



Net-zero carbon Devon – Devon County Council's own emissions

Sarah Alsbury, Devon County Council

International policy: The Paris Climate Agreement



Devon Climate Declaration



- Project partners came together 2019
- Principal commitments:
 - a willingness to lobby for required national policy changes and resources.
 - to review organisational carbon reduction plans within 6 months.
 - collaborate on a Devon-wide carbon plan.
 - collectively review community risks of a warmer world.
- Most local authorities signed, and all have declared emergencies
- Any organisation or community is encouraged to [endorse it](#)



New target and strategy 2020...

Reduce **corporate emissions** by 70% by 2030

- Low Carbon Buildings
- Fleet and business travel
- Street lighting.
- Solar PV on assets
- Purchasing accredited green energy

Capital requirement, most offering return on investment

Carbon offset the residual **corporate emissions**



Invest in woodland creation, peat restoration etc.

Supply Chain

Work with 10 largest as pilot to reduce emissions

DCC carbon neutral by 2030



Voluntary standard

Follow a standard to aid consistency and avoid double-counting...



GREENHOUSE GAS PROTOCOL



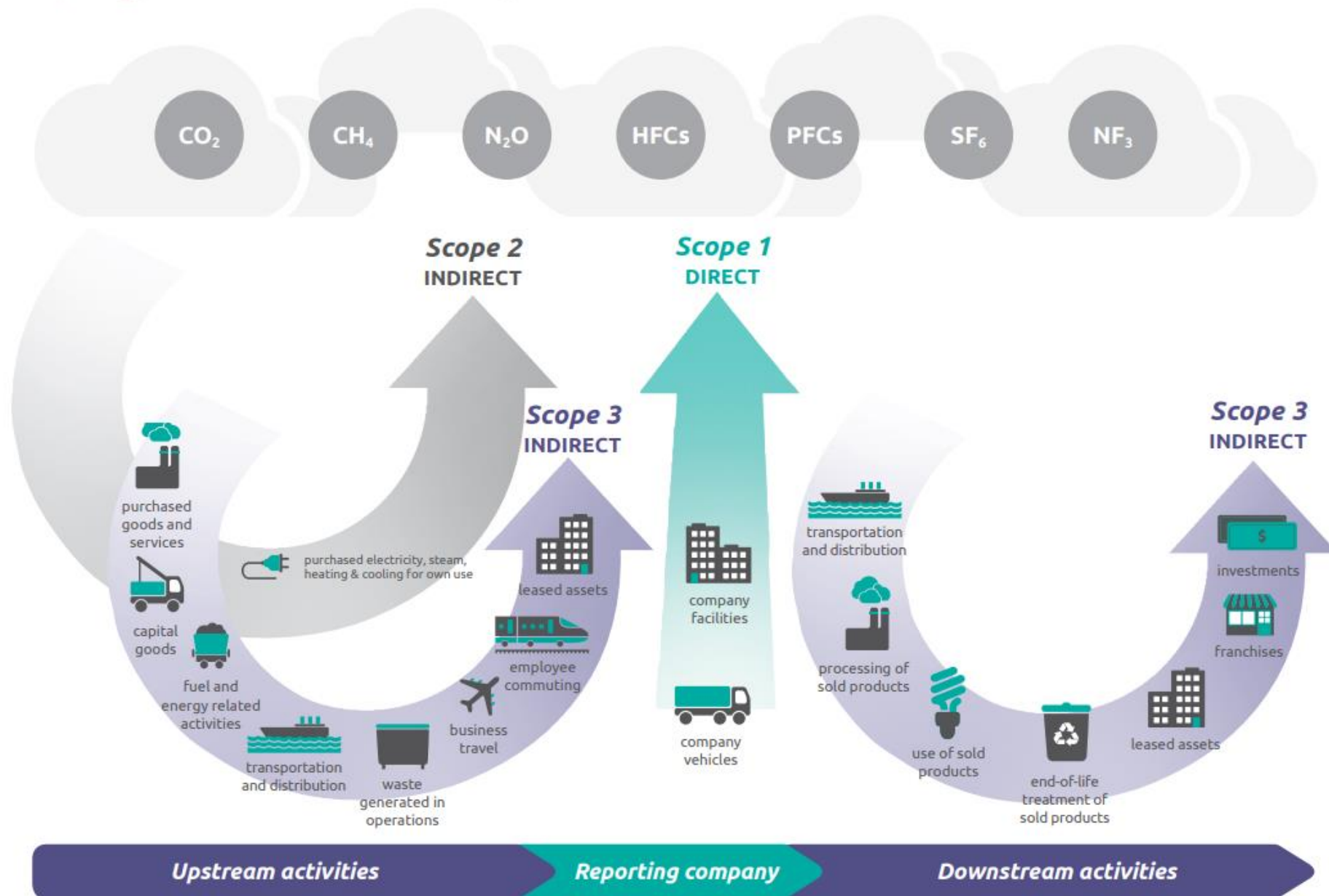
ABOUT	STANDARDS	GUIDANCE	CALCULATIO
<h3>STANDARDS</h3>			
			
Corporate Standard The GHG Protocol Corporate Accounting and Reporting Standard provides requirements and guidance for companies and other organizations, such as NGOs, government agencies, and universities, that are preparing a corporate-level GHG emissions inventory. Best for: Companies and Organizations Online learning product: Corporate Standard Training Webinar			
			
GHG Protocol for Cities The Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) provides a robust framework for accounting and reporting city-wide greenhouse gas emissions. Best for: Cities and Communities Online learning product: Compact of Mayors Online Training Course			

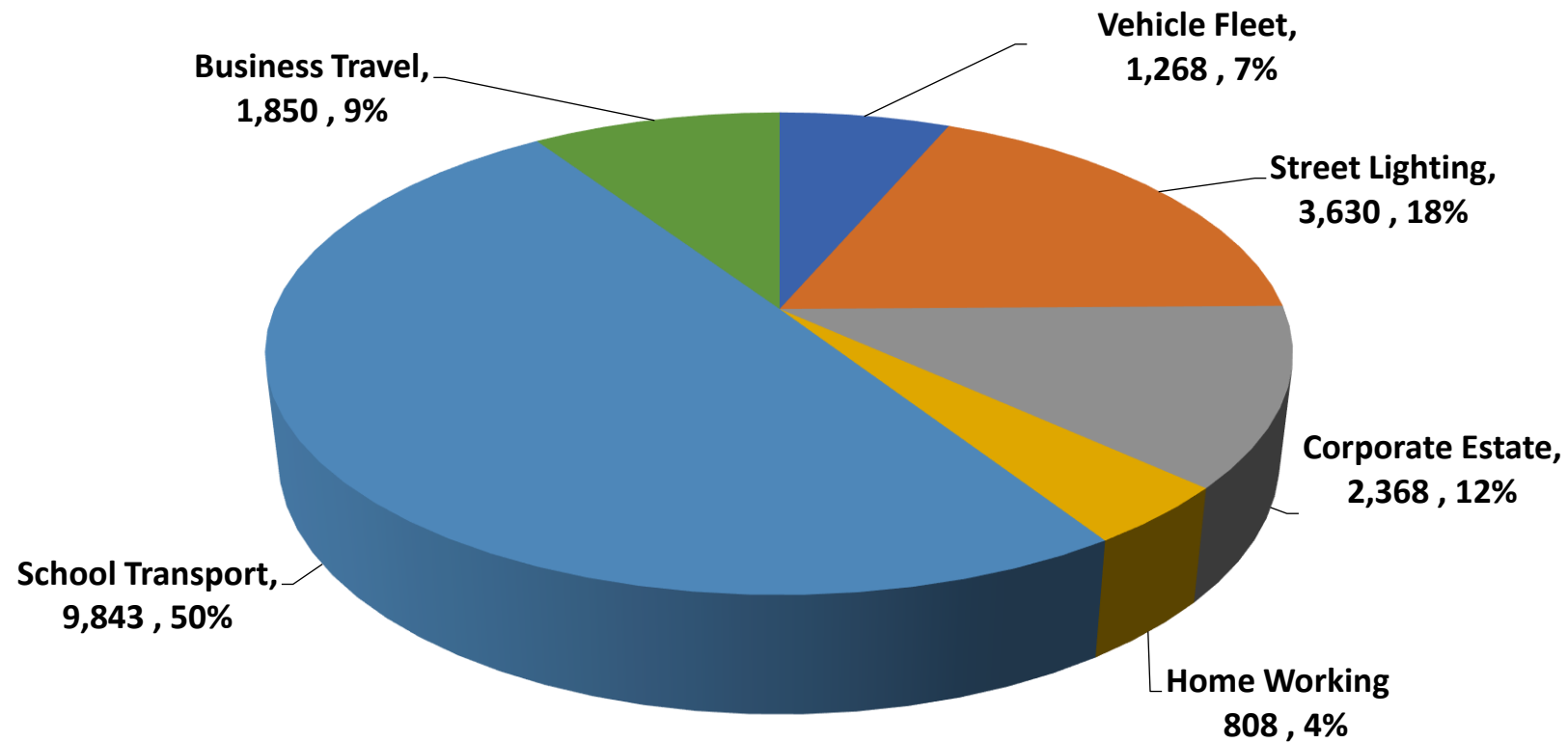


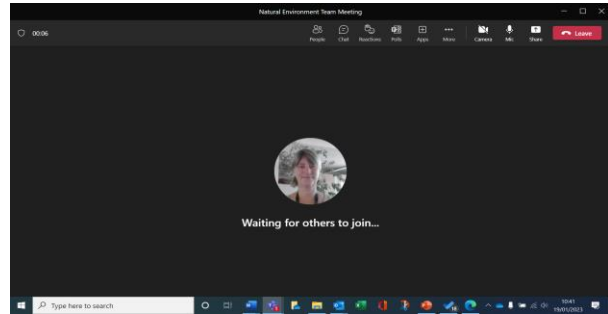
Figure [1] Overview of GHG Protocol scopes and emissions across the value chain



Reducing our own emissions...

2021/22 Greenhouse Gas Emissions by Source (tonnes of CO₂e)

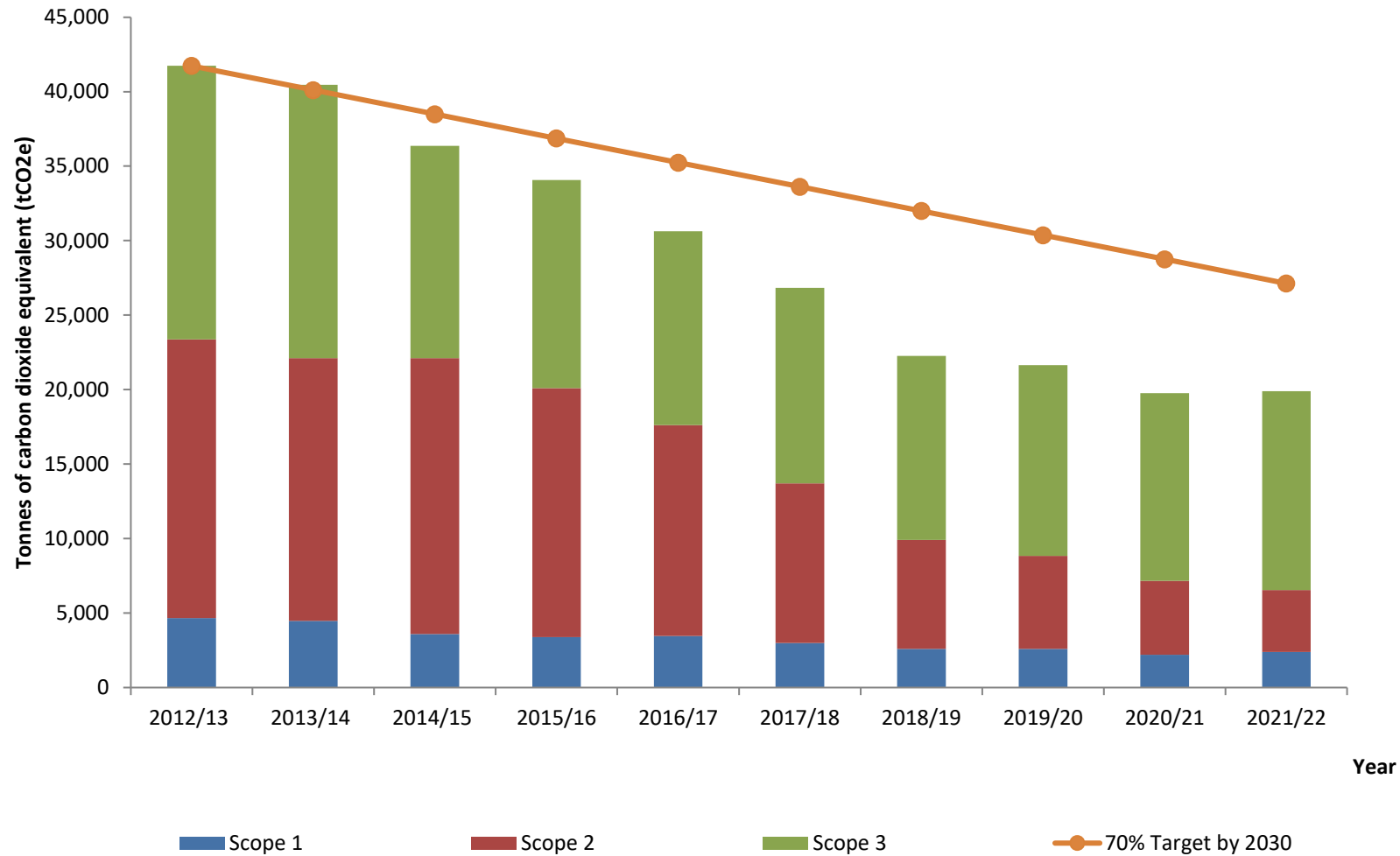




Action

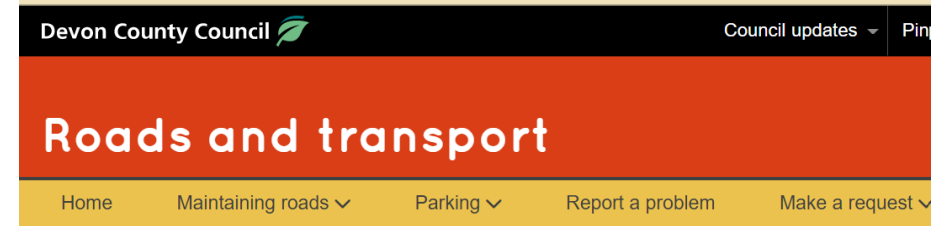
Monitoring Progress

Figure 1: Gross Corporate Greenhouse Gas Emissions 2012/13 - 2021/22





2030 Net-zero Carbon Supply Chain Strategy



[Home](#) > Carbon reporting tool

Carbon reporting tool

Devon County Council has declared a [climate emergency](#). Within the [carbon reduction plan](#) there are targets that need to be met. These include a plan to become net-zero carbon by 2030, this includes emissions from its purchasing of goods and services.

If you undertake construction work on Devon's roads or road assets, we would ask that you help us in our journey by providing carbon data on the completion of your work scheme.



Issues encountered

- Supply chain slowing down delivery e.g. EV charging points
- Contractor capacity, skills and knowledge
- In-house skills and knowledge
- Technology gaps – heating space and larger vehicles
- Scale of the supply chain
- Costs and payback; making a business case beyond LED



Offsetting

“...a tonne of carbon dioxide absorbed or avoided in one part of the world to cancel out a tonne of the gas emitted elsewhere...”

Features of offsetting:

- Voluntary carbon market
- With some verification standards
- Channels money into projects of all kinds

DCC's approach:

- To start to offset in run up to 2030
- Trial different approaches
- Focus on nature-based as huge opportunity for Devon's environment
- Certified



Approaches tried

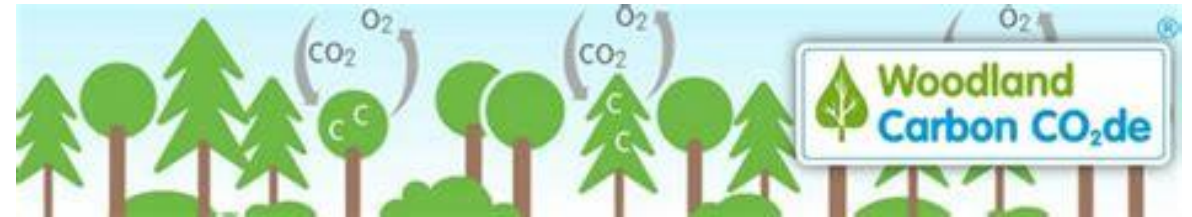
- Buying on open market
- Buying direct from Woodland Trust and through Natural Capital Marketplace
- Buying land and planting with trees



Issues encountered

- Only 2 codes apply in the UK
- Lack of availability for 2030
- Accounting/credibility of other standards
- Price of land and project costs
- Scale of the supply chain

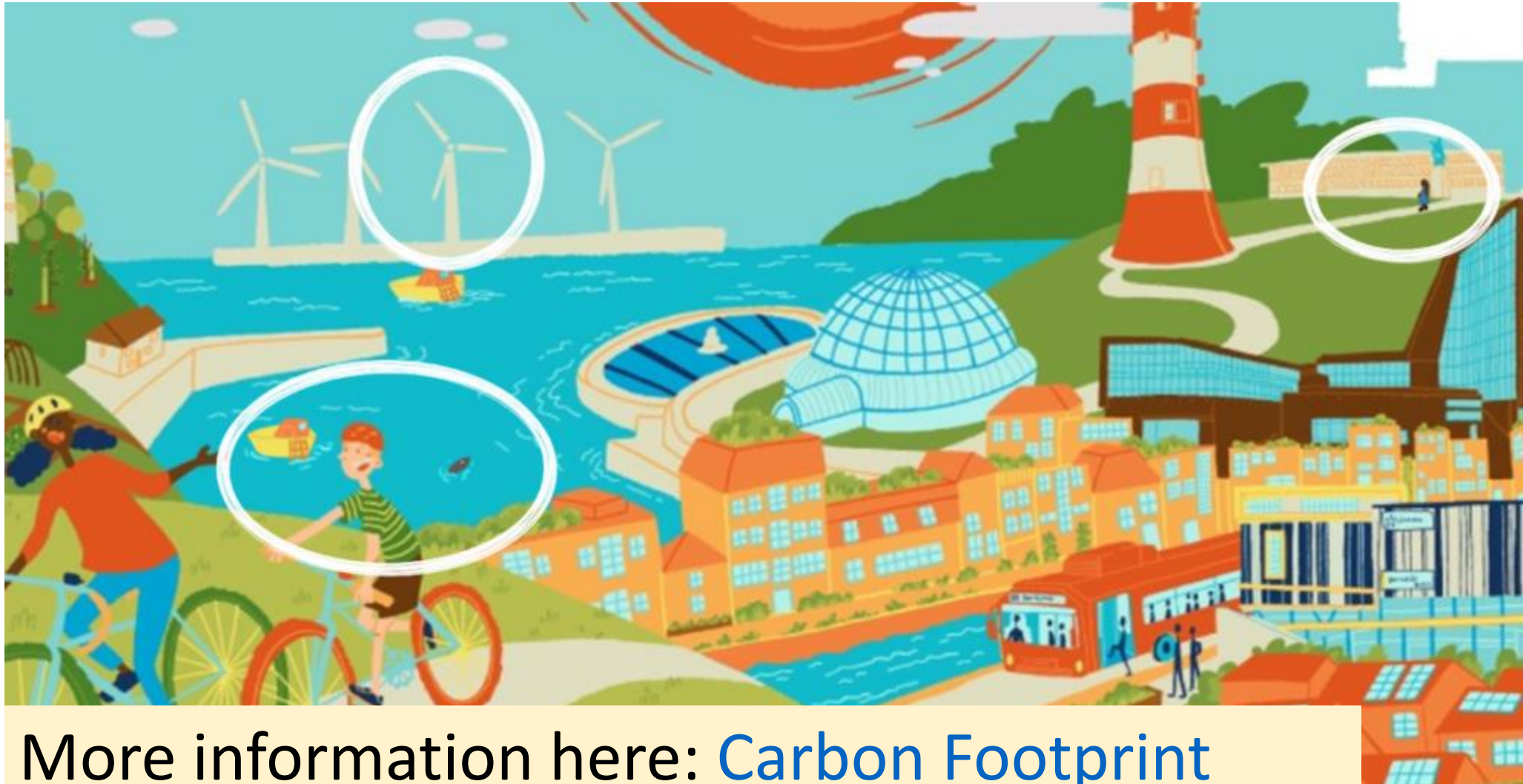
PEATLAND
CODE 



Applying learning

<p>Keep to target</p> <ul style="list-style-type: none">- international carbon credits- can we certify woodland credits early?- explore carbon reduction projects not on DCC property	<p>Push the 2030 net zero target back least possible</p> <ul style="list-style-type: none">- buy more PIUs now- buy more land- plant more on County Farms
<p>Set new net zero target</p> <p>+ major landscape-scale nature recovery project(s)</p>	<p>Increased focus on carbon reduction</p> <ul style="list-style-type: none">- accelerate carbon reduction at DCC- Power Purchase Agreements with renewable energy generators- supply chain projects





More information here: [Carbon Footprint
2022 - Environment \(devon.gov.uk\)](https://www.devon.gov.uk/carbon-footprint-2022-environment)



Achieving net zero

A review of the evidence behind potential carbon offsetting approaches

Date: April 2021

Version: 7 (FRS19212)



Approach	GHG emission reductions or removals	Abatement cost	Per-unit abatement potential	National abatement potential	Implementation readiness	Speed of impact	Longevity	Confidence in science
Kelp restoration	Removals	●	●	●	●	●	●	●
Soils management: arable	Removals and reductions	●	●	●	●	●	●	●
Soils management: pasture	Removals and reductions	●	●	●	●	●	●	●
Hedges and trees outside of woodlands	Removals	●	●	●	●	●	●	●
Enhanced weathering	Removals	●	●	●	●	●	●	●
Biochar	Removals	●	●	●	●	●	●	●
Household insulation	Reductions	●	●	●	●	●	●	●
Household low carbon heating	Reductions	●	●	●	●	●	●	●



Table 7-1 A red-amber-green (RAG) analysis of the different offsetting approaches' performance against the key indicators, to inform decision making. A grey circle indicates that there is not enough reliable information in the literature to draw a conclusion. For a description of how RAG analysis was carried out see Appendix 2.

Approach	GHG emission reductions or removals	Abatement cost	Per-unit abatement potential	National abatement potential	Implementation readiness	Speed of impact	Longevity	Confidence in science
Upland peat restoration	Reductions and potential removals	●	●	●	●	●	●	●
Lowland peat restoration	Reductions and potential removals	●	●	●	●	●	●	●
Woodland creation	Removals	●	●	●	●	●	●	●
Grassland	Removals	●	●	●	●	●	●	●
Floodplain restoration	Removals	●	●	●	●	●	●	●
Constructed wetland	Removals	●	●	●	●	●	●	●
Saltmarsh restoration	Removals	●	●	●	●	●	●	●
Seagrass restoration	Removals	●	●	●	●	●	●	●



Zero Carbon Depot Project

Ben Burfoot



Reading
Borough Council

Working better with you



Local Authority
Carbon Management
Programme

The Nottingham Declaration on Climate Change

We acknowledge that

- Evidence shows that climate change is occurring.
- Climate change will continue to have far reaching effects on the UK's people and places, economy, society and environment.

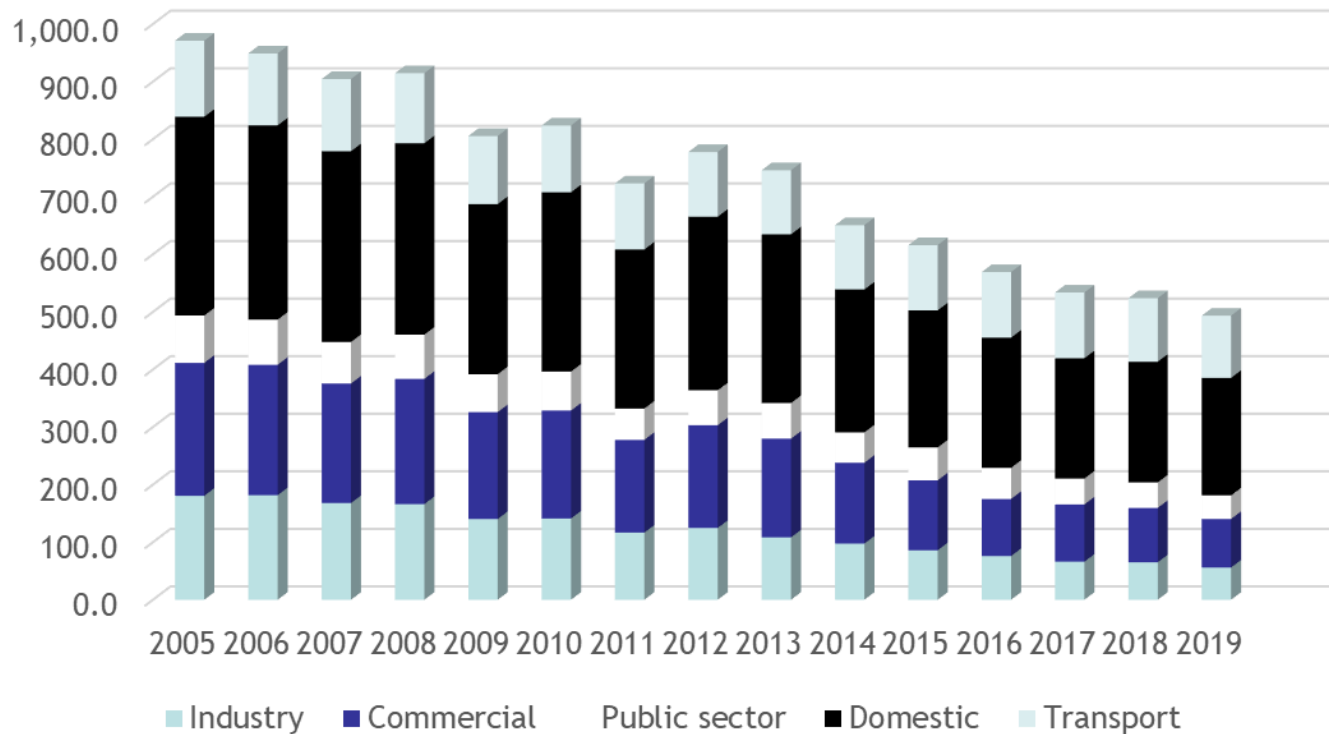
We welcome the

- Social, economic and environmental benefits which come from combating climate change.
- Ambitious targets agreed by central government and the programme for delivering change, as set out in the



Reading
Borough Council
Working better with you

Reading Borough emissions 2005-2019

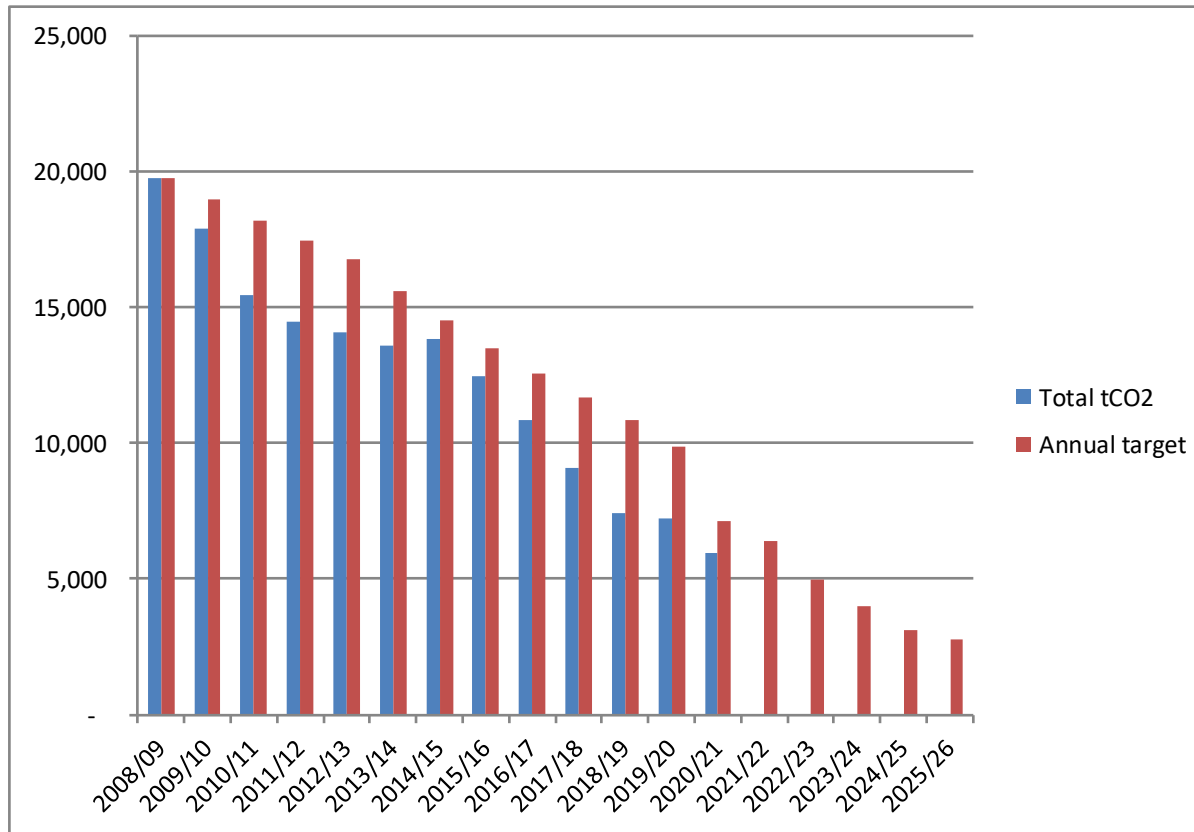


- **Reading's emissions have fallen by 49% since 2005**
- **5th highest reduction of 379 UK council areas**



Reading
Borough Council
Working better with you

Council emissions 2008/09-2020/21



- **69.8% cut in RBC emissions since 2008/09**
- **17.3% cut between 2019/20 and 2020/21 (pandemic restrictions a major factor)**



Carbon Plan 2020-2025



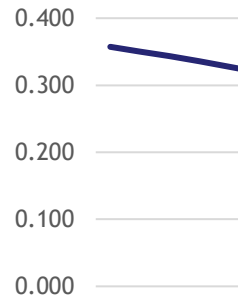
Our pathway to zero



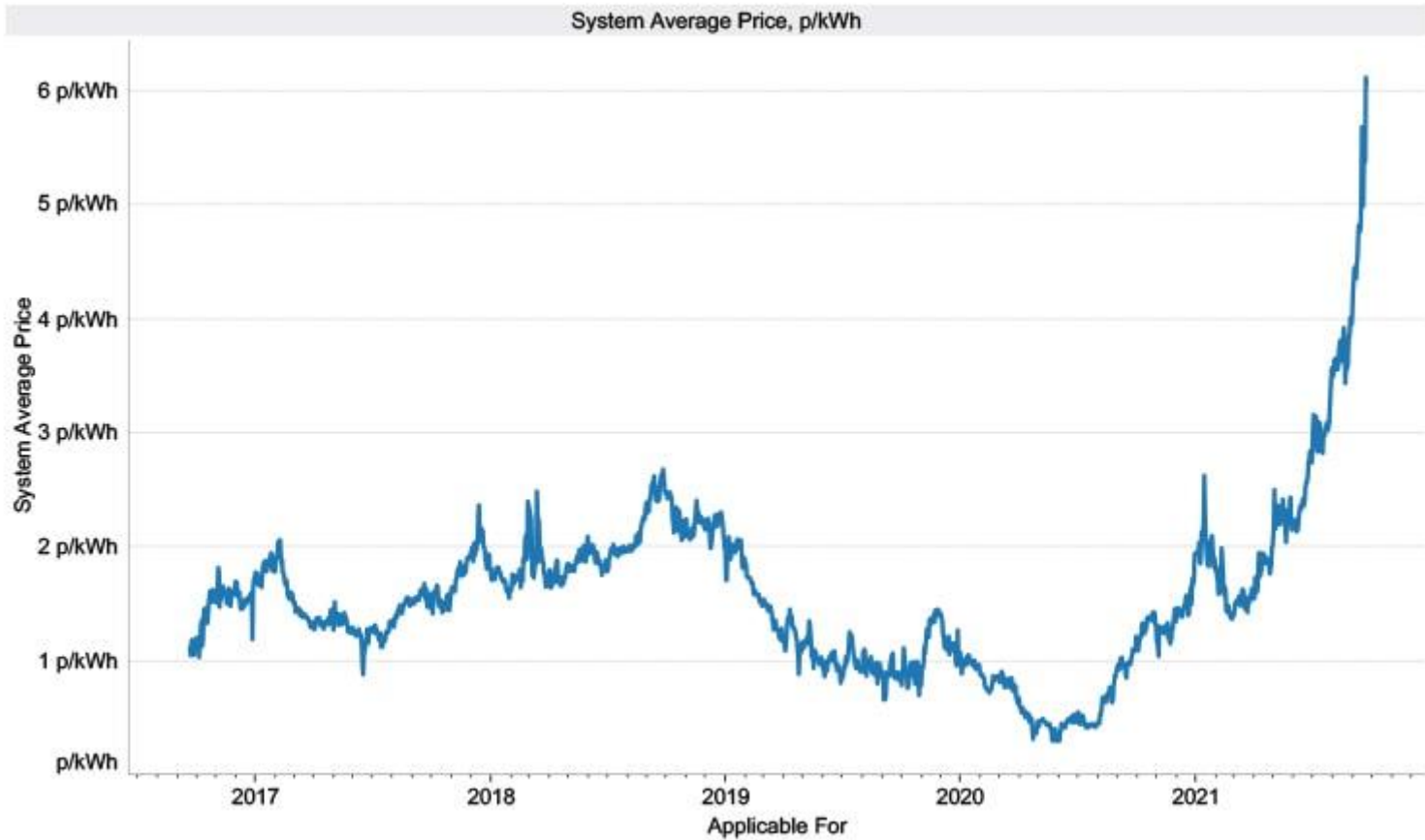
Reading
Borough Council
Working better with you

The Future is Electric

Carbon Intensity 2010 to 2030

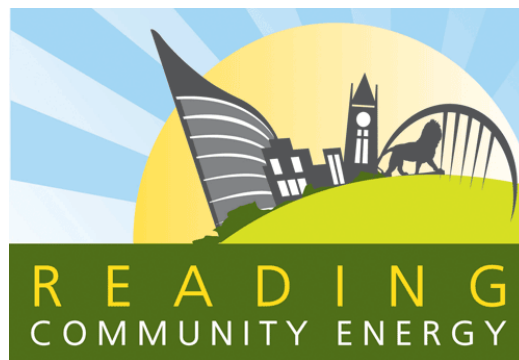


Reading
Borough Council
Working better with you



Reading
Borough Council
Working better with you

10,000
solar panels
on >500
buildings

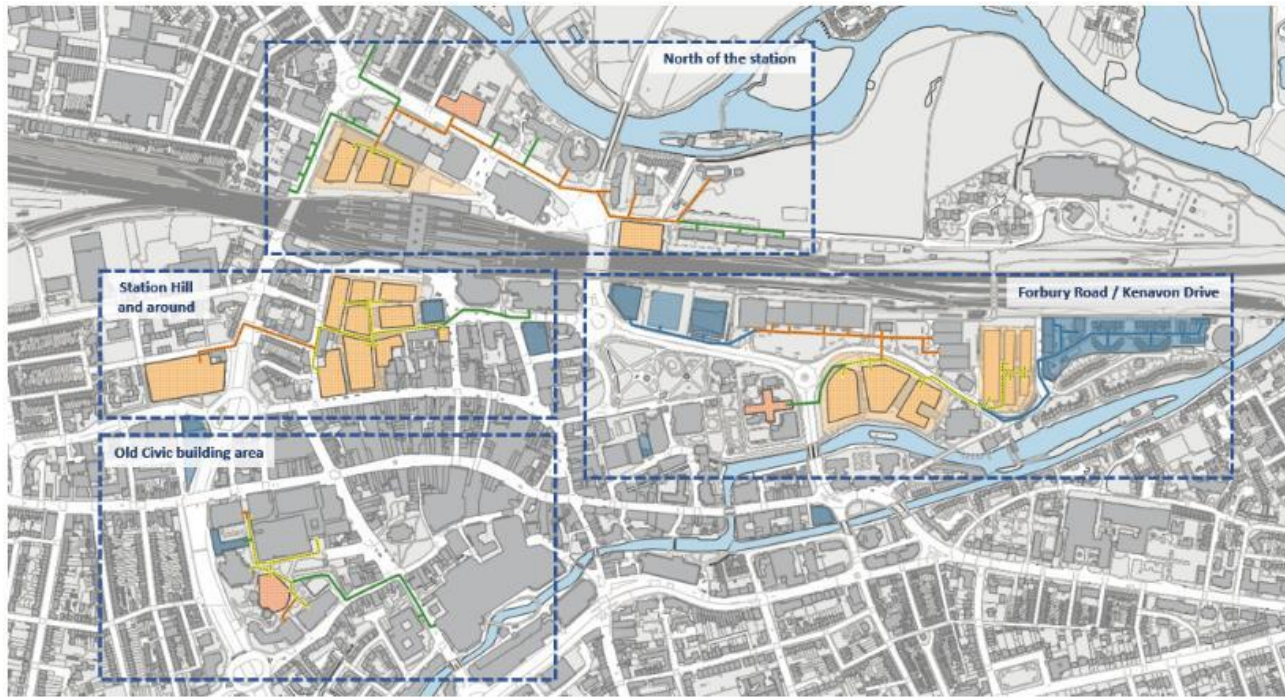


Reading
Borough Council
Working better with you



Danger
Keep Away

A low carbon central heating system for the town centre



Cow manure powered bus breaks speed record



Reading
Borough Council
Working better with you



Finance

Transformation

Health & Social Care

Property

Analysis

Laura Sharman 18 November 2021



Eleven UK cities named as global leaders on climate action

Eleven UK cities have been recognised as global leaders for climate action and ambition.

Environmental charity CDP has published its Cities A List, which celebrates those demonstrating their climate leadership through concerted and effective action.



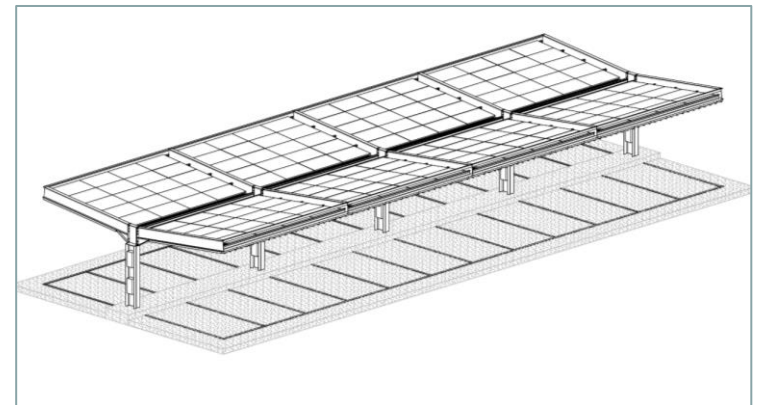
Reading
Borough Council

Working better with you

Zero Carbon Depot Project



14 x eRCV's by 2024
(electric bin lorries)
200 fleet EVs - 2028

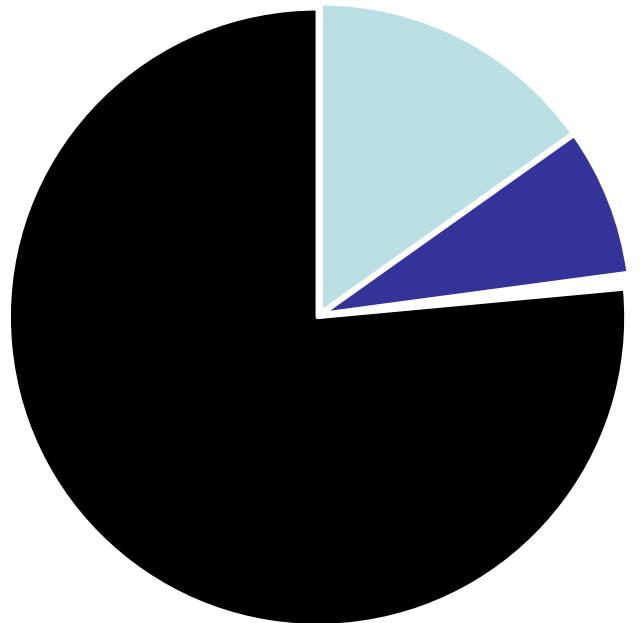


Solar canopies 274kWp



Depot eRCVs

Phase 1

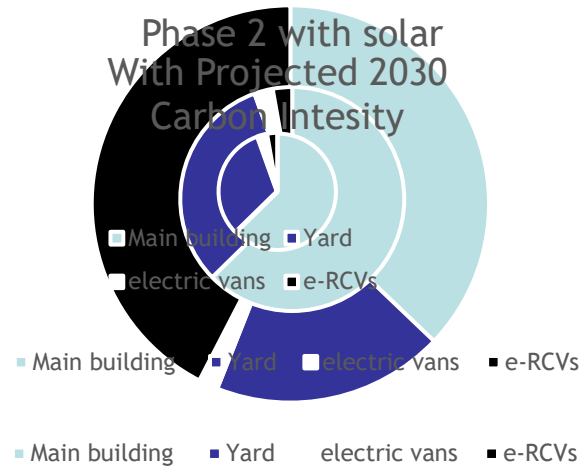


■ Main building ■ Yard ■ electric vans ■ d-RCVs

324 tonnes

Phase 2

Phase 2 with solar
With Projected 2030
Carbon Intensity



■ Main building ■ Yard ■ electric vans ■ e-RCVs

17.5 tonnes
78 tonnes
132 tonnes



Performance against targets:

- 63% 2020 Emissions vs 2008/9 baseline
- 85% 2025 Carbon Plan target

Equates to 60% reduction on 2020 by 2025

Depot project - 95% reduction on 2020

Carbon saved 306 tonnes



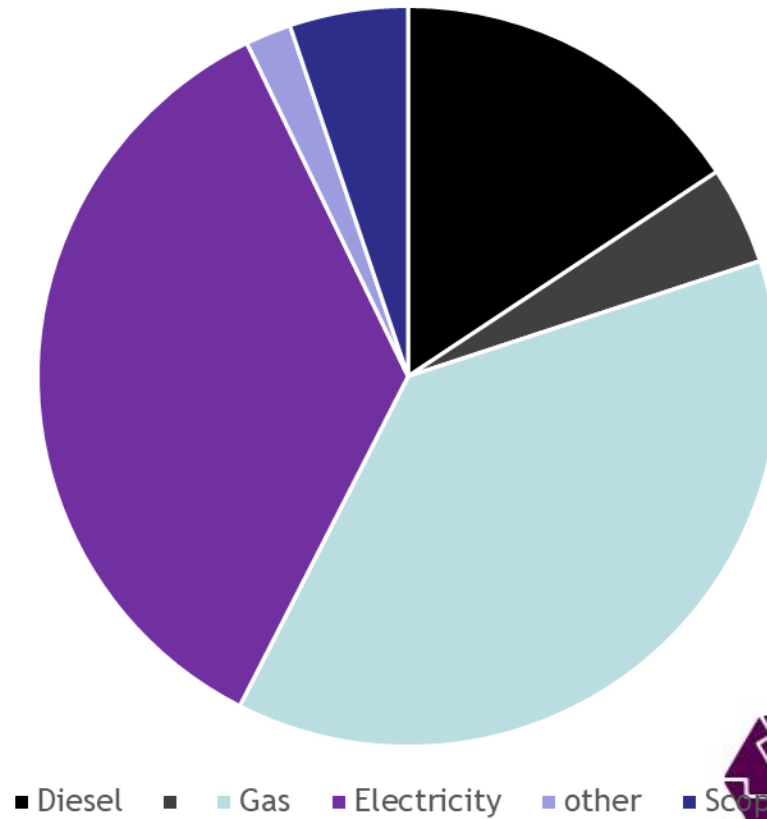
Reading
Borough Council

Working better with you

Meeting 2025

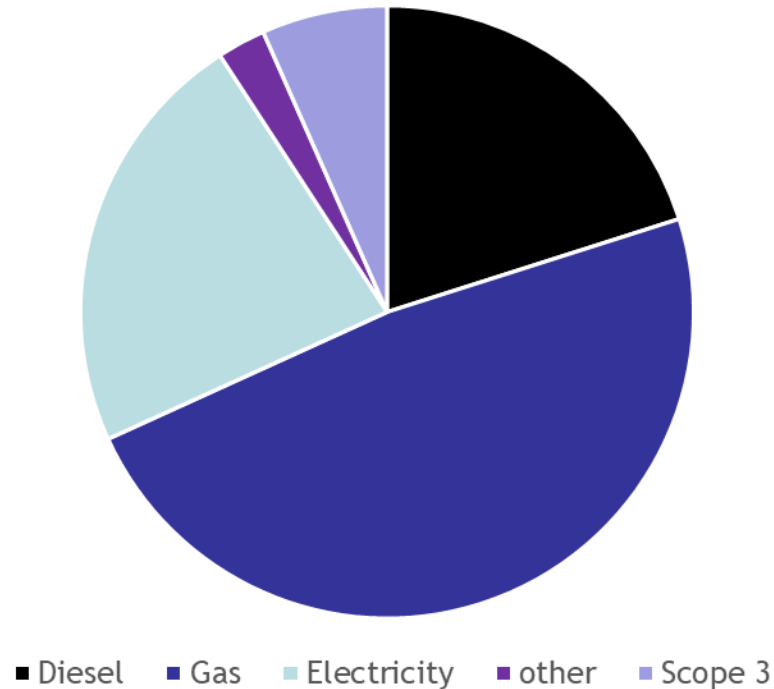
9% of emissions reduction required to meet 2025

CO2 - 5675 t/p.a.



Whole Council emissions with project

CO2 - 4433 t/p.a.



Reading
Borough Council
Working better with you

Costs

lIt = £2

3kWh = £0.81

eRCV = £400k

dRCV = £180k

Electricity £1.16m vs Diesel £3.42m

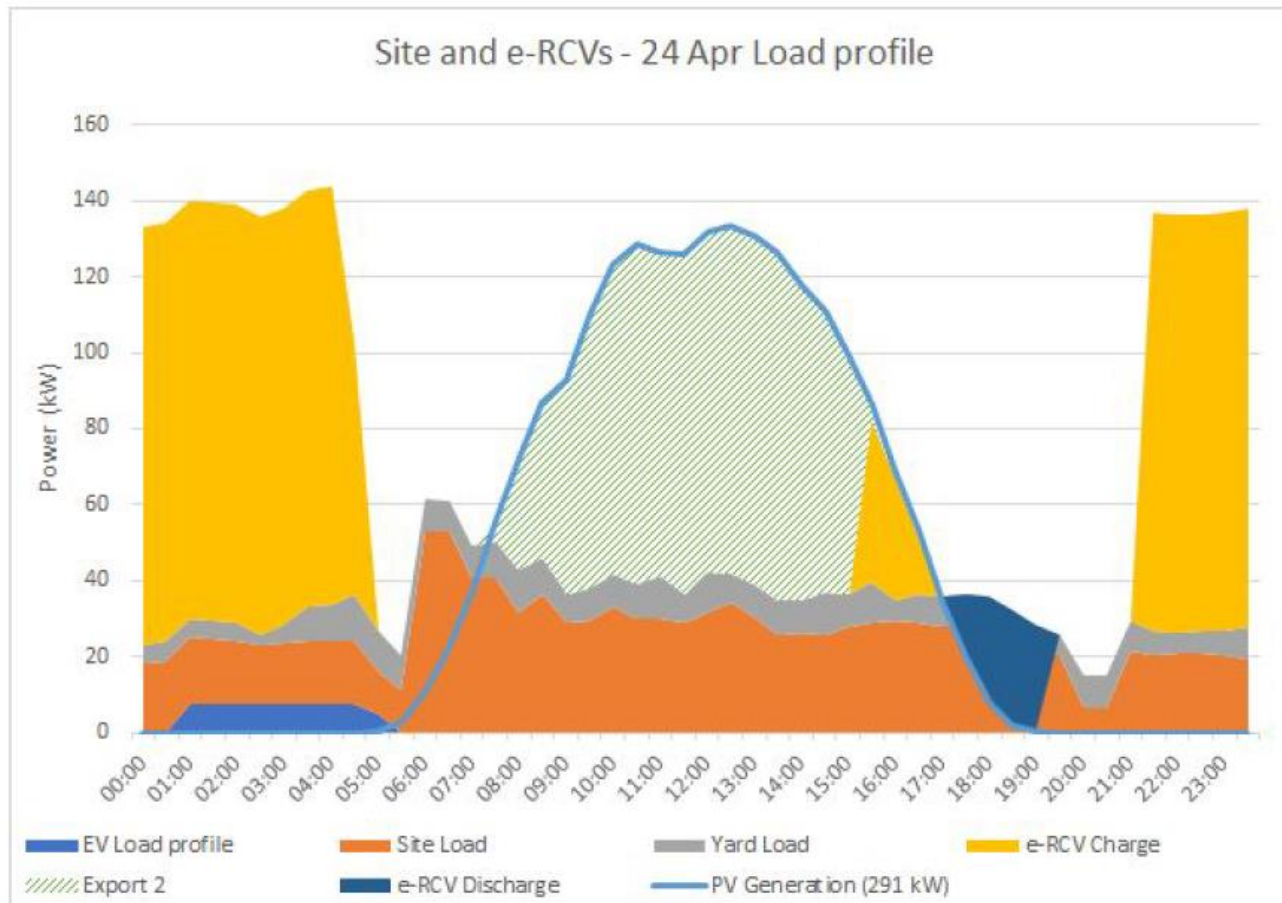
Total costs = £7.3m vs £8.02m

	£7,305,393	£8,002,835	697442
Total with agile tariff	£6,963,143	£8,002,835	£1,039,692
Cost of carbon	216275.81	1011803.3	£795,528
Total with carbon costs (Green book central)	£7,179,419	£9,014,638	£1,835,219



Reading
Borough Council
Working better with you

The potential....



Vehicle to Grid



V2G

(Trucks power buildings)



Reading
Borough Council
Working better with you

Are Electric Vehicles the Answer?



Reading
Borough Council
Working better with you

Ben Burfoot
Sustainability Manager
Reading Borough Council
ben.burfoot@reading.gov.uk



Dundee Celebrates COP26

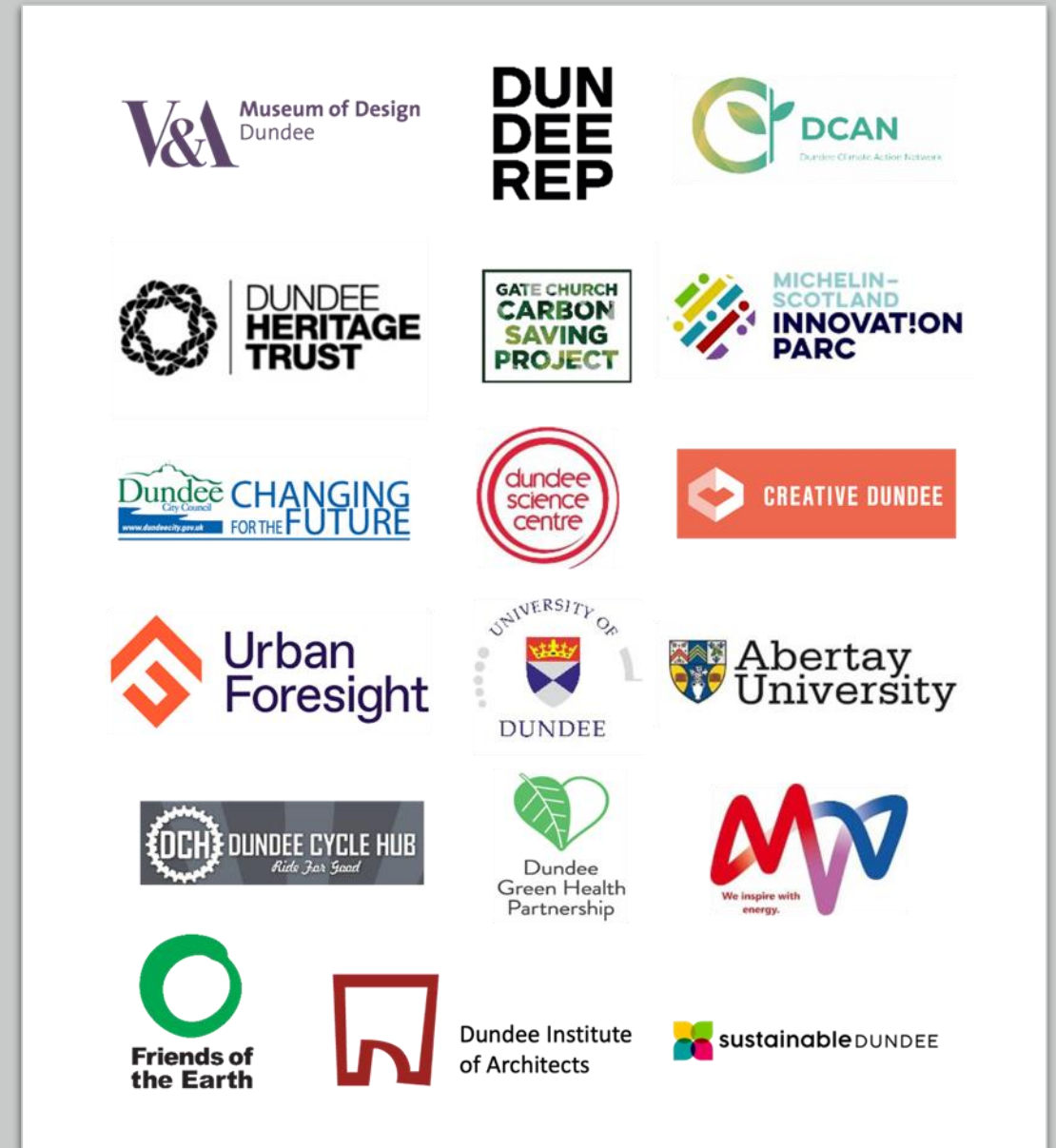


Dr Viola Marx
Sustainability & Climate Change Officer
Sustainability & Climate Change Team
Dundee City Council



COP 26 Working Group

- Small, informal Dundee COP26 Working Group set up in March 2021.
- Grew to over 20 organisations, meeting 4 weekly.
- Aim was to collectively pull together a programme of events for COP26, ensuring synergy of message, maximizing reach across sectors and avoid duplication.
- 3 phases of activity:
 - Pre-COP26 – Programme distribution and launch event on the 26th September at Slessor Gardens
 - COP26 (1-11 Nov)
 - Post COP26 (legacy events and future partnerships)



Engaging people Public & Stakeholders

- The Sustainability & Climate Change Team took the lead on the communication design
- Designed to be applicable to everyone
- Promoted:
 - Landing webpage
 - QR code
 - Social media (Sustainable Dundee & partners): twitter, Facebook, Instagram, YouTube
 - Local press
 - Internal & external communication platforms
 - Radio
 - Leaders of the Council



DUNDEECITY.GOV.UK/DUNDEECOP26

Daily	11:00-14:00	West End Community Fridge	Miller's Wynd
Daily	On demand	舍 [H6]	YouTube
30 Sep	12:00-14:00	The Great Giveaway	Student Union, UoD
1 Oct	12:00-16:00	Community Wardrobe	158 Perth Rd
2 Oct	10:00-12:00	Litter picking in Ninewells	Ninewells Community Garden
2-22 Oct	all day	Save the Earth Eco Trail	Miller's Wynd
6 Oct	12:00-14:00	Free lunch	UoD Community Garden
7 Oct	12:00-14:00	DIA Talk- Community Projects	Larick Centre Tayport
7 Oct	14:00-16:00	Festival of the Future - Water	Online
8 Oct	12:00-16:00	Community Wardrobe	158 Perth Rd
14 Oct	14:00-16:00	Festival of the Future - Food	Online
14 Oct	18:00-20:00	DIA Talk - Low Carbon Retrofit	Verdant Works Dundee
14 Oct	19:00-late	Ninewells Moth event	Ninewells Community Garden
15 Oct	12:00-16:00	Community Wardrobe	158 Perth Rd
15 Oct	10:00-12:00	Ninewells Moth event	Ninewells Community Garden
17-31 Oct	tbc	Scottish Dance Theatre walking towards COP26	YouTube
20 Oct	10:00-12:00	Cuttings Workshop	Ninewells Community Garden
21 Oct	14:00-15:30	Festival of the Future - Energy	Online
21 Oct	16:00-18:00	DIA Talk - Designing Ecological Sensitive	Errol Village Hall
22 Oct	12:00-16:00	Community Wardrobe	158 Perth Rd
28 Oct	10:30-14:00	Carbon Battle Bus	Dundee Science Centre
28 Oct	14:00-16:00	Festival of the Future - Creative Responses	Online
28 Oct	18:30-20:30	DIA Talk - Anthony Baxter / Monitors Pictures	Dalhousie Building UoD
29 Oct	11:00-13:00	DIA Talk - Lifetime Housing Project	Gannochy Road Perth
29 Oct	12:00-16:00	Community Wardrobe	158 Perth Rd
30 Oct	12:00-16:00	Community Wardrobe	158 Perth Rd
1-14 Nov	9:00-17:00	Dundee Science Festival	Greenmarket, Dundee
4 Nov	12:00-14:00	DIA Talk- Sustainability Award Winner & Passive House Post Occupancy Evaluation	Larick Centre Tayport
4 Nov	19:00-22:00	PechaKucha Night Dundee Vol 28	Dundee Rep Theatre
5 Nov	10:00-14:00	Getting stuck in	Ninewells Community Garden
5 Nov	12:00-16:00	Community Wardrobe	158 Perth Rd
6 Nov	19:30-20:30	This Is A Love Story: A Pop Musical	Online on REP STUDIOS
8 Nov	14:00-16:00	Litter picking in Ninewells	Ninewells Community Garden
8 Nov	9:00-14:30	IEA EV Pilot City Forum	Apex Hotel
9 Nov	9:00-18:30	IEA EV Pilot City Forum	Apex Hotel
10 Nov	10:00-12:00	Bulb Workshop	Ninewells Community Garden
11 Nov	8:30-17:00	MSIP Demonstrator & Showcase Event	MSIP, Baldovie Road
11 Nov	18:30-20:30	DIA Talk - Recycling and Circular Economy	Dalhousie Building UoD
12 Nov	8:30-17:00	MSIP Demonstrator & Showcase Event	MSIP, Baldovie Road
12 Nov	tbc	Electric Vehicle Rally of Scotland - Dundee Showcase	Lochee EV Charging Hub
12 Nov	12:00-16:00	Community Wardrobe	158 Perth Rd





FREE EVENTS

HubFest

Dundee Cycle Hub Grand Opening

Celebrating & Empowering Active Travel & Sustainability In Dundee

<ul style="list-style-type: none"> Bike Skills Track Segways Adaptive Bikes Traders Balance Bike Races 	<p>COP26 Launch</p> <ul style="list-style-type: none"> Storm - The 10m Goddess Rewilding & Upcycling Activities Schools Whale Sculpture Picnic Areas <p>sustainableDUNDEE</p>	<ul style="list-style-type: none"> Walking Silent Disco Food Vendors Dr Bike Electric Bike Trials Bike Hire
---	--	--

26th September 2021, 11am - 4pm
Slessor Gardens, Waterfront Place, Dundee

www.dundee-cycle-hub.org/hubfest

Supported and funded by:



EventScotland, Smarter Choices, Smarter Places, Cycling Scotland, EUROPE & SCOTLAND European Regional Development Fund Investing in a Smart, Sustainable and Inclusive Future



Programme launch: HubFest

ZERO Carbon Tour

28 October, Dundee Science Centre
In-person & online

Join Planet Mark and the 100% electric 'Carbon Battle Bus' on the Zero Carbon Tour through Scotland as part of the UK's #TogetherForOurPlanet campaign. Hosted by Dundee City Council and Dundee Science Centre, hear Carbon Stories from local organisations and community groups on their impactful projects to reduce carbon emissions, discuss the concept of net-zero and why it is critical in this #DecadeOfAction.

Free event. Booking via Eventbrite is essential.

Schedule

10:15 Arrival & refreshments

10:30 Welcome - Councillor John Alexander, Leader of Dundee City Council
Housekeeping - Sarah Cartmill, Dundee Science Centre
Agenda - Andrew Griffiths, Planet Mark

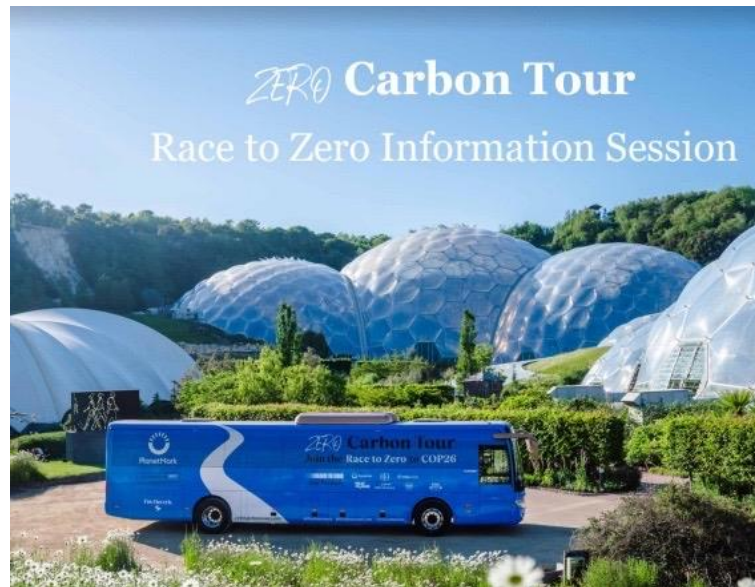
10:40 UN Race to Zero / Carbon Jargon Information Session - Andrew Griffiths, Planet Mark

11:20 Break

11:35 Dundee's Carbon Stories

A journey through green tourism - Carlene Cura & Lorraine Lemon, Dundee Science Centre
Making of the whale - Dundee Primary Schools & Scrapantics
Sustainable choices & social stigmas for the working class - Jade Anderson, Creative Dundee
Dundee's net-zero challenge - Bryan Harris, Dundee City Council
Community climate action - Lynsey Penny, Gate Church Carbon Saving Project
A new climate gallery - Deirdre Robertson, Discovery Dundee
Cycling into sustainability. Lessons learnt from a cycling social enterprise - Scott Francis, Dundee Cycling Hub

13:00 Lunch & Networking



Zero Carbon Bus Tour with Planet Mark

- Delivered by Planet Mark and funded by the Department for Business Industry and Environment Strategy
- Toured Cities across the UK, encouraging sign up to the Race to Zero
- Facilitated event at Dundee Science Centre 28th October
- 6 Local organisations shared carbon stories, which were showcased at COP26 in Glasgow:
 - **Dundee City Council – Climate Action Plan**
 - **Dundee Science Centre – Building retrofit, Gold Green Tourism Award**
 - **Dundee Heritage Trust – Dundee's links with climate research, HMS Discovery**
 - **Dundee EcoSchools and Scrapantics – Moby the Whale**
 - **Gate Church Carbon Project – Community Fridge**
 - **Cultivate Project – Social justice in sustainability**
 - **Dundee Cycle Hub – Cycling into Sustainability**

Dundee EcoSchools COP26 Conference

Thursday, 4th November 9:30 - 12:00

Please join us for three online workshops that will help your school implement long term climate action. All pupils and teachers welcome but aimed at Primary 4-7 and S1-S2 pupils that are part of an Eco Committee or similar.

Schedule

- 9:15 - 9:30 Registration
- 9:30 - 9:45 Introduction - COP26, Climate Change and EcoSchools in Dundee
- 9:45 - 10:15 Eco-Schools Action Planning - Andrea Gabriel, Keep Scotland Beautiful
- 10:15 - 10:45 Break
- 10:45 - 11:15 Litter & Waste - Elaine Mather, Scrapantics
- 11:15 - 11:45 Energy - Karen Ritchie, Bright Green Hydrogen

Booking for this conference is essential.

Materials and MS Teams invites will be sent out in advance to all participants. Please book at sustainability@dundee.gov.uk



Eco-Schools

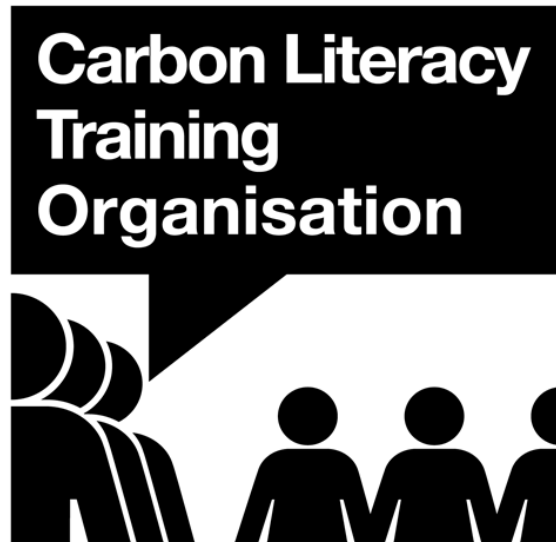


More of Dundee's COP26 events

- Climate themed Pecha Kucha, Dundee Rep with 11 speakers
- Exhibition stand at MSIP Demonstrator Event
- Dundee Institute of Architects Series of COP26 Talks
- University of Dundee Festival of Future. Theme: rewilding.
- Science Festival - Dundee Science Centre



Climate Literacy Training



- **8 All Staff Climate Change Sways on One Dundee** covering COP26 and the Climate Action Plan
- **COP26 'Meet our Climate Leaders' / 'Powerful stories'**. 1-12 Nov, additional Sways on One Dundee featuring local examples of climate leadership
- **11 Climate Change short-courses via My Learn** (for Grade 12 and below)
- **Tailor-made Carbon Literacy Leadership training** (for Grade 13 and above)
 - Delivered by Keep Scotland Beautiful on behalf of the Carbon Literacy Project
 - 2 separate sessions
 - 8 cohorts, 120 staff



Post COP26: Legacy Sustainable Dundee



SELECT A GOAL TO EXPLORE

1 NO POVERTY



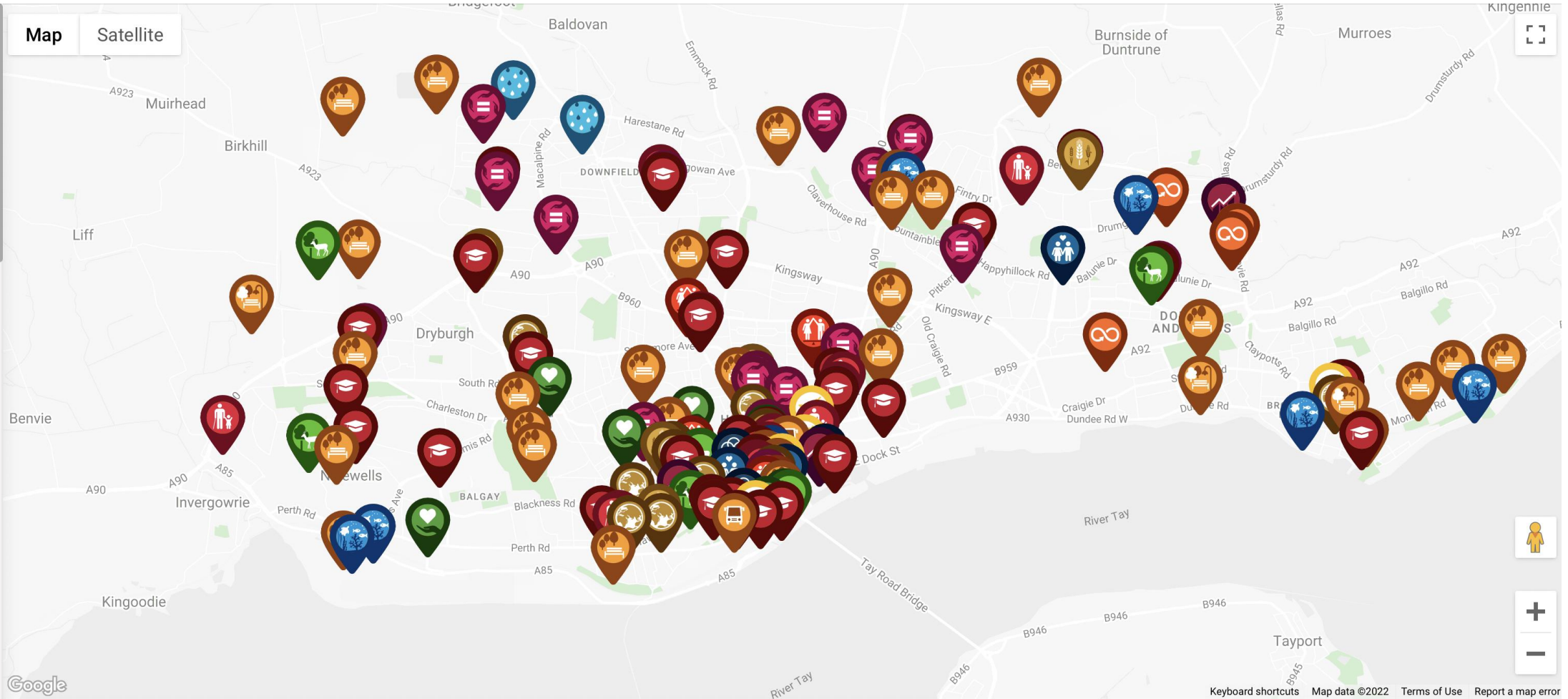
2 ZERO HUNGER



3 GOOD HEALTH AND WELLBEING



4 QUALITY EDUCATION



SUSTAINABLE DUNDEE MAP

The United Nations Sustainable Development Goals (SDG's) are an urgent call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 Goals are connected, which means that action in on area will affect outcomes in others. Sustainable Dundee is a city-wide initiative to tackle the Climate Emergency locally and is fully aligned with the UN SDG's.

This map gives an overview of local initiatives in relation the UN SDG's

Select a goal on the left to learn about Dundee initiatives.

[BACK TO ALL GOALS](#)

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELLBEING



4 QUALITY EDUCATION



3 GOOD HEALTH AND WELLBEING LOCAL INITIATIVES



BOTANIC GARDEN - UNIVERSITY OF DUNDEE

The garden features British plants and many important species from around the world. It also has tropical and temperate glasshouses, a water garden, café, gift shop and hosts regular events.

[VISIT WEBSITE](#)

[VIEW ON MAP](#)

DUDHOPE THERAPY GARDEN

Supports serving, ex-forces and ex-uniformed emergency personnel aiming to improve their well-being by spending time in a green outdoor space.

[VISIT WEBSITE](#)

[VIEW ON MAP](#)

DUNDEE COMMUNITY HEALTH TEAM

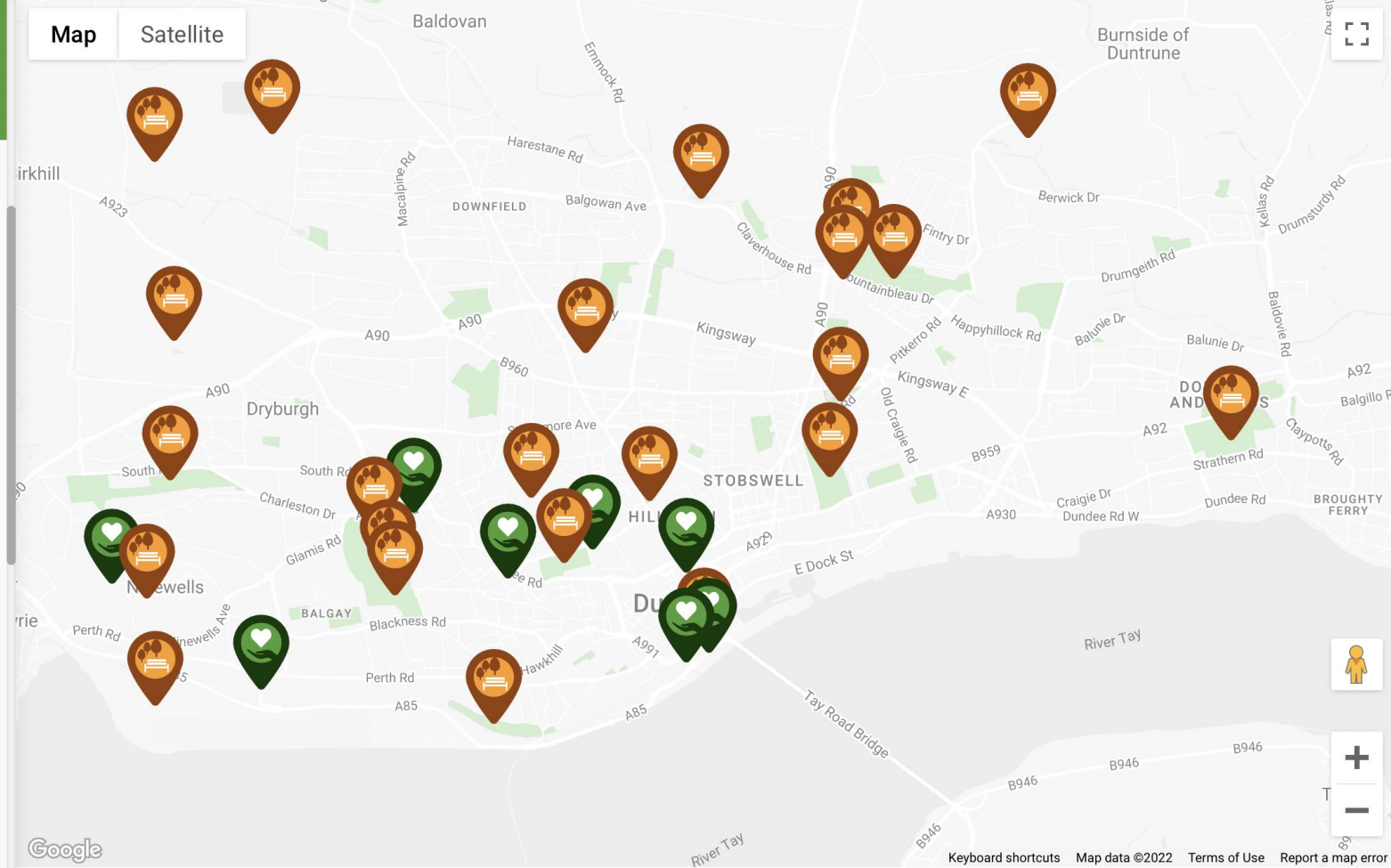
Supports people who live in Dundee to develop skills, knowledge and confidence to improve health and wellbeing in designated communities in the city.

[VISIT WEBSITE](#)

[VIEW ON MAP](#)

DUNDEE CYCLE HUB



Encourages people to lead healthier lives and



SUSTAINABLE DUNDEE MAP

Goal 3: Ensure healthy lives and promote well-being for all at all ages

THINGS TO DO

-  Get vaccinated.
-  Donate Blood



S&CC Team Results & Impact

- Finalist in 2022 COSLA Awards, UK APSE Awards & winner of internal leadership award
- We coordinated the most COP26 related activities of any local authority outside of Glasgow
- We established a city-wide Sustainable Dundee Network with collaborative events and projects going forward.
- Sustainable Development Goals interactive tool for Dundee
- We prepared 36 climate Case studies for the UK Gov, showcasing Dundee's climate credentials
- A Climate Literate Workforce, embedding sustainability & climate change within all DCC strategies, plans and policies
- Public engagement: over 14,000 participants
- 15 schools and 800 pupils participate with 30 schools now part of the Dundee Eco-Schools working group
- Whale sculpture in Wellgate Shopping centre – public waste education

More learning

- COP26 opportunity for network formation with ongoing impact
- Climate Change agenda now priority of City Plan
- Climate Literacy Training: needs to be mandatory & integrated
- Mapping SDG great tool



sustainable DUNDEE

Dr Viola Marx

Sustainability & Climate Change Officer

Dundee City Council

viola.marx@dundeecity.gov.uk