ITEM No ...19.....

REPORT TO: POLICY & RESOURCES COMMITTEE – 16 NOVEMBER 2020

REPORT ON: PUBLIC BODIES CLIMATE CHANGE DUTIES - ANNUAL REPORT

2019/2020

REPORT BY: EXECUTIVE DIRECTOR OF CITY DEVELOPMENT

REPORT NO: 255-2020

1 PURPOSE OF REPORT

1.1 To inform Committee of the work undertaken over the period April 2019 to March 2020 in support of the Council's duties under the Climate Change (Scotland) Act 2009.

1.2 To agree the 2019/20 'Public Bodies Climate Change Duties' (PBCCD) report.

2 RECOMMENDATION

2.1 It is recommended that the Committee agrees the content of the 2019/2020 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 is largely unknown at present and further costed work will be required to identify future policies and measures and quantify their potential emissions reduction impact.
- 3.2 In the 2019/20 reporting period, the Council has continued to invest in carbon reduction initiatives including £2.5m for energy efficiency improvements in public buildings, schools community centres and car parks; £2.4 million for External Wall Insulation for homes in Stirling Park, Dudhope and Law Crescent; £721,720 investment in LED streetlamp replacement and £50,000 in waste reduction programmes.

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 fifth annual reporting period for PBCCD.

5 THE 2019/20200 PUBLIC BODIES CLIMATE CHANGE DUTIES REPORT

- 5.1 The Council's PBCCD Report for 2019/20 is appended as appendix 1 and contains six sections:
 - a Part 1: Organisational Profile;

- b Part 2: Governance, Management & Strategy in relation to climate change;
- c Part 3: Corporate Emissions, Targets and Projects;

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- d Part 4: Adaptation to the impacts of climate change;
- e Part 5: Procurement actions and achievements regarding climate change; and
- f 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 previously 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 Progress on the priorities is outlined below.

Carbon Management Boundary

- 5.5 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.
- 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 publicly 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 (tCO₂e are a way of expressing all greenhouse gas emissions in common units).
- 5.7 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.

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Key **Emission sources within Carbon Management boundary:** Council estate Municipal waste disposal Incineration Broken down by building and energy Direct emissions arising from recovery Direct fuel use Electricity Landfill Council owned or controlled sources e.g. fuels from boilers of Natural gas, vehicles that we own including district heating for Council Scope 2 buildings Construction Compost Recycled Indirect emissions generated by purchased electricity waste **Biomass** consumed by the Council Gas oil Scope 3 Water Council waste All other indirect emissions that Streetlighting & signage etc. are a result of Council activities electricity but occur from sources not owned or controlled by the Council e.g. emissions associated with waste Council fleet & **Business travel** depot fleet Diesel Petrol Gas oil

Figure 1: DCC Carbon Management Boundary 2019/2020

Carbon Footprint Data

In order to provide consistency, a decision was taken in 2015 to re-baseline the organisation back to 2007/2008, rather than reset the baseline year. Where possible, actual data from the correct time period was used. Actual data was available back to 2007/2008 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 2007/2008 and 2018/2019, 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.

Analysis of 2019/2020 Carbon Footprint Data

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

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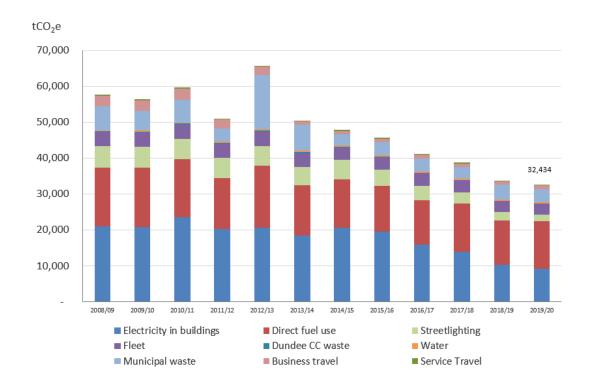


Figure 2: DCC Carbon Footprint: 2008/09 to 2019/2020

5.10 Key points:

- The carbon footprint for the Council has reduced by 3.4% in the past year.
- The carbon footprint has reduced by 42% since the baseline year of 2007/08.
- 73% of the Council's carbon emissions come from heating, lighting and powering its buildings.
- There was a 1% decrease in carbon emissions from energy use in buildings. The target in the currently Carbon management Plan is 5%.
- There was an overall decrease in electricity consumption by 1% in the reporting period at the same time new properties were added to the portfolio and an increase in the number of electric vehicle (EV) charging points installed. Consumption through separately metered EV charging points increased to 553,000 KWh for the year. This does not include consumption through chargers connected to existing building supplies (e.g. Dundee House, City Square and other offices and community use properties).
- Improvements in energy efficiency of buildings through the Non-Domestic Energy Efficiency programme has led to the reduction in electricity consumption from the property portfolio.
- The Grid Emission Factor decreased by 10% as the UK's renewable electricity capacity continues to increase making electricity supply less carbon intensive.
- Natural Gas and Gas Oil consumption for heating buildings increased by 7.7%. This was largely due to the 2019/2020 reporting year being colder compared to the previous year as measured by a 10% increase in the number of degree days (a measurement designed to quantify the demand for energy needed to heat a building). This combined with new gas supplies (Table1) accounts for the increase in gas consumption and reflected in Figure 4.

Table 1: New Supplies added to Portfolio in 2019/2020

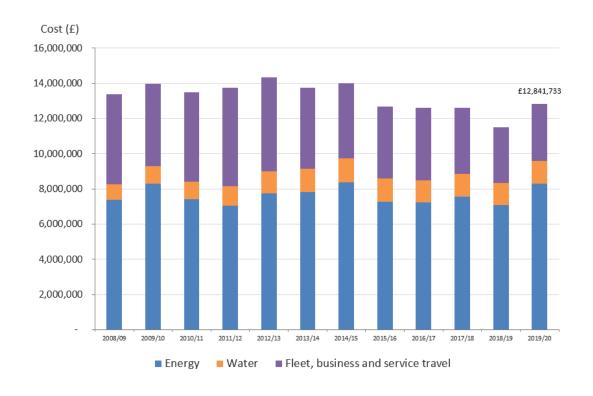
Site	KWh	tCO₂e		
Regional Performance Centre for Sport (RPC)	917,492	169		
New Menzieshill Community Centre	254,971	47		
Waterfront Office South Union St	101,581	19		
Quarry View Nursery	55,914	10		
Hill View Nursery	11,612	2		
Total	1,341,570	247		

- Streetlighting electricity consumption reduced by 16% as a result of the LED streetlamp replacement.
- Approximately 245,700 KWh of electricity was generated from the Council's solar PV systems.

Analysis of 2019/2020 Carbon Footprint Costs

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

Figure 3: DCC Carbon Footprint Costs: 2008/2009 to 2019/2020



- Costs associated with emissions from energy and water use, fleet, service and business travel are estimated to be £12.8m.
- Energy, water and fuel costs have risen slightly in 2019/2020.

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Targets

5.12 The Council's Carbon Management Plan target is to reduce energy use in buildings (measured in CO₂e) by 5% per annum. A 1% reduction was achieved in 2019/2020.

5.13 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 five 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 2019/2020

5.14 The Council's existing carbon management target will be updated in 2021 at which time a full redraft of the Council's Carbon Management Plan will take place.

Carbon Reduction Project Register

- 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 organisation 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.
- 5.16 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 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.
- 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.

7 ACCELERATING COUNCIL PROGRESS IN TACKLING CLIMATE CHANGE AND CARBON REDUCTION

- 7.1 In August 2020, the Council's Policy and Resources Committee approved the COVID-19 Recovery Plan (Article VI of the Minute of the Meeting of Policy and Resources Committee 24 August 2020. Report 185-2020 refers) adding the following recommendations as amendments:
 - e reasserts the commitment made by Dundee City Council in declaring a climate emergency, recognising the principle actions detailed within Dundee's Climate Action Plan as referenced in paragraph 8.5;
 - f instructs the Chief Executive to bring forward a specific report updating the Policy & Resources Committee on progress/actions undertaken in respect of (e), including details of any and all emerging opportunities to accelerate progress against environmental targets; and
 - g agrees that ongoing engagement is a key tool in progressing with recovery in all of its forms and asks officers to engage with community groups who wish to support the city's environmental, social, cultural and economic recovery.
- 7.2 The Council recognises the important duel role it has in both reducing emissions from its own estate and operations as well as its role as a civic leader to co-ordinate and encourage other public, private, community organisations and citizens to play their part in order that the city as a whole can achieve its net-zero ambitions.
- 7.3 The Dundee Climate Action Plan was published in December 2019 and Policy and Resources Committee Report 254-2020 provides an update of progress from a range of initiatives taken by partners over the last year to tackle climate change in Dundee. The report also identifies current resourcing capacity as a key challenge to increasing the pace of action and recommends that a Dundee Climate Leadership Group be established to provide governance and impetus in enabling the city to meet its net-zero target.

8 POLICY IMPLICATIONS

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

9 CONSULTATIONS

9.1 The Council Management Team have been consulted in the preparation of this report and are in agreement with its content.

10 BACKGROUND PAPERS

10.1 None.

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Executive Director of City Development

Dundee City Council Dundee House Dundee

RP/BH/KM 5 November 2020

PUBLIC BODIES CLIMATE CHANGE DUTIES - 2019/2020 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

6,057

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	149,320	NRS, 2019 Mid-Year Estimate
Other (specify in comments)			

1e) Overall budget of the body

Specify approximate £/annum for the report year.

£353,705,000

1f) Report year

Specify the report year

2019/2020 (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 Space - 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 in 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 Services participate in the working group which meets every two months. These are shown under the Dundee Climate Action Plan topics; one of the major projects the group will take forward in partnership with the wider Dundee community.

En	ergy	Transport	Waste	Resilience	Governance/ Strategy/policy
DomesticNon-DomesticStreet LightingHousing	Design and PropertyBusiness Dev.Planning	Sustainable TransportFleetAir Quality	Municipal Waste Internal Resources Circular Economy	FloodingEnvironment/ Biodiversity	 Sustainable Development/ Climate Change Finance Procurement Funding

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, service 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.

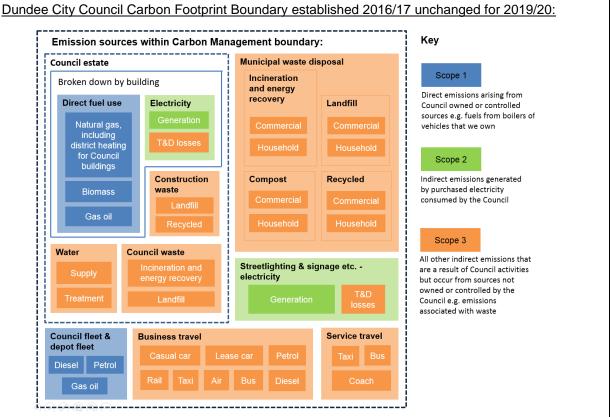
For reporting period 2019/20, the Council was structured as five Strategic Service Areas with main roles in climate change activity categorised as follows:

- 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 City Development. The internal Sustainable Dundee Working Group meets every 2 months to embed carbon management across Services and assist with the communication, facilitation and promotion of initiatives.

Carbon Emissions

- 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 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.



Embedding Climate Change within the organisation

- The Dundee Climate Action Plan contains a number of Council led carbon emission reduction actions across various Services; these will be monitored within newly acquired ClimateView emissions modelling software.
- 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.
- In 2020 the Council joined Adaptation Scotland's Benchmarking Working Group working with other local authorities in Scotland to mainstream resilience actions within the public sector according to the Adaptation Capability Framework.
- A Sustainable Development E-Learning module is available that enables staff to better
 understand the statutory and other drivers for the Council regarding sustainability; what strategic
 action the Council is taking to meet its sustainability duties and what actions staff can take to help
 make Dundee more sustainable.
- The Council's Design and Property Division is working to expand its current ISO14001
 Environmental Management (EMS) accreditation across the whole Division. This promotes the development, embedding and monitoring of environmental procedures including engagement with colleagues across the Division in their development.

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

See Strategic Service Areas above.

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,	City Plan (2017 – 2026) p. 43-44 https://www.dundeecity.gov.uk/sites/default/files/publications/cityplan.pdf				
choice and affordability. Increase District Heating Systems and Maximise External Wall insulation programme	Council Plan 2017-2022 p.42 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1 722.pdf				
Building Strong and Empowered Communities: Improve access to	City Plan (2017 – 2026) p. 43-44 https://www.dundeecity.gov.uk/sites/default/files/publications/cityplan.pdf				
healthy green and open spaces	Council Plan 2017-2022 p.42 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1 722.pdf				
	Biodiversity Action Plan 2020-2030 https://www.dundeecity.gov.uk/sites/default/files/publications/dundees_biodiversity_action_plan_2020-2030.pdf				
Building Strong and Empowered Communities: Improve transport	City Plan (2017 – 2026) p.43-44 https://www.dundeecity.gov.uk/sites/default/files/publications/cityplan.pdf				
connections to communities.	Council Plan 2017-2022 p.42 https://www.dundeecity.gov.uk/sites/default/files/publications/councilplan1 722.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/councilplan1 722.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/councilplan1 722.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 Plan was launched in December 2019. The Council declared a **Climate Emergency** in summer 2019, and the 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 by 2021.

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 prevention 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 risk 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				
	Dundee Climate Action Plan	2019	Co-designed by the Dundee partnership, contains actions across the themes of Energy, Transport, Waste and Resilience. https://www.dundeecity.gov.uk/sites/default/files/publications/climateactionplan.pdf				
	Biodiversity Action 2020-2030 Plan		Protecting and enhancing ecosystems, habitats and species diversity in Dundee. https://www.dundeecity.gov.uk/sites/default/files/publications/dundees-biodiversity-action-plan-2020-2030.pdf				
Energy efficiency	Energy Management Policy	2012-2020	The adoption of the Energy Policy demonstrates the City Council's commitment to the principles of responsible energy and water management in its operational buildings. The City Council will aim to improve its energy and water efficiency and reduce its energy and water consumption in line with the targets set out in this policy. http://www.dundeecity.gov.uk/reports/reports/470-2012.pdf				
	Local Housing Strategy (LHS)	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/ Sustainable/ Renewable heat -	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 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
	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	2019	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. https://www.dundeecity.gov.uk/sites/default/files/publications/dundee cycle strategy 2019.pdf
	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. An updated Staff Travel Plan is in development. http://www.dundeecity.gov.uk/reports/reports/413-2011.pdf
Fleet transport	Plant/Vehicle Asset Management Plan		Internal document, unpublished.
Climate Change	Dundee Climate Action Plan	2019	Co-designed by the Dundee partnership, contains actions across the themes of Energy, Transport, Waste and Resilience. https://www.dundeecity.gov.uk/sites/default/files/publications/climateactionplan.pdf
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

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) Establish a city-wide **Climate Leadership Group** in Dundee to identify the more ambitious actions required to meet the net zero GHG emissions target by 2045 or sooner.
- 2) Participate in Adaptation Scotland's Benchmarking Working Group. The Council has joined Adaptation Scotland's Benchmarking Working Group comprising a group of public sector organisations actively using their adaptation capability framework and benchmarking the development of capabilities, developing case studies and sharing good practice in order to improve climate adaptation strategies in Scotland.
- 3) Assess the impact of the **Dundee Climate Action Plan** on emissions targets using the **ClimateView emissions modelling platform** and communicate results to stakeholders and senior management to focus decision making about future actions.
- 4) 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.
- 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	Traffic light assessment							
Governance	12	28	43%	43%					
Emissions	9	30	30%	30%					
Adaptation	13	28	46%	46%					
Behaviour	6	20	30%	30%					
Procurement	rocurement 6 16		38%	38%					
Overall	46	122	38%	38%					

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 the Council's Sustainable Dundee Working Group (SDWG) incorporating key resources from relevant Services across the Council. The group meets every two months to take forward sustainability and climate change related projects and activities. The group report directly to the Council Management 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 acting. 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 when practical, post-COVID-19, allowing us to assess improvements in performance against the 6 CCAT criteria.

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 two 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 ₂ e	The boundary of the carbon footprint been set and applied
Year 1 carbon footprint	2008/09	Financial (April to March)	20,520	24,815	12,247	57,582	tCO ₂ e	consistently across the 12
Year 2 carbon footprint	2009/10	Financial (April to March)	20,551	24,662	11,077	56,290	tCO ₂ e	year dataset. All consumption data has been converted
Year 3 carbon footprint	2010/11	Financial (April to March)	20,208	27,032	12,284	59,524	tCO ₂ e	using the appropriate
Year 4 carbon footprint	2011/12	Financial (April to March)	18,197	23,857	8,939	50,993	tCO ₂ e	Conversion Factor (CF) for the time period.
Year 5 carbon footprint	2012/13	Financial (April to March)	21,215	24,159	20,320	65,693	tCO ₂ e	
Year 6 carbon footprint	2013/14	Financial (April to March)	17,991	21,579	10,815	50,385	tCO ₂ e	
Year 7 carbon footprint	2014/15	Financial (April to March)	16,845	24,097	6,819	47,761	tCO ₂ e	
Year 8 carbon footprint	2015/16	Financial (April to March)	16,144	22,321	7,090	45,555	tCO ₂ e	
Year 9 carbon footprint	2016/17	Financial (April to March)	15,980	18,244	6,908	41,131	tCO ₂ e	
Year 10 carbon footprint	2017/18	Financial (April to March)	16,592	15,735	6,371	38,698	tCO ₂ e	2 40/ modulation in 400 o
Year 11 carbon footprint	2018/19	Financial (April to March)	15,339	11,724	6,511	33,574	tCO ₂ e	3.4% reduction in tCO ₂ e achieved between 2018/19
Year 12 carbon footprint	2019/20	Financial (April to March)	16,244	10,191	5,999	32,434	tCO₂e	and 2019/20

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	Consumpti on Data	Units	Emission Factor	Units	Emissions (tCO ₂ e)	Comments
Natural Gas	Scope 1	69,766,681	kWh	0.1839	kg CO₂e/kWh	12826.6	Natural gas use in Council buildings
Gas oil	Scope 1	1,508,371	kWh	0.2568	kg CO₂e/kWh	387.29	Gas oil use in Council buildings
Biomass	Scope 1	261,171	kWh	0.0156	kg CO ₂ e/kWh	4.8	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	992,896	Litres	2.5941	kg CO₂e/litre	2575.68	Fleet. Assuming 6.0% for additional fuel not included and contingency.
Petrol	Scope 1	28,717	Litres	2.209	kg CO₂e/litre	63.44	Fleet. Assuming 6.0% for additional fuel not included and contingency.
Gas oil (red diesel)	Scope 1	1,502,633	kWh	0.2568	kg CO₂e/kWh	385.82	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	33,242,712	kWh	0.24957	kg CO2e/kWh	8296.38	Grid electricity used in Council buildings
Grid Electricity (transmission &distribution losses)	Scope 3	33,242,712	kWh	0.02773	kg CO ₂ e/kWh	921.82	Grid electricity used in Council buildings
Grid Electricity (generation)	Scope 2	6,629,233	kWh	0.24957	kg CO ₂ e/kWh	1,654.46	Grid electricity used in street lighting and other sources (car parks, signage etc.)
Grid Electricity (transmission &distribution losses)	Scope 3	7,911,541	kWh	0.02773	kg CO₂e/kWh	183.83	Grid electricity used in street lighting and other sources (car parks, signage etc.)

Water use	Scope 3	334,730	m3	0.344	kg CO ₂ e/m3	115.15	Actual data
Water treatment	Scope 3	317,994	m3	0.708	kg CO ₂ e/m3	225.14	Estimated at 95% of water use total for same year.
Waste disposal – landfill - commercial	Scope 3	1,212	tonnes	100	kg CO ₂ e/tonne	120.91	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - incineration - commercial	Scope 3	6,340	tonnes	21	kg CO ₂ e/tonne	135.38	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - composting - commercial	Scope 3	629	tonnes	10	kg CO ₂ e/tonne	6.42	Commercial waste
Waste disposal - recycling - commercial	Scope 3	3,195	tonnes	21	kg CO ₂ e/tonne	68.23	Commercial waste
Waste disposal - landfill - municipal	Scope 3	4067	tonnes	587	kg CO ₂ e/tonne	2,385.35	Household waste
Waste disposal - incineration - municipal	Scope 3	27,899	tonnes	21	kg CO ₂ e/tonne	595.75	Household waste
Waste disposal - composting - municipal	Scope 3	11,265	tonnes	10	kg CO ₂ e/tonne	114.95	Household waste
Waste disposal - recycling - municipal	Scope 3	13,484	tonnes	21	kg CO ₂ e/tonne	287.94	Household waste
Business travel - private car	Scope 3	1,789,750	km	0.1771	kg CO₂e/km	316.96	Lease + Casual included No information available about car size or fuel so unknown size/unknown fuel factor used
Business travel - taxi	Scope 3	23,694	passenger km	0.1502	kg CO ₂ e/ passenger km	3.56	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.

Business travel - bus	Scope 3	606,695	passenger km	0.1208	kg CO ₂ e/ passenger km	73.25	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	1,380599	passenger km	0.0412	kg CO ₂ e/ passenger km	56.81	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	70,582	passenger km	0.2549	kg CO ₂ e/ passenger km	17.99	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	109,024	litres	2.549	kg CO ₂ e/litre	282.82	Assumed to be separate from fleet petrol and therefore assigned to Scope 3.
Business travel - petrol	Scope 3	111,161	litres	2.209	kg CO ₂ e/litre	245.56	Assumed to be separate from fleet diesel and therefore assigned to Scope 3.
Service travel - taxi	Scope 3	275,432	passenger km	0.15344	kg CO ₂ e/ passenger km	41.36	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	243,879	passenger km	0.1208	kg CO ₂ e/ passenger km	29.45	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	377,330	passenger km	0.0278	kg CO ₂ e/ passenger km	10.49	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	32,434	

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 B	Electricity	Renewab	le Heat	
Technology*	Total consumed by the body (kWh)	Total exported (kWh)	Total consumed by the body (kWh)	Total exported (kWh)	Comments
Solar PV	245,700				Includes generation from multi-storeys, DISC, Unit T Claverhouse, The Crescent and schools e.g. Morgan Academy
Biomass			307,260		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.
Ground Source Heat Pump					GSHP at RPC Dundee. Data at this stage of operation is limited. Impact of full year operation to be reviewed in due course.

^{*}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.

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	22,437	2015/16	32,163	tCO₂e	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. 9,726 tCO₂e reductions since baseline year.

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 (tCO₂e)	Comments
Electricity	1,221	NDEE Basket 1 full year saving (355 tCO ₂ e) and LED street lighting replacement (866 tCO ₂ e)
Natural Gas	90	NDEE Basket 1 Olympia, Dundee Ice Arena, Central Library first full year of savings
Waste	0	Internal Waste Awareness Projects – no data on savings
Fleet transport	184	Replacement of fleet vehicles with EV's and reduction in CO ₂ limits for cars.
Total	1,495	

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 ₂ e savings	Estimated or actual savings	Capital cost (£)	Operation al cost (£/annum)	Project lifetime (years)	Primary fuel/ emission source saved	Estimated carbon savings per year (tCO ₂ e/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

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 ₂ e)	Increase or decrease in emissions	Comments
Estate change		Increase	As stated above, the opening of 5 new buildings have resulted in increased heating gas emissions
Other (specify in comments)		Decrease	The year on year decreases we have seen in the electricity grid factor continues to have an impact on the overall footprint.
Total			

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 ₂ e)	Comments	
Electricity	1,183	Street lighting and NDEE Basket 2	
Natural gas	192	NDEE Basket 2	
Waste	0	Difficult to calculate	
Fleet Transport	0	Difficult to calculate	
Total	1,375	Likely to be higher but difficult to calculate project carbon savings for fleet and waste	

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 ₂ e)	Increase or decrease in emissions	Comments
Estate changes		Increase in emissions related to gas and gas oil for heating.	New gas supplies added to portfolio in 2019/20: Regional Performance Centre for Sport (RPC) New Menzieshill Community Centre Waterfront Office South Union St Quarry View Nursery Hill View Nursery
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 emissions (tCO ₂ e)	estimated savings	Comments
Total project savings since baseline year	9,726		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.

- The carbon footprint for the Council has reduced by 3.4% in the past year.
- The carbon footprint has reduced by 42% since the baseline year of 2007/08.
- 73% of the Council's carbon emissions come from heating, lighting and powering its buildings.
- There was a 1% decrease in carbon emissions from energy use in buildings. The target in the currently Carbon management Plan is 5%.
- There was an overall decrease in electricity consumption by 1% in the reporting period at the same time new properties were added to the portfolio and an increase in the number of electric

vehicle (EV) charging points installed. Consumption through separately metered EV charging points increased to 553,000 KWh for the year. This does not include consumption through chargers connected to existing building supplies (e.g. Dundee House, City Square and other offices and community use properties).

- Improvements in energy efficiency of buildings through the Non-Domestic Energy Efficiency programme has led to the reduction in electricity consumption from the property portfolio.
- The Grid Emission Factor decreased by 10% as the UK's renewable electricity capacity continues to increase making electricity supply less carbon intensive.
- Natural Gas and Gas Oil consumption for heating buildings increased by 7.7%. This was largely due to the 2019/2020 reporting year being colder compared to the previous year as measured by a 10% increase in the number of degree days (a measurement designed to quantify the demand for energy needed to heat a building). This combined with new gas supplies in the table below accounts for the increase in gas consumption

Site	KWh	tCO ₂ e
Regional Performance Centre for Sport (RPC)	917,492	169
New Menzieshill Community Centre	254,971	47
Waterfront Office South Union St	101,581	19
Quarry View Nursery	55,914	10
Hill View Nursery	11,612	2
Total	1,341,570	247

- Streetlighting electricity consumption was down by 16% as a result of the LED streetlamp replacement.
- Approximately 245,700 KWh of electricity was generated from the Council's solar PV systems.

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 stakeholders 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. https://www.dundeecity.gov.uk/sites/default/files/publications/consultative_draft_secap_-risk_vulnerability_assessment.pdf
- 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').
- The Council has joined Adaptation Scotland's Benchmarking Working Group comprising a
 group of public sector organisations actively using their adaptation capability framework and
 benchmarking the development of capabilities, developing case studies and sharing good
 practice in order to improve climate adaptation strategies in Scotland.
- 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.

- The Tayside Integrated Catchment Study is well underway and a Drainage Model has been developed. This models the sewer system and its interaction with watercourses within Dundee and Tayside. The numerous flood risk areas identified throughout Dundee have been prioritised and the optioneering stage is currently progressing which will recommend surface water management improvements for each area that will reduce flood risk and provide more resilience when taking into account future climate change predictions. The 'optioneering stage' will also consider 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 inform the Surface Water Management Plan for Dundee.
- Dundee City Council and Angus Council commissioned a consultant to carry out a Flood
 Protection Study to identify flood risk areas along the Dighty Water, Gelly Burn and Fithie Burn
 in the Downfield and Dundee/Monifieth and Sidlaws area and to assess options (including
 economic viability) for flood protection measures that can be introduced to reduce flood risk to
 residential and non-residential properties. The appraisal considered a range of flood risk
 management measures which would also provide resilience to climate change. The study and its
 recommended options, was submitted to SEPA in December 2019 as part of a national
 prioritisation process. This process will feed directly into Scottish Government allocation of
 funding for their next grant funding cycle for flood protection schemes.
- In partnership with other responsible authorities, the Council has prepared the Tay Estuary and Montrose Basin Local Flood Risk Management Plan as required by the Flood Risk Management (Scotland) Act. The Plan gives actions to reduce flood risk within Dundee City.
- 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 and/or
 reports of flooding are received and clearly assigns roles and responsibilities within the
 organisation when responding to 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
- Service 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 periodically.
 The plan identifies known areas of flooding and measures to be taken when Flood Alerts and/or
 reports of flooding are received and clearly assigns roles and responsibilities within the
 organisation when responding to 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 (and
 included in the Dundee Climate Action Plan). These include physical measures, such as flood
 protection and infrastructure improvements as well as societal measures that build community
 resilience.
- 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 Council, Aberdeenshire Council, Perth and Kinross Council, 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 Drainage Model has been developed. This models the sewer system and its interaction with watercourses within Dundee and Tayside. The numerous flood risk areas identified throughout Dundee have been prioritised and the optioneering stage is currently progressing which will recommend surface water management improvements for each area that will reduce flood risk and provide more resilience when taking into account future climate change predictions. The 'optioneering stage' will also consider 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 inform the Surface Water Management Plan for Dundee.
- Following on from the Dundee Coastal Study Stage 2, the Dundee Coastal Flood Protection Scheme is completed and the Broughty Ferry Coastal Flood Protection Scheme is currently under construction:
 - 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 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 seawall is currently under construction along with walkway/cycleway and a combination of setback wall's and flood-gates. The project will take approximately two years to complete. Once complete the new seawall will reduce the risk of flooding to residential, community and business properties, whilst improving and enhancing active travel along the main shoreline of Broughty Ferry.
 - Since 2019 a programme of dune restoration works have been implemented, with the ongoing objective to effectively manage the dune range to provide natural flood protection. Chestnut pale Fencing has been installed to limit access by members of the public, with the aim of preventing erosion and protecting the natural grasses and fragile habitat. Non-indigenous plants have been removed and new native species have been planted to stabilise the sand dunes. The management of the dunes is ongoing and regular inspections are being undertaken to identify further works to protect and enhance the area. These works have

been undertaken to complement the natural flood protection that the dunes provide to Broughty Ferry.

- Dundee City Council are working in partnership with Scottish Water, SEPA and Scottish Natural Heritage to develop a Surface Water Management Strategy for the St Mary's area of Dundee. This will include disconnection of surface water from the existing combined sewer and conveying it to the water environment through sustainable drainage/SUDS infrastructure which will provide multiple benefits to the community and the partner organisations including a reduction in flood risk, improved blue/green networks which will enhance amenity and biodiversity, an opportunity to improve active travel infrastructure, and contribute towards the Scottish Government "net zero emissions" target. The strategy will also unlock future development in the City by providing a surface water conveyance route from future development sites in the area to the water environment, and by freeing up capacity in the downstream sewer network. Other areas in the city have also been identified where partnership working is proposed to develop similar Surface Water Management Strategies.
- Greenspace / Biodiversity / Green infrastructure:
 - A new Biodiversity Plan was published in January 2020 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 27 areas across Dundee have been identified for renaturalisation, encouraging wildflowers and increased biodiversity.
 - 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 woodled 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 has successfully developed Green Health Partnership (GHP) 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 as well as an e-bike scheme for doctors.
- 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, this will be launched when COVID-19 permits.

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	ent [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. Flood Protection Study to identify flood risk areas along the Dighty Water, Gelly Burn and Fithie Burn in the Downfield and Dundee/Monifeith and Sidlaws area and to assess options (including economic viability) for flood protection measures that can be introduced to reduce flood risk to residential and non-residential properties. The appraisal considered a range of flood risk management measures which would also provide resilience to climate change. The study and its recommended options, was submitted to SEPA in December 2019 as part of a national prioritisation process. This process will feed directly into Scottish Government allocation of funding for their next grant funding cycle for flood protection schemes. The Tayside Integrated Catchment Study is well underway and a Drainage Model has been developed. This models the sewer system and its interaction with watercourses within Dundee and Tayside. The numerous flood risk areas identified throughout Dundee have been prioritised and the optioneering stage is currently progressing which will recommend surface water management improvements for each area that will reduce flood risk and provide more resilience when taking into account future climate change predictions. The 'optioneering stage' will also consider costs and will be followed by outline design of the selected option and confirmation of the necessary funding. Thereafter, and

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Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
			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 inform the 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.
[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 was published in January 2020.
		[N2-18] / [N2-20] Support the development of Local Flood Risk Management Plans. This will manage waters and coasts at a river catchment level and	Dundee City Council has engaged in the development of the Local Flood Risk Management Plan through membership of the Tay Estuary and Montrose Basin (TEAMB) Local Plan District.

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Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
		include local flood risk management plans.	
[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 Drainage Model has been developed. This models the sewer system and its interaction with watercourses within Dundee and Tayside. The numerous flood risk areas identified throughout Dundee have been prioritised and the optioneering stage is currently progressing which will recommend surface water management improvements for each area that will reduce flood risk and provide more resilience when taking into account future climate change predictions. The 'optioneering stage' will also consider 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 inform the Surface Water Management Plan for Dundee.
[B2] Provide the knowledge, skills and tools to manage climate change impacts on buildings and infrastructure	Building and infrastructure networks		N/A Dundee City Council is not listed as a responsible authority for this objective

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Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
[B3] Increase the resilience of buildings and infrastructure networks to sustain and enhance the benefits and services provided	Buildings and infrastructure networks	[B3-3] Scottish Planning Policy (SPP) (Climate Change) identifies that short and long term impacts of climate change should be taken into account in all decisions throughout the planning system.	Adopted LDP policies encourage installation of low and zero carbon generating technology in new buildings, active travel and development of network of green infrastructure. Review in forthcoming Main Issues Reports/SEA process and supplementary planning guidance. New non-statutory planning guidance published for public consultation on the Dundee Green Network to promote opportunities to enhance and protect.
		[B3-6] Home Energy Efficiency Programme for Scotland. Delivering heating and insulation measures across Scotland to help improve energy efficiency and reduce energy demands of existing housing stock in the most fuel poor areas. [B3-7] The Energy Efficiency Standard for Social Housing sets a minimum standard for energy efficiency in social housing. All social housing will be expected to meet the standard by 2020.	The Council continues to maximise impact of the Home Energy Efficiency Programme Scotland – Area Based Schemes (HEEPS:ABS) funding by combining it 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 2019/20 EWI was installed in 3 large areas of Dundee in Stirling Park, Law Crescent and Dudhope. 567 properties - occupied by both Council and private residents - benefited from the upgrades. The total cost of this work was £5.2m with £2.8 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 just under £47m with almost 5,000 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.

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

Objective Reference The	neme Policy/ Proposal reference	Delivery progress made
	[B3-8] Improve Housing Quality by ensuring all houses meet the tolerable standard, and tha all social housing meets the Scottish Housing Quality Standard (SHQS) by 2015.	663 New boilers installed and 19 electric to gas properties completed. 201 properties boodied from repowed reading.

APPENDIX 1: DCC 'PUBLIC BODIES CLIMATE CHANGE DUTIES' REPORT 2019/20

Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
[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 identifies known areas of flooding and measures to be taken when Flood Alerts and/or reports of flooding are received and clearly assigns roles and responsibilities within the organisation for responding to 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.

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 led the development of the citywide Dundee 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 sectors as outlined in section 4e.
 The Dundee Climate Conference due to take place in Oct 2020 has been rescheduled due to
 COVID-19 and is hoped to take place in Sept/Oct 2021 to tie in with COP26 taking place in
 Glasgow in November 2021.
- 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, continue implementation of the city's Dundee 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) Participate in Adaptation Scotland's Benchmarking Working Group
- 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 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.

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 Services 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:	6 th October 2020

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 (2018 is latest data available, published in June 2020)

Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Units
Industry and Commercial	445.8	446.7	436.1	415.2	369.2	376.6	343.7	358.8	348.2	299.9	289.3	257.9	234.3	228.1	kt CO ₂
Domestic	384.8	384.0	378.11	377.8	334.3	352.0	311.2	331.2	314.6	263.1	247.8	230.8	215.2	211.4	kt CO ₂
Transport total	224.3	225.0	231.4	225.4	217.2	213.4	208.3	205.3	201.0	201.5	200.8	204.6	206.4	207.9	kt CO ₂
Total Emissions	1054.9	1055.7	1045.3	1014.8	920.7	942.0	863.2	895.3	863.9	764.5	737.8	693.3	655.9	647.4	kt CO ₂
Per Capita	7.3	7.4	7.3	7.0	6.3	6.4	5.9	6.1	5.8	5.2	5.0	4.7	4.4	4.4	t CO ₂

2a) Targets

Please detail your wider influence targets.

Table 2

Sector	Description	Type of	Target	Baseline	Target /	Baseline	Latest	Saving in	Comments
		Target	saving	year	End Year	value	Year	latest year	
		(units)					Measured	measured	
Energy and Climate Change	<u> </u>	Percentage Emissions	40% reduction	2005	2030	1,097,693	2015	24% (834,655)	Dundee signed to CoM in March
	Energy target.	(%)	in GHG emissions						2018.
Energy and Climate Change	3 - 1	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 **Dundee 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	The Sustainability and Climate Change team created this 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 Climate Action Plan and strive to meet a number of ambitious aims. https://www.dundeecity.gov.uk/sites/default/files/publications/lowcarbonstory.pdf
Communications	Earth Hour 2020	Behaviour change	Lead	Leisure and Culture Dundee	A full week of activities was planned across Senior Council staff and Council leaders, local businesses, schools, NHS, universities and communities in March for Earth Hour; however the country went into lockdown just prior to this and the activities will be undertaken when it is safe and appropriate to do so.
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 Schools Waste Awareness programme commenced Autumn 2019.
Partnership Working	Baldovie Community Reuse Hub	Skills/capacity building	Lead	Tayside Re-users, Transform, Dundee Social	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,

				Enterprise Network.	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	Xplore Dundee, MSIP, 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	Skills/capacity building	Participant	Scottish Government.	The Sustainability and Climate Change team led the pilot 'Local Heat and Energy Efficiency Strategies' (LHEES) approach in the

	Strategies (LHEES) – pilot			Alliance, Resource Efficiency Scotland, Atkins	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

http://www.energydundee.com
