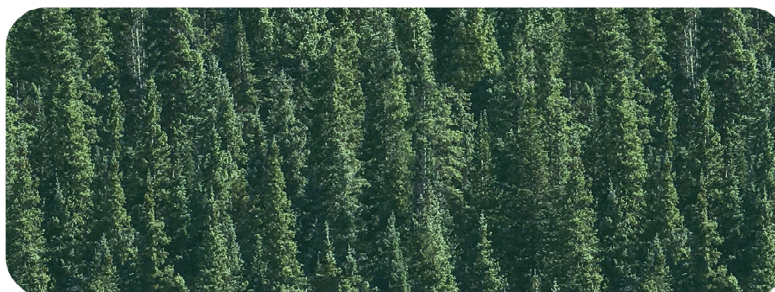


Climate and Nature Emergency Plan

Annual Report 2023/24



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1. Foreword by the Council Leader

I am pleased to present this report which summarises the work that Cyngor Gwynedd has been leading during 2023/24 in delivering our Climate and Nature Emergency Plan 2022/23 - 2029/30. This is the second year we have been implementing the Scheme, and I am pleased to see that we have further developed our work in a number of areas, and started some other projects from scratch. It must still be remembered that our purpose is that "Gwynedd Council will be net-zero carbon and ecologically positive by 2030."

As you browse through this report you will see many examples of project work succeeding in gradually moving us towards the goal of becoming a net zero council. Working in partnership with others enabled the expansion of the Snowdon Sherpa bus service, the introduction of 'fflecsi' services and the introduction of a fleet of electric buses on the T22 route between Blaenau Ffestiniog, Porthmadog and Caernarfon. This change has helped reduce petrol and diesel car journeys and offers residents and visitors more choice on how to get around the county.

We are building on years of experience in converting our buildings and fleet to be less energy consuming and emitting less carbon, and the installation of heat pumps, LED lighting, electrified fleet and chargers will take us several steps further on that journey. We have invested money from the council's coffers

in this work, which resulted in significant funding being attracted through external grant schemes.

This additional external investment is absolutely necessary to the success of our work in the climate and nature fields. The cost associated with the work is huge, while at the same time the budget we have is reduced. We simply need to achieve more but with fewer resources.

Our focus, going forward, is on looking creatively at how we can use our scarce resources, and we will be working with other partners across north Wales and with our local communities to push this vital work forward.

Councillor Nia Jeffreys
Leader of Cyngor Gwynedd



2. Background

Cyngor Gwynedd has made it clear that responding to the climate and nature emergency is one of its priorities, and a Green Gwynedd is one of 7 priority areas in the [Cyngor Gwynedd Plan 2023-2028](#).

To understand more about what the Council is trying to achieve, please turn to the [Climate-and-Nature-Emergency-Plan.pdf \(llyw.cymru\)](#) (CNEP) which was adopted by the Cabinet in March 2022.

The ambition of the Plan is "Cyngor Gwynedd will be net-zero carbon and ecologically positive by 2030."

The ambition corresponds with the Welsh Government's target for joint public sector organisations to be net-zero carbon by 2030 and for Wales to be a net-zero country by 2050.

Our Climate and Nature Emergency Plan includes several projects within the main themes –

- buildings and energy
- movement and transport
- waste
- governance
- procurement
- land use
- ecology

This report will provide an insight into the progress that has been made in each of the CNEP's projects during the 2023/24 year, which is the second year the plan has been operational.

The plan is regularly monitored by the Climate and Nature Board, which has a membership of officers and Cabinet Members and representatives from scrutiny committees.

[This Annual Report was scrutinised at a meeting of the Communities Scrutiny Committee on 23 January 2025 and will be discussed at a meeting of Cyngor Gwynedd's Cabinet on 11 February 2025].

3. Section 6 of the Environment (Wales) Act 2016

Our Climate and Nature Emergency Plan (CNEP) declares our ambition to be "... ecologically positive by 2030". One of the steps we can take to make this a reality is to act on the contents of Section 6 of the Environment (Wales) Act 2016.

According to Section 6 of the Environment (Wales) Act 2016, public authorities operating in Wales have a duty to maintain and improve biodiversity and to promote the strength of ecosystems. While our protected sites and species are important, the requirements of Section 6 relate to taking action to protect nature in our towns, cities, public spaces and the wider landscape, through practical action, and in the organisation of all public actions.

The Welsh Government published a national biodiversity strategy, namely the 'Nature Recovery Action Plan' in 2015 which outlined the commitment to reversing biodiversity loss in Wales, and the objectives for action. It contains 6 objectives for nature recovery in Wales:

Objective 1: Engage and support participation and understanding to embed biodiversity throughout decision-making at all levels

Objective 2: Protecting species and habitats of paramount importance and improving their management

Objective 3: Increasing the resilience of our natural environment by restoring degraded habitats and creating new habitats

Objective 4: Addressing key pressures on species and habitats

Objective 5: Improving our evidence, understanding and monitoring

Objective 6: Implementing a governance framework and support for achieving the objectives

To comply with the duty of Section 6, public authorities must publish a plan of their own outlining what they intend to do to maintain and enhance biodiversity and encourage resilience. Welsh Government guidance states that public bodies should consider basing their Section 6 duty scheme too on the national Nature Recovery Action Plan.

Cyngor Gwynedd is currently developing a revised Nature Recovery Plan, but in the meantime, we have also included relevant information in the CNEP. While nature conservation

and biodiversity has been woven throughout the CNEP, the Land Use and Ecology sections list the projects that will focus specifically on this work.
























At the end of each section of this annual report you will find a description of how the work that has been undertaken

contributes to the realisation of one or more of the above 6 objectives, which in turn comply with Section 6 of the Environment (Wales) Act 2016.

Here is a summary of the link between the Climate and Nature Emergency Plan projects and the Objectives of Section 6:

Section 6 of the Environment (Wales) Act 2016

Climate and Nature Emergency Plan

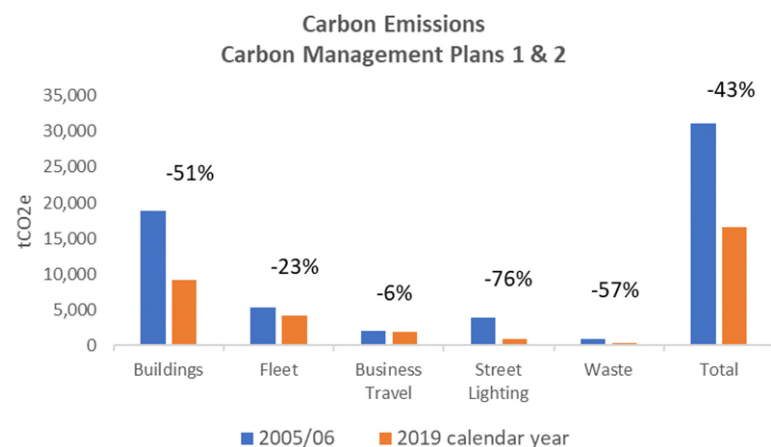
	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6
Buildings and Energy						
Movement and Transport						
Waste						
Governance						
Procurement						
Land Use						
Ecology						

4. Reaching the Current Situation

Prior to the existence of the Climate and Nature Emergency Plan the Council had already been taking action for years to try to reduce our carbon footprint. The Carbon Management Plan 1 was published in 2010 and the Carbon Management Plan 2 in 2015. 2005/06 was used as the baseline year to measure the data in both plans.

By investing around £8m in energy consumption reduction measures between 2010 and 2019, we managed to reduce our carbon emissions by 58% in the areas of buildings, business travel, street lighting, fleet and waste.

The reduction per field can be seen in the graph below and it is fair to say that our efforts have resulted in national recognition several times:



Measuring our Carbon Emissions

When the council implemented Carbon Management Plans 1 and 2, we followed the Carbon Trust's recognised carbon emissions measurement methods, and measured progress in 5 areas as indicated by the chart. Since 2019, the Welsh Government has adopted a different system of measuring carbon data and therefore the CNEP has used year 2019/20 data as a new baseline. As there are slight variations between the two measures it would be misleading to make a direct comparison between carbon data before, and after, 2019.

We are now also measuring our carbon emissions in additional areas – procurement, staff commuting, and working from home (since 2021/22). We also measure how much carbon our lands absorb, and in offsetting that figure against total emissions we get a net figure, which is the gap to reach net zero.

5. Carbon Emissions and Sequestration 2023/24

Our gap to net zero (**including** procurement) in 2023/24 was 58,181,467 kgCO₂e.

Our gap to net zero (**without** including procurement) in 2023/24 was 17,430,668 kgCO₂e.

Emissions
61,277,760
kgCO₂e



Absorb
3,096,293
kgCO₂e

Gap to Net Zero
17,430,668
kgCO₂e

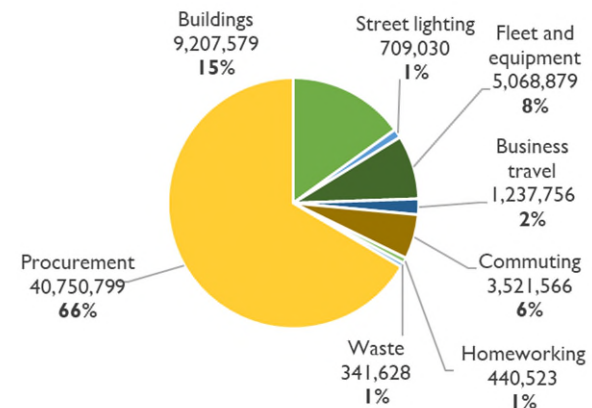
Carbon Emissions

The first chart opposite shows our carbon emissions over 8 headings and includes procurement emissions (purchases of goods and services).

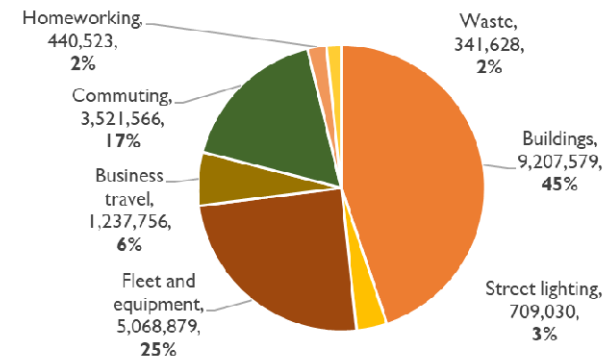
The methodology of measuring carbon emissions resulting from our procurement processes is imperfect because it is based on how much money we spend. The more we spend the greater the emissions.

As the procurement data can create an imperfect picture, the second chart opposite presents data for the remaining 7 headings after procurement is disregarded.

Carbon Emissions kgCO₂e
INCLUDING Procurement 2023/24

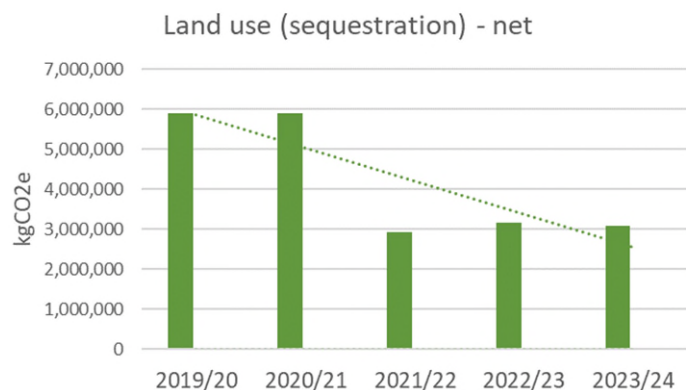


Carbon Emissions kgCO₂e
NOT INCLUDING Procurement 2022/23



Carbon Sequestration (Absorb)

As the chart below shows, carbon absorption levels on Council lands have fallen by 47% between the baseline year 2019/20 and 2023/24, and decreased by 2% between 2022/23 and 2023/24. This is partly because there is a change in the methods of calculation but also because we now own far fewer hectares of land.

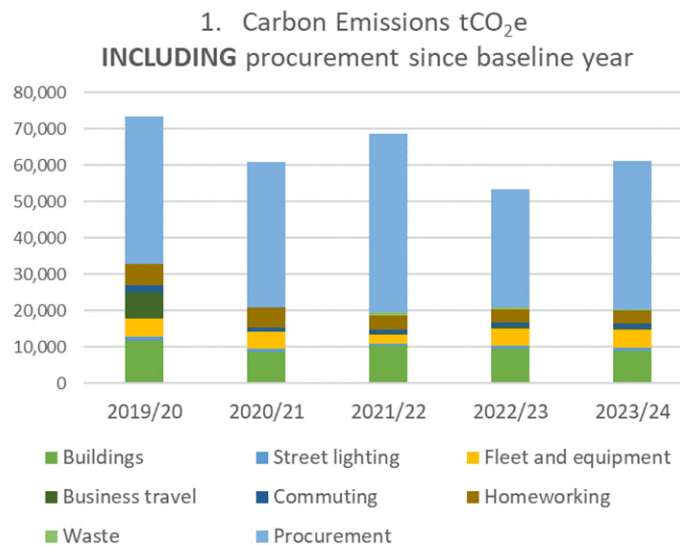


Where are we on the journey of reaching net zero by 2030, and does the 2023/24 data show we are on the right track?

Chart 1 opposite shows that Gwynedd Council's total carbon emissions, including procurement, fell by 16% between the baseline year 2019/20 and 2023/24. If we rule out procurement then the fall is 37%.

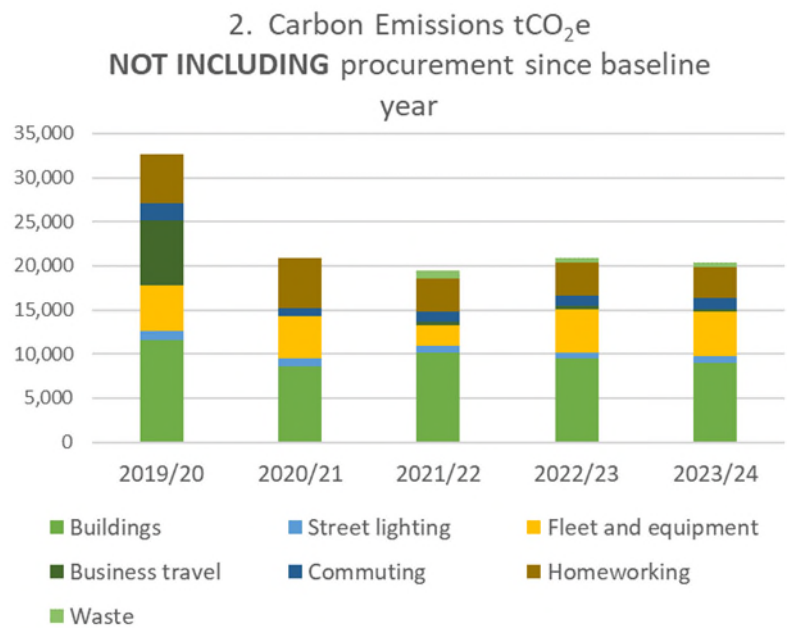
Our procurement emissions increased by just under 1% between the baseline year 2019/20 and 2023/24 but there was a 25% increase in procurement emissions between 2022/23 and 2023/24 which is based on an £11m increase in spending in care, construction and transport.

It has already been noted that the method of measuring procurement emissions is imperfect, and increases in inflation in recent years, coupled with other inevitable rising costs, have led to this reflection that carbon emissions have increased.



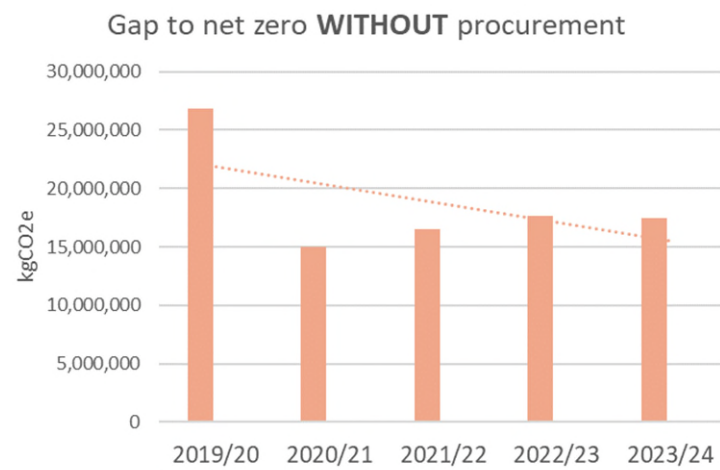
As the procurement emissions data can paint an imperfect picture, chart 2 shows that emissions for the other 7 areas together fell by 37% between 2019/20 and 2023/24 ('working from home' was not measured in 2019/20).

A 2% decline was also seen between 2022/23 and 2023/24. However, there is variation between the 7 areas and 5 areas have seen an increase in 2023/24 on the previous year, namely: Fleet and Equipment, Street Lighting, Business Travel, Waste and Procurement although emissions are still lower than 2019/20 in all categories except procurement. More information on the reasons behind the increase can be found in subsequent chapters.



Gap to Net Zero

Looking at our carbon emission and sequestration data, without taking into account procurement data, then our gap to net zero is 35% smaller in 2023/24 compared to 2019/20 and 1% less than 2022/23.



6. Buildings and Energy

Carbon emissions from buildings and energy in 2023/24 are 45% of the total (not counting procurement), representing a 22% reduction from 2019/20 and a 5% reduction from 2022/23.

Carbon emissions from street lighting in 2023/24 are 3% of the total (not counting procurement), representing a 36% decrease from 2019/20 and an 11% increase from 2022/23.

What did we say we would do in 2023/24?

Short-term Priorities 2022/23 – 2023/24

Projects:

1. Aim for long-term benefits when planning construction or building renovations.
2. De-carbonise the Council's energy supply.
3. Use Passivhaus low carbon construction methods in developing our innovative housing pilot scheme.
4. Offer advice and information to Gwynedd residents about the benefits and opportunities of using low carbon building methods when building homes and low carbon heating/energy systems to maintain a home.
5. Set individual room heating regulations to reduce the energy required to heat a building.

6. Upgrade streetlights and traffic signs to use less energy.
7. Improve the energy infrastructure in Gwynedd and north Wales to maintain low carbon energy and transport systems.

What did we do?

Project 1 – The work of improving the fabric of buildings to make them more energy efficient (projects 1, 9 & 14) is ongoing work that has been underway by us as a Council for over a decade. This work continued during 2022/23, as well as exploring if any new work needs to be undertaken in the future.

Projects 2 and 7 – Throughout 2023/24, the Council worked with Ambition North Wales, the ARUP company and local stakeholders to develop a Local Energy Plan. The Local Energy Plan intends to create an integrated low carbon energy system for Gwynedd, improving existing infrastructure which will in turn support all sectors to transform their current energy use. The plan is expected to be completed by September 2024, after which discussions will continue to establish arrangements to be implemented in collaboration with regional and national partners.

Project 3 – Passivhaus principles are a consideration as the Council plans new buildings, e.g. Ysgol Bontnewydd. The exact

construction methods are agreed on a development-by-development basis.

Project 4 - We offer support and advice to Gwynedd residents on how to save energy and money through the Nest and Eco 4 schemes. Our tackling poverty officers and energy advisers have been holding face-to-face information sessions in our communities as well as answering queries via the website or by phone. At the end of 2023/24, 278 houses had been upgraded which means spending around £10m in Gwynedd. See also the report on Project 1.

Project 5 - We have centralised systems for heat management in buildings so we do not see the need to move forward with imposing individual room heating regulations at this time. This need may change in future if the Internet of Things project (within the Cynfor Gwynedd Digital Plan 2023-28) demonstrates that there is added value to changing the current system.

Project 6 - This project to change streetlamps and traffic to LED ones started in 2016/17, and the bulk of this project was completed by the end of 2022/23, but if additional streetlights or traffic come under the Council's care then it is ongoing work to replace and maintain them. During 2022/23, the Council adopted responsibility for large parts of the A487 around Caernarfon from the North and Mid Wales Trunk Roads Agent, and as a result a large number of additional streetlamps without LED. Although we have been gradually switching each one to an LED lamp during 2023/24, electricity consumption increased

during the year due to the significantly additional amount of lighting.

Medium-term Priorities 2022/23 – 2026/27

Projects:

8. Save 5% of carbon emissions from buildings by bringing them up to the CIBSE 'good practice' standard.
9. Reduce our carbon emissions by expanding our use of solar panels to create renewable energy.
10. Electrification of building heating systems to reduce carbon emissions.
11. Install EC (electronically commutated) ventilation fans in buildings to reduce the energy needed to run them compared to normal fans.
12. Upgrade specialist lighting in leisure centres to reduce energy consumption.

What did we do?

Projects 8 and 12 – The Council's Cabinet agreed to contribute £416,617 towards the running costs of a pilot scheme to install LED lighting at 6 sites. Lighting installation has slipped due to work on the heat pumps but a large part of the work will take place in Summer 2025. The carbon and financial savings will be measured before the value of extending the scheme to replace lighting across the rest of the Council estate is decided.

Project 9 - During 2022/23, the Council's Cabinet agreed to set aside £2.8m to deliver Phase 4 of a plan to install PV solar panels

at 54 Council-owned sites to generate electricity which will result in financial savings as well as reduce carbon emissions. Work will begin to install panels on sites during 2024. The project is also currently being redesigned to take into account the need for heat pumps and electric vehicle charging points. See also the report on Project 1.

Project 10 – The Council successfully attracted a significant grant to fund a pilot project to install heating pumps at 3 sites, and the Council's Cabinet agreed to contribute 10% of equivalent costs (£175,478). Clause 1 of installing the heat pumps on school sites has started during the 2024 summer holidays and will be completed during the 2025 summer holidays. See also the link between this project and project 9.

Project 11 – Ventilation fans will be installed on 2 school sites as part of the heat pumps project (Project 10).

Long-term Priorities 2022/23 – 2029/30

Project:

13. Increase our carbon 'credit' by installing solar farms to produce energy that the Council can use or sell.

What did we do?

Project 13 – This project is not currently a priority because the financial costs of connecting to the national grid are so high, and

because the Council, under existing data reporting arrangements, cannot claim the 'carbon credit' on any electricity generated. Nevertheless, the Local Energy Plan has identified opportunities to develop solar farms and we will continue to discuss how to fund such pilot projects. See also project 9.

Ongoing Priorities

Projects:

14. Improve the fabric of Council-owned buildings to make them as energy efficient as possible.
15. Prevent the over-development of fossil fuel energy schemes.
16. Maximise the benefits that come from implementing our energy and heating policies.
17. Equipment used within Council buildings to be as energy efficient as possible.

What did we do?

Project 14 – See Projects 1 & 9.

Project 15 – This matter has been addressed in the creation of the Local Energy Plan (Projects 2 & 7), and also in the development of the Gwynedd Local Development Plan 2024-2039.

Project 16 – Projects 1-17 contribute to this aim.

Project 17 – During 2023/24, the Council adopted the Cyngor Gwynedd Digital Plan 2023-28 which includes a number of

projects that will lead to energy conservation, reduce paper use and reduce waste.

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

Objective 2: Protecting species and habitats of paramount importance and improving their management

Objective 3: Increasing the resilience of our natural environment by restoring degraded habitats and creating new habitats

During 2023/24, the Council was successful with a grant application to the Welsh Government's Sustainable Schools Challenge fund, and an investment of £12m was received to build a new school in Bontnewydd. One of the first steps in the design process was the appointment of landscape architects, and they have contributed to the design of a building that not only conserves the biodiversity on site but encourages learners to use the landscape of the whole site as a learning space. Planning on the site continues, and in consultation with pupils, nest boxes and flower meadows will be installed.

7. Movement and Transport

Carbon emissions from the Council's fleet in 2023/24 are 25% of the total (not counting procurement) which is a 1% decrease from 2019/20 and a 2% increase from 2022/23.

Carbon emissions from staff commuting in 2023/24 are 17% of the total (not counting procurement) which is a 37% reduction from 2019/20 and a 3% reduction from 2022/23.

Carbon emissions from business travel in 2023/24 are 6% of the total (not counting procurement) which is a 36% decrease from 2019/20 and a 1% increase from 2022/23.

What did we say we would do in 2023/24?

Short-term Priorities 2022/23 – 2023/24

Projects:

1. Move away from using fossil fuel vehicles towards a fleet of ULEV (ultra low emission vehicles) vehicles (cars and vans).
2. Install electric vehicle charging points for Council vehicles.
3. Install electric vehicle charging points for Gwynedd residents.
4. Reduce business travel.

5. Reduce carbon emissions and parking problems in areas that are popular with visitors.

What did we do?

Project 1 – The Council adopted our Green Fleet Plan 2023-29 in January 2023 and the Council subsequently joined a national scheme for public organisations to jointly purchase EV vehicles to save money and speed up delivery time. The Council's Cabinet agreed to contribute £1,048,400 towards the costs of buying 67 cars and vans during 2023/24 and 2024/25. Delivery of the ordered vehicles was delayed but 44 electric vehicles arrived in March 2024.

Project 2 – The Council successfully attracted a grant of £66,346 to install charging points for Council vehicles on 10 sites. By the end of March 2024, there were 14 charging points operational at 5 sites, with a programme of work to install further points over an additional 20 sites having already commenced during 2023/24.

Project 3 - By the end of 2023/24, the Council had 16 public charging points operating at 8 locations and an additional 7 charging points at 4 Council-owned sites managed by Transport for Wales. As a Council, we are working with Transport for Wales and Eryri National Park in planning the locations of public charging points. A much higher number of machines have been

installed but we are waiting for the electricity connection to be authorised. Our ongoing programme to install a total of 114 public charging points continues during 2024/25 and we will review it when assessing future needs.

Project 4 – As a Council, we hold a number of internal and public meetings virtually, including all major Council meetings – Full Council, Cabinet, Scrutiny, Planning – significantly reducing the need to travel to workplaces. This approach has resulted in a significant 36% reduction in carbon emissions from business travel since 2019/20. Despite this, there was a slight increase of 1% between 2022/23 and 2023/24 as more journeys were made in petrol and diesel cars as more meetings returned to being face-to-face meetings following the lifting of restrictions that existed during the Covid-19 period.

Work has already begun to reduce carbon emissions and the financial cost of business travel, by moving the journeys to be using the fleet of electric vehicles bought by the Council or public transport. Over the next few years we should see the carbon emissions of business trips fall further.

Project 5 - One of the great successes of an integrated transport system is the Sherpa'r Wyddfa bus service which started in 2022, namely a network of bus services around the Wyddfa catchment area. The Council is one of the partners that developed the provision, which aims to increase active travel options and reduce parking problems at popular spots in Eryri. The service was further extended during 2023/24 and now serves a wide catchment area from Bangor to Betws-y-Coed to Morfa Bychan. This will reduce the number and distance of

journeys in personal cars while reducing Gwynedd's carbon emissions as a county.

A review of the cross-county public bus network was completed and the views of users were gathered, resulting in a new network being introduced to the Dyffryn Nantlle, Caernarfon and Meirionnydd areas. New services and timetables were introduced; standard ticket prices; increasing the frequency of service between Barmouth and Porthmadog; improving integration between local and Transport for Wales services; introducing a 'Flexi' service in Dyffryn Dulas and Dolgellau.

A brand new T22 service was also introduced between Blaenau Ffestiniog – Porthmadog – Caernarfon which uses electric buses only which are charged from a new electricity depot in Porthmadog.

Long-term Priorities 2022/23 – 2029/30

Project:

6. Have low carbon or zero carbon fuel options for the Council's heavy fleet

What did we do?

Project 6 - Converting the fleet of heavy vehicles to electricity or hydrogen use is a long-term process, but Council officers are working with Ambition North Wales on their Hydrogen Hub project and with the Welsh Local Government Association to share new developments and good practice among local authorities.

Ongoing Priorities

Projects:

7. Reduce carbon emissions through staff commuting habits
8. Encourage active travel among staff – in the interests of health and well-being and to reduce carbon emissions
9. Encourage active travel among residents and visitors to Gwynedd to improve physical and mental well-being and reduce carbon emissions of short car journeys
10. Increase opportunities for community organisations to access EV or ULEV vehicles or use low carbon technology

What did we do?

Projects 7 and 8 - The Council has a Green Car Scheme and a Green Bike Scheme available to most staff, which are salary sacrifice schemes to lease an electric/hybrid car or a new bike. We have been encouraging staff to take full advantage of these opportunities, holding several open days to pilot electric bikes. A

total of 58 bikes and 14 electric or hybrid cars have been leased by our staff during 2023/24.

We have also been investigating other commuting options that may be available to staff, and are in discussions with community organisations to run pilots to provide alternatives to the private car. These schemes will become operational during 2024/25.

The Gwynedd and Anglesey Public Services Board, of which the Council is a member, also discussed the Active Travel Charter during 2023/24, and went ahead with adopting the charter in early 2024/25.

Project 9 – Several projects have been completed during 2023/24 that will improve existing provision or provide new active travel opportunities for residents and visitors alike – Safe walking and cycling routes on Ffordd Penrhos, Bangor; the improvement of Lôn Las Ogwen; the installation of cycle shelters at Ysgol Cymerau, Pwllheli; Ysgol Godre'r Berwyn, Y Bala.

See also Projects 5, 7 & 8 above.

Project 10 - The charging point for the Council's fleet at its car park in Caernarfon has also been used by agreement to charge a community electric car run by social enterprise Deg/Co-wheels.

Further observations

2023/24 was a year when work programmes across the Council were back to levels similar to what they were before the Covid-19 pandemic. In comparison with 2022/23, this has meant an increase in the litres of fuel (petrol and diesel) used to run equipment at recycling and highway maintenance centres. Our heavy vehicles were out gritting more frequently during the cold weather of January and February, and there has also been an increase in journeys to carry out care visits.

The Council had 17 electric vehicles during 2023/24 which has led to the reduction in carbon emissions since 2019/20. However, as it was the end of the financial year when we received the 44 new vehicles, we will not see the benefit until we measure the carbon emissions of 2024/25.

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

Objective 2: Protecting species and habitats of paramount importance and improving their management

One of the positive side effects of increasing the provision of public transport in the Eryri area (Project 5) is that the incidence of irresponsible and dangerous parking has reduced. In turn, this has helped to protect biodiversity on road verges and near locations that support fragile biodiversity.

Objective 3: Increasing the resilience of our natural environment by restoring degraded habitats and creating new habitats

Projects 5, 8 and 9 above run alongside the Council's work to maintain public rights of way, and to maintain grounds. Whilst looking after the county's network of 'lonydd glas', cycle and walking paths we have been protecting path and road verges to maintain and enhance biodiversity.

The Rights of Way Improvement Plan was adopted by Cyngor Gwynedd's Cabinet on 22 November 2022. Cyngor Gwynedd is responsible for a Rights of Way network which is approximately 3,800km long and open to pedestrians, horse riders, cyclists, horse and cart and motor vehicles.

8. Waste

Carbon emissions from Council waste in 2023/24 are 2% of the total (not counting procurement) which is a 95% reduction from 2019/20 and a 6% increase from 2022/23.

What did we say we would do in 2023/24?

Short-term Priorities 2022/23 – 2023/24

Projects:

1. Promote a circular economy in order to reduce the number of items being disposed of and reducing carbon emissions in the supply chain from the purchase of new goods
2. Reduce the amount of street waste that is disposed and increase the amount of street waste that is recycled
3. Reduce paper use

What did we do?

Projects 1, 4, 5 and 6 – The Council worked closely with a number of community initiatives on new projects to boost the circular economy in Gwynedd, all funded by Welsh Government. The following projects ran successfully during 2023/24: Green Shed with Antur Waunfawr, Ar y Lôn with Msparc, Ffiws spaces, Repair Cafés, and work has started on the Hwb Werdd (Green

Hub) in Penygroes by Siop Griffiths and Hen Bost in Bethesda by Partneriaeth Ogwen.

Project 2 – We completed a work programme of installing public recycling bins on popular beaches and started the programme of installing the bins at our temporary camping sites, Arosfan. We are continually assessing the need to install public recycling bins at sites across the county. The Council also worked with Wrap Cymru to review our street waste data collection processes which have generated discussions about having a dedicated vehicle to collect recycling from public bins.

Project 3 – Following an assessment of paper use in our offices, it was decided to change our printing practices, and by 2023/24 we were not printing papers for meetings unless there was a reasonable exception for doing so. We also reviewed our printers and photocopiers hire agreement and arrangements will change during 2024/25 with the aim of significantly reducing paper consumption and saving energy.

Medium-term Priorities 2022/23 – 2026/27

Project:

4. Reduce the number of items arriving at waste incineration sites by encouraging people to repair and re-use (Repair Cafés)

What did we do?

See Project 1 above.

Ongoing Priorities

Project:

5. Repair and modify equipment that would otherwise be disposed of and incinerate, and sold
6. Reduce food waste by supporting community projects seeking to re-distribute food that would otherwise be discarded

What did we do?

Project 5 – See Project 1 above.

Project 6 – £32,000 of grant funding was distributed to 12 community groups during 2023/24 to run food schemes that re-use food for social purposes and reduce waste (food poverty, food clubs to respond to isolation). Although the schemes were successfully carried out, all groups reported that the amount of residual food collected was decreasing, probably because there

were fewer donations from the public and less residual food available from shops.

Further observations

When talking about 'waste', we are referring to waste generated by Gwynedd residents and businesses, and not the waste that Cyngor Gwynedd itself is responsible for as an organisation.

The 6% increase in carbon emissions from waste between 2022/23 and 2023/24 stems from several different reasons:

The factors to calculate the emissions change slightly from year to year, which make it difficult to compare like-for-like between one year and the next. Due to the increased calculation factors of 2023/24, there is a higher carbon 'cost' to our waste. If we had used the 2022/23 calculation factors in 2023/24, then we would have seen a 2.6% increase.

The increase in emissions is based (ironically) on the positive steps of sending more tonnes of waste for recycling. Between 2022-23 and 2023-24, an increase was seen in the tonnage of recycled materials (+3%), garden waste sent for composting (+5%), and nappies sent to a treatment plant (+4%), although there was a reduction in food waste processing (-7%).

However, there has been a slight increase of 0.75% in our residual waste that has to be incinerated in a facility that converts the waste into energy (*Energy from Waste*), and work continues to change the habits of residents and businesses to further reduce this figure.

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

Objective 1: Engage and support participation and understanding to embed biodiversity throughout decision-making at all levels

When developing the projects involved in the scheme to boost the circular economy, we consulted continuously with all our community partners, and officers at many levels within the Council have been considering the impact of the projects on biodiversity.

Objective 2: Protecting species and habitats of paramount importance and improving their management

Objective 3: Increasing the resilience of our natural environment by restoring degraded habitats and creating new habitats

Objective 4: Addressing key pressures on species and habitats

Projects 4, 5 and 6 above contribute to objectives 2, 3 and 4 as our food hubs and community gardens have assessed their

influence on biodiversity and developed them in a way that will not harm the surrounding environment.

9. Governance

What did we say we would do in 2023/24?

Short-term Priorities 2022/23 – 2023/24

Projects:

1. Share information publicly about the work the Council is doing to reduce carbon emissions to encourage others to change habits
2. Support communities to plan and deliver local solutions to local needs

What did we do?

Project 1 – We regularly share information about projects the Council is involved in through our social media and press releases, and also share information about opportunities to save energy and money through the Nest and Eco4 schemes.

Resource shortages remain a barrier to us moving forward with the wider work of influencing and changing residents' habits. We have prioritised time and resources on reducing the carbon emissions directly from our own activity as a Council during the first two years of the Climate and Nature Emergency Plan. However, this does not mean that we have not been engaging and supporting our communities and residents so that everyone can play their part in the journey to net zero. We have supported local work through the Ardal Ni scheme which has highlighted that climate and nature issues are of high priority to residents in

all areas, and we continue to support the communities with their action plans. We are also involved in the work of the Gwynedd and Anglesey Public Service Board to realise their new Well-being Plan which came into force during 2023/24. One of the 3 Well-being Objectives of the new scheme is "We want to work together to support our services and communities to shift towards Net Zero Carbon".

Project 2 - Our other projects as a Council also contribute to helping and influencing residents' habits – Clean and Tidy Communities, circular economy projects such as supporting food hubs, Ffiws/Repair Café, energy saving roadshows.

Medium-term Priorities 2022/23 – 2026/27

Project:

3. Elected members and staff who:
 - understand the implications of the impact of climate change
 - make decisions based on information about the effects
 - act in the most positive manner possible towards mitigating the impact of climate change and being ecologically positive

What did we do?

Project 3 – Carbon literacy training accredited by the Carbon Literacy Project was held for 50 staff and elected members during 2023/24, and a training e-module for all staff and elected Council members was planned which was launched in early 2024/25.

Ongoing Priorities

Project:

4. Encourage staff to develop careers in areas that reduce the impact of climate change or are ecologically positive
5. Review current Council policies and strategies so that reducing carbon emissions or reducing the impact of climate change is a factor in reaching a decision

What did we do?

Project 4 – The Council has two schemes that are successful in attracting applicants, an apprenticeship scheme and a professional trainee scheme ('Cynllun Yfory') for graduates. Information sessions were held for applicants during 2023/24 and we were able to appoint a Climate Change Professional Trainee who will take up their post during 2024/25.

Project 5 – During 2023/24, Cyngor Gwynedd's Digital Plan 2023-28 was published, and this new plan includes a number of projects that will lead to reducing energy consumption and reducing paper waste. Work was also started during the year to

create the Gwynedd Local Development Plan 2024-2039, and to create a Local Energy Plan.

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

Objective 1: Engage and support participation and understanding to embed biodiversity throughout decision-making at all levels

Work has been carried out with Town and Community Councils to inform them of their duty under the Environment (Wales) Act 2016.

Objective 6: Implementing a governance framework and support for achieving the objectives

The work carried out under projects 3 and 5 contributes to the realisation of Objectives 1 and 6.

10. Procurement

67% of the Council's carbon emissions during 2023/24 were from our procurement processes, which is a below 1% increase from 2019/20 and a 25% increase from 2022/23.

The method of measuring procurement carbon emissions, or the supply chain, is based on spending alone. Simply put, the higher the spending, the greater the emissions. This increase in procurement emissions in 2023/24 is based on an £11m increase in spending in the fields of care, construction and transport. The formulas used to measure carbon versus expenditure in certain categories have also changed leading to an increase.

What did we say we would do in 2023/24?

Ongoing Priorities

Projects:

1. Providing market support, particularly to local providers, to be able to measure the impact of their operations on their carbon footprint
2. Understanding and measuring carbon emissions when realising contracts in the procurement chain

What did we do?

Projects 1 and 2 - At the end of 2022/23, the Welsh Local Government Association published a report and toolkit for the use of local authorities so that they seek to further incorporate sustainable procurement into daily practice. There has been a long wait for the package as a resource that would help us as a Council to measure the carbon emissions that derive from the services and materials we buy, and it is an initial step on that journey.

Following the publication of the toolkit, we are now collaborating with [WRAP Cymru](#) to review our Sustainable Procurement Policy and to investigate further support to reduce the emissions of our largest contracts in terms of monetary value (such as food and care).

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

Objective 5: Improving our evidence, understanding and monitoring

Objective 6: Implementing a governance framework and support for achieving the objectives

We worked with WRAP Cymru during the year to review our Sustainable Procurement Policy and develop ideas on how we can support our suppliers to reduce carbon emissions through the agreements we will set. This work continues into 2024/25, and we are reviewing existing guidance for suppliers on how they can protect and enhance biodiversity.

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11. Land Use

All Council lands (which include 'brownfield' sites that have been constructed) absorbed a value of 3,096,293 kgCO_{2e} net of carbon in 2023/24. This is 47% less than 2019/20 and 2% less than 2022/23.

Offsetting the carbon absorbed against our carbon emissions contributes to reducing the gap to net zero.

What did we do we would do in 2023/24?

Medium-term Priorities 2022/23 – 2026/27

Projects:

1. Identify the contribution of Council-owned trees to carbon absorption and storage and flood reduction
2. Identify the contribution of Council-owned lands to carbon absorption and storage and flood reduction
3. Establish tree nurseries to grow trees ready for planting
4. Identify opportunities to plant trees as part of the National Forest for Wales initiative
5. Conserve agricultural land in Gwynedd and using it for a competent purpose, and managing afforestation projects

What did we do?

Projects 1 and 7 – Essential maintenance work continued to be carried out on 8 sites of Council-owned woodland, and repairs were carried out in Parc Dudley, Waunfawr, and in ancient woodland in Parc Meurig, Bethesda, which is now safe and open to the public to enjoy.

Project 2 – In November 2023, a new tool developed by the Welsh Local Government Association was received to measure the value of carbon in various lands. It will help us not only to measure the carbon absorption capacity of our various lands but also to plan the future use of our lands.

Since we started to use the tool, we are now in the process of evaluating our lands for their use to store carbon and enhance nature. This work takes place alongside the work to maintain coppices and identify opportunities to plant trees. Work will continue into 2024/25.

The work of identifying lands for their flood reduction potential occurs with the creation of a Flood Risk Management Strategy (see Section 12).

Projects 3 and 4 – 2 pilot projects were commenced with community enterprises to establish small tree nurseries during the year, and work had begun to assess possibilities to establish tree nurseries where the Council could be a partner.

Ongoing Priorities

Projects:

6. Controlling Ash Dieback Disease in trees and compensating for any carbon emissions as a result of felling trees
7. Council-owned woods are protected to maximise their potential to absorb carbon and become habitats for nature

What did we do?

Project 6 - Unfortunately, the demand to deal with an increasing number of trees suffering from Ash Dieback disease is placing further pressures on our scarce resources. However, we continue to respond to outbreaks and have had to fell 698 ash trees during the year, which was 14% lower than 2022/23.

Project 7 – See Project 1 above.

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

- Objective 1:** Engage and support participation and understanding to embed biodiversity throughout decision-making at all levels
- Objective 6:** Implementing a governance framework and support for achieving the objectives

Cyngor Gwynedd leads the work of the Gwynedd Nature Partnership, a collective of organisations and individuals who act to protect and enhance biodiversity in the county. A fundamental operating principle of the Partnership is to consult with communities to plan projects at grass roots level.

Objective 2: Protecting species and habitats of paramount importance and improving their management

Projects 1 – 7 contribute to the realisation of this objective.

Objective 3: Increasing the resilience of our natural environment by restoring degraded habitats and creating new habitats

Projects 1 – 7 contribute to the realisation of this objective.

Objective 4: Addressing key pressures on species and habitats

Projects 1 – 7 contribute to the realisation of this objective.

Objective 5: Improving our evidence, understanding and monitoring

The Council has continued to collaborate with the Cofnod recording system which helps us to create a baseline for biodiversity across Gwynedd.

11. Ecology

What did we say we would do in 2023/24?

Short-term Priorities 2022/23 – 2023/24

Projects:

1. Identify the steps we need to take to protect nature's habitats and biodiversity into the future
2. Identify our valuable species and habitats and what measures are needed to protect and restore them

What did we do?

Project 1 – Work

continued during the year to produce our revised Nature Recovery Plan for the county and for the Llŷn Area of Outstanding Natural Beauty, and the plans will be published during 2024/25.

Project 2 - Alongside developing the Nature Recovery Plan, we have also been assessing the biodiversity of the nature reserves we own to establish a baseline against which we can measure progress or decline. We use Cofnod processes to map species, and this work continues. We are also in the process of producing a green infrastructure assessment as part of the work that is led by the Planning Department.

Medium-term Priorities 2022/23 – 2026/27

Projects:

3. Increase the number of pollinators by conserving habitats or planting new habitats (landfill sites)
4. Support voluntary and community organisations and town and community councils that protect or enhance nature

What did we do?

Projects 3 and 6 - There are two sites in Gwynedd that used to be landfill sites which have now been converted into sites to protect and enhance nature. Maintenance and tree planting work was carried out at Llwyn Isaf near Clynnog and Ffridd Rasmus near Harlech and both sites have also received a 'gold standard' from Restor, the international hub for nature recovery.

Projects 3 and 5 - A number of new pollinator habitats were planted along some of Gwynedd's highways during the year, in order to develop a Pollinator Network. Particular attention was paid to the highways leading up to the site of the National Eisteddfod in Boduan in August 2023. All Eisteddfod local primary schools took part in our project to plant wildflower meadows and the Council's highways teams planted wildflower meadows along the road verges towards the Pwllheli area, and

we will continue to assess and maintain these meadows in future.

The Council has now adopted new grass-cutting arrangements that will reduce grass-cutting frequency, particularly along highway verges. The highways teams also use specialist equipment to collect grass-cuttings to collect seeds and increase wildflower growth.

Projects 4 & 5 – The Council leads the work of Gwynedd Nature Partnership which, in turn, supports community organisations and schools. Practical support is also offered through the Ardal Ni scheme. Work in this area is just beginning and we will be in further discussions during 2023/24 to see what support the Council can offer within limited resources.

Ongoing Priorities

Projects:

5. Nurturing and maintaining Gwynedd residents' interest in ecological issues so that they want to help conserve nature
6. Protecting valuable habitats for nature

What did we do?

Project 5 – See Project 4 above.

Project 6 – See Project 3 above.

Section 6 of the Environment (Wales) Act 2016

The above projects contribute to the objectives below:

Objective 1: Engage and support participation and understanding to embed biodiversity throughout decision-making at all levels

Objective 5: Improving our evidence, understanding and monitoring

Objective 6: Implementing a governance framework and support for achieving the objectives

All of the work we undertake as a Council and through the Local Nature Partnership is designed or delivered in collaboration with local organisations, communities or schools.

Projects 1 and 2 also contribute to the above 3 objectives.

Objective 2: Protecting species and habitats of paramount importance and improving their management

Projects 1 – 6 contribute to the realisation of this objective.

Objective 3: Increasing the resilience of our natural environment by restoring degraded habitats and creating new habitats

Projects 1 – 6 contribute to the realisation of this objective.

Objective 4: Addressing key pressures on species and habitats

Projects 1 – 6 contribute to the realisation of this objective.

12. Next Steps

Financial

As a Council, we continue to operate in extremely challenging financial circumstances, with our budgets massively squeezed due to a lack of adequate funding and rising costs.

As the field of climate and nature is a priority for us as a Council, we have done all we can to use the funding we have, and to attract funding in the form of grants, to fund the CNEP's projects to date. Starting any new project from now on will be dependent on receiving additional funding to fund it.

Reviewing the Climate and Nature Emergency Plan

There has been a huge amount of new knowledge and technical developments in climate and nature since the implementation of the Climate and Nature Emergency Plan began in April 2022. A large number of the projects included in the current plan have evolved to respond to the changes, and we have described that work in this annual report. Considerable extra work has already been commenced which does not get much attention within the current plan – e.g. electric buses, use of 'smart' technology.

It is now timely for us to review the plan in its entirety to ensure it is up to date and enables us to continue the work until 2030. The review process will be completed before the end of March

2025 so that we have a revised plan which will be effective from April 2025.

Renewable energy

Generating our own energy not only means less reliance on using electricity from the grid (which is unlikely to be net zero carbon for many years, if at all) but also offers us little energy security locally. Unfortunately, there is no recognition given to us as an organisation if we generate renewable electricity for export to the grid and we are unable to claim the carbon credit for it. In addition, the infrastructure is poor for sending electricity to the grid from renewable sources in this area e.g. it would require a multi-million pound investment to be able to use some of our lands for setting up solar farms. Currently, therefore, commercial-scale electricity generation from renewable sources is unaffordable.

Having said that, the Local Area Energy Plan to be adopted during 2024/25 takes us a step closer to creating a low carbon integrated energy system for Gwynedd. There are a number of ambitious schemes in the plan and a number of them will require further work, but it is necessary work that we will be involved in.

Flood Risk Management Strategy

Climate change is having a significant impact on flooding and land erosion scales as rising sea levels and storms and periods of heavy rainfall become more intense and occur more regularly.

Managing flood risk and coastal erosion in Wales is about much more than building defences. Our approach to risk management encourages wider resilience, prevention and risk awareness so that better decisions can be made, both by the public and those who influence how land and water are managed.

The formulation of a *Local Flood Risk Management Strategy* (the Strategy) is a requirement of the Flood and Water Management Act 2010 and we are required to review it (since the original ones in 2013) to be consistent with the National Strategy for Flood and Coastal Erosion Risk Management in Wales, which was published by the Welsh Government in 2020.

The Strategy examines the flood risks on the coast and inland (mainly river risks), and describes which areas are likely to be affected and which organisations will work together to manage the risk.

The process of formulating the Strategy began in 2022 and the Council has since been a member of a national working group which developed a common template for use by all flood authorities. The Welsh Government have been a member of this working group and also want to give the seal of approval to the final Strategy.

A draft Strategy was drawn up and the public consultation process commenced on 25 March 2024, which continued for 6 weeks. A final version of the Strategy was approved by the Council Cabinet on 11 June 2024. We continue to await comments or approval from the Welsh Government.

