



Vale of Glamorgan Council Climate Change Challenge Plan 2021-2030

A copy of the Plan is available in Welsh.

Foreword

In July 2019 the Vale of Glamorgan Council joined with Welsh Government and other Councils across the UK in declaring a global 'climate emergency' in response to the findings of the IPCC 'Special Report on Global Warming of 1.5°C' (October 2018). The Council made a commitment to:

- Reduce the Council's carbon emissions to net zero before the Welsh Government target of 2030 and support the implementation of the Welsh Government's new Low Carbon Delivery Plan.
- Make representations to the Welsh and UK Governments, as appropriate, to provide the necessary powers, resources and technical support to Local Authorities in Wales to help them successfully meet the 2030 target.
- Continue to work with partners across the region.
- Work with local stakeholders including Councillors, residents, young people, businesses, and other relevant parties to develop a strategy in line with a target of net zero emissions by 2030 and explore ways to maximise local benefits of these actions in other sectors such as employment, health, agriculture, transport and the economy.

Since then, we have continued to make changes across the organisation and to embark on ambitious projects to reduce our carbon emissions and to send a clear message that we must all work together to adapt to and mitigate the effects of climate change. We have an opportunity to change and to make a difference and we are bringing all of this work together as **Project Zero**. We will work with the community and our partners to make the necessary changes, focusing on energy, waste, food, buildings, transport, land use and procurement. Our key target is to reduce the Council's carbon emissions to net zero by 2030 but we also want to influence and encourage others to reduce their emissions and to be part of **Project Zero**.

The Intergovernmental Panel on Climate Change (IPCC) was set up by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to provide an objective source of scientific information on climate change. The **IPCC** is clear that climate change is real and human activities are the main cause. **Project Zero** is the Vale of Glamorgan Council's response to this climate change emergency.

In 2019 the Vale of Glamorgan Council declared a climate emergency. However, since early 2020 we have been tackling another emergency as we have worked with partners and the community to respond to the COVID-19 pandemic. The pandemic has changed all of our lives, how we work, socialise, travel and shop and its effects will remain with us for some time. The pandemic has brought about significant challenge and hardship and it has also demonstrated our ability to change, to be more responsive and to be more innovative. We must build on what we have learnt and apply this to how we respond to the many and complex issues that climate change presents.

We need to think about the long term and plan for the future, but we also need to act quickly and influence others to act now. We need to have effective communications to bring about behaviour change within the Council and within the community. We need to understand the science and to work as a team and understand how our actions effect the lives of others.

The consultation we have undertaken as part of the development of this plan has demonstrated support across the community for an ambitious and robust approach to the climate emergency. We are grateful to all those who have taken the time to comment on the plan and who have expressed a willingness to work with us and within their community to tackle climate change and protect our natural resources.

Our work to tackle climate change will continue to evolve. The world does not yet have all the answers but we are learning all the time about what we need to stop doing and what we need to start doing. Despite the significant professional expertise within the Council we need to work with and learn from others and listen to the community to shape **Project Zero**. The consultation and engagement around Project Zero have highlighted the wealth of knowledge and innovation across our communities and a passion and energy to encourage behaviour change. It is clear that some of the changes we need to make will require investment and some may be unpopular, but we need to consider the whole cost of what we do and how we do it.

Through the work we are already undertaking and engagement to date we have identified a number of challenges and steps to deliver **Project Zero**. These challenges are framed around the need to:

- **Demonstrate strong leadership** - the Council must lead by example.
- **Fulfil our responsibility to current and future generations** – these are the areas where we help shape the activities of others through our policies and services and where we can have a significant influence on the actions of others.
- **Make a difference now** – this refers to how the Council operates as an organisation, an employer, buildings and landowner and landlord.

Our commitment to you is to change, but if we are to succeed this will also require changes from our partners, the business community and our residents. I am confident now more than ever that across the Vale there is a willingness to work together and do what is necessary to protect our future and that of generations to come. Together we can make the Vale more resilient, greener and healthier for us all.



Councillor Neil Moore

Leader of the Vale of Glamorgan Council

Our Commitment to Change

The Council's vision is '**Strong Communities with a Bright Future**' and our work to tackle climate change is part of delivering that vision. There is a wide range of evidence which supports the need for change and the urgent need to respond to climate change and [Appendix A](#) details some of the evidence at a global, UK, Welsh and local level and the reasons why we need to make changes.

When the Council declared the climate emergency in 2019 there was already significant work being undertaken and this work has continued to progress and make a difference. One of the key steps we are now taking is to bring this work together into a more co-ordinated and cohesive approach to tackling climate change. **Project Zero** is enabling us to reflect on what is already in place, where we need to build momentum and where we most need to focus our efforts.

Our Values

The Council has a set of four values and these will be embedded in our work on climate change. In the context of our work on climate change these values mean the following;

Ambitious – transforming how we work



Open – welcoming new ideas and being ready to listen, learn and change



Together – working with our partners and the community to achieve the necessary changes

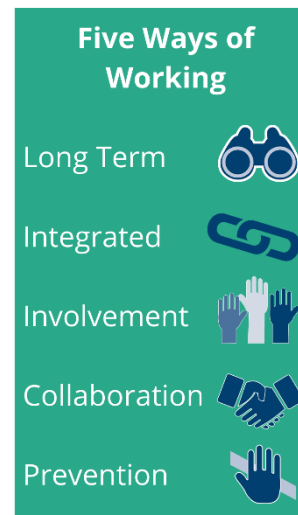


Proud – taking pride in what we have already achieved and working towards a legacy for the Vale that we can all be proud of



The Well-being of Future Generations Act

Project Zero will also contribute to the National Well-being Goals as set out in the Well-being of Future Generations Act and the five ways of working will be evident in all that we do.



Future Wales – The National Plan 2040

[Future Wales](#) was published by Welsh Government in February 2021 and is a framework for planning the change and development Wales will need over the next two decades. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities. Future Wales will influence significant areas of Council activity.



The Corporate Plan

The Council's Well-being Objectives provide the framework for the Council's five-year [Corporate Plan 2020-25](#). These objectives are detailed below and all of them are relevant to our work on climate change and the need to consider the impact on our natural resources of everything we do:

- To work with and for our communities
- To support learning, employment and sustainable economic growth
- To support people at home and in their community
- To respect, enhance and enjoy our environment



Vale Public Services Board

In February 2020 the Council signed a [Climate Emergency Charter](#) with the Vale Public Services Board and this sets out the PSB's shared commitment to lead by example, take positive action and to reduce our impact. Together we will:

- Reduce our emissions to mitigate the effects of climate change whilst adapting to its impacts
- Be kinder to our environment
- Be healthier
- Become a carbon neutral public sector by 2030

Project Zero describes how the Council will work to meet our commitments in the PSB charter and reflects the importance of working with the community and across all sectors to meet the many challenges we face.

What we are already doing

Some of the work the Council is already taking forward and which will be part of **Project Zero** is detailed below and demonstrates the breadth of activity across our services.

Planning

- The Local Development Plan (LDP) provides the **local planning policy** framework for delivering sustainable development, specific guidance has also been developed seeking enhancements on Biodiversity, Trees and Development, Travel Plans and Renewable Energy.
- The LDP target of granting planning permissions sufficient to meet 10.6% (56.68 GWh) of projected electricity demand through **renewable energy** sources by 2020 has been met.
- Since July 2018 we have secured a replanting ratio of 2:1 for the removal of trees with a preservation orders (TPO) or trees in a conservation area (TCA) in accordance with the **Trees, Woodlands, Hedgerows and Development Supplementary Planning Guidance**.

Energy

- The Council purchases **100% of electricity from renewable sources** and has granted planning permission to a number of solar farms.
- We have undertaken over **100 energy saving projects** across council buildings including switching old inefficient lighting to LED lighting and the introduction of better energy controls.
- We have begun switching heating from gas to electricity by installing a **Ground Source Heat pump** at Cadoxton House in Barry and an **Air Source Heat pump** at BSC2 (the Engine Room) in Barry. These sites have seen significant improvements in energy consumption and there are plans for further installations.
- We have installed Solar panels on 14 buildings with a combined capacity of 480 KW. All systems are sized appropriately to match demand at the buildings on which they are mounted.
- 68% of the Council's **street lighting** has been converted to LED with plans to increase this to 92% by the summer of 2021.

Waste

- Over 72% (72.3%) of **household waste** collected by the Council was prepared for reuse and/or recycled during the first half of 2020/21, this exceeds the statutory target of 64% for 2020/21.
- All tenders for Council contracts now specify the reduced use of **single use plastics** and all new tenancies and food concessions that are granted prohibit the use of single use plastics.

Food

- We have reduced **food miles** by changing our milk supplier to a local dairy farm just outside Bridgend. We have gone straight to the milk producer who now supplies all of our schools rather than using a company to supply on behalf of farmers.
- The Council-owned Big Fresh Catering Company is making a conscious effort to reduce or eradicate **single use plastics**. They are working with suppliers to find alternative products and

have for example changed the ice cream product in all of our schools from a polystyrene tub to a recyclable cardboard tub, which has helped reduce waste within our kitchens.

- The Big Fresh Catering Company is working with the 21st century schools team to reduce the amount of **carbon produced** from our kitchen equipment.

Transport

- The Council had £3.44million within the S106 account at 31st March 2020 committed to **sustainable transport** i.e. walking, cycling and public transport infrastructure, with schemes being programmed in a number of areas including Dinas Powys, Wick and Rhose.
- All relevant planning applications are required to be accompanied by a travel plan to promote **sustainable travel** choices and prevent unnecessary car use and since March 2019 at least 10% of car parking spaces on non-residential developments are required to have electric vehicle charging points infrastructure.
- **Active Travel schemes** have been delivered to improve opportunities for walking and cycling in a number of areas including Cowbridge, Llantwit Major, Penarth Heights, Lavernock Road/Cosmeston, Sully Road/St Josephs School and South Road/Hayes Road/Sully Moors Road.
- The **Nextbike** scheme was launched in Penarth in 2020 and there have been over 1400 rentals across 5 docking stations between November 2020 and January 2021. Docking stations have also been installed at Cosmeston and Sully with plans for 2 stations in Dinas Powys next financial year.
- We are working with our schools to **encourage cycling** and 6 balance bikes have been provided to every primary school in the Vale and there are plans to provide 48 bikes for Years 5&6 to complete cycle proficiency training at selected schools in deprived areas. 33 scooterpods have been provided to 26 schools, 3 cyclepods were provided to schools and cycle shelters were installed at 4 schools in 2020/21.

Council Housing

- Works undertaken to the Council's housing stock through the WHQS have improved **energy efficiency and reduced fuel poverty**. We have raised the average SAP (energy performance rating) rating from the low 40s to 65 with improvements including modern windows and doors, new roofs, insulation and modern heating systems.
- We are piloting an **Optimised Retrofit Programme** in our council housing with Welsh Government grant funding to expand knowledge and improve local contractor capability in green heating services, to decarbonise the domestic heating market and provide sustainable council homes with an EPC target rating of A.

Schools

- The Council has designed a **net-zero carbon primary school building** which is being delivered as part of the 21st Century Schools Programme. When completed, Llancarfan Primary School will be the first net-zero carbon (in operation) primary school in Wales.
- Carbon has also been significantly reduced during the **construction process** with 99% of construction waste being recycled or energy recovered to reduce emissions from raw material extraction and to avoid landfill use.
- The Council has been awarded an additional £1,050,000 from Welsh Government to support **decarbonisation** measures as part of the 21st Century Schools Programme.
- We have installed photovoltaic panels (PV) on a number of school sites to increase use of **renewable energy** and also utilised Salix funding to implement a range of **energy efficiency** measures across schools in the Vale.
- We have also installed **electric vehicle charging** stations at selected school sites.
- Over **1,200 trees** from the Woodland Trust are due to be planted as part of our 21st Century School projects which will help create wildlife areas and also contribute to improved air quality around schools.

Our Land

- All our **country parks and the Heritage Coast** only use peat free compost for all gardening projects. Both country parks have created in house composting areas and produce their own compost for use on site. We have also reduced pesticide and herbicide use across our land.
- In 2019/20 216,905m² of **parks, open spaces and highways land** was sown with wildflowers or was maintained as a naturalised area. Section 106 contributions have also been used to enhance public open space with wild-flower, bulb and tree planting including £10k for a comprehensive tree planting scheme in Penarth in 2020/21.

The Council has also made a number of changes in recent years to reduce the impact of the organisation on the environment and to demonstrate strong leadership to staff, partners and the local community. We have implemented a space project to rationalise the amount of office space we need, we have utilised technology to support more agile and flexible working, benefiting customers, employees and the environment. We have given clear messages to staff about reducing waste, reuse and recycling within the workplace and have made significant improvements to our buildings to improve energy efficiency. We have also signed the Vale PSB Staff Healthy Travel Charter.

Regular communication about changes being made and recognition of the contribution of different teams and individual staff members has helped create a culture where staff feel their well-being is valued and an understanding of the connections between well-being and our environment. Staff are encouraged to generate new ideas to help transform how the Council works and their commitment, innovation and expertise are an important part of **Project Zero**.

Our Programme for Change

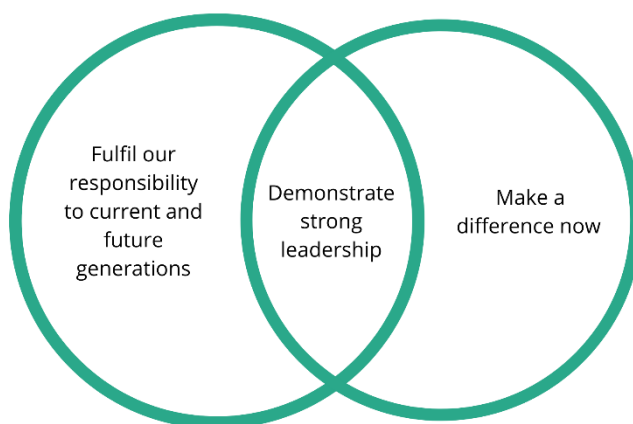
Project Zero articulates the direction we want to take and how we want to change. It brings a great deal of work together, new ideas and ways of working as well as continuing with the good work already taking place, for example improving our school buildings, working with developers and the community and encouraging behaviour change.

The Council is a diverse and complex organisation and the opportunities for change are considerable. One of our tasks is to develop our insight into which changes can have the most effect, where we should target our resources to make the biggest difference whilst recognising that we need a combination of small changes and radical and ambitious transformation.

We have declared an emergency and simply continuing with current practices will not deliver the outcomes we need. We are already doing a great deal, but we need to do more. Our response needs to be dynamic and needs to evolve. As an organisation and as a community we need to change, we need to challenge, and we also need to focus on what the priorities are for us an organisation and for the Vale. This is **Project Zero**.

Through **Project Zero** we have identified eighteen challenges which reflect what we believe needs to change as part of an effective response to the climate emergency. Work in some areas will be more advanced than in others and some activities will take longer to deliver than others but together they form an ambitious programme of work that we are committed to deliver. We have committed to being carbon neutral by 2030 and by meeting these challenges and embedding work on climate change across the Council we can achieve our target and a brighter future for the Vale. Our Challenges and the changes we will make are detailed below and are framed around the need to:

- **Demonstrate strong leadership** - which is integral to all of the steps outlined below, the Council must lead by example.
- **Fulfil our responsibility to current and future generations** – these are the areas where we help shape the activities of others through our policies and services and where we can have a significant influence on the actions of others.
- **Make a difference now** – this refers to how the Council operates as an organisation, an employer, buildings and land owner and landlord.



Demonstrate strong leadership	
We will demonstrate strong leadership as we meet the challenge to effectively engage with the community and our partners about how we can work together. We will raise awareness about the issues and the work we are undertaking and develop a better understanding about where we can have the biggest impact and how we can influence others to work with us and be part of an ambitious programme of change.	
Our challenges are to:	Steps we will take:
Engage with the community and listen to their priorities for tackling climate change and protecting our natural resources, supporting them to make a difference and to shape our collective ambitions.	<ul style="list-style-type: none"> • Build momentum around the Climate Change Community Conversation as an ambitious campaign for change. • Involve Stakeholder groups and develop a green ambassadors group to shape our plans and encourage behaviour change. • Promote volunteering opportunities and community projects.
Raise awareness and understanding by promoting consistent and clear messages to our staff, our communities and partners about the difference we can make and are making by changing our behaviour and transforming our services.	<ul style="list-style-type: none"> • Develop a co-ordinated programme of internal and external communications. • Report on the progress being made and the impact of the changes we make. • Showcase community projects across the Vale. • Signpost people to information and services within their community.
Develop our evidence base and insight to understand more fully the potential impact and 'costs' of activities.	<ul style="list-style-type: none"> • Bring in external expertise and research best practice in other organisations inc. with PSB partners to understand our impact. • Provide training for staff and Members. • Calculate and understand the Council's carbon footprint and publish other key data detailing our performance and progress. • Set meaningful targets towards reducing our negative impact on the environment.

Embrace our role as community leaders to work with and influence and enable others to bring about the changes necessary to tackle climate change.	<ul style="list-style-type: none"> • Work with Welsh Government and influence policy change and legislation. • Work within the Cardiff Capital Region to bring about change across the region. • Work with PSB partners to deliver the commitments in the PSB Climate Emergency Charter. • Work with business and industry, Town and Community Councils, Community groups and the Third Sector to make a difference locally.
<p align="center">Fulfil our responsibility to current and future generations</p> <p>In meeting these challenges, we will encourage behaviour change and adapt the necessary infrastructure to meet the current and future challenges of climate change. The focus for this section is on transport, food, nature, energy, waste, water use and flooding. In meeting the challenges, we will support a green economy and the importance of balancing economic growth with the need to minimise negative impact on the environment and our natural resources. We will take forward work to improve the green infrastructure in the Vale and to promote sustainable food systems.</p>	
Our challenges are to:	Steps we will take:
Protect and enhance green and blue space ¹ , biodiversity and, ecosystem resilience and improve understanding of the importance of our natural environment.	<ul style="list-style-type: none"> • Develop and implement a Green Infrastructure Plan including a survey of all trees in the Vale and an assessment of the current infrastructure. • Implement the biodiversity forward plan and raise awareness about the importance of nature and wildlife • Replace lost trees and promote tree planting across the Vale including working with owners of large areas of land. • Improve existing and create more green and blue spaces through Council led schemes, s.106 funds and new transport schemes. • Work with local communities to increase the number of allotments and community garden space.

¹ green spaces, refers to areas such as woods, meadows and parks and blue space includes rivers, watercourses and sea

	<ul style="list-style-type: none"> • Produce Sustainable Urban Drainage Guidance.
Ensure our planning policies and regeneration activities support work to adapt to and mitigate the effects of climate change and reduce negative impact on the environment.	<ul style="list-style-type: none"> • Review/produce Supplementary Planning Guidance to support work on tackling climate change. • Maximise opportunities to meet our communities need for housing, employment and services through, where possible, the sustainable redevelopment of brown-field land in appropriate locations, through the existing Local Development Plan and the plan review commencing in June 2021 • Work with developers to develop zero carbon buildings. • Create more energy efficient buildings through planning policy. • Require all new and significant developments to implement appropriate sustainable drainage system (SuDS) to appropriately manage surface water, water quantity and biodiversity. • Use S106 agreements to invest in environmental and sustainable transport measures. • Work with Cardiff City Region to explore opportunities to promote and develop clean growth hubs capitalising on Barry as a dock and maximising renewable energy potential.
Achieve a modal shift away from cars to more sustainable forms of transport with an increase in walking, cycling and the use of less polluting transport.	<ul style="list-style-type: none"> • Work within the Cardiff Capital Region to improve public transport options for the region and implement taxi charging points as well as a future network of car park and bus charging points. • Work with developers to ensure new business, leisure and housing developments plan appropriately for transport needs and encourage behaviour change.

	<ul style="list-style-type: none"> • Increase active travel (walking and cycling) and improve the transport infrastructure in the Vale through the use of Welsh Government grants to improve access, safety and the joining up of the active travel network. • Expand the Nextbike e-cycle hire scheme into other parts of the Vale following on from the implementation of the scheme in the Penarth area. • Work with all schools to ensure they have green travel plans and adequate cycling facilities. • Establish a network of Electric Vehicle Charging Points and support projects which promote alternatively fuelled vehicles.
Work with partners and business to develop and implement an Economic Growth Strategy that supports local business and meets the challenge of climate change and our ambition for a green recovery from the Coronavirus pandemic.	<ul style="list-style-type: none"> • Develop and implement a sustainable and green Economic Growth Strategy. • Support increased digital access and literacy in the community. • Support employment opportunities linked to a green economy and work with the Cardiff Capital Region to explore green jobs growth potential in areas such as renewables. • Work with businesses, colleges and universities to identify opportunities and promote new technology.
Support and advocate for more sustainable local food systems leading to fewer food miles, less waste and greater awareness about the impact of our food choices on the environment.	<ul style="list-style-type: none"> • Work through the PSB and Food Vale to implement the Move More Eat Well Plan and to promote buying local produce and shopping locally. • Work within Food Vale to obtain Sustainable Food City status and promote businesses that have sustainable practices • The Big Fresh Catering Company which serves nearly 2 million meals a year will

	<p>take steps to further reduce its impact on the environment.</p> <ul style="list-style-type: none"> • Review procurement arrangements to support less food miles and less packaging and waste. • Work with community groups and through the Green Infrastructure Plan to encourage people to grow their own fruit and vegetables. • Promote and facilitate food waste recycling for residents, business and schools.
<p>Reduce waste and put in place the necessary facilities, services and awareness raising for a more circular economy with a strong emphasis on reuse, repair and recycling.</p>	<ul style="list-style-type: none"> • Adopt a new Waste Management Strategy with a strong emphasis on working with the community. • Develop campaigns to change behaviour e.g. to reduce single use plastics and packaging and to increase reuse, recycling and composting. • Promote and signpost to community projects and services which encourage reuse and repair and a reduction in waste. • Establish a Reuse Shop to take in products, repair as necessary and sell them on. • Roll out of recycling arrangements across the Vale and work with schools and business to reduce waste and improve recycling rates. • Build a new Resource Recovery Centre in the Western Vale. • Commit to avoiding the export of any residual waste or recycling materials from the UK.
<p>Work with partners to reduce the risk of flooding, manage our coastline and encourage everyone to take a more responsible approach to water use.</p>	<ul style="list-style-type: none"> • Implement a Flood Risk Management Plan and a Shoreline Management Plan. • Ensure Sustainable Urban Drainage measures are delivered. • Promote water efficiency measures in our work and buildings.

	<ul style="list-style-type: none"> Encourage the re-use of rainwater where possible.
Reduce the amount of energy we all use and lead by example sourcing our energy from clean and renewable sources and working across all sectors to bring new technology, innovation and investment to the Vale.	<ul style="list-style-type: none"> Develop and implement a Local Area Energy Plan and contribute to the work of the Cardiff Capital Region. Work with developers and businesses to move away from fossil fuels and explore opportunities for investment in alternative energy supplies. Support community renewable energy projects and develop district heating networks. Provide information about being more energy efficient in the home including raising awareness about grants and schemes for homeowners and tenants.
<p style="text-align: center;">Make a Difference</p> <p>These challenges focus on how the Council as an organisation provides its services and manages its assets. The proposed activities relate to our procurement practices, schools and council housing, how we manage our land and assets, staff travel and investment in technology.</p>	
Our challenges are to:	Steps we will take:
Revise our Contract Management and Procurement policies and practices to ensure they support our ambition to reduce waste and carbon emissions.	<ul style="list-style-type: none"> Revise the procurement policy and strategy and train staff on more sustainable procurement to reduce consumption and encourage a circular economy. Explore social and environmental clauses in contracts which place an increased focus on local supply chains and business, with a commitment to supporting the foundation economy.
Invest in our existing housing stock to make it more energy efficient and deliver near zero carbon, or at a minimum A rated new Council homes.	<ul style="list-style-type: none"> Deliver near zero carbon, or at a minimum A-rated new Council homes. Improve the energy efficiency of the Council housing stock and utilise Optimised Retrofit Programmes that include Modern Methods of Construction and off-site

	manufacturing to meet carbon reduction targets.
Build new zero carbon schools and improve our existing school buildings to ensure they are energy efficient and create learning environments fit for the future.	<ul style="list-style-type: none"> • Invest in carbon reduction measures across the educational estate. • Design new schools to meet BREEAM Excellent standard, delivering energy efficient buildings, enhancing habitats for wildlife, and reducing the carbon cost of construction. • Monitor and control carbon footprint at the construction stage and investigate options to address embodied carbon through natural materials and modern methods of construction. • Adopt a fabric first approach to achieve high thermal performance and install photovoltaic panels and/or air source heat pumps. • Improve school grounds biodiversity as a means of decarbonisation and map natural carbon sinks. • Focus on methods to further reduce in-use consumption; e.g. reducing catering, monitoring community usage.
Manage and use our land, buildings and other assets to support work to tackle climate change, rationalising what we need and improving sustainability and energy efficiency.	<ul style="list-style-type: none"> • Review the Asset Management Strategy. • Progress the Space Project to modernise and rationalise Council buildings including the creation of more green areas. • Invest in and implement a programme of energy saving projects to reduce energy use across our buildings as part of the carbon management plan. • Maximise the potential of Council owned land and assets in the production of renewable energy and exploring ways in which this could benefit the local community. • Encourage leaseholders to be more sustainable in how they use property leased from the Council.

	<ul style="list-style-type: none"> Implement plans to convert more street lighting and de-illuminate bollards.
Reduce the number of car journeys staff make and increase the number of electric/low carbon vehicles across the Council's fleet of vehicles.	<ul style="list-style-type: none"> Develop an electric /alternative fuelled vehicle strategy. Promote and incentivise more sustainable staff travel including corporate membership for Nextbike, pool bikes, local bus services and TfW rail service with reduced charges for staff, non-car parking days for staff and a cycle to work scheme. Develop hub facilities for staff to work from to reduce the need to travel.
Invest in technology to support homeworking and online services reducing the need for travel and office space.	<ul style="list-style-type: none"> Utilise new technologies and digital practices to reduce electricity usage and reduce carbon emissions. Implement a new Digital strategy to support increased use of technology and a reduction in office space and travel.

How Project Zero works

The previous section sets out the challenges we need to meet and provides context for where we are in responding to the emergency.

Integration is key to successfully delivering **Project Zero**. The Council provides a wide range of services and all of these will have a role to play in the project.

Our Plans, Policies and Strategies

The Council also has a range of plans, policies and strategies in place that detail how particular services will be developed and delivered. In setting out our commitments and challenges as part of **Project Zero** we need to reflect on the progress already made and ensure that across the Council's many different plans and strategies that there is a consistent and ambitious approach to tackling climate change. Detailed below are some of the key Council strategies, policies and plans that will have a critical role in our work to adapt to and to mitigate the impact of climate change. These plans and strategies will shape how the Council acts but will also inform and influence the behaviour and actions of others.

- Corporate Plan 2020-25 'Working Together for a Brighter Future'
- Annual Delivery Plan
- HR Strategy

- COVID-19 Recovery Strategy
- Reshaping Strategy & Programme
- Corporate Asset Management Plan
- Carbon Management Plan
- Digital Strategy
- Income Generation & Commercial Opportunities Strategy
- Procurement Policy and Strategy
- 21st Century Schools Programme
- Economic Growth Strategy (in development)
- Local Housing Strategy
- Local Transport Plan (LTP) 2015-30
- Active Travel projects
- Local Development Plan 2011-26
- Relevant Supplementary Planning Guidance
- Green Infrastructure Strategy (in development)
- Biodiversity Forward Plan
- Flood Risk Management Strategy
- Shoreline Management Plan

Our Insight

If we are to successfully meet the challenge of tackling climate change then it is critical that across the Council expertise is developed and shared. Training will be provided to Members and staff regarding specific issues such as carbon literacy as well as general awareness raising. The Council will invite professionals from within the organisation and from partner organisations to assist in the development of our knowledge and understanding of the potential negative impact of our actions and where we can make the most positive changes and progress work to be carbon neutral.

We will also utilise online modules for training and share resources with other agencies. There will be a clear message that making the changes to become carbon neutral by 2030 is the responsibility of all elected Members and staff and we can all make a difference and be part of **Project Zero**.

We will engage external expertise to work with us to inform how we can further develop our insight and evidence base to inform our decision making and report progress. This will include using the [Welsh Public Sector net zero carbon reporting guide](#) published in May 2021 and working with partners such as Natural Resources Wales who have undertaken considerable work in this area.

This will improve our accountability and provide the intelligence needed to guide our progress and highlight where action is needed and our priorities for achieving our target of being carbon neutral by 2030. We will share this information with the community and partners as part of our work to bring about change across the Vale by individuals, communities, business and the public sector.

Our Focus on Engagement

In December 2020 an [open letter](#) from the Leader of the Council was published explaining that despite the pandemic, work to tackle climate change has continued and recognising that we still need to do more. This letter hailed the start of a conversation on climate change and the Council will keep this conversation going. It is important that as a Council we continue to keep the public and our partners informed about what we are doing, and it is important that we continue to listen to different ideas and to what our residents and other stakeholders have to say.

Our work to date has been informed by engagement with partners, staff across the Council, discussions with young people as part of work with the Public Services Board and the community conversation we started in December 2020. We recognise that to bring about the necessary changes by 2030 we need to act now but we also need to talk, to share, to listen and learn and to encourage and support each other. The consultation undertaken on the draft plan has highlighted the importance of sharing information and listening to what the public and partners think, hearing their concerns and exploring how we can work together.

We will continue to work with our schools and youth service to listen to the concerns of children and young people to share our ideas for change and to listen to theirs. We will also talk to older members of the community and learn from their knowledge and experience. We want to work with our partners including Town and Community Councils and the voluntary sector and bring all the information together to shape our actions and behaviour.

We need to build momentum behind this work and forums for discussion and constructive challenge. This is our Vale and we need to work together to safeguard its future and to leave a legacy for future generations that we can be proud of. A legacy for the next generation and beyond.

Governance Arrangements

Our work on climate change is integral to the Council's transformation programme and one of the key drivers. Change will be required across the Council to meet the challenges of **Project Zero**. The Council's work to tackle climate change will be included in a wide range of reports including quarterly performance reports, the Council and PSB Annual Reports and regular reports to Cabinet and Scrutiny.

The development and delivery of work to tackle climate change will be overseen by the Council's Reshaping Board which includes Cabinet members and the Senior Leadership Team. The Council's Insight Board will also have a critical role in shaping work, making connections and identifying opportunities as part of **Project Zero**. In addition, technical staff will be engaged in work not just at an operational level but to bring their professional expertise to innovation sessions. External expertise and challenge will continue to be brought in to assist with developing projects to tackle the climate emergency and stimulate debate and discussion to transform how we work.

There will be different opportunities for staff to continue to engage with this work whatever their role. We will continue to hold learning cafes on different themes, and these will run in parallel with wider public engagement and discussions with different stakeholder groups. We will continue to work with partners through the PSB to deliver the commitments in the PSB Climate Emergency Charter and to support each other and challenge progress as necessary.

The Corporate Performance and Resources Scrutiny Committee and the Environment and Regeneration Scrutiny Committees in particular will both have a role in scrutinising progress in meeting the challenges to tackle climate change and deliver **Project Zero**.

The Council has a number of performance indicators which will help determine progress in responding to the climate emergency and being carbon neutral by 2030. These are reported quarterly as part of the Council's performance management arrangements. We will build on these indicators to develop a suite of indicators and robust arrangements to demonstrate progress and the difference we are making and to inform regular reviews of **Project Zero**.

We believe the key to success is to embed the work of **Project Zero** across all our services and to make this a Council wide and a community wide effort. **Project Zero** is an integral part of our transformation programme. Involvement, collaboration and integration are essential if we are to achieve our goals and prevention and a long-term view are necessities. This work will be woven into our integrated business management arrangements which are overseen by our Insight Board ensuring that there is strong leadership and accountability and that across the Council we work together to make the changes for a brighter future.

Appendix A - The Case for Change

There is a wide range of evidence which supports the need for change and the urgent need to respond to climate change.

Climate change is caused by a build-up of greenhouse gases in the earth's atmosphere which leads to a rise in the earth's temperature. As global temperatures continue to rise this means a range of damaging consequences including heatwaves, more intense rainfall and the oceans will continue to warm and acidify and sea levels will rise. Severe, and irreversible impacts on people and ecosystems are also more likely and globally, there will be more shortages of food and water and increased coastal flooding.

Carbon dioxide is the most abundant greenhouse gas and accounts for about two thirds of greenhouse gases and is largely the product of burning fossil fuels. We need to reduce our carbon emissions in order to reduce temperature rises.

- At 1.5°C, over 70% of coral reefs will die, but at 2°C, all reefs over 99% will be lost.
- Insects, vital for pollination of crops and plants, are likely to lose half of their habitat at 1.5°C but this becomes almost twice as likely at 2°C.
- The Arctic Ocean being completely bare of sea ice in the summer would be a once per century likelihood at 1.5°C but this leaps to a once a decade likelihood at 2°C.
- Over 6 million people currently live in coastal areas vulnerable to sea-level rise at 1.5°C, and at 2°C, this would affect 10 million people by the end of this century.
- Sea-level rise will be 100 centimetres higher at 2°C than at 1.5°C.
- The frequency and intensity of droughts , storms and extreme weather events are increasingly likely above 1.5°C

Intergovernmental Panel on Climate Change



It is important that we consider how the decisions and actions we all take can make a difference. Action we take now to change our behaviour and reduce our carbon emissions as part of collective global action does count. The global sea level rose around 8 inches (20 centimetres) in the last century, that's around half the height of a bowling pin. The rate in the last two decades, is nearly double that of the last century and accelerating slightly every year. Throwaway plastic packaging makes-up 40% of the demand for plastic, fuelling a boom in production from 2 million tonnes in the 1950s to 380 million tonnes in 2015. By the end of 2015, 8.3 billion tonnes of plastic had been produced – two thirds of which has been released into the environment and remains there.

What does this mean for the UK and Wales?

The UK Climate Projections (UKCP) provides the most up to date assessment of how the UK climate may change in the future. UKCP18 sets out the weather the UK can expect to experience in a warming climate. The impacts can be summarised as wetter winters, warmer summers, increased incidence of storms and extreme weather and rising sea levels.

According to the Met Office, 2019 was the 12th warmest year for the UK since records in 1884 and all of the top 10 warmest years for the UK since records in 1884 have occurred since 2002.

The Climate Change Risk Assessment summary for Wales identifies key risk areas, where more action is needed:

- Risks to infrastructure (from all sources of flooding).
- Risks to public water supplies from drought and low flows.
- Some land management practices exacerbating flood risk.
- Risks to ecosystems and agriculture businesses from changes in climatic conditions.

The UK Committee for Climate Change's climate risk assessment identified the key trends and patterns which have been observed in the UK and Wales, where the data can be broken down:

- Similar to the UK trend as a whole, average temperatures over land have warmed in recent decades in Wales.
- At the UK level daily maximum and minimum temperature extremes have increased by just over 1°C since the 1950s.
- There are no significant recorded changes in number of days of air frost in Wales.
- Average annual rainfall over Wales has not changed significantly to date.
- There is some evidence however that heavy seasonal rainfall events have also increased across the UK.
- There has been a significant decrease in the number of days people need to heat their homes, whilst the number of days for cooling has remained unchanged.
- Sea level trends are difficult to break down for Wales. But UK-scale best estimate of 1.4 ± 0.2 mm/yr for sea level rise since 1901

Prosperity for All A Climate Conscious Wales 2019 Welsh Government



Llywodraeth Cymru
Welsh Government

In 2020 Natural Resources Wales published a series of seven Area Statements covering the whole of Wales. Each Area Statement outlines the key challenges facing that particular locality, what we can all do to meet those challenges, and how we can better manage our natural resources for the benefit of future generations. These statements provide a valuable insight into the issues within different regional areas and the Vale of Glamorgan is included in the South Central Wales Area Statement together with Bridgend, Cardiff, Merthyr and Rhondda Cynon Taf.

[South Central Wales Area Statement](#)

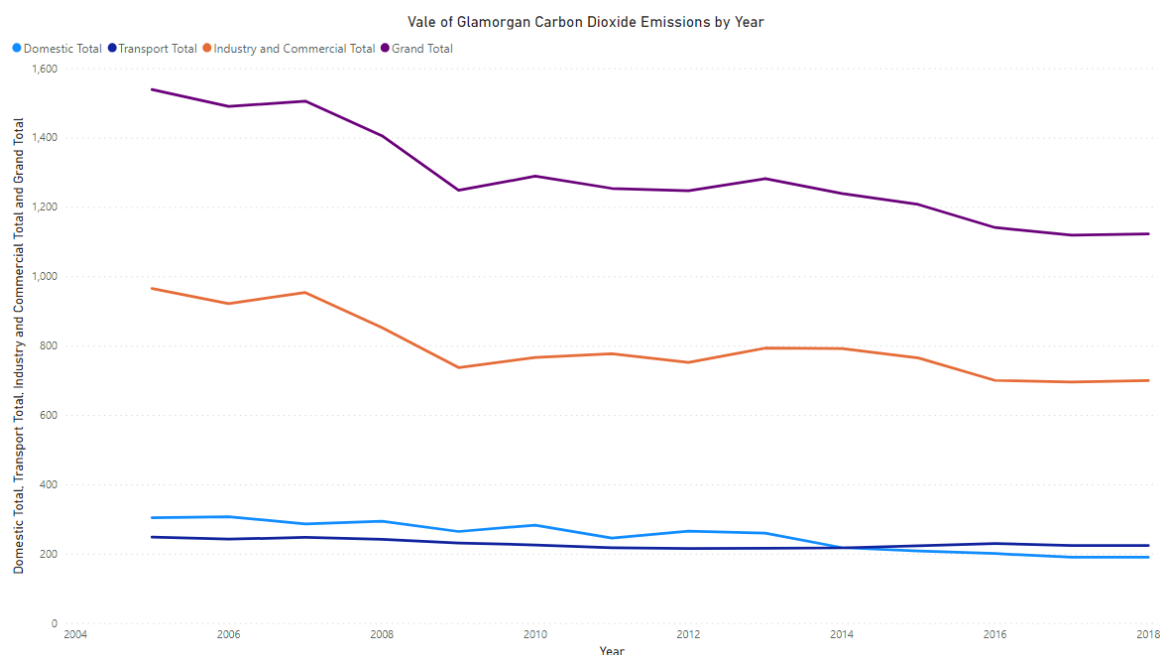
The statement is divided into a number of themes and ***Building resilient ecosystems*** and ***Connecting people with nature*** represent the cornerstones of the Area Statement, underpinning NRW's entire approach to addressing the challenges that we, and our natural environment, now face.

NRW have also published the Second State of Natural Resources Report (SoNaRR2020) which focuses on the management of natural resources within eight broad eco systems. The report builds on a number of Welsh, UK and global assessments of the status and trends of natural resources. It proposes a transformational approach using the ecosystem, economic and social spheres as levers to redesign our society and economy. Three areas of transformative change are identified, these are our food, energy and transport systems.

[State of Natural Resources Report for Wales 2020](#)

Climate Change across the Vale

Climate change is affecting lives in the Vale and it is important that individuals, business and the public sector all play a part in reducing our emissions and changing behaviour. The Vale of Glamorgan has beautiful countryside and coastal areas but we also have significant industry, agriculture and an airport. The graph below shows the CO2 emissions for the Vale of Glamorgan as measured by the Department for Business, Energy and Industrial Strategy.



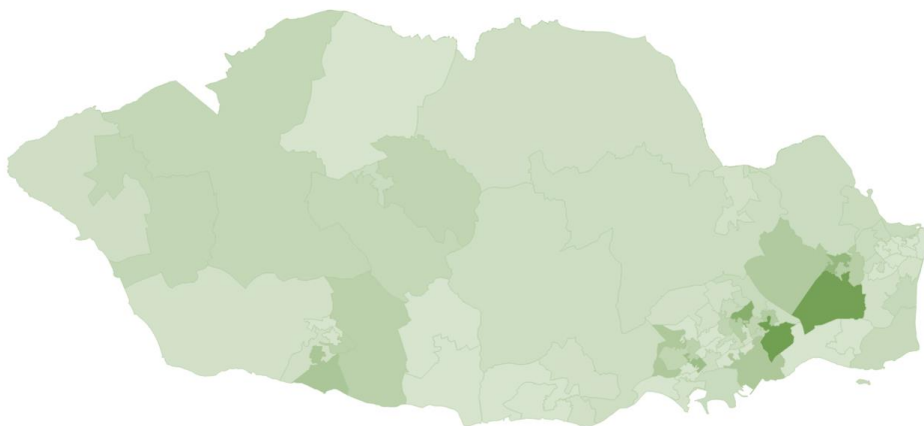
There are also inequalities across the Vale with a number of areas featuring in the top 10% of the most deprived areas in Wales according to the Wales Index of Multiple Deprivation (WIMD).

Climate change and poverty are connected as climate change disproportionately affects poor people in low-income communities. The IPCC Fourth National Climate Assessment Report found that low-income individuals and communities are more exposed to environmental hazards and pollution and have a harder time recovering from the impacts of climate change.

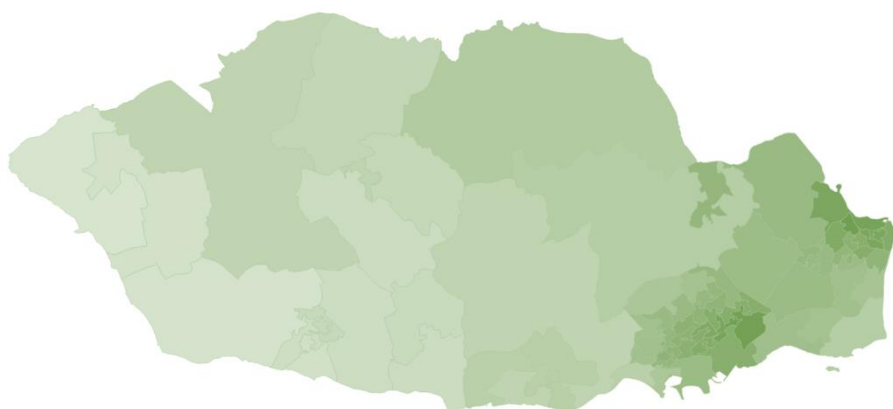
The maps below show the areas of the Vale most at risk from flooding and also the impact of air pollution. More information about WIMD can be accessed [here](#).

As measured by the Welsh Index of Multiple Deprivation (WIMD) 2019, using data from NRW's Flood Risk Assessment, a number of LSOAs in the East of the Vale of Glamorgan are measured as having a heightened risk of flooding; in particular there is a heightened risk of flooding in Dinas Powys 4 LSOA and Cadoc 5 LSOA.

Households at Risk of Flooding by LSOA



Air Quality Levels By LSOA



As measured by the Welsh Index of Multiple Deprivation (WIMD) 2019, Air Quality data by LSOA shows higher concentrations of Nitrogen Dioxide (NO2) particulate matter in the East of the Vale of Glamorgan, with Cornerswell 2 LSOA recording the highest rates of NO2 pollutant. Higher levels are also observed in the East of Barry, and LSOAs ranked as more deprived by WIMD. Higher rates of air pollutant in these areas may be attributed to higher population densities, traffic volumes and a proximity to heavy industry.

Council's Carbon Emissions

We are reducing our emissions from our buildings, including schools and also from street lighting and travel.

The Council has been actively managing its energy consumption for some time and between 2010 and 2018 reported its emissions through the Carbon Reduction Commitment (CRC). This scheme was introduced by the government and required companies and public bodies whose emissions were over the threshold for participating to collect and measure CO2 emissions from the majority of its gas and electricity supplies.

During this period the carbon emissions produced reduced from 17,700 tonnes CO2 to 7,880 tonnes CO2. Some of the reduction is due to the “greening of the grid” as more renewable energy is connected to the grid the emissions factor used to report CO2 improves. However the Council also reduced the KWH of energy (Gas and Electricity) it consumed through this period from 29.3 Million KWH to 14.8 Million Kwh.

The figures for 2019/20 show a continued reduction to 7,539 tonnes of CO2. 2020/21 will be an abnormal year due to the reduced occupancy within buildings, however at the time of writing the Council is predicting a 10% reduction in emissions.

Schools

We have made significant progress in improving energy efficiency in our school buildings. We have improved schools Display Energy Certificate (DEC) rating since 2012-13 and there are now no schools with a rating below D. The percentage in grade D has also dropped from 47% (in 2012-13) to 12% (in 2019-20). More schools have also moved into grade C (67% in 2019-20 compared to 44% in 2012-13) and B (21% in 2019-20 compared to 6% in 2012-13). Our aim is to continue to improve the energy efficiency of our school buildings and to reduce our carbon emissions. A decarbonisation working group project has been established to reduce energy consumption of our educational estate by 5% over the next 5 years. This will result in annual carbon savings of around 207,553.68 kgCO₂e, equivalent to £60,900.

Council Housing

Significant progress has also been made in improving the energy efficiency of our housing stock. The Council currently conducts a whole house assessment to understand what the most cost-effective solution for each individual property is; looking at fabric, services and renewables in order to achieve highest performance, whilst managing fuel poverty. At present the Housing Revenue Account business plan identifies approximately £103m over the next 30 years towards directly responding to decarbonisation and other renewal programmes are also seeking to achieve high levels of energy efficiency.

All our housing development schemes have been designed and built to comply with building regulations in relation to energy efficiency and Welsh Governments’ Development Quality Requirements (DQR, currently revised standards are being developed). Our objective has been to seek a 10% improvement above the minimum requirements of Part L of current Building Regulations, which controls carbon emissions and the conservation of fuel and power.

Appendix B – Glossary of Terms

Active Travel	Walking and cycling (including the use of mobility scooters) for everyday journeys.
Air Source Heat Pump	Air Source Heat Pumps (ASHPs) absorb heat from the outside air to provide heat and hot water. They need electricity to run but because they are extracting renewable heat from the environment. The heat output is greater than the electricity input.
Big Fresh Catering Company	The Big Fresh Catering Company is wholly owned by the Council and provides food services for schools, business and events.
Biodiversity	Biodiversity is a term used to describe the enormous variety of life on Earth. Biodiversity refers to every living thing, including plants, bacteria, animals, and humans.
Blue Space	Includes rivers, watercourses, lakes and seas.
Carbon emissions	The release of carbon into the atmosphere.
Carbon Net Zero	Net zero refers to the balance between the amount of carbon produced and the amount removed from the atmosphere. We reach net zero when the amount we add is no more than the amount taken away.
Cardiff Capital Region	The Cardiff Capital Region (CCR) City Deal is a programme agreed in 2016 between the UK Government, the Welsh Government and the ten local authorities in South East Wales to bring about significant economic growth in the region through investment, upskilling, and improved physical and digital connectivity.
Community Renewable Energy	Locally owned, locally sited renewable energy (electricity and/or heat).
Decarbonisation	A general term used to describe the process of reducing the amount of carbon used for the activity or switching to a low carbon alternative.
Eco Resilience	Eco (Ecological) resilience is generally defined as the ability of ecosystems to resist permanent structural change and maintain ecosystem function.
Food Vale	Food Vale is a partnership of dedicated individuals, community groups, organisations and businesses working together to build a thriving, healthy and sustainable food system in the Vale.
Green Jobs	Green jobs are based on the management of renewable resources or reducing the impact on the environment.
Green Infrastructure	Green space, soil, vegetation and water that provide the ecosystem services that make places more liveable. This includes, for example, streets trees, green roofs and walls, natural play spaces, wildlife / nature gardens, pollinator corridors, landscaping, drainage and air quality management solutions.
Green Space	Areas such as woods, parks, meadows, community gardens and cemeteries.
Ground Source Heat Pump	A ground source heat pump system harnesses natural heat from underground by pumping water through it in pipes. The heat pump then

	increases the temperature, and the heat is used to provide home heating or hot water.
Greenhouse gases	Any gas that has the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and reradiating it back to Earth's surface, thus contributing to the greenhouse effect. Carbon dioxide, methane, and water vapour are the most important greenhouse gases.
Intergovernmental Panel on Climate Change (IPCC)	The IPCC is the United Nations body for assessing the science relating to climate change. The IPCC prepares comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place.
Local Area Energy Plan	Local Area Energy Planning (LAEP) is a whole system approach which helps inform and support local authorities, energy network operators, businesses and communities to plan for a data-driven, cost-effective low carbon transition of the local energy system.
Optimised Retrofit Programme	A Housing department programme utilising Welsh Government grant funding to expand knowledge and improve local contractor capability in green heating services, to decarbonise the domestic heating market and provide sustainable housing with an EPC target rating of A.
Public Services Board	Public Services Boards were established as part of the Well-being of Future Generations Act. Our Vale - The Vale of Glamorgan Public Services Board (PSB) brings together senior leaders from public and third sector organisations across the Vale of Glamorgan to work in partnership for a better future.
Renewables	Renewable energy, often referred to as clean energy, comes from natural sources or processes e.g. wind/sun.
Resource Recovery Centre	Centres for household waste including recycling. Information on centres in the Vale can be found here .
Scrutiny	Scrutiny is a key part of the Council's political structure and plays an important role in ensuring that the Council's services are delivered effectively, efficiently and in the interests of residents and those who work or visit the Vale of Glamorgan. Scrutiny Committees are made up from Councillors who are not on the Cabinet. These Committees are able to influence decisions that are taken by the Cabinet and provide an effective mechanism for challenge to ensure that the views and needs of the community are taken into account.
Section 106	Section 106 of the Town and Country Planning Act 1990 allows a local planning authority to enter into a legally-binding agreement to secure planning obligations with a landowner as part of the granting of planning permission. More information on the Section 106 agreements in the Vale can be seen here .
Sustainable Urban Drainage	Sustainable urban drainage systems (SUDS) are systems designed to efficiently manage the drainage of surface water in the urban environment.
United Nations Environment Programme (UNEP)	The United Nations Environment Programme (UNEP) promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an advocate for the global environment.

Welsh Housing Quality Standard (WHQS)	To ensure that all homes are brought up to an acceptable level, The Welsh Government has drawn up a document, the Welsh Housing Quality Standard (WHQS) . This is a standard for the quality and condition of properties which lists a number of targets which all homes will need to meet.
World Meteorological Organization (WMO)	The WMO is the specialised agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences.
21 st Century Schools Programme	The 21st Century Schools Programme is a long term strategic investment in educational estate throughout Wales. It is a unique collaboration between Welsh Government, the Welsh Local Government Association (WLGA), local authorities, colleges and diocesan authorities.