

Decarbonisation Strategy (2023 – 2025)

RHONDDA CYNON TAF COUNTY BOROUGH COUNCIL

March 2023



**The Carbon Trust's mission is to
accelerate the move to a decarbonised future.**

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1. Executive Summary

1.1. Ambition

Rhondda Cynon Taf County Borough Council (RCTCBC) is committed to supporting the Welsh Government's target of a net zero public sector by 2030. The Council has now set its target to align with the Science Based Target Initiative's net zero definition to mitigate at least 90% of Council emissions by 2030, and balance residual emissions with greenhouse gas (GHG) removals.

By working across the Council's internal operations, staff in all departments can play their part in reducing emissions both in their work and by supporting carbon reduction initiatives. Emissions from the supply chain will be tackled by continuing the ongoing engagement with suppliers and working in partnership to calculate the carbon impact of goods and services provided to the Council.

The Council has a large portfolio of land assets in its ownership and has developed plans to increase the amount of carbon dioxide this land sequesters. By improving the quality of peatland and quantity of woodland, and increasing the amount of renewable energy generated on this land through large scale wind and solar farms, the Council aims to balance its residual emissions.

The scale of the challenge to achieve net zero should not be underestimated, and even with the carbon reductions the Council has already achieved and projects we plan to implement in the next decade, more still needs to be done to reach the target. The Council plans to reduce emissions through energy efficiency measures, switching to low carbon transport and heating, and increasing the amount of energy generated and

carbon sequestered on its land. The Action Plan within this Strategy states clear actions for the next few years and the longer-term ambitions which give direction for the longer term. The Action Plan will be used as a live document which will be updated regularly, and the scale of action increased with each review.

1.2. Carbon footprint

The Council's carbon footprint as reported in the Welsh Government Public Sector Net Zero Reporting (Net Zero Reporting) has been used within this Strategy. Emissions for the baseline year of 2019/20 were 125,702 tCO₂e.

The Net Zero Reporting approach has evolved over in recent years, with the scope increased to include homeworking and staff commuting. Over the three years since the baseline, emissions of the Council have dropped, with a significant dip in 2020/21 due to the Covid-19 pandemic. In particular, 2020/21 saw reduced commuting and business travel, and reduced carbon intensity of purchased goods & services (e.g. less construction procured goods). Emissions for 2021/22 were 120,907 tCO₂e, with renewable energy use equivalent to 7,439 tCO₂e.

RCTCBC 2019/20 Carbon Footprint Baseline	Operational emissions	Supply chain emissions
	34,528 tCO ₂ e	91,174 tCO ₂ e

1.3. Pathway scenarios

To better understand the Council's emissions pathway, the carbon footprint has been separated into Operational emissions, Supply chain impacts, and Land Use & Renewables contributions.

A range of pathways have been modelled from the baseline 2019/20 carbon footprint; these consider the future expected carbon intensity of the electricity grid. Trajectories to 2030 have been developed for Business As Usual, and an expected pathway range (high/low intervention scenarios) is based on the initiatives within the Action Plan. Using the Science Based Target initiative (SBTi), a net zero target is shown as a 90% reduction on the 2019/20 baseline.

As can be seen in the operational emissions pathway, even after the actions planned and the grid decarbonisation have been accounted for, there is still a gap to target to achieve net zero emissions in 2030.

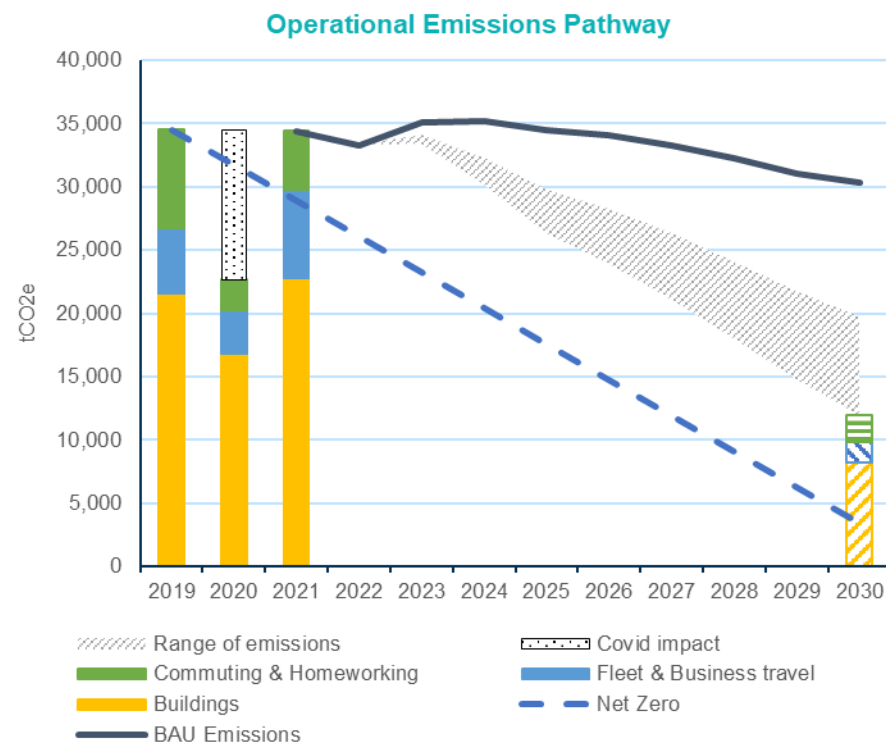
2030 Emissions

In 2030:

- The operational emission pathway estimates 11,949 tCO₂e residual emissions – **this does not meet the 90% mitigation target of 3,453 tCO₂e**; this demonstrated the challenge to meet net zero and the need to do more to bridge the gap
- The supply chain will be engaged and able to accurately report on their emissions contributions – this will allow the supply chain emissions pathway and target to be updated
- Renewable energy generation capacity is targeted to be over 20MW

Operational emissions

Operations emissions are attributed to heat and electricity use in buildings and streetlighting, fuel use from owned fleet and business travel, and commuting and homeworking apportioned emissions. These are all Scope 1

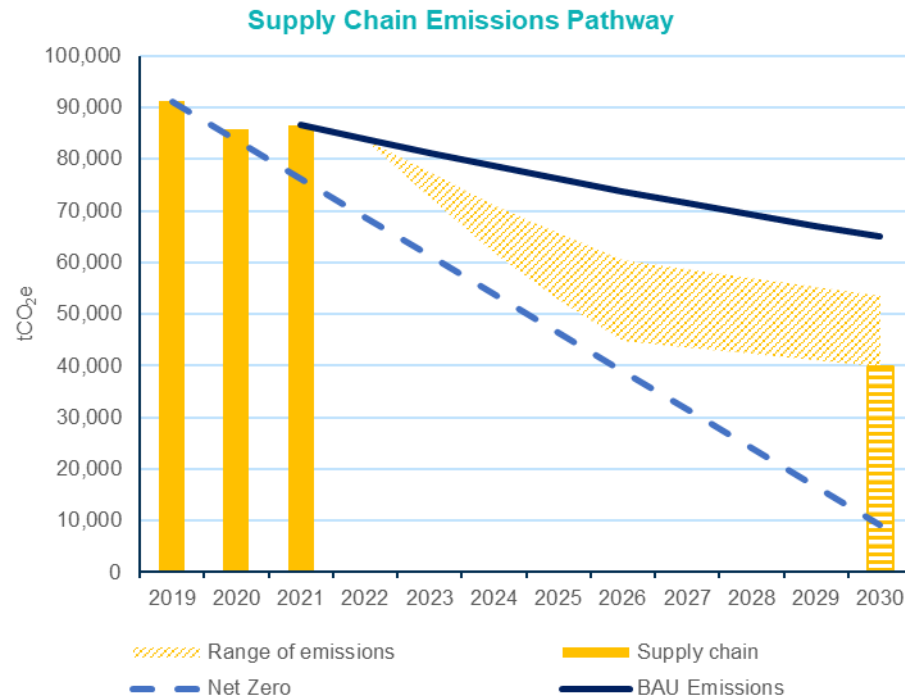


& 2 emissions, with selected Scope 3 emissions where there is operational control (e.g. business travel, upstream energy).

Supply Chain

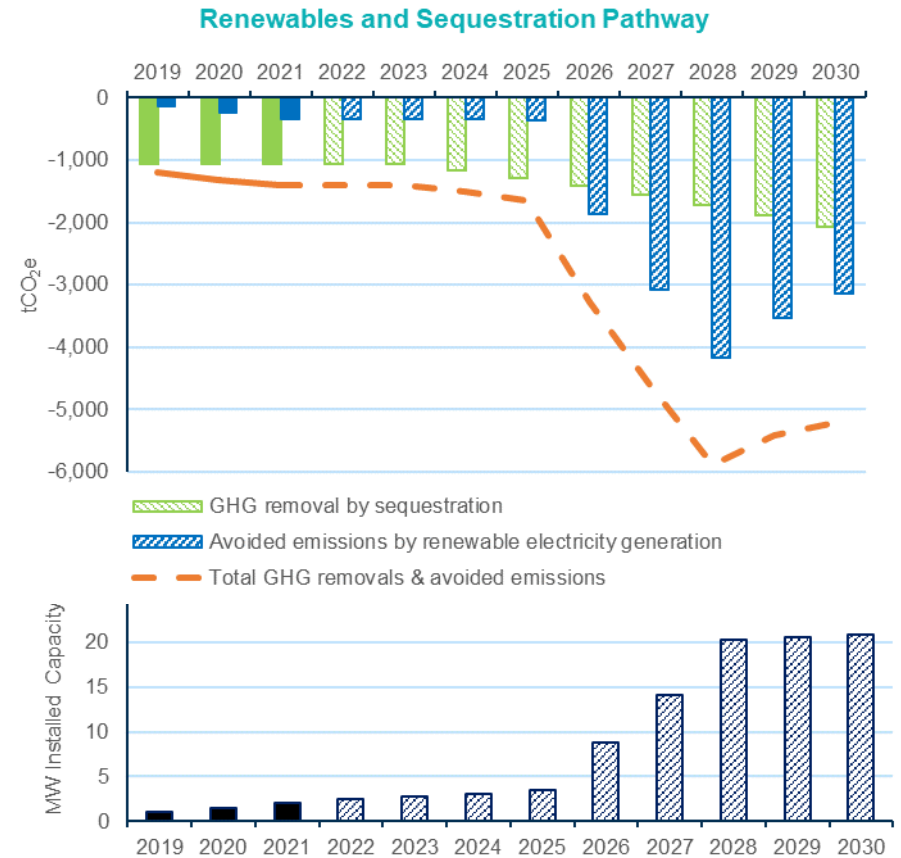
Supply chain emissions are indirect Scope 3 emissions associated with purchasing goods, services and capital assets.

The supply chain emissions pathway is highly estimated, with the baseline footprint data calculated from procurement spend data rather than supplier specific emissions. The approach, footprint, and pathway will evolve in the coming years as data improves – this is expected to include a baseline adjustment and re-targeting for 2030.



Land Use & Renewables

Through dual reporting, the Council's wider efforts for decarbonisation can be reported alongside the carbon footprint. This includes active GHG removals from sequestration (e.g. peatland restoration), and grid-connected renewable power generation schemes.



1.4. Headline Aims

There are 46 initiatives within the Action Plan; to summarise these, the following headline aims up to 2030 have been drawn out.

OPERATIONAL	Buildings	<ul style="list-style-type: none"> • Improve energy efficiency of all buildings • Maximise renewable energy generation and low carbon heating across the estate
	Transport	<ul style="list-style-type: none"> • Increase the number of electric vehicles in the Council fleet • Ensure that over half of all journeys are taken by public transport, bike or walking, or by electric vehicles

SUPPLY CHAIN	Goods & Services	<ul style="list-style-type: none"> • Improve carbon accounting for all purchased goods, services and construction • Only procure supplies and services from businesses that are striving to reduce their carbon emissions and, in doing so, actively support low carbon and local suppliers as part of our wider transition to net zero
	Capital Assets	<ul style="list-style-type: none"> • Work with key suppliers to evaluate and reduce emissions from building and infrastructure projects

LAND USE & RENEWABLES	Sequestration	<ul style="list-style-type: none"> • Assess the condition of peatlands across the county and rewet where required to improve quality of land • Encourage natural regeneration and increase afforestation of woodland and hedgerows
	Renewables	<ul style="list-style-type: none"> • Increase renewable energy generated from Council land and buildings from the 2021/22 baseline (2MW) to 20MW by 2025

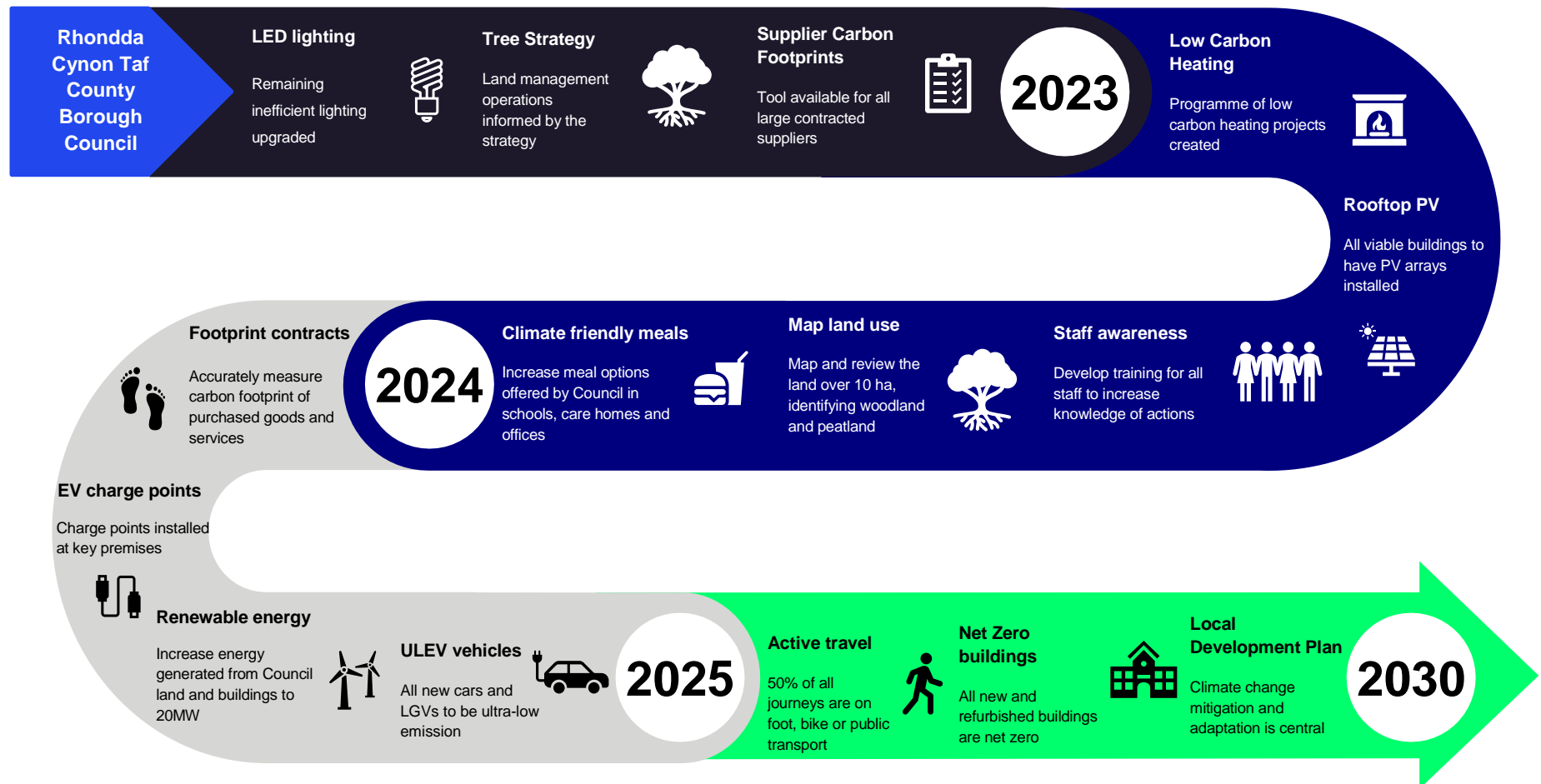
The emissions pathways set the expected operational, supply chain and avoided emissions as follows. Where there is an emissions pathway 'range' – the higher scale of delivery / intervention has been used. For both 2025 and 2030, the expected pathway is above the net zero target line.

RCTCBC emission pathway	2025	2030
Operational emissions	26,354 tCO ₂ e	11,949 tCO ₂ e
Supply chain emissions	52,808 tCO ₂ e	39,759 tCO ₂ e
Total GHG removals and avoided emissions	-1,644 tCO ₂ e	-5,220 tCO ₂ e

1.5. Next Steps

A visual timeline of action is shown by the route map below, with an interim date of the end of 2025 set to align with the next Welsh carbon budget. By 2030, RCTCBC aims to meet the SBTi's definition of net zero for their operational emissions.

This Strategy will undergo a review process in 2025 to re-assess the Action Plan progress and the pathway. This review will enable consideration to be given to the technological advancements which will assist decarbonisation progress, and reduce any reliance on offsetting to achieve net zero.



2. Introduction and context

2.1. Drivers for decarbonisation

Wales and Welsh Government legislation

Wales has been at the forefront of environmental, social and governance improvements, accounting for the impact climate change will have on future generations and enshrining in law mitigation and adaptation measures to reduce the worst consequences of global heating.

The Well-Being of Future Generations (Wales) Act, 2015, requires public bodies listed in the Act to work together to improve the “social, economic, environmental and cultural wellbeing of Wales.” The Act sets out seven well-being goals, with the aim of addressing several challenges including climate change to ensure that future generations have a good quality of life.

The **Environment (Wales) Act, 2016**, promotes the sustainable management of natural resources in Wales, balancing the competing priorities of building the necessary infrastructure and protecting vital ecosystems. The Act requires Welsh Ministers to set decarbonisation targets and carbon budgets - an essential first step in reducing greenhouse gas emissions. The revision to the Act (Amendment of 2050 Emissions Target) Regulations 2021, sets the target for Wales to achieve **net zero by 2050**.

In 2019, Welsh Ministers and the Senedd **declared a climate emergency**, reaffirming Wales’ commitment and determination to tackle the climate crisis. Subsequently, the Welsh Government published **Prosperity for All: A Climate Conscious Wales** – a climate change adaptation plan which

outlines policies and proposals for decarbonisation to meet the goals of the first carbon budget.

To achieve net zero by 2050, a series of 5-year carbon budgets between 2016 and 2050 have been agreed upon by the Welsh Government in **Net Zero Wales: Carbon Budget 2**, published in 2021. This outlines 123 policies and proposals to meet the second of these carbon budgets (2021-2025), by reducing the required 37% of emissions compared to the second carbon budget baseline.

Net Zero Wales also commits the **public sector to achieve net zero by 2030**. In line with this commitment, the **Welsh Government Net Zero Strategic Plan (2022)** sets the approach for their own operational and supply chain emissions. Welsh Government also have modelled their pathway to fall short of a net zero 90% minimum mitigation – this further demonstrates the challenge to meet net zero, and the need to maximise delivery and further develop the approach to bridge the gap.

Welsh ministers have the ambition for public bodies and community enterprises in Wales to develop over 100MW of new renewable capacity by 2026. They also have the aim for 1GW of electricity generated in Wales to be locally owned by 2030, and for all new energy developments to have an element of local ownership.

Regional and local area energy planning

Collaboration will form a key part in achieving the Council's and the Government's ambitions for net zero. RCTCBC, along with nine neighbouring local authority areas form the Cardiff Capital Region. **The Cardiff Capital Region Energy Strategy**, supported by the Welsh

Government Energy Service, sets the strategic approach to deliver on the region's ambitions for decarbonising its energy system. The Council is now developing its Local Area Energy Plan to identify projects and target development priorities for local net zero energy.

RCTCBC corporate policies

RCTCBC have committed to becoming net zero in their **Corporate Plan 2020-24 'Making a difference'**. The Corporate Plan acknowledges that delivering our Climate Change commitment is one of the greatest challenges the Council faces. The Corporate Plan commits to delivering three main priorities, all of which will contribute to and benefit from tackling climate change:



RCTCBC's priorities for 2020 - 2024

The Council's asset strategy is set out in the **Corporate Asset Management Plan for Property Assets for 2018/2023** and incorporates initiatives for energy efficiency and estate rationalisation which benefit carbon emissions.

The internal **Carbon Reduction Programme for FY2022/23** is part of an annual planning cycle that has been in place for over a decade. This yearly

investment programme ensures sustained momentum and a protected budget for energy and carbon reduction.

The most recent revisions to the [Procurement Strategy 2021-24](#) have included a raft of measures around understanding and measuring carbon emissions in the supply chain. One of its key projects has been to engage with suppliers to improve product and service carbon footprinting.

The Council have developed an **Energy Management Strategy** which sets out measures staff and Building Managers should follow in Council buildings, in relation to heating and cooling temperatures.

The Council have developed numerous policies and schemes to promote the Sustainable Transport Hierarchy including:

- The Cycle 2 Work scheme
- Car Salary Sacrifice Scheme including electric vehicle leasing
- Electric Vehicle Charging Strategy
- Active Travel scheme

RCT County Borough-wide policies

The Council have ambitions for the whole of RCT county borough to become net zero soon after 2030 and has recently published their overarching [Climate Change Strategy 'Think Climate RCT'](#) (2022) which shows the Council's position on their own internal and County Borough-wide carbon emissions. This county borough strategy sets initiatives and commitments for RCTCBC as an organisation which have been taken forward to align with this Strategy.

The **Climate change engagement plan** is the communications strategy for the whole county borough. As the majority of RCTCBC staff (79%) also live in the county, this strategy will be relevant to them.

2.2. Carbon neutral and net zero

Previously, RCTCBC committed to becoming carbon neutral by 2030. However, net zero is considered the more ambitious target and is the one set by Welsh Government for the public sector. The technical definition of net zero is still emerging, however, Welsh Government has utilised the SBTi definition within their Net Zero Strategic Plan.

The main difference between net zero and carbon neutral, based on common definitions as set out below, is the approach to residual emissions and offsetting.



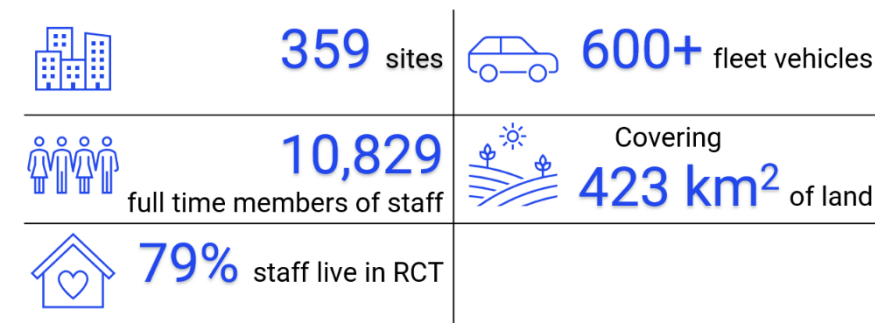
Carbon neutral covers Scope 1 and 2 (operational emissions) and is covered by the PAS2060 standard. There is no requirement for a defined reduction target, with neutrality achieved by offsetting greenhouse gas emissions.



Net zero, as defined by the Science Based Targets initiative (SBTi), covers Scopes 1, 2 and 3 and demands emissions reductions in line with limiting global heating to 1.5°C. Furthermore, 90% of the baseline footprint must be reduced with only 10% of the baseline footprint being removed through GHG removals.

2.3. Council operations

The scale of the Council's operations can be defined as follows, with figures correct as of August 2022.



2.4. RCTCBC recent progress

Energy efficiency and renewables

RCTCBC is strongly committed to understanding and reducing its carbon emissions, spending almost **£10 million on energy conservation projects since 2009**. As a result, all streetlights in RCT have been converted to LED or equivalent, saving 84% of the reported carbon; energy efficient lighting has been installed in over 805 council-owned buildings; 2MW of roof-mounted solar arrays have been installed on schools and corporate buildings; innovative hydrogen fuel cells have been installed in sites throughout RCT; and 100% of RCTCBC's electrical energy supply comes from renewable sources.

At Taff's Well Thermal Spring, two **heat pumps** have been installed to provide low carbon heat for the nearby Taff's Well Park Pavilion and local Ffynnon Taf Primary School.

In addition, so far, two viable **hydro schemes** have been identified and are currently being considered by the Climate Change Cabinet Sub-committee.

Transport

This year, the Council published its **Ultra Low Emissions Vehicles (ULEV) Transition Plan**, to outline the Council's plan to transition 293 fleet vehicles from Internal Combustion Engine (ICE) to Ultra Low Emissions Vehicles (ULEV) over the next six years. This report sits alongside a fleet review, grey fleet review, and EV charging infrastructure report, all of which were produced for RCTCBC by the Welsh Government Energy Service.

A pilot has been introduced in the **social care sector** to transition to a fleet of electric vehicles.

Furthermore, RCTCBC is currently trialling the use of **hydrotreated vegetable oil** (HVO), sometimes known as renewable diesel, for their fleet. A report will be developed in due course to summarise the findings.

Procurement of goods and services

In order to **decarbonise the Council's supply chain**, RCTCBC's standard procurement documents have been updated to reflect the increased interest in reporting emissions and standard sustainability questions are now asked during all tender exercises.

The **Contract Strategy** template document (which gets populated prior to any work taking place) has also been updated and will require each service

area that wishes to procure goods or services to show that the carbon impact of their purchase has been considered.

RCTCBC are developing a first-of-its-kind, simple **toolkit for suppliers** to report the carbon footprint of their goods and services, which has garnered much interest from the Welsh Local Government Association, Business Wales and the Welsh Government. In the meantime, the Welsh Government's Sustainable Risk Assessment Toolkit will be used for upcoming Transport and Social Care contracts.

Land use, tree planting and nature

The RCT county borough has one of the **highest percentages of tree coverage** in Great Britain.

RCTCBC are delivering both **tree planting** in rural and urban areas, and **natural tree regeneration** to increase carbon sequestration, among other co-benefits, in the county. In 2022, the Council spent £100,000 on tree planting, which is due to increase this year.

An **audit** is being undertaken to understand the speed of natural regeneration based on a 2009 baseline. It will only include patches of land over 10 hectares, in line with the Welsh Government Net Zero Reporting requirements. This also sets the threshold to define 'woodland' as land with over 20% tree coverage.

A **study of peatland conditions** is also ongoing, supported by a grant from Natural Resource Wales awarded in September 2022, to analyse the potential for peatland restoration. This includes a feasibility project at Cwmparc, to be complete in 2023. To raise **public awareness** of the Council's natural resources, RCTCBC has produced webpages including, Let's Talk Trees, Let's Talk Nature, and Let's Talk Wildflowers.

2.5. Carbon footprint and baseline

The baseline year for the Council is the financial year 2019/20; this aligns with the Welsh Government’s initial commitment to a net zero public sector, and the first year of Net Zero Reporting. The carbon footprint has been separated into Operational emissions (Scope 1-3 directly controlled), Supply Chain impacts (indirectly controlled), and Land Use & Renewables contributions (GHG removal and avoided emissions).

RCTCBC’s baseline carbon footprint for 2019/20 was 125,702 tCO₂e. Considering REGO certified electricity, exported renewables and land-based sequestration (9,180 tCO₂e), the net emissions were 113,721 tCO₂e.

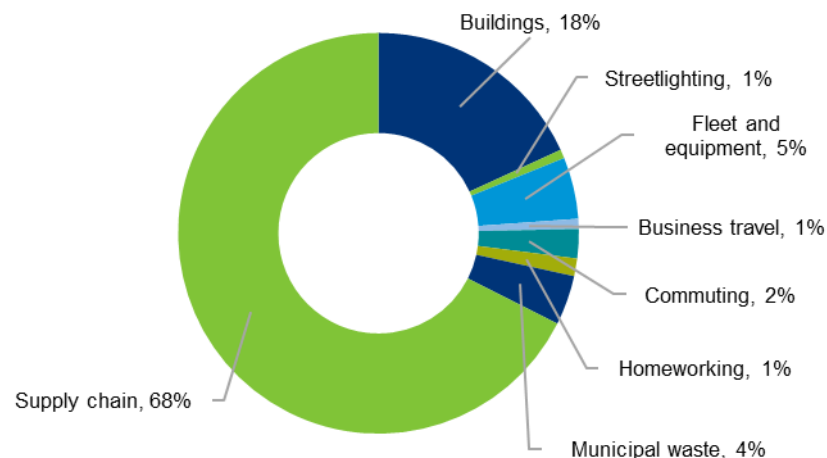
Operational emissions represent 31% of RCTCBC’s total emissions with 17% of the footprint arising from emissions from building use (primarily gas and electricity) and 10% of the footprint arising from emissions from transport.

Emissions from the supply chain account for 69% of the total footprint. Emissions from procured goods and services have been calculated using economic proxy factors to calculate emissions based on spend data. This is a highly estimated approach and there is a need to engage suppliers and increase the accuracy of future supply chain emission accounting.

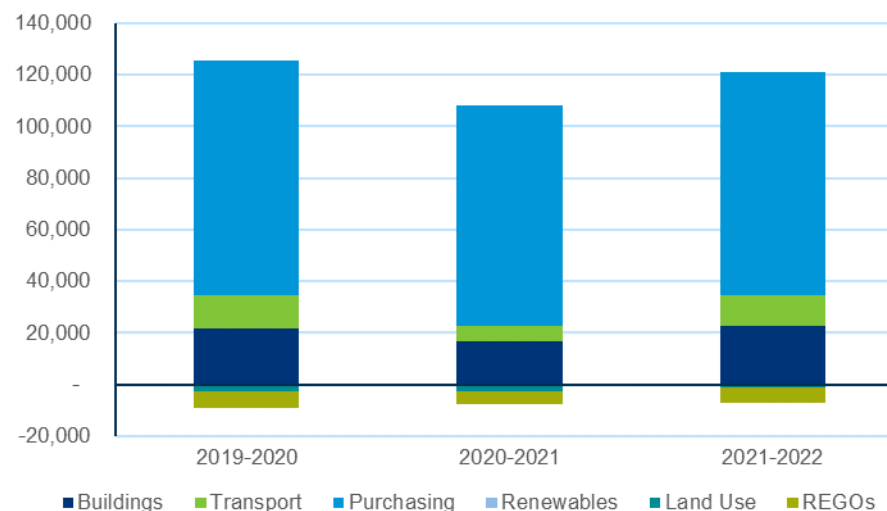
Emissions for the previous two reporting years are shown alongside the baseline. Retrospective adjustments have been made to the baseline year and 2020/21 to account for homeworking and staff commuting which was added to the scope of Net Zero Reporting in 2022.

Further details on the carbon footprints can be found [online](#) and in the Welsh Government Public Sector Net Zero Reporting.

RCTCBC Carbon Footprint 2019/20



RCTCBC Carbon Footprints 2019 - 2022



3. Action Plan

This section of the Strategy forms the ‘Action Plan’ for RCTCBC. This forms the basis of a live document which will be reviewed and updated as actions are achieved and stages completed. The Action Plan includes:

- overarching strategic aims for each theme;
- near-term actions to the end of 2024/25; and,
- longer-term ambitions to 2030.

The carbon impact in 2030 uses the Future Energy Scenario’s Falling Short pathway for the carbon intensity of the electricity grid, a conservative pathway for emissions modelling.

An asterisk next to an action indicates that it was inspired by, or drawn directly from, RCTCBC’s Think Climate strategy: [Making Rhondda Cynon Taf Carbon Neutral by 2030](#). For the exact page reference, see Appendix 4.

The Action Plan is structured into the three emission pathway areas and their main related themes. Initiatives have been codified within the Action Plan table, and broadly prioritised over the next three years. The table shows the structure of the Action Plan initiatives, and an outline estimate of timescales.

* Note that highlighted initiatives and commitments are linked back to **Climate Change Strategy ‘Think Climate RCT’**

		2023	2024	2025
OPERATIONAL	Buildings	B2 B6	B3 B13	B1 B4 B5 B7 B8 B9 B10 B11 B12
	Transport		T6	T1 T2 T2 T3 T4 T7 T8 T9 T10
SUPPLY CHAIN	Goods & Services	S1 S2 S3 S4 S6 S7	S5 S8	S9 S10
LAND USE & RENEWABLES	Sequestration	L1 L4 L8	L2 L5	L3 L6 L7 L9
	Renewables			R1 R2 R3 R4

3.1. Operational

Buildings

This emissions category includes all buildings owned by RCT Council, whether operated by the Council or leased to a third party. Building emissions arise from the use of heating fuels (natural gas and LPG), electricity, and water consumption. In the financial year 2021/22, emissions from buildings account for 18% of RCTCBC's total carbon footprint.

Aims:

1. Improve energy efficiency of all buildings
2. Maximise renewable energy generation and low carbon heating across the estate

Ambitions to 2030

- By 2030, all buildings will have an energy efficiency equivalent to DEC rating of B.
- By 2030, rooftop PV will be installed on all viable buildings.
- Further develop the use of hydrogen for fuel cells in Council buildings (and vehicles), as part of the hydrogen economy development. [* Think Climate, page 5]
- Work with third-sector organisations to ensure the sustainability of community facilities/venues in RCTCBC (EPC B by 2030), reduce the impact of rising energy prices and improve energy efficiency. This includes Council buildings leased to third-sector groups. [* Think Climate, page 16]
- Complete all new builds and refurbishments for the Council's building estate in line with net zero standards by 2030, through the Sustainable Communities for Learning programme where applicable, and aim for low carbon heating systems.

Actions out to March 2025

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source	2030 Carbon reduction
B1	Where appropriate, upgrade the remaining inefficient lighting to LED	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal	405 tCO ₂ e
B2	Create a programme for low carbon heat projects, prioritising LPG-fired, failing and inefficient boilers, and leased buildings *	2023	Officer: Director of Corporate Estates Service Area: Corporate Estates	n/a	n/a
B3	Develop costed proposals for low carbon heat projects to install in 2023/24 as further funding becomes available. Focus on high carbon emitters and sites with existing underfloor heating *	2024	Officer: Director of Corporate Estates Service Area: Corporate Estates	n/a	n/a
B4	Install low carbon heat projects developed as a result of actions B2 and B3	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, UK	7,460 tCO ₂ e
B5	Write a policy outlining the ‘whole building’ approach to maximise energy efficiency – look at insulation improvements when carrying out other works, fabric first, following CIBSE AM17 best practice for heat pumps. This could form part of the Energy Management Strategy update, with the inclusion of a more specific policy to follow.	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal	n/a

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source	2030 Carbon reduction
B6	Carry out rooftop solar PV screening for all viable remaining buildings, including leased buildings, and create a programme of works *	2023	Officer: Director of Corporate Estates Service Area: Corporate Estates	n/a	n/a
B7	Install roof mounted solar on viable buildings, including all schools *	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, Wales funding	216 tCO ₂ e
B8	Re-roofing projects to consider installing solar mounts on appropriately orientated roofs, ready for PV install at a later date	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal	n/a
B9	Optimise property portfolio by reducing the number of Council-owned or leased buildings, as more staff move to hybrid working	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal	2,128 tCO ₂ e
B10	Ensure 80% of the energy used at our Bryn Pica Materials Recycling Facility comes from renewable sources by 2025 *	2025	Officer: Director of Frontline Services Service Area: AMGEN	Internal	32 tCO ₂ e
B11	Work with third-sector organisations to ensure the sustainability of community facilities/venues in RCTCBC (EPC C by 2025) reduce the	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, Wales funding	n/a

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source	2030 Carbon reduction
B12	impact of rising energy prices and improve energy efficiency. This includes Council buildings leased to third-sector groups. *				
	Provide training for Building Managers – following on from the Energy Policy and previous guidance given to Building Managers	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal	388 tCO ₂ e
B13	Provide specific training for staff on how to operate and work in their buildings efficiently	2024	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal	582 tCO ₂ e

Transport

As of August 2022, the Council operates over 600 vehicles from cars to refuse collection vehicles. Transport emissions arise from vehicles owned by RCT Council (also known as fleet vehicles), emissions arising from hired vehicles and business travel in staff own vehicles (grey fleet), as well as emissions from employee commuting. Transport emissions account for 8% of the Council's 2021/22 footprint.

Aims:

1. Increase the number of electric vehicles in the Council fleet
2. Increase journeys taken by public transport, bike or walking, or by electric vehicles

Ambitions out to 2030

- In line with Wales' target for public sector organisations, aim for all our vehicles to be ultra-low emissions vehicles by 2030. [* Think Climate, page 16]
- By 2030, we will ensure that over 50% of all journeys are taken by public transport, bike or walking, or, where this is not possible, using electric vehicles. [* Think Climate, page 9]
- Electric pool vehicles and charging points are to be available at all Council locations they are needed e.g. depots and main offices. [* Think Climate, page 9]
- Investigate the potential for incorporating hydrogen and biofuel vehicles into the Council's fleet as they come onto the market, for example, hydrogen Refuse Collection Vehicles. [* Think Climate, page 5]
- Ensure that the transport services we commission, including Home to School, are zero or low carbon where possible. [* Think Climate, page 10]

Actions (out to March 2025)

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source	2030 Carbon reduction
T1	Implement the Council's Electric Vehicle Charging Strategy and supporting Implementation Plan, which will accommodate the transport needs of existing and future electric vehicle users across the county borough *	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, UK	n/a
T2	In line with Wales' target for public sector organisations, aim for all our new cars and light goods vehicles to be ultra-low emissions vehicles by 2025 *	2025	Officer: Director of Frontline Services Service Area: Frontline Services	Internal, Wales funding	1,637 tCO ₂ e
T3	Implement the Council's Fleet Transition Plan including the promotion and prioritisation of electric vehicles, with appropriate training for staff	2025	Officer: Director of Frontline Services Service Area: Frontline Services	Internal	n/a
T4	Undertake further ULEV trials for different vehicle types e.g., refuse collection vehicles	2025	Officer: Director of Frontline Services Service Area: Frontline Services	Internal	n/a
T5	With the aim of achieving 25% of journeys on foot, bike or public transport by 2025, significantly reduce staff travel by car for commuting and business travel by continuing to maximise the use of technology for route planning and encouraging active travel and greater use of public transport *	2025	Officer: Director of Frontline Services Service Area: Frontline Services	Internal	949 tCO ₂ e

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source	2030 Carbon reduction
T6	Explore the potential for staff to walk / take public transport to social care visits by zoning patches of care, and not only employing those who can drive	2024	Officer: Director of Social Services Service Area: Social Care	Internal	n/a
T7	Encourage staff to commute by active travel and public transport. This can be achieved by opening the Cycle 2 Work scheme year-round and promoting it more heavily and installing enabling infrastructure like bike racks, showers and lockers.	2025	Officer: Director of Finance/ Director of Corporate Estates Service Area: Finance/ Corporate Estates	Internal, UK	n/a
T8	Incentivise low carbon transport with cycle/running clubs, friendly competition to promote active travel, apps e.g. Strava, on-road cycle training and buddying schemes. Use existing platforms like the staff Green Space on Microsoft Teams to promote progress and achievements.	2025	Officer: Director of Democratic Services/ Director of Human Resources Service Area: Democratic Services/ Human Resources	Internal	n/a
T9	Link the Safe Walking and Cycling Routes established by schools to Council staff and the wider community	2025	Officer: Director of Frontline Services Service Area: Frontline Services	n/a	n/a
T10	Provide training to educate frequent drivers on how to drive their own and fleet ICE (internal combustion engine) cars in a more fuel-efficient way	2025	Officer: Director of Frontline Services Service Area: Frontline Services	n/a	296 tCO ₂ e

3.2. Supply Chain

Goods, Services and Construction of capital assets

Supply chain emissions arise from all activities associated with the goods and services the Council purchases, and the construction of new capital assets like roads and buildings. These purchases contain ‘embedded carbon’ – the greenhouse gas emissions associated with the whole production process and life cycle of a product. This includes upstream activities like the extraction of raw materials, manufacturing and distribution of products, as well as downstream activities like the emissions associated with the use of a good or service and the end-of-life disposal of that product. When procuring goods and services, many factors, including the carbon footprint, price, value for money, social value and the local economy will be considered. At times, these factors conflict or compete with one another and need to be prioritised. In the financial year 2021/22, emissions from purchased goods and services account for 67% of RCTCBC’s total carbon footprint.

Aims:

1. Improve carbon accounting for all purchased goods, services and construction
2. Seek to only procure supplies and services from businesses that are striving to reduce their carbon emissions and, in doing so, actively support low carbon and local suppliers as part of our wider transition to net zero, where the legal framework allows
3. Work with key suppliers to evaluate and reduce emissions from building and infrastructure projects

Ambitions out to 2030

- By 2026, 50% of our suppliers will be net zero certified
- Understand the carbon impact of all major purchasing decisions
- Proportion a score for tender responses based on suppliers’ carbon footprints and reduction plans
- Accurately measure the carbon footprint of all purchased goods and services

Actions (out to March 2025)

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source
S1	Produce advice for suppliers outlining the options to achieve net zero certification, in line with RCTCBC's tender requirements, and distribute it to suppliers *	2023	Officer: Head of Procurement Service Area: Procurement	n/a
S2	All procurement lead contracts have already been revised to include questions about suppliers' ability to calculate their carbon emissions. Relevant contract clauses have also been added to strengthen the Council's position. Ensure these are rolled out in all upcoming contracts e.g., Supported Living and Home Care contracts, Transport contract	2023	Officer: Head of Procurement Service Area: Procurement	n/a
S3	Identify departments that procure goods and services with the highest carbon impact and prioritise supporting the procurement approach in upcoming contracts	2023	Officer: Head of Procurement Service Area: Procurement	n/a
S4	Request all contracted suppliers complete the carbon footprint tool annually, and support them to do so by developing training	2023	Officer: Head of Procurement Service Area: Procurement	n/a
S5	Support smaller suppliers to use the carbon footprint tool to assist them in decarbonising their activities	2024	Officer: Head of Procurement Service Area: Procurement	n/a

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source
S6	Where market conditions allow, specify low carbon travel/ vehicles for those contracts where transport is a large contributor e.g., delivery services, transport services (Stagecoach etc), social care services, school transport	2023	Officer: Head of Procurement Service Area: Procurement	Internal
S7	Establish ambitious energy efficiency standards, that go beyond the minimum mandatory Government Buying Standards, when purchasing white goods, appliances and ICT equipment and share with all staff across the Council	2023	Officer: Head of Procurement Service Area: Procurement	n/a
S8	Using WRAP guidelines for measuring emissions from food and drink, calculate an accurate carbon footprint for food provided by the Council using higher resolution specific emissions factors	2024	Officer: Director of Education/ Head of Procurement Service Area: Education/ Procurement	Internal
S9	Establish priorities for increasing the number of climate friendly meal options offered by the Council in our schools, care homes, and offices, as well as our community meals service from a baseline that will be established in 2023/24 *	2025	Officer: Director of Education/ Head of Procurement Service Area: Education/ Procurement	Internal
S10	When demolishing or refurbishing sites, review the options to reuse materials where practicable e.g., timber.	2025	Officer: Head of Procurement/ Director of Corporate Estates Service Area: Procurement/ Corporate Estates	Internal

3.3. Land use and renewables

RCTCBC's use of land can have an impact on climate change mitigation and adaptation in multiple ways, including carbon sequestration, building resilience to extreme weather like natural flood defences, and development of renewables. Fire risk is also projected to increase with climate change, which impacts slope stability, loss of stored carbon in soil and plants, biodiversity loss, air quality, water retention, erosion potential, tourism, and regeneration, as well as potential loss of life and property. Land management can help to mitigate some of these impacts.

Land sequestration

Land can be used to store carbon through rewilding, tree planting or peat bog restoration, for example. Through these activities, carbon dioxide is naturally captured from the atmosphere, reducing the rate of global heating. The deep peat in Britain stores approximately 4.5 million tonnes of carbon (compared to 162 thousand tonnes stored by British forests). Tree planting can also provide natural flood defences which will be essential, especially in Wales where warmer, wetter winters are projected to increase the frequency and severity of flooding events as the planet warms. In the financial year 2021/22, net emissions sequestered from RCTCBC's land amounted to the equivalent of 1% of the total carbon footprint.

Aims:

1. Assess the condition of peatlands across RCT and rewet where required to improve the quality of land
2. Encourage natural regeneration and increase afforestation of woodland and hedgerows

Ambitions out to 2030

- Maximise carbon sequestration across Council-owned land.
- Engage with Welsh Government and Natural Resources Wales regarding the management of the Welsh Government estate to restore peat, reduce carbon emissions and maximise flood and fire risk management.
- Rewet and appropriately manage peatbogs in Council ownership to restore biodiversity and maximise carbon sequestration.
- Where appropriate, use planning conditions to deliver habitat protection and restoration as part of new developments. Engage developers through Supplementary Planning Guidance for environmentally friendlier design, which incorporates and enhances the natural features existing on greenfield sites.

- Encourage new and better management of S106 sites with long term management goals in mind, protecting existing trees, hedges and green spaces.
- Contribute to the Queen’s Green Canopy initiative and the National Forest for Wales through sustainable tree planting by investing £200,000 per annum until 2030.
- Attract private sector investment to increase areas of woodland regeneration and creation, and soil and habitat conservation through restoration and management, ensuring that we protect and store carbon and reduce the risk of flooding.

Actions (out to March 2025)

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source
L1	Understand the sequestration potential of land in our ownership *	2023	Officer: Director of Prosperity & Development Service Area: Prosperity & Development	Internal, Wales
L2	Identify an accurate baseline of RCT woodland cover to inform future management by: - Producing a whole RCT woodland cover map by 2024, including identification of all Council-owned woodland - Identifying the rate of natural woodland regeneration on Council-owned woodland sites over 10 hectares in size *	2024	Officer: Director of Prosperity & Development Service Area: Prosperity & Development	Internal, Wales
L3	By 2025, set a target for sustainably increasing woodland cover through The Natural Tree Regeneration Project *	2025	Officer: Director of Prosperity & Development	n/a

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source
			Service Area: Prosperity & Development	
L4	Utilise RCTCBC's Tree and Woodland Strategy to inform future land management operations including tree planning, management and monitoring	2023	Officer: Director of Prosperity & Development Service Area: Prosperity & Development	n/a
L5	Work with partners to map and review Council-owned land to identify categories that align with the Net Zero Reporting commitment *	2024	Officer: Director of Prosperity & Development Service Area: Prosperity & Development	Internal, Wales, UK
L6	Utilise land category map (L5) to produce a long-term plan to optimise diverse land management, including identifying sites for natural woodland regeneration, sites suitable for food production, sites for peatland restoration, and sites where tree planting is appropriate	2025	Officer: Director of Prosperity & Development Service Area: Prosperity & Development	Internal, Wales, UK
L7	Put climate change at the centre of our Local Development Plan, which is currently being renewed. This includes protecting RCT uplands, important habitats and peatbogs. *	2025	Officer: Director of Prosperity & Development	n/a

	Actions out to March 2025	Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source
L8	Encourage community gardening programmes, growing food locally, and the potential for recruiting adults with complex needs to work in the community gardens and paying them a fair wage. Explore the suitability of parks and other Council land to support this.	2023	Service Area: Prosperity & Development Officer: Director of Prosperity & Development / Director of Social Care Service Area: Prosperity & Development / Social Care	Internal, Wales
L9	Introduce land use policies to mitigate fire risk e.g., Health Hillside Project / conservation grazing, joint working with the Fire Service, Natural Resources Wales, and Wildlife Trust. Extend lessons from the pilot to other Council-owned/ leased sites, as well as NRW/ Welsh Government-owned/ leased sites and private sites in RCT.	2025	Officer: Director of Prosperity & Development/ Director of Social Care Service Area: Prosperity and Development/ Social Care	Internal, Wales

Renewables

Setting land aside for new development of renewable energy sources like solar and wind farms will provide green energy to RCT residents and contribute to the Council's net zero targets. Community ownership of renewables can also provide income or reduced energy rates for local communities and increase local buy-in for new renewable developments. In the financial year 2021/22, electricity generated from solar PV avoided emissions equivalent to 0.3% of the total carbon footprint.

Aims:

1. Use public sector land for green energy generation. Progress solar, wind and hydroelectric energy schemes to reduce the cost of meeting our energy needs and generate income, whilst reducing our carbon footprint

Ambitions out to 2030

- Increase local renewable energy generated from Council land and buildings from the 2021/22 baseline (2MW) to 20MW by 2025 (this also includes roof mounted solar PV)
- By 2027, install two 5MW land based solar farms.
- By 2028, install a 6MW wind turbine scheme.
- Work with partners including a local health board, Natural Resources Wales, and neighbouring authorities to maximise the collective resources to generate green energy across the region

Actions (out to March 2025)

Actions out to March 2025		Target delivery date (FY)	Accountable Officer/ Service Area (for delivering action)	Funding Source	2030 Carbon reduction
R1	Increase renewable energy generated from Council land or buildings from 2021/22 baseline (2MW) to 20MW by 2025 *	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, Wales, UK	3,143 tCO ₂ e
R2	Install 200kW solar scheme at Bryn Pica, as per B10	2025	Officer: Director of Frontline Services Service Area: AMGEN Cymru	Internal, Wales, UK	32 tCO ₂ e
R3	Explore community cooperative energy projects to provide inexpensive, green energy for residents and businesses to purchase, including energy for electric vehicle recharging on publicly owned land *	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, Wales, UK	n/a
R4	Explore potential options to utilise existing energy sources including: - Geothermal energy from abandoned coal mines - Hydroelectric projects *	2025	Officer: Director of Corporate Estates Service Area: Corporate Estates	Internal, Wales, UK	n/a

4. Net zero target

4.1. Future Energy Scenarios

The carbon intensity of grid electricity has been falling due to the removal of coal-fired power stations, with the ramping up of renewable energy generation feeding into the grid further lowering carbon intensity. In the past decade, CO₂ intensity has dropped by 65% from 529 gCO₂/kWh in 2013 to 188 gCO₂/kWh in 2021.

The National Grid ESO Future Energy Scenarios (FES 2022) outline four different forecasts for the future of energy between now and 2050.

The Falling Short scenario assumes non-compliance with the UK Net Zero 2050 emissions target, due to low levels of decarbonisation and societal change. Whereas the Leading the Way scenario has very high levels of decarbonisation and societal change for the “fastest credible” decarbonisation pathway for UK net zero to be met by 2047.

RCTCBC have modelled the carbon impacts of the Action Plan using the Falling Short FES 2022 scenario; this provides a conservative assessment of future emissions.

4.2. Pathways

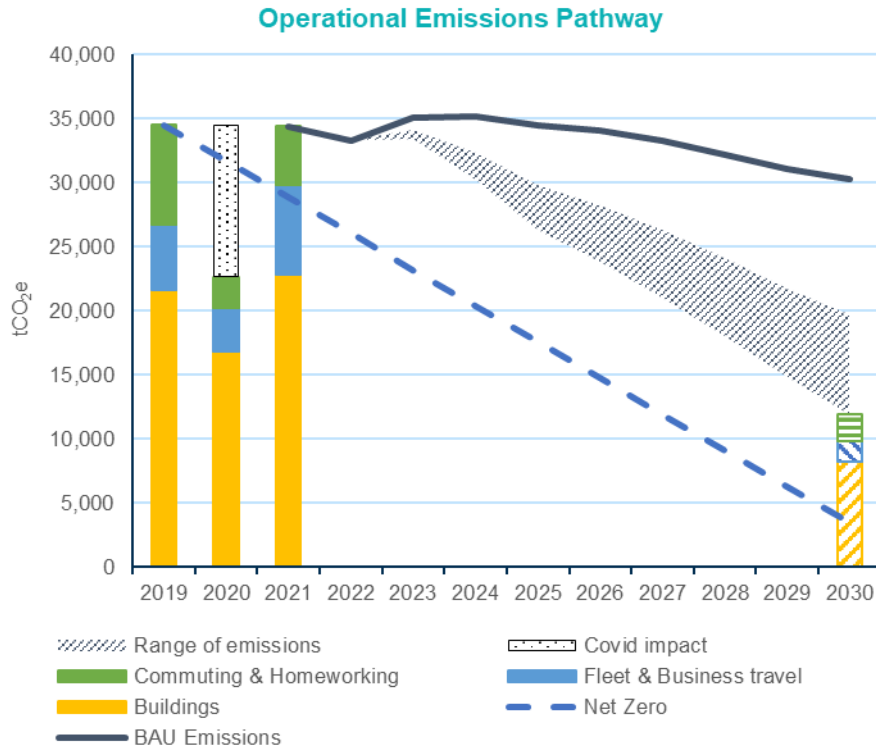
The Council's carbon emissions have been split into Operational emissions (Scope 1-3 directly controlled), Supply Chain impacts (indirectly controlled), and Land Use & Renewables contributions (sequestration and avoidance of carbon – dual reporting method).

Using the baseline 2019/20 carbon footprint, applying the grid decarbonisation scenario forms the basis of the 'Business as Usual' pathway. A likely pathway range has been modelled using high and low estimated carbon reductions from the Action Plan initiatives.

Actual footprint data from 2019/20, 2020/21 and 2021/22 has been used to show progress since the baseline year. Target pathways have been taken from the baseline year and extend to 2030 as stated by Welsh Government.

Using the Science Based Target initiative methodology, the minimum mitigation target for net zero is shown at a 90% reduction on the 2019/20 baseline.

Operational emissions forecast



The operational emissions pathway is broken down into three summary areas:

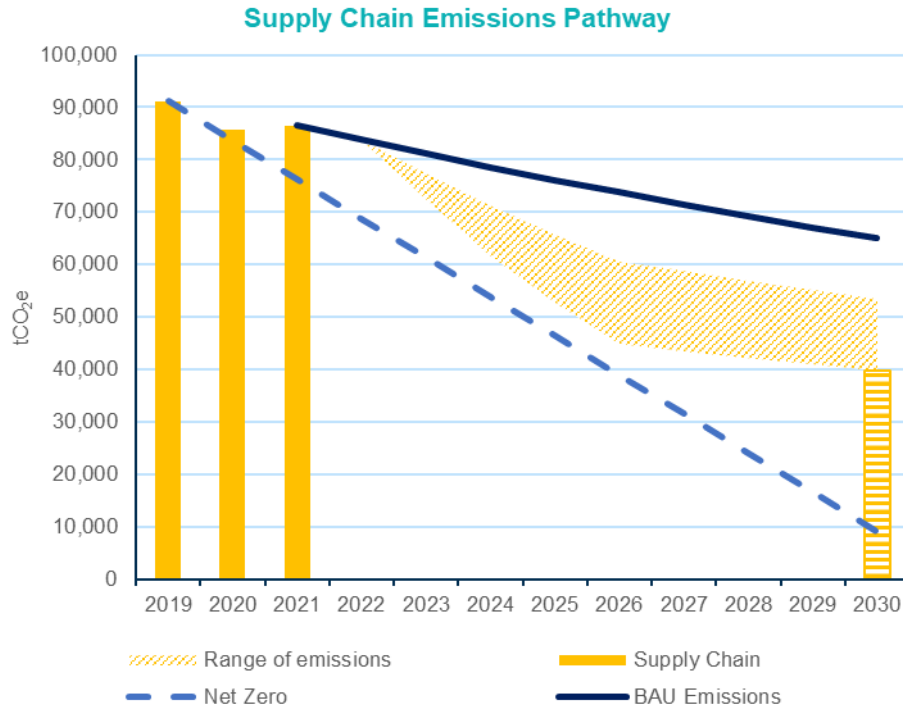
Buildings	Emissions from electricity, gas, LPG, water use and wastewater treatment for all buildings owned and leased by RCTCBC.
Fleet & Business travel	Emissions from the Council's fleet and equipment (inc. light vans and refuse collection vehicles), hired vehicles, and staff own vehicles used for business travel (grey fleet).
Commuting & Homeworking	Emissions from staff commuting to their place of work and homeworking.

The pathway shows:

- Business As Usual (BAU) shows a reduction due only to the decarbonisation of the electricity grid
- The impact of Covid shows the assumed emissions level if no pandemic
- The range of emissions in grey gives an indication of the emissions reduction due to grid decarbonisation, measures underway in 2022/23 and actions planned to 2030
- Expected residual emissions 2030 are estimated as 11,949 tCO₂e
- The net zero target is forecast to not be met with the range of actions in the Action Plan at this stage - this demonstrates the need to maximise delivery, and develop further opportunities to bridge the gap

RCTCBC operational emissions	2025	2030
Expected pathway	26,354 tCO ₂ e	11,949 tCO ₂ e
Net zero target pathway	17,578 tCO ₂ e	3,453 tCO ₂ e

Supply Chain emissions forecast



RCTCBC supply chain emissions	2025	2030
Expected pathway	52,808 tCO ₂ e	39,759 tCO ₂ e
Net zero target pathway	46,416 tCO ₂ e	9,117 tCO ₂ e

Supply chain emissions are summarised as:

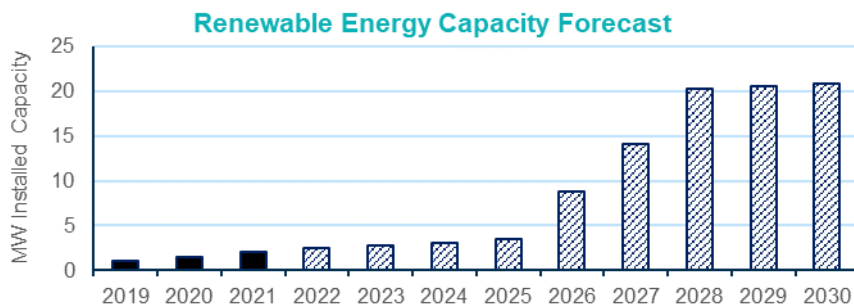
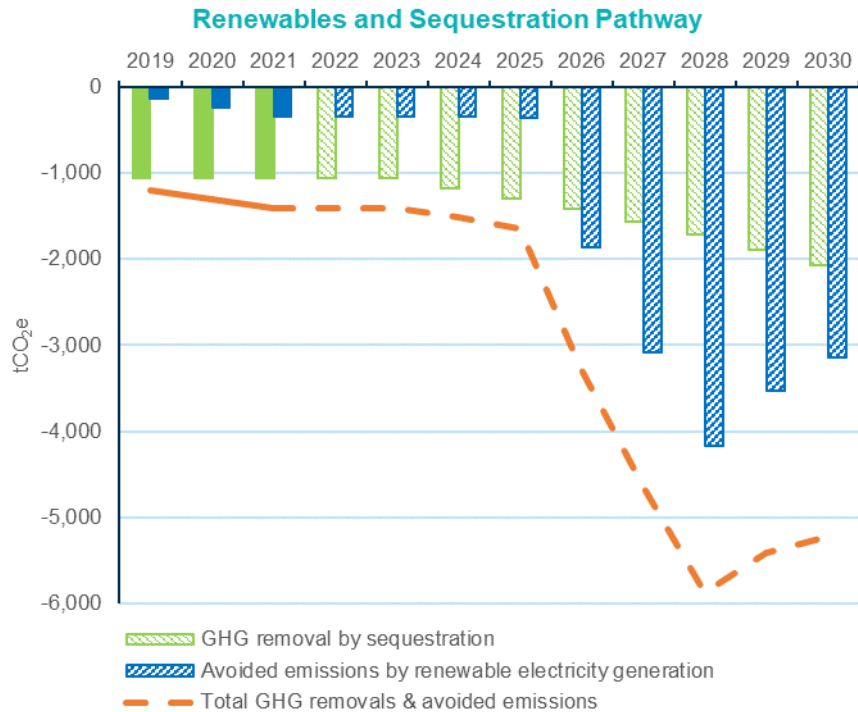
Supply chain

Emissions from the supply chain are based on the goods/service emissions factor multiplied by the value of purchases made.

The pathway shows:

- Business as usual shows a reduction due to the estimated impacts of decarbonisation of the supply chain against financial values due to financial inflation and global supply chain decarbonisation
- Emissions can't be accurately calculated due to the way emissions factors are based on spend, which will be influenced by inflation and a rise in material costs
- The plan is to shift to market-based accounting and work with suppliers to produce actual carbon emissions for the goods and services supplied to the Council
- Large contracts and areas of spending such as capital programmes, infrastructure projects and social care could be split out, based on previous supply chain work, to track progress in these areas
- The estimated pathway shows emissions in 2030 as 39,759 tCO₂e, this is significantly above a 90% reduction target, however, there is a need for the baseline and modelling approach to evolve

Land Use & Renewables forecast



Land use and renewable emissions are summarised as:

GHG removals	Emissions sequestered through good land management e.g., naturally regenerated woodland, increased tree coverage, managed woodlands, peatland restoration
Avoided emissions from renewables	Emissions avoided by using renewable energy from solar, wind and hydroelectric generation

The pathway shows:

- The 20MW target for generation capacity is shown as in 2028
- Renewables are stepped to show the phasing of projects – 5MW solar in 2026 and 2027, and 6MW wind in 2028
- Renewable electricity generation has been calculated at the annual grid emissions intensity factor moving forward. Due to the increase in renewables on the national grid, this factor will decrease with time.
- Emissions removed through good land management are assumed to increase incrementally annually
- Renewable Energy Generation Obligation credits (REGOs) are purchased to offset the electricity used by the Council. Since electricity emissions will decrease due to the planned initiatives (including renewables) as well as grid decarbonisation, the quantity of REGOs required to be purchased will decrease.
- Annual GHG emissions reduction estimated in 2030 are - 5,220tCO₂e

4.3. 2025 / 2030 expected pathway

The emissions pathways set the expected operational, supply chain and avoided emissions as follows. Where there is an emissions pathway 'range' – the higher scale of delivery / intervention has been used. For both 2025 and 2030, the expected pathway is above the net zero target line.

RCTCBC emission pathway	2025	2030
Operational emissions	26,354 tCO ₂ e	11,949 tCO ₂ e
Supply chain emissions	52,808 tCO ₂ e	39,759 tCO ₂ e
Total GHG removals and avoided emissions	-1,644 tCO ₂ e	-5,220 tCO ₂ e

4.4. Total Emissions in 2030

In 2030:

- The operational emission pathway estimates 11,949 tCO₂e residual emissions – **this does not meet the 90% mitigation target of 3,453tCO₂e**; this demonstrated the challenge to meet net zero and the need to do more to bridge the gap
- The supply chain will be engaged and able to accurately report on their emissions contributions – this will allow the supply chain emissions pathway and target to be updated
- Renewable energy generation capacity is targeted to be over 20MW

- GHG removal measures will be reaching maturity to recognise the benefit to offset residual emissions

4.5. Offsetting

Options for offsetting remaining emissions should only be considered when emissions have been reduced as far as possible. The 90% minimum mitigation target set by the SBTi means that a maximum of 10% of the original baseline emissions may need to be offset.

The practice of offsetting is commonly considered as purchasing of carbon credits in sufficient quantity to offset residual emissions. Accreditation bodies and standards exist (such as The Gold Standard organisation) to verify carbon credits. Often these are for projects in other countries, involving afforestation and social value programmes promoting clean cooking fuels etc.

Increasingly, buying credits from the voluntary offset market is viewed as unsuitable, and has been used as a way to 'pay your way' towards net zero. Welsh Government are yet to set expectations for a suitable offset approach for the Welsh public sector net zero ambition. In the meantime, the Council will seek to progress local GHG removal projects which will have a high level of assurance and can be tracked to maturity.

4.6. Adaptation to climate change

Significant decarbonisation efforts are required to avoid the most severe effects of climate change. There is already a certain amount of global heating that is inevitable due to existing carbon emissions in the atmosphere. To date, average global temperatures have increased by over

1°C since pre-industrial levels and will continue to rise in future.

Decarbonisation will limit the rise in temperatures but not eliminate it.

Along with rising temperatures, milder, wetter winters in Wales will increase the frequency of severe flooding, and hotter summers may affect food production, and create health risks from overheating. An increase in extreme weather events overseas will also create supply chain disruptions for Welsh consumers. A full outline of climate change predictions for the UK can be found in the **UK Climate Projections**.

To this end, the Council needs to account for the projected changes in climate in its future planning and build resilience to the increasing risks. Existing plans for decarbonisation may already benefit adaptation. For example, RCTCBC's tree planting commitments are likely to create flood defences if the right trees are planted near coastal or fluvial areas.

In 2019, the Welsh Government published their climate change adaptation plan for Wales, **Prosperity for All: A Climate Conscious Wales**. It sets a vision for 2030 where 'Wales is a country which has the resources and is prepared, has the knowledge to understand the risk and challenges ahead and has the capacity to adapt to the impact of climate change'. The document also highlights areas for action including flood risk and sea level rise; risks to business, buildings and infrastructure; agriculture and forestry; and health and wellbeing. The government has outlined over 30 commitments to adapt to the changing climate and achieve its vision for Wales.

When planning for the future, RCTCBC needs to take into consideration climate projections for Wales, and similar strategies to those outlined in the Welsh Government's adaptation plan.

5. Enablers and resources

5.1. Enablers

RCTCBC are dependent on others such as UK / Welsh Government and Distribution Network Operators to support many of the initiatives outlined. This reliance may hold up delivery, or present barriers such as access to funding or availability of grid connections. The Council must work collaboratively to overcome these challenges in order to recognise net zero.

UK National and Welsh Government policies

The **Future Homes Standard** states that no new gas boilers will be allowed for new build residential properties from 2025. There is a consultation on the date to ban sales of new gas boilers but this could be from 2035.

The UK Government has put in place legislation banning new non-electric car sales from 2030, new hybrid car sales from 2035 and new CO₂ emitting lorry and bus sales from 2040.

The Minimum Energy Efficiency Standards currently state that leased buildings must be EPC rating E or above. It is expected that the UK Government plan to improve this to EPC C by 2027, and EPC B by 2030.

Electricity network capacity

The local Distribution Network Operator has confirmed that currently there is not the available capacity for the grid to accept large scale renewable generation at most primary supply points across RCT County Borough. This hinders the development of large-scale wind and solar arrays, as the costs

to upgrade the network are prohibitive for the scale of the projects the Council would like.

There is available capacity across most of the county to increase demand on the network for EV charge points and heat pumps.

Cabinet members need to escalate grid challenges further to the DNO and Welsh Government to lobby for upgrades to support the Council's projects. The request must be for DNOs to work with local authorities to enable large scale renewable generation and electrification of vehicles and heating. This process is already under way and RCTCBC will keep in contact with the DNO to understand when any changes may occur.

Micro / mini electricity networks

RCTCBC are investigating the feasibility of micro and mini off-grid electricity networks for individual villages, using renewable energy sources and battery storage as the basis of the energy generation. Whilst more applicable to the county borough, some council buildings may benefit from these mini networks.

Decarbonisation of the gas network

If we are not able to exchange all gas fired boilers for heat pumps before 2030, we will be reliant on the emissions factor of the main natural gas network. This is not predicted to reduce as the mix of natural gas in the network is fixed. Welsh Government are investigating options to change the mix of gas in the existing network to include a proportion of hydrogen, which would reduce the emissions factor of mains gas. Wales & West Utilities has set out how it will meet the Government's target for gas pipes to be ready to deliver up to 20% hydrogen to homes and businesses around the country

from 2023, as a replacement for up to a fifth of the natural gas currently used.

Hydrogen

Because of local scoping work into hydrogen, and the use of hydrogen fuel cells to power some council buildings, the Council are keen to investigate the potential for hydrogen as a fuel source for buildings and vehicles. The UK government has continued to include hydrogen as a potential low carbon fuel, and small trials are taking place across the UK. However, clean generation of green hydrogen (rather than blue hydrogen produced from natural gas) would be required to make this a truly low carbon fuel. The wide scale roll out of hydrogen for heating buildings and powering vehicles is not expected to be possible before 2030.

5.2. Resources

Sources of finance

Implementing the necessary measures to reach the council's net zero target may be expensive, so it is essential to have a plan in place to finance the decarbonisation initiatives.

The Welsh Government has various funding mechanisms available to help support the public sector to decarbonise. For example, the **Wales Funding Programme** (administered by Salix Finance), provides interest-free loans for public sector bodies.

The **Public Works Loan Board** (PWLB) provides loans to local authorities for capital projects, often with interest rates below those of other schemes. While the members of the PWLB (the Public Works Loans Commissioners)

were abolished in 2020, the PWLB is still available, and managed through the UK Debt Management Office, on behalf of HM Treasury.

The Council is benefitting from income from the **Feed-In Tariffs** (FITs), selling electricity to the grid that is generated by council-owned renewable energy developments, primarily roof mounted solar PV. FITs provide an above-market price for electricity delivered to the grid to promote investment in renewable electricity. In FY 2021/22, RCTCBC received over £122 thousand from FITs payments. The FITs scheme is now closed to new entrants, but some newer PV systems are registered for the Smart Export Guarantee (SEG) payments, if they produce surplus electricity.

In 2022, RCTCBC secured funding via the **Peatlands Development Grant**, launched by Natural Resources Wales, to enable the development of costed restoration projects of Council-owned peatland. The funding has enabled RCTCBC to identify a significant Council-owned peatland as a potential site for future restoration works to maximise its environmental impact.

Funding for electric vehicles through the **Plug-in grant for cars** is nearing the end as the Government's focus moves to improving electric vehicle charging by expanding the public chargepoint network. As electric taxis, vans, trucks, motorcycles and wheelchair accessible vehicles become available, funding may be available for RCT through **Welsh Government's EV grants**.

For FY 2022/23, RCTCBC received an EV Infrastructure Grant of £300k from the Welsh Local Government Association to facilitate fleet charging. In addition to this, RCTCBC have secured both capital and revenue funding as part of the **ULEV Transformation Fund**, to facilitate the development of public, staff and visitor electric vehicle charging at key Council sites across the County Borough.

Alternatively, the **Workplace Charging Scheme (WCS)**, run by the Office for Zero Emission Vehicles (OZEV), is available for public sector organisations across the UK, providing up to 75% of the cost of purchase and installation of electric vehicle chargers.

The **On-Street Residential Chargepoint Scheme (ORCS)** is available to UK local authorities and provides funding towards the capital costs of installing public charging infrastructure for residents without private parking. It supports installations both on-street and in local authority-owned residential car parks.

The **Renewable Heat Incentive (RHI)**, which provided funding for renewable heat technologies for homes, businesses, public sector and non-profit organisations, is no longer available. The non-domestic RHI scheme closed to new applicants in 2021, followed by the domestic scheme in March 2022. RCTCBC still have one application registered for the RHI scheme – Taff’s Well Thermal Spring Project.

In place of the RHI for smaller schemes the **Boiler Upgrade Scheme** was launched in Spring of 2022 and will run until 2025. The scheme provides funding for domestic and small non-domestic properties in England and Wales for heat pumps and biomass boilers. The grants are not available for social housing but may be applicable to some of the Council's smaller buildings.

The Welsh Government, through the Energy Service, is aiming to stimulate the uptake of heat pumps by providing the **Low Carbon Heat Development Grant** (Sept 2022). RCTCBC successfully secured funding from this grant in December 2022 to support the development to RIBA Stage 3 for the design of low carbon heat solutions at several Council buildings.

The **Sustainable Communities for Learning** programme (previously **21st Century Schools**) is a collaboration between the Welsh Government and local councils in Wales. It is a significant, long-term and strategic capital investment programme with the aim of creating a generation of 21st Century Schools in Wales, improving amongst other goals, the energy efficiency of buildings used for schools.

Existing maintenance budgets could also be used for some of the energy efficiency works proposed, bringing forward the timing of spend to allow savings to be seen quicker going forwards. RCTCBC has their **own Invest to Save scheme** where money saved through lower running costs is reinvested in new energy efficiency schemes, and a budget for **Carbon Reduction Programme** works. Since 2009, RCTCBC have invested almost £10.5 million in their Carbon Reduction Programme, equating to emissions savings of almost 6,000 tCO_{2e}.

Local community groups could be another source of funding for projects run jointly with the council and local groups. This would also help RCT contribute to Welsh Government’s aim for locally owned renewable energy schemes.

Implementation and Routes to market – procurement, frameworks

With many of the specific low carbon technologies, there are particular procurement frameworks available to allow the council to find the best providers for the projects.

Energy Services Companies and frameworks such as Re:fit are another way to procure a service instead of project managing the purchase and installation of several technologies.

Staff training and engagement

RCTCBC is working to develop staff awareness, knowledge, skills and expertise in climate change and carbon reduction, to enable the Council to meet its targets and respond to the Welsh Government's declared Climate and Nature emergencies. The Council is leading by example in encouraging staff to develop low carbon behaviours.

Via its **online platforms**, the Council already produces regular content to engage and inform RCT county borough residents of recent developments in the council's environmental strategy. RCTCBC has effective communications platforms like the '**Let's Talk**' website which allows members of the public to share their thoughts and ideas on RCT's climate change strategies and the online '**Newsroom**' with recent events in the local authority. The dedicated **climate change page** on its website has a countdown to 2030, outlining the innovations taking place in RCT to tackle climate change.

Within the council, many schemes are already in place to engage with staff on environmental issues. For instance, the '**Green Space**' channels on Microsoft Teams provide a collaborative platform for a staff forum on a variety of sustainability-related topics. RCTCBC has also hosted virtual **net zero events** on subjects including the workplace, lifestyle, and commuting.

Council staff from all departments and levels of seniority may also be members of the **Climate Change Working Group** (CCWG) and subgroups. The aim of these groups is to ensure that the council is meeting its targets to reduce its environmental impact. The subgroups, which meet every two months, tackle areas such as communications and engagement, youth participation, and the food system.

Training on environmental topics is being developed to engage staff throughout their employment. First, new starters will have a presentation as part of their induction to provide a general overview and to show the council's commitment to tackling climate and nature emergencies. Following the induction video, a **climate change e-learning package** developed with assistance from Cynnal Cymru is due to be piloted in 2023.

Finally, the **climate change engagement plan** currently in development outlines initiatives to further improve staff engagement and promote environmentally responsible behaviour both within the council workforce and the wider resident population. This includes regular themed newsletters, competitions (e.g., Organic September), promotions on the staff intranet, and friendly challenges.

The Council are continuously developing a **Carbon Footprint Dashboard** to measure council performance against metrics which are aligned to Welsh Government Net Zero Reporting. The dashboard visualises the route to net zero with a line graph and will be available on the intranet for council employees to view.

The council has also implemented initiatives like the '**Green Car Scheme**' and '**Cycle 2 Work**' which will help to reduce financial barriers for staff in reducing their personal carbon footprints and making more environmental choices. These initiatives can be supported by installing enabling infrastructure like chargers, bike storage and changing facilities at council sites.

One area identified for improvement is increasing the involvement of managers and councillors with staff engagement activities. For council staff, having **visible senior buy-in** adds credibility and momentum to the council's commitments. Highlighting the financial benefits of decarbonisation and the political benefits of being seen to take decisive

action on climate change could be ways to increase the engagement of more senior decision-makers and councillors.

6. Governance approach

6.1. Management and responsibility

Ongoing delivery of the strategy, management and updating of the Action Plan, and monitoring, reporting and evaluation of impacts are key to achieving the net zero ambitions for the Council.

Roles and responsibilities

As referenced in the Climate Change Strategy and our Business Plan, decarbonisation is a hugely important area of focus. As such, the Chief Executive will take ultimate responsibility for the organisation's approach to decarbonisation.

The **Chief Executive** will be responsible for putting in place suitable roles and responsibilities to ensure that decarbonisation is managed and considered throughout the organisation, and that suppliers to the Council are working towards decarbonising their own operations.

The **Climate Change Cabinet Member** will have executive responsibility for reporting carbon emissions to Welsh Government. The **Climate Change Cabinet Sub-Committee** will sit under this role and develop actions to reduce carbon emissions.

The **Director of Finance and Digital Services** will be responsible for allocating and managing project finances in relation to low carbon heating, energy efficiency, ultra-low emission vehicles, renewables and related projects.

The **Procurement team** has an essential role in helping the Council decarbonise the purchasing of goods and services. Whilst not directly

involved in all purchases, the Procurement team set the Council policy for all departments to follow in dealings with suppliers.

The **Director of Human Resources** will take responsibility for actions on the cycle to work scheme and its promotion, reducing emissions from business travel and commuting and making staff aware of resources available to help them lower their carbon emissions whilst at work.

The **Director of Education** will be responsible for investigating options for carbon friendly meals in schools, and working with the Corporate Estates team to improve energy efficiency within school buildings.

The **Director of Frontline Services** will have responsibility for implementing actions to change the council's vehicles to low emission vehicles.

The **Director of Corporate Estates** will be responsible for developing and implementing plans to improve the energy efficiency and quantity of low carbon heating schemes within the Council's buildings, including building integrated renewables. They will also work to install large scale renewable generation schemes such as ground mounted solar and wind farms.

The **Director of Corporate Estates**, the **Energy & Carbon Reduction team**, **Estates Managers and maintenance teams** will ensure carbon emissions are considered as a lifecycle approach in all aspects of work related to buildings and properties owned and managed by the Council.

The **Director of Prosperity & Development** will ensure that the planning and development functions within the council prioritise activities that support the council's decarbonisation aims, including land use, management and protection of biodiversity.

The **Director of Democratic Services & Communications** will support this decarbonisation strategy through their communications strategy, working to increase staff engagement.

The **Director of Social Services** will work to promote decarbonisation activities and ways of working across social services.

All staff will understand the ambition of RCTCBC to achieve Net Zero emissions by 2030 and will understand how they can carry out their role with due consideration of their environmental impacts.

Reporting

An annual Carbon Report will be in line with the Welsh Government guidance for the Net Zero Reporting. This will be reported to the Senior Leadership Team / Climate Change Cabinet Sub-Committee as appropriate in order to track our performance against the net zero 2030 ambition.

Stakeholder engagement

It is important to focus on the actions required by staff across the Council. Whilst departments have specific areas of responsibility, it is not solely the responsibility of the energy team to reduce energy use or the procurement team to purchase low carbon goods and services.

The Climate Change Engagement Plan demonstrates the overarching engagement required by including not just the council leaders and staff but the wider public across the county borough.

Management, reporting and updating of this document

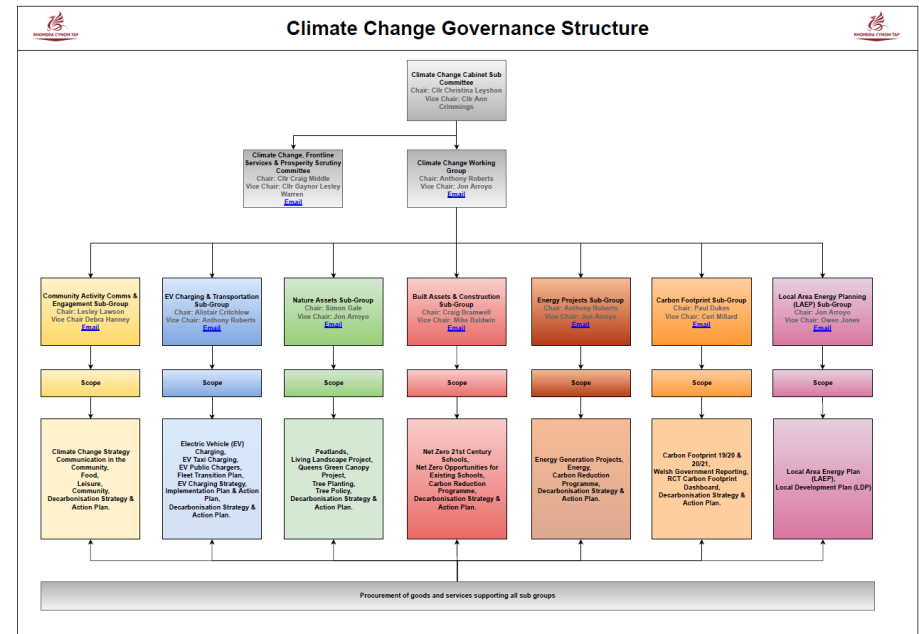
This Action Plan is intended to be a live document integrated into management information to track decarbonisation progress. Revisions to

finances and project timescales can also be included in the updated plan, and improvements made to the dissemination of information, as required.

This Decarbonisation Strategy will undergo a review process in 2025 to re-assess our plans and proposed actions. This review will enable consideration to be given to the technological advancements which assist decarbonisation.

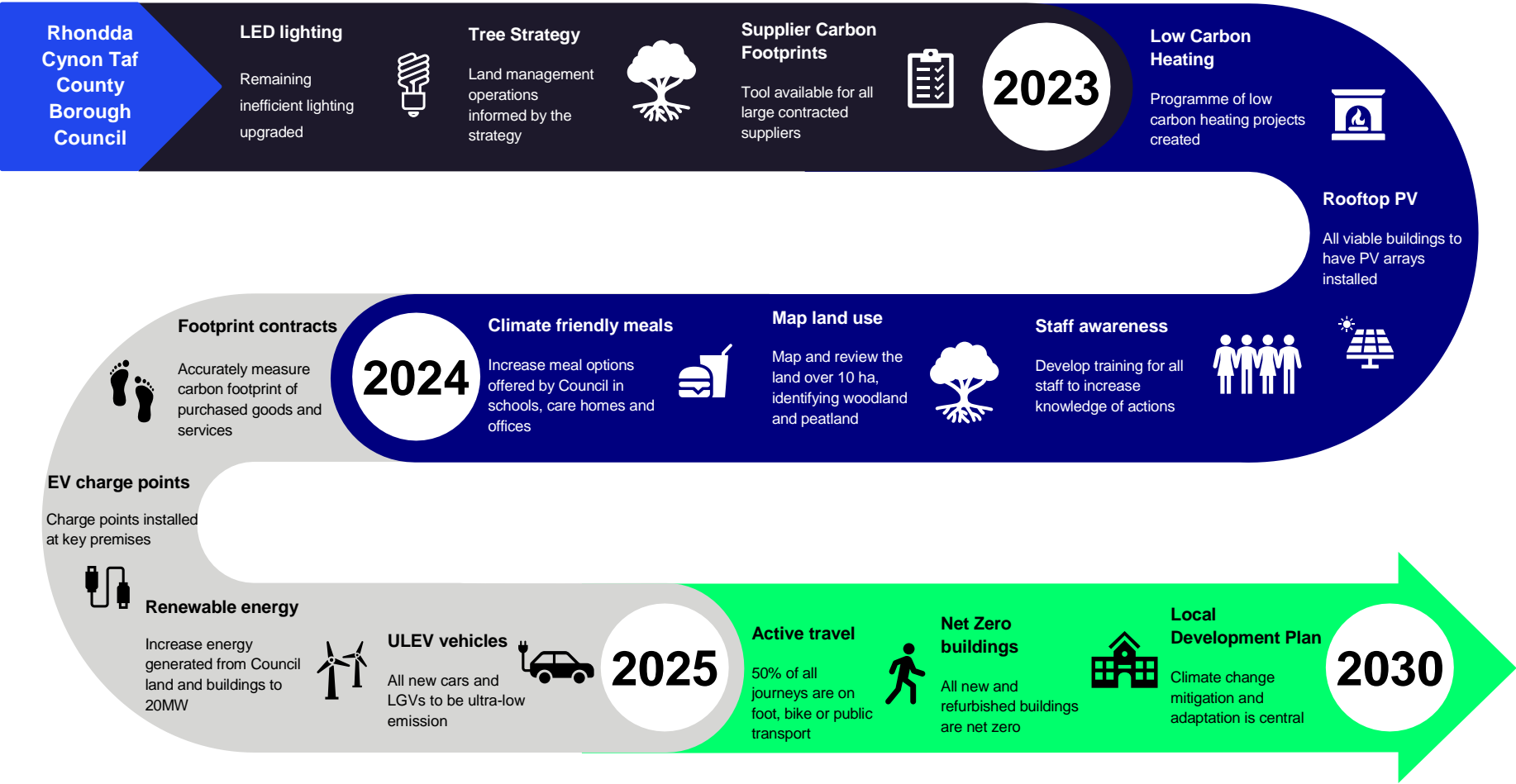
Climate Change Cabinet Sub-Committee Structure

There are seven sub-groups each with a particular focus on an element of decarbonisation and climate change. The governance structure for climate change is already established, and shown as follows:



7. Route Map Timeline

A visual route map to communicate a summary of actions to meet net zero is shown as follows:



APPENDICES

Appendix 1: Modelling Assumptions

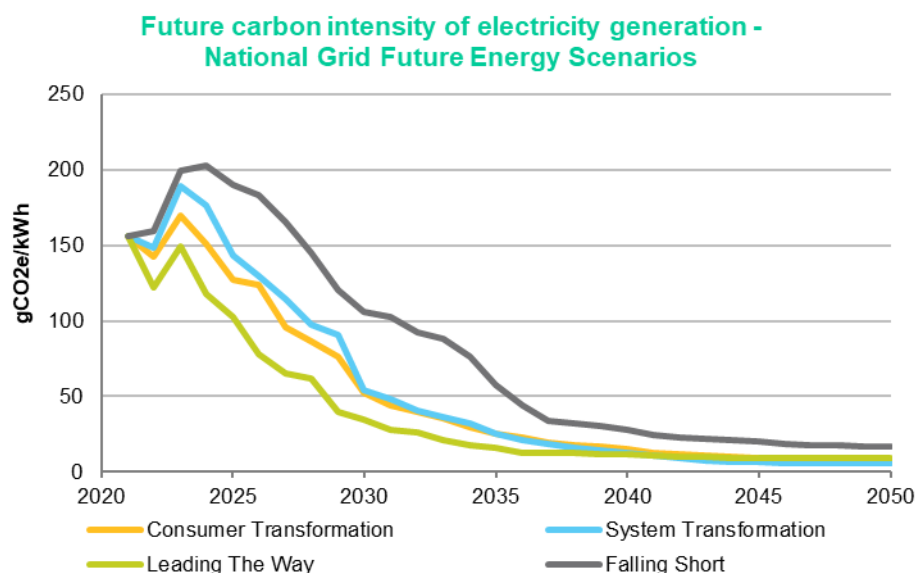
Net zero definition

The approach taken for this report is to use the net zero framework as defined by the Science Based Targets initiative (SBTi) – this aligns with the approach by Welsh Government in their Net Zero Strategic Plan. The table below shows the subtle differences between net zero and carbon neutral, which the council has been working towards previously.

Carbon neutral	Net zero
PAS2060 is the internationally recognised specification for carbon neutrality, which builds on the existing PAS 2050 environmental standard.	The Science Based Targets initiative (SBTi) has defined net zero targets for corporates.
Carbon neutrality has a minimum requirement of covering Scope 1 & 2 emissions, with Scope 3 encouraged but not mandatory.	The boundary of a net zero target includes global scope 1, 2 and 3 emissions of the organisation.
There is no requirement for a company to reduce its emissions on a certain trajectory in order to be carbon neutral.	To be net zero, an organisation must be reducing its emissions along a pathway that limits warming to 1.5°C with no or limited overshoot.
A carbon neutral footprint is one where the sum of the greenhouse gas emissions (CO ₂ e) produced is offset by natural carbon sinks and/or purchased carbon credits.	For net zero, the criteria are stricter to offset the remaining emissions; an organisation must purchase greenhouse gas removals that result in permanent carbon sequestration from the atmosphere.
	At least a 90% reduction in emissions, which aligns with the SBTi requirements for net zero.

Grid electricity

The carbon intensity of grid electricity has been falling due to the removal of coal-fired power stations, with the ramping up of renewable energy generation feeding into the grid further lowering carbon intensity. In the past decade, CO₂ intensity has dropped by 65% from 529 gCO₂/kWh in 2013 to 188 gCO₂/kWh in 2021.



The National Grid ESO Future Energy Scenarios (FES 2022) outline four different, credible pathways for the future of energy between now and 2050. The RCTCBC Action Plan has been modelled against the Falling Short scenario – this provides the most conservative pathway the Council pathway.

Based on extensive stakeholder engagement, research and modelling, each scenario considers how much energy we might need; where it could come from; and how we maintain a system that is reliable. The four scenarios are shown in the figure below. Negative emissions from bioenergy and carbon capture and storage (BECCS) have been excluded as the viability of these technologies on a commercial scale is still uncertain.

Falling Short, previously named Steady Progression, assumes non-compliance with the UK Net Zero 2050 emissions target, due to low levels of decarbonisation and societal change. Leading the Way has very high levels of decarbonisation and societal change. Consumers adopt new technologies rapidly, and a mix of solutions is developed. This scenario aims for the “fastest credible” decarbonisation pathway. UK Net Zero is met by 2047.

System Transformation and Consumer Transformation both have high levels of decarbonisation and UK Net Zero is met by 2050. Larger, more centralised solutions are developed and the highest levels of hydrogen deployment are modelled in System Transformation. High levels of societal change with consumers adopting new technologies rapidly such as electrification of domestic heat and more decentralised solutions are developed in Consumer Transformation.

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Appendix 3: Carbon Reduction Initiatives carbon saving assumptions

Buildings

Ref	Action	Carbon saving assumptions	Cost assumptions
B01	Upgrade the remaining 20% of lighting to LED	189,023m ² shown as no LED in data request. Savings of 5.5W/m ² , and assuming 2250hrs pa. By floor area 36% of LED is required.	
B02	Create a pipeline for low carbon heat projects, prioritising LPG-fired, failing and inefficient boilers, and leased buildings	No associated/quantifiable saving	
B03	Work up proposals for low carbon heat projects to install in 2023/24 as further funding becomes available. Focus on high carbon emitters and sites with existing underfloor heating.	Phase 1 LCH - 3x primary, 1 high, pool. Primary 100,000kWh, Secondary 1m kWh, Pool 1.2m kWh gas. 80% boiler eff, COP 3.	£2000/kW installed, kWh / 2500hrs to estimate kW
B04	Install low carbon heat projects	Phase 3 LCH - LPG sites to heat pumps, and 75% of remaining gas sites, at 80% heat pump	£2000/kW installed, kWh / 2500hrs to estimate kW
B05	Write a policy outlining the 'whole building' approach – look at insulation improvements when carrying out other works, fabric first, following CIBSE AM17 best practice for heat pumps	No associated/quantifiable saving	
B06	Carry out rooftop solar PV screening for all viable remaining buildings, including leased buildings, and create a pipeline of works	No associated/quantifiable saving	
B07	Install roof mounted solar on all viable buildings, including all schools	1245kW to be installed, based on 15kW at primary, 30kW secondary. 1000kWh/kW installed	1200£/kW
B08	Re-roofing projects to consider installing solar mounts on appropriately orientated roofs, ready for PV install at a later date	No associated/quantifiable saving	
B09	Optimise property portfolio by reducing the number of Council-owned or leased buildings, as more staff move to hybrid working	10% of floor area to be closed. Increase home working by 10%, reduce commuting by 10%.	
B10	80% of the energy used at our Bryn Pica Materials Recycling Facility will come from renewable sources by 2025	200kW, 186,337kWh generation from WGES report	1200£/kW

Ref	Action	Carbon saving assumptions	Cost assumptions
B11	Work with third sector organisations to ensure the sustainability of community facilities/venues in RCTCBC (EPC C by 2025), reduce the impact of rising energy prices and improve energy efficiency. This includes Council buildings leased to third sector groups.	No associated/quantifiable saving	
B12	Provide training for Building Managers - building on the Energy Policy and previous guidance given to Building Managers	2% saving from better control of energy use	
B13	Specific training for staff on how to operate and work in their buildings efficiently e.g. how to request temperature changes, policy of no additional fans / heaters etc	3% saving from better building control and spotting faults/maintenance issues	
B14	By 2030, all buildings will have an energy efficiency equivalent to DEC rating of C		
B15	By 2030, rooftop PV will be installed on all suitable buildings	1080kW to be installed, based on 30kW leisure centres, 15kW other. 1000kWh/kW installed	
B16	Further develop the use of hydrogen for fuel cells in Council buildings.	No associated/quantifiable saving	
B17	Work with third sector organisations to ensure the sustainability of community facilities/venues in RCTCBC (EPC B by 2028), reduce the impact of rising energy prices and improve energy efficiency. This includes Council buildings leased to third sector groups.	No associated/quantifiable saving	
B18	Complete all new builds and refurbishments for the Council's building estate in line with net zero standards by 2030, through the Sustainable Communities for Learning programme, to target low carbon heating systems		

Transport

Ref	Action	Carbon saving assumptions	Cost assumptions
T01	Implement our Electric Vehicle Charging (EVC) Strategy and supporting Implementation Plan, that will accommodate the transport needs of existing and future electric vehicle users.	Increase electricity consumption due to charging? Are there any figures in these documents?	

Ref	Action	Carbon saving assumptions	Cost assumptions
T02	In line with Wales' target for public sector organisations, we will aim for all our new cars and Light Goods Vehicles to be ultra-low emissions vehicles by 2025	3% diesel is for equipment, 100% gas oil is for equipment	
T03	Implement the Council's Fleet Transition Plan including the promotion and prioritisation of electric vehicles, with appropriate training for staff.	No associated/quantifiable saving	
T04	Trial further electric vehicles for different vehicle types.	No associated/quantifiable saving	
T05	Improve data collection for non-expensed forms of travel like walking or cycling	No associated/quantifiable saving	
T06	With the aim of achieving 25% of journeys on foot, bike or public transport by 2025, significantly reduce staff travel by car for commuting and business travel by continuing to maximise the use of technology for route planning and encouraging active travel and greater use of public transport.	Reduce all business travel by a quarter. Assume half of the reduced miles will be moved to active travel (walking and cycling), half on public transport so increase bus and rail travel proportionately	
T07	Develop potential for staff to walk / cycle to visits (social care) by zoning patches of care, and not only employing those who can drive	No associated/quantifiable saving	
T08	Encourage staff to commute by active travel and public transport. Cycle 2 Work scheme to be open year-round and more heavily promoted. Install enabling infrastructure (bike racks, showers, lockers). Continue to provide train/bus ticket loan scheme.	No associated/quantifiable saving	
T09	Incentivise low carbon transport with cycle/running clubs, friendly competition to promote active travel and apps like Strava. Use existing platforms like the staff Green Space on Microsoft Teams to promote progress and achievements.	No associated/quantifiable saving	
T10	Link the Safe Walking and Cycling Routes established by schools to Council staff and the wider community	No associated/quantifiable saving	
T11	Ensure that the transport services we commission, including Home to School, are zero or low carbon where possible	In S06	
T12	Provide training to educate frequent drivers on how to drive their own and fleet ICE (internal combustion engine) cars in a more fuel-efficient way	3% reduction in fleet and business travel in petrol and diesel vehicles	
T13	Investigate the potential for incorporating hydrogen vehicles into the Council fleet as they come onto the market, for example hydrogen Refuse Collection Vehicles	Remove 4% of diesel used for RCVs	

Ref	Action	Carbon saving assumptions	Cost assumptions
T14	In line with Wales' target for public sector organisations, we will aim for all our Heavy Goods Vehicles to be ultra-low emissions vehicles by 2030	Remove all diesel used for HGVs (936,990 litres for HGV fleet (60%))	
T15	By 2030, we will ensure that over 50% of all journeys are taken by public transport, bike or walking, or, where this is not possible, using electric vehicles.	Reduce all business travel by another quarter. Assume half of the reduced miles will be moved to active travel (walking and cycling), half on public transport so increase bus and rail travel proportionately	
T16	Over the next 5 years, make electric pool vehicles, and corresponding charging points, available at different appropriate Council locations e.g. depots and main offices	3% diesel is for equipment, 100% gas oil is for equipment	

Supply Chain

Ref	Action	Carbon saving assumptions	Cost assumptions
S01	Produce a paper outlining the options for suppliers to achieve net zero certification, in line with RCTCBC's tender requirements, and distribute it to suppliers	No associated/quantifiable saving	
S02	All procurement lead contracts have already been revised to include questions about suppliers' ability to calculate their carbon emissions. Relevant contract clauses have also been added to strengthen the Council's position. Work to roll these out in all upcoming contracts e.g., Supported Living and Home Care contracts, Transport contract	No associated/quantifiable saving	
S03	Identify departments who procure goods and services with the highest carbon impact and prioritise supporting the procurement approach in upcoming contracts	No associated/quantifiable saving	
S04	Request all contracted suppliers complete carbon footprint tool annually, and support them to do so by developing training	No associated/quantifiable saving	
S05	Support smaller suppliers to use the carbon footprint tool to take them along with RCTCBC on the decarbonisation journey	No associated/quantifiable saving	

Ref	Action	Carbon saving assumptions	Cost assumptions
S06	Specify low carbon travel/vehicles for those contracts where transport is a large contributor e.g., delivery services, transport services (Stagecoach etc), social care services, school transport	25% of transport services will be net zero by 2030. Reduce spend on Postal Services (£88k), Waste collection (£593k), Food and Beverage Serving (£4.2m), Motor Vehicles (£10.6m), Road Transport (£21.2m), Social Care (£76.3m) by 25% to show a decrease	May cost an additional 10% in spend to procure EV services etc. if premium applied
S07	Establish ambitious energy efficiency standards, that go beyond the minimum mandatory Government Buying Standards, when purchasing white goods, appliances and ICT equipment and share with all staff across the council	Reduced operating emissions from products, leading to reduced footprint of 3%. Reduce spend by 3%	May cost an additional 3% in spend to procure more energy efficient products if premium applied
S08	Increase the number of climate friendly meal options offered by the Council in our schools, care homes, offices and offered by our community meals service from a baseline that will be established in 2022/23.	Reduced emissions from food by 2025, (shown in the model by a 25% reduction in food cost £4.2m)	May reduce costs by 5% if purchasing less meat, dairy etc.
S09	Using WRAP guidelines for measuring emissions from food and drink, calculate an accurate carbon footprint for food provided by the Council using higher resolution specific emissions factors. Establish priorities for reducing the carbon footprint and environmental impact of food options.	No associated/quantifiable saving	
S10	When demolishing or refurbishing sites, look to establish a holding centre to store reusable materials. Use repurposed building materials from major projects e.g. timber.	Reducing emissions from construction by 2025 (shown in the model by reducing spend £66.6m by 5%)	Reduce spend on construction by 5% as reusing existing materials
S11	By 2026, 50% of our suppliers will be net zero certified	Reducing emissions by 2026 from all spend not included in travel-related spend (£102,915k) by 50%	Could increase costs by 10%
S12	Understand the carbon impact of all major purchasing decisions	No associated/quantifiable saving	
S13	Score tender responses based on suppliers' carbon footprints and reduction plans	No associated/quantifiable saving	
S14	Accurately measure the carbon footprint of all purchased goods and services	No associated/quantifiable saving	

Land Use

Ref	Action	Carbon saving assumptions	Cost assumptions
L01	Understand the sequestration potential of land in our ownership	No associated/quantifiable saving	
L02	Identify an accurate baseline of RCT woodland cover to inform future management by - Producing a whole RCT woodland cover map by 2024, including identification of all Council-owned woodland - Identifying the rate of natural woodland regeneration on Council-owned woodland sites over 10 hectares in size	No associated/quantifiable saving	
L03	By 2025, set a target for sustainably increasing woodland cover through The Natural Tree Regeneration Project	No associated/quantifiable saving	
L04	Draft Tree Strategy and Policy consultation to be reviewed, improved, approved, and then implemented into a working document	No associated/quantifiable saving	
L05	Work with partners to map and review Council-owned land to produce a long-term plan to optimise diverse land management, including identifying sites for natural woodland regeneration, sites suitable for food production, sites for peatland restoration, and sites where tree planting is appropriate.	No associated/quantifiable saving	
L06	Put climate change at the centre of our Local Development Plan, which is currently being renewed. This includes protecting RCT uplands, important habitats and peatbogs.	No associated/quantifiable saving	
L07	Encourage community gardening programmes, growing food locally and the potential for recruiting adults with complex needs to work in the community gardens and paying them a fair wage. Explore the suitability of parks and other Council land to support this.	No associated/quantifiable saving	
L08	Maximise carbon sequestration across Council-owned land	No associated/quantifiable saving	
L09	Rewet and appropriately manage peatbogs in Council ownership to restore biodiversity and maximise carbon sequestration.	No associated/quantifiable saving	

Ref	Action	Carbon saving assumptions	Cost assumptions
L10	Where appropriate, use planning conditions to deliver habitat protection and restoration as part of new developments. Engage developers through Supplementary Planning Guidance for environmentally friendlier design, which incorporates and enhances the natural features existing on greenfield sites.	No associated/quantifiable saving	
L11	Encourage new and better management of S106 sites with long term management goals in mind, protecting existing trees, hedges and green spaces	No associated/quantifiable saving	
L12	Contribute to the Queen's Green Canopy initiative and the National Forest for Wales through sustainable tree planting by investing £200,000 per annum until 2029	No associated/quantifiable saving	
L13	Attract private sector investment to increase areas of woodland regeneration and creation, ensuring that we protect and store carbon and reduce the risk of flooding	No associated/quantifiable saving	

Renewables

Ref	Action	Carbon saving assumptions	Cost assumptions
R01	Increase local renewable energy generated from Council land or buildings from 2021/22 baseline (2MW) to 20MW by 2025.	Includes totals from building integrated (roof mounted PV in B7)	
R02	Install solar schemes: - 200kw solar scheme at Bryn Pica - Land-based solar array	200kWp solar for Bryn Pica (covered in B10) Land based solar (in progress) 5MW Another land based Solar 5MW	
R03	Install wind schemes: - wind turbines	Potential for: Wind farm 6MW	
R04	Explore community cooperative energy projects to provide inexpensive, green energy for residents and businesses to purchase, including energy for electric vehicle recharging on publicly owned land.	No associated/quantifiable saving	
R05	Explore potential options to utilise existing energy sources including: - Geothermal energy from abandoned coal mines - Hydro electric projects	No associated/quantifiable saving	

Ref	Action	Carbon saving assumptions	Cost assumptions
R06	Use public sector land for green energy generation (solar, wind and hydro). Progress wind, hydro and solar energy schemes to reduce the cost of meeting our energy needs and generate income, whilst reducing our carbon footprint.	No associated/quantifiable saving	
R07	Work with partners including a local health board, Natural Resources Wales, and neighbouring authorities to maximise the collective resources to generate green energy across the region.	No associated/quantifiable saving	

Appendix 4: Alignment with Think Climate strategy

The table below indicates how this report aligns with, and builds on, RCTCBC's Think Climate Strategy: *Making Rhondda Cynon Taf Carbon Neutral by 2030*. The actions in the table below have been inspired by, or drawn directly from, the Climate Strategy. These actions are highlighted in this report with an asterisk.

Buildings		Transport		Supply chain		Land use		Renewables	
Action	Page in Climate Strategy	Action	Page in Climate Strategy	Action	Page in Climate Strategy	Action	Page in Climate Strategy	Action	Page in Climate Strategy
B2	page 5	T1	page 9	S1	page 5	L1	page 5	R1	page 7
B3	page 5	T2	page 5	S9	page 17	L2	page 10	R3	page 7
B6	page 5	T5	page 9			L3	page 10	R4	page 7
B7	page 5					L5	page 10		
B10	page 8					L7	page 11		
B11	page 16								

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