ITEM No …9……..

REPORT TO: **POLICY & RESOURCES COMMITTEE – 22 NOVEMBER 2021**

REPORT ON: **PUBLIC BODIES CLIMATE CHANGE DUTIES – ANNUAL REPORT 2020/2021**

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

REPORT NO: **294-2021**

1 PURPOSE OF REPORT

1.1 To inform Committee of the work undertaken over the period April 2020 to March 2021 in support of the Council's duties under the Climate Change (Scotland) Act 2009.

1.2 To report on the success of efforts to reduce the Council's carbon emissions by 11% over the last year and the investment delivered which has resulted in year on year reductions in organisational emissions.

2 RECOMMENDATION

2.1 It is recommended that the Committee note the progress made by the Council in responding to the climate emergency and progress in reducing organisational emissions outlined in the 2020/2021 Public Bodies Climate Change Duties (PBCCD) Report at Appendix 1.

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 March this year, a capital plan investment of over £21m was announced for green recovery projects to cut greenhouse gas emissions and support ongoing efforts to respond to the climate emergency. Measures include:

a £9.3 million for a new active travel path between Broughty Ferry and Monifieth;
b £6.4m for a range of sustainability and low carbon projects including energy conservation measures in Council properties through the Non-Domestic Energy Efficiency Framework. The first two phases have already saving £490,000 and addressing building-based carbon emissions by delivering annual CO_2 reductions of 1617 tonnes;
c £2.7m for solar PV / electric vehicle charging systems, fourth public charging hub at Clepington Road along with solar power provision and additional electric commercial vehicle charger provision at Greenmarket; and
d £3 million for housing energy saving measures and projects.

3.3 The decarbonisation of heat and transport remain key challenges for all local authorities and the Council has continued to invest in initiatives to support emissions reduction in these sectors. Over the last seven years the Council's External Wall Insulation programme has invested £50m in almost 5,000 properties, reducing the amount of heat residents need to use as well as cutting carbon emissions. Work is currently underway in two areas of the city, with three further areas planned for this financial year. Funding of over £2.2m from the Scottish Government to deliver the Spaces for People temporary infrastructure programme, has made it safer for people who choose to walk, cycle or wheel for journeys and exercise, while physical distancing is in place during Covid-19 and as we transition out of lockdown.

3.4 In addition, £150,000 recurring revenue was allocated to strengthen the capacity of the Council's Sustainability and Climate Change team, enabling progress to be accelerated and support for a city-wide approach to Dundee's transition to net-zero.

3.5 The Council has invested approximately £60 million over the last three years to tackle climate change and with these additional projects, it will bring the total to almost £115m by 2026.

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 2020/2021 PUBLIC BODIES CLIMATE CHANGE DUTIES REPORT

5.1 The Council's PBCCD Report for 2020/21 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;
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.

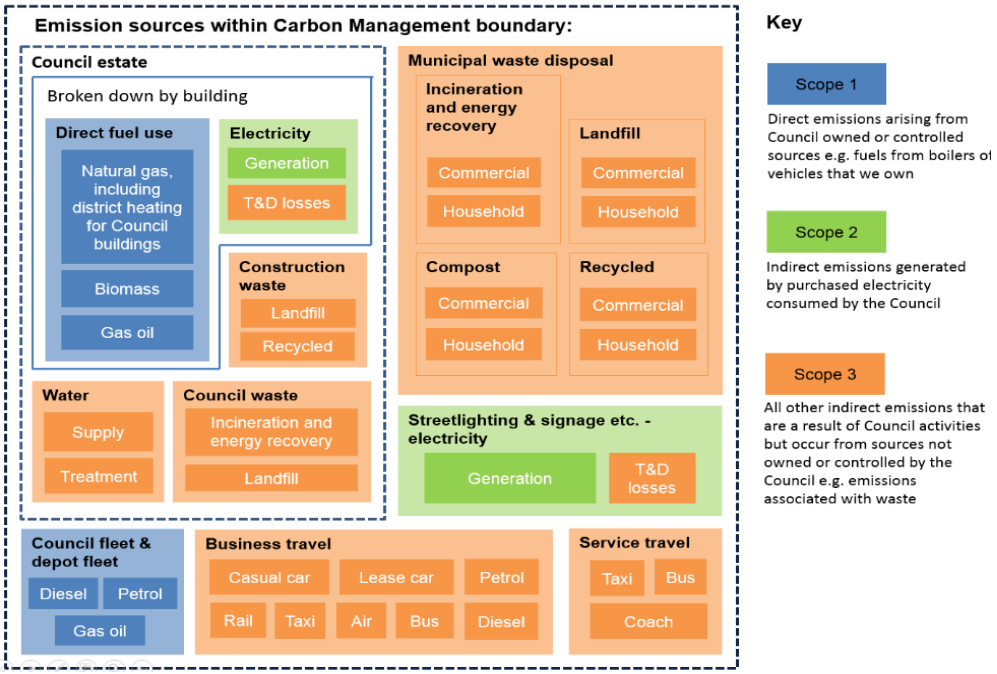
<u>Carbon Management Boundary</u>

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 2020/2021, 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.

5.6 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 Department for Business, Energy & Industrial Strategy (BEIS) to convert consumption units to tonnes of carbon dioxide equivalents (tCO_2e are a way of expressing all greenhouse gas emissions in common units).

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.

Figure 1: DCC Carbon Management Boundary 2020/2021



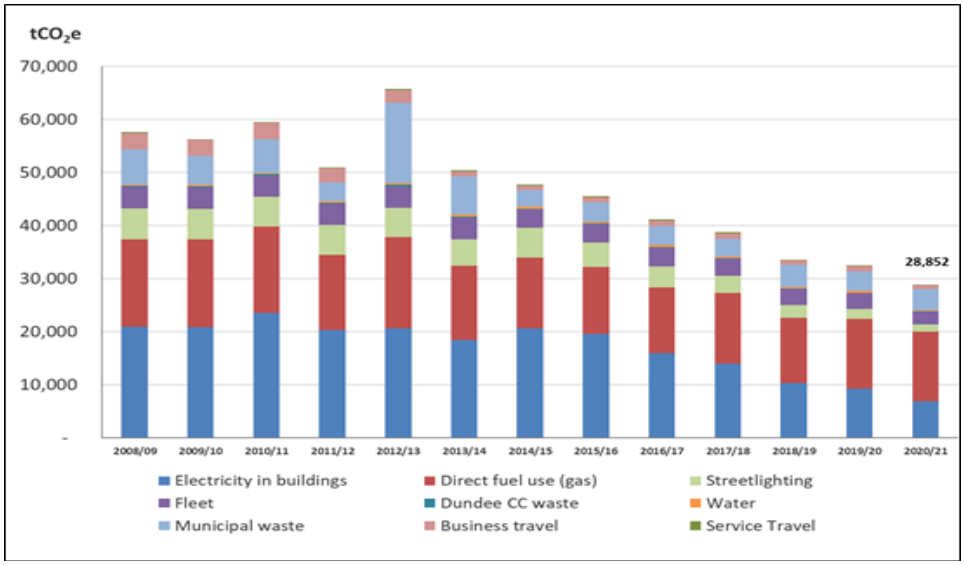
Carbon Footprint Data

5.8 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 2020/2021, 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.

Figure 2: DCC Carbon Footprint: 2008/09 to 2020/2021



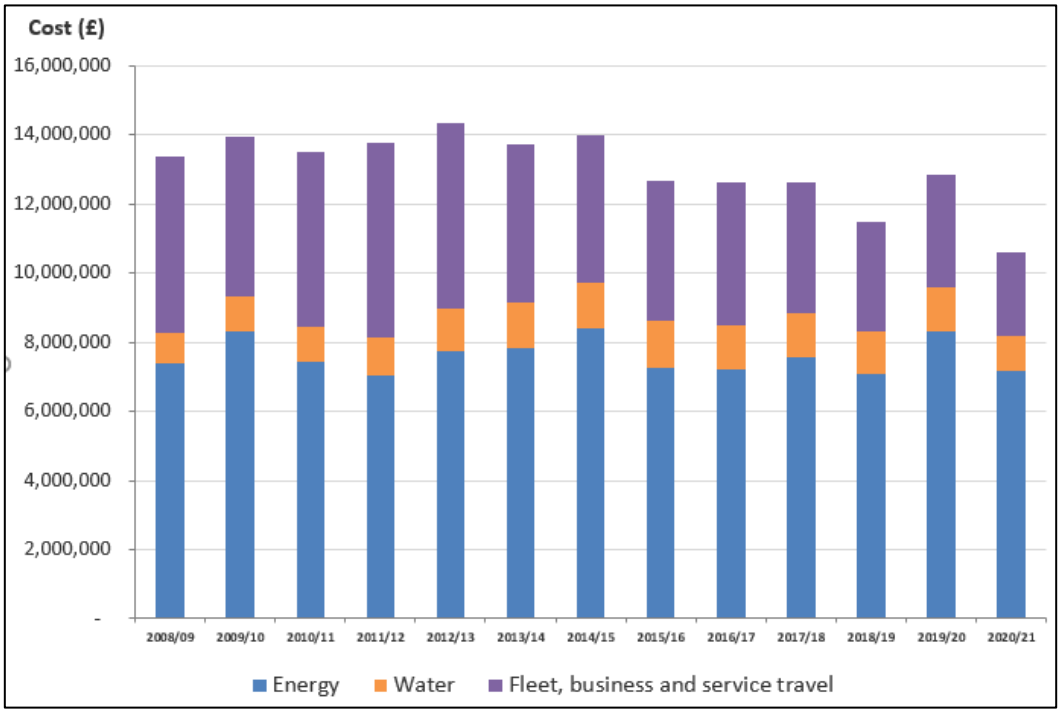
5.10 Key points:

a The carbon footprint for the Council has reduced by 11% in the past year;
b The carbon footprint has reduced by 49% since the baseline year of 2007/08;
c There was an 11% decrease in carbon emissions from energy use in buildings;
d Energy consumption in 2020/21 decreased by 6% compared with the previous year. There was a significant drop in electricity consumption (19%) but gas consumption stayed almost the same;
e The COVID-19 pandemic resulted in building closures for much of the year and the initial months saw large cuts in both electricity and gas consumption. This situation was reversed, however, when COVID-19 risk mitigation recommendations were implemented and ventilation systems were set up to run 24/7 in all buildings (occupied and unoccupied) where they existed. This has resulted in greater than normal consumption of electricity throughout the stock;
f There were no significant additions or removals of stock during this period;
g Improvements in energy efficiency of buildings through the Non-Domestic Energy Efficiency programme also contributed to the reduction in electricity consumption from the property portfolio;
h Streetlighting electricity consumption reduced by 25% as a result of the LED streetlamp replacement;
i The Grid Emission Factor decreased by 9% as the UK's renewable electricity capacity continues to increase making electricity supply less carbon intensive;
j Natural Gas and Gas Oil consumption for heating buildings decreased by 1%. A reduction of 7% on last year, partly due to less occupation of buildings and partly due to the milder winter over the 2020/21 period; and
k Approximately 245,700 KWh of electricity was generated from the Council's solar PV systems.

Analysis of 2020/2021 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 2020/2021



a Costs associated with emissions from energy and water use, fleet, service and business travel are estimated to be £10.6 million; and

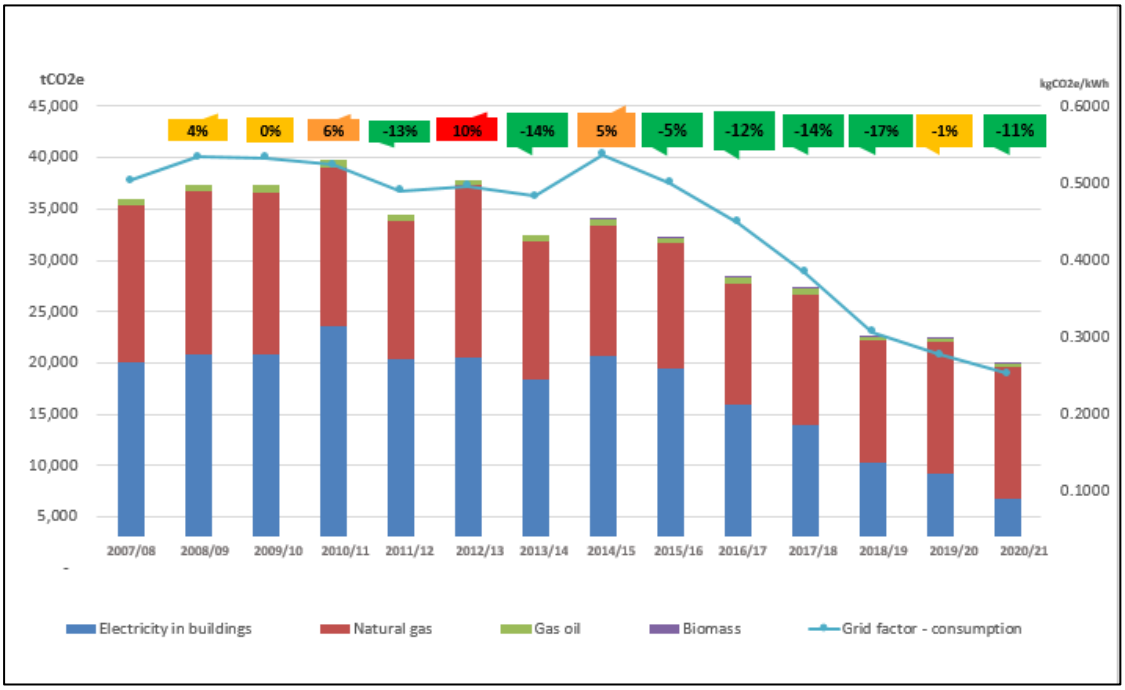
b Energy, water and fuel costs have reduced by 17% during the period.

Targets

5.12 The Council's Carbon Management Plan target is to reduce energy use in buildings (measured in CO_2e) by 5% per annum. An 11% reduction was achieved in 2020/21.

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 2020/2021



Carbon Reduction Project Register

5.14 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.

5.15 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.

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

7 ACCELERATING PROGRESS IN TACKLING CLIMATE CHANGE

7.1 Since the last report, the Council has continued to implement the Dundee Climate Action Plan and implement new measures to increase the pace of change, including:

a The Dundee Climate Leadership Group has been established to provide active leadership on Dundee's net-zero challenge, leveraging expertise from across the city in order to engage and inspire collective ownership and a shared commitment to tackling climate change.
b The Council's Sustainability and Climate Change Team was expanded in September 2021 to five officers, that will enable greater community engagement and behavioural change projects on climate change and developing a robust Net-Zero Transition Plan and Carbon Budget for the Council.
c A COP26 Working Group was brought together with over 20 local organisations to develop a 'Dundee Celebrates COP26' Events Programme: (https://www.dundeecity.gov.uk/sustainable-dundee/dundee-cop26-events-programme).

8 POLICY IMPLICATIONS

8.1 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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11 November 2021

APPENDIX 1

PUBLIC BODIES CLIMATE CHANGE DUTIES – 2020/2021 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

Approx. 6,000

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.

£366,568,000

1f) Report year

Specify the report year

2020/2021 (financial year)

1g) Organisational context

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

Dundee

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 and 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 and awareness-raising to encourage behavioural change, route planning and optimisation and statutory waste data reporting.

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

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

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

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

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

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

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

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

2 GOVERNANCE, MANAGEMENT AND STRATEGY

Governance and Management

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

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

The Council's **Sustainable Dundee Working Group** was formed 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.

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

The **Dundee Climate Leadership Group** was established in spring 2021 to provide active leadership on Dundee's net-zero challenge, leveraging expertise from across the city in order to engage and inspire collective ownership and a shared commitment to tackling climate change. It is chaired by the Principal of the University of Dundee and its operating principles are to work within the objectives of Dundee Climate Action Plan and strategic vision of Dundee Partnership (Community Planning Partnership).

Dundee City Council	Dundee Heritage Trust	Scottish Water
University of Dundee	Dundee Climate Action Network	Robertson Group
University of Abertay	Creative Dundee	DC Thomson
NHS Tayside	Hillcrest Homes	Michelin Scotland Innovation Parc
Scottish Gas Networks		

The Group's purpose is to:

- To promote climate change leadership in Dundee, providing expert advice, challenge and encouragement in progressing the city's contribution to tackling climate change.
- To monitor and drive progress of the Dundee Climate Action Plan in meeting the city's net-zero targets and recommend innovative solutions that support a just transition to a net-zero future.
- Support partners to reduce carbon emissions from the key sectors of residential, commercial, industry, transport and the public and private sectors.
- To enable the provision of independent and expert advice on the most effective steps for meeting reduction targets in order to inform policies and actions of members and local stakeholders and decision-makers.
- To identify the social challenges and impacts of climate change on Dundee's communities and ways to mitigate and improve them.
- To help build and support the case for project development and investment in low carbon and climate resilient projects in the city, supporting collaboration and business case development and project implementation.
- To embed best practice in public engagement on climate change and its impacts, in order to support robust decision making and local action.
- To support the exchange of ideas, research findings, info and best practice on carbon reduction and climate resilience.
- To identify and promote the exchange of best practice and lessons learnt with other cities in order to influence the required changes in Dundee.

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 2020/21, 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.

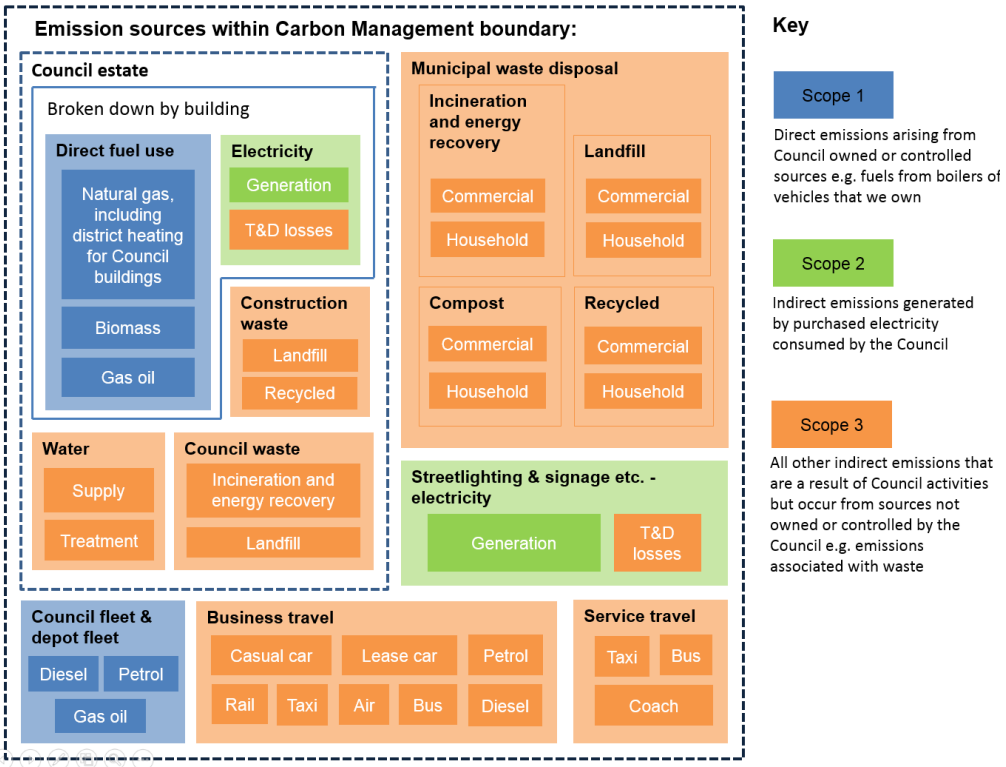
<u>Carbon Emissions</u>

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

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

- As part of the 2016 re-scoping exercise, a **Carbon Footprint Projects Register** has been compiled using the 'Carbon Footprint Forecast & Projects Register Tool' as developed by Resource Efficient Scotland. This register 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.

Dundee City Council Carbon Footprint Boundary established 2016/17 unchanged for 2020/21:



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 have been captured in **ClimateView** emissions modelling software to provide an understanding of how far the current action sin the plan will take us to net zero. Dundee's emissions dashboard can be explored at: https://app.climateview.global/public/board/261e36a2-915d-47d6-8e65-e63e14b7b970

- 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 (ACF). In June 2021 a Benchmarking Assessment was undertaken by key officers at DCC using the Benchmarking Assessment Tool, whereby our progress on the ACF was assessed. A number of actions were identified from this and the internal Adaptation Working Group are taking these forward.

- 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. Internal Carbon Literacy training is being recommended for Senior Managers and all council staff.

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

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

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

Since signing the City up to the **Covenant of Mayors for Climate and Energy** on March 2018, the Council has worked with public, private and community organisations via the Dundee Partnership to co-design a **Dundee Climate Action Plan** which contains actions on Energy, Waste, Transport and Resilience that will help reduce emissions and prepare for climate change. The 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 Plan	2020-2030	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 aims to 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 being launched in Autumn 2021 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	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 and Recycling Strategy and Action Plan	Waste Management Strategy	2020-2025	Adopted in 2020 setting out long term plans to reduce and recycle waste. https://www.dundeecity.gov.uk/service-area/neighbourhood-services/environment/waste-policy
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) Develop a new **Net-Zero Transition Plan and Carbon Budget** 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.

2) Create a new **Community Climate Choices** Fund based on the principles of Participatory Budgeting for local climate change solutions.

3) Utilise the **ClimateView emissions modelling platform** to monitor progress, inform decision making, engage stakeholders and communicate results on the Cities net-zero target

4) Embed **climate Adaptation** across services in line with Adaptation Scotland's Capability Framework.

5) Develop a **Sustainable Dundee Engagement Plan** – localising Scottish Government's 'Net Zero Nation' public engagement strategy for climate change. Within this we will deliver **Climate Literacy Training** for all Council staff and work with Service Management teams to embed climate actions within Service Plans.

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

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

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

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

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

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

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 in 2022, 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.

The Council are now trialling **ClimateView Emissions modelling software** to help measure carbon abatement of actions, policies and strategies and their impact on our net-zero target, one of 5 pilot cities in the UK to do so and the first in Scotland.

3 CORPORATE EMISSIONS, TARGETS AND PROJECTS

Emissions

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

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

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

Reference Year	Year	Year Type	Scope 1	Scope 2	Scope 3	Total	Units	Comments
Baseline carbon footprint	2007/08	Financial (April to March)	20,029	23,664	12,472	56,165	tCO_2e	The boundary of the carbon footprint been set and applied consistently across the 12 year dataset. All consumption data has been converted using the appropriate Conversion Factor (CF) for the time period.
Year 1 carbon footprint	2008/09	Financial (April to March)	20,520	24,815	12,247	57,582	tCO_2e	
Year 2 carbon footprint	2009/10	Financial (April to March)	20,551	24,662	11,077	56,290	tCO_2e	
Year 3 carbon footprint	2010/11	Financial (April to March)	20,208	27,032	12,284	59,524	tCO_2e	
Year 4 carbon footprint	2011/12	Financial (April to March)	18,197	23,857	8,939	50,993	tCO_2e	
Year 5 carbon footprint	2012/13	Financial (April to March)	21,215	24,159	20,320	65,693	tCO_2e	
Year 6 carbon footprint	2013/14	Financial (April to March)	17,991	21,579	10,815	50,385	tCO_2e	
Year 7 carbon footprint	2014/15	Financial (April to March)	16,845	24,097	6,819	47,761	tCO_2e	
Year 8 carbon footprint	2015/16	Financial (April to March)	16,144	22,321	7,090	45,555	tCO_2e	
Year 9 carbon footprint	2016/17	Financial (April to March)	15,980	18,244	6,908	41,131	tCO_2e	
Year 10 carbon footprint	2017/18	Financial (April to March)	16,592	15,735	6,371	38,698	tCO_2e	
Year 11 carbon footprint	2018/19	Financial (April to March)	15,339	11,724	6,511	33,574	tCO_2e	
Year 12 carbon footprint	2019/20	Financial (April to March)	16,244	10,191	5,999	32,434	tCO_2e	11% reduction in tCO_2e achieved between 2019/20 and 2020/21
Year 13 carbon footprint	**2020/21**	**Financial (April to March)**	**15,557**	**7,553**	**5,741**	**28,851**	**tCO_2e**	

3b) Breakdown of emission sources

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

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

Emission Source	Scope	Consumption Data	Units	Emission Factor	Units	Emissions (tCO_2e)	Comments
Natural Gas	Scope 1	69,570,505	kWh	0.1839	kg CO_2e/kWh	12791.93	Natural gas use in Council buildings
Gas oil	Scope 1	1,500,000	kWh	0.25672	kg CO_2e/kWh	385.08	Gas oil use in Council buildings
Biomass	Scope 1	288,473	kWh	0.0156	kg CO_2e/kWh	5	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	800,524	Litres	2.54603	kg CO_2e/litre	2038.19	Fleet. Assuming 6.0% for additional fuel not included and contingency. Average biofuel mix
Petrol	Scope 1	32,028	Litres	2.16802	kg CO_2e/litre	69.44	Fleet. Assuming 6.0% for additional fuel not included and contingency. Average biofuel mix
Gas oil (red diesel)	Scope 1	1,040,796	kWh	0.26775	kg CO_2e/kWh	267.1931491	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	26,931,462	kWh	0.22788	kg CO_2e/kWh	6138	Grid electricity used in Council buildings (90% EF = generation)
Grid Electricity (transmission &distribution losses)	Scope 3	26,931,462	kWh	0.02532	kg CO_2e/kWh	681	Grid electricity used in Council buildings
Grid Electricity (generation)	Scope 2	5,467,240	kWh	0.22788	kg CO_2e/kWh	1,246.00	Grid electricity used in street lighting and other sources (car parks, signage etc.)
Grid Electricity (transmission &distribution losses)	Scope 3	5,467,240	kWh	0.02532	kg CO_2e/kWh	138.43	Grid electricity used in street lighting and other sources (car parks, signage etc.)
Water use	Scope 3	216,310	m3	0.344	kg CO_2e/m3	74.41	Actual data
Water treatment	Scope 3	205,495	m3	0.708	kg CO_2e/m3	145.49	Estimated at 95% of water use total for same year.
Waste disposal – landfill - commercial	Scope 3	1,424	tonnes	458	kg CO_2e/tonne	652.44	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - incineration - commercial	Scope 3	7,173	tonnes	21	kg CO_2e/tonne	152.9	Includes DCC waste within commercial collection (estimated at 12.88% of commercial waste)
Waste disposal - composting - commercial	Scope 3	649	tonnes	10	kg CO_2e/tonne	6.62	Commercial waste

Waste disposal - recycling - commercial	Scope 3	2,317	tonnes	21	kg CO_2e/tonne	49.39	Commercial waste
Waste disposal - landfill - municipal	Scope 3	5032	tonnes	437	kg CO_2e/tonne	2,200.86	Household waste
Waste disposal - incineration - municipal	Scope 3	29,513	tonnes	21	kg CO_2e/tonne	629.12	Household waste
Waste disposal - composting - municipal	Scope 3	7,492	tonnes	10	kg CO_2e/tonne	76.45	Household waste
Waste disposal - recycling - municipal	Scope 3	13,222	tonnes	21	kg CO_2e/tonne	282	Household waste
Business travel - private car	Scope 3	798,980	km	0.1714	kg CO_2e/km	136.95	Lease + Casual included No information available about car size or fuel so unknown size/unknown fuel factor used
Business travel - taxi	Scope 3	23,803	passenger km	0.1455	kg CO_2e/ passenger km	3.46	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	258,644	passenger km	0.1195	kg CO_2e/ passenger km	30.91	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	602,792	passenger km	0.0369	kg CO_2e/ passenger km	22.27	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	27,751	passenger km	0.2443	kg CO_2e/ passenger km	6.78	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	113,385	litres	2.546	kg CO_2e/litre	288.68	Assumed to be separate from fleet petrol and therefore assigned to Scope 3.
Business travel - petrol	Scope 3	116,891	litres	2.168	kg CO_2e/litre	253.42	Assumed to be separate from fleet diesel and therefore assigned to Scope 3.
Service travel - taxi	Scope 3	276,699	passenger km	0.1455	kg CO_2e/ passenger km	40.26	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	245,001	passenger km	0.1195	kg CO_2e/ passenger km	29.28	From transport expenditure against cost centre codes with assumptions about % expenditure against different modes, therefore data should be treated as an estimate.

3c) Generation, consumption and export of renewable energy

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

	Renewable Electricity		Renewable Heat		
Technology*	**Total consumed by the body (kWh)**	**Total exported (kWh)**	**Total consumed by the body (kWh)**	**Total exported (kWh)**	**Comments**
Solar PV	245,700				Includes generation from multi-storeys, DISC, Unit T Claverhouse, The Crescent and schools e.g. Morgan Academy
Biomass			339,380		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 and 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	20,001	2015/16	32,163	tCO_2e	2020/21	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. **12,162 tCO_2e 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 (tCO_2e)	Comments
Electricity	454	street lighting replacement (454 tCO_2e) – Electricity consumption down due to buildings not being in use – rather than NDEE improvements.
Natural Gas	0	No further NDEE during 20/21 due to COVID-19.
Waste	0	No further waste reduction projects due to COVID-19.
Fleet transport	650	Replacement of fleet vehicles with EV's, also less fleet usage due to COVID-19..
Total	**1,104**	

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

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

Project name	Funding source	Expected First full year of CO_2e savings	Estimated or actual savings	Capital cost (£)	Operational cost (£/annum)	Project lifetime (years)	Primary fuel/ emission source saved	Estimated carbon savings per year (tCO_2e/annum)	Estimated costs savings (£/annum)	Behaviour Change aspects	Comments
NDEE Basket 2 - Elec	CEEF	2020/21	Estimated	2,229,160	-	10	Grid Electricity (generation)	673	266,224	No	Cost savings for gas and electricity First full year capture due to postponement of projects – started just after end of reporting period.
NDEE Basket 2 - Gas	CEEF	2019/20	Estimated	193,840	-	10	Natural Gas	58	-	No	First full year capture due to postponement of projects – started just after end of reporting period.
Waste	ZWS/ DCC	2021/22	Estimated	780,000	-	10	Refuse to combustion	31	114,173	Yes	Waste education. DCC and Schools postponed due to COVID-19.
Fleet	Transport Scotland/ Air Quality Funds	2019/20	Estimated	3,043,023	n/a	10	Diesel	n/a	124,565.44 kg	Yes	Replacement of 52 diesel Fleet vehicles with EV in 19/20 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_2e)	Increase or decrease in emissions	Comments
Estate change		Increase	N/A – no significant changes this year
Other (specify in comments)		Decrease	COVID-19 – electricity use in buildings reduced by 19% as buildings were unused initially.
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_2e)	Comments
Electricity	454	Street lighting and NDEE Basket 2
Natural gas	0	Gas consumption remained constant
Waste	0	Difficult to calculate
Fleet Transport	650	Could be an overestimate due to less vehicles being used
Total	1104	

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

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

Emissions source	Total estimated annual emissions (tCO_2e)	Increase or decrease in emissions	Comments
Estate changes	N/A		No Significant Estate Changes during reporting period.
Other (specify in comments)	Difficult to quantify	Decrease	COVID-19 has resulted in reduced energy use from buildings and an overall reduced carbon footprint. The impact of the decreasing grid factor will also have a significant impact on the overall footprint.
Total	Difficult to quantify	Decrease	The net effect will be a reduction in emissions but there is likely to be an increase in consumption of electricity and natural gas.

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

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

Total savings	Total estimated emissions savings (tCO_2e)	Comments
Total project savings since baseline year	16,048	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 11% in the past year.
- The carbon footprint has reduced by 49% 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 11% 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 19% in the reporting period
- 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 COVID-19 pandemic resulted in building closures for much of the year and the initial months saw large cuts in both electricity and gas consumption. This situation was reversed, however, when COVID-19 risk mitigation recommendations were implemented and ventilation systems were set

up to run 24/7 in all buildings (occupied and unoccupied) where they existed. This has resulted in greater than normal consumption of electricity throughout the stock.

- There were no significant additions or removals of stock during this period.
- The Grid Emission Factor decreased by 9% 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 1%.
- Streetlighting electricity consumption was down by 25% 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 is participating in **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. The Benchmarking tool was used internally with colleagues from Planning, Green Space, Housing, Energy and Infrastructure to assess where we are on the Capability Framework and identified a number of initial steps to engage all services within the Council. These will be actioned in the coming year.

- 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.

- Progress with the Tayside Integrated Catchment Study is continuing. There is now a good understanding of the sewer system within Dundee and its interaction with watercourses running through the city. However, some further investigation/survey/flow monitoring work is required in future stages of the Study to provide further confirmation of the configuration of some specific sewer and watercourse connections. The Optioneering Stage of the Study is now complete and has identified preferred options to reduce flood risk in the areas taken forward for optioneering, and to provide resilience when considering future climate change predictions. These preferred options and associated cost estimates are to be submitted to the Scottish Government/SEPA for prioritisation at a national level, with a view to Scottish Government funding being allocated to Local Authorities and Scottish Water in future years to implement the prioritised options. Subject to being prioritised favourably and the availability of funding, the preferred options will be taken forward to outline design stage and detailed design stage. Thereafter, and subject to the allocation of Scottish Government funding, construction of the preferred options will follow. Outputs from the Study 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.

- Dundee City Council are continuing to work in partnership with Scottish Water, SEPA and NatureScot to develop a Surface Water Drainage 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. As locations for drainage strategies similar to that being developed in St Marys continue to be identified across the city, Dundee City Council and Scottish Water are to enter into a formal partnership agreement. Further details of the drainage strategy partnership working can be found in the 25 January 2021 City Development Committee Report Number 32-2021 available at https://www.dundeecity.gov.uk/minutes/report?rep_id=32-2021.

- 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.

- Building on the results of the Benchmarking Assessment, the internal Adaptation Working Group will continue to engage staff in embedding adaptation across teams and departments and within Service Plans, Local Development Plans and Council Plans.

Delivering adaptation action

- The Cycle 1 **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 reviewed and updated in 6-year cycles from the date of the inaugural Plan published in June 2016. The Cycle 2 Tay Estuary and Montrose Basin Local Flood Risk Management Plan to be published in June 2022 is currently being prepared. Subject to being prioritised favourably at a national level by the Scottish Government/SEPA, Flood Protection Schemes being considered for inclusion in the Cycle 2 Tay

Estuary and Montrose Basin Local Flood Risk Management Plan include extending the Dundee Coastal Flood Protection Scheme, and also implementing a Fluvial Flood Protection Scheme.

- Progress with the **Tayside Integrated Catchment Study is continuing**. There is now a good understanding of the sewer system within Dundee and its interaction with watercourses running through the city. However, some further investigation/survey/flow monitoring work is required in future stages of the Study to provide further confirmation of the configuration of some specific sewer and watercourse connections. The Optioneering Stage of the Study is now complete and has identified preferred options to reduce flood risk in the areas taken forward for optioneering, and to provide resilience when considering future climate change predictions. These preferred options and associated cost estimates are to be submitted to the Scottish Government/SEPA for prioritisation at a national level, with a view to Scottish Government funding being allocated to Local Authorities and Scottish Water in future years to implement the prioritised options. Subject to being prioritised favourably and the availability of funding, the preferred options will be taken forward to outline design stage and detailed design stage. Thereafter, and subject to the allocation of Scottish Government funding, construction of the preferred options will follow. Outputs from the Study 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. 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 continuing to work in partnership with Scottish Water, SEPA and NatureScot to develop a Surface Water Drainage 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. As locations for drainage strategies similar to that being developed in St Marys continue to be identified across the city, Dundee City Council and Scottish Water are to enter into a formal partnership agreement. Further details of the drainage strategy partnership working can be found in the 25 January 2021 City Development Committee Report Number 32-2021 available at

  https://www.dundeecity.gov.uk/minutes/report?rep_id=32-2021.

- Greenspace / Biodiversity / Green infrastructure:

  - The new Biodiversity Plan, published in January 2020, includes actions for safeguarding and enhancing existing habitats and species as well as actions on potential sites and projects. Dundee City Council's progress towards these actions are reported to council committee annually as well as to the Scottish Government every 3 years as part of its legal Biodiversity Duty.

  - Community consultation on new management techniques for greenspaces – in 2020, after feedback from members of the public and working towards targets identified in the Biodiversity Action Plan, areas in 27 parks across Dundee were chosen as biodiversity and naturalised grassland areas. These areas generated a lot of public interest and it was decided to launch a city-wide consultation over winter in 2020/21 to gauge the opinions of local communities more widely. Throughout the consultation process Dundee City Council has continued, and will continue, to engage with local people about the proposed biodiversity grasslands / naturalised grasslands in their local greenspaces. The areas have been refined through this dialogue, but the consultation has conclusively shown that there is a public appetite for biodiversity grasslands/naturalised grasslands at each of the 27 sites proposed.

  - 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, six parks successfully attained a Green Flag award in 2020/21, 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. Dundee continues to benefit from grant funding awarded by Forestry Commission Scotland, enabling the improvement and expansion of Dundee's wooded areas. The Urban Tree Policy is due to be updated and will incorporate climate resilience measures.

  - Nature- based solutions-Dundee City Council are working with Scottish Water, SEPA and NatureScot to develop proposals for a Sustainable Urban Drainage System (SUDS) within St Leonards Park as part of the St Mary's Stormwater Strategy. Using a 'One Planet Choices' decision making/option appraisal strategy this project aims to reduce surface water flooding, enhance capacity for future wastewater connections, reduce the cost of treating sewage and deliver multiple benefits for the community and environment including improved quality of space, access to greenspace and enhanced biodiversity.

- 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.

  - **Ride-On**: 15 docking stations are live, eventually there will be enough for 400 e-bikes.

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

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

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

Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
[N1] Understand the effects of climate change and their impacts on the natural environment	Natural Environment	[N1-8] Understand the risks associated with coastal flooding through development and implementation of local flood risk plans.	Dundee City Council has engaged in the development of the Local Flood Risk Management Plan through membership of the Tay Estuary and Montrose Basin (TEAMB) Local Plan District.
		[N1-10] Developing datasets to support flood risk, river and coastal management. A requirement of the Flood Risk Management (Scotland) Act is to develop a programme to integrate necessary data.	• The Cycle 1 **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 reviewed and updated in 6-year cycles from the date of the inaugural Plan published in June 2016. The Cycle 2 Tay Estuary and Montrose Basin Local Flood Risk Management Plan to be published in June 2022 is currently being prepared. Subject to being prioritised favourably at a national level by the Scottish Government/SEPA, Flood Protection Schemes being considered for inclusion in the Cycle 2 Tay Estuary and Montrose Basin Local Flood Risk Management Plan include extending the Dundee Coastal Flood Protection Scheme, and also implementing a Fluvial Flood Protection Scheme. • Progress with the **Tayside Integrated Catchment Study is continuing**. There is now a good understanding of the sewer system within Dundee and its interaction with watercourses running through the city. However, some further investigation/survey/flow monitoring work is required in future stages of the Study to provide further confirmation of the configuration of some specific sewer and watercourse connections. The Optioneering Stage of the Study is now complete and has identified preferred options to reduce flood risk in the areas taken forward for optioneering, and to provide resilience when considering future climate change predictions. These preferred options and associated cost estimates are to be submitted to the Scottish Government/SEPA for prioritisation at a national level, with a view to Scottish Government funding being allocated to Local Authorities and Scottish Water in future years to implement the prioritised options. Subject

			to being prioritised favourably and the availability of funding, the preferred options will be taken forward to outline design stage and detailed design stage. Thereafter, and subject to the allocation of Scottish Government funding, construction of the preferred options will follow. Outputs from the Study 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. 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 include local flood risk management 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.
[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).	• The Cycle 1 **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 reviewed and updated in 6-year cycles from the date of the inaugural Plan published in June 2016. The Cycle 2 Tay Estuary and Montrose Basin Local Flood Risk Management Plan to be published in June 2022 is currently being prepared. Subject to being prioritised favourably at a national level by the Scottish Government/SEPA, Flood Protection Schemes being considered for inclusion in the Cycle 2 Tay Estuary and Montrose Basin Local Flood Risk Management Plan include extending the Dundee Coastal Flood Protection Scheme, and also implementing a Fluvial Flood Protection Scheme. • Progress with the **Tayside Integrated Catchment Study is continuing**. There is now a good understanding of the sewer system within Dundee and its interaction with watercourses running through the city. However, some further investigation/survey/flow monitoring work is required in future stages of the Study to provide further confirmation of the configuration of some specific sewer and watercourse connections. The Optioneering Stage of the Study is now complete and has identified preferred options to reduce flood risk in the areas taken forward for optioneering, and to provide resilience when considering future climate change predictions. These preferred options and associated cost estimates are to be submitted to the Scottish Government/SEPA for prioritisation at a national level, with a view to Scottish Government funding being allocated to Local Authorities and Scottish Water in future years to implement the prioritised options. Subject to being prioritised favourably and the availability of funding, the preferred options will be taken forward to outline design stage and detailed design stage. Thereafter, and subject to the allocation of Scottish Government funding, construction of the preferred options will

			follow. Outputs from the Study 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
[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.

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 Housing Department continues to maximise the 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 2020/21 the Council was allocated over £2m of HEEPS:ABS but due to the effects of COVID-19 and the introduction of the new PAS:2035 retrofit standard, the number of properties that could be insulated was greatly reduced. Work was able to proceed in the Alpin and Foggyley areas but works due in Fleming Gardens, Glenprosen, Lawton 1st and Linlathen areas has been carried forward to 2021/22. The HEEPS:ABS funding awarded to pay for work to private dwellings within these areas was just under £2m. At the current time, these projects are being re-designed to comply with the much more exacting installation standards of the new PAS which include designing out cold-bridging and the requirement for the appointment of a suitably qualified Retrofit Co-ordinator, a new role introduced to ensure the production of long-term energy efficiency retro-fit plans for every property. The new designs are expected to be much costlier than previously so it remains to be seen

			whether the budgets currently allocated for EWI for owners and tenants are sufficient to cover these increases.

Objective Reference	Theme	Policy/ Proposal reference	Delivery progress made
		[B3-8] Improve Housing Quality by ensuring all houses meet the tolerable standard, and that all social housing meets the Scottish Housing Quality Standard (SHQS) by 2015.	The Housing Service is committed to improving the efficiency and performance of our properties to benefit our tenants and private owners. In 2020/21 the service delivered the following projects/installations: • 165 New boilers installed and 7 electric to gas properties completed. • 78 properties benefited from renewed roofing (13 blocks). • 3 void properties had new windows installed. Stock total is 12427 this is only our housing stock this doesn't include HMO/ Homeless accommodation. The Housing Service is committed to driving forward change. It is recognised that there are challenges ahead which include the requirement to maximise the number of Council properties achieving EPC Band B (which starts at SAP 81) by the target year of 2032 to meet EESSH2 (Energy Efficiency Standard for Social Housing 2). The Housing Service is also committed to contributing to the Scottish Government's stated aim of Scotland being net-zero across all sectors by 2045, as well as ensuring the transition is just and that the fuel poor are prioritised in projects and programmes and all of this within the context of PAS 2035 and COVID-19 as mentioned above.. It is still to be understood the extent to which Hydrogen will be deployed to displace natural gas from the gas grid and how it can best meet the cost of upgrading the electricity network to allow it to cope with an increase in demand for electrical heating in homes in conjunction with rising numbers of heat-pumps. Whatever option or combination of options is chosen, it is clear that there will be a phasing out of gas heating with a prohibition already on the installation of gas-boilers in new-build housing after 2025. One thing that is clear is that the Housing Department will not install replacement heating that leads to an increase in running costs for tenants. Heat pumps currently cannot compete with gas central heating and this is an issue where gas heating in properties is at the end of its life and needs to be replaced. Therefore, whilst contrary to our desire to reduce carbon emissions by installing renewable heat, it is likely that we may be forced into installing new gas heating for at least the next few years. Therefore, we will continue to take a fabric first approach by improving the thermal performance of stock through installation of insulation. This means that, whatever heating system is inside homes, less will be required of it and this cuts carbon emissions.

			We may also look at installing PV arrays on suitable roofs and properties to reduce tenants electricity costs and reduce demand on the grid. The Housing Department also has a new-build social rented housing programme, constructing properties itself or in partnership with local Housing Associations. The target for completions over the next 5 years is 1000 units (200 per annum. In 2020/21, 27 completions were achieved. This was well below target but was against the backdrop of COVID-19, difficulties in obtaining labour and materials and also hold-ups because of the technical issues that arise on brownfield sites such as drainage etc. However, it is hoped that progress will pick up in 2022/23. Building properties from scratch provides opportunities – not always available in retro-fit – to include energy efficiency features such as high-levels of insulation and air-tightness which, as well as greatly reducing heat-loss and carbon emissions, provide further opportunity for the installation of decarbonised heat as fewer units will be needed and so running costs for tenants kept low. Within our new-build programme, we aim to achieve the Scottish Government Greener Standard which incorporates many aspects of energy efficiency and sustainability. In common with our retro-fit programmes, we have adopted a fabric first approach. Whilst we have tried to incorporate PVs and forms of heating controls which include zoned heating within the home to maximise energy efficiency we have focused on getting the envelope as well insulated as possible including triple glazing (although not on all development) and making the most of solar gain through considering the building aspects as far as the sites allow. Dundee Energy Efficiency Advice Project (DEEAP), which forms part of the Council's Advice Services in Corporate Services, aims to carry out 4,000 energy advice home visits per year and staff attend 100 community and public events to raise awareness of the energy advice service. This activity was severely curtailed by the effects of COVID-19. However, almost 6,000 energy advice sessions were provided remotely. DEEAP advisors, Private Sector Services Unit (PSSU), Care and Repair and Asset Management staff continue to raise awareness and make referrals to Home Energy Scotland (HES) for private owners and tenants.

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 Adaptation Working Group will regularly review the climate risks as part of the ongoing development Adaptation and Resilience work across all services.

- 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 Senior 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:	25th October 2021

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

2b) Targets

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

In March 2018, the Lord Provost and Leader of Dundee City Council, signed the **Covenant of Mayors for Climate and Energy**, a global initiative that brings together local governments in a voluntary commitment to reduce emissions and develop an action plan that adopts a joint approach to tackling climate change mitigation and adaptation. The **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 A COP26 Dundee planning group has led to the widening of the Sustainable Dundee Partnership with a number of COP26 legacy collaborative projects already planned.
Partnership Working	Dundee Climate Leadership Group	Partnership working: net-zero	Lead	13 organisations across sectors in Dundee	The Dundee Climate Leadership Group was established in spring 2021 to provide active leadership on Dundee's net-zero challenge, leveraging expertise from across the city in order to engage and inspire collective ownership and a shared commitment to tackling climate change. It is chaired by the Principal of the University of Dundee and its operating principles are to work within the

					objectives of Dundee Climate Action Plan and strategic vision of Dundee Partnership (Community Planning Partnership).
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. Over 20 schools are now engaging in the process; an Eco-Schools conference is planned during COP26
Communications	COP26	Behaviour Change	Lead	+20 organisations across sectors in Dundee	A wide group of organisations across the city have been planning a series of events to celebrate COP26. These will commence on the 26th September with the opening of the Active Travel Hub and launch of the COP26 Dundee programme and will continue with many diverse events and activities taking place across the City with the aim of engaging as much of the community as possible. This partnership will continue beyond COP26 as part of the Sustainable Dundee Partnership.
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 Enterprise Network.	Joint partnership repair items that could be saved from the skip including unwanted furniture and other household items, thus reducing waste to thermal treatment or landfill. The Hub also offers opportunities for the unemployed to learn skills needed to repair, reuse and extend the life of products via training and employment programmes. https://www.dundeecity.gov.uk/service-area/neighbourhood-services/environment/community-re-use-hub
Partnership Working	JIVE 2 Hydrogen Fuel deployment	Partnership working of climate change/ sustainability	Participant	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 Strategies (LHEES) – pilot	Skills/capacity building	Participant	Scottish Government. Scottish Cities Alliance, Resource Efficiency Scotland, Atkins	The Sustainability and Climate Change team led the pilot 'Local Heat and Energy Efficiency Strategies' (LHEES) approach in the Lochee Community Planning Partnership area to support the delivery of heat decarbonisation and energy efficiency objectives of the Energy Efficient Scotland programme. The study focuses the step-by-step practicalities of developing a LHEES, the data and other requirements necessary to develop meaningful implementation plans, the technology solutions that are likely to be applicable in the area as well as an understanding of the challenges and lessons on how the wider development of LHEES can best be delivered. https://www.gov.scot/Resource/0053/00532541.pdf
Partnership Working	Invest in Dundee - Energy Dundee	Skills/capacity building	Lead	Public, private and academic sectors in Dundee	Dundee and Dundee Port provide the ideal location to create an Offshore Wind construction port and deliver Incoming logistics, preassembly and loadout. In addition to the number of jobs created over the construction years basing the subsequent Operations and Maintenance activity would provide high quality and secure jobs for Dundee and region for the following decades. Significant public and private investments have been made in infrastructure to ensure the city and port meets the needs of the offshore wind sector. Alongside investment in infrastructure Dundee offers skills, R&D facilitates, competencies across the supply chain and world class centre of excellence.

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