ITEM No …2……..

REPORT TO: **POLICY & RESOURCES COMMITTEE - 18 NOVEMBER 2019**

REPORT ON: **PUBLIC BODIES CLIMATE CHANGE DUTIES – ANNUAL REPORT 2018/2019**

REPORT BY: **EXECUTIVE DIRECTOR OF CITY DEVELOPMENT**

REPORT NO: **362-2019**

1 PURPOSE OF REPORT

1.1 To inform Committee of the work undertaken over the period April 2018 to March 2019 in support of the Council's duties under the Climate Change (Scotland) Act 2009.

1.2 To agree the 2018/2019 "Public Bodies Climate Change Duties" (PBCCD) report.

2 RECOMMENDATION

2.1 It is recommended that the Committee:

a note that the Council's carbon emissions have decreased by 13% between the 2017/18 and 2018/19 reporting period;

b note that emissions from energy use in Council buildings have decreased by 17% between the 2017/18 and 2018/19 reporting period;

c note that the Council's overall carbon footprint has reduced by 40% from the 2007/08 baseline year;

d agrees the content of the 2018/2019 Public Bodies Climate Change Duties Report.

3 FINANCIAL IMPLICATIONS

3.1 Any anticipated costs associated with the implementation of the PBCCD will be contained within existing capital and revenue budgets. The financial implications for the Council in meeting net-zero greenhouse gas emissions are largely unknown at present and further costed work will be required to identify future policies and measures and quantify their potential emissions reduction impact.

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:

a in the way best calculated to contribute to the delivery of Scotland's climate change targets;

b in the way best calculated to help deliver any Scottish adaptation programme; and

c in a way that it considers most sustainable.

4.2 In November 2014, the Scottish Government announced its intentions to use powers in the Climate Change (Scotland) Act 2009 to introduce a Public Bodies Climate Change Duties (PBCCD) reporting requirement for 180 'major players' reflecting the expectation that the public sector will lead by example in tackling climate change. This is the fourth annual reporting period for PBCCD.

5 THE 2018/2019 PUBLIC BODIES CLIMATE CHANGE DUTIES REPORT

5.1 The Council's PBCCD Report for 2018/2019 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 An additional 'Recommended Reporting' section is included which captures climate change activity not covered elsewhere in the report.

5.3 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:

a clearly defining the Council's carbon management boundary;

b the need to overhaul the Council's processes relating to carbon emissions and establish a system to store and manage consumption data; and

c create a project register so that progress towards the Council's emissions reduction target can be better measured.

5.4 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.

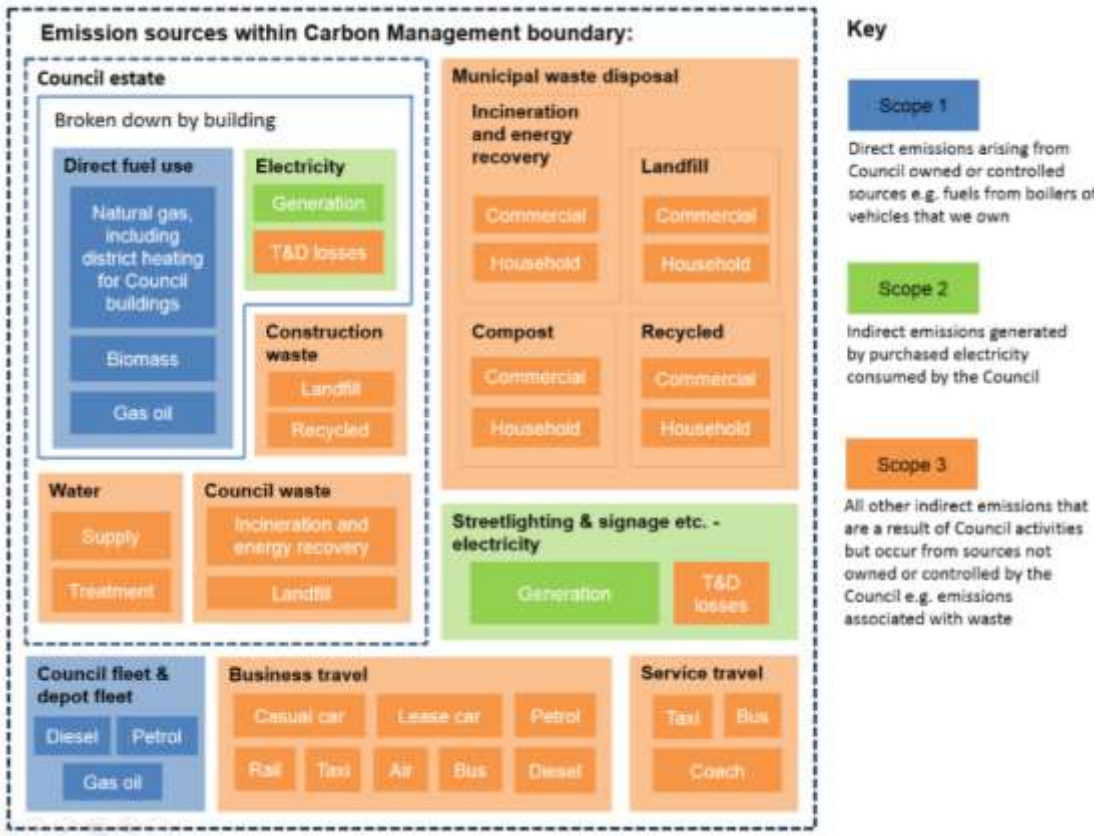
5.5 <u>Carbon Management Boundary</u>

a The boundary was fully re-scoped and extended in 2016 as shown in Figure 1. It should be noted that the boundary is subject to annual change as, over the target period 2007/2008 to 2019/2020, assets are disposed of, new assets are acquired and the functions of the organisation evolve. The boundary is therefore reassessed on an annual basis, along with the Council's asset list, to make sure that the carbon management boundary is applied consistently to new sources.

b From 2014/2015 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 carbon factors from the UK Dept. for Business, Energy & Industrial Strategy (BEIS) to convert consumption units to tonnes of carbon dioxide equivalents (tCO_2e are a way of expressing all greenhouse gas emissions in common units).

c 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 2018/2019



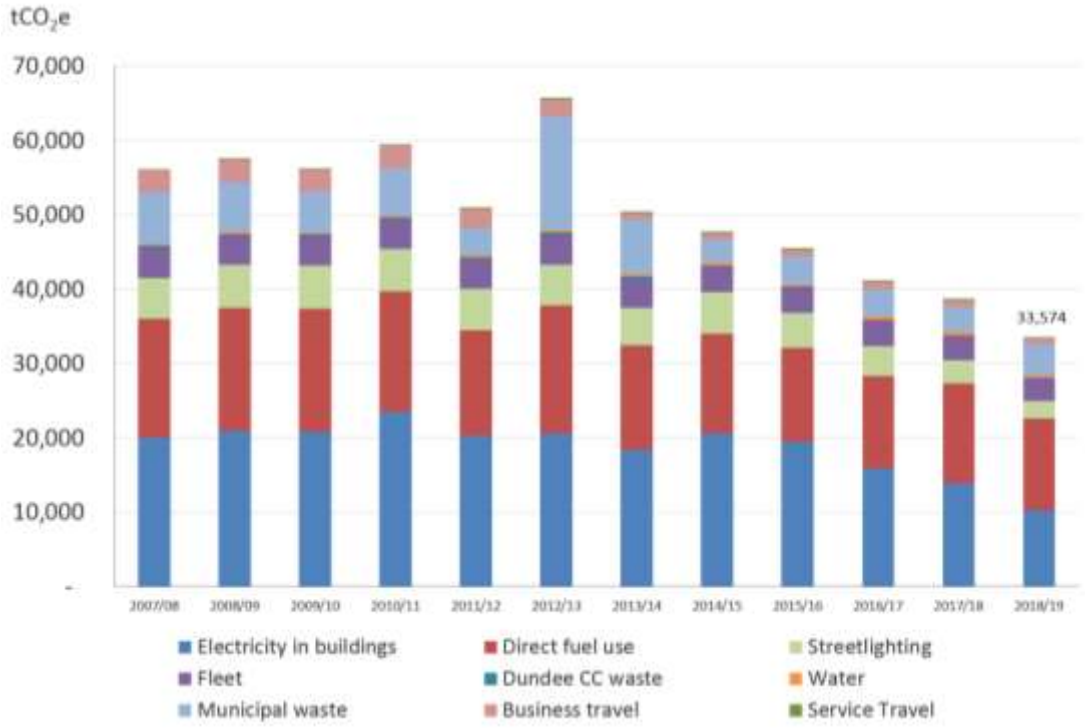
5.6 Carbon Footprint Data

In order to provide consistency, a decision was taken in 2015 to re-baseline 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 2018/19, 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.

5.7 Analysis of 2018/2019 Carbon Footprint Data

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

Figure 2: DCC Carbon Footprint: 2007/08 to 2018/2019



Headline messages:

- overall emissions have decreased by 13% compared to the previous year;
- emissions from energy use in buildings have decreased by 17% compared to the previous year;
- from the baseline year of 2007/08, the overall footprint has reduced by 40%;
- 69% of the Council's emissions come from heating, lighting and powering its buildings; and
- costs associated with emissions from energy and water use, fleet, service and business travel are estimated to be £11.5m.

Key points:

- there was an overall decrease in electricity, gas and heating oil consumption (8% less than previous year) as well as a reduction in the grid emission factor (a measurement of CO_2 emissions intensity per unit of electricity generation in the grid system (tCO_2/MWh)) which also decreased by 20% compared to 2017/2018);
- part of this decrease can be attributed to changes to the building stock with the closure of several primary schools, however this was partially offset by the opening of replacement schools (eg North East campus and Baldragon first full year). New schools can increase total energy consumption despite using more energy efficient materials and equipment. This is due to larger buildings with more electrical equipment overall (ICT, air conditioning, floodlights etc), as well as being occupied for longer hours for community use;

- most of the reduction in electricity consumption was due to improvements in energy efficiency of buildings through the Non-Domestic Energy Efficiency programme as well as the LED street light replacement programme;

- outdoor temperatures were slightly milder overall than the previous year with 9% less degree days (a measurement designed to quantify the demand for energy needed to heat a building), which meant heating related emissions were lower;

- a fire at Braeview Academy, leaving the school unoccupied for 3 months during the winter period, led to significant reduction in gas oil consumption;

- the biomass footprint increased slightly as it was fully operational compared to the previous year, when the Crescent boiler was out of operation for a period over the winter months. The Emission Factor and costs also reduced in the period;

- there has been a slight increase in municipal waste to landfill and combustion;

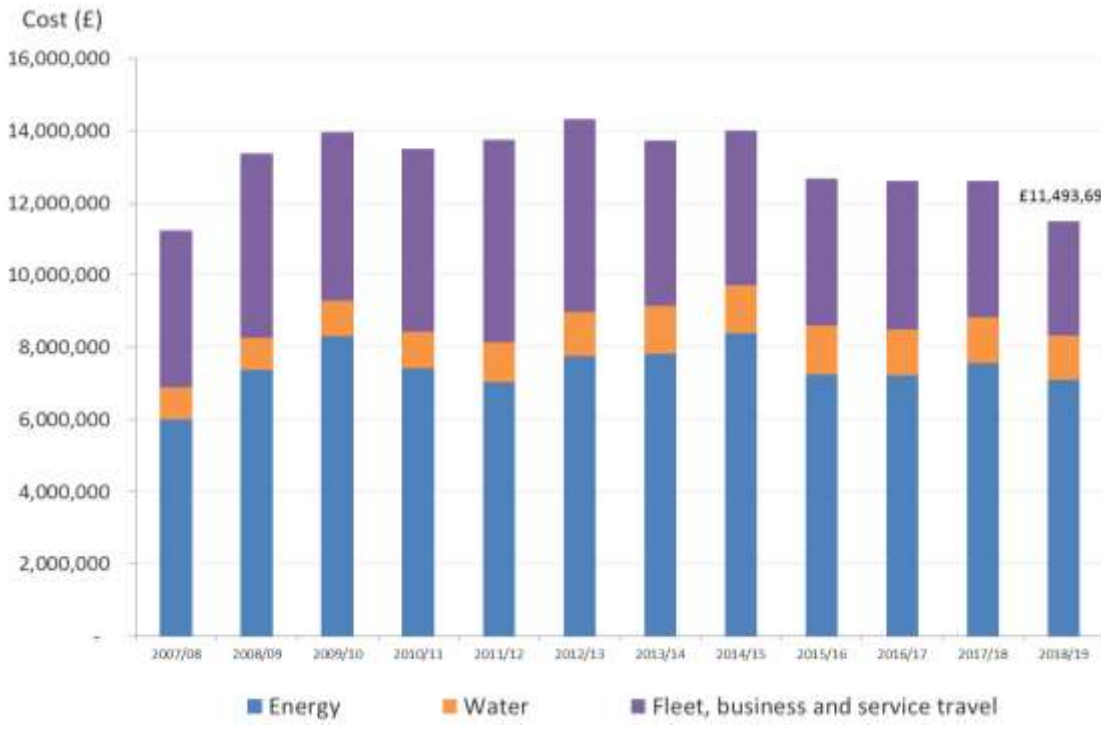
- the Fleet carbon footprint is continuing to reduce, most likely due to an increase in use of electric vehicles. The costs of fuel have risen; and.

- minor reductions in water consumption were recorded due to building closures.

5.8 Analysis of 2018/2019 Carbon Footprint Costs

The progress of Dundee City Council's footprint costs is shown in Figure 3.

Figure 3: DCC Carbon Footprint Costs - 2007/2008 to 2018/2019



- Costs associated with emissions from energy and water use, fleet, service and business travel are estimated to be £11.5m.

- Energy and water costs have risen slightly in 2018/19.

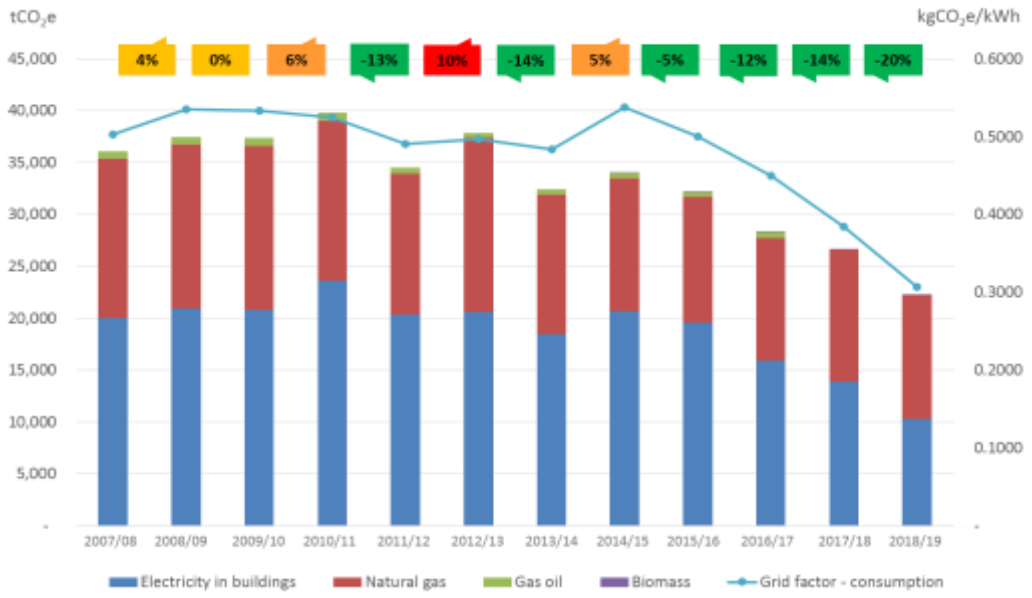
- There has been an overall decrease in the consumption of fuel with the transition to electric vehicles and less mileage covered. This is despite the cost of fuel increasing over the period.

5.9 Targets

a The Council's Carbon Management Plan target is to reduce energy use in buildings (measured in CO_2e) by 5% per annum. A 17% reduction was achieved in 2018/2019.

b It should be noted that it is 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 four years, there has been a significant reduction in the emission factor for grid electricity as shown in Figure 4.

Figure 4: DCC Energy in Buildings Carbon Footprint: 2007/2008 to 2018/2019



c The Council's existing carbon management target will continue until 2019/2020 at which time a full redraft of the Council's Carbon Management Plan will take place.

5.10 Carbon Reduction Project Register

a As part of the 2016 re-scoping exercise, a preliminary Carbon Footprint Project Register was prepared. This register continues to be refined annually by identifying and including existing and proposed Council projects that will help the Council better measure and manage progress of carbon reduction interventions. Investment in the Non-Domestic Energy Efficiency basket of projects and Street lighting LED programme are starting to have positive impact on carbon savings and will continue to have a significant positive impact on carbon savings over the next few years.

b Further details of projects contributing to reducing emissions and adapting to climate change are outlined in Appendix 1

6 CARBON MANAGEMENT PLAN - ACHIEVING NET ZERO

6.1 The Council's Carbon Management Plan is due to be reviewed and updated in 2020 and a new carbon reduction target will be set, taking recognisance of the recent city-wide target for Dundee to achieve net-zero greenhouse gas emissions by 2045 or sooner and the Scottish Government's current consultation on the role of Public Sector Bodies in tackling climate change which proposes that future PBCCD reports be amended to:

a require all Public Sector Bodies to state the year by which they will cease to emit any direct (organisational) greenhouse gases and their targets for reducing indirect (area-wide) emissions; and

b report on how Public Sector Bodies will align their spending plans with these targets.

6.2 In order to meet a new target, actions will require to be identified from across Council services. The Carbon Footprinting and Project Register Tool is a useful start, combined with actions identified during the preparation of the city-wide Climate Action Plan.

6.3 As part of the plan the Council had agreed to develop a carbon budget and that the Executive Director of City Development and Executive Director of Corporate Services will bring back a report to Committee in 2020 recommending a way forward and highlight resources required (Article V of the Minute of the Meeting of Policy and Resources Committee 24 June 2019, Report no. 258-2019 refers). A carbon budget allocates an allowance of emissions for the following financial year. Council Services would then be required to keep within this allowance over the financial year allowing the Council to better manage how it works towards meeting its emission reduction targets.

7 POLICY IMPLICATIONS

7.1 This report has been subject to an assessment of any impacts on Equality and Diversity, Fairness and Poverty, Environment and Corporate Risk. A copy of the Impact Assessment is available on the Council's website at www.dundeecity.gov.uk/iia.

8 CONSULTATIONS

8.1 The Council Management Team were consulted in the preparation of this report.

9 BACKGROUND PAPERS

9.1 None.

Neil Martin
Acting Head of Design and Property

Author: Bryan Harris

Robin Presswood
Executive Director of City Development

Dundee City Council
Dundee House, Dundee

NM/BH/KM 29 October 2019

PUBLIC BODIES CLIMATE CHANGE DUTIES – 2018/19 ANNUAL REPORT

1 PROFILE OF REPORTING BODY

1a) Name of reporting body

Dundee City Council

1b) Type of body

Local Authority

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

6,124

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	148,750	NRS, 2018 Mid-Year Estimate
Other (specify in comments)			

1e) Overall budget of the body

Specify approximate £/annum for the report year.

£351,085,000

1f) Report year

Specify the report year

2018/2019 (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 an important 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, offshore wind, oil and gas, and decommissioning sectors. 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 – Waste policy & planning, collection and disposal of municipal waste, composting operations, collection of recyclates for onward treatment as per national regulations and promotion of waste reduction & reuse activities. Waste education & awareness-raising to encourage behavioural change, route planning & optimisation and statutory waste data reporting."

*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 **Sustainable Dundee Working Group** was formed at the inaugural meeting on the 8th March 2018, organised by the Sustainability and Climate Change (S&CC) team. The broad purpose of the group is to take forward ideas, projects, actions and communications relating to sustainability within Dundee City Council. The group is responsible for overseeing progress on climate change activity and in turn reports to the Council Management Team.

Proposals can be agreed at the working group level. Decisions concerning projects with significant financial or strategic considerations will be taken to the Council Management Team.

Officers from the following departments participate in the working group. These are shown under the Climate Action Plan topics; one of the major projects the group will take forward in partnership with the wider Dundee community.

Energy	Transport	Waste	Resilience	Governance/ Strategy/policy
▪ Domestic ▪ Non-Domestic ▪ Street Lighting ▪ Housing ▪ Design and Property ▪ Business Dev. ▪ Planning	▪ Sustainable Transport ▪ Fleet ▪ Air Quality	▪ Municipal Waste ▪ Internal Resources ▪ Circular Economy	▪ Flooding ▪ Environment/ Biodiversity	▪ Sustainable Development/ Climate Change ▪ Finance ▪ Procurement ▪ Funding

The Working Group meets every two months to discuss Energy, Transport and Waste issues. Wider sustainability issues (e.g. air quality, adaptation, biodiversity, policy, procurement) are considered when required. Performance is reported via the Council's Pentana database.

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 2018/19, 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, finance, IT, staff travel);
- Neighbourhood Services (housing, community facilities, waste, air quality, greenspace, biodiversity).

Responsibility for climate change activity is led by the City Development Department. The internal Sustainable Dundee Working Group meets every 8 weeks to embed carbon management across departments and assist with the communication, facilitation and promotion of initiatives.

<u>Carbon Emissions</u>

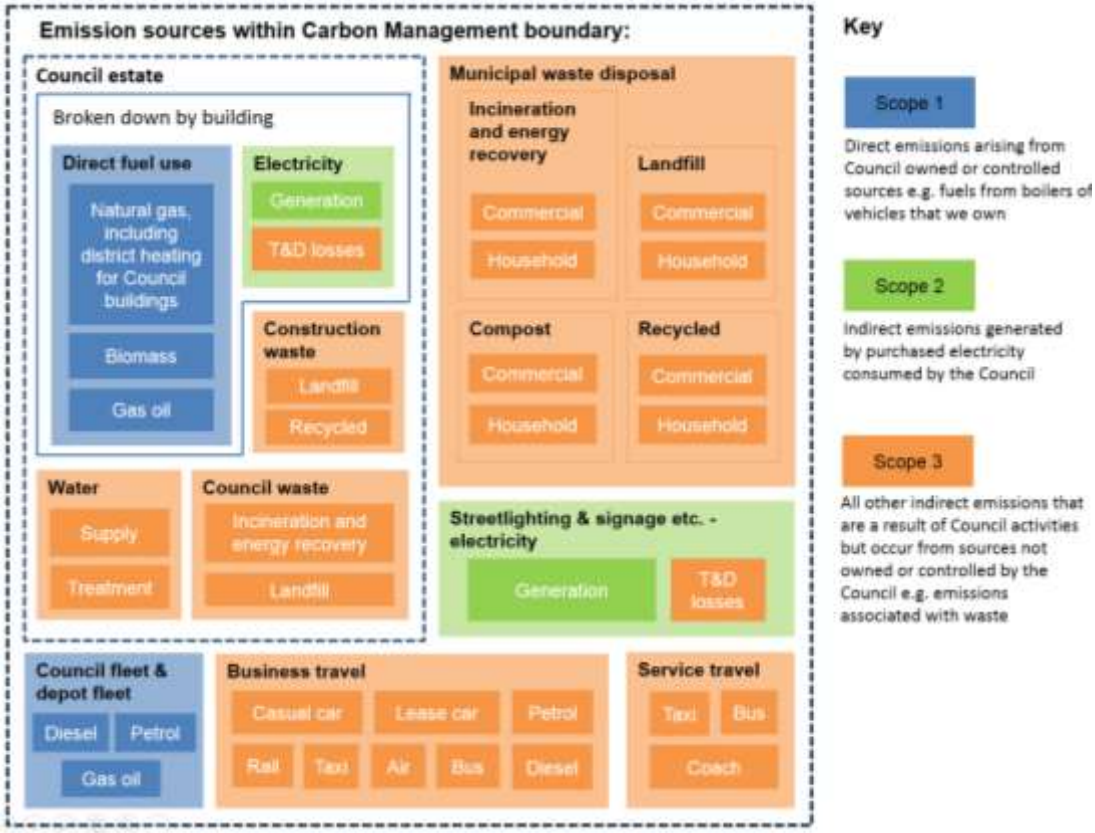
- The Council's **carbon footprint boundary** was re-scoped in 2016 by officers from a range of Council services. Data for each emission source within the defined boundary is collated annually and calculated, identifying scope 1, scope 2 and scope 3 emissions. The data is presented to Council Management Team and Committee as part of the Council's statutory '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** was 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 **Carbon Footprint Projects Register** has been compiled using the 'Carbon Footprint Forecast & Projects Register Tool' as developed by Resource Efficient Scotland. This register was further developed during 2017 and is updated annually by identifying and including existing and proposed Council projects that will help the Council better measure and manage progress of carbon reduction interventions.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

Dundee City Council Carbon Footprint Boundary established 2016/17 unchanged for 2018/19:



Embedding Climate Change within the organisation

- A new city-wide **Climate Action Plan** will contain a number of Council led carbon emission reduction actions across various departments; these will be monitored within the Council's Pentana Management Information System.

- 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. An **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. This was re-promoted to staff in summer 2019.

- 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 2018/19

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
Building Strong and Empowered Communities: Improve housing quality, choice and affordability. Increase District Heating Systems and Maximise External Wall insulation programme	City Plan (2017 – 2026) p. 43-44 https://www.dundeecity.gov.uk/sites/default/files/publications/cityplan.pdf
	Council Plan 2017-2022 p.42 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1722.pdf
Building Strong and Empowered Communities: Improve access to healthy green and open spaces	City Plan (2017 – 2026) p. 43-44 https://www.dundeecity.gov.uk/sites/default/files/publications/cityplan.pdf
	Council Plan 2017-2022 p.42 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1722.pdf
Building Strong and Empowered Communities: Improve transport connections to communities.	City Plan (2017 – 2026) p.43-44 https://www.dundeecity.gov.uk/sites/default/files/publications/cityplan.pdf
	Council Plan 2017-2022 p.42 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1722.pdf
Strong and Safe Communities: Recycling waste to meet Scotland's' Zero Waste ambitions.	Council Plan 2017-2022 p.40-41 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1722.pdf
Fair Work and Enterprise: Publish a Climate Change Action Plan: Deliver sustained reductions in CO_2 emissions and increased use of renewables in energy production and consumption.	Council Plan 2017-2022 p.34 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1722.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.

Since signing the City up to the **Covenant of Mayors for Climate and Energy** on March 2018, the Council has worked with public, private and community organisations via the Dundee Partnership to co-design a **Dundee Climate Action Plan** which contains actions on Energy, Waste, Transport and Resilience that will help reduce emissions and prepare for climate change. The Climate Action Plan has now undergone public consultation and will be published by the end of 2019. The Council declared a **Climate Emergency** in summer 2019, and the Climate Action Plan represents the first set of actions in a long-term pathway to achieve net-zero greenhouse gas emissions by 2045 or sooner.

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 2020.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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
	Local Development Plan	2019-2029	Policy 30: Green Infrastructure Maintenance Policy 36: Flood Risk Management Policy 37: Sustainable Drainage Systems Policy 38: Protecting and Improving the Water Environment
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)	2019-2024	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. The 2019-2024 Local Housing Strategy launched September 2019. https://www.dundeecity.gov.uk/reports/agendas/ns300919ag.pdf
Renewable energy/	Invest in Dundee – Energy Dundee	2018-	The energy sector is an important part of the future for Dundee and the broader local economy encompassing: offshore wind, oil & gas, decommissioning (driven by the proximity of the Scottish Offshore Wind projects) and emerging and growing areas such as hydrogen, electric vehicle and a general market demand to lower energy costs and become more sustainable. Scottish

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

Sustainable/ Renewable heat -			Government identified Dundee Port in the National Renewables Infrastructure Plan (NRIP) as the most suitable port location on the East Coast of Scotland and recognised the major investment to support offshore construction and O&M activity made by both the public and private sector in the city. Significant public and private investments have been made in infrastructure to ensure the city and port meets the needs of the offshore wind sector. Alongside investment in infrastructure Dundee offers skills, R&D facilitates, competencies across the supply chain and world class centre of excellence. Dundee's cluster approach brings together regional strengths from across Tayside and Fife in the engineering/manufacturing sectors via networks, such as Energy Dundee, East Coast Renewables and the Forth and Tay Cluster to support the offshore sector. www.investindundee.co.uk www.energydundee.com
	District Heating Strategy	2018-2028	The District Heating Strategy sets 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. https://www.dundeecity.gov.uk/reports/reports/166-2018.pdf
	Local Development Plan	2019-2029	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 45:Energy generating Facilities - Policy 46: Delivery of Heat networks - Policy 47: Wind Turbines - Policy 48: Low and Zero Carbon Technology in New Development https://www.dundeecity.gov.uk/sites/default/files/publications/local_development_plan_2019_for_web.pdf
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

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

	Local Development Plan	2019-2029	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, environmental protection and supporting heat networks in the City. https://www.dundeecity.gov.uk/sites/default/files/publications/local_development_plan_2019_for_web.pdf
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
Cycling	Dundee Cycling Strategy	2016-	This strategy sets out how Dundee City Council will deliver its duties, powers and policies to enable and encourage more people to cycle more often. The Council recognises the role of walking and cycling to make a significant impact on the success of the city and the lives of its citizens. In Dundee promoting cycling can help achieve the strategic priorities in the Council Plan and therefore seeks to give due advantage to pedestrians and cyclists in its management of the transport network.
	Local Development Plan	2019-2029	Policy 54: Safe and Sustainable Transport
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.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

ICT	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. https://www.dundeecity.gov.uk/service-area/neighbourhood-services/community-safety-and-protection/air-quality-dundee
	Local Development Plan	2019-2029	Policy 40: Air Quality

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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) Launch the city-wide **Climate Action Plan** and begin the process of implementation, governance, monitoring, and reporting.

2) Develop a new **Carbon Management Plan** for the Council based on the latest carbon management data provided by the Carbon Footprinting and Project Register Tool and the carbon reduction actions identified during the climate action planning process.

3) Develop and trial a Council **Carbon Budget** that will enable the organisation to better meet its commitments of the new Carbon Management Plan.

4) Carry out an assessment of performance relating to Climate Change using the **Climate Change Assessment Tool** to ascertain changes since the last assessment and in light of the climate planning process.

5) Continue to 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.

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.

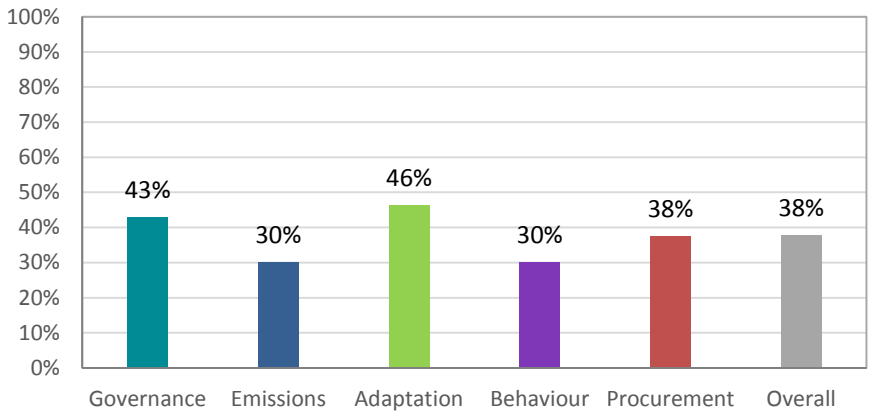
This refers to the tool developed by Resource Efficient Scotland for the purposes of self-assessing an organisation's capability / performance in relation to climate change.

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%**

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19



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 is now used to develop this forecast. This action is on-going.

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. This action is now complete with the development of a new Sustainable Dundee Working Group (SDWG) incorporating key resources from relevant departments across the Council. The group meets every two months to take forward sustainability and climate change related projects and activities. This group will report directly to the Council Management Team twice yearly, and when significant decisions are required regarding financial expenditure or changes in strategic direction.

New Action priorities were identified by the Sustainable Dundee Working Group in March 2018:

Action Priority 5 - improve sustainability in design by undertaking whole life costing at the start of projects to ensure best available technology is selected to reduce running costs and carbon emissions. This action is included in the Dundee Climate Action Plan and will be progressed in due course.

Action Priority 6 - develop a Sustainable Dundee communication strategy that links the various aspects of sustainability projects and makes clear, both internally and externally, the activities the Council are undertaking to improve sustainability and the reasons for taking action. This is ongoing and has seen significant progress with new Sustainable Dundee campaign being launched including a new logo, webpages, a Sustainable Dundee twitter account, a Low Carbon Story published for promotional and educational purposes detailing the carbon saving projects completed and planned by Dundee City Council. This is a standing item on the agenda of SDWG meetings.

The CCAT will be rerun in Spring 2020, allowing us to assess improvements in performance against the 6 criteria.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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.

The **Dundee Climate Action Plan** is the culmination of a years' worth of collaborative work, led by the Council and co-designed with public, private and community organisations, recognising the fact that a concerted city-wide effort is required. The Plan has been informed by a Baseline Emissions Inventory, Climate Risk & Vulnerability Assessment, statutory Strategic Environmental Assessment, partnership workshops and public consultation.

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	The boundary of the carbon footprint been set and applied consistently across the 11 year dataset. All consumption data has been converted using the appropriate Conversion Factor (CF) for the time period. 13% reduction in tCO_2e achieved between 2017/18 and 2018/19
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	
Year 10 carbon footprint	2017/18	Financial (April to March)	16,592	15,735	6,371	38,698	tCO_2e	
Year 11 carbon footprint	**2018/19**	**Financial (April to March)**	**15,339**	**11,724**	**6,511**	**33,574**	**tCO_2e**	

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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	64,797,503	kWh	0.18396	kg CO_2e/kWh	11,920.15	Natural gas use in Council buildings
Gas oil	Scope 1	1,354,602	kWh	0.27652	kg CO_2e/kWh	374.57	Gas oil use in Council buildings
Biomass	Scope 1	244,464	kWh	0.015060	kg CO_2e/kWh	3.68	Heat contract output data available for biomass. Assume 85% efficiency to estimate input value. Decrease due to issues with the boiler leading to extended periods of inoperability.
Diesel	Scope 1	984,601	Litres	2.62694	kg CO_2e/litre	2586.49	Fleet. Assuming 6.0% for additional fuel not included and contingency.
Petrol	Scope 1	17,194	Litres	2.20307	kg CO_2e/litre	37.88	Fleet. Assuming 6.0% for additional fuel not included and contingency.
Gas oil (red diesel)	Scope 1	1,506,731	kWh	0.27652	kg CO_2e/kWh	416.64	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	33,506,858	kWh	0.28307	kg CO_2e/kWh	9484.79	Grid electricity used in Council buildings
Grid Electricity (transmission &distribution losses)	Scope 3	33,506,858	kWh	0.02413	kg CO_2e/kWh	808.52	Grid electricity used in Council buildings
Grid Electricity (generation)	Scope 2	7,911,541	kWh	0.28307	kg CO_2e/kWh	2239.52	Grid electricity used in street lighting and other sources (car parks, signage etc.)
Grid Electricity (transmission &distribution losses)	Scope 3	7,911,541	kWh	0.02413	kg CO_2e/kWh	190.91	Grid electricity used in street lighting and other sources (car parks, signage etc.)

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

Water use	Scope 3	339,399	m3	0.344	kg CO_2e/m3	116.75	Actual data
Water treatment	Scope 3	322,429	m3	0.708	kg CO_2e/m3	228.28	Estimated at 95% of water use total for same year.
Waste disposal – landfill - commercial	Scope 3	1,763	tonnes	99.7729	kg CO_2e/tonne	175.90	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - incineration - commercial	Scope 3	7,297	tonnes	21.3842	kg CO_2e/tonne	156.04	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - composting - commercial	Scope 3	2,844	tonnes	10.2586	kg CO_2e/tonne	29.18	Commercial waste
Waste disposal - recycling - commercial	Scope 3	3,308	tonnes	21.3842	kg CO_2e/tonne	70.74	Commercial waste
Waste disposal - landfill - municipal	Scope 3	4821	tonnes	586.5313	kg CO_2e/tonne	2,827.67	Household waste
Waste disposal - incineration - municipal	Scope 3	27,516	tonnes	21.3842	kg CO_2e/tonne	588.41	Household waste
Waste disposal - composting - municipal	Scope 3	8,344	tonnes	10.2586	kg CO_2e/tonne	85.60	Household waste
Waste disposal - recycling - municipal	Scope 3	12,736	tonnes	21.3842	kg CO_2e/tonne	272.35	Household waste
Business travel - private car	Scope 3	1,950,102	km	0.18064	kg CO_2e/km	352.27	Lease + Casual included No information available about car size or fuel so unknown size/unknown fuel factor used
Business travel - taxi	Scope 3	19,933	passenger km	0.15344	kg CO_2e/ passenger km	3.06	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

Business travel - bus	Scope 3	309,598	passenger km	0.12007	kg CO_2e/ passenger km	37.17	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	656,352	passenger km	0.04424	kg CO_2e/ passenger km	29.04	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	33,070	passenger km	0.29832	kg CO_2e/ passenger km	9.87	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	90,160	litres	2.62694	kg CO_2e/litre	236.84	Assumed to be separate from fleet petrol and therefore assigned to Scope 3.
Business travel - petrol	Scope 3	92,175	litres	2.20307	kg CO_2e/litre	203.07	Assumed to be separate from fleet diesel and therefore assigned to Scope 3.
Service travel - taxi	Scope 3	307,649	passenger km	0.15344	kg CO_2e/ passenger km	47.21	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	259,380	passenger km	0.12007	kg CO_2e/ passenger km	31.14	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	396,375	passenger km	0.02801	kg CO_2e/ passenger km	11.10	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	**33,574**	

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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	230,768				Includes generation from multi-storeys, DISC, Unit T Claverhouse, The Crescent and schools e.g. Morgan Academy
Solar Thermal					
Wind					
Hydro					
Wave					
Tidal					
Biogas CHP					
Landfill Gas CHP					
Biomass			207,794		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.*

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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	22,592	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. **9,571 tCO_2e reductions since baseline year.**

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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	1,221	NDEE Basket 1 full year saving (355 tCO_2e) and LED street lighting replacement (866 tCO_2e)
Natural Gas	90	NDEE Basket 1 Olympia, Dundee Ice Arena, Central Library first full year of savings
Other heating fuels	0	
Waste	0	Internal Waste Awareness Projects – no data on savings
Water and sewerage	0	
Business Travel	0	
Fleet transport	184	Replacement of fleet vehicles with EV's and reduction in CO_2 limits for cars.
Other 1 (specify in comments)	0	
Total	**1,495**	

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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

Provide details of the projects which are estimated to achieve the highest carbon savings

Project name	Funding source	Expected 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
NDEE Basket 1 - Elec	CEEF	2019/20	Estimated	831,932	5,860	10	Grid Electricity (generation)	355	251,487	No	First full year capture due to postponement of projects – started just after end of reporting period.
NDEE Basket 1 - Gas	CEEF	2019/20	Estimated	682,513	4,354	10	Natural Gas	90	7,679	No	First full year capture due to postponement of projects – started just after end of reporting period.
Street lighting	CEEF	2019/20	Estimated	1,920,000	-	10	Grid Electricity (generation)	866	508,307	No	First full year capture due to postponement of projects – started just after end of reporting period.
Waste	ZWS/ DCC	2019/20	Estimated	780,000	-	10	Refuse to combustion	31	114,173	Yes	Waste education. DCC and Schools
Fleet	Transport Scotland/ Air Quality Funds	2019/20	Estimated	135,312	n/a	10	Diesel	n/a	n/a	Yes	Replacement of 15 Fleet vehicles with EV in 18/19 period

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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			
Service provision			
Staff Numbers			
Other (specify in comments)	5,123	Decrease	• Improved energy efficiency of Council buildings • Milder winter • Reduced grid emissions factor • Small amount due to reduced building stock – not possible to separate as have also had new buildings open • A fire at Braeview Academy, leaving the school unoccupied for 3 months during the winter period, led to significant reduction in gas oil consumption.
Total	5,123	Decrease	

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	1,183	Street lighting and NDEE Basket 2
Natural gas	192	NDEE Basket 2
Other heating fuels	0	
Waste	0	Difficult to calculate
Water and sewerage	0	
Business Travel	0	
Fleet Transport	0	Difficult to calculate
Other 1 (specify in comments)		
Total	1,375	Likely to be higher but difficult to calculate project carbon savings for fleet and waste

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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	Not Yet Available	Not yet available	Closure of older buildings but opening of new ones with more ICT equipment, therefore difficult to quantify.
Service provision			
Staff numbers			
Other (specify in comments)	Difficult to quantify	Decrease	The impact of the decreasing grid factor in 2018/19 will have a significant impact on the overall footprint.
Total	Difficult to quantify	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	9,571	This is the total reduction since the baseline year of 2007/08. 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.

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.

- Emissions in 2018/19 have decreased by 13% compared to the previous year.
- Emissions from energy use in buildings have decreased by 17% compared to the previous year.
- From the baseline year of 2007/08, the overall footprint has reduced by 40%.
- There was an overall decrease in electricity, gas and heating oil consumption (8% less than previous year) as well as a reduction in the grid emission factor which also decreased by 20% compared to 2017/18).
- Part of this decrease can be attributed to changes to the building stock with closures of several primary schools, but this was partially offset by the opening of replacement schools (e.g. North East campus and Baldragon first full year). New schools can increase total energy consumption despite using more energy efficient materials and equipment. This is due to larger buildings with more electrical equipment overall (ICT, air conditioning, floodlights etc.), as well as being occupied for longer hours for community use.

- Most of the electricity reduction was due to improvements in energy efficiency of buildings through the NDEE programme as well as the LED street light replacement programme.
- Outdoor temperatures were slightly milder overall than the previous year (9% less degree days), which means heating related emissions were lower.
- A fire at Braeview Academy in September 2018 left the school unoccupied for 3 months during the winter period, this led to a significant reduction in gas oil consumption compared to previous years.
- Biomass footprint at the Crescent facility increased slightly as it was fully operational compared to the previous year, when the facility was out of operation for a period over the winter months, the EF and costs also reduced in the period.
- There has been a slight increase in municipal waste to landfill and combustion.
- Fleet carbon footprint is continuing to reduce, most likely due to increase in use of electric vehicles.
- The costs of fuel have risen.
- Minor reductions in water consumption due to building closures.

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 autumn 2018 a **Risk and Vulnerability Assessment (RVA)** of ten policy sectors was carried out in small workshops with key resources in each policy sector to determine the nature and extent of climate related risks in Dundee. Climate impacts were identified for each of the climate hazards/scenarios for the policy sectors with an estimate of how likely they are to occur, the level of impact and the timeframe for occurrence, short, medium or long term. The policy sectors and some examples of impacts are shown below:

Policy Sector	Expected Impact(s)
Buildings	Increased demand for cooling and insulation, higher costs for repair and maintenance.
Transport	Damage to transport infrastructure, extreme weather impact on mobility, higher maintenance costs.
Energy	Damage to electrical infrastructure and power generation facilities.
Water	Increased water scarcity and drought, impacts upon flora and fauna, lower ground water recharge.
Waste	Damage to waste infrastructure and treatment facilities, site and access disruption.
Land Use Planning	Urban heat island effect, erosion and floods, including coastal.
Environment & Biodiversity	Ecosystem degradation, species migration, insect infestation, habitat loss due to flooding, access to food.
Health	Increased disease and mortality rate, hygiene issues, increased incidence of injury.
Civil Protection & Emergency	Increased number of disasters/deployments, increased insurance costs.
Tourism	Decline in tourism and demand, closure of museums, increased maintenance costs, reduction in bathing water quality.

- During this RVA exercise, climate resilience actions were **co-designed with stakeholders**, including NHS Tayside, Scottish Water, SEPA and Scottish Natural Heritage. Many of the actions identified were already in progress by various organisations; some new actions were identified during the Climate Action Plan visioning event and the remaining actions were devised in partnership with the stakeholders. All identified impacts and actions can be found in the full RVA.

- The resultant actions will be implemented, monitored and evaluated as part of the on-going climate action planning process and aligned with **Adaptation Scotland's Capability Framework** in which we are currently at stage **P12C** ('Planning and Implementation – we have developed an initial adaptation strategy and action plan').

- 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.

- 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 has enabled local Flood Protection Schemes/Works and coastal erosion defence schemes to be developed and constructed to protect Central Dundee, Riverside, and parts of the Broughty Ferry from the coastal flood risk identified. Outputs from the Study are also being used to develop the Broughty Ferry Flood Protection Scheme and measures to protect Dundee Airport from coastal flood risk.

- 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 numerous flood risk areas identified throughout Dundee have been prioritised and are shortly to be taken through to an 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

- As a result of the Climate Risk and Vulnerability Assessment discussed in section 4a), **21 actions have been identified** to help the city build resilience against climate change. These include physical measures, such as flood protection and infrastructure improvements as well as societal measures that build community resilience.

- These are mostly high level actions and in time will develop into a stand-alone **Adaptation Strategy** for Dundee that aligns with the Scottish Governments new Climate Change Adaptation Programme published in October 2019.

- Council Officers have undertaken training on a **Climate Just** tool which allows social vulnerability in the face of climate change to be assessed so that adaptation can be tailored to people as well as places.

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 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 numerous flood risk areas identified throughout Dundee have been prioritised and are shortly to be taken through to an 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.

- Following on from the Dundee Coastal Study Stage 2, one **Flood Protection Scheme** is completed and one is under preparation:

  - *City Quay to Central Waterfront* and *Central Waterfront to Dundee Airport*. Construction works completed in August 2018 creating a 4km set back wall and flood gates, providing protection from a 1 in 200 year flood. The use of local stone has minimised the carbon footprint, with the project receiving successful match funding from Sustrans to improve lighting and create a small section of combined cycle footway at Bridgeview Café.

  - *Broughty Ferry Town - Douglas Terrace to Broughty Castle*. A new river wall and steps will be constructed along with walkway and a combination of setback wall and gates that will provide flood protection. The scheme is currently undergoing the Marine License Application and public consultation. 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 Pavilion and the installation of a gabion mattress or equivalent to protect the Grassy Beach area.

- Greenspace / Biodiversity / Green infrastructure:

  - A new **Biodiversity Plan** is being prepared that includes actions for safeguarding and enhancing existing habitats and species as well as actions on potential sites and projects. The plan will be integrated across sectors and the broader green network and adopted corporate-wide to ensure biodiversity protection and enhancement are prioritised in all green space maintenance regimes, relevant projects and developments.

  - **New management techniques for greenspaces** - The most eye-catching has been the establishment of annual flower mixes along verges adjacent to busy roads. These mixes are bold, attractive and beneficial to biodiversity. In house Landscape Designers take into account the challenges of the urban area and use a palette of plants which can withstand changes to the local environment, such as lack of water and vehicle emissions etc.

  - Over twenty parks and greenspaces are assessed annually for quality by staff and members of the community against the national **Green Flag** criteria. A number of criteria directly or indirectly consider the impact of climate change. Each assessment results in an individual park action plan. In addition to these, five parks successfully attain a Green Flag award in 2017/18, by submitting a Management Plan and hosting a site visit by an external assessor.

  - Over 250 ha of Dundee is **woodland**, which performs an important environmental function storing carbon, sheltering the built environment from wind and filtering pollutants, as well as being appreciated by visitors and wildlife. In recent years, Dundee has benefitted from grant funding awarded by Forestry Commission Scotland, enabling the improvement and

expansion of Dundee's wooded areas. The Urban Tree Policy is due to be updated and will incorporate climate resilience measures.

- **Community Growing Projects** - a Community Allotment Officer was appointed in 2015 and capital funding made available to develop Growing Spaces in all areas of Community Regeneration. To date, seven community gardens have been established which enable local people to grow their own fruit and vegetables, positively impacting on their health and wellbeing, as well as reducing food miles / carbon footprint of fruit and vegetables. A **Food Growing** Strategy is currently under development.

- In partnership with NHS Tayside and Scottish Natural Heritage, the Council is developing a **Green Health Partnership** (GHP) over the next three years as part of the national Natural Health Service. The GHP aims to encourage an increase in social prescribing by linking health care professionals with local greenspace health initiatives, such as Branching Out and the Family Fresh Air Club run by the Dundee Countryside Rangers and Dundee Association for Mental Health's Greenbuds, as well as community growing spaces. A Green Bus Map, linking buses to parks and greenspaces has been launched.

- The **Mobility Integration Living Laboratory project (MILL)** is a public-private-people partnership which is seeing Dundee become a real life test and experimentation environment for mobility solutions that integrate with the transport network. This is critical in addressing social vulnerability to climate change, ensuring that transport is not an isolating barrier for those wishing to reach healthcare, employment opportunities and social activities whilst reducing road transport emissions and the city's carbon footprint. Current activities include:

  - **Enterprise Car Club**: 6 low carbon car club vehicles have been made available across 3 locations for Council staff. Uptake so far has been very positive. Progressing discussions with Police Scotland and others around sharing of these vehicles.

  - **Ride-On**: 1st phase of e-bike docking locations has been determined by the E-Bike Working Group. Planning applications for sites within conservation areas. These are in progress. Target a soft launch by end of October 2019 with full launch in spring 2020.

  - **Co-Wheels**: Scheduling with the Council for the installation on telematics on community minibuses in Sept 2019. Working on business model for minibus deployment. 11 vehicles on order for use within Back to Zone pilot (scheduled for mid Oct 2019 soft launch/beta testing). Full launch December 2019.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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 numerous flood risk areas identified throughout Dundee have been prioritised and are shortly to be taken through to an 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.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

[N2] Support and 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. A new Biodiversity Plan is currently being developed.
		[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.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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 numerous flood risk areas identified throughout Dundee have been prioritised and are shortly to be taken through to an 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

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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.	The 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. In 2018/19 EWI was installed in a total of 12 areas in Dundee including Broughty Ferry, Craigiebank, Hilltown and Polepark. 718 properties - occupied by both Council and private residents - benefited from the upgrades. The total cost of this work was £5.5m with £1.5m coming from the Scottish Government in the form of HEEPS:ABS (Home Energy Efficiency Programme Scotland: Area Based Schemes) funding for the private owners. This brings the total investment in EWI in the city since the inception of the EWI Programme in 2013 up to more than £40m with 4,342 residents in Dundee seeing their properties thermally upgraded. For 2019/20, the Scottish Government originally allocated Dundee City Council £1.36m of HEEPS:ABS funding but, as the Council has proved its ability to carry out EWI installations efficiently and at scale, a further £1.08m has now been allocated. This will allow 626 dwellings to be insulated over the course of the year, bringing the Council close to 5,000 installations. Dundee Energy Efficiency Advice Project (DEEAP), which forms part of the Council's Advice Services Department in Corporate Services, carries out 4,000 energy advice home visits per year and staff attend 100 community and public events to raise awareness of the energy advice service. 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

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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.	By March 2019, the Council required only 76 abeyances for the energy efficiency component of SHQS out of a stock of 12,750 properties. Measures carried out over the course of the year towards achievement of SHQS included installation of: • New roofs (including loft insulation of 300mm) at 144 properties; • New, energy-efficient windows at 161 properties; • 447 new, energy-efficient gas heating systems; External Wall insulation (EWI) at 718 included tenants and owners properties - 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.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2018/19

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 has developed a **Climate Action Plan** which will provide the leadership, commitment and planning necessary for the transition to a low carbon future. Resilience has been identified as one of the plan's four strategic programme areas and to assist in plan preparation, a **'Climate Change Risk and Vulnerability Assessment' (RVA**) was 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.

- Climate risks were ascertained and assessed across 10 policy sector as outlined in section 4e. Identified actions will be monitored via Pentana. Project leads for each of the policy sectors will meet at the Sustainable Dundee Working group twice a year to report on and discuss progress. An annual stakeholder event will take place, reporting on and reviewing the full Climate Action Plan to allow continual monitoring and updating of the plan.

- 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) Via the Dundee Partnership, commence implementation of the city's Climate Action Plan, including the 'Resilience' strategic programme.

2) Further investigate opportunities for collaborative working on climate change adaptation with the city's universities and neighbouring Councils.

3) Develop a Biodiversity Plan which incorporates adaptation and resilience, and considers the ecosystems service functions of Dundee's greensapces.

4) Investigate and develop adaptation engagement tools to support community capacity building in collaboration with community organisations.

5) Increase participation in the Eco-Schools programme in Dundee, via improved local support and pilot projects with appointed schools.

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.

- A Sustainable Procurement policy (http://www.taysideprocurement.gov.uk/strategy) was introduced a number of years ago to support the Council to comply with its climate change duties, and commits the Council to buying more sustainably which in turn offers cost efficiency, support the Councils commitment to Corporate Social Responsibility and promotes health improvements amongst stakeholders. Key outcomes included in the policy are:
  - Reduce carbon emissions
  - Contribute to climate change adaption through procurement activity
  - Embed sustainability at the heart of procurement activity
  - Deliver a variety of sustainable outcomes

Examples of where the Councils approach to its procurement has had an impact in 2018/19 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.

- **Education and Office Furniture** – a collaborative framework is available allowing the Council to purchase furniture from a sustainable supply chain that positively contributes to our climate change commitment. In order to provide assurances that wood and wood-based products originate from sustainably managed forests, it is a requirement of this framework that all timber used in manufacture comes from a sustainable source and must have Chain of Custody tracking documents to meet the requirements of UK and EU timber regulations. Suppliers, whether manufacturers or resellers of furniture, are members of the Furniture Industry Sustainability Programme (FISP) which demonstrates their sustainable and corporate social responsibility credentials. Other environmental components of the framework which contribute towards our stated outcomes are:

  - Promotion of furniture Take-Back schemes by suppliers, to encourage reuse or remanufacture
  - Use of re-cycled content in final product
  - Reuse of packaging materials for original purpose
  - Reduction of waste materials
  - Innovation for delivery planning and logistics such as use of vehicle trackers and on-site furniture assembly
  - Suppliers are ISO14001 accredited
  - Operating robust transport using Euro V and V1 compliant vehicles.

- **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.

- **Janitorial products**
  - Suppliers adopt plastic-packaging recycling initiatives,
  - Products have dilution control measures, which reduce the amount of waste chemical, and also reduce the outer packaging.
  - Suppliers reduce the amount of packaging associated with its products
  - Suppliers stream waste into waste skips which are used to separate different grades of recycling waste in order to facilitate a more complete recycling process.

- **Audio Visual Equipment**
  - Reduced packaging initiatives
  - Life extension initiatives
  - WEEE Directive compliance
  - Minimisation of transportation – use of sea/land freight rather than air
  - Recycle 100% of waste materials and packaging.

- 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

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 include:

  - The Grounds Maintenance Equipment 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 Supply of Education Materials Framework incorporates a number of sustainability aspects, including supply chain sustainability, waste reduction, environmental considerations and end-of-life processes as well as transportation considerations. Suppliers source fair trade and ethical products, and seek to minimise their environmental impact, minimising the packaging required in deliveries and maximised recycling of waste generated by their operations. Suppliers consolidate deliveries to reduce their carbon footprint. One supplier has confirmed that, as a result of sustainable initiatives, they are now a "zero to landfill" company. Supplier's delivery methods also include the trialling of electric and hybrid vehicles.
  - The **IT peripherals 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. Since launching in 2014, WARPit had helped the Council divert almost 53 tonnes of waste, saved 154 tonnes of CO_2 and saved the Council its partners £320,000 in avoided procurement costs. Items totalling over £69,000 have been donated to local charities.

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 Officer. 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 Sustainable Dundee Working Group 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.

No external validation undertaken. The Council will continue to work with Sustainable Scotland Network, Scottish Government and other Scottish Local Authorities to determine a future process for external validation.

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:	9th October 2019

PART 2

RECOMMENDED REPORTING: REPORTING ON WIDER INFLUENCE

Wider Impact and Influence on GHG Emissions

1a) Historic Emissions

Please select which dataset you use for setting area-wide emission targets or for monitoring emission reduction projects and actions. Please note that both datasets will show on the form, the response you provide in the dropdown will be used as a note for which dataset you use as a local authority. You can include further data sources by selecting the 'other' dropdown. You can 'add' or 'remove' rows as necessary. For further information on the differences between the 'full' and 'subset' datasets, please view the SSN reporting resources page or view the UK Government datasets and associated technical guidance. Links to both of these resources can be found at the very top of this form.

*Table 1a – Subset (**2017 is latest data available, published in June 2019**)*

Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Units
Industry and Commercial	445.50	446.20	435.80	415.35	369.28	376.77	343.91	358.86	348.28	280.32	289.65	259.76	236.77	kt CO_2
Domestic	385.07	384.21	378.11	374.52	334.58	352.42	311.56	331.39	314.88	263.64	248.29	233.11	218.45	kt CO_2
Transport total	224.06	224.45	230.79	224.95	216.81	213.08	207.90	205.19	200.93	201.26	200.38	204.23	206.13	kt CO_2
Total Emissions	1054.64	1054.88	1044.71	1014.83	920.68	942.17	863.38	895.44	864.10	745.22	738.34	697.12	661.35	kt CO_2
Per Capita	*7.34*	*7.35*	*7.27*	*7.03*	*6.34*	*6.45*	*5.86*	*6.05*	*5.83*	*5.03*	*4.98*	*4.70*	*4.44*	*t CO_2*

2a) Targets

Please detail your wider influence targets.

Table 2

Sector	Description	Type of Target (units)	Target saving	Baseline year	Target / End Year	Baseline value	Latest Year Measured	Saving in latest year measured	Comments
Energy and Climate Change	Covenant of Mayors (CoM) for Climate and Energy target.	Percentage Emissions (%)	40% reduction in GHG emissions	2005	2030	1,097,693	2015	24% (834,655)	Dundee signed to CoM in March 2018.
Energy and Climate Change	Climate Emergency Declaration	Percentage Emissions (%)	Net-zero GHG Emissions	2005	2045	1,097,693	2015	24% (834,655)	Dundee declared Climate Emergency in June 2019

2b) Targets

Does the organisation have an overall mission statement, strategies, plans or policies outlining ambition to influence emissions beyond your corporate boundaries? If so, please detail this in the box below.

In March 2018, the Lord Provost and Leader of Dundee City Council, signed the **Covenant of Mayors for Climate and Energy**, a global initiative that brings together local governments in a voluntary commitment to reduce emissions and develop an action plan that adopts a joint approach to tackling climate change mitigation and adaptation. The Climate Action Plan is the culmination of collaborative work, led by Dundee City Council and co-designed with public, private and community organisations, recognising the fact that a concerted city-wide effort is required. It represents the first set of actions in a long-term pathway to first surpass the Covenant of Mayors target of **40% reduction in greenhouse gas emissions by 2030** and then to **achieve net-zero greenhouse gas emissions by 2045 or sooner.**

3) Partnership Working, Communications and Capacity Building

Please detail your Climate Change Partnership, Communication or Capacity Building Initiatives below.

Table 3

Key Action Type	Description	Action	Org. role	Partners	Outputs
Partnership Working	Sustainable Dundee	Partnership working of climate change/ sustainability	Lead	+20 orgs inc. Dundee Partnership	Communications and partnership banner to promote and take forward sustainability and climate change activity in Dundee. Tasked with developing the Climate Action Plan for city. Stakeholder Workshop held in August 2018, Risk and Vulnerability Assessment conducted in group workshops across 10 policy sectors in November 2018 and further public consultation 2019. https://www.dundeecity.gov.uk/sustainable-dundee
Partnership Working	Eco-Schools Dundee	Partnership working of climate change/ sustainability	Lead	Keep Scotland Beautiful	Dundee has a low Green Flag attainment compared to other local authority areas in Scotland. The Sustainability and Climate Change team have worked with internal and external partners to produce a support pack of local resources and information designed to help schools embarking on the Eco-Schools programme. The team also promoted the new application process and invited schools to join a pilot programme where they would be supported through the process. 7 schools are participating and sharing their experience to encourage other schools.
Communications	Our Low Carbon Story	Awareness Raising	Lead	Dundee City Council depts.	Provides key examples of existing work, & future plans, which align to SECAP and strive to meet a number of ambitious aims. https://www.dundeecity.gov.uk/sites/default/files/publications/lowcarbonstory.pdf

Communications	Earth Hour 2019	Behaviour change	Lead	Leisure and Culture Dundee	Our participation involved internal and external communications via the corporate Intranet, Council web pages, social media such as Facebook and Twitter, local press and internal emails, all running adjacent to the coordination of a number of widely varying events and activities.
Communications	Drive Dundee Electric	Behaviour change	Lead	Scottish Government, Office for Low Emission Vehicles	Launched in June 2017 to encourage and support the uptake of electric vehicles in the area. It is now the face of all the charging infrastructure, regulation, events and acts as a point of information and contact to ensure all response is accurate and quick, providing the best experience to electric vehicle owners. https://drivedundeeelectric.co.uk
Communications	Waste Education and Awareness programme	Behaviour change	Lead	Schools, Zero Waste Scotland	Internal Waste Education programme delivered in two main Council premises to encourage proper use of recycling facilities and to reduce contamination. Briefings held, reusable bottles and coffee cups distributed and internal bins monitored for contamination. Supporting Zero Waste Scotland's Food waste reduction pilot project in schools and small businesses in Dundee Commencing Schools Waste Awareness programme Autumn 2019.
Partnership Working	Baldovie Community Reuse Hub	Skills/capacity building	Lead	Tayside Re-users, Transform, Dundee Social Enterprise Network.	Joint partnership repair items that could be saved from the skip including unwanted furniture and other household items, thus reducing waste to thermal treatment or landfill. The Hub also offers opportunities for the unemployed to learn skills needed to repair, reuse and extend the life of products via training and employment programmes. https://www.dundeecity.gov.uk/service-area/neighbourhood-services/environment/community-re-use-hub
Partnership Working	JIVE 2 Hydrogen Fuel deployment	Partnership working of climate change/ sustainability	Participant	Scottish Cities Alliance, Scottish Government	Dundee is supporting the Scottish Government's ambitions for the creation of a hydrogen economy in Scotland to attract investment into transport, manufacturing, engineering, energy and commercialisation of the technology. Replacing diesel with hydrogen as a fuel source in vehicles will result in better air quality, improved health, reduced noise levels and zero carbon emissions as well as providing the capacity for longer transport distances compared to other low carbon energy technologies.

					A potential site has been identified in Dundee as a National Hydrogen Knowledge Centre for fuel generation, energy storage, vehicle research and development and manufacture together with a skills academy to support the wider hydrogen growth. It also has the potential to attract various associated businesses, including fuel cell development and transportation companies such as local bus and fleet networks, thus expanding out the wider low carbon sustainable transport market. Dundee is one of 22 cities in the pan-European JIVE2 Project (Joint Initiative for Hydrogen Vehicles across Europe) which will see **12 new Hydrogen Fuel buses deployed in Dundee**. The underlying objective is to support the transition of fuel cell buses as a mainstream choice for public transport authorities and operators by demonstrating parity in cost and operation against using fossil fuels. The project is one of the early adopters in the Government's National Hydrogen Transport Objective. https://www.scottishcities.org.uk/media/blog/dundee-successful-in-european-hydrogen-bus-funding
Partnership Working	Local Heat and Energy Efficiency Strategies (LHEES) – pilot	Skills/capacity building	Participant	Scottish Government. Scottish Cities Alliance, Resource Efficiency Scotland, Atkins	Piloting a 'Local Heat and Energy Efficiency Strategies' (LHEES) approach in the Lochee Community Planning Partnership area to support the delivery of heat decarbonisation and energy efficiency objectives of the Energy Efficient Scotland programme. The study focuses the step-by-step practicalities of developing a LHEES, the data and other requirements necessary to develop meaningful implementation plans, the technology solutions that are likely to be applicable in the area as well as an understanding of the challenges and lessons on how the wider development of LHEES can best be delivered. https://www.gov.scot/Resource/0053/00532541.pdf
Partnership Working	Invest in Dundee - Energy Dundee	Skills/capacity building	Lead	Public, private and academic sectors in Dundee	Dundee and Dundee Port provide the ideal location to create an Offshore Wind construction port and deliver Incoming logistics, preassembly and loadout. In addition to the number of jobs created over the construction years basing the subsequent Operations and Maintenance activity would provide high quality and secure jobs for Dundee and region for the following decades. Significant public and private investments have been made in infrastructure to ensure the city and port meets the needs of the offshore wind sector. Alongside investment in infrastructure Dundee offers skills, R&D facilitates, competencies across the supply chain and world class centre of excellence.

					Scottish Government identified Dundee Port in the National Renewables Infrastructure Plan (NRIP) as the most suitable port location on the East Coast of Scotland and recognised the major investment to support offshore construction and O&M activity made by both the public and private sector in the city. The level of support and enthusiasm for the offshore sector includes the following investments: • Forth Ports have invested over £10m to create a new quayside with an industry-leading "heavy lift" capability, coupled with a significant onshore operational area. Further investment will be forthcoming to enable offshore wind marshalling to be supported at the port should a suitable project be awarded. • Dundee City Council has invested in access and trunk roads into the port and offsite land for supply chain development. • There is significant local community support for developing industries. We have two brilliant Universities and a College which can provide any support needed during both the construction and operational phases. Dundee's cluster approach brings together regional strengths from across Tayside and Fife in the engineering/manufacturing sectors via networks, such as Energy Dundee, East Coast Renewables and the Forth and Tay Cluster to support the offshore sector. Energy Training East: A division of Energy Dundee, is a partnership of universities, research institutions and colleges across Tayside, supported by Skills Development Scotland, creating a unique combination of training and R&D expertise to support the energy sector. Jobs creation would include the following work areas; Civil/ Mechanical/Technical and Electrical Engineering, Planning, Environmental, Welding and a range of support services. http://www.energydundee.com