

Blaenau Gwent County Borough Council

Net Zero Report 21/22



Decarbonisation Plan 2020 to 2030

Blaenau Gwent County Borough Council Net Zero Report 2021/22

This document is produced in accordance with the requirements of the Welsh Public Sector Zero Reporting Guide published by Welsh Government in April/ May 2022.

If you have any queries or questions in relation to this plan, please contact the BGCBC Policy and Partnerships Team at the below email address:

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Mae'r ddogfen hon ar goel yn Gymraeg

This document is available in Welsh.



Introduction

This report provides an overview of our organisational carbon footprint for 2021/22 and a summary of the actions we are taking towards Net Zero 2030. It also covers the actions we are taking on borough wide territorial emissions. The report outlines our progress on the aims we set in last year's annual report including:

- Completion of the readiness assessment process for all transitions
- Identifying our next step high-level actions based on these assessments
- Responding to the Blaenau Gwent Climate Assembly recommendations.

It also outlines our priorities for 2022/23, including developing our corporate approach to territorial emissions and embedding the additional capacity and skill sets we need to support delivery across our organisational emissions.

Our Approach

Our approach is based on Welsh Government's two Net Zero targets; Net Zero 2030 for the Welsh Public Sector (organisational emissions) and Net Zero 2050 for all of Wales (territorial emissions). Our organisational emissions are the carbon emissions produced by delivering our services, while Blaenau Gwent's territorial emissions include all the carbon emissions released within the borough, from homes, transport, businesses etc. We have made a clear separation between these two Net Zero goals because the two types of emissions often require quite different types of action and we have greater direct control over our organisational emissions.

Organisational Net Zero 2030

Our Decarbonisation Plan was adopted in September 2020 at the same time we declared a Climate Emergency. The plan addresses our organisational emissions with the aim of making our full contribution to the ambition of a Net Zero Public Sector in Wales by 2030.

We have adopted a data driven approach, based on identifying from our carbon footprint, eight transitions we have to undertake to reach Net Zero. Each of these transitions represents a coherent area of action with its own distinct low carbon technologies, business models and infrastructure. Each of these transitions has its own detailed actions to deliver it. Our approach is based on mainstreaming decarbonisation into our operations, rather than establishing separate decarbonisation projects and budgets. With a cross-organisation climate group providing corporate overview.

Blaenau Gwent County Borough Council: Transitions Summary 2019/20

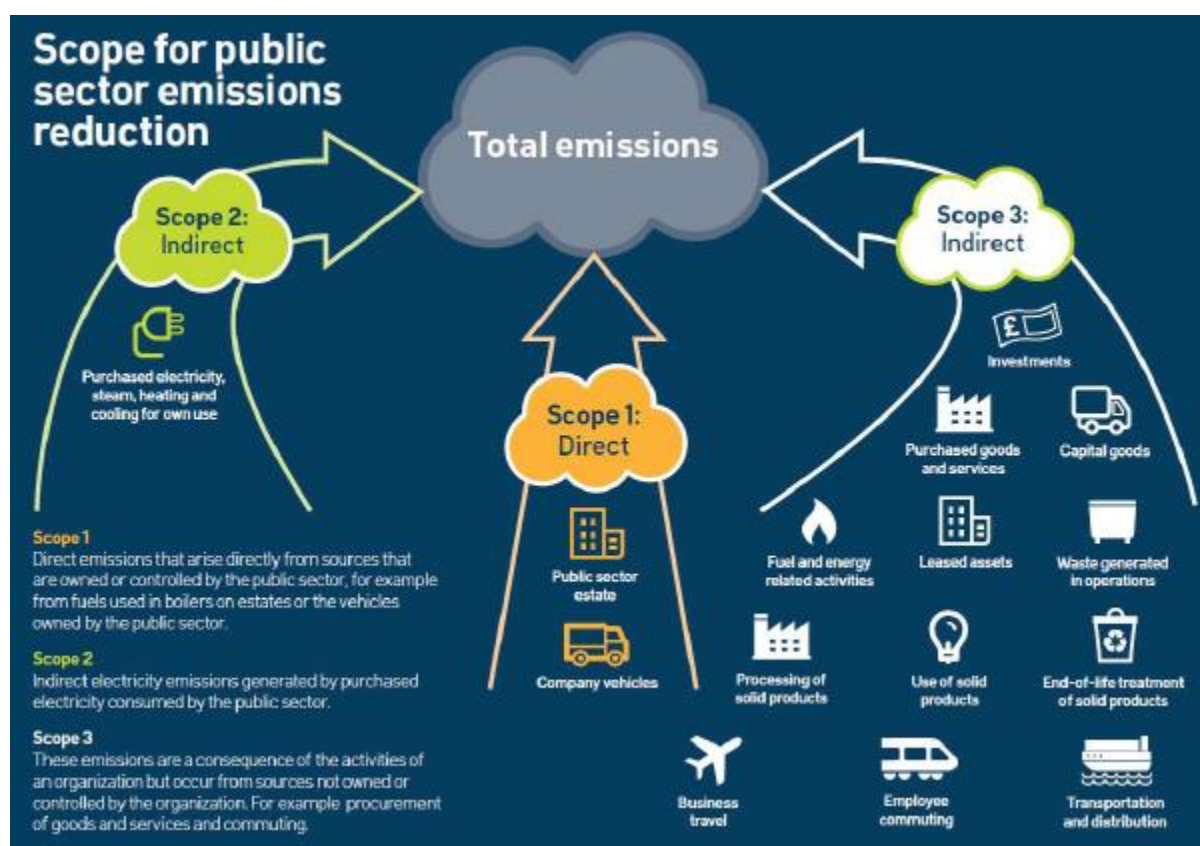


Overview of our Transitions

1. Transport Direct: Travel by our staff in corporate or their own vehicles, includes fleet, commuting and staff travel within work.
2. Sequestration: Absorption of carbon on land we own and manage, largely associated with woodland, urban trees and peatland.
3. Procurement: Goods which covers what we purchase as an organisation and includes key items such as clothing, food, IT, machinery, equipment and furniture.
4. Procurement: Services which covers the services we procure to deliver our functions such as schools and social services. This also includes investments such as pension schemes.
5. Procurement: Works which includes all construction and maintenance of our buildings and infrastructure.
6. Electricity: Covers the electricity we purchase to run all our services. It includes key things such as street lighting, running our corporate buildings and schools. It also includes our use of renewable technologies.
7. Heat: Includes our heating (and cooling) of our buildings.
8. Waste: Covers the carbon impacts of our treatment of municipal waste, whether recycling, landfill or incineration.

Our Carbon Footprint

Our carbon footprint is divided into three scopes (see diagram below). Our footprint includes all emissions from assets, such as buildings and vehicles, that we have day-to-day operational control of, whether we own or lease them (Scope 1 and 2 emissions) and also emissions which are the result of our procurement and other organisations delivering services on our behalf (Scope 3 emissions). We calculated our baseline carbon footprint for 2019/20.



The underlying method for calculating our carbon emissions is quite simple. Carbon emissions are the amount of an activity that we carry out (e.g. litres of diesel used by our fleet or the amount spent on construction projects) multiplied by the nationally calculated average carbon intensity of a unit of that activity (e.g. the carbon emissions from a litre of diesel or pound of spend on construction projects):

$$\text{carbon intensity of activity} \times \text{amount of activity} = \text{total emissions}$$

(e.g. CO₂ per litre x litres of fuel used = emissions)

Our carbon footprint emissions can be divided into two types, which differ significantly both in the level of control we have over achieving carbon reductions and also how they can be monitored. The first type, **direct emissions** are either directly released through our operations (e.g. fuel burnt in our fleet) or through our consumption of electricity (e.g. street lighting), these emissions largely correspond to scopes 1 & 2. Due to the direct relationship

between our activities and carbon being released, we have relatively high levels of control over reaching Net Zero for these emissions and therefore we can directly measure our progress in terms of carbon emissions.

The second type, **spend based emissions** are related to our procurement of products and services, these include most scope 3 emissions and we have less direct control over these emissions. Spend based emissions calculations can give a reasonable estimate of the size of these activities contribution to our overall carbon footprint. However, because they are calculated on the basis of our financial spend and national average carbon intensity factors, they cannot accurately detect changes in our performance from year to year, so they are not suitable for monitoring our performance over time. As a result, we will not update our spend-based emissions figures on an annual basis.

Two of our transitions have negative carbon emissions figures. The nature based solutions transition is about the carbon impact of the land we own. This figure is based on the net annual change in the carbon stored and released from the land we own and/or manage. This land based figures are true **negative net emissions** that represent removal of carbon from the atmosphere.

The negative figure for the waste transition represents **avoided emissions**, the amount of carbon emissions that are avoided by others producing products using recycled waste rather than new materials. However, our footprint only includes the emissions from the recycling process. For this reason, the avoided emissions from municipal waste are not part of our carbon footprint.

We have also reported the amount of renewable electricity we have generated; these figures are not directly part of our carbon footprint. As the carbon savings from the electricity we use ourselves is already captured in our footprint through the reduced amount of grid electricity we need to use, while the electricity we export to the grid contributes to the lowering of the carbon intensity of the national grid as a whole.

2021/22 Carbon Footprint

	tonnes CO ₂ e/year		
	2019/20	2020/21	2021/22
Scope 1 - Direct Emissions			
Natural Gas Heating	3,942	3,725	3,483
<i>Natural Gas Heating Aneurin Leisure</i>	1,152	798	1,076
Biomass Heating	60	67	75
Diesel Fleet	911	905	933
Petrol Fleet	18	9	10
Liquid Natural Gas Fleet	35	31	32
Scope 1 Total	6,119	5,535	5,609
Scope 2 - Electricity Indirect Emissions			
Metered - Buildings	1,792	1,272	1,265
<i>Metered - Buildings Aneurin Leisure</i>	572	279	374
Unmetered - Street Lighting	968	870	700
Scope 2 Total	3,332	2,420	2,339
Scope 3 - Other Indirect Emissions			
Purchased Goods and Services	40,992	40,570	37,461
Extraction, Production & Transportation of Fuel & Energy Used	2,104	1,727	1,548
<i>Extraction, Production & Transportation of Fuel & Energy Used Aneurin Leisure</i>	288	170	323
Water	46	42	22
<i>Water Aneurin Leisure</i>	22	12	6
Business Travel	278	118	198
<i>Business Travel Aneurin Leisure</i>	11	2	4
Staff Commute	2,181	1,039	2,074
Homeworking Energy Use			352
Downstream Transportation and Distribution - Silent Valley	216	209	612
Scope 3 Total	45,691	43,889	42,600
Sequestration			
Forest land	-2,350	-2,350	-2,350
Grass land	-55	-55	-55
Settlements	919	919	919
Sequestration Total	-1,486	-1,486	-1,486
Carbon Footprint Total	53,656	50,359	49,062

Indicates figures not suitable for monitoring annual progress

Indicates figures not directly comparable due to change in methodology

Indicates new data

Carbon Footprint Trends

To give an accurate view of the year to year changes in our carbon footprint we need to exclude purchased goods and services, which are not suitable for monitoring performance, and sequestration where the figures are based on the same data for each year. To allow comparison where methods of measurement have changed, these figures include estimates for our previous years' emissions from staff commute, homeworking energy use and the onwards transportation of waste. For example, although the carbon figure for the staff commute this year is only slightly lower than the baseline year, the new home and agile working arrangements mean that around 23% of our total potential commuting miles have been avoided.

These more directly measured carbon emissions are shown in the table below:

	tonnes CO ₂ e/year			Change from Base Year	Change from Last Year
	2019/20	2020/21	2021/22		
Direct Carbon Emissions	15,377	12,682	13,087	↓ -15%	↑ 3%

Following a substantial, COVID influenced, fall of 18% in these emissions last year the figures show an 3% increase this year, meaning our carbon footprint is 15% down on our baseline. Overall the figures show that the large majority of the COVID related reductions last year have been maintained, with bounce back in some areas largely balanced by continued reductions in others.



The first electric vehicles have now become a permanent feature of the Blaenau Gwent Council's fleet. Four electric powered general purpose vans purchased with funding from Welsh Government Energy Service that will be used by Highway Inspectors.

Position Summary

Although we were already taking action in a number of areas before declaring a Climate Emergency, we did not have a clear picture of the total impact of our actions or our overall position in relation to Net Zero. We decided to focus on understanding our organisational emissions first, on the basis that we had the greatest control over these emissions and that developing a strong plan to reduce our own impact would be the best way to demonstrate public leadership.

Our Decarbonisation Board was formed in March 2021, initially chaired by our Managing Director and now by our Interim Chief Executive. Senior officers from across the organisation and from Aneurin Leisure Trust, who deliver services on our behalf, sit on the board. Last year the Board oversaw the completion of Readiness Assessments covering all of our transitions. As a result, we feel that we now have a good understanding of where we are and what we need to do to reach Net Zero 2030.

The readiness assessments were based on best practice tools developed by PCAN (Place-based Climate Action Network) for the Leeds Climate Commission. Each readiness assessment was based on workshops with officers to draw on the insight and knowledge of those who know these areas of the business. Each workshop received briefings based on both further analyses of our own carbon data and key external guidance, such as Climate Change Committee Recommendations for Local Authorities and Welsh Government Local Government Strategy Panel “Deep Dives”.

Each Readiness Assessment included a set of, typically around seven to ten, high-level actions. These are the actions identified as being the next steps we could take now to accelerate progress towards Net Zero and have been approved by senior leadership and are being built into the business plans of the service areas responsible for delivering them. The purpose of these actions is to make sure that all our transitions are moving forward but ultimately reaching Net Zero will require decisions about long term investment both from the council and from government and partners. The high-level actions identified for each transition are included in the transitions summary below.

Transitions Summary

This section summarises the carbon impact of each of our transitions and the high-level actions we have identified through our readiness assessments.

1. Transport

(Proportion of Footprint: 10%)

Carbon Data

	tonnes CO ₂ e/year			Change From Base Year	Change From Last Year
	2019/20	2020/21	2021/22		
Diesel Fleet	911	905	933	↑ 2%	↑ 3%
Petrol Fleet	18	9	10	↓ -44%	↑ 11%
Liquid Natural Gas Fleet	35	31	32	↓ -9%	↑ 3%
Business Travel	278	118	198	↓ -29%	↑ 68%
<i>Business Travel Aneurin Leisure</i>	11	2	4	↓ -64%	↑ 100%
Staff Commute	2,181	1,039	2,074	N/A	N/A
Transport Total	3,434	2,104	3,251	↓ -5%	↑ 55%

Indicates figures not directly comparable due to change in methodology

High Level Actions

Action	Service Area Leading
Develop a plan for non-depot charging infrastructure for fleet and personal ULEV vehicles at key staff sites in the new operating model.	Regeneration
Develop a fleet plan and resource its implementation by building costs into Corporate Medium Term Financial Plan	Community Services
Develop and resource a low carbon depot	Community Services
Replace small fleet ULEV in phased way in line with available space, grid capacity and infrastructure	Community Services
Ensure procurement arrangements are in place to support the plan. This needs to recognise the inter-dependent work on the new depot and collaborative opportunities at a regional and national level.	Commercial Services
Embed the new operating model and assess its impact in terms of decarbonisation	Commercial Services
Identify solutions for grey fleet use of personal vehicles delivering council services e.g. Social Services.	Commercial Services
Investigate and identify staff demand to travel more actively and consider business case to meet this demand e.g. showers at main sites, secure shower facilities, safe storage and e-charging for cycles.	Community Services
Explore how staff can be encouraged to switch to ULEV.	Commercial Services

2. Nature based Solutions

(Proportion of Footprint: -3%)

Carbon Data

	tonnes CO ₂ e/year
Forest land	-2,350
Grass land	-55
Settlements	919
Nature Based Solutions Total	-1,486

High Level Actions

Action	Service Area Leading
Bring together and optimise existing internal and external information and mapping (supported by wider corporate GIS improvements) to give better understanding of our current sequestration position and the potential for further development.	Natural Environment
Strengthen existing actions and policy with specific reference to, and targets for, carbon sequestration/climate impact, including the replacement Local Development Plan.	Natural Environment/ Planning
Investigate the potential for renewable energy projects to also improve carbon sequestration and how this could be integrated into future schemes	Regeneration
Include explicit references to/ figures for carbon impacts as part of environmental assessment of planning proposals	Planning
Ensure that carbon impact of land-use changes and disposals/acquisitions in our own estate are assessed and where possible put in place specific carbon sequestration requirements e.g. requirements in leases and community asset transfers.	Estates
Investigate potential for carbon sequestration programmes for specific land-use types in our estate such as business parks.	Natural Environment

3. Procurement Goods

(Proportion of Footprint: 10%)

Carbon Data

	tonnes CO2e/year
IT & Office Machinery	1,883
Food and Drink	1,318
Equipment and Furniture	1,327
Machinery	442
Paper and Printing	298
Water Supply	69
Glass and Metal Products	45
Soap and Cleaning Materials	169
Clothing	17
Procurement Goods Total	5,567

High Level Actions

Action	Service Area Leading
Make decarbonisation a key component of revised Procurement Policy, including clear statements of key elements such as whole life costs, end of life arrangements etc.	Commercial Services
Formally adopt decarbonisation of procurement as a priority at a corporate strategic decision making level, including, Strategic Commissioning and Commercial Board which considers all contracts awarded over £75,000 and Medium Term Financial Strategy.	Corporate
All significant contracts (above £75,000 SCCB threshold, with discretion to include lower value if good reason to believe will have significant carbon impact) should identify what the most significant carbon impact(s) are from the contract. Wherever possible we should identify suitable benchmark target(s)/criteria to measure performance against, and where possible/relevant this should be incorporated into contract criteria.	Commercial Services
Develop long-term engagement plans to grow decarbonisation capacity of (local) suppliers in key areas.	Regeneration

4. Procurement Services

(Proportion of Footprint: 53%)

Carbon Data

	tonnes CO ₂ e/year
Social Care and Health	9,646
Education	9,466
Pensions/Investments	3,837
Public Administration	3,200
Legal and Consultancy Services	1,318
Transport Commissioned	514
Computer Services	255
Post and Telecommunications	235
Miscellaneous	170
Procurement Services Total	28,640

High Level Actions

Action	Service Area Leading
Initial engagement with suppliers to raise awareness of, and secure commitment to, decarbonisation via signing of pledge/joining scheme (ideally one also being used by other Welsh public sector bodies).	Commercial Services
Ongoing programme of decarbonisation initiatives targeted at key procurement areas, supported by additional resources to explore supply chains and develop specific actions/plans. These deep dives could be initiated through the Annual Procurement Review. Service areas should be encouraged to develop relevant proposals.	Commercial Services
Social services and education to undertake long-term engagement to support suppliers to build their capacity to decarbonise key areas of their operations, such as transport and energy.	Social Services/ Education
Investigate the possible benefits of Power Purchase Agreement to secure low carbon electricity by directly investing in renewable generation supply, with clear emphasis on local capacity and links to Energy Prospectus.	Regeneration
Consider whether we should ask the Greater Gwent Pension Fund to develop a more proactive approach to accelerating the transition to Net Zero through its investment strategy, such as divestment policy. Starting with requesting position statement from Greater Gwent Pension Fund.	Finance

5. Procurement Works

(Proportion of Footprint: 10%)

Carbon Data

	tonnes CO ₂ e/year
Construction and Maintenance	5,521
Procurement Works Total	5,521

High Level Actions

Action	Service_Area_leading
Assess the impact of major projects on territorial emissions in Blaenau Gwent e.g. projects that will create significant new energy use or travel demand outside of our own organisational footprint.	Corporate
Commit that all new builds will be designed and constructed to Net Zero standards. Only in exceptional circumstances will projects proceed without the requirement being met. Where the standard has been judged to be unachievable, the barriers will be set out in detail in writing.	Community Services
Procurement (Works). Commit to take into account carbon costs (the emissions associated with undertaking works) in procurement of building and maintenance works, including setting appropriate carbon standards. Integrated into decision making as part of procurement review.	Commercial Services

6. Electricity

(Proportion of Footprint: 8%)

Carbon Data

	tonnes CO ₂ e/year			Change From Base Year	Change From Last Year
	2019/20	2020/21	2021/22		
Metered - Buildings	1,792	1,272	1,265	↓ -29%	↓ -1%
Metered - Buildings Aneurin Leisure	572	279	374	↓ -35%	↑ 34%
Unmetered - Street Lighting	968	870	700	↓ -28%	↓ -20%
Electricity Total	3,332	2,420	2,339	↓ -30%	↓ -3%

High Level Actions

Action	Service Area Leading
Energy Policy- Ensure energy demand reduction is aligned to the Council's Zero Carbon commitment.	Community Services
Commit to using carbon data (energy standards and life-cycle costs) to inform procurement decisions. Review Procurement Strategy and arrangements to align to the Council's Zero Carbon commitment.	Commercial Services
Street Lighting Strategy – Develop a plan and targets for future energy reductions including reaching 100% LED lighting no later than 2030.	Community Services
Zero Carbon Electricity. Develop a plan and targets for ensuring the Council maximises its use of renewable energy, through installing renewables and procurement	Regeneration

7. Heat

(Proportion of Footprint: 11%)

Carbon Data

	tonnes CO ₂ e/year			Change From Base Year	Change From Last Year
	2019/20	2020/21	2021/22		
Natural Gas Heating	3,942	3,725	3,483	↓ -12%	↓ -6%
Natural Gas Heating Aneurin Leisure	1,152	798	1,076	↓ -7%	↑ 35%
Biomass Heating	60	67	75	↑ 25%	↑ 12%
Heat Total	5,154	4,590	4,634	↓ -10%	↓ 1%

High Level Actions

Action	Service Area Leading
Energy Policy- Ensure energy demand reduction is aligned to the Council's Zero Carbon commitment	Community Services
Develop a strategic heating Decarbonisation plan to include replacement of existing heating systems and associated retrofitting of buildings with net zero carbon alternatives by 2030 including the investment required	Community Services
District heating networks. Set date for future review of whether developments in technology allow for additional networks in Blaenau Gwent	Regeneration

8. Waste**(Proportion of Footprint: -15%)****Carbon Data**

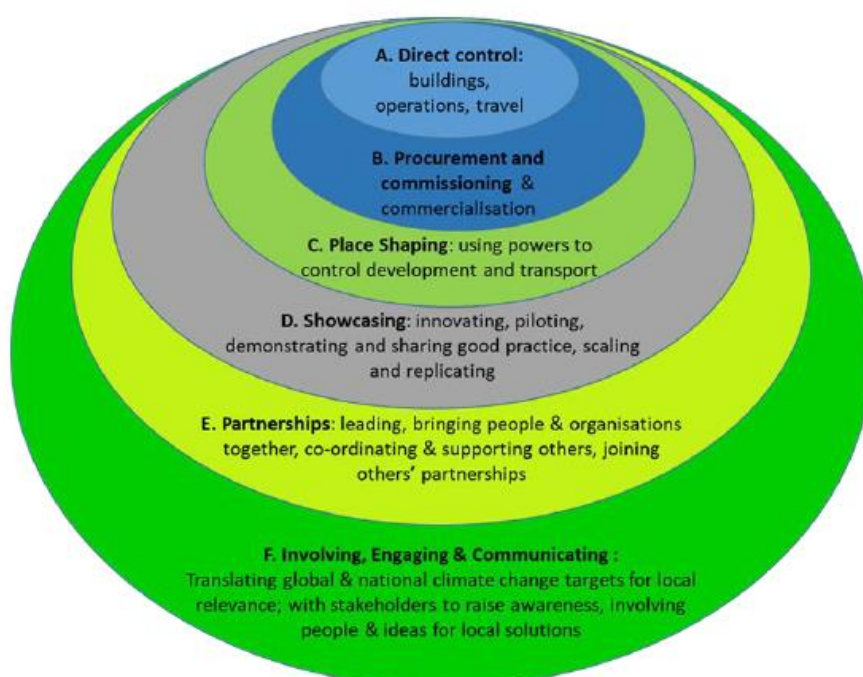
	tonnes CO ₂ e/year			Change From Base Year		Change From Last Year	
	2019/20	2020/21	2021/22				
Recycled/Composted	-11,828	-11,760	-12,205	↓	-4%	↓	-3%
Waste to Energy	3,611	4,078	3,833	↑	6%	↓	-6%
Landfill	0.3	0.1	0.2		N/A		N/A
Waste Total	-8,216	-7,682	-8,372	↓	-2%	↓	-9%

High Level Actions

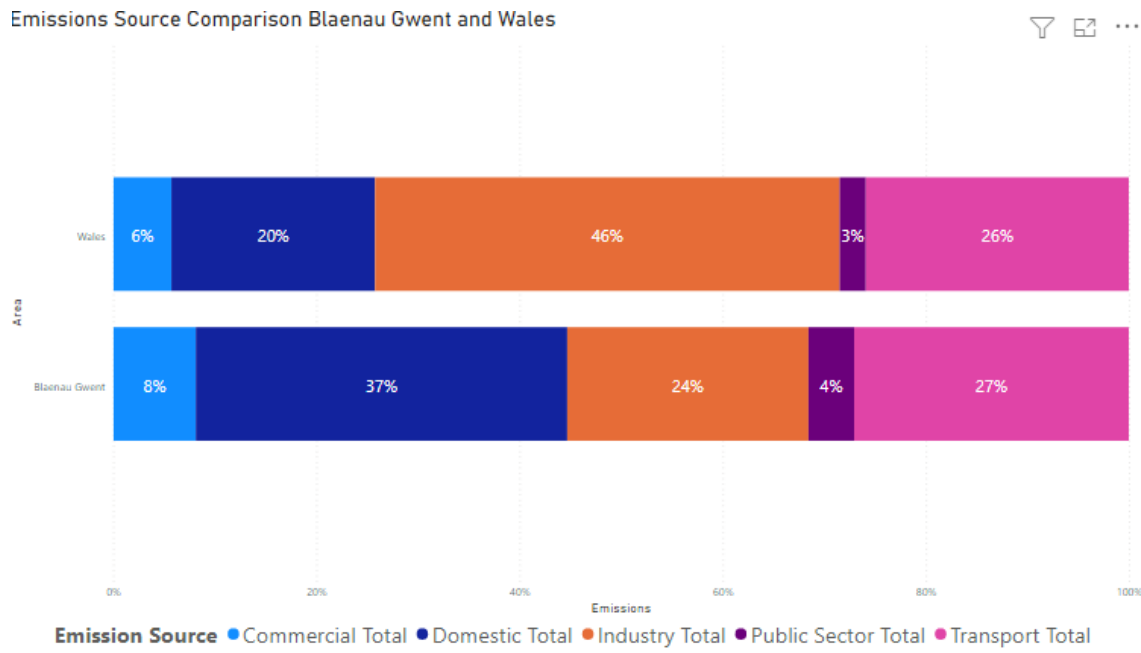
Action	Service Area Leading
Zero Waste. Deliver Waste Management and Recycling Strategy	Community Services
Minimise environmental impact of onward treatment of waste	Community Services
Commercial Waste Service. Develop upgraded service.	Community Services
Develop stronger reduce element to household waste communication	Community Services

Territorial Net Zero 2050

There are already a number of actions taking place across the council to cut territorial emissions. However, similar to our position for organisational emissions prior to developing our Decarbonisation Plan, we do not have a clear overview of their total impact or any gaps in relation to Net Zero. Compared to organisational emissions, which largely sit in A and B, the blue area of the diagram below, we have much less direct control of territorial emissions, which mainly sit in areas C through F. Estimates suggest that, of the 50% of territorial emissions that do not come from the National Grid, 28% are primarily under local government control with another 37% under shared control with national government. As a result, partnership working and regional and national strategies have a far greater role to play. Net Zero 2050 also requires much more public action than organisational emissions.



Territorial emissions in Blaenau Gwent have fallen 33% between 2005 and 2019, compared to 29% for Wales as a whole. 71% of these reductions in emissions are associated with electricity consumption, while some of these reductions will be due to actions taken locally to improve energy efficiency, the large majority will be due to decarbonisation of the national grid. In contrast, the other main emission sources, transport and gas use for heating, have seen much smaller reductions and will require more direct action in Blaenau Gwent by organisations and residents. Compared to Wales overall a far higher proportion of emissions in Blaenau Gwent come from housing, and far less from industry (see below), meaning that we likely have local control over a higher proportion of our emissions. Over 75% of these home emissions are from gas usage, decarbonising home heating is key to achieving Net Zero for us.



Following the Blaenau Gwent Climate Assembly last year, we are involved with partners through the Blaenau Gwent Mitigation Steering Group in developing a set of actions to pursue in response to the five recommendations of the Blaenau Gwent Climate Assembly (see appendix). Realistically the group will probably require a significant flex in its membership to deliver on these challenging actions. These actions are not intended to cover all aspects of Net Zero 2050, and it is very unlikely the group will have the capacity to develop a comprehensive overview of territorial emissions. The local authority cannot deliver territorial Net Zero alone, but we are the organisation that is best positioned to produce this local overview, particularly due to our role in place shaping.

There is already significant data about our territorial emissions available, the main challenge now is to compile this in a single place and understand what it means for us. This includes understanding how our emissions fit in with existing regional and national plans. Central to territorial emissions is understanding our future energy system. We have already undertaken two significant pieces of work in this area: through our WBRID (Whole System Business Research Innovation for Decarbonisation) Project we have developed a pathfinder model with Wales and West Utilities for our energy system in 2035 and 2050. With the Carbon Trust we have produced a Renewable and Low Carbon Energy Assessment (RLCEA) to understand the capacity for renewable generation across the borough as a whole. Over the next year this work will inform the development of a Local Area Energy Plan.