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1. Context

Recent reports by the Intergovernmental Panel on Climate Change have painted a bleak picture of the present, with potentially devastating effects in the future - 'now or never' if world is to stave off climate disaster (April 2022).

2. Introduction

The County Council approved a Net Zero Carbon (NZC) Plan on 12th February 2020.

Action NZC-28 of this Plan requires performance reports on progress towards becoming a net zero carbon local authority by 2030 to be published annually.

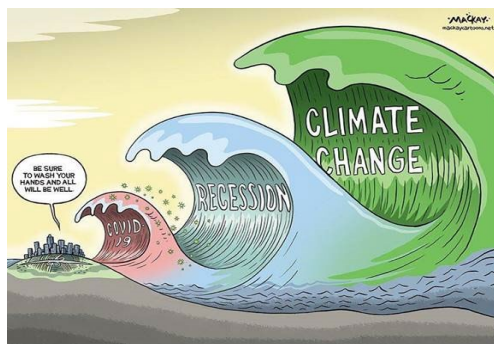
The first Progress Report (March 2021) reflected on our 2019/20 carbon emissions.

This second Progress Report reflects on our 2020/21 carbon emissions and should be read in conjunction with the earlier NZC documents.

Much has happened in the last twelve months in relation to climate change, notably the UN Climate Change Conference (COP26) in Glasgow (November 2021), plus the publication of numerous guidance documents, including:

- Welsh Public Sector Net Zero Carbon Reporting Guide (May 2021)
- Net zero carbon status by 2030: A route map for decarbonisation across the Welsh public sector (July 2021)
- Welsh Local Government Decarbonisation Planning: Review (September 2021)
- Net Zero Wales Carbon Budget 2 (2021-25) (October 2021)

Audit Wales also published Public Sector Readiness for Net Zero Carbon by 2030 (July 2022) based on a baseline review completed by all public bodies pre-Christmas 2021.



COVID-19 has continued to present many challenges since March 2020, which have been further exasperated by Brexit, escalating energy costs, and war in the Ukraine. Notwithstanding this, considerable progress has been made on delivering the actions in our NZC Plan.

Our NZC Plan mirrors the Notice of Motion unanimously agreed by County Council on 20th February 2019 to declare a Climate Emergency and to become a NZC local authority by 2030.

The Plan is a living document, and whilst we have consciously adopted a pragmatic approach that focuses on measurable, operational issues within our control, it also recognises some of the wider actions that are taking place across the Council that contribute towards addressing the climate emergency.

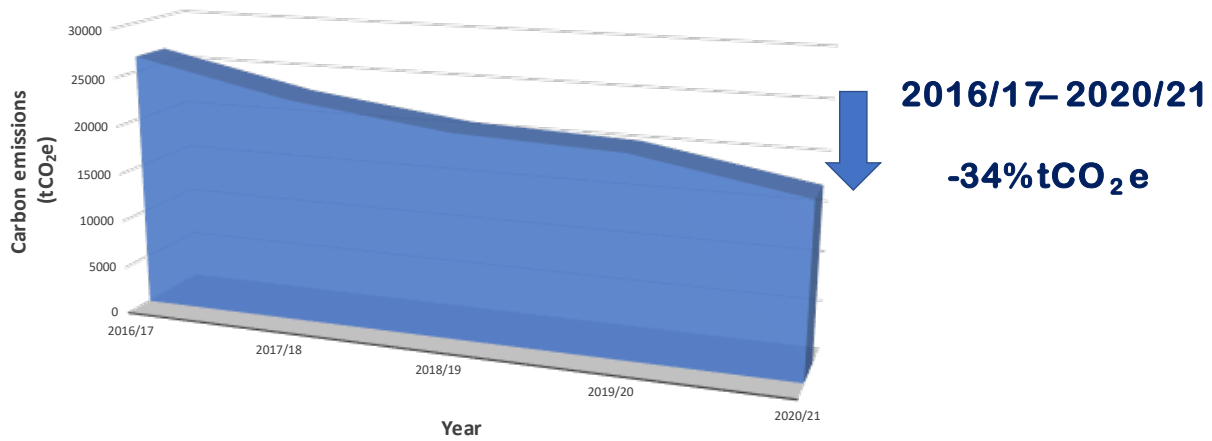
This second NZC Plan Progress Report is a comparatively focused document as we will be publishing a revised NZC Plan by 31st March 2023. This will incorporate recent NZC-related developments and guidance, plus the Nature Emergency declared by County Council on 9th February 2022 (Agenda Item 10.2).

3. Summary of Progress – Carbon Footprint

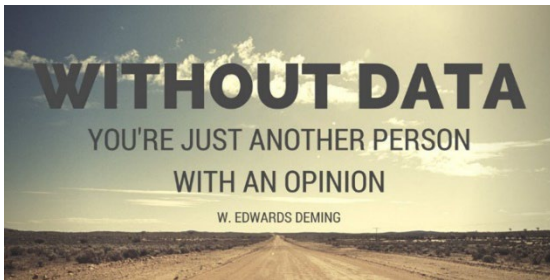
Carbon Footprint	2018/19	2019/20	2020/21	2020/21 vs 2019/20		
	Results			Progress	% change	
Non-Domestic Buildings						
Consumption (kWh)	64,857,362	66,407,242	59,808,497	-6,598,745	Improved	-9.9%
Carbon Emissions (tCO _{2e})	14,822	14,443	12,581	-1,862	Improved	-12.9%
Street Lighting						
Consumption (kWh)	4,202,381	3,925,149	3,875,843	-49,306	Improved	-1.3%
Carbon Emissions (tCO _{2e})	1,291	1,088	981	-107	Improved	-9.8%
Fleet Mileage						
Mileage (Miles)	5,293,249	5,154,668	4,427,070	-727,598	Improved	-14.1%
Diesel Used (litres)	1,434,583	1,419,336	1,267,437	-151,899	Improved	-10.7%
Carbon Emissions (tCO _{2e})	3,856	3,814	3,407	-407	Improved	-10.7%
Business Mileage						
Mileage (Miles)	3,846,615	3,971,513	2,251,986	-1,719,527	Improved	-43.3%
Carbon Emissions (tCO _{2e})	1,118	1,132	621	-511	Improved	-45.1%
TOTAL						
Consumption (kWh)	69,059,743	70,332,391	63,684,340	-6,648,051	Improved	-9.5%
Mileage (miles)	8,829,043	9,126,181	6,679,056	-2,447,125	Improved	-26.8%
Carbon Emissions (tCO _{2e})	21,087	20,477	17,590	-2,887	Improved	-14.1%

In 2020/21, our overall carbon footprint reduced by 14.1% compared to 2019/20, with all four areas showing a reduction in both consumption and carbon emissions i.e., Non-Domestic Buildings; Street Lighting; Fleet Mileage; and Business Mileage.

Whilst these reductions are in part attributable to the impact of COVID-19, the continuation of staff home working, together with changes in working practices such as an increased use of video conference facilities and online communication, should see a lasting reduction in carbon emissions in the longer term.



	2016/17	2017/18	2018/19	2019/20	2020/21	Progress	Change
						2020/21 vs 2019/20	
kWh	72,527,266	68,564,902	69,059,743	70,332,391	63,684,340	-6,648,051	-9.5%
Miles	9,313,790	9,069,875	8,829,043	9,126,181	6,679,056	-2,447,125	-26.8%
tCO ₂ e	26,542	23,143	21,087	20,477	17,590	-2,887	-14.1%



The Welsh Public Sector Net Zero Carbon Reporting Guide (May 2021) introduced a voluntary annual reporting process. This aims to provide a consistent reporting framework across the Welsh public sector to help monitor progress

towards achieving Welsh Government’s ambition for a carbon neutral public sector by 2030.

Our NZC Plan (February 2020) predates this Reporting Guide; consequently, there are differences in the reporting methodologies.

Total carbon emissions reported under our NZC Plan effectively equate to the Reporting Guide’s ‘Operational’ emissions which additionally include:

- Landfill of municipal waste;
- Well-to-Tank emissions; and,
- Water supply & treatment

Emissions	2019/20 tCO ₂ e	
	Our NZC Plan	Reporting Guide
Operational	20,477	28,547
Supply Chain		76,894
Land Use		-697
Total	20,477	104,744

Note: A Well-to-Tank emissions factor, also known as upstream or indirect emissions, is an average of all the GHG [Greenhouse Gas] emissions released into the atmosphere from the production, processing and delivery of a fuel or energy vector.

Operational emissions reporting is established, generally well understood, and measurable; whilst the reporting of Supply Chain emissions is a comparatively new, blunt instrument that is based on £ spend plus assumptions rather than accurate data. Welsh Government recognise that Supply Chain reporting is an iterative process that is currently in its relative infancy, with current reporting aimed at identifying and quantifying major spend categories so that more work can be focussed on these areas in future.

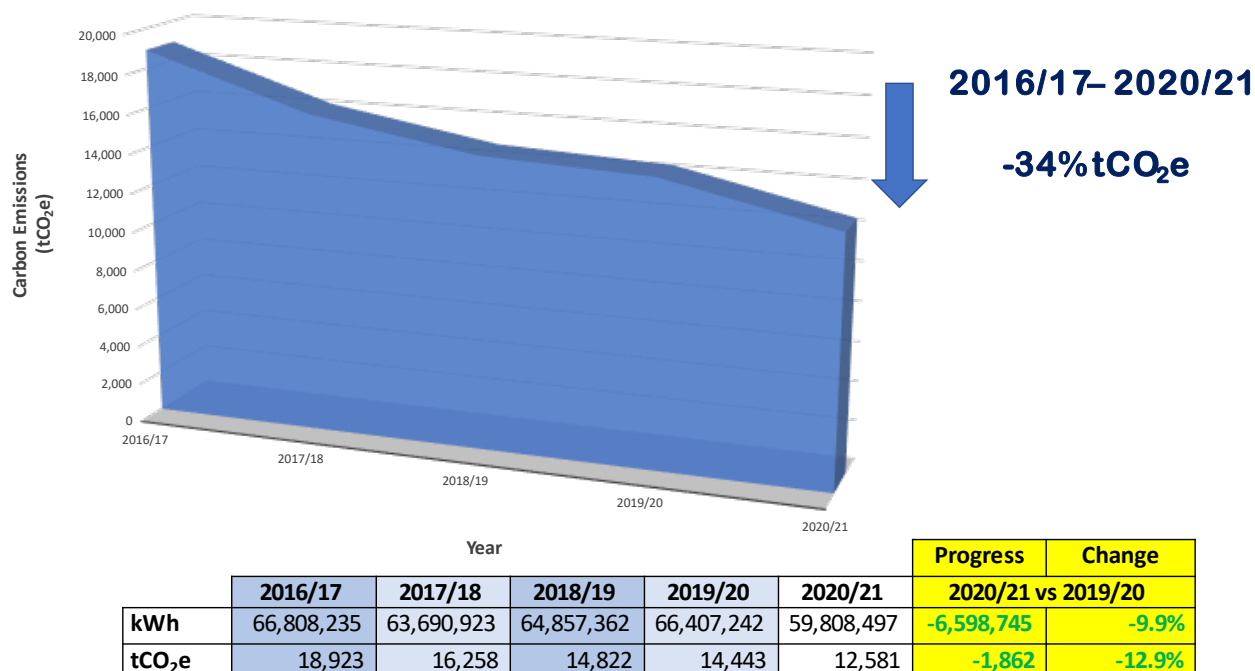
Whilst public bodies are requested to submit annual carbon reports in a prescribed format to ensure consistency, the methodology adopted by an organisation for developing and tracking its own NZC Plan is for each individual organisation to determine.

This NZC Plan Progress Report reflects on our 2020/21 carbon emissions based on the same methodologies that we have been applied in previous years to provide consistency and continuity. In future, we will:

- Report annual emissions to Welsh Government in accordance with the Reporting Guide
- Continue with the existing scope of our NZC commitment but adopt the corresponding methodologies prescribed in the Reporting Guide.

Welsh Government published a revised [public sector net zero reporting guide](#) on 21st June 2022; consequently, the figures quoted above will change as reporting methodologies are refined.

4. Carbon Footprint: Non-Domestic Buildings



Note: The performance data quoted in this document uses UK emission conversion factors issued by the Department for Business, Energy, and Industrial Strategy (BEIS) where appropriate. These emission conversion factors are published annually, for example: [Greenhouse gas reporting: conversion factors 2020](#).

Utility Consumption in Non-Domestic Buildings - 2020/21 vs 2019/20:

Utility	Consumption (kWh)			2020/21 vs 2019/20	
	2018/19	2019/20	2020/21	kWh	%
Electricity	19,984,610	19,668,100	15,444,707	-4,223,393	-21.5%
Gas	39,176,883	40,025,303	35,506,410	-4,518,893	-11.3%
Oil	3,878,728	4,576,446	4,893,784	+317,338	+6.9%
LPG	1,398,425	1,355,527	2,873,628	+1,518,101	+112.0%
Kerosene	418,716	660,249	1,089,907	+429,658	+65.1%
Biomass	0	121,615	61	-121,554	-99.9%
Total	64,857,362	66,407,242	59,808,497	-6,598,745	-9.9%

Note: Whilst our Electricity and Gas consumption is metered, our reporting for Oil, LPG and Kerosene is based on delivery dates which can distort year-on-year comparison should deliveries be near year end. This to be addressed under Action NZC-05: Extend 'smart' and sub-metering technology to ensure accurate and timely capture of energy consumption data. Also, three Oil to LPG fuel conversion projects were completed in our Re:Fit Cymru Phase 1 project (as LPG has a lower carbon emissions factor and is cheaper). Future fuel conversion projects will address the decarbonisation of heating.

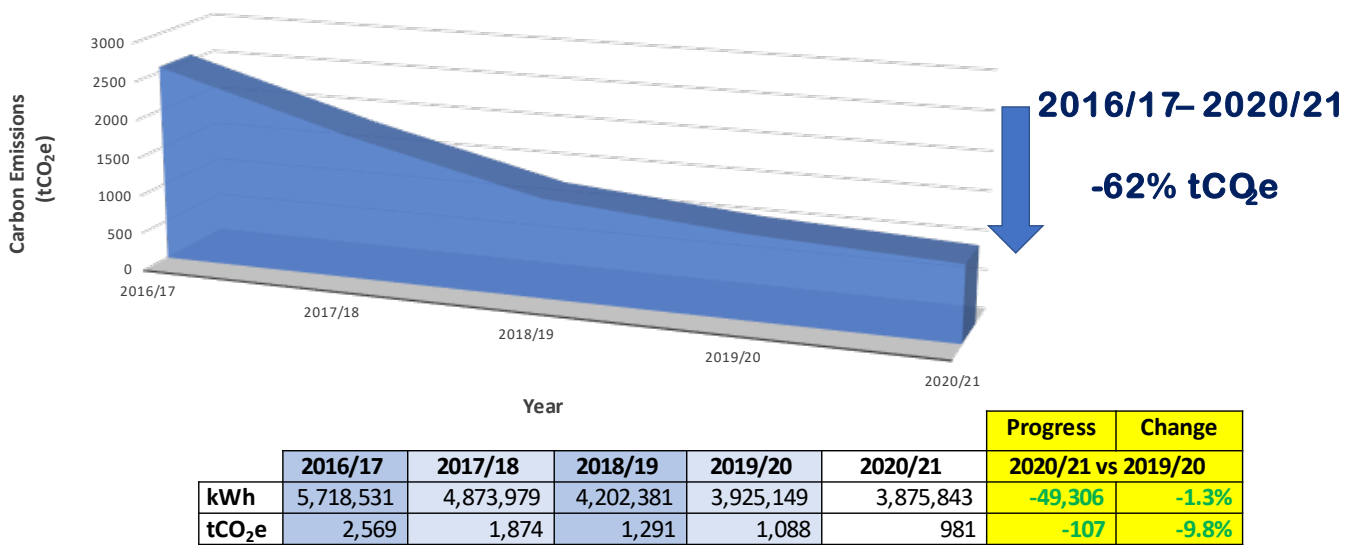
Progress against Actions

NZC-01		
Action	Lead Officer	Timescale
Deliver Re:fit Cymru (Energy Efficiency) Phase 1 project to achieve energy / carbon savings	Head of Property	Apr 2021 Apr 2022
Progress		
<p>Whilst COVID-19 delayed on-site commencement of our Phase 1 programme, works were able to commence in September 2020 with most of the work completed by 31st March 2021. The solar PV system at our Parc Dewi Sant offices was outstanding due to additional bat surveys being required to secure planning permission. Planning permission was unanimously granted in January 2022 and the works have now been completed.</p> <p>Phase 1 is projected to save £315,726 and 675 tonnes of carbon equivalent (tCO₂e) each year – these savings being guaranteed by Ameresco, our Re:Fit Cymru service provider, under an Energy Performance Contract. Working with Ameresco has allowed us to accelerate the roll-out of our energy efficiency programme in a more comprehensive manner and at a greater pace than could be achieved using limited in-house resources.</p> <p>See Carmarthenshire Net Zero Case Study Ameresco</p>		
NZC-02		
Action	Lead Officer	Timescale
Develop further phases of Re:fit Cymru (Energy Efficiency) project, or similar, to achieve accelerated energy / carbon savings	Sustainable Development Manager	Ongoing
Progress		
<p>We are currently in discussions with Ameresco, our Re:Fit Cymru service provider, to develop a new and significant larger Phase 2 project for approval in 2022/23. As many as possible of our buildings are being included in an initial scoping exercise to identify the scale of the total energy conservation measures and associated costs necessary to decarbonise our Estate. This will enable further phases to be developed more quickly.</p>		
NZC-03		
Action	Lead Officer	Timescale
Incorporate ' <u>Passivhaus</u> ' standard, where appropriate, in new building construction projects	Property Design Manager	Ongoing
Progress		
<p>We are developing a '<u>Fabric First</u>' methodology to new build construction projects to ensure a high level of energy efficiency for new facilities entering our building portfolio. This is underpinned by a commitment to incorporate the quality assured 'Passivhaus' Standard.</p> <p>The following new schools currently under construction have been designed to achieve Passivhaus Standard certification and thus deliver enhanced performance in terms of energy usage and internal environment: Gorslas Primary School; Ysgol y Castell; and, Pembrey Community Primary School</p> <p>In July 2021 confirmation was received that Ysgol Parc y Tywyn had formally been accredited as achieving the Passivhaus standard.</p> <p>Other non-educational buildings also designed and built to achieve the Passivhaus Standard are: Carmarthen Archives and Repository (completed); and, Pendine Attractor Project – Eco Hostel building (currently under construction).</p>		

NZC-04		
Action	Lead Officer	Timescale
Continually review and amend design specifications and briefs to reflect new technologies and energy efficient equipment	Property Design Manager	Ongoing
Progress		
<p>We will continue to explore solutions and methods to maximise renewable energy solutions. A further emphasis will be put on establishing optimised solutions in new buildings with calculated investment against the performance level of the building fabric and aimed to provide best value in terms of capital and operation expenditure. We will continue to explore a flexible model to best suit the needs of the Net Zero Carbon agenda on any given project.</p> <p>Examples of how renewable and low energy specifications are being continually developed and adapted include:</p> <ul style="list-style-type: none"> • All major new build projects incorporate renewable energy technologies where appropriate with solar photovoltaic (PV) installations being incorporated into many recent Modernising Education Provision 21st Century Schools projects (e.g. Ysgol Pum Heol – 12kW PV array completed January 2021; Ysgol Rhys Pritchard – 27 kW PV array completed February 2021) and new housing developments (e.g. Garreglwyd and Dylan sites). • The new housing development currently under construction at Glanmor Terrace, Burry Port includes battery storage to maximise the use of the electricity generated by the solar PV installed on each dwelling. Electric vehicle charge points are also being provided for each property. Also features Mechanical Ventilation Heat Recovery (MVHR) units in each dwelling. As part of the move towards limiting the use of fossil fuels these properties are totally electric. • Air Source Heat Pumps have been installed to provide heating at each of the flats and communal areas at Llys yr Ysgol Sheltered Housing Complex. These heat pumps replaced inefficient and expensive to run electric storage heaters at the Complex. Air Source is currently being explored on a larger scale in respect of the new development for Ysgol Heol Goffa. • Specifications for all new school developments now include for the installation of Electric Vehicle Charging Points. • LED lighting now being specified as standard. • All new solar PV systems include technology specified to enable web access to generation data that allows more detailed real-time data for the analysis of electricity generation. 		
NZC-05		
Action	Lead Officer	Timescale
Extend 'smart' and sub-metering technology to ensure accurate and timely capture of energy consumption data	Various	Ongoing
Progress		
<p>A major audit of all our electricity and gas fiscal meters has enabled the roll-out of a comprehensive programme of 'smart' meter installations. We are also doing likewise for our water meters.</p> <p>Gas Metering: <u>Day+1 Half Hourly (HH)</u> data flowing from 209 meters including all the 197 supplies at sites to be retained (100%). Complete.</p> <p>Electricity Metering: Day+ 1 HH data flowing from 256 of 574 known supplies (44.6%). Work in progress, with Western Power Distribution, our distribution network operator, currently installing meters. EDF, our electricity provider, need to action 233 (D0142) upgrades to complete the bulk of our remaining meters. This has been delayed by EDF staff absence, progress anticipated shortly.</p> <p>Water Metering: Day+1 Quarter Hourly (QH) data flowing from 4 of 336 known supplies (1.2%). Work in progress to confirm site list with Welsh Water Dwr Cymru before arranging for data loggers to be installed.</p> <p>This HH and QH data is automatically imported daily to our SystemsLink energy management software system to provide enhanced data accuracy that enables us to better identify opportunities for savings.</p>		

NZC-06		
Action	Lead Officer	Timescale
Develop appropriate carbon reduction target for the Council's non-domestic buildings as part of annual review of action plan	Sustainable Development Manager	Mar 2021
		Mar 2023
Progress		
Welsh Government were to establish Wales-wide methodologies for carbon emissions reporting by the end of 2019/20. Unfortunately, these were not published until May 2021. This delay has impacted on this Action, and other similar Actions. The Wales reporting methodologies differ from our current approach and we will be publishing a revised NZC Plan by 31 st March 2023 which will incorporate trajectories for carbon emission reductions in order to develop milestone targets.		

4.2 Carbon Footprint: Street Lighting



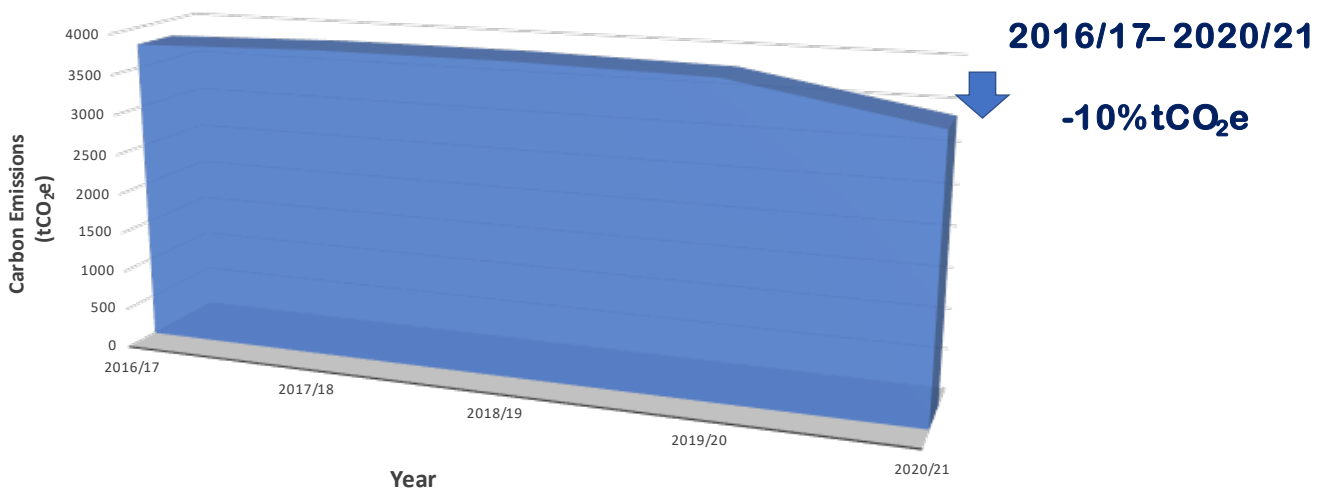
We have completed the conversion of almost 100% of our 20,000 streetlights to low energy light-emitting diode (LED) lighting, funded by the Welsh Government's interest-free Wales Funding Programme. The remainder will be converted at their end of use.

We have also completed a project to upgrade 5,000 community street lighting units to incorporate LED lighting on behalf of the town and community councils which has reduced energy consumption and improved lighting quality in local communities.

Progress against Actions

NZC-07		
Action	Lead Officer	Timescale
Develop appropriate carbon reduction target for the Council's street lighting as part of annual review of action plan	Public Lighting Engineer	Mar 2021 Mar 2023
Progress		
Welsh Government were to establish Wales-wide methodologies for carbon emissions reporting by the end of 2019/20. Unfortunately, these were not published until May 2021. This delay has impacted on this Action, and other similar Actions. The Wales reporting methodologies differ from our current approach and we will be publishing a revised NZC Plan by 31 st March 2023 which will incorporate trajectories for carbon emission reductions in order to develop milestone targets.		

4.3 Carbon Footprint: Fleet Mileage



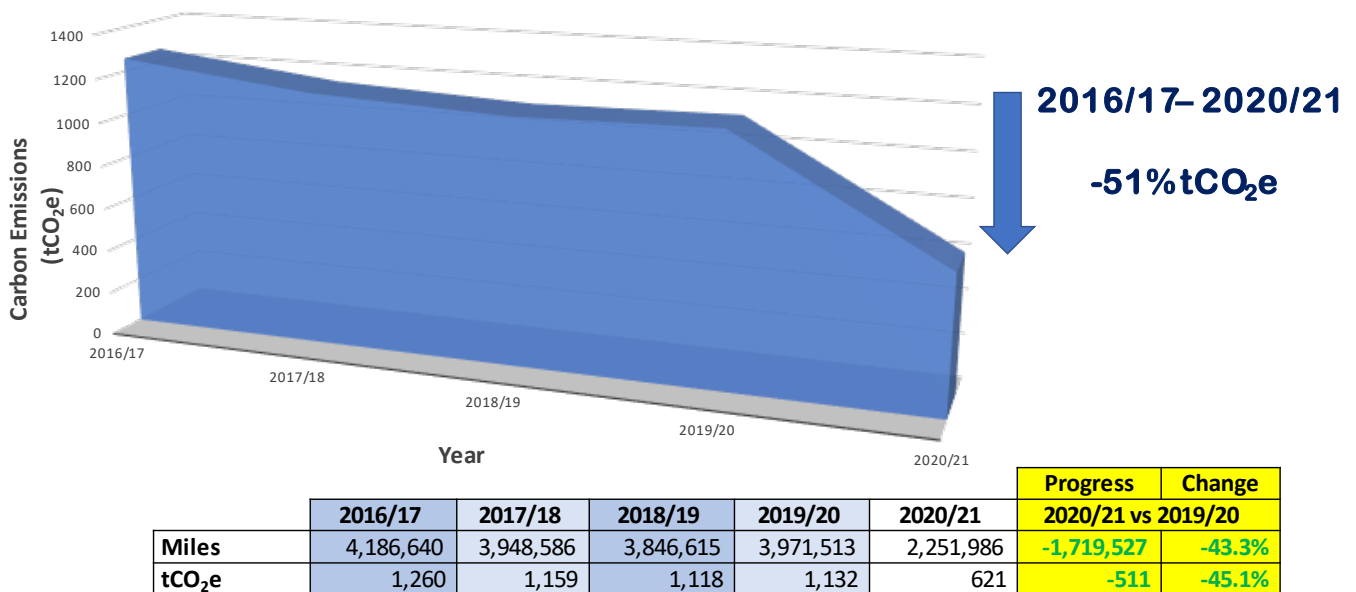
	2016/17	2017/18	2018/19	2019/20	2020/21	Progress 2020/21 vs 2019/20	Change
Miles	5,127,150	5,121,289	5,293,249	5,154,668	447,070	-727,598	-14.1%
tCO ₂ e	3,790	3,852	3,856	3,814	3,407	-407	-10.7%

Progress against Actions

NZC-08		
Action	Lead Officer	Timescale
Review the most appropriate fuel powered vehicles for each of the Council's services	Fleet Manager	Ongoing Sept 2022
Progress		
Our Fleet Strategy will set the priorities for investment, the scale of change will be determined by the current state of the market transition to low carbon technologies by vehicle type, the scale of infrastructure development required, life cost evaluation and grant funding available.		

NZC-09		
Action	Lead Officer	Timescale
Develop appropriate carbon reduction target for the Council's fleet mileage as part of annual review of action plan	Fleet Manager	Mar 2021
		Mar 2023
Progress		
Welsh Government were to establish Wales-wide methodologies for carbon emissions reporting by the end of 2019/20. Unfortunately, these were not published until May 2021. This delay has impacted on this Action, and other similar Actions. The Wales reporting methodologies differ from our current approach and we will be publishing a revised NZC Plan by 31 st March 2023 which will incorporate trajectories for carbon emission reductions in order to develop milestone targets.		

4.4 Carbon Footprint: Business Mileage

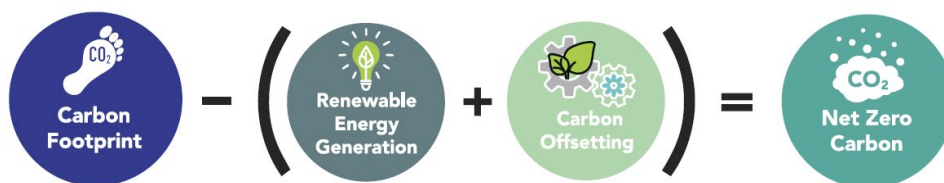


Progress against Actions

NZC-10		
Action	Lead Officer	Timescale
Undertake a review of the Council's pool cars to identify opportunities for carbon reduction	Head of Transportation and Highways	TBC Sept 2022
Progress		
Our Fleet Strategy is currently being updated and will include detail on how we move to electric vehicles in the car and light commercials sector. Electric charging infrastructure is being installed at key depots during 2022 to facilitate increased use of electric vehicles. A work stream will commence in July 2022 to review how low carbon travel can be facilitated as part of the Better Ways of Working.		

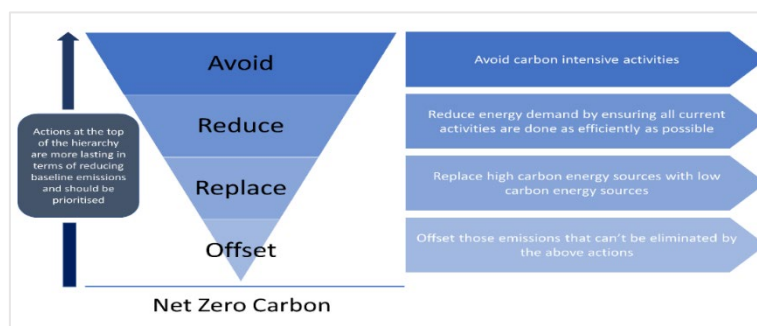
NZC-11		
Action	Lead Officer	Timescale
Finalise electric vehicle strategy for the County	Transport Strategy and Infrastructure Manager	TBC Dec 2021
Progress		
An Electric Vehicle Charging Infrastructure Strategy was published in December 2021.		
NZC-12		
Action	Lead Officer	Timescale
Develop appropriate carbon reduction target for the Council's business mileage as part of annual review of action plan	Head of Transportation and Highways	Mar 2021 Mar 2023
Progress		
Welsh Government were to establish Wales-wide methodologies for carbon emissions reporting by the end of 2019/20. Unfortunately, these were not published until May 2021. This delay has impacted on this Action, and other similar Actions. The Wales reporting methodologies differ from our current approach and we will be publishing a revised NZC Plan by 31 st March 2023 which will incorporate trajectories for carbon emission reductions in order to develop milestone targets.		

5. Renewable Energy Generation + Carbon Offsetting



Whilst we are committed to significantly reducing our carbon footprint, we recognise that however energy / carbon efficient our Services become, we will inevitably still have a residual carbon footprint. This situation is acknowledged by the 'Net' in the Net Zero Carbon equation, which enables our residual carbon footprint to be compensated / offset by the generation of renewable electricity and through carbon sequestration (such as through the planting of trees).

However, we continue to pursue the carbon mitigation hierarchy approach as we do not consider compensation / offsetting as a 'get out clause' for reducing our carbon footprint:



We have continued to add further solar PV installations on our non-domestic buildings, including schools, and currently have a total installed capacity of 1.8 MWp.

Renewable Energy Generation	2017/18	2018/19	2019/20	2020/21	2020/21 vs 2019/20	
	Result				Progress	% change
Solar PV						
Installed Capacity (kWp)	1,153	1,193	1,193	1,302	Improved	+9%
Electricity generation (kWh)	937,330	979,071	997,480	1,059,364	Improved	+6%
Equivalent Carbon Savings (tCO ₂ e)	360	301	277	268	Declined	-3%

Note: Solar PV systems installed as part of our Re:Fit Cymru Phase 1 project are not included as operational after 1st April 2021.

The continuing decarbonisation of the electricity distribution network - National Grid - means that emission conversion factors for electricity are decreasing. Whilst this has a positive impact in reducing our carbon footprint, it conversely has a negative impact in reducing the equivalent carbon savings from renewable energy generation, thus requiring more solar PV panels to offset our (reducing) carbon footprint.

Note: The Council spends in-excess of £5m annually on energy. As is currently very evident, the procurement of energy has become increasingly complex with prices volatile and linked to both UK and global factors. To minimise risk, we procure our energy using Crown Commercial Service Framework Agreements for most supplies. All this electricity is procured from renewable energy sources. Unfortunately, as the consumption of this 'green' electricity is reflected in the UK emission conversion factor for electricity, we are unable to directly benefit from carbon savings resulting from the procurement of 'green' electricity as this would effectively be double counting.

We recently commissioned Land Use Consultants Ltd to deliver a strategy that sets out how to enhance Green and Blue Infrastructure in eight selected towns across the County, and to also analyse our own land holdings to determine the potential for carbon sequestration. This work will inform the development of our new Decarbonisation / NZC Plans, as will the recent declaration of a Nature Emergency by the County Council.

Progress against Actions

NZC-13		
Action	Lead Officer	Timescale
Work with Welsh Government Energy Service to explore and deliver opportunities for large scale renewables	Sustainable Development Manager	Ongoing
Progress		
We continue to work with Welsh Government Energy Service (WGES) to explore and deliver large-scale renewable energy projects. WGES are currently reviewing our land holdings to determine feasibility for renewable energy. We are also actively pursuing other opportunities, including a possible power purchase arrangement with Hywel Dda UHB linked for a proposed 500 kWp solar farm at their Hafan Derwen site – some 50% of the generated electricity would be available to supply our adjoining Parc Dewi Sant offices.		
NZC-14		
Action	Lead Officer	Timescale
Work with National Procurement Service (NPS) to support greater procurement of energy from locally generated renewable energy projects	Sustainable Development Manager	Ongoing
Progress		
100% of the electricity we procure using the Crown Commercial Service Framework Agreement is from renewable energy. In 2020/21, 86% of this 'green' electricity was generated within Wales (compared to 63% in 2019/20). This sourced from: Hydro (1%); Landfill Gas (7%); Solar (17%); and, Wind (75%).		

NZC-15		
Action	Lead Officer	Timescale
Explore the feasibility of tree-planting and other such measures, on Council controlled land to contribute towards carbon offsetting	Strategic Asset Manager	Ongoing
<p>Progress</p> <p>5.71ha of native broadleaved woodland will be planted on Council land over winter 2022/23 under the Welsh Government Glastir Woodland Creation (GWC) scheme. The area comprises three fields in Tregib, Llandeilo; Pendre, Kidwelly and Maesdewi, Llandybie previously used for grazing purposes. These areas were identified as potential tree planting sites from bare land holdings (i.e. those not in long-term tenancy) owned by the Council. Sites were first screened to exclude those that held unimproved grassland of high biodiversity habitat, then sites of suitable size close to urban or rural communities were prioritised to maximise social benefits. Applications were made to the GWC scheme and three of the sites were selected by Welsh Government for funding under this scheme. The planting will use a range of site suited native broadleaved species to maximise biodiversity benefits. Planting will be designed to allow public access through the sites and community planting days will be held to encourage local people take part in the project.</p> <p>Carbon sequestration over the lifetime of the project will be 2,999 tCO₂e (based on the UK Woodland Carbon Code Small Project Carbon Calculator).</p>		
NZC-16		
Action	Lead Officer	Timescale
Develop appropriate target for renewable energy generation as part of annual review of action plan	Strategic Asset Manager	Mar 2021 Mar 2023
<p>Progress</p> <p>Welsh Government were to establish Wales-wide methodologies for carbon emissions reporting by the end of 2019/20. Unfortunately, these were not published until May 2021. This delay has impacted on this Action, and other similar Actions. The Wales reporting methodologies differ from our current approach and we will be publishing a revised NZC Plan by 31st March 2023 which will incorporate trajectories for carbon emission reductions in order to develop milestone targets.</p>		

6.1 Collaboration: Working with Welsh Government

Progress against Actions

NZC-17		
Action	Lead Officer	Timescale
Collaborate with Welsh Government and other 'early adopter' Public Bodies to introduce carbon reporting as part of the ambition to achieve a carbon neutral Welsh public sector by 2030	Sustainable Development Manager	June 2020
<p>Progress</p> <p>We collaborated with Welsh Government and other 'early adopter' Public Bodies and had anticipated that reporting guidance would be published in April 2020; however, the Guidance has not published until May 2021. Further, revised Guidance was published in June 2022.</p>		

6.2 Collaboration: Working with Carmarthenshire Public Services Board /

Swansea Bay City Deal partners

Progress against Actions

NZC-18		
Action	Lead Officer	Timescale
Work with the Carmarthenshire Public Services Board (PSB) Healthy Environment Delivery Group to undertake a Climate Change and Environmental Risk Assessment for the County	Corporate Policy and Partnership Manager	Ongoing
<p>Progress</p> <p>A Climate Change and Environmental Risk Assessment has been completed and will be supplemented with additional data and information.</p> <p>In May 2021, the Healthy Environment Delivery Group discussed the report commissioned by Natural Resources Wales on climate change risks. This report considered the impact on local communities, and how communities can be better prepared for the effects of climate change with specific reference to Newcastle Emlyn. The report recommended the following priority actions: (1) Community-Led Emergency Response Plan; (2) Citizens' Jury; (3) Newcastle Emlyn 2050 Future Scenario; and, (4) Climate Risks and Assets Map.</p> <p>At its meeting on <u>29th September 2021</u>, the PSB was unable to progress priorities (2) and (3) due to capacity issues. However, priority (1) - Community Lead Emergency Response Plan – is being supported with links to the 10 Towns project, and priority (4) - Climate Risks and Asset Map – is also being supported with the assistance of University of Wales Trinity St David students.</p>		
NZC-19		
Action	Lead Officer	Timescale
Work with PSB partners to identify and develop opportunities for collaboration regarding carbon reduction	Sustainable Development Manager	Ongoing
<p>Progress</p> <p>Natural Resources Wales (NRW) held a virtual SW Wales PSBs Net Zero Workshop on 29th September 2021. This event included speakers from Welsh Government and their consultants who provided an overview of the Public Sector Net Zero Reporting Guide (May 2021). NRW also shared their experience in determining baseline emissions and developing carbon reduction strategies through their Carbon Positive Project.</p> <p>Hywel Dda University Health Board have secured Welsh Government grant funding to construct a solar farm at their Hafan Derwen site. We had been negotiating a possible power purchase arrangement whereby some of the generated electricity would be available to supply our adjoining Parc Dewi Sant offices. Disappointingly, technical issues associated with the local grid connection meant that this has not been possible.</p>		
NZC-20		
Action	Lead Officer	Timescale
Work with Welsh Government and Swansea Bay City Region partners to establish a Regional Energy Plan for South West Wales	Head of Regeneration Head of Place & Sustainability	Ongoing
<p>Progress</p> <p>The <u>South West Wales Energy Strategy</u> (March 2022) was commissioned by the Welsh Government and supported by the Welsh Government Energy Service. It has been developed by the South West Wales Energy Core Group, a sub-group of the Regional Directors' forum from the four constituent local authorities, with additional support from an Advisory Panel and regional stakeholders. It sets a strategic framework to guide the transformational interventions needed to help achieve a net zero Wales by 2050. It has been a collaborative exercise developed by WGES and the four local authorities, with input from a wide range of stakeholders - public, private, and voluntary.</p> <p>Undepinning this regional Strategy will be four <u>Local Area Energy Plans</u> (LAEPs) for each local authority area. <u>Energy Systems Catapult</u> have been appointed by Welsh Government to help support the development these LAEPs which will involve significant coordination across the public, private and third sectors with the involvement of businesses, communities, and agencies. In Carmarthenshire, this will be led by the Place and Sustainability Division.</p>		

6.3 Collaboration: Working with experts from the private and 3rd sectors

Progress against Actions

NZA-21		
Action	Lead Officer	Timescale
Work with the Council's contractors to explore innovative approaches to carbon reduction	Various	Ongoing
Progress		
We are currently working to explore innovative approaches to carbon reduction with a range of organisations, including: the Active Building Centre regarding extending the Cross Hands Industrial Estate; and, the Welsh School of Architecture, Cardiff University to understand and model our retrofit programme to inform our housing decarbonisation strategy and future investment programmes across our entire housing stock.		
NZA-22		
Action	Lead Officer	Timescale
Participate in the Carmarthenshire 3 rd Sector Environment Network established by Carmarthenshire Association of Voluntary Services (CAVS)	Various	Ongoing
Progress		
The Carmarthenshire 3 rd Sector Environment Network is open to any 3 rd sector organisations or community groups involved with, or concerned by, environmental issues to share information and to collaborate to achieve common goals. The meetings also allow groups to follow the progress made by the Healthy Environment PSB delivery Group in the implementation of the Carmarthenshire Well-being Plan.		
During 2021/22, two meetings with were held with presentations from Dyffryn Tywi – Hanes Tirwedd Ein Bro, Renew Wales, The Carbon Community and Learn with Grandma. Information was shared on any relevant volunteering, funding and training opportunities available. Other topics raised included working towards a Circular economy and there was a focus on Climate Change action in the run up to COP26 at the end of October 21.		
NZA-23		
Action	Lead Officer	Timescale
Work with Ynni Sir Gâr, and others, to deliver and support local renewable energy projects	Sustainable Development Manager	Ongoing
Progress		
Ynni Sir Gâr have been funded under the Welsh Government Rural Development Fund LEADER programme to identify and explore the feasibility of small-scale community energy projects in the County. The project will work collaboratively with our Ten Towns initiative. We are also supporting Ynni Sir Gâr to deliver a project at Ysgol Bro Dinefwr to install additional solar PV plus EV charging points.		

7. Integration and Communication

Progress against Actions

NZC-24		
Action	Lead Officer	Timescale
Undertake a staff survey to identify how individuals can contribute to the Council's commitment to become a net carbon zero local authority	Media and Marketing Manager	May 2020 TBC
Progress		
<p>The staff survey was put on hold as an action due to communications around COVID-19 taking priority.</p> <p>Carbon Literacy for Elected Members training is being provided in June and October 2022 for all our elected Members. This to be followed-up by carbon literacy courses for our staff.</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2;"> <p>Our <u>Prosiect Zero Sir Gâr</u> campaign was originally intended to run for two weeks to coincide with <u>COP26</u> but was extended as we had more stories to share and <u>Wales Climate Week</u> followed.</p> <p>Aims:</p> <ol style="list-style-type: none"> 1. To raise awareness of what the Council is doing to tackle climate change and to become a net carbon zero local authority by 2030; and, 2. To encourage residents, businesses, and other organisations to take action to cut their own carbon footprint. </div> </div> <p>This campaign was particularly popular with schools who shared pictures of their '<u>Prosiect Zero Super Heroes</u>' to tackle climate change.</p>		
NZC-25		
Action	Lead Officer	Timescale
Incorporate climate change / carbon reduction into Integrated Impact Assessment process to be introduced by the Council	Corporate Policy and Partnership Manager	TBC
Progress		
<p>The integrated impact assessments includes a section which addresses climate change and carbon reduction impacts. Process to be introduced imminently.</p>		

NZC-26

Action	Lead Officer	Timescale
Support the 'Walk the Global Walk' project in the County's schools to promote awareness of climate change	Officer for International School Linking	March 2021

Progress

We continue to support the Climate Action Consultation Group that was initiated by participants of the 'Walk the Global Walk' project.

Manifesto Gweithredu dros yr Hinsawdd, Gŏl-geidwaid Byd-eang Sir Gaerfyrddin

Carmarthenshire Global Goalkeepers Climate Action Manifesto

Climate Change

No Time to Waste

8 Action Points:

- Promote development of green spaces and support native tree species planting of a minimum of 10 trees in each school, or school community if school grounds are unsuitable, and ensure their ongoing protection
- Encourage and support safe, sustainable school transport including car-pooling, walking and cycling e.g. providing bike shelters
- Set up a climate action consultation body consisting of a representative group of young people, councillors, council officers, and local businesses which meets every 3 months to ensure progress on this manifesto
- Provide support for developing countries to combat impact of climate change e.g. by supporting the Size of Wales Initiative
- Support the development of gardens in schools and local communities to provide food and encourage biodiversity e.g. provide seeds and peat-free compost
- Double the council's use of hybrid and electric vehicles and install electric charging points in appropriate primary and secondary schools by January 2022
- Work together with schools and suppliers to reduce single use plastic in schools by January 2022
- Ensure young people have the support they need to carry out relevant climate actions

Wedi ei lofnodi gan Gŏl-geidwaid Byd-eang ac Athrawon o: | Signed by Global Goalkeepers and Teachers from:

Ysgol Dyffryn Aman	Ysgol Bro Dinefwr	Coedcae School	Ysgol Glan-y-Mŏr	Ysgol Gyfun Y Strade
Sam Bennett Maeslin Smith Gareth Holmes (Teacher)	Milly Jones Isabel Edwards Carol Owen (Teacher)	Lily Evans, Chloe Barlow Rhye Thomas, Sophie Kwan Victoria Colbourne (Teacher)	Liberty Brown Thomas Askley Sophie Bowen (Teacher)	Ieuan Davies Katie George Sion Acclaiŏll (Teacher)

Queen Elizabeth High School - Anwen Skinner; Carmarthenshire Youth Council

NZC-27

Action	Lead Officer	Timescale
Review action plan following the publication of Welsh Government guidance regarding new carbon reporting framework	Sustainable Development Manager	Mar-2021 Mar 2023

Progress

Welsh Government were to establish Wales-wide methodologies for carbon emissions reporting by the end of 2019/20. Unfortunately, these were not published until May 2021. This delay has impacted on this Action, and other similar Actions. As identified earlier in this Report, our NZC Plan (February 2020) predates the Wales guidance, consequently there are differences in the reporting methodologies. Welsh Government will be publishing further guidance in May 2022, which we will incorporate into to our new NZC Plan to be published by 31st March 2023.

NZC-28

Action	Lead Officer	Timescale
Publish performance reports on progress towards becoming a net zero carbon local authority by 2030	Sustainable Development Manager	Annual

Progress

This report is the second annual update on progress towards become a net zero carbon local authority by 2030.

Appendix 1:

Summary of Progress Against Actions in NZC Plan

Ref	Action to be undertaken	Lead Officer	By When
Carbon Footprint – Non-domestic buildings			
NZC-01	Deliver Re:fit Cymru (Energy Efficiency) Phase 1 project to achieve energy/carbon savings	Head of Property	Apr 2024 Apr 2022
NZC-02	Develop further phases of Re:fit Cymru (Energy Efficiency) project, or similar, to achieve accelerated energy / carbon savings	Sustainable Development Manager	Ongoing
NZC-03	Incorporate the 'Passivhaus' standard, where appropriate, in new building construction projects	Property Design Manager	Ongoing
NZC-04	Continually review and amend design specifications and briefs to reflect new technologies and energy efficient equipment	Property Design Manager	Ongoing
NZC-05	Extend 'smart' and sub-metering technology to ensure accurate and timely capture of energy consumption data	Various	Ongoing
NZC-06	Develop appropriate carbon reduction target for the Council's non-domestic buildings as part of annual review of action plan	Sustainable Development Manager	Mar 2024 Mar 2023
Carbon Footprint – Street Lighting			
NZC-07	Develop appropriate carbon reduction target for the Council's street lighting as part of annual review of action plan	Public Lighting Engineer	Mar 2024 Mar 2023
Carbon Footprint – Fleet Mileage			
NZC-08	Review the most appropriate fuel powered vehicles for each of the Council's Services	Fleet Manager	Ongoing
NZC-09	Develop appropriate carbon reduction target for the Council's fleet mileage as part of annual review of action plan	Fleet Manager	Mar 2024 Mar 2023
Carbon Footprint – Business Mileage			
NZC-10	Undertake a review of the Council's pool cars to identify opportunities for carbon reduction	Head of Transportation & Highways	TBC Sep 2022
NZC-11	Finalise electric vehicle strategy for the County	Transport Strategy & Infrastructure Manager	TBC Dec 2021
NZC-12	Develop appropriate carbon reduction target for the Council's business mileage as part of annual review of action plan	Head of Transportation & Highways	Mar 2024 Mar 2023
Renewable Energy Generation / Carbon Offsetting			
NZC-13	Work with Welsh Government Energy Service to explore and deliver opportunities for large scale renewable energy projects	Sustainable Development Manager	Ongoing
NZC-14	Work with National Procurement Service (NPS) to support greater procurement of energy from locally generated renewable energy projects	Sustainable Development Manager	Ongoing
NZC-15	Explore the feasibility of tree-planting, and other such measures, on Council controlled land to contribute towards carbon offsetting	Strategic Asset Manager	Ongoing
NZC-16	Develop appropriate target for renewable energy generation as part of annual review of action plan	Sustainable Development Manager	Mar 2024 Mar 2023
Working with Welsh Government			
NZC-17	Collaborate with Welsh Government and other 'early adopter' Public Bodies to introduce national carbon reporting framework as part of ambition to achieve carbon neutral Welsh public sector by 2030	Sustainable Development Manager	Jun 2020

Ref	Action to be undertaken	Lead Officer	By When
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Working with Carmarthenshire Public Services Board / Swansea Bay City Deal partners			
NZC-18	Work with Carmarthenshire Public Services Board's (PSB's) Healthy Environment Delivery Group to undertake a Climate Change and Environmental Risk Assessment for the County	Corporate Policy and Partnership Manager	Ongoing
NZC-19	Work with Carmarthenshire PSB partners to identify and develop opportunities for collaboration regarding carbon reduction	Sustainable Development Manager	Ongoing
NZC-20	Work with Welsh Government and Swansea Bay City Region partners to establish a Regional Energy Plan for South West Wales	Head of Regeneration Head of Place and Sustainability	Ongoing

Collaboration with experts from the private sector and 3rd sectors			
NZC-21	Work with the Council's contractors to explore innovative approaches to carbon reduction	Various	Ongoing
NZC-22	Participate in the Carmarthenshire 3 rd Sector Environment Network established by Carmarthenshire Association of Voluntary Services (CAVS)	Various	Ongoing
NZC-23	Work with Ynni Sir Gâr, and others, to deliver and support local renewable energy projects	Sustainable Development Manager	Ongoing

Integration and Communication			
NZC-24	Undertake Staff survey to identify how individuals can contribute to the Council's commitment to become a net zero carbon local authority	Media and Marketing Manager	May-2020 TBC
NZC-25	Incorporate climate change / carbon reduction in Integrated Impact Assessment process to be introduced by Council	Corporate Policy and Partnership Manager	TBC
NZC-26	Support the 'Walk the Global Walk' project in the County's schools to promote awareness of climate change	Officer for International School Linking	Mar 2021
NZC-27	Review action plan following publication of Welsh Government guidance regarding new national carbon reporting framework	Sustainable Development Manager	Mar-2021 Mar 2023
NZC-28	Publish performance reports on progress towards becoming a net zero carbon local authority by 2030	Sustainable Development Manager	Annual

Key:

- Overdue
- Revised target dates due to delay in publishing Wales carbon reporting guidance
- On track
- Completed
- Ongoing. These Actions will continue throughout the lifetime of the NZC Plan

Appendix 2:

Climate Emergency

The initial focus of this action plan for a route towards becoming a net zero carbon local authority is not intended to limit or preclude other potential wider actions that contribute towards addressing the climate emergency.

Some of these actions are identified below (this is not an exhaustive list):

- Civil Contingencies
- Education
- Finance
- Highways and Transportation
- Housing
- Information and Communications
- Leisure
- Place & Sustainability
- Procurement
- Public Protection and Air Quality
- Regeneration
- Waste and Environmental Services

**** Information currently being collated ****