

# ORGANISATIONAL CLIMATE CHANGE PLAN

2022-27



SERO NET  
CASNEWYDD  
NET ZERO  
NEWPORT

Mae'r ddogfen hon ar gael yn Gymraeg  
This document is available in Welsh



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# 01. Foreword

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Following the Council declaring an Ecological and Climate Emergency in November we are both pleased to present our Climate Change Organisational Plan.

Climate Change is one of the defining global challenges of our generation and there is an urgent need for the world to decarbonise, to limit global temperature rise and avert the worst impacts of climate change.

There is also a need for the world to adapt to the impacts of climate change now and in the future. The accumulating impacts of climate change including rising sea levels, poor air quality and extreme weather events are already putting many people at risk both locally and across the globe.

As an organisation we have made a good start and have already made a substantial reduction in our carbon emissions in line with targets set out in our Carbon Management Plan in 2017-18. This has resulted in a 29% reduction of scope 1 and scope 2 emissions.

However, there is still much more that we need to do.

As a globally responsible organisation, the council is committed to:

- Reaching net zero by 2030 and
- Ensuring our services support the city's journey to both net zero by 2050 and adapting to the impacts of climate change.

The plan will be a key document for the Council going forward and will guide the Council's direction of travel in tackling climate change and its impacts.

We both recognise that making the right choices now will set us on the right path for future generations and the plan sets out the themes, priorities, actions and milestones that we need to take as a Council over the next five years to achieve that commitment.



**Councillor Jane Mudd**

Leader of the Council



**Councillor Jason Hughes**

Cabinet Member for  
Sustainable Development

## 02. Summary

This is the Newport City Council Organisational Climate Change Plan that sets out the themes, priorities, actions, and milestones that we need to take as a Council over the next five years to:

- Reach net zero carbon as an organisation by 2030.
- Review the services we provide to ensure they support the city's journey to net zero and adaptation to climate change.

A 29% reduction of Council scope 1 and scope 2 carbon emissions has already been achieved in the last three years.

### 2.1 Key Delivery Themes

To deliver on this the plan six delivery themes have been identified.

Themes	2030 Vision
01 <b>Organisational Culture &amp; Leadership</b>	The climate and nature emergency will be at the heart of all our work. In our decisions we will take positive action to minimise climate and ecological impacts. We will lead by example and empower our partners, communities, and individuals to tackle the climate emergency and prioritise nature-based solutions.
02 <b>Our Buildings</b>	To achieve net zero carbon energy and support the nature recovery across our buildings by 2030.
03 <b>Our Land</b>	A city which sustainably manages and increases its natural resources, protecting, enhancing, improving and connecting the natural environment in a carbon neutral and climate and ecological responsible manner.
04 <b>Transport &amp; Mobility</b>	A city with healthy and sustainable travel choices for the Council and the people of Newport and Wales.
05 <b>The Good &amp; Services We Procure</b>	Procurement will be at the heart of ensuring that our external contracting minimises the climate impact and carbon footprint of goods, works, and services procured.
06 <b>Our Wider Role</b>	Leading by example and proactively supporting our communities and partners towards society wide carbon net zero and climate change action.

## 03. Terms you'll find in our plan

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**Biodiversity** is all the different kinds of life you'll find in one area—the variety of animals, plants, fungi, and microorganisms like bacteria that make up our natural world. Each of these species and organisms work together to maintain balance and support life.

**Biological Carbon Sequestration (Capture) and Storage** is the storage of carbon dioxide in vegetation such as grasslands, forests, soils and oceans.

**Blue Infrastructure** is a network of multi-functional blue space and blue features, which can deliver quality of life and environmental benefits for communities. It includes lakes, rivers, streams, canals and other water bodies.

**Building Retrofit** is changes to a building after construction to improve energy efficiency or decrease energy demand.

**Carbon Literacy** is an awareness of the carbon dioxide costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis.

**Carbon Neutral** is a state of net zero carbon emissions.

A **Circular Economy** is achieved by designing products smartly with their whole life cycle in mind, re-using and repairing to extend their useful life, and then when their life is deemed over, remanufacturing to create new products from old.

**Climate Change** includes global warming and the “side effects” of warming, e.g. melting glaciers, heavier rainstorms, more frequent drought.

**Climate Change Mitigation** means avoiding and reducing greenhouse gas emissions and increasing greenhouse gas capture and storage.

**Climate Change Adaptation** is altering our behaviour and way of life to protect our families, our economies, and the environment in which we live from the impacts of climate change.

**The Climate Emergency** is a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.

**Deep Retrofitting** is a major or whole building retrofit to achieve a near net-zero energy building.

A **District Heat Network** is a distribution system of insulated pipes that takes heat from a central source and delivers it to a number of domestic or non-domestic buildings.

**Eco-literacy** is the ability to understand the natural systems that make life on earth possible.

**Ecological Footprint of Wales** is a measure that shows how many planets would be needed if everyone in the world were to consume the same as Wales.

**Ecology** is the relationship between living things and their environment.

**Ecosystems** are all the living things in an area and the way they affect each other and the environment.

**Ecosystem Resilience** is the capacity of an ecosystem to respond to a disturbance by resisting damage and recovering quickly.

### 03. Terms you'll find in our plan

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**Global Warming** is the Earth's rising surface temperature and is one symptom of the much larger problem of human-caused climate change.

The **Greenhouse Effect** is a warming of Earth's surface caused by greenhouse gases.

**Greenhouse gases (GHG)** are the thin layer of gases surrounding the Earth. These gases include both naturally occurring and human-derived greenhouse gas such as carbon dioxide, methane, water vapour and nitrous oxide.

**Green Infrastructure** is a network of multi-functional green space and green features, which can deliver quality of life and environmental benefits for communities. It includes parks, open spaces, playing fields, woodlands, street trees, allotments, private gardens, green roofs and walls, SuDS and soils.

**Natural Resources** are natural assets or raw materials occurring in nature. Earth's natural resources include light, air, water, plants, animals, soil, stone, minerals, and fossil fuels.

**Nature-Based Solutions** are actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.

**Net Zero** is achieving a balance between the amount of greenhouse gas emissions produced and the amount removed.

**Precipitation** is any liquid or frozen water that forms in the atmosphere and falls back to Earth.

**Procurement** is the act of purchasing goods or services.

The **Re:fit Programme** is a support initiative for public bodies to implement energy efficiency measures and local energy generation schemes on their assets. These measures improve the energy performance, reduce carbon emissions and running costs.

**Scope 1 Direct Emissions** arise from sources that are owned or controlled by the Council including emissions from our plant and vehicle fleet and fuel.

**Scope 2 Indirect Emissions** arise from the generation of purchased electricity and heating. The energy is generated elsewhere, however as a user the Council is responsible for these emissions.

**Scope 3 Indirect Emissions** arise from sources that are not owned and not directly controlled by the Council, however, they are related to our activities. This includes emissions from the supply chain, such as goods we have purchased and services that we have outsourced. It also includes emissions from the water we consume, our waste services, employee commuting and business travel.

**Solar PV (Solar Photovoltaics)** is the generation of electricity using energy from the sun. Modern solar panels produce electricity from daylight and do not require direct sunlight, although more electricity is produced on bright sunny days.

### 03. Terms you'll find in our plan

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#### **Sustainable Drainage Systems (SuDS)**

are designed to manage stormwater locally, to mimic natural drainage and encourage its infiltration and passive treatment. SuDS are designed to both manage the flood and pollution risks resulting from urban runoff and to contribute wherever possible to environmental enhancement and place-making.

#### **Sustainable Management of Natural Resources**

is the use of natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide.

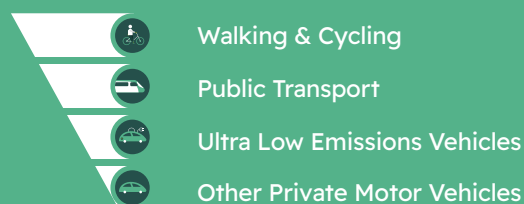
**Sustainable Procurement** is a process whereby organisations meet their needs for goods, services and works in a way that achieves value for money on a whole life basis and generates benefits not only to the organisation, but also to society, the economy and the environment. It considers the social, economic and environmental consequences of what is procured through all stages of its life-cycle. This includes considering design, resource extraction and sourcing, manufacturing and production, transportation, service delivery, operation and maintenance, reuse, recycling and disposal. It is also about questioning whether the purchase requires to be made at all. It also considers the capacity of suppliers to address these consequences throughout the entire supply chain.

#### **Sustainable Transport Options**

are walking, cycling, public transport and electric vehicles. Not all options are equally sustainable. See sustainable travel hierarchy below.

#### **The Sustainable Travel Hierarchy**

guides planning decisions and gives priority to active travel and public transport vehicles, followed by ultra-low emissions and finally private vehicles. It is set out in Planning Policy Wales (PPW) 10.



#### **Tonnes of Carbon Dioxide Equivalent (tCO<sub>2</sub>e)**

is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential. For example, the global warming potential for methane over 100 years is 21. This means that one million metric tons of methane emissions is equivalent to 21 million metric tons of carbon dioxide.

#### **The 21st Conference of Parties (COP21)**

in Paris in 2015, was when 196 parties (countries) signed the latest legally binding international treaty on climate change.

#### **Ultra-Low Emission Vehicles (ULEVs)**

are vehicles that emit less than 75g of CO<sub>2</sub> per km from the exhaust.

#### **Well-To-Tank Emissions**

also known as upstream or indirect emissions, is an average of all the greenhouse gas emissions released into the atmosphere from the production, processing and delivery of a fuel or energy.

## 04. Introduction

This is the Newport City Council Climate Change Plan that sets out the themes, priorities, actions, and milestones that we need to take as a Council over the next five years to:

Reach net zero carbon as an organisation by 2030.

Review the services we provide to ensure they support the city’s journey to net zero and adaptation to climate change.

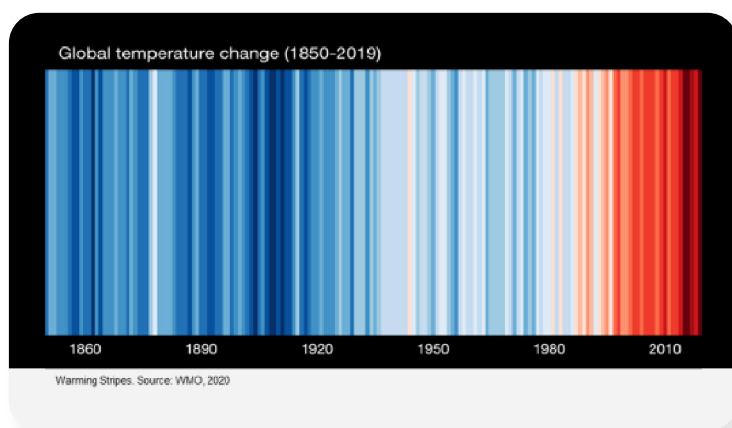
This is a key document for the Council and will shape the Council’s climate change mitigation and adaptation journey over the next five years.

### 4.1 What is Climate Change and Global Warming?

Climate change encompasses a wide range of changes to our climate, including average temperature and precipitation levels. It includes warming and the “side effects” of warming, for example; melting glaciers, heavier rainstorms, or more frequent drought.

Global warming refers to the Earth’s rising surface temperature which is one symptom of the much larger problem of human-caused climate change.

Figure i: Average Surface Temperatures



Over recent decades, we have seen a notable increase in the average surface temperature, as indicated in figure i. Each stripe represents the average temperature difference of a single year compared with the 20th century average. The red lines indicate a warmer than average reading and blue indicating a colder than average reading, with the stronger colours corresponding to a larger difference. Together the stripes vividly show how, and to what extent, the global temperature has changed over the years.



## 4.2 What is causing this warming?

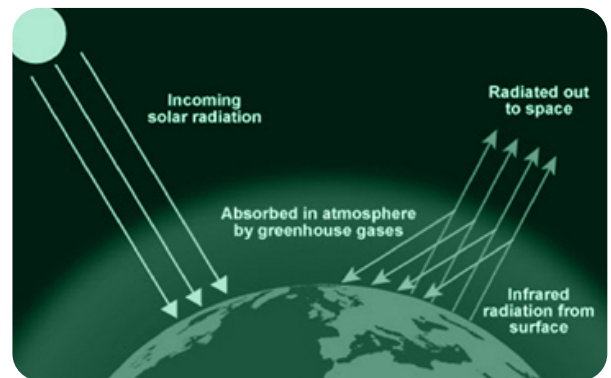
As we know, the Earth is surrounded by a thin layer of gases. These gases include both naturally occurring and human-derived “greenhouse gases” (GHG) such as carbon dioxide, methane, water vapour and nitrous oxide.

As solar radiation from the sun reaches the Earth, a proportion of it is absorbed by the GHG and the rest is reflected back into space.

Having the right quantity and balance of greenhouse gases in the atmosphere gives us the temperatures required to live comfortably on our planet. Without any greenhouse gases at all, the average temperature of the Earth would be -18°C.

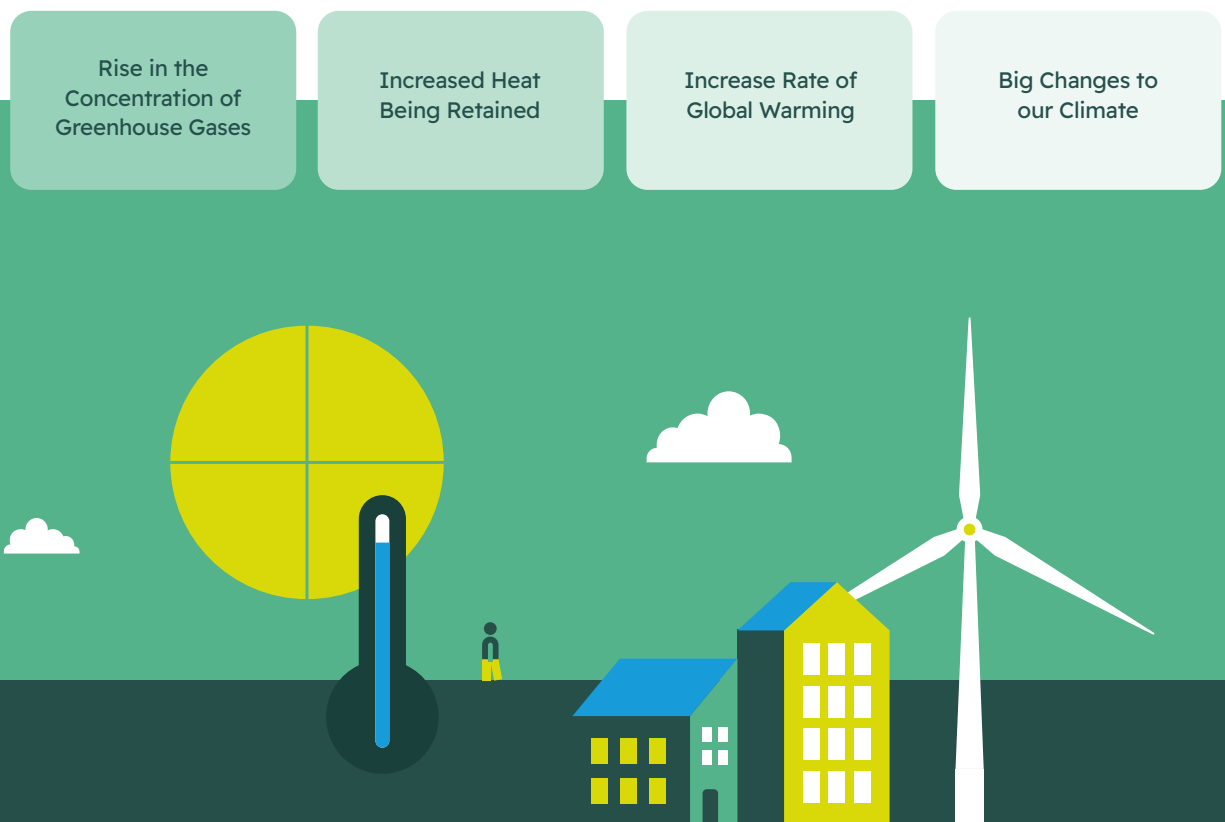
The rise in the concentration of greenhouse gases in the atmosphere is resulting in too much heat energy being retained, and an increased rate of global warming, resulting in significant changes to our climate.

Figure iii: Changes to our Climate



Source: <https://www.open.edu/openlearn/ocw/mod/oucontent/view.php?id=68980&section=2.2>

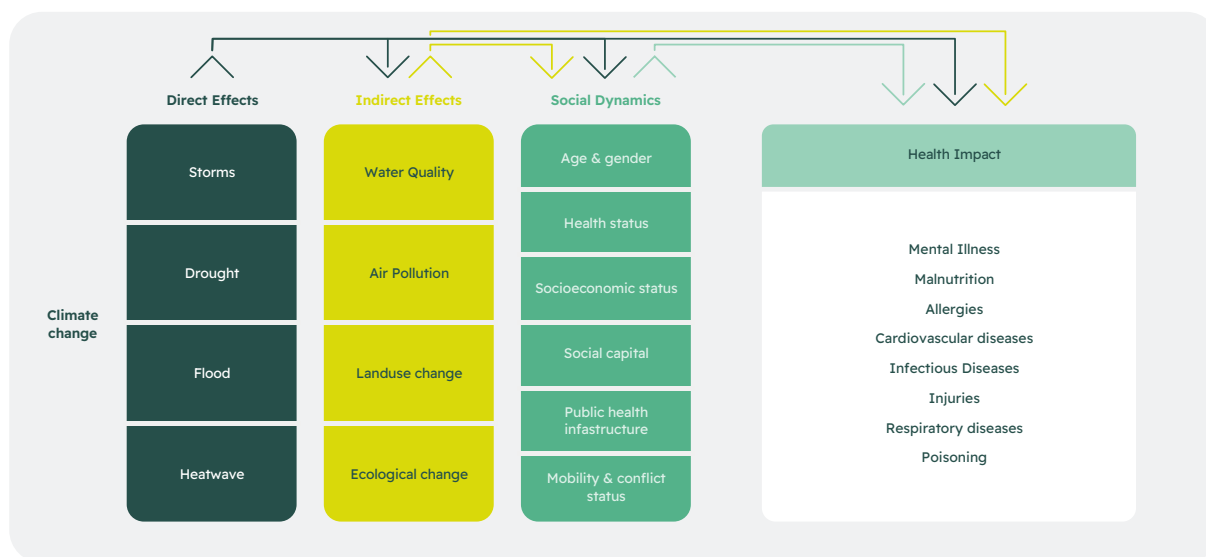
Figure iii: Changes to our Climate



### 4.3 What are the Impacts?

There are many direct and indirect effects of global warming and climate change.

Figure iv: Climate Change Impacts



Source: Lancet Commission

In the UK, it is forecast that we will experience changing weather patterns with stronger storms occurring more often, bringing an increased risk of flooding to local areas. During the summer months temperatures will continue to rise, bringing heatwaves and drought.

These changes will affect the quality of land, land use, and agriculture. Water and air quality will continue to worsen, and there will be changes to local ecology and wildlife biodiversity as a result of this, with some local species at risk of extinction.

With agriculture being affected, the cost of food will increase along with the cost of living. Damage to land and infrastructure will result in an increased strain on public services and local economies.

Changes in temperatures will also result in pests settling further north due to the warmer climate which will bring with them more diseases, not usually seen in the UK. Changes to the climate will also bring with it new forms of illnesses linked to extremes in temperatures, with the young and the elderly being most affected. The health system will continue to be put under even more pressure.

It is important to note that all these consequences are inter-connected and in the same way they can all be mitigated by doing all we can to keep climate change to a minimum.

### 4.4 Paris Agreement

In 2015, 196 parties at the 21st Conference of Parties (COP21) in Paris, signed the latest legally binding international treaty on climate change.

Figure v: Paris Agreement

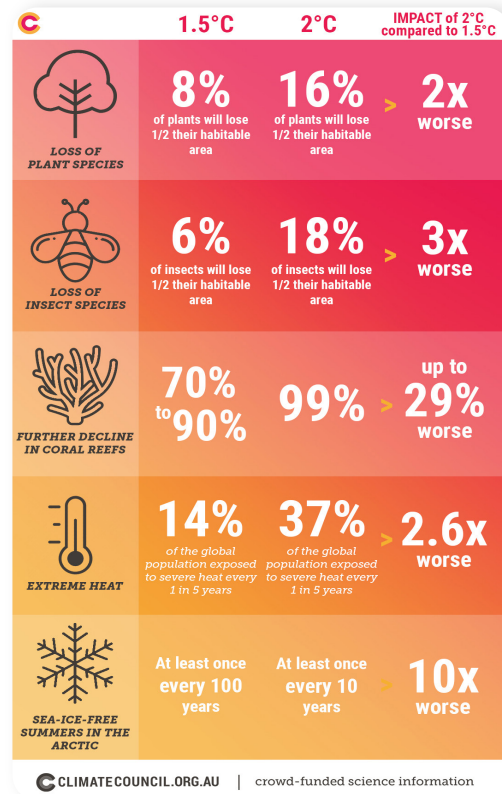


Source: sustainability.yale.edu

Figure vi: Climate Related Risks

This treaty outlined three main objectives:

- To limit global warming to well below two degrees Celsius, compared to pre-industrial levels.
- To enhance resilience to climate impacts, which will be unavoidable due to the greenhouse gases already emitted.
- To align financial flows in the world with these objectives.



Source: <https://www.climatecouncil.org.au/resources/infographic-the-difference-between-1-5-and-2-degrees-warming/>

## 4.5 Wales Context

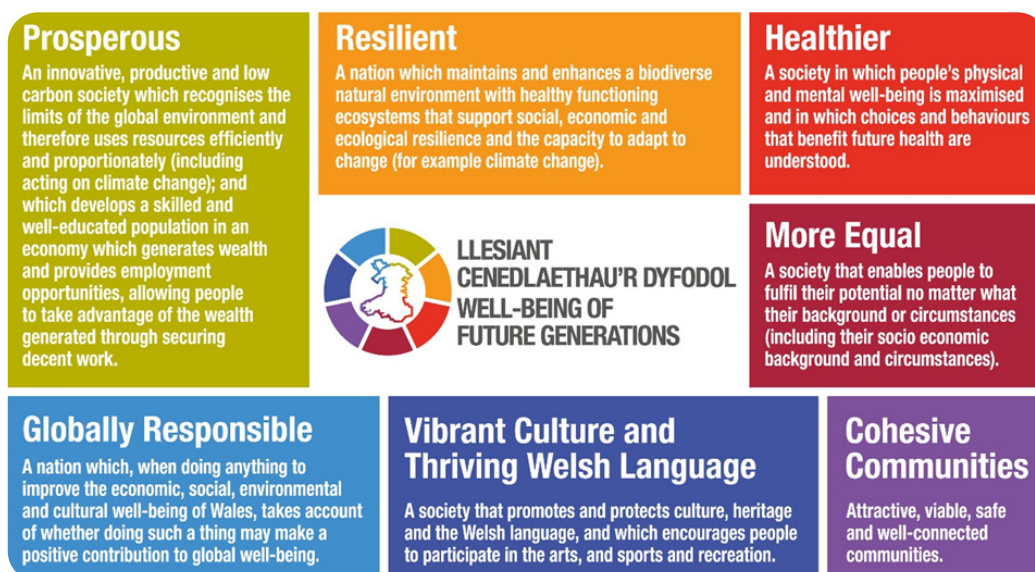
### 4.5.1 Well-being of Future Generations

The **Well-being of Future Generations Act** is comprehensive legislative approach to strengthening action on sustainable development in Wales, with a legal link to the **UN Sustainable Development Goals**. The Act sets out a well-being duty on the Council and other specified bodies to carry out sustainable development and improve the well-being of Wales in accordance with the sustainable development principles.

The Act puts in place seven well-being goals which encompass a vision to improve well-being, including striving to reduce the impacts of climate change for the future.



Figure vii: Well-being Goals



The sustainable development principle means that a body must act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

46 national indicators help tell a story of progress against the well-being goals. In addition, the Welsh Government are currently consulting on a set of national milestones to provide a mechanism for monitoring national progress towards the seven well-being goals.

There are several measures that are directly related to climate change and carbon reduction.

- Milestone 7 | Indicator Number 14 - Ecological Footprint of Wales
- Milestone 8 | Indicator Number 41 - Emissions of Greenhouse Gases within Wales
- Milestone tba | Indicator Number 44 - Status of Biological diversity of Wales

#### 4.5.2 Environment (Wales) Act 2016

The Environment Act shows how the UN priorities can be implemented at a state and regional level including climate change targets, biodiversity duty and the sustainable management of natural resources. The Act sets out a minimum reduction in emissions of 80% by 2050. This target has since been revised and increased to 100% by 2050.

In Wales, our nature, land, water, and air are our ultimate resource. However, demands on these natural resources are increasing and one of the greatest challenges we face is to find a way to secure healthy, resilient, and productive ecosystems for the future whilst still meeting the challenges of creating jobs, housing, and infrastructure. The Environment Act helps us to meet this challenge.

#### 4.5.3 The Climate Emergency and Net Zero 2050

In 2019, the Welsh Government was the first parliament in the world to declare a climate emergency. That same year, all UK government administrations agreed to raise the emissions target further and set a carbon zero target by 2050 (apart from Scotland who aims to get there 5 years earlier). In 2021, the Welsh Government set out a legal commitment to achieve net zero by 2050 but is striving to “get there sooner”.

#### 4.5.4 Net Zero Welsh Public Sector 2030 and the Route Map to Decarbonisation

To reach this goal, the public sector has been tasked with becoming net zero carbon by 2030. The Council is fully committed to addressing the climate emergency and is currently working towards the ambition of becoming a net zero carbon organisation by 2030 and supporting Wales to be net zero carbon by 2050.

The Route Map to Decarbonisation guides the development of the Welsh public sector’s contribution to future all Wales low carbon delivery plans and is an overview of the actions and milestones needed to reach net zero greenhouse gas emissions by 2030. It sets out framework for action:

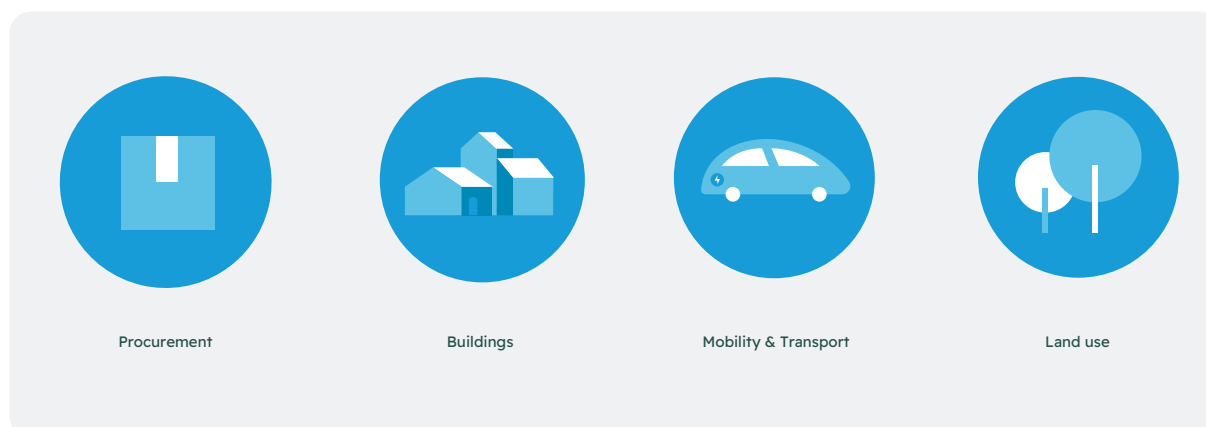
Figure viii: Route Map to Decarbonisation Vision

**“By 2030 choosing zero carbon will be the routine, culturally embedded and self-regulating across the Welsh public sector”**

Figure ix: Route Map to Decarbonisation Journey to Net Zero



Figure x: Route Map to Decarbonisation Areas of Action



It also states that the public sector has a wider role in shaping our society-wide low carbon journey. The Council Climate Change Plan will use the route map as a framework for delivery.

**4.5.5 South East Wales Transport Commission**

The First Minister for Wales established the **South East Wales Transport Commission (SEWTC)** to investigate sustainable ways to tackle congestion on the M4 in South East Wales. The Commission has set out a set of **recommendations** structured around the concept of a network of transport alternatives.

#### 4.5.6 Air Quality

The World Health Organisation (WHO) developed air quality standards for a range of pollutants to protect human health. Air quality standards have been written into UK and Welsh legislation, namely Part IV of the Environment Act 1995 and The Air Quality Standards (Wales) Regulations 2010. The legislation makes the UK Government, the Welsh Government, and local authorities responsible for tackling air pollution. The responsibility of the local authority is to identify and monitor areas within its district that may exceed the air quality objectives. If an exceedance is found the area must be declared as an air quality management area (AQMA) and an action plan be developed to improve. Within the UK the main pollutants of concern covered under this legislation are nitrogen dioxide (NO<sub>2</sub>) and particulate material (PM<sub>10</sub> and PM<sub>2.5</sub>).

##### In Newport we currently have 11 AQMAs:

- Caerleon
- Malpas Road, south
- Chepstow Road | Clarence Place | Caerleon Road
- Cefn Road
- Caerphilly Road
- George Street

##### AQMAs along the M4:

- Royal Oak Hill
- Basseleg Road, Glasllwch
- St Julians
- Glasllwch Road, High Cross
- Malpas Road, Shaftesbury

Priorities and actions identified in the Climate Change Plan will support the work that is underway to improve air quality in Newport.



#### 4.5.7 Equality Act 2010

The Equality Act 2010 legally protects people from discrimination, and it is against the law to discriminate against someone because of:

- age
- disability
- gender reassignment
- marriage and civil partnership
- pregnancy and maternity
- race, religion or belief
- sex
- sexual orientation.

The council must consider how decisions may impact on people differently because of the protected characteristics above, and how any negative impact could be reduced.

The impact of climate change on younger people and future generations are likely to be greater than other sections of the community as temperatures are likely to rise as time goes on.

In addition, extremes in weather tend to impact more greatly on the most vulnerable and those with existing health conditions so older people and those with disabilities could also be impacted more greatly.

There are no specific impacts for race. However, ethnic minorities in Newport tend to live in the most deprived areas in Newport. Public health studies have shown that the impacts of climate change tend to be the biggest in deprived areas.

For example, poor air quality combined with health impacts of deprivation interact

to modify and strengthen associations with all-cause and respiratory disease mortality especially in the 'most' deprived areas where the most-vulnerable people live and where health needs are the greatest.

Also, ethnic minorities tend to have poorer health outcomes, lower disability-free life expectancy and higher rates of cardiovascular disease and diabetes which are all negatively affected by the impacts of climate change.

The Climate Change Plan will support the mitigation and adaptation of the impacts of climate change in the local area so has the potential to have a positive impact or to reduce the likelihood of a negative impact.

#### 4.5.8 Socio-economic Duty

The Socio-economic Duty is set out in the Equality Act 2010, and requires the council, when making strategic decisions, to pay due regard to the need to reduce the inequalities of outcome that result from socio-economic disadvantage. Inequalities of outcome are felt most acutely in areas such as health, education, work, living standards, justice and personal security, and participation.

As mentioned above public health studies have shown that the impacts of climate change tend to be the biggest in deprived areas.

The Climate Change Plan will help to mitigate and adapt to these impacts.





## 4.6 Local Authority Context

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### 4.6.1 Ecological & Climate Emergency

In November 2021 the Council proposed a political motion and declared an Ecological and Climate Emergency. The declaration stated:

Newport City Council will continue the good work that we have started and:

- Reduce our carbon emissions to net zero carbon by 2030.
- Review the services we provide to ensure they support the city's journey to both net zero carbon and adapting to the impacts of climate change by 2050.
- Develop a clear Climate Change Organisational plan, in consultation with our citizens, for the next five years that will set out the actions we need to take to achieve this.
- Develop a city-wide Local Area Energy Plan, in collaboration with experts from the public, private and third sector to develop innovative solutions to decarbonise heat, electricity and local transport and realise local renewable energy production.
- Work with One Newport partners and the public to develop a city-wide Climate Strategy to enable city-wide net zero carbon and adaptation to climate change by 2050.
- Integrate best ecological practice into each area of the Council's activity, allowing us to lead the city by example.
- Publicise this declaration of an ecological and climate emergency to residents and businesses in Newport and support and influence action by partners through partnerships and support and enable action by citizens to reduce their own carbon emissions

### 4.6.2 Local Well-being Plan

The Well-being of Future Generations (Wales) Act 2015 establishes a Public Services Board (PSB) for each local authority area in Wales. The PSB includes public and third sector partners from the local area.

Each PSB must publish a Local Well-being Plan which sets out well-being objectives which must improve the economic, social environmental and cultural well-being of the area. The current [Local Well-being Plan for Newport](#) runs from 2018-23 and the Well-being Objectives are:

- Everyone feels good about living, visiting, and investing in our unique city.
- Everyone has the skills and opportunities they need to develop, prosper, and contribute to a thriving sustainable city.
- Everyone belongs to resilient, friendly, connected communities and feels confident and empowered to improve their well-being.
- Newport has healthy, safe, and resilient environments with an integrated sustainable travel network.

Supporting the climate and nature recovery and reducing our carbon emissions are key to achieving these well-being objectives.

The Local Well-being Plan also pledges to develop and deliver on a city-wide Climate Strategy which is currently in the very in the early stages.

### 4.6.3 Corporate Plan

The Council's **Corporate Plan 2017-22** has four well-being objectives which were set to maximise the Council's contribution to achieving the Well-being of Future Generations Act Well-being Goals. The Well-being Objectives are:

- To improve skills, educational outcomes & employment opportunities
- To promote economic growth and regeneration whilst protecting the environment
- To enable people to be healthy, independent & resilient
- To build cohesive & sustainable communities

Limiting climate change and reducing our carbon emissions are key to achieving all of our well-being objectives.

The Climate Change Plan will sit alongside the Corporate Plan and will be a key driver when developing and implementing the next Corporate Plan for the period of 2022-27. Delivery and annual reporting of the two plans will be co-ordinated and aligned.

### 4.6.4 Local Development Plan

The **Local Development Plan (LDP)** is the development plan for Newport and is the basis for land use planning within the local authority area. The current plan 2011-26 was adopted in 2015 and has a number of objectives that will support the delivery of the Climate Change Plan. These are:

#### **Objective 1 | Sustainable Use of Land**

To ensure that all development makes the most efficient use of natural resources by seeking to locate development in the most sustainable locations, minimise the impact on the environment and make a positive contribution to local communities.

#### **Objective 2 | Climate Change**

To ensure that development and land uses in Newport make a positive contribution to minimising, adapting to or mitigating against the causes and impacts of climate change, by incorporating the principles of sustainable design, changes to travel behaviour, managing the risks and consequences of flooding, and improving efficiency in the use of energy, waste and water.

#### **Objective 6 | Conservation of the Natural Environment**

To protect and enhance the quality of the natural environment, including landscape, protected habitats and species of principal importance for biodiversity in Wales (regardless of greenfield or brownfield status) and the protection of controlled waters.

#### **Objective 10 | Waste**

To ensure that waste management choices are based on the proximity principle, where appropriate, and a hierarchy of reduce, reuse, recovery and safe disposal, and that there is adequate provision for facilities to enable this to happen.

Planning of our communities will be key to supporting the city's journey to net zero and adaptation to climate change.

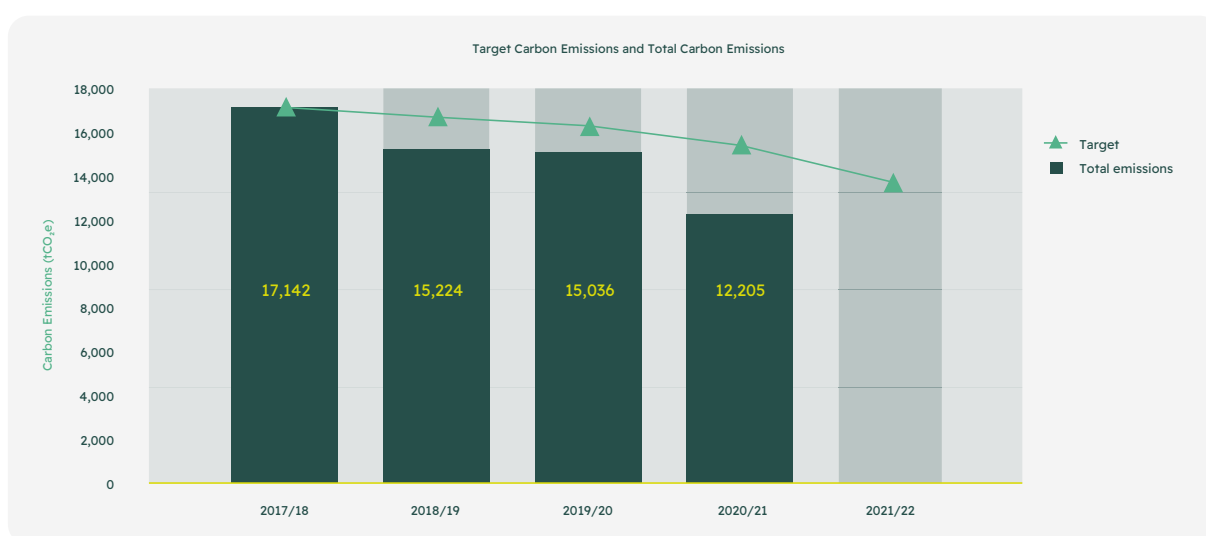
### 4.6.5 Carbon Management Plan

The Council's **Carbon Management Plan 2018-22** which was focussed on carbon emissions from scope 1 and 2 has already started the Council's journey to net zero carbon and will be reviewed in 2022. The reviewed and updated Carbon Management Plan will provide more detail and support the delivery of the Climate Change Plan.

## 05. Where are we now?

The Council, along with all public sector organisations in Wales, has made a commitment to become carbon neutral by 2030.

Figure xi: Council Carbon Emissions



Great strides have been made to reduce carbon emissions in line with the targets that were set out in our **Carbon Management Plan**. From Figure xi, it is clear that we have continued to reduce our total emissions below the target values each year. This has resulted in a 29% reduction of scope 1 and scope 2 emissions compared to the baseline year that was initially set as 2017/2018.

### 5.1 Measures to Reduce Emissions Across the Council

The Council has taken a variety of approaches to reduce carbon across the organisation.

#### 5.1.1 LED Streetlighting

Completing a project to convert all older inefficient streetlights to modern LED alternatives. The project involved the conversion of over 14,000 lights across the city resulting in a 56% reduction in consumption and associated carbon emissions.

#### 5.1.2 Building Energy Efficiency Measures

Reducing utility energy consumption via operational improvements and behaviour change and a range of energy efficiency measures have been implemented. These include, draught proofing, insulation, improved heating controls, solar panels, and LED lighting to name a few. The standard of new Council buildings and extensions has also been improved to reduce energy and carbon emissions.

### 5.1.3 Gwent Healthy Travel Charter

Signing up to the **Gwent Healthy Travel Charter** which contains a series of commitments to support staff and visitors to reduce travel, walk and cycle more, take public transport, and switch to electric vehicles. The Gwent public sector Healthy Travel Charter was launched in November 2020. 23 Public Services Board Organisations across Gwent have signed up to the which commits to 15 actions over three years.



### 5.1.4 Electric Vehicles and Charging

The introduction of electric vehicles, which were first used to deliver Council services in 2018, has increased significantly, with the Council now aiming to have replaced all cars and light vans with electric alternatives by April 2022. Electric vehicle chargers have also been installed across multiple Council sites to support the transition away from fossil fuelled vehicles by 2030.



In 2021, the Council was the first Welsh Local Authority to invest in a fully electric refuse collection vehicle (RCV). Six refuse vehicles will be electric by April 2022, and the entire fleet of RCVs will be fully electric by the end of the decade.

### 5.1.5 Roof-Mounted Solar PV

At the time of writing, the Council has the largest roof mounted solar panel array on any building in Wales with a 500kWp system, which was installed at The Geraint Thomas National Velodrome of Wales in September 2020. This formed part of a wider roll-out of 2.3 MW of roof mounted solar panels working with Egni Coop community energy cooperative across 27 buildings in total. The solar panels can generate over 2 Giga Watt hours of renewable electricity per year, significantly reducing the carbon emissions associated with importing electricity from the grid.



## 5.2 Measures to Reduce Emissions Across the City

The Council has taken a variety of approaches to reduce carbon across the city.

### 5.2.1 Sustainable Travel

Implementing numerous active travel schemes to promote walking and cycling. The Council has installed 50 public electric vehicle charge points across the city, mostly in Council run public car parks. The next phase of EV charging installations will include on-street residential chargers and rapid charging hubs.

### 5.2.2 Low Carbon Housing

Approving two low carbon housing developments, where the developers have agreed not to use any fossil fuel to provide heating. The developments have also included sustainable drainage systems (SuDS) planted with a wet meadow mix of flora, including nut and berry bearing trees and shrubs to provide foraging opportunities and habitats for wildlife. The Council is also in the process of developing a new Local Development Plan to ensure that any new developments align with the city's requirement to be net zero carbon by 2050.

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## 5.3 Future Plans

### 5.3.1 Building Energy Efficiency Measures

To achieve the carbon reductions required to achieve net zero carbon by 2030, extensive building retrofits will be required. As well as continuing to deliver schemes in partnership with our property joint venture company Newport Norse Limited, the Council are also embarking on a multi-million pound retrofit programme in conjunction with a specialist energy services company through the Refit Programme of works. As well as reducing our consumption and generating our own electricity, one of the main objectives will be to remove or significantly reduce its reliance on gas boilers, replacing them with more efficient heat pump systems.

### 5.3.2 Renewable Energy Generation for Buildings

Solar PV is already installed on over 30 Council buildings across the city and we will continue to install solar PV wherever possible. Reducing existing consumption to a minimum will maximise the proportion of our usage that comes from on-site generated net zero carbon electricity. Converting our heating systems from fossil fuels such as oil and gas to electric heat pumps will not only save energy overall, but will increase our electricity consumption significantly, requiring large solar PV and battery storage systems to maximise carbon reductions.

### 5.3.3 Ground Based Solar PV

A small number of selected locations are being investigated for this technology. These larger systems can make a greater contribution to tackling the climate emergency. Options for direct charging of electric vehicles are being explored which would allow 100% zero emission Council vehicles to operate in the city.

### 5.3.4 Local Area Energy Planning

A pilot project to develop a long term, city-wide energy plan for Newport is also underway. The Local Area Energy Plan pilot is a Welsh Government initiative which asks local authorities to set out a plan for how their area can meet energy needs through renewable and non-carbon sources. The plan will assess current energy systems, and detail both practical actions and a long-term vision towards creating a zero-carbon energy system for the city by 2050. The plan is currently under development and should be published in June 2022.

## 5.4 Baselining our Carbon Emissions

Welsh Government has recently published [guidance](#) (May 2021) to public sector organisations to enable a consistent approach across Wales for reporting on their organisational carbon emissions. The new reporting methodology considers all emissions associated with activities performed by local authorities including fuel, energy and water consumption, waste disposal, employee commuting, business travel, and land use. The addition of scope 3 emissions from waste, employee commuting, business travel and purchased goods and services has resulted in the Council’s reported emission totals increasing considerably compared to previous years.

Well-To-Tank (WTT) emissions are being considered for the first time to demonstrate the true impact of the processes, considering the upstream scope 3 carbon emissions associated with extraction, refining, and transportation.

In the current Welsh Government guidance, supply chain emissions associated with the procurement of goods and services are classed as indirect scope 3 emissions.

This is the area of biggest increase compared to previous years when this was not reported. The supply chain emissions are based on spend on a certain category and the emission factor associated with that category. It is recognised that this is an estimated assumption-based approach and does not give an accurate account of emissions. Welsh Government has stated that procurement is at best a rough estimate for the time being and will continue to be worked on to provide

more accurate results. However, it is still useful to understand the categories of spend with the largest carbon emission totals associated with them.

Figure xii: Breakdown of Carbon Emissions by Scope

Carbon Emissions - Scope Breakdown (tCO<sub>2</sub>e) 2019-2020

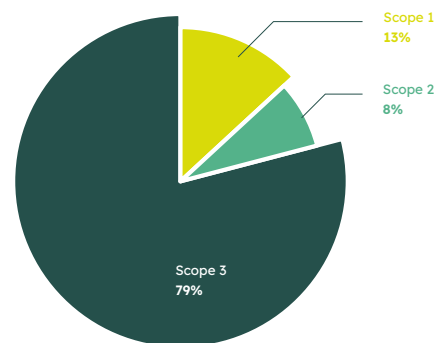
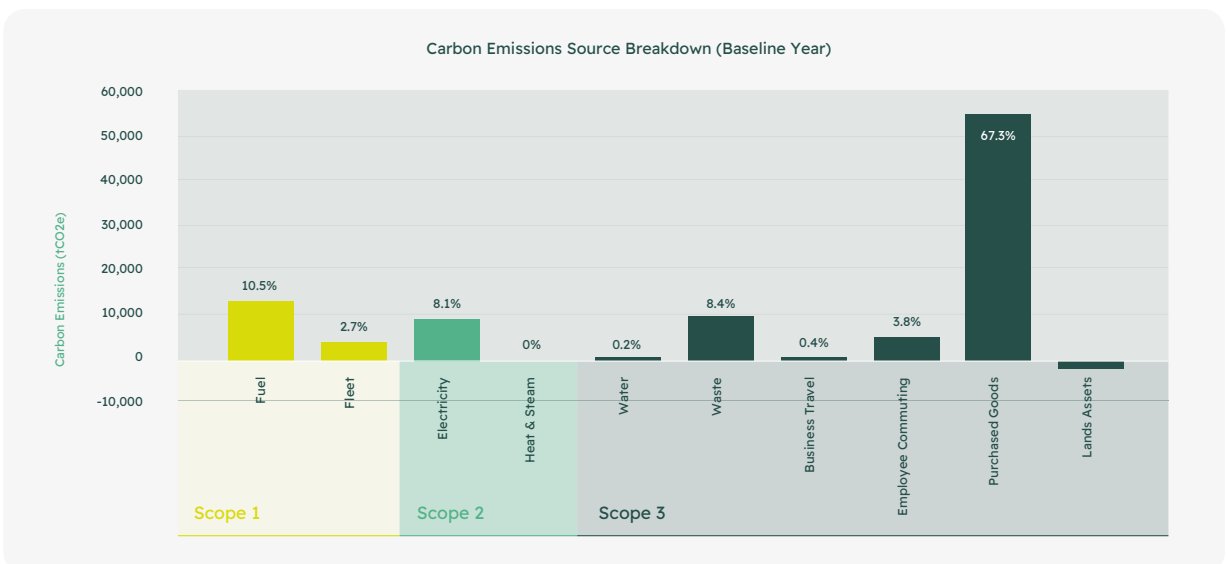


Figure xiii: The Baselining for Carbon Reporting

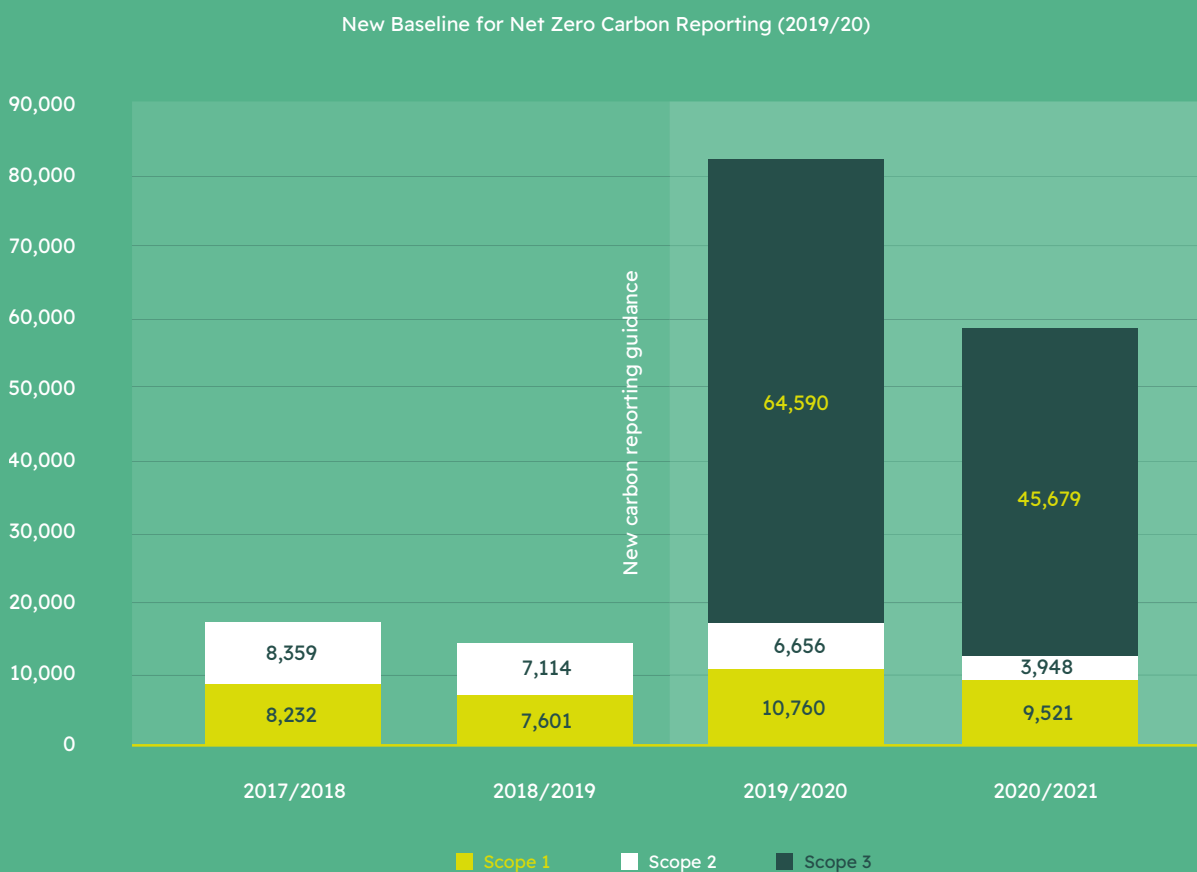


The baseline for the Council which aligns with the net zero carbon baseline for Welsh Government is for the financial year 2019-2020. The Council during that period emitted the equivalent of 82,006 tonnes of CO<sub>2</sub> into the atmosphere.

As we can see carbon emissions from the goods and services that we procure is a large proportion of the total and will need to be one of the areas of focus for the Council over the coming years. The plans for the addressing these emissions are covered in section 7.5 of this plan.



Figure xiv: Net Zero Carbon Reporting and the New Baseline



It should be noted that significant reductions were made the following financial year to the baseline due to COVID-19 restrictions reducing the number of staff working out of Council offices. We would be expecting to see a slight increase in overall tonnes of CO<sub>2</sub> equivalent emitted in 2021-22 due to some services returning to close to normal.

## 06. The plan

### 6.1 How was the Plan Developed?

A Climate Change Project Board was set up to lead on the development of the plan. Staff and managers from across the Council were involved in writing of a consultation draft of the Plan using the [Route Map for Decarbonisation](#) as a framework.

A public consultation took place in November and December 2021. All responses were reviewed, and the Plan was amended accordingly.

### 6.2 Aims of the Plan

The Plan sets out the delivery themes, priorities, actions, and milestones that we need to take as a Council over the next five years to:

Reach net zero carbon as an organisation by 2030.

Review the services we provide to ensure they support the city’s journey to net zero and adaptation to climate change.

### 6.3 Key Delivery Themes

To deliver on this the plan six delivery themes have been identified similar to the those in the [Route Map for Decarbonisation](#).

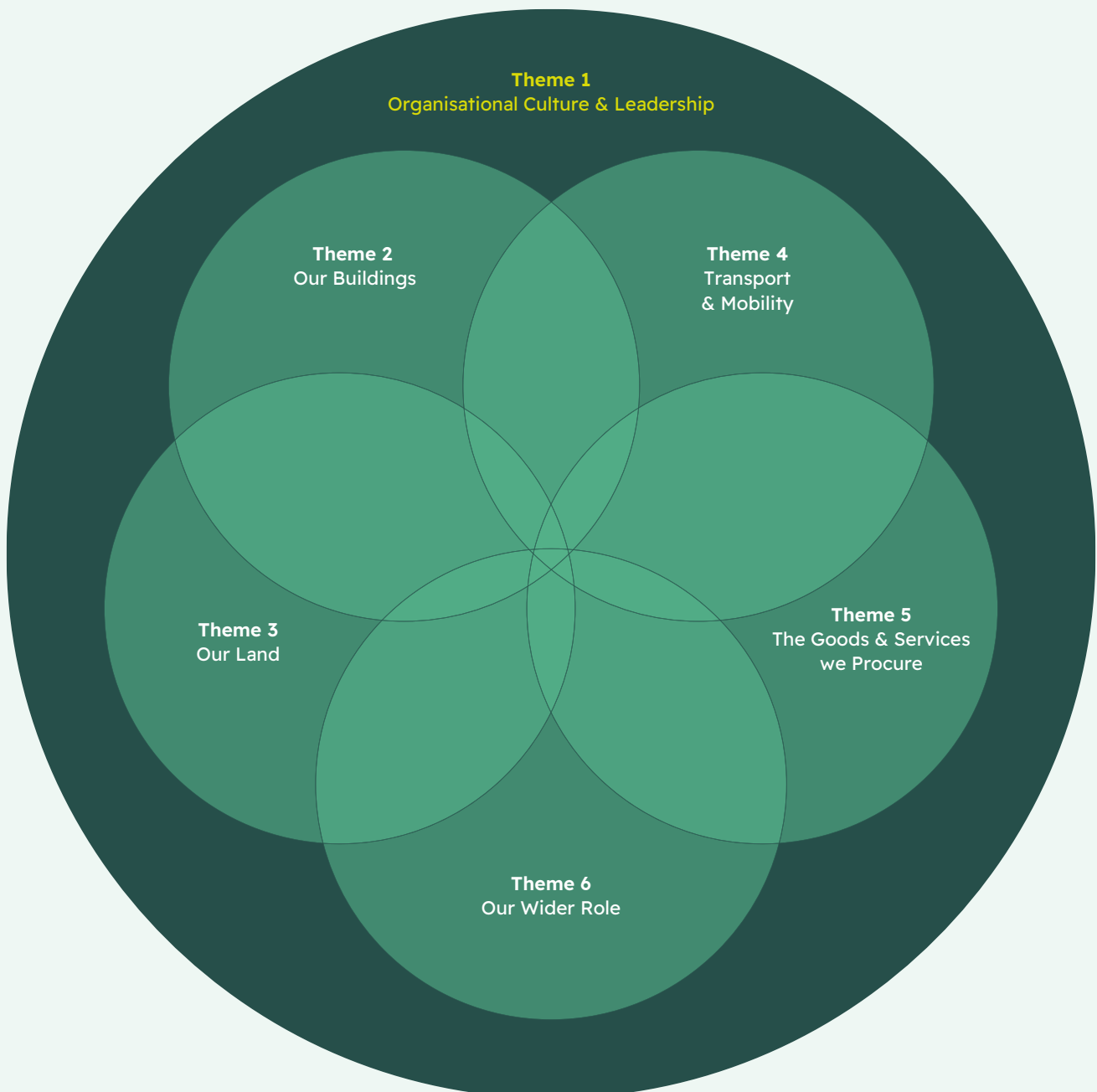
The delivery themes are:



The delivery themes are not distinct and are all interdependent and have interconnected and overlapping relationships linked together with Theme 1 as an overarching theme. This is illustrated in figure xv overleaf.



Figure xv: The Interconnected and Overlapping Relationships of the Plan Delivery Themes



In the following chapter each of the themes sets out:

- 2030 Vision,
- Theme Priorities
- Action to Take
- Milestones and Timescales
- Measures of Success

## 07. Delivery Themes

### 7.1 Theme 1 Organisational Culture & Leadership



#### 7.1.1 2030 Vision

The climate and nature emergency will be at the heart of all our work. In our decisions we will take positive action to minimise climate and ecological impacts. We will lead by example and empower our partners, communities, and individuals to tackle the climate emergency and prioritise nature-based solutions.

Behaviour change, improved understanding of our environmental impact, education and training will be key.

We want everyone to understand the emergency we face and respond to this in their day-to-day actions, decisions, and longer-term visions for our internal services and for the city as a whole. Raising awareness and understanding of the threat of climate change will help shape behaviours across the organisation to align with our net zero carbon aspiration.

Our new senior leadership structure recognises the importance of climate change by introducing a Strategic Director for Environment and Sustainability. The actions being committed to under the Organisational culture & Leadership theme will demonstrate a Council-wide commitment to net zero carbon. We will show leadership and accountability in delivering these priorities by embedding climate change-centric thinking into our policy-setting and decision-making processes.

#### 7.1.2 Priorities

To reach our vision we have set out four priorities:

##### 1. Behaviours & Role-Modelling

Our elected members and workforce will be encouraged and supported to consider their individual contribution to becoming net zero carbon by 2030, and leaders will role model the Council's expectations.

##### 2. Governance & Performance

Our democratic and corporate functions will be committed to becoming net zero carbon by 2030, and our decision-making, governance framework and performance monitoring will reflect this commitment.

##### 3. Promotion & Engagement

Regularly publicise progress and achievements to embed aspirations to be net zero carbon by 2030.

##### 4. Financial Commitment

To plan for the financial impacts of climate change, and to ensure that our medium to long term financial planning contributes to the delivery of the Council's commitment to reduce carbon emissions where possible.

## 07. Delivery Themes

### 7.2 Theme 2 Our Buildings



#### 7.2.1 2030 Vision

To achieve net zero carbon energy and support the nature recovery across our buildings by 2030.

Our building emissions as a Council are estimated to be 15,231 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) which equates to 18.6% of our overall emissions.

This includes the emissions from fuel for heating, electricity, and district heat.

Buildings and assets related to education such as schools make up a large proportion of carbon emissions from our estate and are therefore a focus for the Council.

Significant investment is being made in our schools via the Welsh Government 21st Century Schools programme, and the Council are working with Welsh Government to ensure those schools are as near to net zero carbon as is affordable.

#### 7.2.2 Priorities

To reach our vision we have set five priorities:

##### 1. New Council Buildings

All new building to be net zero carbon.

##### 2. Building Retrofitting

Deep retrofit to ensure creating net zero carbon energy buildings.

##### 3. Renewable Heat

Implementation of renewable heat in new buildings.

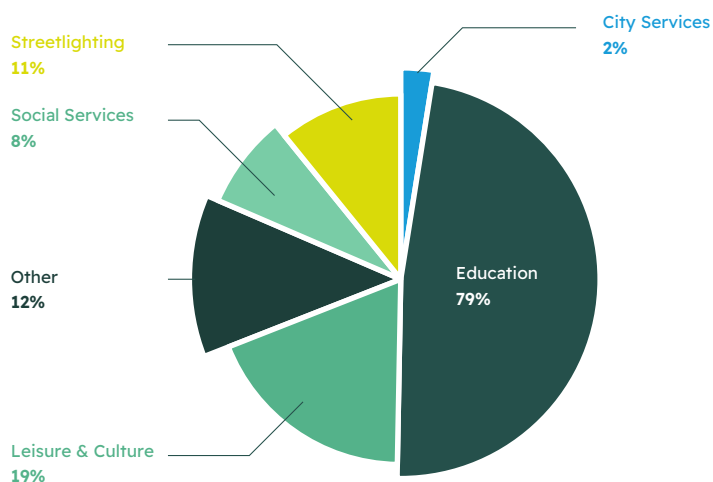
##### 4. Natural Gas

A commitment to significantly reduce or remove natural gas heating across the buildings.

##### 5. Building Rationalisation

Audit current assets to understand their long-term carbon impact with the aim of better strategic utilisation.

Figure xv: The Interconnected and Overlapping Relationships of the Plan Delivery Themes



## 07. Delivery Themes

### 7.3 Theme 3 Our Land



#### 7.3.1 2030 Vision

A city which sustainably manages and increases its natural resources, protecting, enhancing, improving and connecting the natural environment in a carbon neutral and climate and ecological responsible manner.

Our Council owned land and woodland is estimated to provide biological carbon storage of 1,041 CO<sub>2</sub>e which equates to an offset of -1.3%.

Biological carbon sequestration (capture) and storage is provided by the storage of carbon dioxide in vegetation such as grasslands, forests, soils and oceans.

Carbon capture and storage is an essential part of limiting the impact of climate change. Maintaining and expanding habitats such as woodland on our estate is key to protecting and enhancing carbon stored.

#### 7.3.2 Priorities

To reach our vision we have set four priorities:

##### 1. Ecosystem Resilience

Sustainably restore, create and connect biodiversity and habitats by improving Council owned land and public realm

##### 2. Trees & Woodland

Improve human health, environmental quality, carbon reduction and capture by sustainably managing and increasing Newport's trees and woodland.

##### 3. Urban Greenspace

Increase green infrastructure in the urban/public realm to reduce environmental inequalities, for the multiple benefits of nature's recovery, human health and wellbeing, climate adaptation, cooling and flood alleviation, providing carbon reduction and clean air.

##### 4. Council Owned Leased Land

Support the nature recovery whilst reducing carbon emissions from Council owned farmland and any other leased land.

## 07. Delivery Themes

### 7.4 Theme 4 Transport & Mobility



#### 7.4.1 2030 Vision

A city with healthy and sustainable travel choices for the people.

Our transport emissions as a Council are estimated to be 5,603 tCO<sub>2</sub>e which equates to 6.9% of our overall emissions. This includes the emissions from our plant and fleet vehicles, how our staff travel to work and during their working day.

We also have a wider role to play working with our partners across the city to plan and provide an integrated, frequent, low carbon and accessible transport network that is affordable in line with the sustainable travel hierarchy.

This will reduce air pollution, promote environmental resilience whilst equalising opportunity.

#### 7.4.2 Priorities

To reach our vision we have set nine priorities.

##### Council emissions

##### 1. Business (Grey) Mileage & Staff Commuting

Reduce carbon emissions from employee commuting and grey mileage by implementing a policy of agile working, active travel and usage of public transport and ultra-low emissions vehicles (ULEVs).

##### 2. Fleet

Reduce Council carbon emissions by moving to a ULEV fleet.

##### Wider Role

##### 3. Transport Network

Managing the transport network to enable people to travel in a more sustainable way.

##### 4. Land Use Planning & Placemaking

Ensure sustainable transport options are available from the outset in all new developments, including walking, cycling, public transport and electric charging infrastructure.

##### 5. Active Travel

Reduce carbon emission by prioritising active travel across the city.

##### 6. Public Transport

Encourage the use of public transport instead of car usage.

##### 7. Charging Point Infrastructure

Increase charging capacity across the city.

##### 8. Schools

Reduce carbon emissions from home to school travel.

##### 9. Taxis

Implement policies to support the move to a low emission taxi fleet.

## 07. Delivery Themes

### 7.5 Theme 5 The Goods & Services we Procure



#### 7.5.1 2030 Vision

Sustainable procurement will be at the heart of ensuring that our external contracting minimises the climate and nature impact and also the carbon footprint of goods, works and services procured.

The emissions from the goods and services that we purchase and our supply chain as a Council are estimated to be 55,168 tCO<sub>2</sub>e which equates to 67.3% of our overall emissions.

It should be noted that the recommended methodology for calculating these emissions is based on spend on a certain category and the emissions associated with that category (as set by Welsh Government). The result is an estimate of overall emissions for procurement. More accurate results are being worked on for the future reporting.

This will reduce air pollution, promote environmental resilience whilst equalising opportunity.

#### 7.5.2 Priorities

To reach our vision we have set four priorities:

##### 1. Measurement

Gain a good understanding of our estimated tCO<sub>2</sub>e per annum from procured goods and services, and its emissions profile and supplier base.

##### 2. Guidance, Tools and Training

Develop guidance, tools and training for the organisation to support staff to reduction of carbon throughout the procurement lifecycle.

##### 3. Partnership

Lead by example and work with our procurement strategic partners both public and private to align climate change, carbon reduction and circular economy aspirations.

##### 4. Engagement

Incentivise suppliers through proportionate evaluation criteria to proactively seek opportunities to reduce carbon and climate impacts.

## 07. Delivery Themes

### 7.6 Theme 6 Our Wider Role



#### 7.6.1 2030 Vision

Leading by example and proactively supporting our communities and partners towards society wide action for nature and climate recovery.

The Council also has a wider role to play in supporting community wide climate change mitigation and adaptation through the services that we provide.

How we provide our services can support the city's journey to net zero carbon and adaptation to climate change.

For example:

- Planning for low carbon sustainable communities through planning and our local development plan.
- Working with the private sector to deliver local and regional renewable energy.
- Managing municipal waste to reduce carbon emissions.

Emissions from our waste services are estimated to be 6,908 tCO<sub>2</sub>e which equates to 8.4% of our overall Council's emissions. It must be noted that at present it is difficult to distinguish between Council and City waste, therefore, this figure is representative of the waste produced by the city as a whole and collected by the Council. Reducing waste in the right way will reduce the carbon footprint of the city.

#### 7.6.2 Priorities

To reach our vision we have six priorities:

##### 1. Placemaking & Building Control

Reduce carbon emissions and support nature recovery by focusing on sustainable, low carbon development, influencing low carbon energy and building resilient communities.

##### 2. Energy

Identify and implement the changes needed to the local energy system to decarbonise heat, electricity and local transport and realises local renewable energy production.

##### 3. Flooding

Build climate resilience and alleviate flooding across the city using a range of measures including natural flood defences.

##### 4. Waste

Build climate resilience and alleviate flooding across the city using a range of measures including natural flood defences.

##### 5. Digital

Utilise digital solutions effectively to reduce and monitor carbon emissions.

##### 6. Partnerships & Communities

Work collaboratively with partners and communities to promote the climate and nature recovery across the city.

## 08. Timescales

<b>Aug-Oct 2021</b>	Consultation Draft of the plan developed	Complete
<b>29 Oct 2021</b>	Reviewed by Scrutiny Committee	Complete
<b>31 Dec 2021</b>	Consultation closing date	Complete
<b>Jan/Feb 2022</b>	Consultation responses reviewed and Climate Change Plan updated	Complete
<b>9 Mar 2022</b>	Presented to Agreed and endorsed by Cabinet	Complete
<b>Mar 2022</b>	Plan published	Complete
<b>Mar/Apr 2022</b>	Development of a delivery, governance and performance framework	
<b>Apr 2022</b>	Start implementation of the plan	
<b>Annually</b>	Progress report to be published	
<b>Annually</b>	Review of the plan	
<b>Apr 2026</b>	Start to develop new plan for next period 2027-32	





SERO NET  
CASNEWYDD  
NET ZERO  
NEWPORT



NEWPORT  
CITY COUNCIL  
CYNGOR DINAS  
CASNEWYDD