

Denbighshire County Council's Climate and Ecological Change Strategy 2021/22 to 2029/30

Description:	This document tells you about the Council's Net Carbon Zero and Ecologically Positive goals and the tasks we are going to seek to deliver to achieve our 2030 goals.
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Final Revised 2, January 2022	13 January 2022	HVE	<p>Pages 16 and 20: data table 3 and chart 3 updated following learning from 2020/21 performance during Covid Pandemic.</p> <p>Pages 18 and 20: data table 4 and chart 4 updated following learning from 2020/21 performance during Covid Pandemic.</p> <p>Page 46: wording made clearer on the total estimated costs to 2030.</p>	Final and published
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What is this document?

Denbighshire County Council declared a [Climate Change and Ecological Emergency](#) in July 2019.

In response and by the 31st March 2030 the Council aims to become a:

- Net Carbon Zero Council
- Ecologically Positive Council

This document tells you more about those two aims and the tasks we are going to seek to deliver to achieve our 2030 goals.

This document is also available in Welsh, and may be available in other formats on request.

For more information on anything in this booklet please contact the Climate Change Team:

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Welcome to Denbighshire County Council's Climate and Ecological Change Strategy

Climate and ecological change is the globally defining challenge of our time. It impacts all living things that call our planet home including you and me. This document outlines our net carbon zero and ecologically positive goals for the Council along with the changes and actions we have identified so far that we will endeavour to deliver between now and 2030.

By working to achieve these goals we hope that Denbighshire County Council can make its contribution to tackling the climate and ecological emergency we all face. By working to achieve these goals we hope to make our contribution to see carbon emissions reduce to net zero in Wales by 2050 and deliver on our statutory duty as a local authority to maintain and enhance biodiversity and promote resilience of ecosystems as outlined in [Environment \(Wales\) Act 2016](#). By working to achieve these goals we hope to make our contribution to see the Public Sector in Wales become net carbon zero by 2030 as outlined in Welsh Government's [Prosperity for All: A Low Carbon Wales](#) delivery plan.

We are proud to be one of the first Council's in Wales to have tackling climate and ecological change as a guiding principle in its decision making process, formally changing in October 2020 our Constitution- the set of rules and principals that the Council follows when delivering its work. We also look to build on our strong track record on reducing carbon and improving biodiversity, most recently delivered under our [Corporate Plan \(2017-2022\) priority for the Environment](#).

We've made a positive start and we look forward to working closely with our communities, staff, partners and funders to continue our collective efforts to secure the well-being of future generations.



Cllr Barry Mellor

(Lead Member for
Environment and
Transport)



Gary Williams

(Corporate Director -
Governance and
Business)

The changing climate and decline in nature

As the amount of carbon dioxide (CO₂e¹) human society has emitted into the earth's atmosphere has increased so to have global temperatures. Without reducing CO₂e emissions the earth will get warmer and warmer. This rise in global temperature is causing our climate and planet to change.

The changes to our climate include: hotter drier summers, warmer wetter winters, more extreme weather events and sea level rise. This causes: more drought and wildfire, stronger storms, more heat waves, flooding, damaged corals, less snow and ice, thawing of permafrost, changes in plant life cycles and changes to animal migration and life cycles.

At the same time, nature is in decline with a reported 68% decline in the world's wildlife population between 1970 and 2020². Human activity is reducing the quality and the amount of habitat available for wildlife and habitats are increasingly fragmented reducing the ability of species to migrate to stay in their required climate to sustain life. As temperatures continue to rise, and habitats extent and connectivity continue to decline, climate change will become an increasing driver for species losses.

The climate is changing everywhere on our planet including here in North Wales. The region has experienced in recent years wider and more frequent flooding, extreme heat and stronger and more frequent storms. 354 of species known to be present in Wales are at risk of extinction³. Dormouse populations across the UK, as an example, have declined 51% since 2000⁴ and in all former strongholds across Denbighshire.

We currently have a rise of around 1°C in global temperatures above pre-industrial levels. In October 2018, the [Intergovernmental Panel on Climate Change](#) (IPCC) published a Special Report on the impacts of a 1.5 °C rise in global temperatures. The IPCC found that a 1.5°C world would have significantly lower climate-related impacts for the natural world and human society than a 2°C world. The IPCC estimated that global carbon emissions would need to reduce to net zero by 2050 at the latest to ensure global temperatures

¹ CO₂e is short for "carbon dioxide equivalent" which is used for describing different greenhouse gases in a common unit- carbon.

² According to the [World Wildlife Fund \(WWF\) Living Planet Report, 2020](#)

³ According to The [State of Nature \(Wales\) Report, 2016](#)

⁴ According to [The State of Britain's Dormice Report, 2019](#)

remained under 1.5 °C and that the majority of actions required to meet this target would need to be completed by 2030.

The realisation that time is fast running out has resulted in a climate emergency being declared by many organisations including Denbighshire County Council in July 2019 and over 300 other UK local authorities. The Welsh Government and UK Government have also declared a climate emergency.

How this Strategy has been developed

Denbighshire County Council declared a Climate and Ecological Emergency in July 2019 which committed the Council to become net carbon zero by 2030 and improve biodiversity.

Denbighshire County Council ran an engagement period in January and February 2020 asking for the public's feedback on the Council's proposed net carbon zero and ecologically positive goals and for any ideas on how the Council can achieve them by 2030.

Building on the public's ideas Denbighshire County Council worked throughout 2020 with Councillors and Officers from across the Council to develop the Council's Climate and Ecological Change Strategy (2021/22 – 2029/30). This included calculating the Council's carbon footprint and the biodiversity of Council land, exploring our pathway to 2030 via scenario planning and holding workshops with all the service areas that make up the Council to identify and develop further what changes we could make and what projects we could deliver to help the Council achieve its goals.

This work was guided by the Climate Change and Ecological Emergency task and finish group which was set up as part of the emergency declaration. This group was made up of two representatives from each political party represented in the Council including the lead members on Cabinet covering climate and ecological change.

The calculations for the Net Carbon Zero baseline and ambitions have followed the methodology for calculating carbon emissions and carbon absorption in Welsh Government's new Greenhouse Gas Reporting Regime for the Welsh Public Sector.

The calculations for the Ecological Positive baseline and ambitions have been guided by established methodologies for measuring biodiversity value from NERC- the Centre for Ecology and Hydrology. Biodiversity is vast, complex and interconnected and as such any measure for biodiversity value is a pointer only.

In November 2020 the Council asked its staff and the public for their feedback on the draft document. This feedback helped to shape the Council's final Climate and Ecological Change Strategy (2021/22 – 2029/30) which was then presented to the Elected Members of Denbighshire in February 2021 for adoption.

Other Council Strategies

There are a number of other strategies the Council has, and areas of work the Council is undertaking, that supports the Council in tackling climate and ecological change. These include:

- [Corporate Plan](#)
- Denbighshire County Council's Social Housing Asset Management Plan
- [Local Flood Risk Management Strategy](#)
- Air Quality Management Plan
- Woodland and Tree Strategy (currently in development)
- Biodiversity Duty Delivery Plan
- [Local Development Plan](#)
- [Economic and Community Ambition Strategy](#)
- Fleet Strategy
- Ash Die Back Strategy (currently in development with Conwy County Borough Council)
- County Allotment Strategy (currently in development)
- Clwydian Range and Dee Valley AONB Management Plan
- [Asset Management Strategy 2017-2021](#)
- [Denbighshire County Council's Active Travel Plan \(2017-2021\)](#)

Net Carbon Zero Council by 2030

What is our goal?

Net Carbon Zero

Our goal is for the total carbon emitted by the Council minus the total carbon absorbed from Council owned and operated land⁵ to equal zero by 31st March 2030. This is our net carbon zero ambition.

The following sources of emissions will count towards our net carbon zero goal and will be referred collectively as Denbighshire County Council's Net Carbon Zero Footprint:

Buildings	We will reduce emissions from the electricity, gas, LPG, oil, biomass and water we use at Council owned buildings ⁶ .
Waste	We will reduce emissions from the waste generated by the Council.
Fleet	We will reduce emissions from the petrol and diesel we use to power the vehicles owned by the Council.
Staff commuting	We will reduce the emissions from the travel undertaken by staff and councillors coming into work and returning home.
Street lighting	We will reduce emissions from the electricity used by Council owned lamp posts, traffic signs and signals.
Business travel	We will reduce the emissions from the travel undertaken by staff and councillors whilst carrying out their job.

⁵ Land that the Council owns but rents out to others is not included.

⁶ Council owned building refer to buildings such as offices, depots, schools and leisure centres that the Council own. However, Council Housing is not included.

The following sources of carbon absorption will count towards our carbon zero goal:

Grassland We will maintain the amount of grassland the Council owns and operates.

Forest / woodland We will increase the amount of forestland and woodland the Council owns and operates.

Supply Chain

In addition to this, we aim to reduce the total carbon emitted from the Council's supply chain by 35%⁷ by 31st March 2030.

Supply chain We will reduce emissions from all the goods and services the Council buys from others.

What is our starting point?

Net Carbon Zero

The total carbon emitted from Denbighshire County Council's Net Carbon Zero footprint in 2019/20 was 16,448 tCO₂e⁸.

The total carbon absorbed from Denbighshire County Council owned and operated land in 2019/20 was 2,418 tCO₂e.

Therefore, the Council's Net Carbon Zero position in 2019/20 was +14,030⁹ tCO₂e.

⁷ Compared to 2019/20 baseline

⁸ tCO₂e is short for "tonnes of carbon dioxide equivalent" which is used for describing different greenhouse gases in a common unit- carbon.

⁹ This is calculated by subtracting carbon absorbed from carbon emitted, i.e. subtracting the 2,418 figure from the 16,448 figure

The Net Carbon Zero Council goal is to get that 14,030 tCO₂e figure to zero by 31st March 2030.

The tables and graphs below describe how much the Council emitted from each source of emissions and how much is absorbed from each source of absorption in 2019/20.

Table 1: Carbon emissions per source

Source of carbon emissions	Amount of carbon emitted in 2019/20 in tCO₂e	% of total
Buildings	10,151	62
Fleet	2,693	16
Staff Commuting	1,848	11
Street Lighting	788	5
Business Travel	550	3
Waste	418	3
Total	16,448	100

Chart 1: Denbighshire County Council Net Carbon Zero Footprint 2019/20

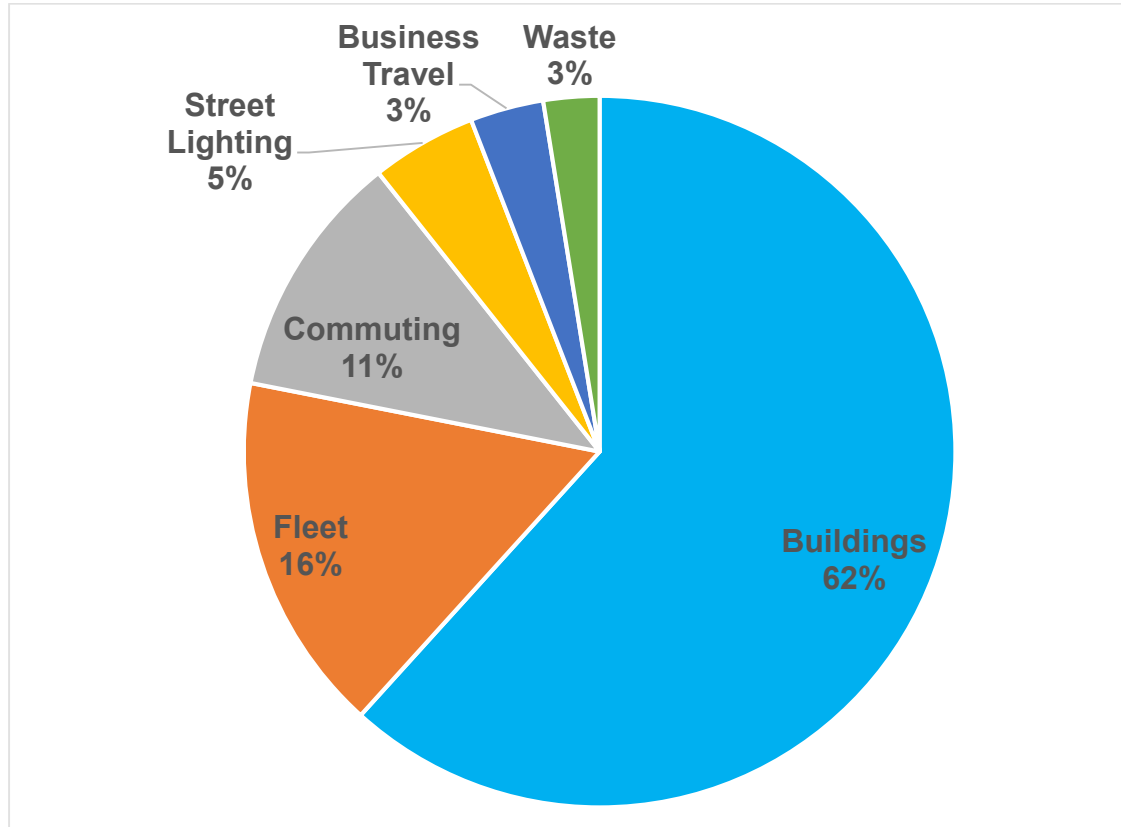
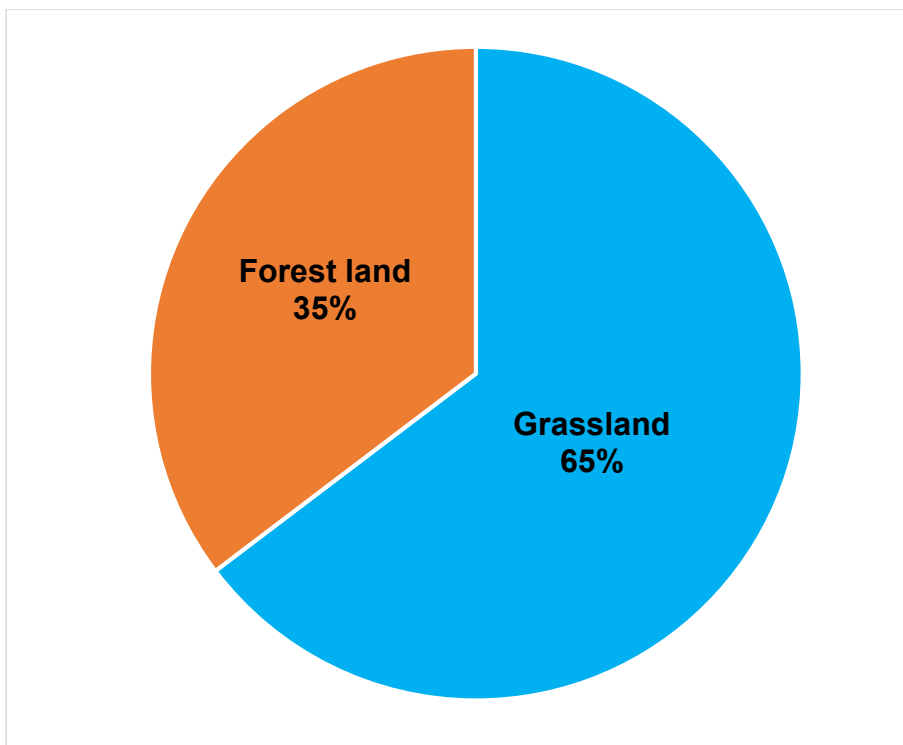


Table 2: Carbon absorption per source

Source of carbon absorption	Amount of carbon absorbed in 2019/20 in tCO2e	% of total
Grassland	1,564	65
Forest / woodland	854	35
Total	2,418	100

Chart 2: Denbighshire County Council's Carbon Absorption in 2019/20



Supply Chain

In addition, the Council emitted 22,710 tonnes of CO2e from its supply chain in 2019/20.

Where do we want to get to?

Net Carbon Zero

To achieve our Net Carbon Zero goal, the Council needs to reduce the amount of carbon it emits and increase the amount of carbon it absorbs.

The table below describes how much carbon emissions we aim to reduce for each source of emission by 31st March 2030. Interim targets for what we expect by Year 3 (2023/24) and by Year 6 (2026/27) of the 9-year programme are provided. The Council's direct intervention will play a central role in order to deliver this carbon reduction. Our efforts will combine with efforts nationally to decarbonise fuel and energy networks. We will be responsive to new opportunities that may arise between now and 2030 that enable us to go further on reducing our carbon emissions¹⁰.

Table 3: Reduction target by 2030 per source of carbon emission

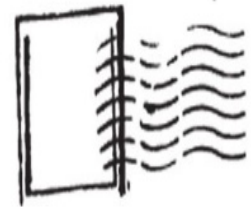
Source of carbon emissions	% reduction targets compared to 2019/20	Projected emissions in 2029/30 in tCO2e if target met	Projected emissions in Year 3 (2023/24) in tCO2e	Projected emissions in Year 6 (2026/27) in tCO2e
Buildings	60	4,060	8,121	6,091
Fleet	60	1,077	2,154	1,616
Staff Commuting	20	1,478	1,725	1,602
Street Lighting	50	394	657	525
Business Travel	80	110	403	257
Waste	50	209	348	279
Total	N/A	7,329	13,408	10,369

A postcard from the future is included below as a way of bringing these figures to life through story telling- providing an example of how the Council might have gone about achieving its 2030 targets.

¹⁰ For example, the introduction of a readily accessible new technology or a major development in ways to generate energy.

Postcard 1: Reducing carbon emissions

Dear 2020 Council, Year 2030 here! What a challenging but rewarding Net Carbon Zero Council journey you have been on. Not wanting to give you spoilers but here's some of the headlines on how you've reduced your carbon...



In Council buildings the use of energy for heating, anything that uses electricity and the use of water has reduced through increasing the air tightness of the building and efficiency of the systems and equipment within them. All new Council buildings that are built are low carbon in operation. Onsite generation of renewable electricity has increased. More sites heating systems have been converted to low carbon and renewable options. Rainwater harvesting is utilised more widely for the water use in Council buildings.

Excess travel by Council Fleet vehicles has increasingly been avoided by service delivery being even more accessible and efficient. There has been a big increase in electric vehicles owned by the Council and electric vehicle charging points have been installed across the Council's buildings and car parks. Ultra low emission options for our larger fleet vehicles such as bin lorries and gritters have been piloted.

Our recycling rates have gone from strength to strength with less contamination now waste is source segregated. A focus in waste prevention in the County has reduced the overall tonnage of waste produced and collected by the Council as more items are used and reused which would previously just have been thrown away.

Working from home is readily available now for staff who can and the Council office estate has been made efficient. When staff do come into the office it's to an office closest to where they live which reduces mileage and increases the number of staff walking, cycling (active travel) or catching the bus to work. Business travel for meetings is very rare now as virtual meetings have become the norm. When officers do meet it is often closer to their respective homes and not necessarily in a Council main office. Officers who have to travel to carry out their work have access to an electric vehicle.

The table below describes how much we aim to increase the amount of carbon absorbed for each source of carbon absorption by 31st March 2030. Interim targets for what we expect by Year 3 (2023/24) and by Year 6 (2026/27) of the 9-year programme are provided. The Council’s direct intervention will play a central role in order to deliver this increase in carbon absorption as well as getting a better understanding of the carbon absorption capacity of some of our more established landscapes.

Table 4: Increase target by 2030 per source of carbon absorption

Source of carbon absorption	% increase targets compared to 2019/20	Projected absorption in 2029/30 in tCO₂e if target met	Projected absorption in Year 3 (2023/24) in tCO₂e	Projected absorption in Year 6 (2026/27) in tCO₂e
Grassland	0%	1,564	1,564	1,564
Forest / Woodland	575%	5,765	2,491	4,128
Total	N/A	7,329	4,055	5,692

A postcard from the future is included as a way of bringing these figures to life through story telling- providing an example of how the Council might have gone about achieving its 2030 targets.

Postcard 2: Increasing carbon absorption

Dear 2020 Council, Year 2030 here! What a challenging but rewarding Net Carbon Zero Council journey you have been on. Not wanting to give you spoilers but here's some of the headlines on how you've increased your carbon absorption...



The Council has maintained the amount of grassland in its ownership *wherever possible*, safeguarding the carbon absorption benefit and delivered projects to improve the species richness of its grassland habitats for the benefit of biodiversity.

The Council has made big efforts in increasing the amount of forestland and woodland it owns and operates. The Council over the 9 years has converted existing, and bought new land, turning it into carbon sinks and wildlife havens via carefully selected tree planting including elements of species rich grassland.

This activity achieved additional benefits wherever possible for the Council and its communities including the planting of trees upland from river catchments to reduce the risk of flooding and maximising on the opportunities to open these spaces up to the public for leisure, tourism and improved wellbeing.

If the Council is successful in achieving its targets as outlined in the above tables, in 2029/30 the Council's total carbon emissions minus the Council's total carbon absorption will equal zero. The Council will have achieved its ambition to become net carbon zero.

The graphs below show the change in each source of carbon emissions and in each source of carbon absorption comparing the total amounts in 2019/20 to the total amounts in 2029/30 if the Council is successful in achieving its targets.

Chart 3: Amount of carbon emitted by the Council in 2019/20 compared to projected emissions in 2029/30

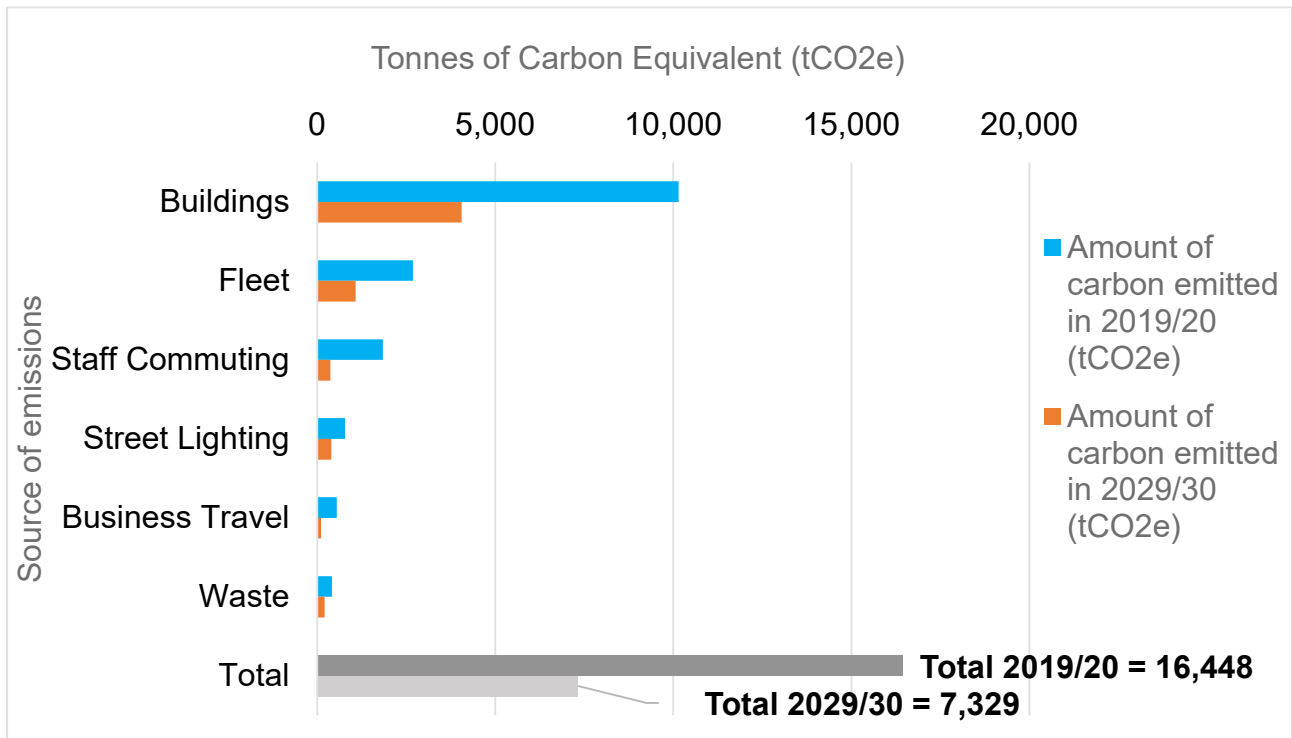
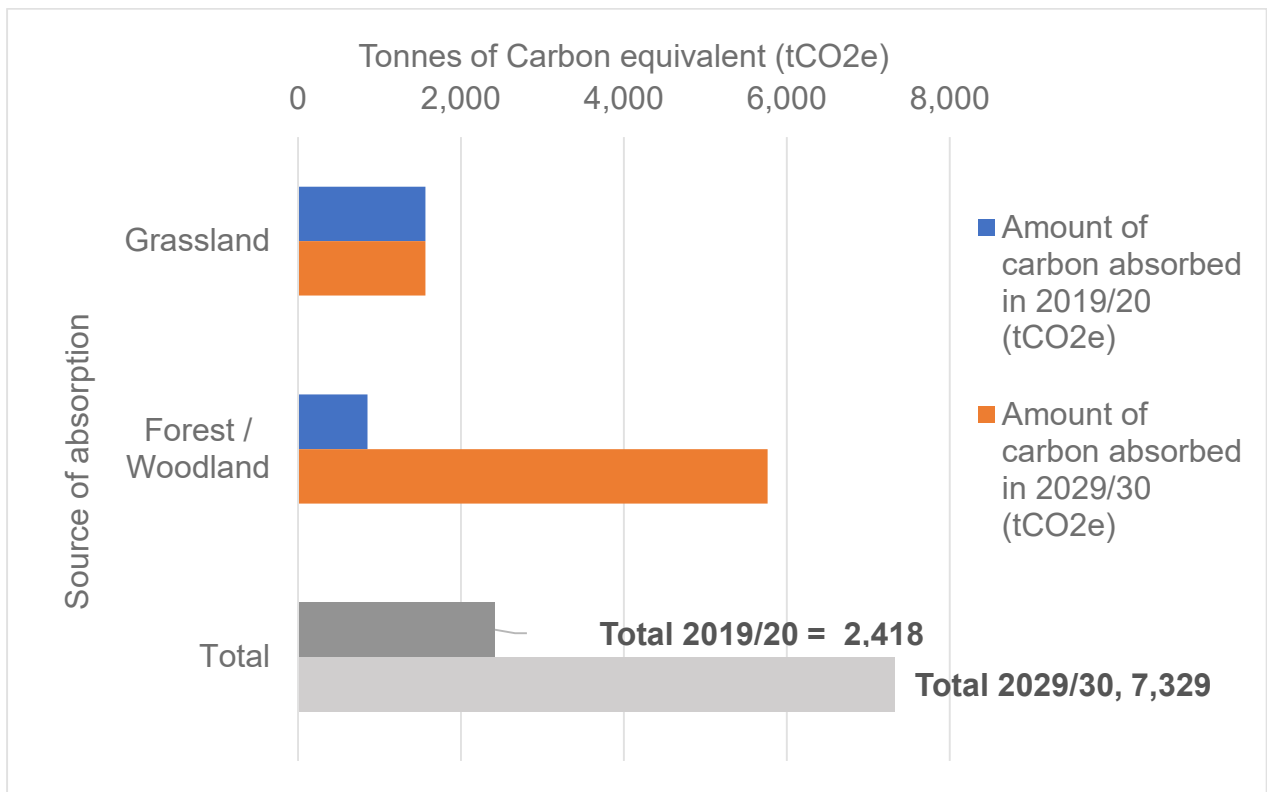


Chart 4: Amount of carbon absorbed by the Council in 2019/20 compared to forecasted absorption in 2029/30



Supply Chain

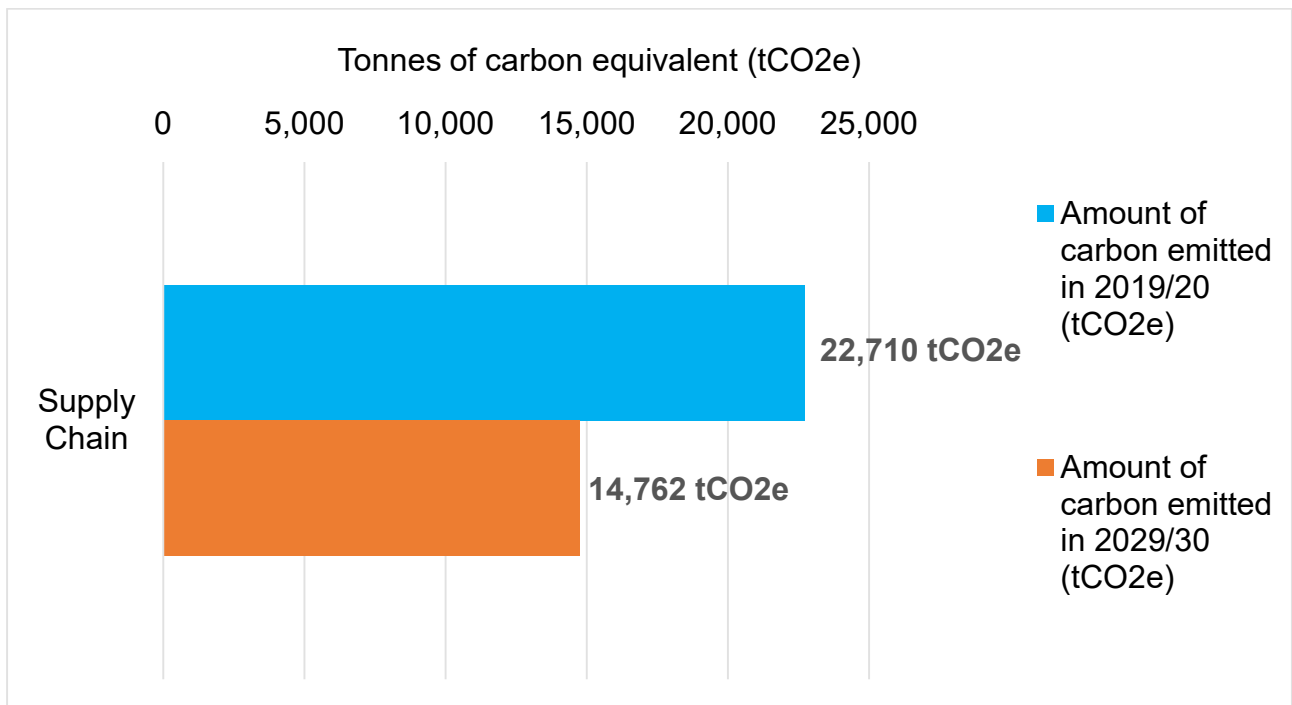
The Council also aims to reduce the carbon emitted from our supply chain by 35%. We will work with companies and businesses who we buy our goods and services from to reduce the carbon intensity of what we buy and how we deliver services and also to maximise on the local community benefit we can generate from those contracts.

The table below describes how much we aim to reduce the amount of carbon emitted from the Council's supply chain by 31st March 2030. Interim targets for what we expect by Year 3 (2023/24) and by Year 6 (2026/27) of the 9-year programme are provided. The graph below shows the change in the total carbon emissions from our supply chain by comparing 2019/20 total emissions to 2029/30 total emissions if the Council achieves its reduction target.

Table 5: Reduction target for carbon emission from our supply chain

Source of carbon emissions	% reduction targets compared to 2019/20	Projected emissions in 2029/30 in tCO2e if target met	Projected emissions in Year 3 (2023/24) in tCO2e	Projected emissions in Year 6 (2026/27) in tCO2e
Supply Chain	35%	14,762	20,061	17,411

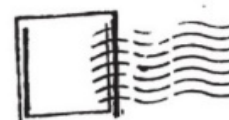
Chart 5: Amount of supply chain carbon emissions 2019/20 compared to what is forecasted for 2029/30



A postcard from the future is included as a way of bringing these figures to life through story telling- providing an example of how the Council might have gone about achieving its 2030 target.

Postcard 3: Reducing supply chain carbon emissions

Dear 2020 Council, Year 2030 here! Not wanting to give you spoilers but here's some of the headlines on how you've reduced your supply chain carbon emissions...



The Council has reduced spend wherever possible most notably in paper as the Council in 2030 is now practicably paperless. Having introduced a whole life costing approach to procurement early in the programme, the Council has seen an uptake in buying higher quality items less often.

We have seen construction become much less carbon intensive leading up to 2030 helped by the Public Sector in Wales being clear to suppliers that low carbon delivery of new build project was very important.

It goes without saying now that additional value is sought from every Council contract over £25,000. Working with our communities, together we have identified the environmental benefit valued most with community benefit projects delivered by/ with suppliers for the benefit of carbon reduction, carbon absorption and biodiversity improvement.

What changes and actions will help us get there?

Changes to Council processes and policies

To achieve our net carbon zero goal by 2030 will require the Council to adjust how it goes about delivering the wide range of work and tasks required of us by Welsh Government, by our partners and by our communities.

In Summer 2020 virtual workshops were held with the management teams of every service area that make up the Council to start the task of identifying the ways we could change how we do things to contribute to reducing carbon emissions and increasing carbon absorption. This built on ideas generated by the public during the public engagement event held in early 2020.

Over 100 suggestions for processes and policies changes were identified and our aim is to implement as many of these as we can over the 9 years.

The list below highlights some of the priority changes to Council processes and policies that we hope to make in Year 1 to 3 (2021/22 - 2023/24) of delivering this strategy to support the Council to successfully achieve its net carbon zero goal by 2030.

This is a dynamic and flexible list; other things may be implemented that do not feature in the graphic below responding to new opportunities.

1. Through engagement and communication ensure service based objectives align with the corporate ambition to become Net Carbon Zero and reduce supply chain emissions.
2. Implement the Council's change in constitution to have regard to tackling climate and ecological change, including changes to business case templates and introduction of whole life costing.
3. In consultation with staff and the unions, work to include in every member of staff Job Description their responsibility around climate and ecological change.
4. Supporting new ways of working for the Council staff learning from experience of operating under COVID-19 restrictions, including working from home and virtual business meetings.
5. Continue to implement the EV first vehicle replacement policy.
6. Move as far forward and as fast as possible in going paperless e.g. electronic case bundling, electronic signing and sealing of contracts, electronic paper packs for democratic meetings.
7. Ensure the carbon reduction is being appropriately considered in Council Procurement - Policy and Strategy documents, Commissioning templates, tender evaluations.
8. Identify community benefits in Council contracts that reduce carbon and increase carbon absorption.

9. Work to standardise the Recycling and Waste approach across all schools and Council owned sites include provision of wide range of recycling.
10. Consider introducing policy to design and build to high carbon reduction/low carbon in use standards as standard on Council owned buildings (e.g. Passivhaus).
11. Ensure an enhanced eco build option is always presented in business cases when deciding on major capital projects.
12. Ensure the new Asset Management Strategy 2021 onwards aligns with the corporate ambition to become Net Carbon Zero and introduce a new asset disposal and acquisition policy which is supportive in retaining or/and buying land for carbon absorption and ecological improvement purposes.
13. Review 21st Century Schools Redundant Site Policy to build in the option of Denbighshire County Council retaining the site for conversion to community woodland/orchards.
14. Investigate the potential for better land use across the county to achieve multiple objectives e.g. natural flood risk management via tree planting etc.
15. Ensure Ash Die Back Policies around replacement are supportive of increasing tree stock of native provenance.
16. Ensure the new Active Travel Plan 2021 onwards, which maps current routes and plans for the future delivery of active travel routes in the county, aligns with the Council's ambitions to tackle climate and ecological change.
17. Promotion of existing planning policies within the Local Development Plan 2006-2021 and Council's existing Supplementary Planning Guidance which contribute to environmentally responsible development.
18. Delivery of the replacement LDP which takes forward local priorities for land use planning within the national policy framework. The replacement LDP will ensure emerging local priorities around climate change and biodiversity are reflected in local planning policy and decision making.

19. LDP Annual Monitoring Report to be an important source of information on how local land use planning supports the Council's priorities with regard to climate change and biodiversity.

Actions and projects

Achieving net carbon zero will require the Council to build on existing programmes of activity started under the Environment Priority of our Corporate Plan, in addition to delivering new projects and activity.

Over 90 ideas for projects to reduce carbon and increase carbon absorption were identified in the Summer 2020 virtual workshops in developing this strategy and our aim is to implement as much as we can of those over the 9 years. In addition to other actions we might take responding to new opportunities.

The list below provides an overview of the priority actions and projects that have been identified so far that the Council hopes to deliver which will reduce carbon emissions and increase carbon absorption. Whilst the Council can be more specific for Years 1 to 3, it is more difficult to do this for years 4 onwards due to the uncertain and complex context Local Authorities must operate within.

The delivery of all projects and actions identified is subject to securing the necessary funding.

Actions to reduce Council's carbon from buildings and street lighting

Years 1 to 3 (2021/22 - 2023/24)

- Complete our 7 year LED Street lighting project
- Review and rationalise how many buildings the Council owns and operates

Years 1 to 9 (2021/22 - 2029/30)

- Deliver works to improve energy efficiency of existing building including measures to improve air tightness (e.g. loft insulation, cavity wall insulation), reducing

electricity use (e.g. LED lighting, power management) and increase efficiency of heating (e.g. upgrade heating control and building management systems).

- Design and build new Council buildings to be low carbon in operation including the integration of renewable energy and heat technologies as well as rainwater harvesting (e.g. 21st Century Schools Band B).
- Deploy renewable energy schemes for electricity including working with schools to submit funding applications to Wind-farm funds to install renewable energy (e.g. wind turbines and PV panels) and installing solar car ports at Council office car parks.
- Convert heating systems in existing Council buildings to renewable heat (e.g. air source heat pumps, ground source heat pumps).
- Undertake major refurbishments of existing Council buildings to be low carbon in operation (e.g. Greening County Hall Project).
- Deploy rainwater harvesting technologies across the Council estate and particularly within depots with high water usage.

Actions to reduce the Council's carbon from fleet, staff commuting and business travel

Years 1 to 3 (2021/22 - 2023/24)

- Install EV charging infrastructure into 9 Council owned car parks.
- Introduce Electric Vehicle bookable pool cars at Council offices.
- Convert 3 of our waste vehicles to Electric vehicles.
- Introduce an electric vehicle home charging solution for staff who start and end their day at home but utilise Denbighshire County Council owned fleet vehicle.

Years 1 to 6 (2021/22 - 2026/27)

- Convert all of Denbighshire County Council owned light commercials (up to 3.5 tonnes) vehicles to Electric Vehicles.
- Install EV charging infrastructure into Council buildings, including offices, depots, libraries, and tourist attractions.

Years 1 to 9 (2021/22 - 2029/30)

- Extend public charging across Denbighshire which can also service Denbighshire County Council Electric Fleet vehicles.
- Facilitate a car sharing platform for staff.

Years 4 to 9 (2024/25 - 2029/30)

- Convert the majority of Denbighshire County Council owned larger sized vehicles to Ultra Low Emission options.
- Trial large vehicles which are powered by hydrogen (e.g. Bin Lorries).

Actions to reduce the Council's carbon from waste

Years 1 to 3 (2021/22 - 2023/24)

- Re-launch recycling in civic buildings and replace bins at Council sites so it is a source segregated recycled waste collection.
- Working with the third sector introduce accommodation at Rhyl and Ruthin Household Recycling Centres to support reuse and repair activity to divert items from becoming waste.
- Deliver the New Waste Transfer Station to enable greater source segregation of recyclates.
- Work to reduce plastics in Schools and Council offices.

Years 1 to 6 (2021/22 - 2026/27)

- Support Welsh Government in the delivery of a new facility to recycle nappies based in Denbighshire, diverting Absorbent Hygiene products away from residual waste and into the recycling facility from across North West Wales.

Years 1 to 9 (2021/22 - 2029/30)

- Deliver improvement project for increasing tonnage of waste re-use or recycled that is generated from delivering the various Highways and Street Scene frontline service functions.

Actions to reduce the Council's carbon from the goods and services we buy

Years 1 to 3 (2021/22 - 2023/24)

- Create a bank of specific carbon related questions which could be used as part of the tender evaluation process. These should be scored and weighted appropriately as part of the quality assessment of tenders.
- Create an online portal to capture and report on the Community Benefit of contracts including measures around this agenda.

Years 1 to 9 (2021/22 - 2029/30)

- Identify the Council officers who procure on a regular basis to target communication and training as to the Climate and Ecological Change agenda and the contribution that environmentally responsible procurement can make.
- Re-visit regional contracts as they expire with the aim to reduce carbon, where possible, in the future.
- Pursue Personalised Grants for care and stimulating Microenterprise work – enabling personalised purchasing of care from providers ultra-local to the citizen to reduce carbon footprint.
- Work with businesses and suppliers in Denbighshire to encourage lower carbon practice.

Actions to increasing the Council's carbon absorption

Years 1 to 3 (2021/22 - 2023/24)

- Complete the PLANT Project – planting 18,000 urban trees.

- Establish a County Tree Nursery, growing 5,000 trees a year for planting projects across the County.
- Work with schools to identify planting opportunities on school grounds.

Years 1 to 9 (2021/22 - 2029/30)

- Conversion of new Council land purchased for the purpose of carbon sequestration and biodiversity through the process of natural regeneration and targeted tree planting, enabling public access wherever possible.

Using our influence across Denbighshire

Years 1 to 3 (2021/22 - 2023/24)

- Completion of Carbon Literacy training by all councillors and managers and creation of e-learn module on carbon literacy themes for all staff.
- Progression of replacement LDP to ensure emerging local priorities around climate change and biodiversity are reflected in local planning policy and decision making.
- Supporting the North Wales Corporate Joint Committee in developing and publishing a new regional Transport Plan and encouraging alignment with Denbighshire's climate and ecological change agenda.
- Continue to support households living in Denbighshire who are most likely to experience fuel poverty and those vulnerable to the effects of a cold home through promoting Welsh Government's fuel poverty scheme and administering Denbighshire's own criteria to access Energy Company Obligation (ECO) funding.

Years 1 to 6 (2021/22 - 2026/27)

- Delivery of Supplementary Planning Guidance resulting from the new Local Development Plan will support the climate change agenda.
- Support the development of the Smart Local Energy project and the Decarbonisation of Transport project within NWEAB Low Carbon Energy Programme.

- Via our role as Clwyd Pension Fund Board Members, encourage the Fund to identify climate change as a financial risk, to measure and understand its carbon exposure within its investment portfolio and to set agreed Carbon reduction targets which are measurable and time bound.

Years 1 to 9 (2021/22 - 2029/30)

- Implement a programme of initiatives to raise awareness of staff of the role they need to play in reducing our carbon emissions, and ensure measures are put in place to drive the necessary behaviour change.
- Implement a programme of initiatives and engagement with schools across the County to share learning and resources on this agenda and encourage positive behaviour change.
- Implement a programme of initiatives, working with Welsh Government and the Public Service Board, to raise awareness amongst residents and businesses in Denbighshire of the role they can play in reducing carbon emissions.
- Engage with City, Town and Community Councils on reducing carbon and increasing carbon absorption via the review and update of the City, Town and Community Council Charter.
- Work with landowners in Denbighshire, including the Council agricultural tenants, to encourage the management and use of land for the benefit of carbon absorption (e.g. guidance for the protection and restoration of peat lands).
- Where applicable and legally allowed, review standards within the Council's licensing and consenting regimes to reflect the Council's local priorities to tackle climate change and improve biodiversity.

Ecologically Positive Council by 2030

What is our goal?

Our goal is to protect, manage and restore our land as well as create new spaces for nature so that the ecosystems¹¹ in Denbighshire are diverse, connected, big in scale and extent, in a healthy condition and adaptable and thus not only maintains biodiversity but enhances it. This is our Ecologically Positive Council goal.

Opportunities for Ecologically Positive work contributing to our carbon absorption requirements in our Net Carbon Zero Council goal and vice versa will be both taken and maximised upon.

What is our starting point?




Available data for species richness across Denbighshire has been mapped onto Council owned and operated land to give us an idea about our starting point for the Council's biodiversity value.

Biodiversity is vast, complex and interconnected and as such any measure for biodiversity value is a pointer only.




The table below provides you with information on the different habitats types that are included in this species richness measure. The most species rich habitat is listed first, and the least species rich habitat is listed last.





¹¹ An ecosystem is all the plants and animals that live in a particular area together with the complex relationship that exists between them and their environment.


Table 6: Different habitats types

Habitat name	Species richness score ¹²	Photo example
Calcareous Grassland – unimproved and semi-improved	43.02	
Broadleaved and Yew Woodland - Mixed, Part and Part Montane habitats	20.91	
Neutral grassland – unimproved and semi-improved	20.44	

¹² This score is the average total number of plant species per 200m² plot normally present within that habitat type. Scientific analysis has shown that the diversity of animal species increases in areas of land with greater plant species diversity.

Habitat name	Species richness score¹²	Photo example
Acid Grassland – unimproved and semi-improved	19.58	
Bracken	19.29	
Inland rock	16.74	

Habitat name	Species richness score ¹²	Photo example
Dwarf Shrub Heath	15.87	
Tall Ruderal	15.87	
Improved Grassland	14.28	
Coniferous Woodland	14.05	

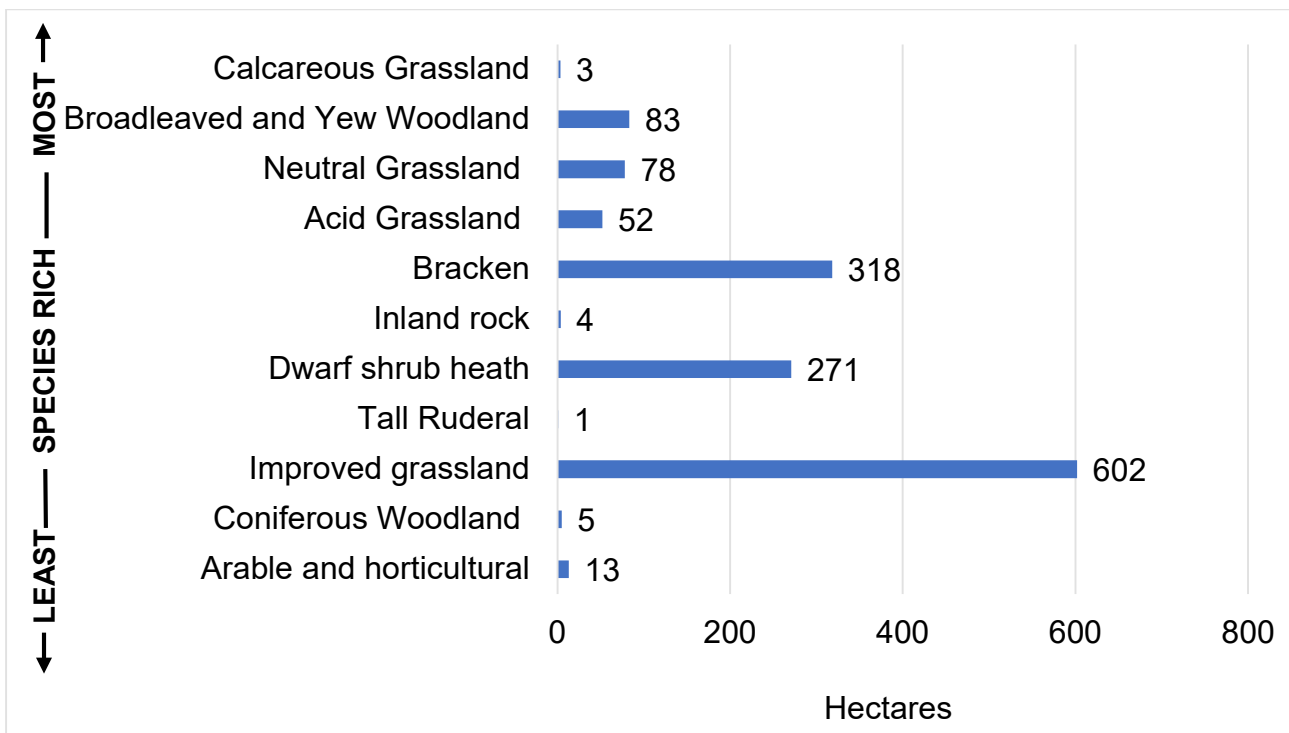
Habitat name	Species richness score ¹²	Photo example
Arable and horticultural	10.25	

The graph below describes the amount of land the Council owns and operates in each habitat type of varying species richness.

62% of Council owned and operated land is in the lowest categories of species richness.

38% of Council owned and operated land is in the highest categories of species richness.

Chart 6: Amount of land Denbighshire County Council own and operate in each habitat type of varying species richness



In addition, there are a number of important habitats which support a wide range of species which the Council is fortunate to have in its ownership, but are not included in our species richness baseline due to limitations in the habitat categories available in the measurement methodology. These include rivers, streams, and the important dune systems and shingle habitats on Denbighshire's coastline which are home to a variety of rare and specialised plants and animals. These include the last colony of Little Tern (species of bird) in Wales, along with Sand Lizard and Natterjack Toad which were reintroduced here after becoming extinct in Wales.

The Council produce a report every three years on what we have done to comply with the Environment (Wales) Action 2016 statutory duty to maintain and enhance biodiversity and promote the resilience of ecosystems¹³. The [latest report](#) was produced in 2019 for the period 2016-19 and provides additional detail with regard to the Council's Ecologically Positive starting point¹⁴.

Where do we want to get to?

To achieve our Ecologically Positive goal, the Council needs to increase the percentage of our owned and operated land that has a higher species richness.

This can be achieved by restoring and changing how we manage land that we currently own and operate to increase species diversity, and by increasing the land ownership therefore creating new spaces (ecological niches) for nature.

The Council's percentage of owned and operated land in the lowest categories of species richness should be lower than the percentage of Council owned and operated land is in the highest categories of species richness for the Council to achieve its Ecologically Positive goal. The table below describes the percentage change expected by 2030.

¹³ The full title of this duty is "The Biodiversity and Resilience of Ecosystems Duty" but is often referred to as the Environment (Wales) Action 2016 Section 6 duty.

¹⁴ You can [read Denbighshire County Council's report \(PDF\) on the Wales Biodiversity Partnership website](#).

Interim targets for what we expect by Year 3 (2023/24) and by Year 6 (2026/27) of the 9-year programme are provided

Table 7: Percentage change in habitats of lowest and highest species richness

Species richness categories	Starting Point	2030 end goal	Projected % in Year 3 (2023/24)	Projected % in Year 6 (2026/27)
Lowest categories of species richness	62%	Reduce to below 49% or lower	Reduce to 57.7% or lower	Reduce to 53.3% or lower
Highest categories of species richness	38%	Increase to above 51% or higher	Increase to 42.3% or higher	Increase to 46.7% or higher

There are a number of important habitats not included in our baseline, due to limitation of the measurement methodology, which support a wide range of species which the Council is fortunate to have in its ownership. Over the 9 years the council will continue to protect, restore and increase the extent of these habitats for the protection and enhancement of biodiversity.

The Council own and manage specific habitats which are of cultural historical importance and/or managed to support and conserve rare species which we may choose to continue to manage in a focused way. These habitats may support a lower species diversity than other more common habitats, but the plant and animal communities which it does support are often rare and specialised, and can be found nowhere else in Denbighshire. An example of this is Heather Moorland, which is an important feature of the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty.

A postcard from the future is included below as a way of bringing these figures to life through story telling- providing an example of how the Council might have gone about achieving its 2030 target.

Postcard 4: Ecological Positivity

Dear 2020 Council, Year 2030 here! Not wanting to give you spoilers but here's some of the headlines on how you've achieved ecological positivity...



It's now second nature for officers to review the biodiversity value and impact of every project, intervention or activity the Council undertakes and to deliver the activity in a way that provides a positive impact for ecology. Every opportunity is taken to do no harm to biodiversity in Council operations but where harm is unavoidable plans are made and delivered which leaves biodiversity in a better state than when we started.

Through collaborative efforts across departments improved grassland habitats (which support a lower species richness) have been converted into neutral grassland (which support a higher species richness) increasing biodiversity in the county. This has been achieved by expansive changes in cutting regimes to allow for natural regeneration as well as deliberative sowing of meadow / wildflower seeds.

For the greatest combined benefit, the hectares of broadleaf and mixed woodland owned by the Council has increased. The Council over the 9 years has converted existing land of low species richness, and bought new land, turning it into carbon sinks and wildlife havens via carefully selected tree planting including elements of species rich grassland.

The Council has actively made space for nature, adopting a natural regeneration approach free from mechanical intervention developing sites into ecological exemplars. Core aims in this work to reconnect people with nature have been achieved through opportunities for recreational access and the work has inspired a new generation of naturalists who understand the importance of our natural environment, and how to protect it. University students visit to learn about the abundant biodiversity that surrounds.

What changes and actions will help us get there?

Changes to Council processes and policies

To achieve our ecologically positive goal by 2030 will require the Council to adjust how it goes about delivering the wide range of work and tasks required of us by Welsh Government, by our partners and by our communities.

In Summer 2020 virtual workshops were held with the management teams of every service area that make up the Council to start the task of identifying the ways we could change how we do things to contribute to protecting and improving biodiversity. This built on ideas generated by the public during the public engagement event held in early 2020.

Over 25 suggestions for processes and policies changes were identified and our aim is to implement as much as we can of these working over the 9 years.

The list below highlights some of the priority changes to Council processes and policies that we hope to make in Year 1 to 3 (2021/22 - 2023/24) of delivering this strategy to support the Council to successfully achieve its ecologically goal by 2030.

This is a dynamic and flexible list; other things may be implemented that do not feature in the list below responding to new opportunities.

- 1.** Through engagement and communication ensure service based objectives align with the corporate ambition to become Ecologically Positive.
- 2.** Implement the Council's change in constitution to have regard to tackling climate and ecological change, including changes to business case templates.
- 3.** In consultation with staff and the unions, work to include in every member of staff Job Description their responsibility around climate and ecological change.
- 4.** Review our Volunteering policy to ensure opportunities for environmental improvement placements are promoted.

5. Continue and expand to more roads the Denbighshire County Council Highway Rural Verge/Grass Cutting Policy (A, B and Unclassified Roads).
6. Develop a Pollinator policy.
7. Introduce a new outdoor light replacement policy to protect bats and insects - a warm white spectrum (<2700Kelvin) and luminaires feature peak wavelengths higher than 550nm.
8. Review Environmental Standards for grounds maintenance conducted throughout the Council to focus on increased Tree planting, less grounds maintenance to support biodiversity. Avoid removal of green space.
9. Develop a Tree & Woodland Strategy.
10. Ensure the new Asset Management Strategy 2021 onwards aligns with the corporate ambition to become Net Carbon Zero and introduce a new asset disposal and acquisition policy which is supportive in retaining or/and buying land for carbon absorption and ecological improvement purposes.
11. Investigate the potential for better land use across the county to achieve multiple objectives e.g. natural flood risk management providing space for nature.
12. Ensure biodiversity protection and improvement is being appropriately considered in Council Procurement - Policy and Strategy documents, Commissioning templates, tender evaluations.
13. Identify community benefits in Council contracts that improve the environment, delivering ecological improvement.
14. Give clear guidance to developers on our expectations on them to retain important ecological features on sites building their designs around them.
15. Start using an ecological compliance audit for planning applications to ensure mitigation, compensation and enhancement is actually installed.

16. Promotion of existing planning policies within the Local Development Plan 2006-2021 and Council's existing Supplementary Planning Guidance which contribute to ecological responsible development.
17. Delivery of the replacement LDP which takes forward local priorities for land use planning within the national policy framework. The replacement LDP will ensure emerging local priorities around climate change and biodiversity are reflected in local planning policy and decision making (e.g. policy on external lighting to protect bats, requirement for integrated nest boxes in buildings)
18. LDP Annual Monitoring Report to be an important source of information on how local land use planning supports the Council's priorities with regard to climate change and biodiversity.

Actions and projects

Becoming ecologically positive will require the Council to build on existing programmes of activity started under the Environment Priority of our Corporate Plan, in addition to delivering new projects and activity.

Over 40 ideas for projects to protect and improve biodiversity were identified in the Summer 2020 virtual workshops in developing this strategy and our aim is to implement as much as we can of those over the 9 years. In addition to other actions we might take responding to new opportunities.

The list below provides an overview of the priority actions and projects that have been identified so far that the Council hopes to deliver which will protect and improve biodiversity. Whilst the Council can be more specific for Years 1 to 3, it is more difficult to do this for years 4 onwards due to the uncertain and complex context Local Authorities must operate within.

The delivery of all projects and actions identified is subject to securing the necessary funding.

Direct Action

Years 1 to 3 (2021/22 - 2023/24)

- Complete the PLANT Project – planting 18,000 urban trees.
- Complete the Living Assets project – To maintain, enhance, protect and preserve Denbighshire's 'living assets' for future generations.
- Establish a County Tree Nursery, growing 5,000 trees a year for planting projects across the County.
- Complete the Moorland Management and Wildfire Prevention Project.
- Complete the Improving Biodiversity Project – funded from 'Well Connected Communities and Opportunities for All' grant.
- Deliver improvement and expansion projects for Denbighshire County Council allotments.
- Tender grounds maintenance contract for Housing Estates using a specification which improves biodiversity e.g. leaving areas of long grass for species diversity.
- Create an online portal to capture and report on the Community Benefit of contracts including measures around this agenda.
- Identify the Council officers who procure on a regular basis to target communication and training as to the Climate and Ecological Change agenda and the contribution that environmentally responsible procurement can make.
- Create a bank of specific carbon and ecologically related questions which could be used as part of the tender evaluation process. These should be scored and weighted appropriately as part of the quality assessment of tenders.

Years 1 to 9 (2021/22 - 2029/30)

- Identify land to plant trees and introduce wildflowers within school grounds.
- Deliver the Ash Dieback Project to limit the impact of the disease.
- Conversion of new Council land via the process of natural regeneration and targeted tree planting, enabling public access wherever possible.
- Deliver Coastal zone management and in particular our natural sea defences at Gronant Special Protection Area.

- Expand year on year the wildflower (deliberate non cut) pilot conducted in 2020 to more areas the Council owns or manages e.g. more public realm sites, Community Housing sites, Care Homes sites etc.
- Take the opportunity to embed this agenda and goals when updating the Flood Risk Management Strategy (2014) e.g. consider more greatly natural flood risk management methods which also improve biodiversity.
- Develop a series of Environment Away Days to provide team building opportunities for service areas whilst delivering biodiversity improvement work.

Years 4 to 6 (2024/25 - 2026/27)

- Deliver the Picturesque Landscape project to fence off areas and promote the return of woodland.
- Install green roofs on Council owned garages.
- Introduce wildflower planting around car park sites.

Using our influence across Denbighshire

Years 1 to 3 (2021/22 - 2023/24)

- Engage with City, Town and Community Councils on improving biodiversity via the review and update of the City, Town and Community Council Charter.
- Progression of replacement LDP to ensure emerging local priorities around climate change and biodiversity are reflected in local planning policy and decision making.

Years 1 to 6 (2021/22 - 2026/27)

- Delivery of Supplementary Planning Guidance resulting from the new Local Development Plan will support the climate change and biodiversity agenda.

Years 1 to 9 (2021/22 - 2029/30)

- Implement a programme of initiatives, working with Welsh Government and the Public Service Board, to raise awareness amongst residents and businesses in Denbighshire of the role they can play in improving biodiversity.
- Work with landowners in Denbighshire, including the Council agricultural tenants, to encourage the management and use of land for the benefit of ecological improvement and biodiversity.
- Carry out two Volunteer Programmes per year within Countryside Services for the public to contribute to this agenda.
- Implement a programme of initiatives and engagement with schools across the County to share learning and resources on this agenda and encourage positive behaviour change.
- Promoting the 'Green Spaces for Health' programme delivered by Betsi Cadwaladr University Health Board for NHS sites and initiatives based in Denbighshire.

Financial strategy to support strategy and action plan

The financial position faced by local authorities remains very tough. Funding cuts over a sustained period mean that we have a lot less money to invest in services now than we have in the past. Financial pressures are likely to continue in areas such as social care and on top of this the Council is committed to supporting our communities and businesses to recover from the impact of the Coronavirus pandemic.

Despite the difficult situation we are faced with, this council has a clear ambition to make our contribution to tackle the climate change and ecological emergency.

This document sets out the ambitions to become net carbon zero and ecologically positive and the range of changes and actions the Council could do to achieve those goals. Some of changes and actions will require capital investment, others revenue funding, and some may be delivered at no additional cost.

To deliver this strategy over the next 3 years (2021/22 – 2023/24) we think it will cost in at least £9 million pounds in total to deliver the projects needed to achieve all that we'd like. We suspect we will need to invest a similar figure every 3 years (2024/25 – 2026/27 & 2027/28- 2029/30) leading up to 2030.

Although the investment figure to achieve net carbon zero and ecologically positive is a large sum, the council will not have to provide all of this money itself. We expect that grants from the Welsh Government, National Government and supporting bodies will be available to help fund the planned work over the 9 years and it is expected that opportunities for securing external grant funding over the 9 years will be maximised upon.

To pay for the capital investment identified, we will need to commit revenue budget and cash to this priority. In the current financial climate, this will mean there is less money available for other things the Council may wish to deliver. It is likely that a proportion of the investment required would be generated through prudential borrowing.

We have measures in place to ensure all individual capital investment decisions we take are based on robust business cases and that the overall debt financing position is carefully monitored and remains affordable and sustainable. Our revenue budget plans and processes are well established and will enable us to manage affordability.

Affordability is the greatest risk in the Council being able to achieve its net carbon zero and ecologically positive goals. However, this Council remains committed to implementing the changes and actions needed to make our contribution to tackling climate and ecological change wherever and whenever we are able.

How progress will be monitored

This strategy will be delivered as a programme of activity, coordinated centrally with input and effort by officers from across the Council's service areas working with our partners where applicable.

The person accountable for achieving these goals is the Council's Chief Executive as operational Sponsor for the Programme of work. Political steer is provided by the Lead Member/s in Cabinet with the areas of responsibility (known as 'Portfolios') covering Climate and Ecological Change.

The Council will calculate its carbon emissions, its carbon absorption and the species richness on its land in April- June each year to see how the Council performed on these Net Carbon Zero and Ecologically Positive metrics in the previous financial year (April – March). The Council will submit its carbon emissions and carbon adsorption data to Welsh Government each year, starting in 2021, as part of the new Welsh Public Sector Greenhouse Gas Reporting Regime.

Progress in achieving the goals set out in this Climate and Ecological Change Strategy will be monitored by a committee called the Corporate Plan Board. The Corporate Plan Board is made up of all the Councillors who are members of Cabinet and all Heads of Service, Directors and the Chief Executive.

Key performance measures and programme highlights will be integrated into the Corporate Plan performance report which is scrutinised quarterly through SLT, Cabinet and Scrutiny, and annually by Council.

A 12-month review paper will be taken to Full Council each year highlighting progress made and next steps referring back to the Council's Climate Emergency Declaration.

The Council's progress on achieving the Net Carbon Zero and Ecologically Positive 2030 goals can also be scrutinised by Internal Audit and Scrutiny Committees at appropriate points over the 9 years and at the discretion of the Chief Internal Auditor and Scrutiny Chairs and Vice Chairs.

The strategy document will be formally reviewed and refreshed every 3 years up until 2030 (2023/24 and 2026/27).

How we will share our learning

Climate and ecological change is the globally defining challenge of our time. It will require everyone to contribute to its solution- pooling effort, knowledge and resources.

The Council's approach to achieving Net Carbon Zero and Ecologically Positive Council is open and collaborative. The Council looks forward to learning from others, maximising on opportunities together as well as sharing our experience over the 9 years to 2030.

Denbighshire County Council will continue to work with our Public Sector Partners via the Public Service Board¹⁵, including Betsi Cadwaladr University Health Board, on our collective 'Environmental Resilience' priority, sharing learning from our efforts in achieving Net Carbon Zero and Ecologically Positive Council goals and seeking advice from others.

The Council will share its learning with City, Town and Community Council's within Denbighshire. Working with Local Government partners via the Local Government Decarbonisation Strategy Panel, and other opportunities, the Council will look to influence Welsh Government to simplify and make consistent the existing policy and legislative landscape, facilitate the increased impact by working at scale, support the increased engagement and behaviour change work with communities and provide resourcing which reflects the magnitude of the climate emergency we are all facing.

Latest news, advice and opportunities to get involved will be posted on the Council's [corporate website](#) and the Council Consultation portal. We will issue an e-newsletter every 6 months updating on the Council's work on this agenda and we aim to host a public engagement event once a year. We will share our learning with businesses across Denbighshire via our business communication channels managed by the Council's Economic and Business Development Team.

¹⁵ The Public Service Board (PSB) is a partnership of public service agencies who work together to improve local services. [A list of current Conwy and Denbighshire PSB partners can be found on the PSB website.](#)

Members of the public can register for the climate and ecological change sub group of the Council's [Y Panel](#) and take part in online discussion forum on climate and ecological change themes.