufacturer for recycling, and adoption of the latest model delivery vehicles with Euro 5/6 engines**.**
  - The **Domestic furniture and Furnishing Framework** includes a reuse furniture lot and suppliers were also required to maximise recycling, reuse and redistribution. A range of sustainable measures were included - such as a target to divert waste to landfill , a reduction of fuel consumption , re-distribution and recycling of furniture that has not reached its end of life with local organisations and social enterprises.
  - The **IT consumables framework** includes minimum specification for the latest energy efficiency recyclable and environmental accredited products.
  - All TPC officers have been fully trained in the **'Marrakech Sustainable Public Procurement Training'** sessions and embed sustainable procurement practices within all TPC procurement activity through reviewing the need to specification, ITT and evaluation, supplier selection and contract management.
- The Council continues to use the innovative resource-redistribution tool **WARPit** – that makes it easy for staff to obtain unwanted resources within the council and beyond, reducing procurement spend and waste disposal costs, as well as minimising waste and reducing carbon emissions. By the end of August 2017, WARPit had helped the council divert almost 25 tonnes of waste, saved 73 tonnes of CO_2 and saved the Council its partners £170,000 in avoided procurement costs.
- The Council had previously made a silver pledge under **WWF's 'What Wood You Choose' campaign**, to improve our procurement of sustainability timber products for Council construction and maintenance/ repairs projects. The Council was awarded its Silver Pledge in August 2014 and continue to monitor all new Council timber procurement contracts, requiring timber suppliers to provide a copy of their relevant chain of custody certification at the start of construction as stated in section 236 of the Council's Bill of Quantity stipulating sustainable timber to be used on all contracts.
- Recent Civil Engineering projects include a requirement on the contractor to prepare a **Site Waste Management Plan** at tender stage and to monitor and maintain this during construction. This allows partners within the contract to develop a strategy for site waste at an early stage and ensure that this is implemented throughout the project. This information can be used at a senior level to help manage waste, for example the potential reuse of earthworks and demolition materials across Council projects.

Further information

5c) Supporting Information and best practice

Provide any other relevant supporting information and any examples of best practice by the organisation in relation to procurement.

None.

6 VALIDATION AND DECLARATION

6a) Internal validation process

Briefly describe the body's internal validation process, if any, of the data or information contained within this report.

Data and information is sourced from relevant departments and collated by the Sustainability and Climate Change Manager. The report is then circulated internally for verification before being presented to Council Management Team for further comment before submitted to the Council's Policy and Resources Committee for approval.

6b) Peer validation process

Briefly describe the body's peer validation process, if any, of the data or information contained within this report.

The report is circulated internally to relevant officers for verification.

6c) External validation process

Briefly describe the body's external validation process, if any, of the data or information contained within this report.

Information and data contained in Section 3 of the report was audited by a third party organisation (Carbon Forecast Ltd) as part of a programme of support to improve carbon management data and the methodologies for completing data sources were documented.

6d) No Validation Process

If any information provided in this report has not been validated, identify the information in question and explain why it has not been validated.

N/A

6e) Declaration

I confirm that the information in this report is accurate and provides a fair representation of the body's performance in relation to climate change.

Name:	Bryan Harris
Role in the organisation:	Sustainability and Climate change Manager
Date:	14th September 2017