

A man with a beard and a woman with long braids are standing outdoors in front of a lush green background. The man is wearing a purple plaid shirt and a white apron, with his arms crossed. The woman is wearing a dark green jacket and a blue and white striped apron, also with her arms crossed. They are both smiling at the camera.

Wales
TUC
Cymru

Greener workplaces for a just transition

A Wales TUC toolkit
for trade unionists

About this toolkit

About us

The Wales TUC exists to make the working world a better place for everyone. We want Wales to become a Fair Work nation. With 48 member unions and around 400,000 members in Wales, the Wales TUC is the voice of Wales at work.

We support unions to grow and thrive, and we stand up for everyone who works for a living. Join us.

About this toolkit

The aim of this toolkit is to provide information to help union officers and reps in Wales who want to take action on the climate emergency and negotiate for greener and fairer workplaces. It is designed to support the voice of workers and their unions.

It provides information, tools and ideas to help union reps to campaign, organise and raise awareness. It also includes negotiating and bargaining checklists on different areas of workplace sustainability. It aims to ensure that workers, through their unions, have a central voice in the changes that will be needed in every workplace to ensure Wales can achieve a just transition to a greener and fairer Wales.

The resources in this booklet are designed to be used on Wales TUC and union training courses, as well as to support action in the workplace and at community level.

Using this toolkit if you are a freelancer or self-employed

In this toolkit we have focussed on how unions can organise workplace campaigns and negotiate with employers to create more sustainable workplaces. But in the case of freelancers and the self-employed, the 'workplace' may include several different places of work and instead of a single employer there may be multiple agencies or contractors.

Many of the suggestions in this book could be adapted to the circumstances of freelancers and the self-employed but there will also be circumstances where the different employment relationship and industrial relations background may make this more challenging. Reps should speak to their union for advice on the best approach if unsure.



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How to use this toolkit

This toolkit is split into four sections. To help you find the information you need more quickly and understand what sections of the toolkit might be most useful for you, this page explains the purpose of the different sections.

Section one: Background and context

This section explores why the climate and nature crisis is an issue for trade unionists. It considers the causes and consequences of the crisis, the laws and policies that are already in place to try to tackle it and what further action is needed. Find out why unions are calling for a 'just transition' and why a fair and fast shift to a net-zero economy is vital for workers in Wales and beyond.



Section two: What can unions do?

This section considers action that unions can take at a workplace level. It gives practical information to support unions in developing strategies for negotiating with employers to secure both improvements for the environment and a fair deal for workers. Find out more about the role of trade union green reps as part of a whole branch approach. Learn how to effectively map and monitor environmental issues in the workplace. Understand different approaches to bargaining and negotiating for a just transition and engaging members for effective workplace campaigns. It includes bargaining checklists and case studies.



Section three: Workplace issues

This contains detailed background information and guidance on specific issues relevant to workplace sustainability. For example, it covers work-related travel, resource efficiency, procurement, energy use and many more topics. It is aimed at green reps and other workplace reps who are looking to secure improvements in a particular area. Find bargaining checklists, action plans, case studies and other useful information to help you plan successful workplace sustainability campaigns which benefit the environment and members.

→ Bargaining checklists



→ Action plans



Section four: Tools and resources

Find examples of surveys, checklists, agreements, forms, letters and other resources that you can adapt for your workplace to help you to support and develop your campaign. This section also includes a glossary of terms and further sources of information.

Hyperlinks and endnotes

This toolkit has been designed primarily as a digital resource, and you'll find hyperlinks throughout the text which you can click on view further information or sources that are referenced. If you're using a printed copy, you can find the links printed out in full in the endnotes.

Glossary

We've tried to avoid unnecessary jargon but we've also included [glossary](#) of some of the more technical terms for ease of reference.

It's not just for green reps...

As well supporting the role of green reps, this toolkit also been designed for use by other trade union reps such as branch officials, health and safety reps and union learning reps. Here are some suggestions of some bits of the toolkit that might be of particular relevance to reps in other roles:

Union officers, branch officials and reps:

- Mapping workplace environmental issues [56](#)
- Negotiating on environmental issues [66](#)
- Climate-proofing' workplace policies [68](#)
- Developing transition agreements [70](#)
- The role of the 'green' or environmental rep [47](#)

Health and safety reps

- The case for action – health, social and equality impacts [28](#)
- Air pollution [29](#)
- Cross over with the health and safety agenda [53](#)

ULRs

- What skills will workers need for a net-zero, zero waste Wales? [42](#)
- Green skills and the ULR role [53](#)
- Climate proofing on jobs and skills [69](#)
- Awareness raising [74](#)

Case studies – quick links:

- Climate emergency campaign– UCU, Cardiff University [54](#)
- Climate proofing - Prospect, IPO [67](#)
- Active travel – UCU, Cardiff University and PCS, Welsh Government [88](#)
- Action on plastics, UNISON, Swansea Council [103](#)
- Hospital orchard, UNISON, Cardiff and Vale UHB [162](#)
- 'Energy guardians' brewery case study, Unite the Union [142](#)

Foreword

The climate emergency is a trade union issue. Now more than ever, workers, just like employers, want a sense of security. But the climate and nature crisis means a more uncertain future for us all.

Trade unions have called for urgent action to build a greener, fairer and more equitable economy that protects jobs, our health and the planet.

Working people and communities are on the front lines of climate change. In Wales, as elsewhere, we've already started to see the impact of

extreme weather on our communities and workplaces. Climate and nature breakdown will increase threats such as extreme weather and new viruses. And harmful air pollution from emissions is already a public and occupational health emergency.



Climate change exposes the existing inequalities in society, both at home and abroad. There are important social justice reasons why trade unions are campaigning and bargaining on this agenda.

The trade union movement in Wales is organising and mobilising to protect our planet for future generations. And we stand up for those workers whose jobs are at real risk and younger workers seeking to enter the jobs market.

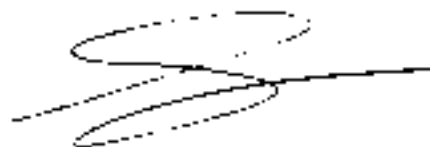


Trade unions remain the best way to ensure that workers' interests are protected through any period of industrial change. This has been seen clearly throughout the pandemic.

With proper planning and targeted funding, tackling climate change will not mean fewer jobs but could actually increase the number of good quality jobs - both direct but also across a range of local supply chains. There is an enormous amount of work to be done in restoring nature, building renewable energy, low carbon homes and transport. But we must take action now to make the recovery and transition to a net-zero economy a genuine and just one.

In Wales, trade unions, employers, government and civil society work together in social partnership. This can be the catalyst for achieving a greener, fairer, equitable recovery and a pathway to a net-zero Wales. Social partnership and the implementation of fair work will be central to delivering a transition that is truly just.

There is also much that we can do at a workplace level. Across Wales, union reps are already working with their members to make workplaces more sustainable. They are finding ways to cut carbon and reduce waste, campaigning for cleaner air and creating green spaces to support nature and well-being. This guide shares some examples of this important and often unsung work. And it aims to support reps in the ongoing challenge of creating greener workplaces.



Shavanah Taj, Wales TUC General Secretary



**Trade unions
remain the best
way to ensure that
workers' interests
are protected
through any period
of industrial change.**

The background image is a dramatic landscape. The top half is dominated by a large, intense fire or explosion, with bright orange and yellow flames rising from a dark, silhouetted treeline. The sky above the fire is filled with thick, dark purple and blue smoke or clouds. The bottom half of the image shows a dark, rocky cliff face with visible horizontal layers. A diagonal line runs from the top left to the bottom right, dividing the image into two main color zones: a deep purple on the left and a bright orange on the right. The text 'Section 1' is overlaid in white on the purple side.

Section 1



Introduction

There is a growing consensus that the recovery from Covid-19 must be used as an opportunity to build a greener and fairer future. One that addresses both the climate and nature crisis and the inequalities that have been highlighted so starkly by the pandemic.

Governments and employers have called for no return to 'business as usual' and the need 'to build back better' when dealing with Covid and its economic impact. Unions are campaigning to ensure that these words are put into meaningful action.

The trade union movement in Wales, and beyond, must now organise around the triple challenge of combatting climate change, creating the jobs and skills for a net-zero economy, and putting social justice at the heart of the recovery from the pandemic.

Build back better

This phrase has been used throughout the Covid-19 pandemic. It means different things to different people. From a union perspective a number of conditions need to be met to ensure it is more than an empty slogan.

Wales TUC campaign

The trade union movement in Wales has called for a green recovery from the Covid crisis. In June 2020, the Wales TUC launched a report and a campaign for [A green recovery and a just transition](#). Its opening statement said:

*'Building the recovery from Coronavirus represents a once in a generation challenge. It must be used as an opportunity to take the urgent action needed to build a greener and fairer economy in Wales, one that protects jobs, our health, and the planet. And workers must have a central voice in planning the recovery and the transition to a net-zero economy to ensure this happens.'*¹

TUC campaign

At a UK level the TUC and unions have been campaigning for a UK wide sustainable industrial strategy to build back better. The TUC has highlighted the urgent need for the UK government to invest in green jobs, infrastructure and technology to prevent mass unemployment and build a green recovery. It has called for a job guarantee scheme that includes decarbonisation as part of the criteria. The [TUC's General Council Report 2020](#) said:

*'The TUC's focus has been on a sustainable industrial strategy and on building back better after the Covid-19 crisis, highlighting the importance of an economic stimulus for a just transition to a net-zero carbon economy.'*²

TUC Congress 2020 motion

Unite, GMB, PCS, UCU, RMT, FBU, ASLEF and the BFAWU all backed a crucial motion on the economy

we rebuild. It 'cannot merely represent continuity with the past,' the unions said, calling for:

- A green new deal that 'creates a new generation of jobs in the industries and infrastructure we need to tackle the climate crisis.' This means 'investment in our manufacturing capability and sustainable infrastructure - electric vehicles and charging infrastructure, construction materials and retrofitting all homes, carbon capture and storage, synthetic aviation fuels and the Swansea Bay Tidal Lagoon.'
- Infrastructure is needed for a fully integrated and green public transport system to encourage people to return to public transport when it is safe to do so. 'We will not meet our climate obligations without more people and goods using our railways, waterways and buses.'
- A shorter working week 'with no loss of pay to realise the benefits of new technology and to facilitate new green job creation in order to mitigate against mass unemployment,' ([Composite Motion 2](#)).³

The [Greener Jobs Alliance](#) is as a partnership body inclusive of trade unions, student organisations, campaigning groups and a policy think tank. It campaigns around the issue of jobs and the skills needed to transition to a low-carbon economy.

It has published a [discussion document](#) on whether industry rescue packages developed in response to Covid should be unconditional or with strings.⁴



Understanding the climate and nature crisis

The climate and nature emergencies are a matter of concern for us all. We don't need to be scientists to talk with others about them.

This section gives background information about the science and impacts and of the climate and nature emergency. It also covers some of the key terms that you may come across.

Climate change

Climate change describes the shift in worldwide climate patterns and weather phenomena linked to an increase in global temperatures.

[NASA](#) defines climate change as: "a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates." It says climate change is "primarily driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature."

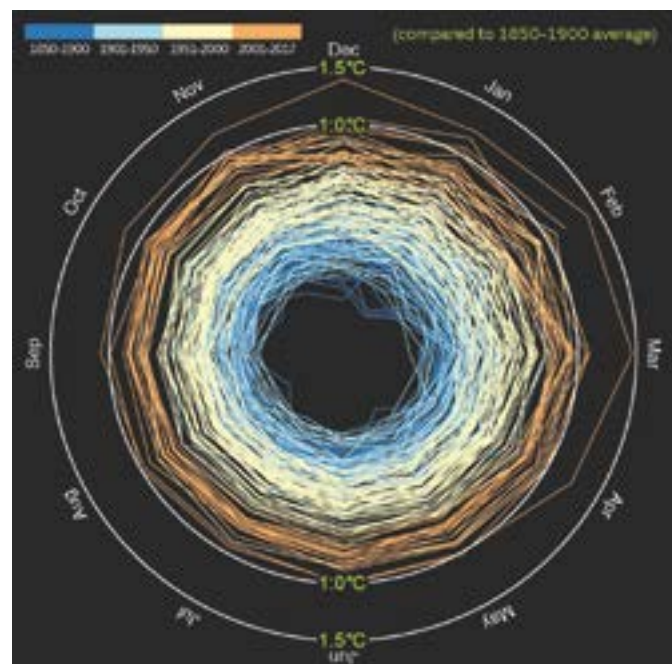
This results in changes such as "global land and ocean temperature increases; rising sea levels; ice loss at Earth's poles and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods and precipitation; and cloud and vegetation cover changes, to name but a few."

The greenhouse effect

Life on Earth depends on a finely balanced atmospheric 'greenhouse' effect. Without it, our planet would be too cold to support life. The greenhouse effect happens when a layer of gases in the lower atmosphere traps the heat from the sun as it is reflected back up from the surface of the earth. Instead of escaping, this heat is radiated back down and this is what keeps the earth warm enough to support life.

This layer of gases used to be mainly made up of

water vapour. But human activity is creating an excessive amount of long-lived greenhouse gases to be released into the atmosphere. These long-lived greenhouse gases (such as carbon dioxide) behave differently from water vapour. They do not dissipate when the temperature increases. Instead they remain in the atmosphere causing an increasing build-up of heat.



This graph shows the average global temperature for each month, from 1850 to 2017. The temperature increases as you move away from the centre of the circle.

© Crown copyright, Met Office

‘Climate change’ describes the shift in worldwide climate patterns and weather phenomena linked to an increase in global temperatures.

Key greenhouse gases created by human activities include:

carbon dioxide CO₂ – the main source of carbon dioxide is the burning of fossil fuels, such oil, gas and coal. These are used for things like transport, heating, energy and industrial processes. At the same time as emissions of carbon dioxide have increased, deforestation has reduced the amount of plant life available to turn carbon dioxide into oxygen.

methane CH₄ – this is mainly produced by farming, from animals such as cattle and arable farming. It is also produced by food waste. It can be released as a result of fossil fuel exploration and from abandoned oil and gas wells. It is a more potent but less abundant and persistent greenhouse gas than carbon dioxide.

nitrous oxide N₂O – produced by nitrogen-based fertilisers and livestock waste as well as the burning of fossil fuels and wood. Sewage treatment plants are also a source.

fluorinated ‘F’ gases – gases such as chlorofluorocarbons and hydrofluorocarbons are now heavily regulated. But they used to be widely used in industrial applications and home appliances such as refrigerators. F gases are very potent greenhouse gases. They can cause ozone layer depletion as well as trapping heat in the lower atmosphere.

Global warming/heating

As a result of greenhouse gasses released by human activity, temperatures have been going up around the world for decades. This temperature increase is referred to as ‘global warming’ or sometimes ‘global heating’.

The world is now around 1°C hotter than it was during the ‘pre-industrial average’ (defined by temperature records between 1850-1900). The last 5 years have been the hottest on record, and the period from 2010-2019 was the hottest decade since records began.

The term ‘climate change’ is broader than ‘global warming’. It includes not only increasing global average temperatures, but also the climate effects caused by this increase.

Around the world, efforts are now focussed on limiting this temperature increase to no more than 1.5°C above the pre-industrial average. This limit is what climate scientists say is needed to prevent the worst effects of climate change.

Ocean temperatures

In 2019 the oceans heated to record levels showing “irrefutable and accelerating” heating of the planet. The world’s oceans are the clearest measure of the climate emergency. They absorb more than 90% of the heat trapped by the greenhouse gases emitted by fossil fuel burning, forest destruction and other human activities.

Scientists say evidence linking the increase in extreme weather events to climate change is clear.

The new analysis shows the past five years are the top five warmest years recorded in the ocean. The past 10 years are also the top 10 years on record according to [*The Journal of Atmospheric Sciences* report published January 2020](#).⁵

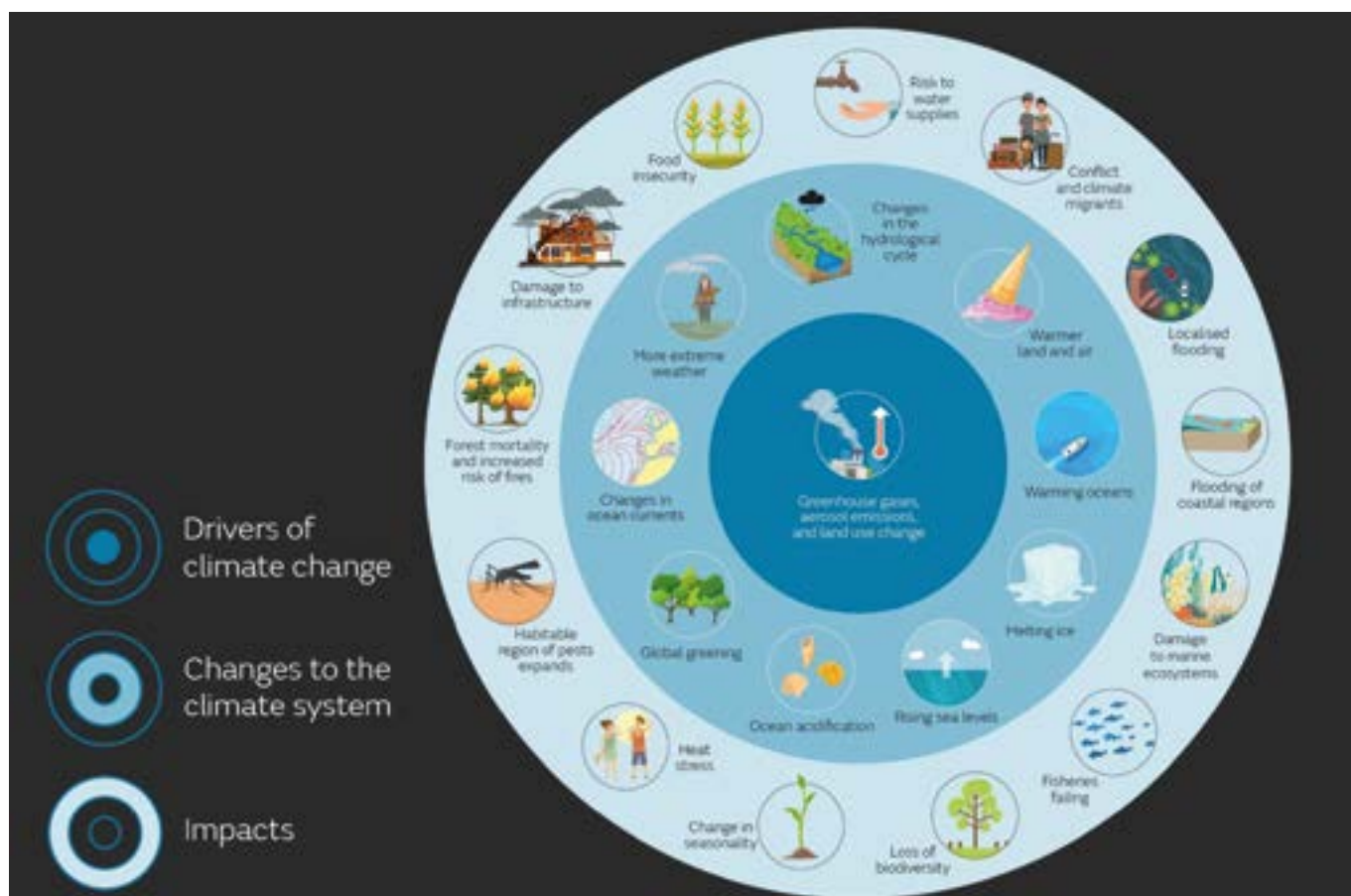
Extreme weather

Over 5 million people in England and Wales live and work in places that are at a risk of flooding from rivers or the sea. Recently, the flooding in the aftermath of Storm Ciara and Storm Dennis caused devastation in homes and workplaces across South East Wales. Elsewhere in the world, in 2020 alone

we've seen flooding and landslides in Indonesia and wildfires in Australia. These are all part of a huge increase in extreme weather-related events.

Scientists say evidence linking the increase in extreme weather events to climate change is clear. Climate change has increased:

- extreme rainfall and associated floods
- coastal flooding due to sea-level rises
- heatwaves (in Australia, China, and Europe) and increased the risks of wildfires.



This image illustrates some of the drivers of climate change and the impacts they could have on the climate system © Crown copyright, Met Office

These extreme weather events have serious implications for humans and animals, the environment, and the economy.

[Data from the European Academies Science Advisory Council \(EASAC\) published in March 2018⁶](#) highlights that since 1980 there have been:

- Four times as many floods and other hydrological events.
- More than double the number of climatological events such as extreme temperatures, droughts and forest fires.

Greenhouse gas emissions at a critical point

Carbon dioxide concentrations are now [the highest they have been for at least 800,000 years](#).¹⁴

Up until the start of the pandemic GHG emissions were still rising. The reduction in emissions due to the pandemic is only likely to be temporary unless the promises to build back better become a reality. [These graphs](#) by the BBC illustrate the threats and the opportunities.¹⁵

Scientists have warned of the danger of the accelerating effect of 'tipping points' created by a warming climate. For example, the creation of a feedback loop as greenhouse gasses trapped in Arctic permafrost are released.

To reflect the critical point that we have reached and the need for urgent action many people now talk about the climate 'emergency' or 'crisis' rather than just referring to 'climate change'.

- Twice as many meteorological events such as storms.

Consequences of climate change

Climate change poses grave risks, both here and across the world. Risks for human health include an increase in the number of heat-related deaths and an expansion of the habitable regions for pests and disease vectors, such as mosquitos. Food-insecurity, disrupted water supplies and increased conflict and poverty are also recognised risks. Extreme weather also causes damage to property and infrastructure. This disrupts the delivery of essential services and has heavy costs for society and the economy.

For people in developing countries, the impacts will be worse. This is because they often have the least resources and may be more heavily depended on the natural environment. Large numbers of people could be displaced. This process is already happening. Globally, [an estimated 17.2 million people were displaced from their homes because of climate change-related disasters in 2018 alone](#).⁷

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Nature loss

Nature loss describes the global decline in animals and plants. Species are now being lost at unprecedented rates due to the impact of human activity on the world's ecosystems.

The 'age of extinction'

The United Nations has [warned that up to one million species of animals and plants are facing extinction](#).⁸

Species are going extinct at a faster rate than has been seen for millions of years. This decline is not only bad for wildlife and nature, but bad for people too. It is often described as the nature 'emergency' or 'crisis' and it is just as much a threat as the climate emergency.

Causes – the impact of human activities

Human activities such as deforestation, intensive farming and fishing, industrial and domestic activities that pollute the air, soil and water are all causes of nature loss. Climate change is also a key driver.

In 2020, the UN warned that the world had failed to meet any of its targets to stop the destruction of

nature for the second decade in a row. Targets to protect coral reefs, preserve natural habitats and reduce plastic and chemical waste to levels that prevent damage to ecosystems were all missed.

Consequences of nature loss

The UN has warned of 'grave impacts' on people around the world if nature loss is not stopped. Human health and well-being is underpinned by nature. We rely on the natural world for food, water, medicine and the air we breathe. All life on earth is highly interconnected. Scientists say that for every living thing to do well on the planet there needs to be a wide variety of life on living on it. But this biodiversity is now under threat.

A critical point

Worryingly, global populations of mammals, birds, fish, amphibians and reptiles plunged by an average of 68% between 1970 and 2016. This was according to the WWF and Zoological Society of London (ZSL)'s recent [Living Planet Report 2020](#).⁹

Around the world, pollinating insects are in decline and soils are becoming degraded and less fertile.

The [2019 State of the Nature Report](#) revealed that in Wales 666 species are under threat of extinction. And of the 3902 species assessed, 73 have already been lost.¹⁰

The links between the climate and nature crisis

There are a number of ways in which the climate and nature emergencies are inter-linked. Each can worsen the impact of the other. For example, climate change can cause shifts in flower and plant blooming and create new opportunities for invasive species and pests.



Natural Resources Wales has warned: "Where coastal plants and wildlife cannot move inland, sea-level rise and increased land erosion could lead to widespread loss. The ecosystem services these habitats provide – like flood defence and carbon dioxide removal – will also be lost."¹¹

Nature-based solutions

Nature-based solutions offer some of the cheapest and most effective ways to tackle climate change. They can also boost wildlife populations at the same time. [Recent research](#) found that protecting at-risk areas and restoring one third of lost areas of woodland, peatland, wetlands and savannahs could store huge amounts of carbon. This could absorb around half of all the greenhouse gas emissions that

human activity has produced since the industrial revolution. It could also prevent around 70% of predicted species extinction.¹²

The role of oceans

The world's oceans also offer huge potential for absorbing carbon dioxide and mitigating climate change. They also provide opportunities for boosting biodiversity. For example, researchers at Swansea University are involved in [Project Seagrass](#). This project is focussed on restoring vital marine habitats which have a huge role to play in tackling climate change. In fact, seagrass meadows, mangroves and coastal wetlands capture carbon at a rate greater than that of tropical forests.¹³

Nature-based solutions offer some of the cheapest and most effective ways to tackle climate change. They can also boost wildlife populations at the same time.

International action to address the climate and nature crisis

The Paris Agreement

The UN climate talks in Paris in 2015 (COP21) produced the landmark [Paris Agreement](#). This commits countries to cutting greenhouse gas emissions and to making the actions and investments needed for a sustainable low-carbon future.¹⁶

The agreement has been [signed by 190 countries](#), including the UK government.¹⁷ It sets 1.5°C and 2°C temperature increase limits to avoid the worst impacts of climate change. The agreement required each country to establish reductions in greenhouse gas emissions. These are called 'Nationally Determined Contributions' (NDCs).

In 2018, a [UN Intergovernmental Panel on Climate Change \(IPCC\) report](#) highlighted the difference between 1.5°C and 2°C of warming. It said that meeting the stricter limit of 1.5°C could reduce future climate-related risks. Especially some of the worst, most long-lasting and irreversible changes. It said even half a degree more of warming would worsen the risks of floods, drought, extreme heat and poverty for hundreds of millions of people. And it warned that we have just 12 years to limit the rise in global temperatures to 1.5°C.¹⁸

Climate emergency declarations

The [school strikes movement](#), inspired by Greta Thunberg and protests by groups such as [Extinction Rebellion](#) sprung up in response to the perceived lack of action at national and international level. These movements helped to build the momentum that resulted in many countries declaring 'climate emergencies' in 2019.

Many governments, including the Welsh, Scottish, Northern Irish and UK governments, have now declared climate emergencies. As a result, they have shifted their carbon reduction targets with commitments to reach net-zero by 2050. These developments are welcome. But all governments need to follow this up with clear and funded plans for how this will be achieved. And workers need to be given a central voice in planning the transition to ensure it is fair.

Scientists are concerned that without a rapid transition over the next decade, the [targets will slip out of reach](#). This would result in the world failing to meet the targets in the Paris Agreement.¹⁹ Without urgent action to reduce emissions, the world is likely to exceed 2°C of warming. By the end of this century, warming could potentially reach 4°C or even more.

2021 UN climate change conference – COP26 Glasgow

[COP26](#) is the next UN climate summit.²⁰ Due to Covid-19 it has been postponed to November 2021. It is intended to be the point when progress on meeting greenhouse gas reduction targets (NDCs) is reported on. The UK and international trade union movements will be linking up with civil

society organisations to ensure that the worker and community voice is heard. The summit is being hosted by the UK and will be held in Glasgow. This means the actions that the UK government has taken towards meeting its targets will be particularly under the spotlight.

The UN secretary-general, António Guterres has spoken of the need for developed countries to step up their ambition: “We are still running behind in the race against time. Every country, city, financial institution and company should adopt plans for transitioning to net-zero emissions by 2050. We need to see these plans well in advance of COP26 – in particular the NDCs required under the Paris agreement.”²¹

2021 UN biodiversity conference (CBD COP15)

The [UN biodiversity conference COP15](#) was due to be held in October 2020 but has been postponed until 2021 because of Covid. It aims to develop a Paris-style international agreement on nature.²²

In September 2020, 64 leaders from five continents signed the [Leaders’ Pledge for Nature](#). This is a pledge is to reverse nature loss by 2030 and support sustainable development. The UK was among the signatories.²³

The pledge contains a series of commitments to take action over the coming decade. Actions include a move towards sustainable food production, an end to unsustainable fishing practices, the elimination of environmentally harmful subsidies, renewed efforts to reduce deforestation and a transition to a circular economy.



UK level action

Climate and nature breakdown are not inevitable. And we do not need to wait for technological breakthroughs to tackle them. The technology and know-how needed to bring about a transition to net-zero economy already exists. And there are many actions that can be taken to reverse the decline in nature.

Government action

In 2019, the Welsh, Scottish and UK governments declared climate emergencies. They have since all committed to the net-zero target as recommended by the UK Committee on Climate Change (CCC).

Trade union response

Trade unions are calling on governments to develop clear and funded pathways to net-zero, across different sectors of the economy. These pathways need to be developed closely with workers and trade unions, to ensure the transition happens fairly and is informed by the knowledge of those working on the ground.

How to plan fair and successful paths to net-zero emissions

A new TUC report called on the UK government to build an industrial strategy for a net-zero economy in the UK: [*'Voice and Place: How to plan fair and successful paths to net zero emissions'*](#).²⁴ It includes a case study on Wales (pages 47-54).

The report says that TUC strongly supports the net-zero target but believes that meeting it requires a reset of the way we live and work. It says: "Get it right and we can develop new, innovative industrial sectors providing great new jobs. Get it wrong and those working in fossil fuel sectors of the economy will lose their jobs and livelihoods, with only low skill, low value jobs to replace them. It is for this reason

that trade unions call for a 'just transition' to a net zero economy."

Workplace action

A lot of government action and other necessary actions rely on change happening at a workplace level, and this will only happen fairly if workers are part of the process. Trade unions are well placed to start a conversation about this with employers. The other sections in this guide support unions in having these discussions.



UK's Nationally Determined Contribution (NDC) for 2030

Following advice from the CCC in December 2020, the UK Prime Minister announced that the UK NDC would follow the Committee's advice for it to require at least a 68% reduction in emissions by 2030. (Based on the advice in the [CCC's UK Sixth Carbon Budget](#).)²⁵



The UK Committee on Climate Change

The UK Committee on Climate Change (CCC) was established to advise government on the level of the carbon budgets. It also reports to parliament on progress made towards reducing emissions. It conducts independent analysis into climate change science, economics and policy.

The CCC says that:

"Reaching net-zero greenhouse gas (GHG) emissions requires extensive changes across the economy, but the foundations are in place. Major infrastructure decisions need to be made in the near future and quickly implemented. These changes are unprecedented in their overall scale, but large-scale transitions have been achieved successfully in the UK before, such as the natural gas switchover in the 1970s or the switch to digital broadcasting in the 2000s...

"What changes are needed?

- resource and energy efficiency, that reduce demand for energy across the economy
- societal choices that lead to a lower demand for carbon-intensive activities
- extensive electrification, particularly of transport and heating, supported by a major expansion of renewable and other low-carbon power generation
- development of a hydrogen economy to service demands for some industrial processes, for energy-dense applications in long-distance HGVs and ships, and for electricity and heating in peak periods
- carbon capture and storage (CCS) in industry, with bioenergy (for GHG removal from the atmosphere), and very likely for hydrogen and electricity production.

"It must be vital to the whole of government and to every level of government in the UK. Overall, a well-managed transition can be achieved and lives can be improved. People can benefit from better physical and mental health, an improved environment and, crucially, a reduced exposure to climate risks."

<https://www.theccc.org.uk/uk-action-on-climate-change/reaching-net-zero-in-the-uk/>

The challenge for Wales

Net-zero will be more challenging for Wales. Wales has a greater share of 'harder to reduce' emissions compared to other parts of the UK.²⁶ We have more energy-intensive industries (such as steel manufacture, petroleum refining and cement manufacture). We also have more solid wall and off-grid homes and small-scale farms. And we have fewer sites suitable for carbon capture and storage.

In Wales, around one in five workers are in 'climate critical' sectors. These are those that are likely to be highly impacted by the transition (mainly manufacturing, construction, transport and energy).²⁷ It is these industries that will be key to achieving the transition.

But it is not just the climate critical sectors. The scale of the transition means it will affect workers across the whole economy. Workers across all sectors will be affected by changes. They will all be part of the efforts to decarbonise and move Wales to a more sustainable, zero-waste, circular economy. And trade union members have the knowledge and ideas to help deliver the changes needed. Their voices must be heard at a workplace, regional, sectoral and national level to ensure this happens.

Progress in reducing greenhouse gas emissions

The most recent available figures on greenhouse gas emissions in Wales are from 2018. They are summarised in this Welsh Government infographic opposite:

The UK CCC notes that greenhouse gas emissions in Wales have fallen by 28% in the two decades since 1998, while the economy has grown by 40% in the same period. This means that Wales is on track to meet its 2020 target (a 27% reduction on 1990 levels). But the CCC notes that this fall in emissions has not been evenly distributed across all sectors. It says:

"Emissions reductions have been dominated by the power sector, which has caused 85% of the total reduction in emissions from 2016 to 2018. Emissions from the manufacturing & construction (-9%) and fuel supply (-7%) sectors have also fallen, while emissions in all other sectors fell by an average of just 1%."²⁹

The steel industry in Wales

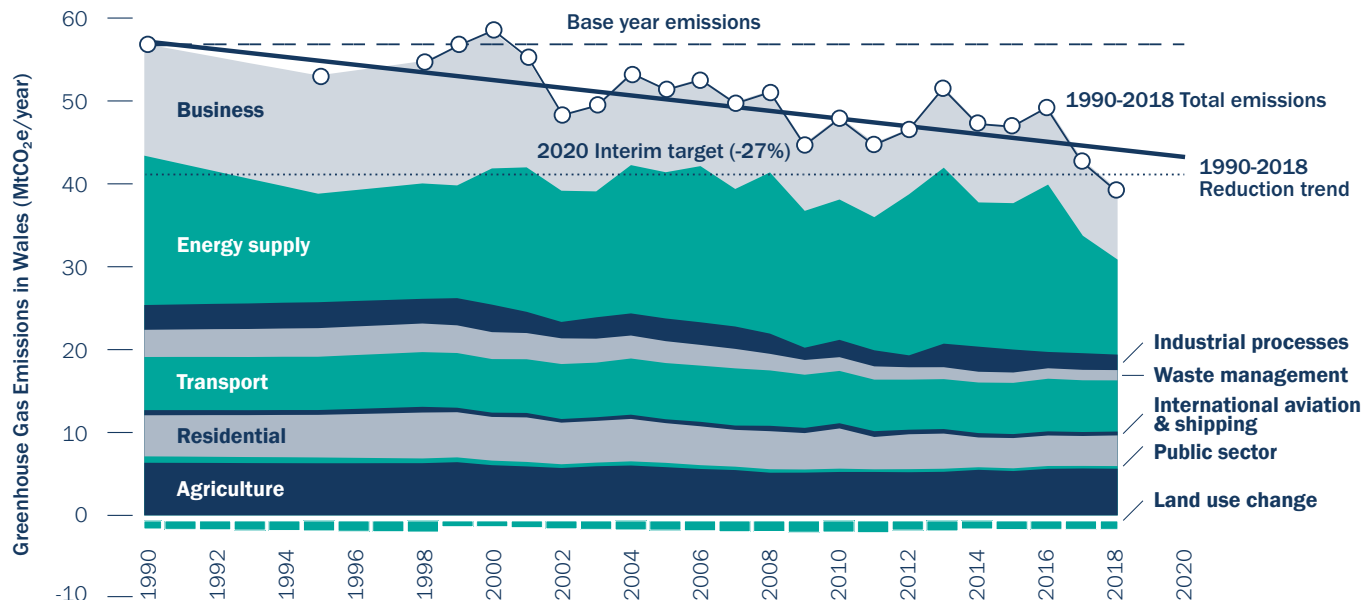
Our steel industry is crucial to the whole UK economy and many of the new, greener technologies require steel (eg wind turbines). It is also the foundation of infrastructure such as roads, rail and hospitals. Some sectors such as power generation and waste have a relatively clear path to reduce emissions. But others, such as the steel industry, face more significant challenges. There is an overwhelming case for additional public investment to support research and development into lower-carbon, greener steel.

Steel unions say the industry is committed to reaching net-zero but have called for more support to make greener steel a reality. Support for the transition of our steel industry is vital for jobs, the economy and the environment. Without it, there is a risk that jobs will be lost, our economy compromised and emissions will simply be exported overseas. And unions have recently highlighted how a tonne of Chinese steel has fifty times the carbon cost of one sourced from the UK.²⁸

2018 Wales Greenhouse Gas Emissions



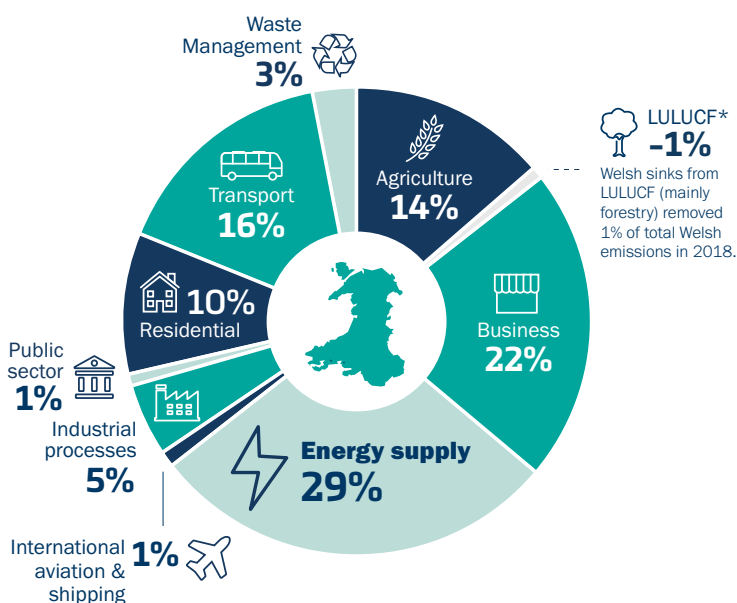
Greenhouse Gas Emissions in Wales



Change in greenhouse gas emissions



Energy supply remains the largest emitting sector of Wales' 2018 greenhouse gas emissions



Sources of emissions

	1990 (baseyear) - 2018	2017-2018
Agriculture	-11% ↓	-0.6% ↓
Business	-37% ↓	-6.9% ↓
Energy supply	-36% ↓	-19.2% ↓
International aviation & shipping	-23% ↓	-1.0% ↓
Industrial processes	-33% ↓	-6.9% ↓
Public sector	-58% ↓	+4.5% ↑
Residential	-26% ↓	+2.4% ↑
Transport	-4% ↓	-1.1% ↓
Waste management	-62% ↓	-1.1% ↓

Emissions sink*

	1990 (baseyear) - 2018	2017-2018
LULUCF	+5% ↑	+0.5% ↑

* Land Use, Land Use Change and Forestry
 ** Please note that the sector definition for the greenhouse gas inventory (GHGI) varies from the 1st low carbon delivery Plan "Prosperity for All: A Low Carbon Wales"

* The LULUCF sector remains a net removal of emissions and the size of this sink has increased by 5% between 1990-2018, and it has increased by 0.5% between 2017-2018

Meeting Wales' net-zero commitment

To meet the net-zero commitment, the CCC has recommended that Welsh Government adopts a more challenging pathway of interim emissions targets. It sets this pathway out in its [The Path to a Net Zero Wales report](#) published in December 2020.

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The CCC recommends that the target be legislated as "a 100% reduction in greenhouse gases (GHGs) from 1990 and should cover all sectors of the economy". It says these new targets should be legislated in the first half of 2021, as ambitious long-term targets will "provide a clear signal to Welsh people and businesses". And it calls for policies to be implemented to target all sectors of the economy.

It sets out four key areas for action:

- **Taking up low-carbon solutions.** "People and businesses can adopt low-carbon solutions as high-carbon options are phased out. By the early 2030s all new cars and vans and all boiler replacements in homes and other buildings will be low-carbon – largely electric. By 2040, all new heavy goods vehicles should be low-carbon. The South Wales industrial cluster, and other industrial sites in Wales, will switch away from fossil fuels to low-carbon alternatives or install carbon capture and storage technology at scale from the mid-2030s."
- **Expanding low-carbon energy supplies.** "New demands for clean electricity from transport, buildings and industry mean electricity supply in Wales must double by 2050. In Wales, low-carbon electricity generation will shift from 27% now to 100% by 2035, cutting Welsh power sector emissions by more than 95%. Low-carbon hydrogen, produced using electricity or from fossil gas with carbon capture and storage, is needed in shipping and parts of industry less suited to electricity use, as well as potentially in trucks."



→ Reducing demand for high-carbon activities.

"In line with the Committee's recommendations for the UK as a whole, diets in Wales can shift away from meat and dairy products, waste will continue to reduce, and growth in flights and travel demand will slow. Buildings must become better insulated, and vehicle and industrial efficiency will improve. These changes can happen over time, bringing multiple benefits to the economy, health and wellbeing."

- **Transforming land.** "A transformation is needed in Wales' use of land. By 2030, 43,000 hectares of mixed woodland must be planted in Wales to remove CO2 from the atmosphere, increasing to 180,000 hectares by 2050. With the right policies this can be a new source of revenue to Welsh farmers. A further 56,000 hectares of agricultural land can shift to bioenergy production by 2050. Wales' peatlands must be restored and managed sustainably and low-carbon farming practices can be adopted widely."

Find out more: [The path to Net Zero and progress on reducing emissions in Wales](#) – Climate Change Committee (theccc.org.uk)



“An important challenge for both UK and Welsh Government is to identify where jobs may be lost in Wales and to support workers to transition to being a part of the new low-carbon workforce”

where jobs may be lost in Wales (for example in fossil power generation and refining) and to support workers to transition to being a part of the new low-carbon workforce (e.g. energy efficiency retrofits in buildings or industrial carbon capture and storage).”

A ‘decisive decade’ for Wales

In its advice to Welsh ministers published in December 2020, the Climate Change Committee (CCC) says that meeting the 2050 net-zero target will bring “multiple benefits for Welsh jobs, health and the natural environment”.

To achieve this goal, it says a major investment programme is needed across Wales. And it says that Wales now “faces a decisive decade to get on track to an emissions-free future.”

Its report highlights that Welsh Government cannot meet its target without the right policy and financial commitments from Westminster: It says: “In many sectors, the Net Zero transition will bring real savings, as people use fewer resources and adopt cleaner, more-efficient technologies like electric cars. But the transition must also spread the costs fairly and that requires coordinated support from the Welsh and Westminster governments to manage the burden and share the benefits.”

The CCC advice also notes: “An important challenge for both UK and Welsh Government is to identify

It warns that: “Climate policies that fail to consider the need for a just transition and the fair distribution of costs in their formulation, announcement and delivery, risk being derailed due to public concern over regressive impacts (either real or perceived).” And adds: “UK and Welsh Government policy, including on skills and jobs, must join up with local and regional policy on the just transition.”

The next section explores what a ‘just transition’ transition means and why unions are key to ensuring this happens. The Welsh Government’s response to the climate and nature crisis is discussed in detail on [page 32-41](#).

“The 2020s are the key period to scale up the Welsh ambition to decarbonise. No single solution, or single sector, can deliver Net Zero alone; action is required across all areas. It will bring Wales new jobs, new industries, better health, cleaner air, and real improvements to the outstanding Welsh natural environment.”

Climate Change Committee Chairman, Lord Deben.³¹

What is a Just Transition and why is it a trade union issue?

We must secure the future and livelihoods of workers and their communities in the transition to a net-zero economy.

A 'just transition' to a greener economy is one where workers have a central voice in planning the transition, so it is done 'with' them not 'to' them. It's one where no workers or communities are left behind. And where new jobs that are created are just as good any that are lost in terms of pay, skills, pensions and trade union recognition.

Trade unions across the world have led the call for a just transition. Following pressure from the international trade union movement, the concept of "a just transition of the workforce and the creation of decent work and quality jobs" was included in the preamble to the Paris Agreement³⁵ and in the Silesia Declaration³⁶ at the UN climate talks in 2018.

Despite these commitments the [International Trade Union Confederation \(ITUC\)](#) is clear that:

*"Nonetheless, the just transition will not happen by itself. It requires plans and policies. Workers and communities dependent on fossil fuels will not find alternative sources of income and revenue overnight. This is why transformation is not only about phasing out polluting sectors, it is also about new jobs, new industries, **new skills**, new investment and the opportunity to create a more equal and resilient economy."*³⁷

Sharon Burrow, General Secretary, ITUC

United Nations Agreements

The term 'just transition' is enshrined in agreements that have been adopted by the UK Government. Despite this there has been a failure to implement it by the UK government. The term has eventually started to enter the language of industrial relations and even some business groups are advocating it.

The ITUC has produced [Just Transition: A Business](#)

[Guide](#) which includes case studies of businesses who have taken positive action and practical advice for organisations who want operational advice on how to implement a just transition.³²

TUC statement

In July 2019, the TUC issued a [just transition statement](#) supporting the decarbonisation of the economy. The statement also made it clear that this transition away from fossil fuels could not be done at the expense of workers. It concluded by saying that "a just transition must provide fairness and overcome injustices experienced by all workers, male and female, young and old, black and white, in the global north and south." It called on the UK government to take urgent action to support a just transition.³³

The statement identified 4 requirements for a just transition:

- A clear and funded path to a low carbon economy.
- Workers must be at the heart of delivering these plans.
- Every worker should have access to funding to improve their skills.
- New jobs must be good jobs.

Wales TUC statement

In June 2020 the Wales TUC issued a report '[A green recovery and a just transition](#)'.³⁴

This identified a five point-plan to deliver a just transition:

1. A clear and funded pathway to a green recovery and a net-zero economy.
2. A central voice – just transition must be an integral part of social partnership.

1. Welsh Government must use all levers to promote Fair Work to ensure new jobs are good jobs.
2. Employers must put workers at the heart of their transition plans.
3. Every worker should have access to funded training to improve their skills.

Just transition campaigns – international examples

Just Transition Centre

The ITUC has established a [Just Transition Centre](#) which has resources for union engagement on this issue.³⁸

[Union voices on just transition](#) – Experiences from Canada, Germany, Holland, New Zealand, Nigeria, Norway, and Spain. For example, the FNV (Dutch Union) describe how they are making sure fossil energy sector workers are not left behind as the country is transitioning into climate sustainable energy production.³⁹

Climate proofing agreements

In June 2019, the ITUC announced a day of global action on climate change. It called on unions to find out their employers plans to climate-proof their operations and jobs. A [Campaign Guide](#) provided resources for the global day of workplace action, including a model letter to send to employers and questions to ask in the meeting.⁴⁰

Unions were invited by the ITUC to put 3 questions to their employer:

1. Do you measure CO₂ emissions?

- If **yes**, can we develop a plan for reducing emissions?
- If **no**, can we agree to a process to measure our emissions?
- 2. Will we have net-zero emissions by 2050, or have a 50% reduction in emissions by 2030?
- 3. What will we do to get there?

The ITUC guide contains a model letter (Page 7) that includes the 3 questions. If your employer has not given you any of this information, then adapting the letter and using it could be a good way of starting to find out what your employer has and hasn't done.⁴¹

The [Canadian Task Force on Just Transition for Coal Power Workers and Communities](#) reported in 2018 and contained a range of measures that included:

- Create a detailed and publicly available inventory with labour market information pertaining to coal workers, such as **skills profiles**, demographics, locations, and current and potential employers
- Create a comprehensive funding program for workers staying in the labour market to address their needs across the stages of securing a new job, including income support, **education and skills building**, re-employment, and mobility.⁴²

The case for action – health, social and equality impacts

Unless action is taken to address inequality, the impacts of climate change will not be borne fairly. It will be the poorest, who've done the least to cause the crisis, who are likely to suffer the most. For example, those without access to resources find it much harder to prepare, respond and recover from extreme weather events.

Unions will need to assess climate action and responses in the light of the health, social and equality impacts. Some actions to address climate change may have unintended consequences. It's why the social justice elements of the transition to a zero-carbon economy need to be mainstreamed in to local, regional and national policies and agreements.

Health

There are many ways in which climate change has the potential to impact on [health](#). People's health could be adversely affected in a variety of ways by heat waves, cold weather, sea-level rises, flooding, disruption to health and social care delivery, air quality and vector-borne diseases. The CCC produces a [climate related risk assessment summary for Wales which outlines the risks](#).⁴⁵

Risks of flooding of essential buildings and the potential for overheating in places like hospitals and care homes during heatwaves is also a concern. Heat related deaths in the UK are projected to increase by around 250% by the 2050s.⁴⁶ But climate change isn't just a future risk – its impacts are already being felt.

And it's not just physical health that is a concern, but mental health too. The New Economics Foundation says: "Climate change is a daunting public health risk. But if tackling it runs side-by-side with reducing health disparities between rich and poor, climate change could also be a great public health opportunity."⁴⁷

The Covid pandemic has at long last highlighted the importance of social care. A [pathway to net zero emissions for healthcare](#) has been issued by the British Medical Journal in October 2020.⁴³

Women and climate change

Globally, climate change disproportionately affects women. Women often face higher risks and a greater impact from the effects of climate change. This is because people who live in poverty are more exposed to climate risk, and the majority of the world's poor are women.

According to the UN: "Women's unequal participation in decision-making processes and labour markets compound inequalities and often prevent women from fully contributing to climate-related planning, policy-making and implementation." But "women's inclusion at a leadership level has led to improved outcomes on climate related projects and policies."⁴⁴

Women are also more likely to rely on public transport and are more likely to lack the technical skills needed for a green transition.

At the 2020 TUC Women's Conference held at Congress House in March, the TUC Women's Committee released a statement addressing the issue:

"The recent floods across much of the UK is just one example of the extreme weather we are seeing across the globe as a result of climate change. As our report to conference sets out, the gender impacts of climate change are huge. Eighty per cent of those displaced by climate change are women. Women and our unions must be at the heart of measures to address the climate crisis."

The [Commission on a Gender Equal Economy](#) has

The social justice elements of the transition to a zero-carbon economy need to be mainstreamed in to local, regional and national policies and agreements.



Air pollution

There is growing awareness of the damage caused by air pollution. The pollutants that contribute to harmful air pollution are not necessarily greenhouse gases themselves, although some of them do contribute to climate change. But the causes of air pollution and greenhouse gas emissions are often the same. Both are caused by the burning of fossil fuels. Key sources of air pollution include transport, industrial processes and domestic burning.

The recent inquest verdict following the [tragic death of nine-year-old Ella Kissi-Debra](#) made legal history when air pollution was recorded as [a cause in an individual death in the UK for the first time](#).

There is a mounting body of evidence demonstrating the devastating impact of air pollution. It harms our lung, heart, brain and reproductive health and has lifelong impacts for children. Exposure to air pollution has also been [linked to a greater risk of dying from Covid](#).⁴⁸ It is a public and occupational health emergency of huge proportions.

Worldwide, it is estimated that nearly [9 million people die from air pollution related diseases per year](#).⁴⁹ In Wales, it is estimated to contribute to as many as [1,400 deaths per year](#).⁵⁰

Air pollution is closely linked to the issue of climate change. So, by acting on air pollution, we can both improve the health of workers and communities and help to tackle climate change.

Work-related emissions (including work-related travel) make a large contribution to the problem. Air pollution is blighting communities and affecting the health of workers on their journeys to and from work. It also harms workers while they are at work (both those working indoors and out). It's why tackling air pollution is a key priority for unions.

Trade unions in the UK have set up the [Trade Union Clean Air Network \(TUCAN\)](#). This supports the call for workplace action and for much greater recognition of it as a major contributor to occupational ill health. [The TUCAN Charter, Guidance and Newsletters can be found here](#).⁵¹

In Wales, the Welsh Government plans to bring forward a Clean Air Act with tougher limits on levels of air pollution. It has recently published [a 10-year clean air plan](#).⁵²

You can find out more about the Clean Air Plan on [page 39](#).

Local, regional and national industrial strategies need to consider the full range of equality impacts.

noted that: “crises do not impact everyone equally. While we may all be weathering the same storm, we are in drastically different boats.” Publishing its final report [*Creating a Caring Economy: A Call for Action*](#) it said:

*“Working together, across the four nations of the UK, at every level, we can design and demand a new economy: an economy which has the wellbeing of individuals, communities and the planet at its centre; an economy which values care, both paid and unpaid, as the activities that nurture us all; an economy which ensures that no-one faces discrimination, violence, or poverty, and in which no-one is left behind, or pushed behind. This new economy is a **caring economy**.”⁵⁵*

The opportunity presented by ‘building back better’ includes tackling the systemic discrimination experienced by women in the world of work.

Other equality impacts

The climate and nature crisis also [disproportionately impacts on disabled people](#)⁵³. For example, disabled people can be more vulnerable to extreme climate events and infectious diseases. This is because disabled people are more likely to experience compromised health. Disabled people are also more likely to live in poverty so are more exposed to climate risk.

The impacts also hit people from Black, Asian and minority ethnic backgrounds disproportionately. Not only those who live in the global south but also those in the UK. In the UK, on average BAME people are more exposed to air pollution than white people.⁵⁴ Local, regional and national industrial strategies need to consider the full range of equality impacts.



What could a just transition to a net-zero Wales look like?

In April 2019, the Senedd became the first parliament to [officially declare a climate emergency](#).⁵⁹ The Welsh Government has stated [its ambition to reach net-zero carbon emissions by 2050](#)⁶⁰ and to make the [Welsh public sector carbon neutral by 2030](#).⁶¹

Trade unions in Wales recognise the overwhelming scientific evidence showing the need to decarbonise our economy. In 'A green recovery and a just transition' we outlined the trade union movement's support for efforts to meet Wales' climate targets. Our report identified the need for a clear and funded pathway to net-zero. One that secures good quality jobs and gives workers a central voice in developing policy changes at both a national policy and workplace level.⁶²



The role of social partnership

In Wales, the Social Partnership Council brings together trade unions, employers and the Welsh Government.⁵⁶ The Wales TUC believes that in Wales, [social partnership provides a strong foundation for social dialogue](#). This can be the catalyst for achieving a greener, fairer, more equitable recovery and pathway to a net-zero Wales.

The Welsh Government plans to introduce a [Social Partnership Act](#). This will place a duty on all devolved public bodies to work in social partnership.⁵⁷ We want to see a 'just transition' become an integral part of all social partnership discussions at all levels. We've called for the Social Partnership Council to play the role of a national recovery council in response to the Covid crisis.

In November 2020, Wales TUC hosted an online discussion on [A just transition for Wales](#) as part of [Wales Climate Week](#). The event brought together trade unionists, Welsh Government, academics, employers, members of the public and third sector organisations. It was a forum to discuss the opportunities and challenges and the need to ensure a just transition to net zero in Wales. [A video recording of the event is available here](#).⁵⁸

The commitment to a green recovery

The Wales TUC welcomes the Welsh Government's [reaffirmed commitment to social, economic and climate justice as part of the post-Covid recovery](#).⁶⁸ Discussions are already underway through the social partnership structures to identify the best ways of supporting key sectors and industries through the crisis in a way that supports a green recovery.

Fair Work

Welsh Government has [committed to using all its available levers to implement the recommendations of the Fair Work Wales report](#).⁶³ The report recommended that Fair Work Wales Standard(s) should be used as criteria for access to public funding.

Fair work is where workers are fairly rewarded, heard and represented, secure and able to progress in a healthy, inclusive environment where rights are respected. The six Fair Work characteristics are:

- fair reward
- employee voice and collective representation
- security and flexibility
- opportunity for access, growth and progression
- safe, healthy and inclusive working environment
- legal rights respected and given substantive effect.

The promotion of equality and inclusion is integral to all six characteristics.

The Wales TUC believes that the implementation of Fair Work will be key in ensuring that new green jobs are good jobs.

Workplace transition agreements

The workers and communities across Wales affected by the transition to net-zero must have a central voice in how the transition happens. The most practical place for this to start is at a workplace level, by employers working with trade unions. All organisations affected by the transition should be working with unions to develop a transition plan and put in place transition agreements. You can find more information about transition agreements on page 70.

Funding the transition

Welsh trade unions welcome action from the Welsh Government to tackle the climate emergency. But we also recognise that there are challenges in funding the transition and that there are some levers that lie outside of the Welsh Government's powers. For example, Wales' financial resources are limited by the constraints of [the funding settlement from UK government](#).⁶⁴ This has implications for Wales because the amount of money the Welsh Government receives is directly related to how much the UK government spends.

Although Welsh Government now has additional borrowing powers, these are nowhere near the order of magnitude that will be required to fund the transition. The issue of funding the transition to net-zero in Wales is explored in more detail in our report, [A green recovery and a just transition](#).

In November 2020, the UK government announced a [10-point 'green industrial revolution' plan](#).⁶⁵ Reaction to the plan has expressed concern that it falls far short of the level of the funding and ambitious plans that are required to reach net-zero.⁶⁶ It promises to create 250,000 new jobs across the UK. This compares to the [1.2 million that TUC research shows could be created with the right investments in green infrastructure](#).⁶⁷

Commenting on the UK government's plan, TUC

General Secretary **Frances O'Grady** said: "For all the government's talk of a 'green industrial revolution', it is off to a slow start with this plan. Ministers must do more to build a fairer, greener economy with decent work at its heart and deliver a just transition for workers."⁷⁰

What are the opportunities for green jobs in Wales?

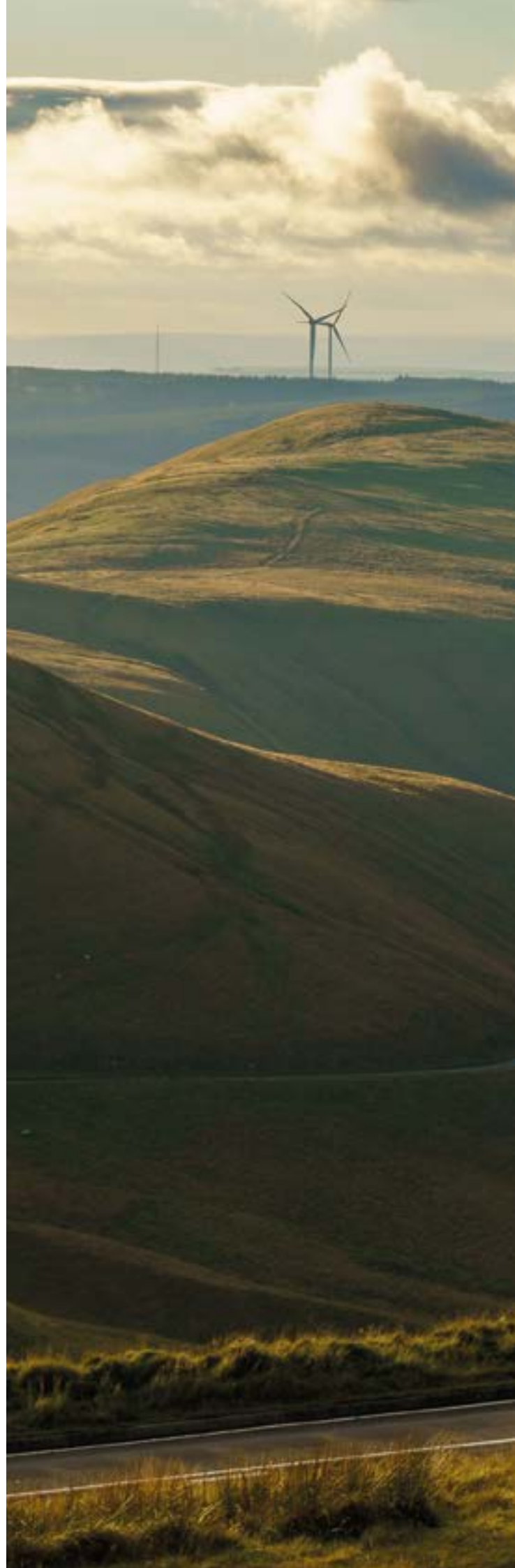
[Research carried out for the Wales TUC](#) has found that almost 60,000 jobs could be created in Wales in the next two years alone through government investment in key infrastructure projects.

The research – carried out for the Wales TUC by Transition Economics – shows that fast-tracking spending on projects such as social housing, public transport, and decarbonisation could make a significant contribution to the economic recovery.

Broken down by sector, projected job creation from a £6bn investment in infrastructure would mean:

- 27 thousand jobs in housing construction and energy efficiency retrofits
- 18 thousand jobs in transport upgrades
- 9 thousand jobs in energy, manufacturing, and broadband infrastructure upgrades
- 5 thousand jobs in land, forestry, and agriculture improvements.

These jobs would benefit some of the sectors and demographics hit hardest by the Covid-19 emergency. Over 75% of the jobs would be created in sectors that traditionally employ non-graduate workers.⁶⁹





Wales' environmental legislation and policy framework

Under Wales' devolution settlement, the Senedd has legal 'competence' to pass laws on a wide range of subjects relating to the environment, including nature conservation.

As such, Wales has devolved climate change laws which set out its own targets and monitoring strategies.

But it is a complex and interconnected picture, with the power to reduce real world emissions being a mixture of devolved, partially devolved and with some powers remaining reserved in the hands of the UK government. And the UK government's industrial policy also impacts on Wales. For example, on the ability of our steel industry to transition to greener steel.

At a UK level, the key piece of legislation is the [Climate Change Act](#) which was passed in 2008. The Act set legally binding targets to reduce carbon dioxide emissions in the UK by at least 80 per cent by 2050, from 1990 levels.⁷¹ In 2019, [the UK Government committed to reach net-zero by 2050](#) in line with the revised advice from the CCC.⁷²

In this guide, we are focusing on Wales' environmental legislation and policy framework but you can find more information about the UK's climate change legislation and policy framework [in the TUC's Voice and Place report \(pages 9-12\)](#).⁷³

The Well-being of Future Generations Act 2015

With the framework of the [Well-being of Future Generations Act](#), Wales has established a unique approach by placing a well-being and sustainable development duty in the decision making and actions of public bodies in Wales.

Wales is the first country in the world to legislate for the well-being of current and future generations in a way that ties in with the United Nations Sustainable Development Goals. The Well-being of Future

Generations Act is designed to facilitate positive outcomes for the people of Wales, our planet, for current and future generations.

Tackling climate change and supporting biodiversity is central to the Act and an integral part of the Act's 'well-being goals'. The promotion of 'decent work' is also a key part of the legislation. The Act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

The Act applies to public bodies in Wales. But its influence can be felt more widely because its principles are applied in areas such as procurement, where a public body commissions goods or services from a private company for example. Overall, the Act aims to improve the social, economic, environmental and cultural well-being of Wales. It provides a framework that underpins the other environment related legislation in Wales.

The Well-being of Future Generations Act has been recognised internationally as a ground-breaking piece of legislation. Speaking about the Act, the UN Assistant Secretary General said: "[What Wales is doing today, the world will do tomorrow](#)".⁷⁴

The website of the Future Generations Commission has more information about the Act and its implementation: www.futuregenerations.wales/about-us/future-generations-act/

The annual [Wellbeing of Wales](#) report provides an update on progress being made in Wales towards the achievement of the 7 wellbeing goals.⁷⁵

"What Wales is doing today, the world will do tomorrow."

The sustainable development principle and five ways of working:

The Act puts in place a 'sustainable development principle' that sets out how public bodies should go about meeting their duties under the Act.

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

There are five things that public bodies need to take into account to show they have applied the sustainable development principle. These are called the 'five ways of working':

Long-term: The importance of balancing short-term needs with the need to safeguard the ability to also meet long term needs;

Prevention: How acting to prevent problems occurring or getting worse may help public bodies meet their objectives;

Integration: Considering how the public body's well-being objectives may impact upon each of the well-being goals, on its other objectives, or on the objectives of other public bodies;

Collaboration: Considering how acting in collaboration with any other person (or different parts of the body itself) could help the body meet its well-being objectives; and

Involvement: The importance of involving people with an interest in achieving the well-being goals, and ensuring that those people reflect the diversity of the area which the body serves.

The well-being goals

Public bodies in Wales must work towards achieving all seven of the Act's well-being goals, which are:

A prosperous Wales – An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.

A resilient Wales – A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example, climate change).

A more equal Wales – A society that enables people to fulfil their potential no matter what their background or circumstances (including their socio economic circumstances).

A healthier Wales – A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood.

A Wales of cohesive communities – Attractive, safe, viable and well-connected.

A Wales of vibrant culture and thriving Welsh language – A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.

A globally responsible Wales – A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being.



The Environment (Wales) Act 2016

The [Environment \(Wales\) Act](#) put in place legislation to help plan and manage Wales' natural resources in a more proactive, joined-up and sustainable way. It aims to put Wales in a better position to become a greener, low-carbon economy which can adapt to the impacts of climate change.

The act covers areas such as the sustainable management of natural resources, climate change, collection and disposal of waste and flood and coastal erosion.

Emissions targets

The Act places a duty on Welsh ministers to set a maximum total amount for net Welsh greenhouse gas emissions. Emission reduction targets and five-yearly carbon budgets were put in place, based on its original target of a reduction of at least 80 per cent in greenhouse gas emissions by 2050.

Since the declaration of the climate emergency, Welsh Government plans to revise its targets to reach the more ambitious goal of net-zero emissions by 2050. The first budgetary period was 2016-20, and the remaining budgetary periods are each succeeding period of 5 years, ending with 2046-50.

The first two carbon budgets, have been set at the following levels:

- Carbon budget 1 (2016-20): Average of 23% reduction
- Carbon budget 2 (2021-25): Average of 33% reduction

The Committee on Climate Change (CCC) has provided advice on the third carbon budget

Low carbon delivery plans

The Welsh Government published its first [Low Carbon Delivery Plan](#) in March 2019. It sets out the actions it intends to take to cut emissions and support the growth of a low-carbon economy.⁸⁷

The [second Low Carbon Delivery Plan is currently being developed](#) and is due to be published in 2021. Welsh Government wants to work with partner organisations and the public in the development of the plan to:

- Identify the most important changes we need to make in Wales to reduce emissions from a range of sources including power, transport, industry, land use, agriculture, buildings, waste and the public sector;
- Identify which actions to deliver that change need to be undertaken by government, businesses and communities;
- Generate the evidence and modelling needed to ensure the actions it takes are going to be effective in meeting our long term and interim targets;
- Align its response to the climate emergency with its priorities in recovery from Covid-19 and managing the impact on our economy of leaving the European Union.⁸⁸

Find out more: <https://gov.wales/sites/default/files/publications/2020-07/engagement-approach-for-low-carbon-delivery-plan-2.pdf>



(covering 2026-30) in 2020, and to provide updated advice on the levels of the 2nd carbon budget (2021-25).⁷⁶

Biodiversity and Resilience of Eco-systems duty

The Environment (Wales) Act introduced an enhanced duty for public authorities to seek to maintain and enhance biodiversity and the resilience of ecosystems. To do so, public authorities should embed the consideration of ecosystems and biodiversity at an early stage into their planning, including any policies, plans, projects and programmes as well as their day-to-day activities.⁷⁷

The Act also sets out a duty for [Natural Resources Wales](#) to produce a '[State of Natural Resources](#)' report every 5 years.⁷⁸ This is used to inform a [Natural Resources Policy](#).⁷⁹ The focus of the policy is the sustainable management of Wales' natural resources. It also aims to maximise the contribution this can make to achieving the goals of the Well-being of Future Generations Act.

The policy outlines three national priorities:

1. Delivering nature-based solutions.
2. Increasing renewable energy and resource efficiency.
3. Taking a 'place based' approach.

The policy integrates a wide range of diverse policy areas, including food and drink, farming and agriculture, water, energy, waste, countryside access and environment. The Act also requires the production of [area statements](#). These provide an evidence base to help deliver the sustainable management of natural resources at a local level across Wales.⁸⁰

The Clean Air Plan for Wales (and proposed Clean Air (Wales) Act)

The Welsh Government has published a ten-year [Clean Air Plan](#) and has committed to introduce a Clean Air Act in the next Senedd term. The aim of the Clean Air Plan for Wales is to improve air quality and reduce the impacts of air pollution on human health, biodiversity, the natural environment and our economy.

The Wales TUC has called for more recognition of air pollution as an occupational health emergency. We broadly welcome the Clean Air Plan for Wales. We are pleased to see that it includes a commitment to produce new statutory guidance for the public, private and voluntary sectors to 'empower workforces to tackle air pollution'.

We also welcome that the proposed Clean Air Act will put in law a commitment to reduce PM2.5 and NO₂ levels to below World Health Organization limits. This is something we have called for to protect workers from exposure to dangerous levels of air pollution. Stricter limits will help to ensure everyone in Wales can breathe cleaner air and protect lung, brain and heart health.

The Wales TUC will seek to be closely involved in the development of the proposed statutory guidance. We want to ensure that it reflects the concerns that unions have raised around workers' exposure to air pollution and offers workers and unions an effective mechanism to press for improvements in air quality. We also want to ensure that plans for new air quality monitoring networks are robust enough to address current gaps in coverage and access to information on air quality in Wales.

Find out more about the Clean Air Plan here: <https://gov.wales/sites/default/files/publications/2020-08/clean-air-plan-for-wales-healthy-air-healthy-wales.pdf>

Find out more about the Environment (Wales) Act here: <https://gov.wales/environment-wales-act-2016-factsheets>

The Circular Economy Strategy

The Welsh Government has consulted on a [draft Circular Economy Strategy](#), which looks to move Wales towards becoming a zero-waste, circular economy by 2050.

A circular economy is one that keeps materials in use as long as possible and avoids waste. Following the declaration of a climate emergency and with the recognition that 45% of emissions come from goods and products, the Welsh Government views a circular economy as making a major contribution towards achieving these aims.

The strategy aims to ensure that by 2050, Wales can live within the planet's resources, generating zero waste and net zero carbon emissions. The finalised strategy is expected soon.

Find out more:

<https://gov.wales/circular-economy-strategy>



Other relevant legislation and policies in Wales:

Prosperity for All – The National Strategy

In [Prosperity for All – The National Strategy](#) Welsh Government states that delivering prosperity for all is its mission. It says: “Prosperity is not just about material wealth – it is about every one of us having a good quality of life, and living in strong, safe communities. Our long-term aim is to build a Wales that is prosperous and secure, healthy and active, ambitious and learning, and united and connected.”

The strategy sets out wellbeing objectives which are informed by the Well-being of Future Generations Act. It says it aims to drive sustainable growth and combat climate change as well as promoting fair work.⁸¹

Prosperity for All – The Economic Action Plan

The purpose of the [Economic Action Plan](#) is to support delivery of Prosperity for All – the national strategy for Wales. The Plan “sets out a vision for inclusive growth, built on strong foundations, supercharged industries of the future and productive regions. The Plan drives the twin goals of growing the economy and reducing inequality”. Decarbonisation is one of the ‘Calls to Action’ in the plan⁸²

The Wales Procurement Policy Statement

The [Wales Procurement Policy Statement](#) sets out the principles under which public sector procurement is to be delivered in Wales. This policy adopts the Sustainable Procurement Task Force definition of sustainable procurement: “the process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not

only to the organisation, but also to society and the economy, whilst minimising damage to the environment”.⁸³

The Active Travel (Wales) Act 2013

The [Active Travel \(Wales\) Act](#) requires local authorities to map and continuously improve routes and facilities for “active travel”. This is defined as walking and cycling for a purpose, like accessing work or services, rather than for leisure. However, in the five years since the Act was introduced Welsh Government data [showed relatively little change in walking and cycling rates](#).⁸⁴ But [cycling rates](#)⁸⁵ and [funding for active travel](#)⁸⁶ have both now increased as part of the Covid response and it is hoped that this might be a permanent shift. More information about active travel can be found at: <https://gov.wales/walking-cycling>

What skills will workers need in the transition to a net-zero, zero-waste Wales?

The first thing that many people think of are the skills related to the 'climate critical' sectors, such as energy, transport, construction or areas such as waste management or nature restoration. But the key point to remember is that every job will require 'green skills'. They will be needed across all sectors and at all levels.

There is no agreed definition of 'green jobs' or 'green skills'. Green skills can encompass the huge and diverse range of technical and practical skills, knowledge, values and attitudes that will all be needed to develop and support a sustainable society. The concept of green skills and jobs will also continue to evolve over time.

Some organisations have adopted a framework for anticipating green skills that is based on the [US O*NET classification of green occupations](#).⁸⁹ These are:

1. green increased demand occupations
2. green enhanced skills occupations
3. green new and emerging occupations.

Planning for the types of skills and the number of jobs in each sector of the economy needs to be based on research and consultation across each sector of employment. This has been recognised by the [Scottish Just Transition Commission](#) in its [interim report](#) from 2020⁹⁰:

"There is a great deal of information and research regarding the number of jobs that may result from investment in a net-zero economy. However, what these job numbers mean in terms of job quality (contractual security, skills, earnings, voice) and the extent to which they offer fair work, is too often unclear. More understanding is also needed on the scope of the 'just transition challenge' in Scotland – for instance, detailed mapping of jobs and skills in both existing and emerging industries will help shape transition plans."

There is a crucial research role here for the education sector in collaboration with employers, unions and local and national authorities.

Environment and skills – a weak connection?

A general conclusion from Cedefop's 2018 [Skills for Green Jobs report](#)⁹¹ is that in a number of European countries, including the UK:

"There tends to be a weak connection between organisations involved in national policy making on environmental topics and those involved in labour markets and skills policy, including skills anticipation. This parallels a generally weak connection between environmental and skills policies. There are also gaps in policies and regulations in relation to gender issues and to monitoring and evaluation of policies or activities relevant to green skills."

There is currently a lack of detailed information which is needed to help fully anticipate and plan for the 'green skills' that will be needed for the transition in Wales. The Wales TUC is working with the Office of the Future Generations Commissioner to support its research into [the skills needed for a greener economy](#).⁹²

Every job will require 'green skills'. They will be needed across all sectors and at all levels

Skills gaps

Technological change, globalisation, ageing populations and climate change will dramatically increase the pace of change in labour market. This will have impacts on skills needs for new and current jobs alike.

The growing importance of sustainable development and the shift to a net-zero, zero-waste economy will also require new skills and qualifications. This offers great potential for the creation of green jobs. But it also implies structural change and transformation of existing jobs.

Today, skills gaps are already recognised as a major bottleneck in sectors. This can be seen in areas such as renewable energy, energy and resource efficiency, renovation of buildings, construction, environmental services and manufacturing. The skills landscape in this area currently seems very limited in terms of qualifications. Packages of training and qualifications will need to be developed at pace.

The adoption and spread of clean technologies requires skills in technology application, adaptation and maintenance. Skills are also crucial for economies and businesses, workers and entrepreneurs. All need to rapidly adapt to changes as a consequence of environmental policies or climate change.

Meeting skills needs is a critical factor for productivity, employment growth and development. The transition offers significant opportunities for job growth and simultaneous emergence of new occupations, job profiles and therefore skills. The 2020 New Skills Agenda for Europe of the European Commission identified the development of green jobs and of green skills as a priority. It identified [12 key actions that could support their development](#).⁹³

Transferring existing skills

Each workplace requires an audit of current jobs and skills and how the transition to a zero-carbon economy will impact on these. This requires advanced planning. It should not be done as a last-minute exercise when threats to existing employment patterns begin to be implemented. The starting point is that **every job will be affected by the transition**. Of course, some jobs will change more than most, while others will disappear completely.

In order that the potential benefits outweigh the costs an assessment will be needed of the current workforce skills profile. It should consider the extent to which it can be transferred over to new ways of working. Where there are gaps, training programmes will need to be introduced in consultation with staff and their representatives.

Skills planning, policy and funding in Wales

There are a number of funded skills programmes available in Wales that can provide access to training and qualifications to equip people for jobs in the green economy. Some are aimed at workers and some at employers. Individual workers can find information on how to access these programmes through [Working Wales](#).⁹⁴ Employers can get information on funded programmes via [Business Wales](#).⁹⁵

It is important to note that many of the skills programmes in Wales are project based. This means the skills funding picture can change rapidly. The Wales TUC believes it is vital to embed funding for skills in the green economy into mainstream FE and HE funding. We must also ensure that many of the programmes funded through EU funds are maintained post-Brexit. Green skills must be a significant focus of whatever replaces European Structural Funds in Wales.

[Regional Skills Partnerships](#) in Wales are responsible for setting much of the employment and skills policy in Wales.⁹⁶ Trade unions are working with them to ensure that green skills are at the top of the agenda in regional employment and skills plans.

The Wales TUC wants to see every worker have access to funded training for green skills.

In our report, [A green recovery and a just transition](#), we set out a number of recommendations for Welsh Government on skills policy and funding, careers advice and guidance services and apprenticeships to support a just transition.

Apprenticeships

The apprenticeship system in Wales is fully devolved, from framework development to delivery and monitoring and inspection. It is clear that new qualifications and frameworks need to be developed at pace to reflect the green agenda.

Apprenticeships are a priority area for Welsh Government. It is on course to exceed its target of providing 100,000 all-age, high quality apprenticeships across Wales during this Senedd term. [Information on funding for apprenticeship delivery and incentives for recruitment of apprentices is available from Business Wales.](#)

The Wales TUC believes that it is urgent and essential that funding incentivises both:

- ➔ the development of new qualifications in the green economy
- ➔ the recruitment of apprentices into green roles.

This is needed to address areas where there is a weak connection between environmental and skills policy.

The role of ULRs and workplace skills audits

Unions can have a key role in developing and supporting green skills development at a workplace level. See [page 53](#) for more information about the ULR role in identifying green skills and [page 69](#) for guidance on workplace skills audits.

Further sources of information

Visit www.tuc.org.uk/learn-your-union for more information about union learning in Wales. For more information about green skills, see the unionlearn publication, [Cutting Carbon, Growing Skills](#).



The [Greener Jobs Alliance](#) has produced a [Green Skills Manifesto](#) to address the concerns about the lack of alignment between green skills and jobs in England under UK government policy.⁹⁷ Although learning and skills is devolved in Wales, the five underlying principles highlighted in the manifesto are just as relevant for the development of green skills in Wales:

- 1. Equalities:** Many of the potential low-carbon growth areas like construction and engineering do not adequately reflect the potential workforce. The under-representation in apprenticeships and employment in these sectors must be addressed to ensure access to job opportunities by all disadvantaged groups. A recognition that climate change and energy prices will hit the poorest sections of society hardest.
- 2. Fair and decent jobs:** The move to a low-carbon economy must be based on fair wages and decent terms and conditions of employment. These should include opportunities for career progression and rights to health and safety and trade union recognition.
- 3. Coordination and coherence:** Stimulating demand for jobs and training requires a long-term strategic approach in areas such as low-carbon sector incentives and procurement policies.
- 4. Communication and engagement strategy:** Partnerships across civil society at national and local level are needed to promote training, job opportunities and inclusiveness.
- 5. A just transition:** Workers and communities must be consulted about the opportunities and threats to employment in each sector of the economy. Provision to retrain and upskill in good time must be built into all jobs and sectors at risk

There is no agreed definition of ‘green jobs’ or ‘green skills’. Green skills can encompass the huge and diverse range of technical and practical skills, knowledge, values and attitudes that will all be needed to develop and support a sustainable society.

A photograph of two construction workers at night. The worker in the foreground is a Black man with a beard and glasses, wearing a white hard hat with safety glasses on his forehead and a blue work jacket. He has his arms crossed and is smiling. The worker in the background is a white man wearing a white hard hat and safety glasses, looking off to the side. The background shows a construction site with scaffolding and lights. A diagonal blue overlay covers the right side of the image.

Section 2

What unions can do



The role of the green or environmental rep

Introduction

Green reps can be elected to champion environmental issues in the workplace and can help to develop successful joint approaches. They can raise awareness of sustainability issues and ensure that they are included in the negotiating or bargaining agenda at work.

Just as unions and employers work together to improve health and safety in the workplace through safety committees – where trade union-appointed safety representatives negotiate with management – environmental issues can be addressed in a similar way.

The main concern of a green rep is to agree a joint approach to decarbonisation and sustainability. Ideally this would be formalised in a collective agreement and overseen by an employer or union committee that addresses environmental issues.

Some unions elect or appoint dedicated environmental or 'green' reps. Others incorporate the functions of the green rep as additional responsibilities into existing roles, for example, into the role of the health and safety rep.

On the issue of green skills, union learning reps may also play a role. However the role is allocated, it's important that these reps have sufficient facility time to carry out duties related to the sustainability agenda.

Green reps – what's in a name?

Some unions use the term 'green rep', but this is not a universal term. The title of environment/environmental rep, climate rep, or sustainability rep is also used.

For the purposes of this toolkit, we are using the term green rep. In a way the title is not important. The most important thing is that in each workplace there is at least one person taking responsibility for the impact of climate change and environmental measures on employment.

and working parties, developing environmental policies and management systems, and drawing up workplace agreements etc.

7. Networking with other green reps to share information and good practice.

(The above is an [extract from PCS guidance](#)).⁹⁸:

Some unions like the UCU, have also issued [guidance on the role](#). This guidance contains some useful checklists on the appointment and role that are relevant to all unions.⁹⁹ Individual unions have different approaches on this part of union organisation. Some have no formal policies while others have a more clearly defined position.

Role and duties

The **functions** of a green rep will be influenced by their sector of employment but are likely to include the types of activities covered below:

1. Raising awareness and promoting green workplace practices with members, such as reducing waste, recycling, energy saving, green purchasing.
2. Liaising with the branch on green and sustainability issues that need to be raised with management.
3. Taking forward and promoting union policy and campaigns on green and sustainability issues in the branch, eg on energy, climate change and fair trade.
4. Carrying out workplace environmental audits.
5. Monitoring employers' activity on, or progress towards, green and sustainability policies and targets.
6. Involvement in developing environmental best practice in the workplace, eg through committees

Training

It is vital that green reps or other reps taking on the duties as part of their role can access training. The Wales TUC Education Service has developed a new course called 'Greening our workplaces – green skills for trade unionists'. It's for new and existing green reps and other reps taking on sustainability as part of their role. It is available as an online course. More details are available from the [Wales TUC](#) and on our website www.tuc.org.uk/green

Some unions also offer their own training programmes on sustainability– speak to your union to see what is available.

Facility time

Businesses and governments recognise that climate change is a major challenge. Given that work activities make such a large contribution to global warming you would think that it should be treated as a priority issue. There is also no shortage of calls for stakeholder engagement. As workers have a key stake in the organisation that employs them it ought to follow that they should be *engaged* in consultations on how best to address it in the workplace. Unfortunately, this is often not the case.



Getting started:

Green rep appointment checklist

What to find out first:

- Does your union have any guidance on the green rep role?
- Does your employer recognise the role?

Check whether:

- It is referenced in an agreement.
 - It is referenced in a policy document.
 - It has been carried out in the past and there is any custom and practice.
- Is there anyone in the branch currently leading on this? Check whether any environmental functions are carried out by any existing branch officers.
 - If the post is currently vacant sound out views on members who may be interested.

Next steps

- Ensure that the person appointed to the green rep role is a member of the branch committee and that the post is advertised for election at the AGM.
- Notify your regional office of the branch member appointed as the green rep.
- Notify the employer of the branch member appointed to lead on this.

Green rep functions checklist

What information do new green reps need?

- Obtain all up-to-date policies and documentation.
- Build up a contact list of individuals you need to liaise with on general and specific issues (use the contact list at the back of this handbook to keep a note).
- Ensure new reps are provided with an induction on how the branch works and provided with copies of relevant documents like this handbook.
- Identify any current issues or campaigns.



Wales TUC greener workplaces survey

The Wales TUC surveyed union branches in Wales on the issue of greener workplaces in early 2020. Almost 150 reps responded.

The survey found that around a quarter of the branches surveyed had a dedicated green rep. A further 21 per cent said that the role was being covered by another rep in the branch (eg health and safety rep).

Worryingly, 41 per cent of reps reported that the union had not been consulted about changes the employer was making to reduce its environmental impact. Another 44 per cent said that they had only been consulted about 'some' changes. Only 15 per cent of the reps who responded said that the union had been consulted about all the changes the employer had made.

Sixty-seven per cent of reps said that facility time for green reps would help their branch to take action on green issues in their workplace.

This is the reason why unions have called for the statutory recognition of green reps, on a par with health and safety and union learning reps. Employment law is not devolved and under UK employment law, there is currently no legal right to appoint union reps to represent workers on this issue. In 2017, the TUC Congress passed a motion calling on unions to "lobby to demand rights for workplace environmental reps."

In addition to changes in the law, unions have called for amendments to the ACAS code of practice 'Time off for trade union duties and activities.' This would allow facility time for:

- appropriate training
- conducting environment- and climate-related audits
- raising issues with the employer.

Even without a change in the law, in some workplaces, unions have been successful in extending the consultation agenda to cover a widening environmental agenda at work. And they have succeeded in getting employers to formally recognise the role of union green representatives and put in place voluntary agreements on facilities and facilities time.

Whether or not the role is taken on by an existing rep it is crucial that additional facility time is negotiated.

Making the case for facility time

Organisations should engage with staff on sustainability issues. Trade unions provide the most effective and democratic way of facilitating this engagement. For public bodies in Wales, engagement with trade unions on the sustainability agenda aligns closely with the ways of working in the Well-being of Future Generations Act. This is both in terms of involvement and collaboration.

Engagement also supports the key principle of 'worker voice' on the Fair Work agenda.

A proposed joint statement on a commitment to a just transition and to the provision of facility time for green reps is currently under discussion at the Workforce Partnership Council. This is the social partnership structure covering the Welsh public sector.

Employers' sustainability and corporate social responsibility strategies will have more credibility if there is a commitment to recognise the role of green reps and consult with staff unions on sustainability issues. This is true across both the public and private sector. The implementation of sustainability policies will be more effective with union support and participation. And it is more likely that successful joint approaches can be developed.

There are many aspects of sustainability where a joint approach is more productive. For example, unions have networks that go beyond the workplace and can support a community engagement strategy.

Key points:

- Green reps can play a key role in workplace consultation. They can help to secure the active

participation of union members in environmental initiatives at work. Union communication and consultation networks can offer ready-made links with workers on the ground. Employers may otherwise find it hard to reach these workers.

- Unions have the confidence of their members. This means union involvement in environmental projects will reassure them that their interests are being taken into account. It can help reassure workers that a new green initiative isn't just 'greenwash'. That is, only paying lip-service to environmental concerns for the sake of appearances.
- Setting up joint management and union environmental committees and negotiating framework agreements with employers can secure workforce engagement on carbon reduction. This can help to embed environmental sustainability into the way organisations work. Obtaining senior management buy-in is crucial to making a difference.
- If an organisation manages its environmental performance via an environmental management system (EMS), union involvement will strengthen the EMS. Union engagement can form an important part of the evidence employers use to gain accreditation.
- [TUC research](#) has found that joint work between management and unions on the green agenda helped to develop a mutual appreciation of the benefits of carbon reduction. It also improved industrial relations.¹⁰⁰

Unions are best placed to:

- monitor the effectiveness of environmental policies and provide staff input
- gain staff support for changes to workplace practices

- use existing union structures and procedures to influence and develop members' thinking and actions
- raise staff awareness and encourage behavioural change
- improve operational procedures.

Facility time checklist

- ✓ Arrange time off for training at average earnings to carry out the role. Contact your branch and / or union education officer to find out what is available through your union or the Wales TUC Education programme.
- ✓ Find out if there is any time off with remission from work to carry out your functions as a rep. This may be in the form of a branch allocation for all union duties or a specified number of hours each week for the green rep.
- ✓ If there is no agreement on time off raise the issue in your union and agree a strategy for raising this with management.

A whole branch approach to environmental issues

There is of course a big crossover between the green agenda and other industrial relations matters. In some union branches it will be the health and safety rep that takes on environmental issues. The advantage of this approach is these reps do have legal rights under the Safety Reps Regulations 1977. Although it's still important that additional facility time is secured so that these reps have time to

address environmental issues fully.

On the issue of green skills, other reps with legal rights, like union learning reps, may also play a role. A TUC study, [The Union Effect – greening the workplace](#), July 2014, highlighted six case studies where union involvement had triggered positive initiatives.¹⁰¹

It is vital when a union rep is progressing an environmental issue that consideration is given to potential overlaps with other industrial relations issues. Some environmental measures may have unintended consequences. To avoid potential divisions on the union side these should be thought through and communicated as early as possible.

Environment v jobs?

The need for a holistic approach would be where dealing with one issue could have a negative impact on another. For example, if the union is engaged in discussions about energy management. The employer could propose that closing a site or certain buildings would considerably reduce carbon emissions. However, such an approach might also lead to a loss of jobs or other impacts on conditions of employment eg overcrowding, travel distance to work etc.

A strategy is needed that ensures improvements aren't made on one issue at the expense of the other.

Where there is more than one union in the workplace it is even more important that dialogue takes place to avoid divisions between unions, or any management attempts to divide and rule.

Cross over with health and safety and learning agendas

These are two potentially significant areas where co-ordination is needed.

Health and safety – In many workplaces the issues may be covered by the same managers and committees. The health and safety manager may have an environmental brief and / or any consultation committee may deal with both subjects. Whether the union roles are combined or not it will be important to emphasise the link. For example, air pollution at work is both a health and safety, and an

environmental issue. Using a union risk assessment methodology should help to ensure that all aspects are dealt with.

Learning agenda – There are plenty of opportunities to combine education and skills development with action on the environment. Consideration could be given to running events on 'high profile' dates, like Earth Day in April, Clean Air Day in October or Wales Climate Week in November. Where there are continuous professional development programmes, environmental and climate modules could be introduced.

Green skills and the ULR role

ULR checklist

If there is a union learning rep (ULR) in your workplace it will be important to involve them in developing a green skills strategy. The following checklist contains questions to consider:

What opportunities are there to raise the issue in your workplace? Think about:

- ☒ discussions in branch meetings.
- ☒ staff development activities or continuous professional development.
- ☒ circulating online resource material, eg awareness raising training.

Employers' current policies

- ☒ Has your employer declared a climate emergency?

- ☒ Is there an action plan that spells out how they intend to reduce carbon emissions?
- ☒ Does it contain any reference to green skills and training the workforce?

Sector policies

- ☒ Has your sector of employment published any material that addresses current and future skills issues?

Local authority policies

- ☒ Has your local authority declared a climate emergency?
- ☒ Is there an action plan that spells out how they intend to reduce carbon emissions?
- ☒ Does it contain any reference to green skills and training the workforce?

Case study: UCU environment rep shows the way to a greener future at Cardiff University

UCU environment rep Paul Rock has played a key role in making Cardiff University a greener place to work and study. Working together with students, last year UCU [ran a successful campaign](#) calling on the university to [declare a climate emergency](#).

Alongside the climate emergency declaration, the university has committed to becoming carbon neutral by 2030. Behind the scenes, Paul has been working for many years in his role as a trade union environment rep to try to make the university more sustainable.

Survey reveals groundswell of support

Paul says: “My first step was to run a survey, to ask staff what was important to them in terms of green issues and where they wanted to see the union push for change. We had a large number of responses, enough to make the results quite powerful. There were lots of ideas and a real groundswell of support for change.”

Getting the environment rep role recognised

Armed with the backing of staff from the information gathered from the survey, Paul was successful in securing union representation on the university’s environmental steering group. Paul also requested a meeting with the university’s environment manager and deputy vice chancellor. They agreed a list of practical things to improve sustainability that they could work on together.

Key wins:

→ One key area of change staff wanted to see was action to support sustainable travel, where Paul secured key new schemes for staff (you can read more about this on [page 88](#)).

→ Paul has also campaigned successfully for more sustainable, ethical investment in the university’s investments and pension fund.

Following up on the climate emergency declaration

Paul says: “The university has appointed a Dean for environmental sustainability and he has been keen to ensure that unions are fully part of this work. We would like to see sustainability as part of all the academic course programmes. And a task and finish group has been set up to come up with ideas of what we should do to meet the university’s commitments in view of our Climate Emergency declaration.”

“The role of unions is vital in the changes that will need to come because we also need to think through impact on people. It’s not just about being an eco-champion. We need to say, hang on is this going to be good or bad for the people who work here and the people in the supply chain?”



Mapping workplace environmental issues

Surveying members

There are many potential environmental issues in the workplace. A starting point for deciding on priorities will be to seek the views of union members. This can be done informally by initiating a discussion with colleagues or by circulating a survey. It will be important before raising matters with management that the union has sought the views of members.

More formal surveys can be time consuming and suffer from a low response rate. However, done correctly, they can provide a valuable tool for bringing concerns to the attention of the employer. Check the sample survey in the resources section of this toolkit to help with ideas on how to customise something to use at work.

Identifying issues

Once you have sought the views of members and other reps you will be in a better position to establish the range of issues in the workplace. You may need to reinforce this by checking policies and minutes of meetings. You will then need to think about the priorities to raise with management. To make this judgement consider issues like:

- Is it something members feel strongly about?
- Will it make a significant difference to environmental performance?
- Are any improvements achievable within a fairly short time frame? It's always good to start with something where you can make progress, especially if you are a new rep.
- Do I have the latest information and a clear set of objectives?

Walk-round inspections

One way to check on the state of play is to carry out an inspection. The principles to adopt on this are

similar to those for a health and safety inspection. There is a sample checklist in the resources section of this toolkit. Think about:

- whether you can complete it in one go, depending on the size of each workplace and number of buildings and sites that you represent?
- whether you want to conduct a joint inspection with management or a union only one?
- what type of information you will need prior to and during the inspection process?
- how you will record the information?
- how you will use the information to get things done?

Carbon footprinting

Half of UK carbon emissions are produced by work activity. Workplaces burn energy, consume resources, and generate waste and travel. It means unions are uniquely placed to hold their employers to account. This may be challenging given the number of statistics and different formulations that are in use. Some institutions will have a wealth of data and full-time staff, while others will have limited capacity and a lack of comprehensive information.

What has to be accounted for?

Scope 1 – All direct emissions from the activities of an organisation or under their control. This includes fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning.

Scope 2 – Indirect emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.

Scope 3 – All other indirect emissions from activities of the organisation, occurring from

sources that they do not own or control. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, homeworking, procurement, waste and water.

The principle that 'you can't manage what you can't measure' is relevant here. An employer who is serious about climate change action will need to know their carbon footprint and have a clear strategy for reducing it in line with targets. As a minimum these targets need to be aligned with carbon budgets that are consistent with the international target of keeping global warming to below 1.5°C.

Establishing baselines

The best way to do this is to **adopt a carbon management and reduction plan**. The plan should contain ambitious targets for reducing greenhouse

gas emissions and an agreed mechanism for tracking carbon reduction performance.

There are a number of different independent standards for measuring greenhouse gas emissions. There are different strengths and weaknesses across the different standards available. [The Carbon Trust](#) provides resources on ways of [checking carbon footprints](#).¹⁰² Natural Resources Wales has produced [an assessment of accounting and reporting methods for Welsh public sector decarbonisation](#).

Public sector in Wales

Decarbonisation is central to the Well-being of Future Generations Act and the Welsh Government wants the Welsh public sector to become carbon neutral by 2030.



An employer who is serious about climate change action will need to know their carbon footprint and have a clear strategy for reducing it.

Welsh Government has announced a [‘team Wales’ approach to tackling climate change](#). It says the [Partnership Council for Wales](#) will support this agenda by: “offering technical, commercial and financial support to Public Bodies to implement action.” It is developing a Net Zero Carbon Reporting Guide “to support consistent, transparent reporting.”

Public services across Wales have pledged to ensure decarbonisation action is embedded through:

- Understanding their carbon footprint, in line with guidance for public sector greenhouse gas emissions reporting;
- Agreeing to a set of net-zero commitments/pledges for COP26;
- Closely monitoring and reporting their current and future carbon emissions;
- Ensuring all Local Authorities have robust, evidence-based net zero action plans in place, as living documents, by March 2021;
- Work with a new Decarbonisation Strategy Panel.¹⁰⁵

Four priority areas of focus have been identified. These are the areas that produce the largest amount of carbon emissions in the public sector:

- procurement
- buildings
- mobility & transport
- land use.

Private sector

Some private sector companies are [required to report annually](#) on their greenhouse gas emissions and environmental performance.¹⁰³

Carbon management plans

A carbon management plan is the way that organisations organise, measure, manage and report on their greenhouse gas emissions.

Prospect has produced a helpful workplace bargaining guide [‘Carbon management plans and your work footprint’](#).¹⁰⁴



Natural Resources Wales – carbon management plan

Natural Resources Wales' [Carbon Positive project](#) aims to show leadership in how the public sector can reduce its carbon impact to tackle climate change.¹⁰⁷ The project is funded by Welsh Government and aims to become an exemplar in carbon management.

Natural Resources Wales has been taking positive steps to reduce its carbon emissions, and to enhance and protect carbon stored on the land it manages. Through sharing its experiences and examples of best practice in carbon management, it aims to encourage further decarbonisation in Wales.

The project advocates [a comprehensive five-step approach to carbon management](#):

1. [Calculate the organisation's net carbon status.](#)
2. [Evaluate options for mitigation.](#)
3. [Develop demonstration projects.](#)
4. Communicate and work with others.
5. Record experience and plan future implementation.

It has produced a [Carbon Positive project highlights infographic](#).

Carbon management plans – a bargaining checklist

- | | |
|--|---|
| <input checked="" type="checkbox"/> Consultation with the union on the carbon management plan is essential. This could be as an official stakeholder as defined by standards or codes. But ideally it would be as the elected voice of the workforce as part of the bargaining agenda. | <input checked="" type="checkbox"/> Where there is new equipment and new low carbon processes re-training is vital. Also, disruption of work due to new installations or refurbishment of buildings should be taken into consideration where this is linked to performance indicators. |
| <input checked="" type="checkbox"/> Ensure that any change of policy or off-setting does not shift carbon emissions from the organisation's carbon footprint to the individual member. | <input checked="" type="checkbox"/> Risk assessments (heating and lighting for example) and thorough consultation specific to work processes and shift patterns is vital. |
| <input checked="" type="checkbox"/> Sharing the benefits from savings from carbon reduction (for example electricity) should be invested in people, skills, retaining jobs and continuous efficiency improvement. | <input checked="" type="checkbox"/> All changes should be fully assessed for equality impacts with thorough consultation. Consideration should be given to different protected characteristics alongside other equality and fairness considerations (eg impacts on lower-paid workers and people with caring responsibilities). Adjustments should be made where necessary. |
| <input checked="" type="checkbox"/> The scope, priorities and duration of a carbon management plan will determine direct implications on members' work behaviour and performance – briefings and information on targets, ambitions and pathways to change are also important. | <input checked="" type="checkbox"/> Carbon management plan implementation should be well communicated to staff with reporting routes and a responsible person/department identified. |

(Adapted checklist from the Prospect bargaining guide '[Carbon management plans and your work footprint](#)' – [check this guide for detailed lists of specific bargaining considerations](#)).¹⁰⁶

Biodiversity footprinting helps organisations to understand the impact of their operations on plants, animals (and other organisms) and ecosystems.

Biodiversity footprinting

Workplaces and work-related activity can have a huge impact on nature. Biodiversity footprinting helps organisations to understand the impact of their operations on plants, animals (and other organisms) and ecosystems. It can help to identify changes needed to reduce negative impacts and increase positive impacts.

An organisation's activities can have both direct and indirect impacts on biodiversity and 'ecosystem services.' Ecosystem services are the benefits to humans provided by the natural environment and from healthy ecosystems. These offer services like natural pollination of crops, clean water, clean air, extreme weather mitigation, human mental and physical well-being.

What should be accounted for?

Direct impacts – these are the organisation's own operations and activities that have a direct physical effect on the surrounding land, air or water environments and the wildlife that inhabit them. These are often related to land use and waste generation.

They can include:

- Habitat loss and degradation, erosion, species loss, air and water pollution, soil and water contamination.
- The introduction of non-native species which can disrupt surrounding ecosystems.
- Reduced access to natural resources or disrupting ecosystem services, such as erosion control and natural flood defences.

Indirect impacts – these are often the most significant risk and can be more difficult to identify, assess and control. They may involve the cumulative effect of the operation of several companies. They include:

- Activities carried out by third parties in an organisation's supply chain. An example of a negative impact would be where materials are sourced from countries where rainforests are not sustainably managed and are destroyed to produce commodities. Eg palm oil.
- Impacts associated with the use of an organisation's products or services. An example of a negative impact would be a product that cannot easily be reused or recycled and produces harmful substances as it breaks down.
- Induced changes in behaviour by others, such as workers or local people which are prompted by a company's operations. Induced negative impacts to biodiversity could include habitat loss eg due to unplanned settlements and agricultural expansion, or increased demand for and depletion of natural resources as a result of displacement.

Impacts can be positive as well as negative. An example of a **positive direct impact** would be a workplace wildflower garden that benefits wildlife, increases biodiversity and provides benefits for workers' health and well-being.

Biodiversity footprinting tools

Biodiversity footprinting is not as well established as carbon footprinting. The [International Union for the Conservation of Nature \(IUCN\)](#) has produced a [new guide on biodiversity footprinting tools](#).¹⁰⁸

Biodiversity reporting and management plans

Public sector

In Wales, the Well-being of Future Generations Act drives the delivery of action for biodiversity by public bodies. It is particularly relevant to the 'resilient Wales' goal but it also links to the other well-being goals.

The Environment (Wales) Act 2016 Act places a general duty on public authorities to, “seek to maintain and enhance biodiversity in the exercise of functions... and in so doing promote the resilience of ecosystems”. This means public authorities should embed the consideration of biodiversity and ecosystems into their day-to-day activities, policies, plans, programmes and projects. They must also prepare and publish a plan setting out what they propose to do to maintain and enhance biodiversity and promote resilience.¹⁰⁹

The [area statements](#) produced under the Environment (Wales) Act can help organisations to understand the natural resources and biodiversity in their local area and identify key actions they can take. The statements are relevant to other organisations, as well as public bodies. The [Nature Recovery Action Plan for Wales](#) sets out the overall national strategy.

Private sector

Private sector companies who are required to report annually on greenhouse gas emissions under [UK government environmental reporting guidelines](#) are advised to aim to integrate biodiversity and ecosystem reporting into environmental reporting.¹¹⁰ Planning developments in Wales are required to ‘[secure a net benefit for biodiversity](#)’ to receive approval. Organisations that have an environmental management system (EMS) in place should already be identifying the risks their activities may pose to biodiversity.

Some organisations produce [a dedicated biodiversity management plan](#).¹¹¹ Others integrate it into other environmental management plans, rather than having a separate plan.

Biodiversity management – bargaining checklist:

- ☑ Consultation with the union on the biodiversity plan is essential. Either as an official stakeholder as defined by standards or codes but ideally as the elected voice of the workforce as part of the bargaining agenda.
- ☑ Any health and safety implications related to any impacts identified should be raised and investigated (eg air quality). Risk assessment and thorough consultation specific to work processes and shift patterns is vital.
- ☑ Ensure that any change of policy doesn’t create negative induced impacts for workers.
- ☑ Ensure actions to increase positive impacts on biodiversity also maximise benefits for worker and community wellbeing (eg by providing increased access to nature and green spaces).
- ☑ All changes should be fully assessed for equality impacts with thorough consultation. Consideration should be given to different protected characteristics alongside other equality and fairness considerations (eg impacts on lower-paid workers, people with caring responsibilities). Adjustments should be made where necessary.
- ☑ The scope, priorities and duration of a biodiversity plan will determine direct implications on members’ work behaviour and performance – briefings and information on targets, ambitions and pathways to change are also important.
- ☑ Where there is new equipment or processes re-training is vital. Also, disruption of work due to new installations or changes to buildings should be taken into consideration where this is linked to performance indicators.
- ☑ Biodiversity management plan implementation should be well communicated to staff with reporting routes and a responsible person/ department identified.

Environmental management systems, labelling and accreditation



Intro

Green reps will need to know who has environmental responsibilities within the management structure. In some larger workplaces there may be an environmental team dealing with different aspects of the sustainability agenda. In others it will be one person combining the role with other duties, or, no one designated at all. At the branch induction for green reps this should be part of the information that is passed on.

To find out or to make sure your information is still up to date, follow these steps:

→ Obtain the latest copy of the environment /

sustainability or climate policy. The information you need may be in more than one document. Ideally it should be dated with a review date so that can judge whether it is the latest one.

- Check who has been delegated responsibilities in the policy.
- Seek a meeting or make contact with the person(s) who has been given a lead role. Introduce yourself as the green rep and prepare for the meeting by drawing up a list of questions or points that you would like clarified. You may want to send these in advance depending in the urgency of the issue or the potential difficulty in obtaining the information requested.

- Check the policy to find out what it says about staff engagement and the procedures for dealing with sustainability issues.
- Check if the employer is registered with an accredited environmental management system (EMS).

Schemes

There are a large number of organisations offering accreditation, and these may be an incentive for employers wishing to promote their green credentials to their customers, workforce or more widely. Some of the better-known ones are listed below:

International Standards Organisation (ISO) – ISO 14001 is a generic management system standard, meaning that it is relevant to any organisation seeking to improve and manage resources more effectively. This includes:

- single-site to large multi-national companies
- high-risk companies to low-risk service organisations
- the manufacturing, process, and service industries, including local governments
- all industry sectors, including public and private sectors
- original equipment manufacturers and their suppliers.

ISO 14001 sets out the criteria for an environmental management certification system. It maps out a framework that a company or organisation can follow to set up an effective environmental management system.

Designed for any type of organisation, regardless of its activity or sector, it is intended to provide assurance to company management and employees

as well as external stakeholders that environmental impact is being measured and improved.¹¹²

British Standards Institute (BSI) – This is linked to ISO 14001 and is seen as more appropriate for small to medium sized organisations. It provides guidance on the phased implementation of an EMS allowing organisations to implement and maintain an EMS via a staged approach. Users have the option to stop at any stage or to continue and attain a level suitable for ISO 14001 certification.¹¹³

Eco-Management and Audit Scheme (EMAS) – The requirements of ISO 14001 are an integral part of the European Union's EMAS. EMAS's structure and material are more demanding, mainly concerning performance improvement, legal compliance, and reporting duties.¹¹⁴ EMAS organisations acknowledge that active employee involvement is a driving force and a prerequisite for continuous and successful environmental improvements.¹¹⁵

Green Dragon – Operating in South Wales, this is an environmental standard that is awarded to organisations that are taking action to understand, monitor and control their impacts on the environment. There are 5 levels of award.¹¹⁶

Sector specific – You may work in a sector that has its own performance system. For example, the Environment Association for Universities and Colleges (EAUC) has introduced a self-assessed [Sustainability Leadership scorecard](#).¹¹⁷

Carbon Trust – [The Carbon Trust Standard](#) recognises organisations that follow best practice in measuring, managing and reducing their environmental impact.¹¹⁸

It also has a [Carbon Neutral Certification Standard – PAS 2060](#).¹¹⁹

Institute of Environmental Management and Assessment (IEMA) – This is an organisation for environmental professionals.¹²⁰

Union activities that can contribute to accreditation

Unions should ensure they are consulted when an employer is looking at bringing in an EMS. Systems that have an 'engagement / communication with the workforce' criteria provide an ongoing opportunity for a union voice. It will be important that it isn't just a token consultation exercise to tick a box. The reality is that in many workplaces there will not be an EMS due to cost and capacity factors. Agreeing an internal audit process may be a joint activity that could influence environmental performance.

Audits

These are concerned with checking that people are doing what they are supposed to be doing and that policies and procedures are working. They can deal with the whole environment management system or particular issues such as waste or energy.

They can be done by internal or external auditors. In small organisations it may be difficult to do internal audits because the auditor needs to be independent of the audited activity. In order to avoid paying outside consultants EMAS guidance suggests arrangements with other organisations to ensure a degree of independence.

What should be audited depends on the type of audit

For example, it could look at compliance with environment legislation or single issues like resource/waste or noise management. It also depends on the type of workplace. Most workplaces would benefit from auditing areas like:

- energy efficiency
- water usage
- resource efficiency/waste minimisation

- transport including transportation of goods
- reduction of emissions.

(These issues are covered in more detail in Section 3 of this toolkit).

Other areas will depend on the business but could include:

- product planning
- selection and use of raw materials
- production processes.

What are the benefits?

- ensuring compliance with legislation
- assessing and anticipating problems
- raising staff awareness
- improving operational procedures
- more efficient use of resources.

What are the stages?

The exact content will be determined by the type of audit and management system but the following steps are recommended:

1. Select a management-union audit team and identify sites.
2. Establish audit parameters.
3. Inform national, regional and site management and unions of the time-scale for auditing.
4. On-site audit commences.
5. Off-site research.



6. Draft environmental audit report with numbered list of recommendations.
7. Discuss draft with site and regional management and unions – modify where necessary.
8. Final draft.
9. Management response, acceptance/rejection of recommendations, adopting of timescale.
10. Implementation of recommendations.
11. Closure of the audit once all the recommendations have been implemented or rejected.
12. Final report to management and unions.
13. Communication of the report throughout the organisation.
14. Publicity for the report.
15. Set a date for the next audit.

Environmental management system or collective agreement?

This will be influenced by how much you know about your current environmental management system (EMS).

If the organisation is not signed up to an EMS, evaluate whether you think it should be and what system should be introduced. Seek a meeting with management to obtain its views and prepare a union response. If it is, check which scheme and ask for copies of the relevant documentation associated with it. Use this information to help you assess whether it is addressing the right issues and whether 'continuous improvement' is taking place.

Whether or not there is an EMS it should always be backed up by a collective agreement if possible. The 'transition agreement' approach described in the following section ([page 70](#)) is designed to support a bargaining strategy linked to carbon emissions and other environmental standards and targets.

Negotiating on environmental issues

Setting up a joint environment committee

Check what the current arrangements are for progressing environment/climate related issues. If these procedures are working effectively then there will be no need to change them. If there are no procedures or they are not working effectively you will need to prepare a response. Make sure this is done in conjunction with branch officers and other unions. The environment policy should indicate what the current procedures are including the committee or committees where specific issues are raised.

Try and get as much done without going through committees. However, there will be some things that require formal decisions. Get advice on which procedure to use if you are not sure. If you are not able to obtain agreement on a course of action with management, you will need to discuss the best way to progress the issue. In some cases, this may involve declaring a failure to agree and use of the grievance procedure.

Making the case for business action

There are different drivers for business action. These include:

- legal requirements
- a moral duty
- sector or higher-level policy demands
- public relations purposes
- financial considerations
- workforce / community pressure.

The combination of these factors will be different for each sector of employment. Unions need to do their research to establish the best pressure points to support improvements.

Making the case for trade union involvement

The central principle is that union representation is an essential requirement. In the absence of legal rights reference can be made to:

- Social partnership agreements.
- The obligations contained in international protocols like the UN Paris Agreement to consult with workers as part of the just transition principle.
- The references from national bodies like the Committee on Climate Change that endorse the just transition principle.
- The 'ways of working' set out in the Well-being of Future Generations Act which include involvement and collaboration. These apply to public bodies in Wales.
- Stakeholder engagement is a much-used term in climate change policy. In a workplace the most important stakeholders are the workforce.
- Workers and their representatives will often have detailed knowledge of the work process and how it can be improved. Consultation and negotiation will be the best way to ensure effective input and buy-in from staff.

Case study: Prospect reps help workers at the IPO 'climate-proof' their workplace

Prospect reps at the Intellectual Property Office (IPO) in Newport, South Wales, have been helping the workforce have their say over changes to make the workplace more sustainable.

Prospect reps Becky Lander and Conal Clynych are members of the IPO's new 'Green Team'. This reflects the importance of environmental issues for Prospect members. In fact, a survey of members in January 2020 found that the climate emergency was the second biggest concern for members (after pay).

Working jointly to overcome barriers

Becky explains: "The management have been proactive. We've already seen positive changes with action to reduce single use plastics and introduce/improve on-site composting. They've also introduced wild areas to support biodiversity and charging facilities for electric vehicles."

"But we want to do more, and now the union has another mechanism to feed into what is being planned it means we can put forward members' ideas and work jointly to help overcome barriers."

"The members have some really creative ideas on how to improve sustainability. Having the union represented on the 'Green Team' means that we can feed in our members' views. It means we can identify any issues, so that new initiatives are much more likely to have wider buy-in from the workforce."

"Both the members and the management really want to work together to see the IPO become a carbon neutral workplace."

IPO sustainability manager Lesley Evans says: "We see working with key stakeholders as an

essential part of our environmental management system. We are extremely lucky that the trade unions at IPO are so passionate about environmental matters and are keen to work with us. The Green Team is a relatively new group but has already touched on some important issues and I look forward to us achieving even more together in the future."



‘Climate proofing’ workplace policies

Understanding the impact of climate risk on organisations

A common feature of responses to climate change in the past was to recognise that it is a major threat to human existence and then not do much about it. This is slowly changing but not at the pace required if we are to avoid the consequences of warming the planet above 1.5 degrees. But there are good reasons why all employers should now be taking steps to understand the impact of climate risk.

Actions fall under two main categories – **mitigation** and **adaptation**. Mitigation refers to the measures that need to be taken by employers to reduce their carbon emissions. Adaptation refers to the measures needed to combat the risks already present and locked into the system from global warming and in particular the extreme weather events associated with it.

It’s vital that unions have access to information on climate risk to understand how these could impact on members. Unions must also be fully consulted about any actions being considered in mitigation or adaptation measures.

Climate risk

There are different types of climate risk, some examples are:

Physical risks – eg operational impacts from extreme weather events

Transition risks – eg changes in technologies, regulation or markets that may increase business costs, undermine the viability of existing products or services, or affect asset values

Liability risks – eg the potential for liability for the damaging effects of greenhouse gas emissions (such as legal action against fossil fuel companies)

Two-thirds (67%) of UK corporates disclosed climate-related risks and opportunities in their 2019 annual reporting, according to the Carbon Trust.¹²¹

However, fewer than a quarter (23%) of companies are expected to fully report in line with the recommendations of the G20 Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD), released in June 2017.¹²² This is despite the fact the World Economic Forum highlighted extreme weather events and the failure of climate change mitigation and adaptation as the top risk faced by the world in 2019.¹²³

If you work for a private sector organisation check the company financial report to find out whether climate risk has been reported. If you work in the public sector check relevant annual reports to see if it has been included. If your employer is not yet assessing its climate risks this is something the union should raise. It is in the interest of members that these risks are identified as well as in the business interests of the organisation.

Climate adaptation

Finding out how your organisation is planning to adapt to the risk and opportunities is the next stage. This will cover key areas like investment strategy, and business plans. It will also cover the control measures needed to adapt to occupational risks associated with climate change impacts. For example, responding to extreme weather events. Increased incidences of flooding and working in higher temperatures are some of the hazards that may need to be addressed in a Climate Risk Assessment register.

It's vital that unions have access to information on climate risk to understand how these could impact on members.

Climate proofing on jobs and skills

The checklist below could help you to develop a union jobs and skills strategy.

Branch organisation

- ☒ Has the impact of climate change on future employment and skills been discussed?
- ☒ Has there been liaison with other unions to coordinate a response?
- ☒ Is there a branch officer leading on climate change and green skills? This could be a green rep or a union learning rep. If both have been appointed, it will be important that there is liaison between the two.
- ☒ Have any potential health and safety and equality impacts been factored into considerations?

Conduct a skills audit

- ☒ Have the views of members been obtained on the jobs and skills required over the next 10 years? Consider a survey to help generate data that could be used in discussions with management.

Formulate a claim

Have green job creation and skills mapping been discussed with the employer? Based on the information generated from the questions above:

- ☒ What are the main risks for current staffing arrangements as a result of climate change policies?
- ☒ What are the main opportunities for future staffing arrangements as a result of climate change policies?
- ☒ What general training arrangements need to be prioritised to minimise the risks and maximise the opportunities?
- ☒ What job specific training arrangements need to be prioritised?
- ☒ How will you progress green jobs and green skills as a bargaining issue with management?

Green reps and climate emergencies

Unions should check whether their employer has declared a climate emergency. This action has been adopted by some private and public sector bodies. It may provide the union with an opportunity to leverage support for additional measures.

If the organisation has not declared a climate emergency, it would be worth checking best practice in the sector. Presenting best practice examples may help to convince your employer to do something similar.

Just making a declaration will not mean much unless it is backed by actions that will achieve carbon reductions and any other environmental goals.

Example of a Climate Emergency checklist

The Greener Jobs Alliance has published [guidance on what to look for in an employer's climate emergency declaration](#).¹²⁴

Developing transition plans and agreements

Introduction

In Section 1 we referred to the ITUC '**climate proofing work**' campaign. Some unions are looking to extend this by negotiating '**transition agreements**'. This is also referred to as adopting a '**Green New Deal**' approach.

In preparing for transition planning and agreement negotiations, it is important to remember that negotiations do not take place in isolation from a broader campaigning approach. Rarely do employers take action simply because we ask them to.

Emissions reduction and other environmental measures that are introduced by the employer may have an adverse impact on staff and their terms and conditions of employment. Branches will need to ensure that actions are only implemented following effective consultation and that the principles of a just transition are adopted.

Transition planning

Below is a guide adapted from the UCU 'Green New Deal for Colleges and Universities: a UCU Bargaining Guide for Branches'. Branches will be at different stages of development in dealing with the issue, and it's important to check with your own union about their approach to this area. This plan sets out a five-step process for developing a 'transition agreement' or 'Green New Deal' claim:

Step 1: Assess current position

- Review current branch organisation.
- Note if anyone is leading for the branch on this issue and whether they have attended a green reps training course.
- Review employer's position on the climate and nature emergency - have they issued any other climate or environmental policy related

information, statements or plans? Eg climate risks assessments, carbon management plans?

- Speak to your union to see what guidance and support is available.

Step 2: Decide on your priorities and identify support

- Put 'transition agreement negotiations' (or 'green new deal negotiations', depending which term your union uses) as an agenda item for a **branch committee** discussion.
- Circulate this guidance to branch committee members.
- Introduce the topic and ask for views on priorities and ways to progress them.
- Put 'transition agreement negotiations' as an agenda item for a **members' branch meeting**. Use the 'What is a 'green new deal?'' section above as a guide to introduce the topic and ask for members' views on priorities and ways to progress them.
- Liaise with any other recognised trade unions and seek their views on a 'transition agreement' claim.
- You could also consider surveying members.
- Identify priority areas for action – In Section 3 some of the key areas are listed.
- Establish focus groups of members on specific priority areas. Use the checklists and sources of information in Section 3.
- Ensure the equality impacts of all issues are considered by focus groups. These should consider the impacts on people with protected characteristics (eg women and disabled people) and also wider considerations of equality and fairness (eg impacts on lower paid workers or

those with caring responsibilities).

- Carry out an environmental and sustainability audit/inspection alongside other trade unions (see [page 56](#)).

Step 3: Submit the claim to your employer

- Once you have decided on and researched your priorities, start the process of submitting your claim by writing a formal letter to your employer. Adapt the version in Section 4 'model letter to the employer'.
- Set a time frame for a response and request a date for a meeting.

Step 4: Progress negotiations and build your campaign

- Collate audit/inspection results.
- Organise an awareness raising sustainability event.
- See if your union has any campaign materials or design your own (free online design resources such as [Canva](#) can be useful for this).
- Use union communication channels (newsletters, social media, noticeboards etc) to build support for the campaign. [Megaphone UK](#), the TUC's shared online campaign platform allows unions to run their own petitions and email actions. The TUC's [Pocket Guide to Organising and Campaigning](#) gives some suggestions for effective campaigns.
- Review progress of negotiations to prevent claims drifting.

Step 5: Monitor and review

- Has the employer met the claim in full? Monitor and review.

What is a 'Green New Deal'?

The term "Green New Deal" was first used in January 2007 by journalist Thomas Friedman in the New York Times. He used it to describe the level of ambition needed to address the climate crisis in a way which was not dissimilar to the New Deal policies of the US Government in the 1930s that were designed to deal with the financial meltdown after the Wall Street crash.

Since then, "Green New Deal" has been used to describe various sets of policies that aim to make systemic change. In the UK it has broadly been described under five principles to guide a policy plan that will fundamentally restructure our economy to deliver good jobs and a habitable future:

1. Decarbonising the economy.
2. Creation of millions of new, well-paid and secure jobs ensuring sustainable and meaningful livelihoods for all workers, including those in today's high emissions sectors.
3. Reduction of social and economic inequality.
4. Protecting and restoring vital threatened habitats and carbon sinks, and ensure the provision of clean water, clean air and green spaces, securing a safe and healthy environment for all.
5. Building a resilient society prepared for the impacts of climate change, in ways that protect the most vulnerable.

- Have you reached partial agreement? Review, consolidate and then refresh and relaunch the claim.
- Have you reached a failure to agree? Consider escalation to a formal collective dispute.

At any step:

- **Seek advice** from your union's regional and national office.

At all steps:

- **Equality proof** – a transition plan/Green New Deal approach must ensure that equality issues are addressed. The adoption of some policies may have unintended consequences for some



"Every country, city, financial institution and company should adopt plans for transitioning to net-zero emissions by 2050."¹²⁵

UN secretary-general, António Guterres

individuals or groups that the union will need to monitor. Liaise with your branch equality rep if you have one.

Transition planning and agreements – key bargaining objectives

Each union and branch will establish their own priorities but common key bargaining objectives could include these elements:

- 1.** Recognition of the climate and nature emergency (eg declaration or statement) by the employer, with associated policies and plans.
- 2.** Industrial relations - recognition of green reps (including provision of facility time to carry out functions and training) and inclusion of all environmental matters in the bargaining agenda with unions, with agreed joint consultation structures.
- 3.** An agreed joint approach to ongoing transition planning – which acknowledges the principles of a just transition and provides reassurances of security for jobs, pay, terms



and conditions, access to training, equality, pensions, health and safety etc.

4. Carbon and environmental footprinting and management – to be carried out in full consultation with unions.

Additional areas that could be included in a transition agreement/GND claim are:

- sustainable travel
- resource management
- ethical procurement, investment and banking
- food and land use
- water
- air pollution
- community engagement.

The future of work

All jobs need to be climate proofed. Work across all sectors will be impacted by how we build back from the pandemic and move to a net-zero economy. This will affect some workplaces more than others where the potential for either job loss or job creation is greater. Automation and digitisation will also change the world of work.

The University and College Union has produced a wallchart '[The future we choose](#)' which traces the history of climate action and the lessons for today.¹²⁶

In the 1970s as a response to redundancies in the aerospace sector, [the union reps on site developed an alternative plan called 'The Lucas Plan'](#).¹²⁷ The New Lucas Plan has been set up to draw out the lessons for workers today. [Video resources are available from \[lucasplan.org.uk\]\(https://lucasplan.org.uk\)](#)¹²⁸

Awareness raising



Introduction

As with any industrial relations issue it is important that members understand what the union is doing and the reasons why.

Promoting climate and environmental education will include convincing members that it is a trade union issue and something that should be prioritised in the workplace. Surveys show that there is plenty of public support.

The Climate Assembly UK's report 'Path to net-zero' was published in September 2020. It shows how a representative sample of the population believe the UK should meet its net zero emissions commitment. The Climate Assembly came up with detailed recommendations across ten areas including: how we travel; what we eat and how we use the land; what we buy; heat and energy use in the home; how we generate our electricity; and greenhouse gas removal.¹²⁹

There are a lot of organisations operating in the climate change space. Some of them have a blind spot when it comes to the trade union movement. Often reports will be issued talking about 'just transition' of workers that will contain no reference to union engagement. Unions will need to take every opportunity to stress the collective approach compared to an over-reliance on individual solutions.

Communications and campaigning

Maintain a visible physical and online presence

– try and maintain a visual presence on the issue. Posters on noticeboards can help to raise the profile of union action. These posters were produced by UCU, for example.¹³⁰ There are lots of free online resources that can help you to design your own posters and images for social media campaigns. There are some Wales TUC campaign videos

Recent research has exposed how a decades-long campaign to spread doubt about climate change was a deliberate strategy to shape public opinion and delay action to tackle it.

available at www.tuc.org.uk/green that you can share. The TUC's [Pocket Guide to Organising and Campaigning](#) has some useful suggestions for building campaigns.

Using images – showing real people and situations that people can relate to have been found to be the more effective at engaging people. So images showing local communities affected by extreme weather are more effective than images of polar bears or smoking chimneys.

Conversations and group discussions with members

- Encourage members to share their ideas for action.
- Encourage everyone to listen to and share concerns.
- Focus on what can be done collectively through the union – give positive, practical examples.
- Make the links to other 'co-benefits' for members (see boxed section) as well as making a moral case for taking action.
- Be prepared that sometimes group discussions can become side-tracked towards either individual 'behaviour change' (which can become a bit confrontational/judgemental and make people feel defensive) or the need for very high level societal/structural changes (which can be a bit overwhelming and make people feel that it's difficult to make a difference). Of course, it's important to acknowledge and listen to everyone's concerns. But be prepared and have a strategy for redirecting discussions in a more constructive direction when needed.

Talking to climate change deniers and doubters

Most people accept the science of climate change. It might be hoped that we have now moved past

the point of having to defend the science. But there are still a small minority who think climate change is a 'hoax', or conspiracy theory. These people often don't respond to reasoned arguments or evidence.

Where the position someone holds is one of doubt or uncertainty, they may be more willing to be persuaded of the case for action. Recent research has [exposed how a decades-long campaign to spread doubt about climate change](#) was a deliberate strategy to shape public opinion and delay action to tackle it.¹³¹

Co-benefits

The term 'co-benefits' is used to describe beneficial things that happen when by tackling one issue, we create significant benefits in other areas. It can be helpful to highlight these when talking about climate change and nature loss as they can be a good way of maximising support for action.

For example, reducing transport emissions can improve air quality and improve the health and wellbeing of workers. Or creating workplace green spaces can benefit wildlife and nature and also provide areas for relaxation for workers and support better physical and mental wellbeing.

It may also be easier to achieve results in discussions with employers if the union can present change as a win/win outcome. For example, energy reduction measures can cut carbon emissions and also save the employer money. Or action to improve air quality and support active travel may help to reduce sickness absence, time lost to congestion and improve staff health and wellbeing.

Becky Lander is a workplace rep and a specialist trade union environmental rep for Prospect at the Intellectual Property Office (IPO), near Newport in South Wales. She and her fellow Prospect rep, Conal Clynch, ran an awareness raising event to coincide with the FridaysforFuture school strike in September 2019.

Becky explains: "The IPO has an environmental suggestions group on Yammer which comes up with lots of ideas. Interest really picked up around the time of the school climate strikes last year."

The reps decided to hold an event to coincide with the school climate strike. They set up a stall in reception and showed a Greta Thunberg video as part of the event. This sparked a lot of interest from members and helped kick off discussion. And it also helped to raise the union's profile on the sustainability agenda.

Becky explains: "I represented Prospect at the event and afterwards was asked to be involved in a staff 'Green Team' that was being set up by the IPO Environmental Team."

Running workplace events

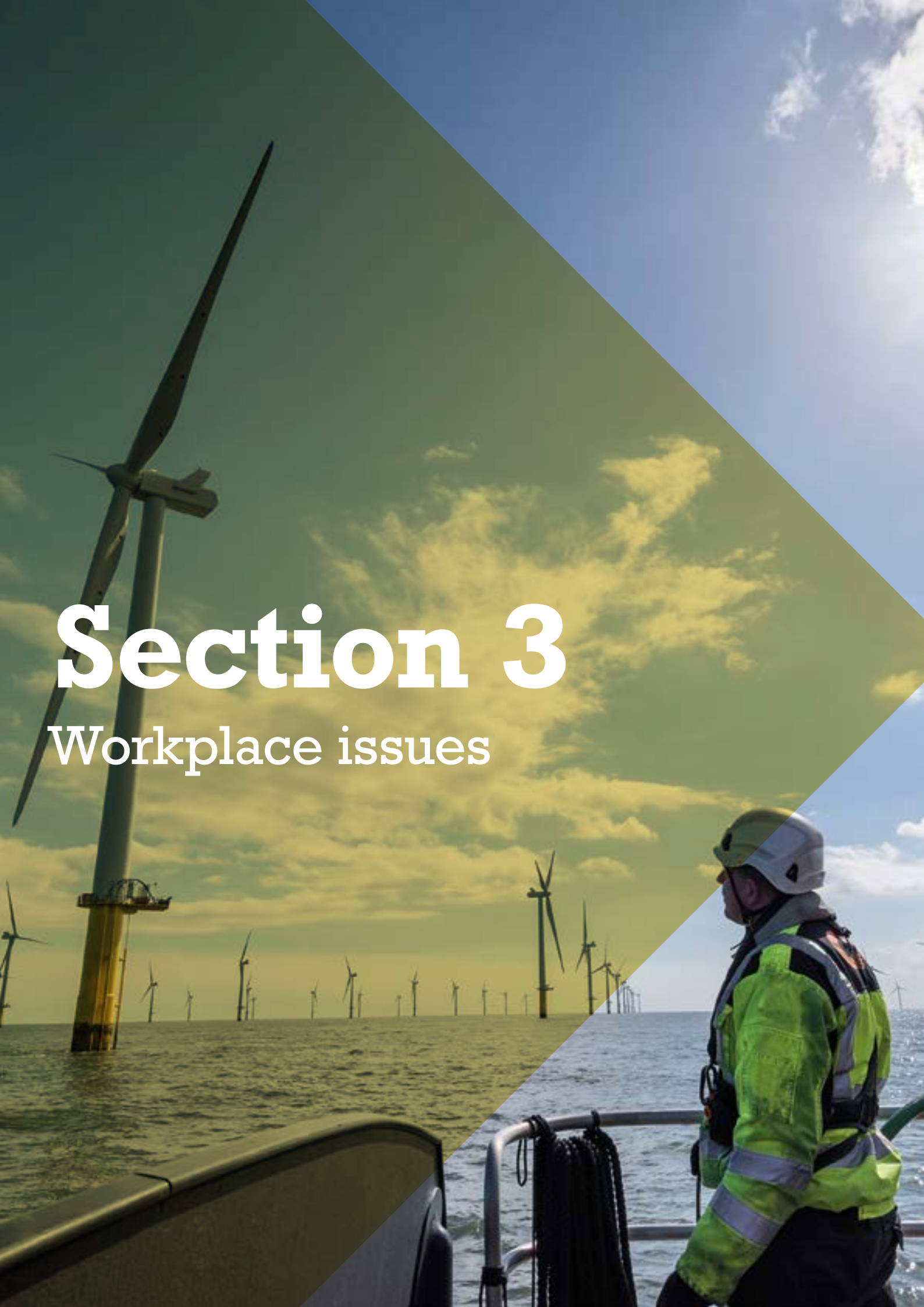
Events should engage with people. Sticking a few posters on the wall is not likely to raise awareness and encourage involvement. As with surveys and inspections you need to decide whether to organise on a joint basis with management or union only. For it to be successful you need to plan in advance. Identify key dates in the calendar that could provide a focus for your event. For example, Wales Climate Week in November or World Environment Day in June.

When you have decided on the focus think about:

- duration
- members of the organising team
- target audience
- general or specific issues eg transport or energy
- objective – general awareness or more focused
- content – speakers, quiz, film etc
- resources needed – money, equipment, publicity etc

Section 3

Workplace issues





Work-related travel

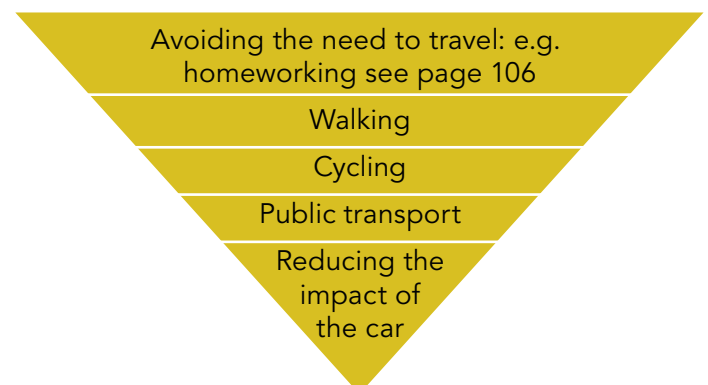
Introduction

This chapter explores why sustainable travel is an important issue for trade unionists and looks at what action can be taken in the workplace.

What is sustainable travel?

Wales' definition of sustainable is embedded in legislation: in the Well-being of Future Generations Act (see [page 36](#)). The provisions of this Act mean that in Wales, sustainable travel is travel that benefits, or does the least harm to: our environment, prosperity, health, levels of equality, social cohesion and culture.

There is a widely accepted hierarchy of sustainable travel with the most sustainable modes at the top and the least sustainable at the bottom.



The sustainable travel hierarchy

However, when looking at how people in Wales actually travel to work, that hierarchy is turned on its head. In Wales [80% of people commute to their workplace by car](#), a level equalled only by the West Midlands.¹³³

The car dominates our transport system and will continue to do so. For many of our members it is an essential tool for their daily lives. Moving to a more sustainable travel system does not mean getting rid of the car but trying to mitigate some of the damage caused by our over reliance on this one mode of transport. This guide is about how to enable members to have the ability to choose other, more sustainable modes.

What are the key issues when considering the sustainability of travel?

The environment

Climate Change. [In Wales, transport accounts for 16% of climate changing emissions.](#)¹³⁴ Cars account for over half of those emissions. Air pollution from transport [also contributes to nature loss](#) and impacts negatively on ecosystems.¹³⁵

Health

Trade unionists have long known that health owes much to the environment we live and work in. Trade unionists led the fight for clean air in the workplace. However, the quality of the air we breathe outside the workplace, in our towns and cities is a growing cause for concern.

According to Public Health Wales, each year around 1,600 avoidable deaths in Wales are due to particulate matter (PM2.5 and PM10), and 1,100 due to nitrogen dioxide (NO₂) exposure. [South Wales has the UK's second worst levels of air pollution](#) according to the latest figures.¹³⁶ The primary source of both NO₂, and particulate matter pollutants is vehicle emissions, especially those from diesel powered vehicles. Additionally, tyres and brakes produce harmful particles. Helping to reduce the number of car journeys will therefore have a positive impact on your members' health.

Covid Awareness

Obesity has been shown to be an important factor in the severity of Covid-19 infections

Our increasing reliance on the car as a means of getting about has also contributed to a serious rise in physical inactivity. Wales has the lowest physical activity levels in Britain, resulting in obesity and a whole range of illnesses that are estimated to cost the Welsh NHS £35 million each year to treat. Encouraging your members to switch from driving to active travel for short journeys or a combination of active travel and public transport for longer journeys can provide significant health benefits, both physical and mental.

Equalities

The car's domination of our transport system over the past seven decades has resulted in our communities being designed around the assumption that services and employment will be accessed by car. Yet nearly a quarter of households in Wales, often families on low incomes, don't have access to a car. Many young people find affording a car particularly difficult because of the high cost of insurance. Given how many workplaces can only be accessed by car, this can make starting or restarting a career even more problematic.

Women are less likely to have access to a car in Wales. A report by Chwarae Teg, *Working Women's Journeys*, found that whilst 80% of men aged 17 or over in Wales have a full driving licence, that figure drops to 67% for women. Economically inactive women are the group least likely to have access to a car, making it more difficult for them to gain employment.

The negative impacts of high levels of car use have a greater impact on less well-off people, even though poorer people are less likely to own a car. Cardiff and Vale University Health Board reports that statistics show that [poorer people are far more likely to be injured in collisions with cars](#): 'Children in more deprived wards are four times more likely to be hit by a car compared with the least deprived wards'.¹³⁷

The air quality problems caused by road traffic also

tend to be worse in poorer areas:

'On the one hand, people in the least deprived communities are more likely to have a car than those in the most deprived areas. On the other, the impact of pollution (particularly NO₂) is felt more in deprived areas, which tend to be located closer to main highways, have a higher proportion of "imported" traffic (from less deprived areas), and have a higher proportion of people with chronic illness which makes them more vulnerable to air pollution exposure'.¹³⁸

Source: [Cardiff and Vale University Health Board, Moving forwards: healthy travel for all in Cardiff and the Vale of Glamorgan, 2017](#)

High levels of car ownership are also a key factor in the decline of bus services; services which are disproportionately important to less well-off people.¹³⁹

People with disabilities will often find travel to work challenging. It is vitally important that the needs of current and future workers with disabilities are fully taken into account when designing travel facilities.

Prosperity

Our economy depends on the free flow of goods, but our roads are often clogged up by single occupancy cars. This congestion is currently [estimated to cost Wales £2bn per annum](#).¹⁴⁰

The employer's agenda

Many employers in Wales, particularly in the public sector, are under pressure to take a more sustainable approach to travel. To ensure that union negotiators are on the front foot in any discussions with management about a transition to greener travel, it is essential that members have a clear understanding of all the issues involved and the best options for them and their workplace.

Taking Action

The type of actions that can be taken will be dependent on the location and individual circumstances of each workplace. Workplaces in rural areas may have little public transport and, with workers often travelling longer distances, active travel may be a less attractive option. However, even in those situations there may be members who do live close enough to the workplace to walk or cycle. Electric bikes, which are becoming increasingly popular and affordable, make cycling longer distances much easier and can even 'flatten out' hills. There may also be public transport options or even car sharing. At the very least, consideration should be given to providing charging facilities for electric cars.

It is also important to remember that even small changes can be helpful. Cycling or walking instead of driving just once or twice a week will still bring health and environmental benefits.

Engagement is key

Use the model travel survey (see section 4) to find out how your members currently travel and what needs to change for them to be prepared to try an alternative mode. Encourage discussion about the issues in this guide and how they affect your members and their families. It will be much easier to make a case to management if you have a good understanding of your members' views and know the types of changes they will support.

If you are successful in making changes let your members know about them. Make sure that any new facilities for sustainable travel such as bike stands, showers and lockers are prominently advertised so that people are encouraged to use them. Try to have information on sustainable travel to work included in induction materials and welcome packs. It is often easier to change people's mode of travel when the journey itself changes, such as when starting at a new workplace.

Travel plans – bargaining checklist

- ✓ Do your research (see the resources on [page 89](#)) to make sure you're not outmanoeuvred and can take the initiative on negotiations if necessary.
- ✓ Raise awareness among members about the more beneficial kinds of Staff Travel Plan packages that can be achieved and the reasons why reducing car use is important.
- ✓ Where there is a proposed change to one aspect of travel-related terms and conditions (for example, car parking fees), this is an opportunity to argue for a coherent, well-developed travel plan, rather than piecemeal measures introduced under the guise of 'green' policy.
- ✓ Where employers are initiating a travel plan, seek to be closely involved throughout its development.
- ✓ Make sure you get clear agreement on terms of reference at the start of travel plan negotiations, which assure staff that the aim is to produce a travel plan with benefits to workers as well as to employers and the environment.
- ✓ Ensure equality impacts are considered. Consideration should be given to different protected characteristics alongside other equality and fairness considerations (eg impacts on lower-paid workers and people with caring responsibilities). Adjustments should be made where necessary.
- ✓ Ensure employers understand that if they want to have a real impact on car use, the most effective measures will include financial incentives.
- ✓ Make sure you get to see anonymous data resulting from management's staff travel surveys.
- ✓ Remember that this is a great opportunity to raise the union's profile.

Workplace travel plans

The workplace travel plan should incorporate all the measures being put in place to encourage more sustainable travel choices. Successful travel plans need wide support to succeed. They need to be seen to be fair, be backed by concrete support for change from the company, and be clearly communicated, including listening and responding to concerns.

A useful [guide on how to write a travel plan is available on the TravelKnowHow Scotland website](#).¹⁴¹

The first step should be setting up a working party or steering group to make sure the travel plan gets the right input and support across the organisation. This could be a Joint Environment Committee or a standalone committee, but either way it would need to involve the facilities manager, personnel manager, union rep, fleet manager, communications manager and managers of any departments whose work generates business mileage.

Gathering the right data is vital to support this, such as:

- site audit
- staff discussion group
- local transport information
- relevant resources, such as car sharing databases
- staff travel survey
- business travel data
- mapping where staff live.



Promoting and enabling walking and cycling to work

Walking and cycling produce zero climate changing emissions and are the least expensive way to get to work. They also provide significant health benefits, building regular exercise into people's daily routines. See Cycling UK www.cyclinguk.org for the health benefits of cycling and Living Streets www.livingstreets.org.uk for walking.

Listed below are some of the practical steps that can be taken to make walking and cycling a more attractive option.

Raising awareness: Many members will be unaware of the most convenient walking and cycling routes between their workplace and home or public transport stops. Similarly, people accustomed to travelling by car may not be aware of how little time

Key Dates for Sustainable Travel

Linking in with national events, when the media will be talking about travel, is a great way to raise the profile of your work. These are some of the most important dates:

Bike Week	Usually in June
Walk to School Week	Usually in May
National Walking Month	Usually May
Cycle to Work Day	Usually in August
World Bicycle Day	3rd June
World Car Free Day	22nd September

it can take to walk to local destinations. Many local authorities produce walking and cycling maps that can be pinned on noticeboards. Simple notices giving walking and cycling times from the workplace to key destinations can be very effective.

Infrastructure: People's readiness to walk and particularly cycle will be greatly influenced by the availability of safe routes. Having to share roads with heavy, fast moving traffic is a major disincentive. Wales' Active Travel Act requires local authorities to develop plans for networks of safe and convenient walking and cycling routes. These plans, known as Active Travel Network Maps, have to be updated every three years and should map routes to most workplaces, at least in urban areas. Contact your local council for more information on how you can have your say on the Active Travel Network Map.

Cycle parking: one of the most important considerations for people thinking about cycling to work is the availability of secure, weatherproof parking for their bike. Ideally, a bike pump and some basic tools should also be available for loan in the cycle storage area. It is worth remembering that six bikes can be parked in the space taken by one car.

Changing facilities: People will find it easier to make longer journeys by bike if there are changing facilities and, ideally, showers available at the workplace. Cyclists and walkers will also appreciate somewhere to store their wet weather clothing.

Help to buy a bike: To make the purchase of a bike and accessories more affordable, employers can give staff access to the UK Government's Cycle to Work scheme. This is a salary sacrifice scheme that allows employees to make savings of between 31 percent and 41 percent on the purchase of a bike and equipment such as locks and helmets. Companies may administer the scheme themselves or use an external specialist company, such as cylescheme.co.uk, evanscycles.com or halfords.co.uk.

Training: Many people who would like to start

cycling, lack confidence, particularly if the journey to work involves using busy roads. British Cycling has a series of videos to help people negotiate their cycle ride to work: www.britishcycling.org.uk/commuting.

Some Welsh local authorities, for example Cardiff, offer cycle training for adults, contact your local authority for more information. There is also a network of centres that specialise in providing cycle training for people with a disability including: [Bikeability](#) in Swansea and [Pedal Power](#) in Cardiff

Bicycle User Group: This can be simply a group of people in a workplace who have an interest in cycling and want to help encourage others to give it a try. This type of peer support can be very effective in convincing new staff take up the activity. All the group will require from the employer is a space to meet and a noticeboard where they can advertise their activities. More ambitious BUGs may:

- Recommend traffic-free or quiet routes to and from work.
- Provide tips on repairs and maintenance.
- Help novice cyclists by acting as 'bike buddies' on their journey to and from work.
- Order and supply leaflets/maps etc.
- Meet with management to talk about cycling.
- Organise rides, events, presentations etc.

Workplace Walking Groups: could be established on a similar basis to the Bicycle User Groups.

Walking Champions: Living Streets' [Walking Works programme](#) provides training for walking champions in the workplace who encourage and inform colleagues on how to walk to work.

Accreditation: To give organisations a goal to aim for, Cycling UK has created a [Cycle Friendly](#)

[Employer accreditation scheme](#).¹⁴² The process starts with a self-evaluation using the free online tool. Cycling UK would welcome enquiries from TU reps who are interested in finding out more about the scheme before engaging with the employer. There is also a useful [short guide to overcoming some of the barriers to cycling to work](#) on the Cycling UK website.¹⁴³

Combining with public transport: linking active travel with public transport can make it an even more effective alternative to car journeys. You cannot take non-folding bikes on buses in Wales nor on many rush-hour trains. However, you can usually take folding bikes. Another alternative is to have a second bike, preferably an older, not very valuable bike, locked to a bike rack in the station; using it just for the journey from the station to work and back. Transport for Wales are developing plans to improve walking and cycling access at all Welsh stations.

Promoting and enabling public transport

Journeys by public transport produce significantly lower carbon emissions than single occupancy cars. This difference will increase as Wales moves towards its target of a zero-emissions bus fleet by 2028. Public transport users also obtain some health benefits from the physical activity needed to walk or cycle to and from the bus stop or train station. The costs of public transport costs can compare well with commuting by car. Many trade unions have negotiated with employers to secure fare subsidies along with salary advances for the purchase of season tickets.

Buses

Bus services have been in long term decline in Wales, however they are still the most important form of public transport with nearly 100 million journeys taking place in 2017-18.

A frequent barrier to people shifting to bus travel is a lack of information on available routes and fares.

Covid Awareness

Covid-19 has had a major impact on bus services in Wales. Traveline Cymru has a dedicated web page listing the service changes and Covid restrictions. www.traveline.cymru/coronavirus

[Traveline Cymru](#) is an organisation established by Welsh Government and transport operators to provide information on public transport in Wales. They provide a range of services for organisations wishing to make greater use of public transport.¹⁴⁴ They also offer a training service for organisations who would like to raise awareness of how to use Traveline Cymru. They would welcome approaches from green reps. Email marketing@traveline.cymru for more information.

If there isn't a convenient local bus route to your workplace but you believe you can demonstrate demand for one, it may be worth contacting your local council who are responsible for keeping routes under review.

Trains

Since the Beeching cuts in the 1960s only a few areas of Wales have access to local train services. However, in South East Wales the new Metro project is expected to see a major increase in rail travel. Almost all services that begin and end in Wales are operated by Transport for Wales, which is owned by the Welsh Government. They have committed to replacing many of the existing diesel trains with electric or battery powered models and have pledged to procure 100% of their electricity from zero-carbon sources, with 50% of this generated in

Covid Awareness

Transport for Wales provides important information on using their train services to access the workplace during the Covid outbreak. See tfwrail.wales/travel-safer



Wales. For more information on the development of rail services and advice on multi-journey discounts and timetables, visit tfwrail.wales. More information on plans the South Wales Metro can be found at tfwrail.wales/metro/south-wales.

Reducing the impact of car use

There are ways of mitigating the negative environmental impact of the car without moving to a different mode. Electric powered cars give rise to significantly fewer emissions than petrol or diesel versions and have less of an impact on air quality. There are various government schemes to promote electric vehicles in preparation for the ban on the sale of new petrol and diesel cars planned for 2030. The UK Government gives [a grant to manufacturers and dealers of electric cars](#) that can reduce the cost by up to £3000.¹⁴⁵

There is also support for installing electric vehicle charge points in people's homes, such as the [Electric Vehicle Homecharge Scheme](#). However electric cars do nothing for Wales congestion problems and have

none of the health benefits of active travel. Even with government grants they are also more expensive than conventional cars putting them beyond the reach of many members.

There are also ethical concerns about the supply chain for electric vehicles which need to be addressed. [International trade unions](#) and the [ILO](#) have raised concerns over workers' and human rights abuses in the mining of materials for batteries.

Another way of reducing carbon and also congestion is to cut the number of cars travelling to the workplace by lift sharing. More information on how this can work can be found on the shared transport organisation CoMoUK como.org.uk.¹⁴⁶ CoMoUK also have [information on using car clubs and car hire](#) that can reduce pressure on parking facilities.

Car use

Unions report that the most contentious elements of travel plans are normally where employers have large uncontrolled car parking that staff use. The criteria

for access to car parking should be based on job requirements and transport needs – not seniority. Employers should provide an appeals process for individuals who believe they are particularly disadvantaged by any scheme of car parking charges and restrictions.

Workers issued with permits might include people who:

- have a mobility problem
- need to use a car in the course of their work (but consider whether a car-pool could be an alternative)
- are car sharing
- work out of hours
- have no realistic alternative, eg no bus route and too far to walk or cycle
- have responsibilities as carers (eg dropping off children) that cannot be met using available public transport.

Charges can be made more acceptable by:

- making it clear that parking revenue will be used to pay for improving other travel options
- setting parking fees on a sliding scale so that higher earners pay more
- offering a travel allowance or redeemable vouchers; staff can then choose whether to spend the allowance on parking or save money by using other forms of transport
- offering staff a compensatory one-off income adjustment at the introduction of charges.

Workers should expect, and be offered, a combination of financial, and other incentives to

use alternatives to sole car use BEFORE they are presented with additional costs such as parking fees.

Travel for work

Travel may also be an essential part of a worker's job. In this case there are many things that can be done to reduce the environmental impact.

- Consider whether face to face meetings could be replaced by video conferencing, avoiding the need to travel.
- Promote the use of public transport, cycling and walking where this is an option.
- Cycle mileage: Staff who use their own bikes for work purposes, to travel to external meetings or to other office locations, can be allowed to claim a mileage allowance. HMRC permit 20p a mile business mileage for bikes. As well as encouraging cycling, this will be a considerable saving for the employer when compared with the mileage paid for using a car.
- Pooled bikes: when staff frequently make short journeys for work purposes, consideration should be given to establishing a pool of bikes that staff can book out.
- Switch fleets to 'greener' vehicles, for example smaller, electric or hybrid vehicles – see www.est.org.uk/service/switching-electric-vehicles.
- Give training to drivers on 'greener' driving techniques.
- Make sure any essential car user allowance rewards energy-efficient cars.
- Promote the use of train travel rather than flying for short-haul business trips

Case studies

Cardiff University

Paul Rock has been the UCU Environmental Representative at Cardiff University for seven years. One of his first actions when he took on the role was to conduct a survey of members. This gave him the data he needed to demonstrate the type of changes his members would support, significantly strengthening his bargaining position.

Travel issues made up a significant part of the concerns raised by members and they have been a constant priority for Paul. He has a place on the university's Environmental Management Steering Group and its Climate Emergency Task and Finish Group. He strongly believes in the importance of working with other trade unions and the students' union to secure the best deal for his members.

Thanks to their efforts the university now provides a range of measures supporting greener travel including: free use of Next Bikes (a Cardiff scheme similar to Santander bikes in London); an interest free loan scheme for the purchase of public transport season tickets; and a new Cycle to Work scheme under which bike purchase is subsidised by the government through the tax system.

Paul is currently campaigning for more secure covered bike parking on university estate and is pushing the university to move to a greater use of trains rather than planes for attending international conferences. One of his thorniest problems is the allocation of limited car parking spaces. He is campaigning for a fairer, needs based points system and for charges to be strictly proportional to income.

Welsh Government

Stephen Gray is the PCS Environmental Representative at Welsh Government's offices in Cathays Park, Cardiff. However, whilst he holds the job title he is very clear that he relies on a team of members who help him carry out the work. A key member of the team is Nigel Gaen who is both a PCS health and safety rep and a keen cyclist.

The two have been working hard with others in their branch to improve facilities for cyclists at Welsh Government. And they've secured some key improvements. Particularly in improved cycle storage, access to the Cycle to Work subsidised bike purchase scheme and free use of the Next Bike cycle hire scheme.

Like lots of PCS members, they are keen supporters of the Bicycle User Group and have worked in partnership with the group and Sustrans to promote cycling to work during Bike Week. They have introduced a weekly monitoring system for cyclists and their monitoring shows a level of cycling to work that is over twice the average for Wales.

The team see their work on sustainable travel as an important way of promoting the union. Their plans for future improvement include securing staff discounts on Cardiff Bus fares and more and better changing facilities for cyclists.

The Covid crisis has had a major impact on their workplace with the majority of staff now working from home and PCS will continue to work with colleagues.



Sources of further information

CoMoUK: an organisation that promotes shared transport including lift shares and car and bike sharing www.como.org.uk.

Cycling UK: A cycling organisation whose website contains lots of useful information on the health and environmental benefits of two wheeled travel cyclinguk.org.

Living Streets: An organisation that promotes the benefits of walking. They also offer a workplace travel planning service livingstreets.org.uk.

Sustrans Cymru: The charity that aims to make it easier for people to walk and cycle. Their website is a great source of information and advice on all walking and cycling matters. www.sustrans.org.uk

Transport for Wales: Information on timetables and fares for train services in Wales tfwrail.wales.

Traveline Cymru: Information on public transport timetables and fares. The site also has a cycle route planner traveline.cymru.

Welsh Cycling: A Wales based organisation 'providing support to all cyclists, however they ride.' britishcycling.org.uk/wales

Welsh Local Authorities: local authorities have a key role in transport in Wales and are an important source of advice and information. Click on the link to find the website of your council. wlga.wales/welsh-local-authority-links

Work-related travel – action plan:

Step 1: Research

- Conduct a travel survey to find out how your members currently choose to travel and why ([see page 171](#)).
- Find out about the available sustainable travel options, see the suggestions in this guide. What might work in your workplace?

Step 2: Engage

- Discuss your research findings with your members. Find out the type of changes they will support.
- Encourage wider discussion. Bring in external experts like Traveline Cymru ([see page 89](#)).
- Talk to other unions and other members of any relevant committees in your workplace.

Step 3: Plan

- Pull together your ideas for what should be in a travel plan.
- You don't have to be too ambitious at the first attempt, small changes can be helpful as long as they benefit your members.

Step 4: Negotiate

- Ensure you have a clear basis for negotiation with management and an understanding that the aim is to produce a travel plan with benefits to workers as well as to employers and the environment.

Step 5: Consolidate

- When you secure improvements, make sure your members know about them, and that their union made them happen.
- Consider putting place, with support from management, a programme of events to coincide with key national sustainable travel dates ([see page 83](#)). For example, give a free cup of coffee to everybody who arrives by bike during cycle to work week.
- Get accreditation. Have your changes formally recognised by, for example, working with Cycling UK to have your workplace declared "Cycle Friendly".



Resource efficiency – reduce, reuse, recycle

Introduction – the move to a zero-waste, circular economy in Wales

The Welsh Government wants Wales to become a zero-waste nation by 2050 and aims to achieve this by creating a circular economy.

A **circular economy** is one that keeps resources in use as long as possible and avoids waste. It's a different model to the traditional 'linear' economy. This is based on extracting resources to make products which are used and then disposed of – the 'take-make-use-dispose' model.

The circular economy reflects the fact we live on a planet with finite resources. In a linear model, waste is the end point. But in the circular model it becomes the start of something new where a product or material can be recovered and regenerated for another cycle. This creates a closed loop, keeping resources in use for as long as possible.

It's a system that extracts the maximum value from products and resources while they are in use. A circular economy also offers opportunities to increase the value from a product's use through different ownership models, such as sharing and service-based models.

The term **zero waste** means that no residual waste goes to landfill and everything is either re-used or recycled. Zero waste seeks to eliminate rather than merely manage waste.

Why do we need a zero-waste, circular economy?

The Welsh Government wants to see Wales living within the planet's resources, generating zero waste and net-zero emissions by 2050. With the recognition that 45% of emissions come from goods and products, it views the circular economy as making a major contribution to achieving these aims, and addressing the climate emergency.¹⁴⁷

A recent report by the Ellen MacArthur Foundation found meeting climate targets requires a transformation in the way we produce and use goods. It found that circular economy strategies could play a key role and could reduce ["global CO2 emissions from key industry materials by 40% or 3.7 billion tonnes in 2050"](#).¹⁴⁸

45% of emissions come from goods and products

As well as helping the climate, eliminating waste will bring huge benefits for nature and wildlife. For example, eliminating plastic waste will help to reduce plastic pollution in oceans and its impact on marine animals.

The circular economy could also have much to offer in terms of new, green jobs in local supply chains. Many jobs will be needed to support reconditioning, remanufacture, servicing and repair. According to the Carbon Trust, a circular economy offers "strong job creation opportunities as the circular economic model is focused on extracting greater value from resources, so opening up new opportunities across material and product loops that do not exist in linear, waste creating models."¹⁴⁹

The European Federation of Public Service Unions has produced [a new report which aims to make visible the crucial role of workers in delivering the circular economy](#). It highlights issues of worker safety and the importance of trade union organising in the sector.¹⁵⁰

Circular economy strategies could play a key role and could reduce “global CO2 emissions from key industry materials by 40% or 3.7 billion tonnes in 2050”



What does this mean for workplaces?

Wales already has a strong foundation from which to build a circular, zero waste economy. It is a global leader in recycling and resource efficient strategies. It is recognised as having the third highest recycling rate in the world.

But more needs to be done, and the move to a circular economy will see Wales move ‘beyond recycling’ towards a different mindset. Whilst recycling will still have an important role, in a circular economy it becomes less significant. There will be less emphasis on recycling and a greater focus on preventing waste in design. More products will be repaired and re-used, so they can be kept in use longer.

Union involvement will be vital in moving Wales towards the circular economy. Workers on the ground can be one of the best sources of ideas for identifying ways to reduce unnecessary waste. They also have

ideas about ways that products could be designed better to support repair and reuse. It is important that workers are involved in any new schemes so they can share ideas and help to identify issues.

The Welsh Government is due to publish its Circular Economy strategy which will set out plans for how Wales will move to a circular economy in more detail. But based on the draft consultation, it is likely that it may include actions such as:

- ➔ The need to consider and highlight the waste hierarchy and circular economy principles in implementing and prioritising actions (eg deprioritising actions such as recycling and incineration).
- ➔ Utilising the role of the Welsh Government in instigating change, through Government levers, providing support to communities and businesses, and aligning actions with wider Welsh and UK policies.

Workers on the ground can be one of the best sources of ideas for identifying ways to reduce unnecessary waste

- The need to increase information, both on the circular economy as a concept and how materials, products and practices can support it.
- The need to make informed decisions regarding material consumption and use via the carrying out of Life Cycle Assessments.
- The role of collaboration between communities and businesses (both in Wales and internationally) to share best practice and ensure the feasibility of actions.
- 1.3 million tonnes or 45% was recycled.
- 413 thousand tonnes or 14% was prepared for re-use.
- 306 thousand tonnes or 11% was disposed of via landfill.
- 236 thousand tonnes or 8% was sent for incineration.
- 218 thousand tonnes or 8% was composted.

What is the current picture?

The Welsh Government's existing targets for the recycling of waste are 70% recycling by 2025 for waste from households and commercial and industrial businesses and 90% by 2019/20 for waste from construction and demolition activities.¹⁵¹

In 2019, the Welsh Government said that:

"Considerable progress has been made with recycling in Wales, particularly from households. However, at non-domestic premises, such as businesses and in the public sector, significant amounts of recyclable materials are still disposed of as a part of the residual waste stream or co-mingled with other recyclable wastes. This reduces the recycle capture and value and prevents their use as a high quality source of input material to industry."¹⁵²

Natural Resources Wales carried out a [survey of industrial and commercial waste in 2018](#).¹⁵³ It found that:

- Welsh industrial and commercial sectors generated an estimated 2.9 million tonnes of waste which is a 22% (800k tonne) reduction on the total waste generation (3.7 million tonnes) derived from the previous 2012 survey.

Of this:

- 200 thousand tonnes or 7% was treated.
- 97 thousand tonnes or 3% was sent for land recovery.
- The remainder – 127 thousand tonnes or 4% – was classified as 'other'.

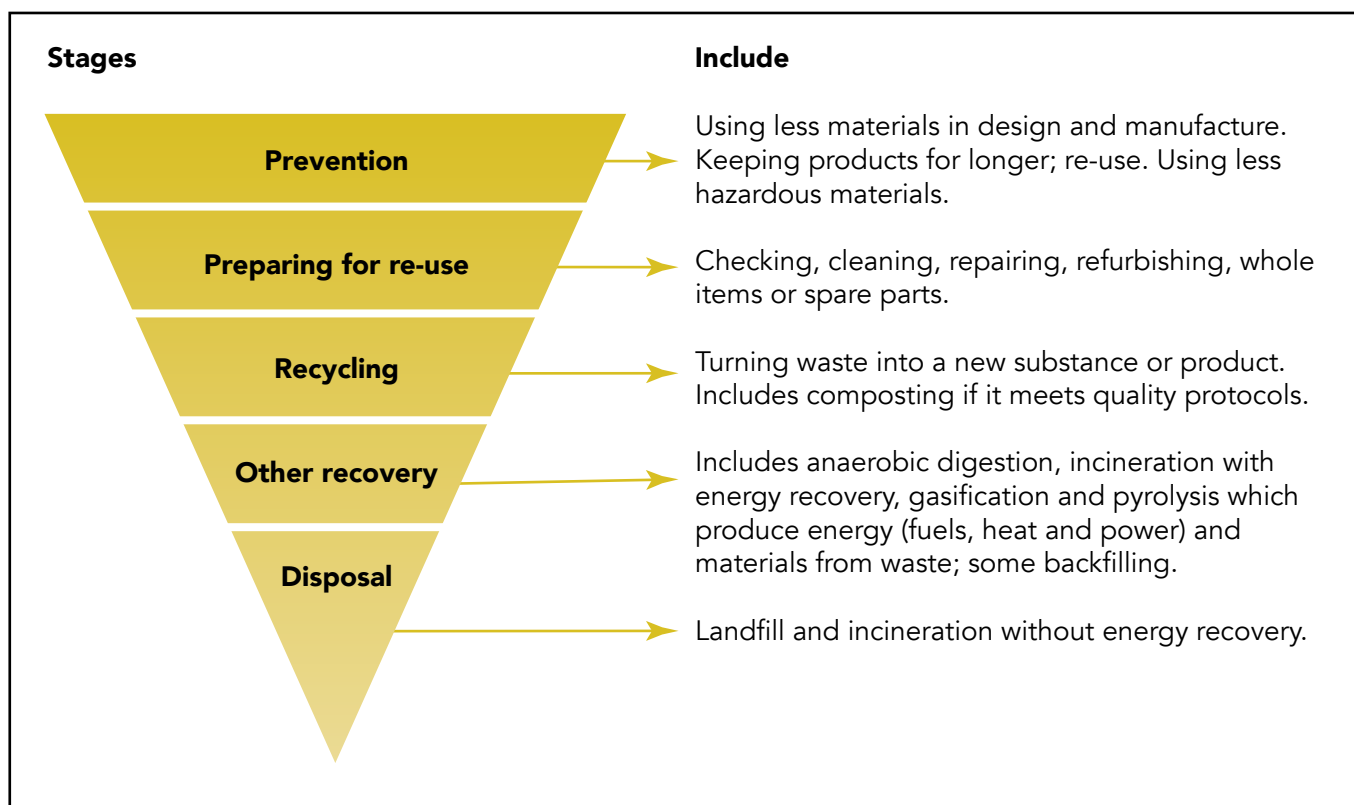
Type of waste

The most significant type of industrial and commercial waste generated was mixed wastes with 24%, followed by paper and cardboard and metallic waste both with 15%, then animal and vegetable wastes with 11%. An estimated 225 tonnes of hazardous waste was generated (around 8% of the total).

The waste hierarchy

The waste hierarchy underpins the legal and regulatory framework that governs how organisations should prevent and manage waste.

Crucially, the hierarchy ranks actions in priority order. It prioritises prevention and re-use ahead of recycling, with disposal as the last resort. In line with legal and regulatory requirements, all organisations should be applying the hierarchy of waste. Guidance on applying the hierarchy of waste can be found on the [Welsh Government website](#).



Source: <https://businesswales.gov.wales/managing-waste>.

Business Wales has [guidance on the waste legislation and regulations that apply to organisations in Wales](#).¹⁵⁴

A new hierarchy for zero-waste?

Some organisations have called for an enhanced version of the waste hierarchy that moves from a 'waste management' model to a 'resource management' model. For example, [Zero Waste Europe has proposed a new 7-stage zero-waste hierarchy](#) which has a greater focus on the prevention stage.¹⁵⁵ It includes additional levels to break down the prevention area of the current hierarchy into two stages. Stage one is 'refuse, rethink, redesign' and stage two becomes 'reduce and reuse'. It argues that options that don't allow for material recovery, have high environmental impact and 'create lock in effects that threaten the transition to zero waste' should be unacceptable.

EMS systems and accreditation schemes

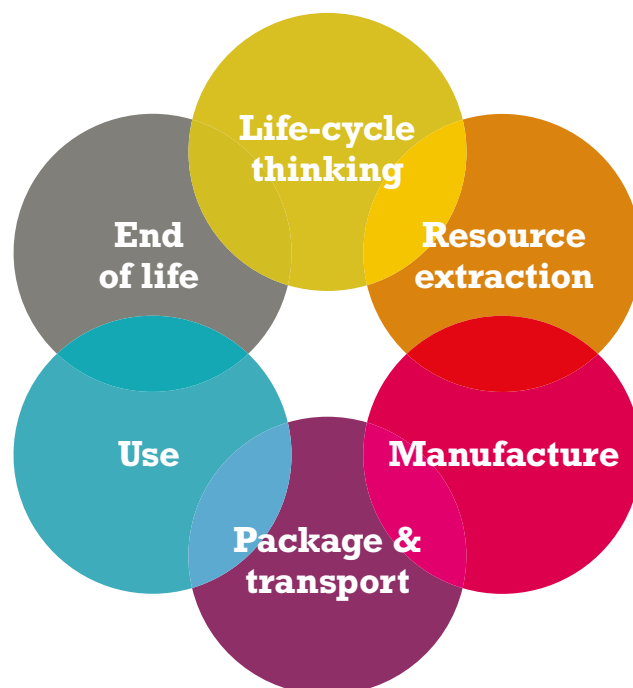
Organisations can implement an environmental management system (EMS) to reduce environmental impact, clarify responsibilities and ensure compliance with legislation.

More information on different EMS systems can be found on [page 62](#). International Standard ISO 140001, the EC's Eco-Management and Audit Scheme (EMAS) or the British Standard (BS 8555 are examples of systems available. Some organisations

have developed their own in-house systems. Resource efficiency charity WRAP has [a guide to EMS systems for waste](#).¹⁵⁶

There are also some sector specific schemes promoting best practice such as the [Courtauld Commitment](#) in the food and drink sector.¹⁵⁷

Life cycle assessments



Life cycle assessments are a key part of the circular economy because they take into account all stages of a products' life, including the 'end of life' stage.

An audit of the amounts and different types of waste and recycling is a vital starting point for workplace action. It is the best way to understand where the issues are and identify areas for improvement.

This shows the true cost of materials, products and services in terms of their impact on people and the planet.

Everything that is created goes through a series of 'life cycle' stages, from material extraction, manufacture, packaging and transport, through to end of life. A life cycle assessment is a tool that can be used to help assess and understand something's true environmental footprint at every stage. It includes over 90 different impact categories that are linked to ecosystem health. It considers areas such as the use of finite resources, land and water use, greenhouse gas emissions and human toxicity.

Benefits of life cycle assessments include:

- Being able to assess and understand the impact of material choices and operational processes and to make informed decisions about the most sustainable options.
- Identifying cost savings.
- Identifying supply chain improvements.
- Shaping and contributing to corporate sustainability strategies.
- Supporting communications about environmental credentials of products/services/processes.
- Improved environmental performance and reputation.

Life cycle assessments are an effective tool but can be complicated and usually require help from someone with expertise. There are a number of organisations that offer life cycle assessments. International standard [ISO 14040](#) governs life cycle assessment practice and sets out what is considered a good assessment.¹⁵⁸

More information about life cycle assessments can be found on the [European Platform on Life](#)

[Cycle Assessments](#).¹⁵⁹ [The Life Cycle Initiative](#), a programme hosted by the UN Environment Programme, also has a useful website.¹⁶⁰

Taking action

Waste audits

An audit of the amounts and different types of waste and recycling is a vital starting point for workplace action. It is the best way to understand where the issues are and identify areas for improvement. WRAP has [information on how to carry out a waste audit](#).¹⁶¹ It will be important to find out who in the organisation has responsibility for waste management and ideally work together on setting up an audit. An audit will also enable you to [cost potential savings](#), which can be helpful in making a business case for change to employers.

Apply the waste hierarchy

See the waste hierarchy section ([page 95](#)). The key with this step is a focus on prevention first. A good starting point is to consider ways to reduce the amount of resources your workplace is using in the first place. This will help you to identify areas where the most effective changes can be made and identify opportunities to improve existing practice. This will particularly be the case if the audit finds that recyclable materials still being disposed of as a part of the residual waste stream or co-mingled with other recyclable wastes.

There may be further opportunities to eliminate or reduce the use of hard to recycle products and materials. Or to reduce the need to send items for recycling by introducing reusable items.

Procurement and purchasing review

Reviewing procurement is a key step in preventing waste. Does the organisation have a green procurement policy? How can the organisation work with suppliers to make improvements – eg

procuring products that use less packaging and goods that can be re-used and repaired, using more recycled and recyclable materials? Where reclaimed or recycled materials cannot be used, do any new materials used meet standards to minimise the environmental impacts eg FSC certified wood? Ensuring information on life cycle assessments is obtained and used to inform procurement decisions is a key step. Sustainable and ethical procurement considerations (eg decent work) should be closely linked in any procurement policy. See procurement section, [page 118](#).

Review the organisation's own products and processes (where applicable)

How does the organisation assess the environmental impact of its own products or services? A number of issues could be considered. Does it use life cycle assessments? Does it utilise recycled and recyclable materials where possible? Does it offer repair/ remanufacture? Has it considered offering alternative models such as shared ownership or service-based models? Does labelling and information about how to recycle its products meet best practice?

Engaging with members

Share the findings of your audit, find out what the issues with systems are for staff and where they think improvements can be made. There is often a lot of support for measures to reduce waste, but communication is key as is ensuring people understand the changes and that the right systems and support are in place to make it work in practice.

Making a plan and setting targets

Use the findings of your audit and consultation with members and others to make a plan to reduce waste and improve resource management. These findings will help you to identify the highest impact actions. WRAP has a guide to the [5 key areas to target for the biggest waste reduction](#).¹⁶²

There may be significant barriers to achieving zero-waste in the immediate future. But a helpful approach is to focus efforts on interim targets and the highest impact actions in the short term to build momentum, with a longer-term goal to achieve zero waste.

Awareness raising

Does the employer plan to provide any training or awareness raising to support new initiatives? Training should be provided to ensure members are aware of any new procedures and understand how to separate waste effectively and why action is needed to reduce waste.





Resource efficiency – a bargaining checklist:

- ☒ Do your research – the best starting point is a waste audit. Gather any existing relevant data or policies on waste, procurement etc and review. Identifying potential cost savings will be vital in making a business case for action during negotiations.
- ☒ In making the case for action, ensure employers and members are aware of the link between waste and greenhouse gas emissions. Reducing waste can make a significant contribution towards reducing the organisations carbon footprint, as well as reducing other environmental impacts.
- ☒ Ensure employers are aware of the important role that unions have in engagement on this issue. Often, it's members on the ground who will have the best understanding of the practical barriers to reducing waste and ideas for improving resource management. And securing their support will be vital if new initiatives are to succeed.
- ☒ Where employers are initiating action, consultation is vital in the development of any long-term plans to become zero-waste and move towards a circular model of resource management. The scope and pace of plans will determine the direct implications on members' work behaviour and performance – briefings and information on targets, ambitions and pathways to change are also important.
- ☒ Ensure the benefits of savings from waste reduction and more effective resource management are shared. These should be reinvested into people, skills, retaining jobs and continuous efficiency improvement.
- ☒ Where there is new equipment or processes re-training is vital. Also, disruption of work due to new installations should be taken into consideration where this is linked to performance indicators. These should also be reviewed where new processes take longer to carry out, to ensure sufficient time is provided.
- ☒ New risk assessments should be carried out where appropriate, with thorough consultation specific to work processes.
- ☒ All changes should be fully assessed for equality impacts with thorough consultation. Consideration should be given to people with different protected characteristics alongside other equality and fairness considerations. Adjustments should be made where necessary.
- ☒ Ensure employers' targets are sufficiently ambitious. As a minimum there should be a long-term goal to meet the 2050 zero-waste target, with interim reduction targets.

Negotiating for change: Making the business case

Cost savings

Waste reduction produces savings at both the procurement stage and disposal stage (eg avoiding landfill tax). WRAP has [a simple waste calculator](#) that can help organisations get a rough estimate of how much they can save by improving waste prevention and how well they are performing against the waste hierarchy.¹⁶³

The Chartered Institute of Procurement and Supply advises: “The true cost of waste is not simply the cost of discarded materials - it encompasses inefficient use of raw materials, unnecessary use of energy and water, faulty products, waste disposal of by-products, waste treatment and wasted labour.” Better resource management can create savings across all of these areas.

The Aldersgate group has released [a report](#) on new business trials showing that greater resource efficiency could deliver significant economic benefits to EU businesses.¹⁶⁴

Competitiveness and access to new opportunities

Moving to a circular model can help open up new sources of income that are less reliant on the sale of products alone. For example, opening up service-based models associated with maximising the value of resources.

Alignment with the circular model is likely to give organisations a competitive advantage in the longer term. For example, with the Well-being of Future Generations Act public bodies are moving towards greener procurement practices and many other organisations are increasingly looking to improve procurement (see the procurement section [page 118](#)).

Security

Covid-19 has exposed the vulnerabilities of long, linear supply chains, with many organisations experiencing disruption to supplies. A more localised, circular supply chain can help to reduce these vulnerabilities. Becoming part of the circular economy can also position organisations to better address emerging resource security/scarcity issues in the future.

Reputation

Reducing greenhouse gas emissions and pollution by reducing waste is the right thing to do. It's a key contribution that organisations can make towards tackling the climate and nature emergency and securing the world's finite resources for future generations. These issues also matter to customers and services users. So being proactive can have a positive impact on an organisation's reputation.

Advice and support is available

Organisations such as [Business Wales](#) and [WRAP Cymru](#) can provide information to organisations looking to reduce their waste and move to a circular model. Welsh Government has made funding grants available to support organisations in the move to a circular economy. A £6.5 million [Circular Economy Fund](#) is open to organisations of any size, which are operating in Wales. Organisations may apply for a capital grant to invest in infrastructure and equipment for eligible circular activities (criteria apply).¹⁶⁵

Covid awareness:

During the first lockdown, there was a one third reduction in food waste due to changes such as more working from home, according to research by WRAP

Food waste – a checklist:

- ✓ Are management and members aware of the link between food waste and climate change?
- ✓ Does your workplace offer separate collection facilities for food waste?
- ✓ What facilities are available for workers to store, prepare and consume food or drink while at work?
- ✓ Is there a workplace canteen, cafe or shop? How much food waste is generated and what action is being taken to reduce food waste?
- ✓ Are there opportunities to contribute to food redistribution schemes? Community - [Fair Share Cymru](#), [Community Fridge](#) and food sharing apps etc.
- ✓ Are there opportunities for onsite composting?
- ✓ Does the workplace offer a good work-life balance and flexible working options?

Food waste resources:

The Wasting Food: It's out of date campaign outofdate.org.uk and www.lovefoodhatewaste.com have resources aimed at raising awareness with individuals

WRAP Cymru has a suite of free resources available on food waste prevention in the workplace: www.wrapcymru.org.uk/food-waste-prevention

It has a new 'Food Waste Reduction Roadmap Toolkit' aimed at organisations in the food and drink

Food waste – what are the issues?

Urgent action is needed on food waste. Food waste has huge economic, social and environmental impacts.

The UN estimates that around one third of the world's food is lost or wasted, and production of this wasted food generates 8% of all greenhouse gas emissions. That is more than is produced by any individual country, except the US and China.

Food waste releases methane, a potent greenhouse gas. And that's not the only problem. Throwing food away also means that all the resources that have been used to produce it have been wasted. This can include things such as the water and land that have been used as well as transport and packaging.

Recent research has found that just under 30 per cent of people in the UK don't see a link between food waste and climate change.¹⁶⁶

Most food waste happens at home, but it's a problem in workplaces too. Things like long working hours, shift work, long commutes and poor work-life-balance can have a knock-on effect on food waste at home. Because they can mean that people don't have enough time to plan and prepare meals to reduce waste. Food waste is also hurting people's wallets. An average family of four can save over £60 per month by reducing food waste.¹⁶⁷

sector: wrap.org.uk/sites/files/wrap/food-waste-reduction-roadmap-toolkit.pdf And it has produced a [specific waste hierarchy for food and drink businesses](#).



Plastics – what are the issues?

Plastic is a useful material that has many positive applications – for example in areas such as healthcare and the preservation and storage of food.

But there are also many downsides to the way that plastics are produced and used. They are often used unnecessarily or in a problematic way. For example, the excessive use of single-use plastics has created a huge problem of litter and plastic waste in the environment. The BBC's Blue Planet II famously highlighted the devastating impact of plastic on our oceans and marine animals.

But it is not just plastic pollution. The manufacture of new plastic uses fossil fuels. If the consumption of new plastics isn't reduced, it could hamper efforts to combat climate change. In fact, an increase in the use of new plastics could potentially wipe out most of the benefit in emissions reductions gained from a switch away from fossil fuels for transport.¹⁶⁸

There are also health concerns about the potential impact of micro-plastic pollution on human health. Micro-plastics are tiny particles of plastic that escape into the air, water and our food and get into our bodies. The long-term effects on health are not yet known, but scientists believe there may be cause for concern.¹⁶⁹

An additional problem is that currently, there isn't enough capacity to recycle all our waste plastic within Wales. In 2017, around 61% of our plastic recycling was recycled outside of Wales. Concerns have been raised about the environmental and ethical impacts of plastic waste being shipped overseas.

WRAP Cymru has produced a [Plastic Route Map](#) which sets out how Wales can address the challenges concerning the manufacture, use and disposal of plastics. It says: "key to addressing these challenges is the adoption of new initiatives and business models that retain plastics in economic use for as long as possible and avoid escape into the environment."¹⁷⁰



Action on plastics – a checklist:

- ✓ Eliminate unnecessary single-use plastics – eg some items could be eliminated altogether or reusable alternatives may be available.
- ✓ Prioritise recycled plastics instead of new plastics in procurement.
- ✓ Ensure easily recyclable plastics are chosen above harder to recycle ones.
- ✓ Caution is needed with some privately run/corporate sponsored collection schemes for hard to recycle plastics

and composite materials. These are not always as good as they appear. They can result in items being 'down-cycled' – that is, recycled once into items that cannot themselves be recycled. These will ultimately end up in landfill.

- ✓ Remember, it's important to avoid overly demonising one material. In some cases, plastic alternatives may have worse environmental impacts or be unfit for purpose. The sustainability and suitability of alternative materials needs to be fully assessed.

Case study: UNISON Swansea action on single-use plastics

Mark Otten is the UNISON Environmental Officer at Swansea Council. He has taken action to reduce single-use plastics in the authority:

"As an Environmental Officer for Unison Swansea Council, I am always looking for ways to work with the employer to reduce our carbon footprint. This is ever so much more important in light of announcement of a climate emergency by our country's governments.

"I was working at Swansea Council's Corporate Building & Property Services (CB&PS), which carry out an array of work that includes maintenance of council housing stock and public buildings as well as new builds and upgrades to properties to bring them up to Welsh standards. Whilst there I was keen to tackle the problem of single use plastics in the workplace. Dealing with a very large turnover of a variety of stock opened my eyes to the amount of single use packaging that was going through our stores.

"To tackle one item alone, bottled water, would mean a huge reduction in single use plastic going through the stores. To give an indication of what

I mean, during the period of March 2018 – March 2019, the procurement of bottled water (single use plastic) for staff who were on sites or mobile was recorded at 990,000 bottles. Year on year, the issue of spend on bottled water had continued to raise its head, mainly due to the cost. My concern was that of the impact it was having environmentally.

"During a health and safety meeting at the end of 2018, the suggestion of personal drinks bottles was put forward. I highlighted that to go along this route would benefit both our environment and reduce cost to CB&PS. Over the next few months, a variety of bottles were sourced and tested out. On the 20th March 2019, 500 one litre aluminium bottles were procured and issued out to staff. In total to date (19/11/2020), 900 bottles have been procured and issued out to staff.

"During this time, there has been a saving of £10,000 to CB&PS. More so, the staff themselves feel happy that they have helped in tackling a part of our eco problem which is, plastic pollution. In addition to this, other sections within the local authority have followed this up by adopting the same practice."

It's important to avoid overly demonising one material. In some cases, plastic alternatives may have worse environmental impacts or be unfit for purpose.

Sources of further information:

Welsh Local Authorities: local authorities have a key role in resource/waste management and are an important source of advice and information. wlgg.wales/welsh-local-authority-links

WRAP Cymru - provides Wales-specific support on behalf of the Welsh Government, including the delivery of the Circular Economy Fund, sustainable procurement assistance for the public sector, the Collaborative Change Programme for local authorities and the Wales Recycles campaign www.wrapcymru.org.uk

Business Wales is a free service that provides impartial, independent support and advice to people starting, running and growing a business in Wales: businesswales.gov.wales

WG circular economy strategy: gov.wales/circular-economy-strategy

Circular Economy fund: gov.wales/65m-circular-economy-funding-support-green-recovery

Circular Economy Wales: circulareconomy.wales

Wales Recycles: walesrecycles.org.uk

FareShare Cymru: www.fareshare.cymru/en

Library of things: borrow.benthyg.org

Repair cafes: repaircafewales.org

Green sheds: circulareconomy.wales/green-shed

Zero waste schools: circulareconomy.wales/zero-waste-schools

Community wood recycling: www.communitywoodrecycling.org.uk



Resource/waste management – action plan:

Step 1: Research

- Find out who has responsibility for resource/waste management.
- Gather any existing policies and data.
- Carry out a waste audit and identify potential cost savings.
- Apply the waste hierarchy.

Step 2: Engage

- Consult with members.
- Encourage wider discussion. Get external advice and help if needed. Local authorities and organisations like WRAP Cymru and Business Wales can provide information and advice. See the resources section on [page 104](#).
- Talk to others in the workplace – other workplace unions and any members of other relevant committees in your workplace.

Step 3: Plan

- Identify and target high impact actions – these will depend on the findings of your audit.
- Pull together the ideas for a plan – it may be helpful to focus on some quick wins, as well as longer-term goals.

Step 4: Negotiate

- Push for targets for waste reduction – these should be sufficiently ambitious.
- Make a moral case and a business case for action.
- Focus on your plan and see the bargaining checklist on [page 98](#) for other considerations.

Step 5: Consolidate

- Encouraging the employer to sign up for an EMS and accreditation can help with continuous improvement.
- Ensure the employer provides appropriate training and awareness raising. Set dates to review progress towards the longer-term goal to become zero-waste.

Homeworking



Introduction

With Covid-19, more people than ever before are working from home. In Wales, the advice throughout the pandemic has been that those who can work from home should continue to do so. Reports suggests that some of these changes may become permanent. It's thought there could be a shift towards more working from home even once the threat of Covid has passed.

In Wales, around 40 % of workers have been working from home during the pandemic.¹⁷¹ In contrast, only around 4% routinely worked from home in 2019, according to the ONS.¹⁷²

Many employers and workers [do not see a return to full-time office-based work at the end of the crisis.](#)¹⁷³

It's thought that many organisations are set to move to a 'mixed' working style. This would combine home and office-based working, with some workers remaining at home full time.

A [survey of office workers](#) carried out in autumn 2020 found that just under a third of workers wanted to return to the workplace full time and just under half wanted to divide their time between the office and home. And a smaller number (15%) wanted to stay working from home full time.¹⁷⁴ But these numbers will vary in different workplaces.

The Welsh Government has stated its long-term ambition to see around 30% of Welsh workers working from home or near to home, including after the threat of Covid-19 lessens.

The Welsh Government says it wants to give workers across Wales more flexibility to work remotely and believes this has the potential to drive regeneration and economic activity in communities.

It is exploring the potential for a network of community-based remote working hubs which offer workers choices beyond a simple home/office split. These hubs, within walking and cycling distance of people's homes, could be used by public, private and third-sector employees.

The intention is to develop a hybrid workplace model, where staff can work in the office, at home, or in a hub location. The aim is that this will enable 30% or more of workers to work remotely, helping reduce congestion and pollution and improving work-life balance for employees and employers.

<https://gov.wales/aim-30-welsh-workforce-work-remotely>

In Wales, around 40 % of workers have been working from home during the pandemic.

What are the issues?

There are different views about the potential economic, social and environmental impacts of a longer-term shift to homeworking. Trade unionists report that members often have very different experiences and opinions on homeworking, depending on their circumstances. The issues are far from straight forward.

The main purpose of this chapter is to consider the environmental issues, and what practical action trade unions can take to support greener homeworking. But of course, trade unionists will know that there are also other important considerations. The health and wellbeing, social, equality and economic impacts of homeworking must be looked at too.

Is homeworking really greener?

Understanding the overall impact of homeworking on an organisation's environmental footprint is complex. For example, there are obvious benefits in terms of reduced congestion and air pollution from transport emissions. But while industrial energy use has gone down during pandemic, daytime home energy usage has risen by nearly 30%.¹⁷⁵

There are common issues across many workplaces, but also variations. This can affect the overall balance of environmental impacts. The balance of positive and negative impacts is also dependent on the individual circumstances of each worker.

Factors that may influence the environmental benefits of homeworking include:

- ➔ Emissions of normal mode of transport and distance of travel to/for work – if large numbers of the workforce normally use a private car to travel to/for work, working from home could result in a significant reduction in greenhouse gas emissions. But if the majority of the workforce normally travel to/for work by public transport or cycle or walk to work, this won't be the case.

Understanding the overall impact of homeworking on an organisation's environmental footprint is complex.

→ Energy efficiency of workers' homes – insulation, sources and types of energy used for heating, lighting, cooling and ventilation, efficiency of equipment, use of technology and occupancy levels of homes can all be a factor. Whether a worker is renting or is an owner-occupier will also make a difference as it is likely to affect how much control they have over the energy efficiency of their home. The location, construction type and fabric of homes is also important. For example, Wales has a larger share of solid-walled homes which are difficult to insulate as well as homes that are reliant on solid fuel.

→ Energy efficiency of workplace buildings– factors such as insulation, sources and types of energy used for heating, lighting, cooling and ventilation, efficiency of equipment, occupancy levels and location can all be a factor.

→ Location, weather, seasons – factors that affect the demand on heating/lighting are important. For example, during summertime with warmer temperatures and longer daylight hours, the energy demands of homeworking will be much lower than during winter, when the cold and low light levels hugely increase energy consumption.

→ Equipment, digital technology and digital services requirements – changes in the demand for and consumption of digital technology and services due to increased home working practices will affect the overall environmental impact of homeworking.

Potential environmental advantages of homeworking

→ Reduced transport emissions.

→ Reduced traffic congestion.

→ Improved air quality.

→ Fewer cars mean people feel safer on the roads, which could encourage more people to make non-work-related journeys by bike or on foot rather than by car.

→ No commuting time = better work-life balance and more time to develop environmentally friendly habits– eg evidence suggests that more time at home/time saved on commuting during lockdown led people to reduce their environmental impact in other ways. Like using up more leftovers, reducing household food waste.

Potential environmental disadvantages of homeworking

→ Increased domestic energy consumption – for heating, lighting and technology.

→ Greater difficulty in calculating an organisation's carbon footprint – the relative energy efficiency of workers' homes may be unknown unless there is an Energy Performance Certificate (EPC). There may be difficulties in estimating work-related energy consumption and emissions.

→ Risk of employers outsourcing emissions and costs to workers.

→ Potential duplication of workplace and home emissions with mixed office/homeworking arrangements – eg energy being used to heat and light a large office space and workers' homes.

→ Increased 'life-cycle' costs and emissions of additional digital technology and homeworking equipment.

What are the life-cycle emissions of digital working?

Homeworking has become increasingly dependent on new energy-intensive forms of digital technologies. The production of computers and mobile devices is very energy intensive. Various rare earth elements are required for their production, and energy-intensive processes, for their operation. For example, the equipment required to support them (servers and networks) and the digital services we use them to consume like video calls/streaming, cloud storage, emails and searches. These all produce greenhouse gas emissions. Estimates of the emissions from digital technologies vary from 1.4 – 5.9% of total global emissions.¹⁷⁶ And this figure is expected to rise unless we change the way we use digital technology.



Research into the environmental impacts of homeworking

The Centre for Research into Energy Demand Solutions at the University of Sussex carried out a [review of research into the energy and climate impacts of homeworking](#) in 2020. The researchers concluded that to understand whether homeworking is truly sustainable, “we need to look beyond the direct impact on commuting and investigate how it changes a whole range of daily activities.”

They highlight that there may be unintended and indirect environmental consequences (or ‘rebound effects’) from a shift to more homeworking. For example, mixed home/office working could result in greater average distances between the workplace and the home, with workers living further away from the workplace. This could result in longer car journeys on days spent in the office.

The researchers noted that other measures, such as

a transition to lower carbon modes of travel, could potentially provide a greater overall emissions benefit than increased homeworking. Overall: “The main source of savings is the reduced distance travelled for commuting, potentially with an additional contribution from lower office energy consumption. However, the more rigorous studies that include a wider range of impacts (eg non-work travel or home energy use) generally find smaller savings... The available evidence suggests that economy-wide energy savings are typically modest, and in many circumstances could be negative or non-existent.”¹⁷⁷

Taking action

It’s vital to consult with others in the branch committee when approaching this issue. You will need to decide how best to consult with members on the issue of greener homeworking in the context of the wider bargaining agenda on homeworking issues. It’s also important to make links with the health, safety and wellbeing agenda.

Other measures, such as a transition to lower carbon modes of travel, could potentially provide a greater overall emissions benefit than increased homeworking

Homeworking policy

This will determine your starting point for action. Is there already established homeworking in place with a formalised policy? Or has homeworking just arisen informally in response to Covid? Does the branch have any plans to negotiate a new policy or revise the existing one? And does the homeworking policy cover any environmental issues?

Surveys

Has or is the branch planning to carry out a survey to identify workers' experiences of and preferences regarding longer-term homeworking? It may be possible to gather useful information from this. For example, how many members want to continue working from home full or part time and how many wish to return to the workplace. You may be able to add some specific questions on the issue of greener homeworking and link them to any wider wellbeing issues (eg concerns about additional energy bills due to homeworking or difficulties in keeping the house warm).

It may be helpful to set up a focus group to look at the issues around greener homeworking for members in your workplace and identify key areas for action.

The Carbon Trust says: "Employers could potentially find ways to improve domestic energy efficiency for employees, potentially as an incentive or benefit."

It notes that companies including Accenture, EDF Energy, Aviva and HSBC have piloted approaches to encouraging employees to implement home insulation.¹⁷⁹ Source: The Carbon Trust [CTC830 [Homeworking: helping businesses cut costs and reduce their carbon footprint report](#)]

What can employers do to support greener homeworking?

Ensure emissions (and costs) aren't outsourced to workers

Employers shouldn't see homeworking as a convenient solution to reduce costs and outsource emissions. As a minimum, they should provide a homeworking allowance for workers to fully cover the costs of increased energy consumption and other associated homeworking costs (heating, lighting, electrical equipment, broadband etc). Working from home during the winter is expected [to add an average of £107 to workers' fuel bills](#).¹⁷⁸

It's important that additional emissions related to homeworking are considered in the organisation's carbon footprint. If savings are being made elsewhere by reduced need for office space or fewer travel expenses, there is a case that some of these savings could be reinvested in funding to help reduce homeworking emissions. For example, could employers provide an offer of a financial contribution towards the costs of some energy efficiency assessments (eg EPCs) and energy efficiency measures for homeworkers? Where this is mutually agreed, this could help employers to measure and reduce the organisation's carbon footprint from homeworking. It could also help workers reduce both their work and domestic emissions.

"We want to make sure that members' concerns and wellbeing needs are considered in any longer-term changes with travel and homeworking. We are also trying to better understand the energy and emissions equation of homeworking. It's something we're working on now before any potential return to the workplace."

Prospect reps, IPO Newport

Sustainable procurement

Employers should ensure sustainable procurement practices for homeworking equipment and technology as part of a wider sustainable procurement policy. They should aim to purchase items that are long lasting and can be repaired and updated rather than needing to be replaced. Short lifespan digital equipment should be avoided. Employers should review the intervals at which items are upgraded – it may be possible to extend these without negative impacts. For example, extending the average lifespan of laptops from 4 to 6 years across an organisation can create a big reduction in emissions.

Promoting greener digital working practices

Employers should provide information on lower impact digital working practices that can reduce emissions whilst working from home. As well as the obvious tips such as not leaving devices on standby thinking about how digital technology is used is important. For example, simple changes such as streaming videos in standard definition instead of high definition can help cut emissions. Even reducing unnecessary emails can make a difference.

Ensure a jointly agreed homeworking policy is in place

Ensure a homeworking policy, jointly agreed with unions is in place. This will put in place the foundations needed to support safe, fair and sustainable homeworking. It should clearly set out the agreed definitions and parameters around homeworking and include a commitment to consider all requests fairly and not to impose homeworking arrangements or costs on workers. It's important that risk assessments should be carried out for homeworking. Consideration should be given to people with different protected characteristics alongside other equality and fairness considerations. Adjustments should be made where necessary. [Guidance on good practice is available from ACAS.](#)

Offer homeworking as an option, alongside a range of other measures

A better work-life balance can help workers to have more time to develop sustainable habits. But homeworking is not the only way to achieve this. For example, a shorter working week (without loss of pay) and flexible working hours are other ways to help improve work-life balance. Some employers have signed up for [schemes offering additional annual leave or 'travel days' for workers taking holidays via land-based travel](#).¹⁸⁰

There are lots of ways to support wellbeing and more sustainable behaviours. Employers should also offer flexible start/finish times and support for greener travel to reduce the impact of transport emissions on office days where workers are on a mixed home/office working pattern. And the community-based hub



Employers shouldn't see homeworking as a convenient solution to reduce costs and outsource emissions.

Greener homeworking: a bargaining checklist:

- ✓ The key starting point is to ensure a jointly agreed homeworking policy is in place. Check with your own union for guidance on developing a homeworking policy. [Guidance on good practice is also available from ACAS.](#)
- ✓ Ensure the homeworking policy includes a commitment that emissions are not outsourced to home workers and consider what measures will be taken to measure and manage homeworking emissions. There should be a commitment to cover any additional costs incurred to the worker.
- ✓ Ensure that any savings the employer makes from increased homeworking (eg reduced travel expenses or reduced running costs for premises) are reinvested into financial support for the costs of homeworking and measures to support greener homeworking, as well as jobs, skills and other areas of continuous improvement.
- ✓ Ensure homeworking is offered alongside a broader package of support – such as other work-life balance measures and support for greener travel.

UNISON has produced a new guide: Covid-19 pandemic: [Bargaining over working from home with model policy.](#)

It includes bargaining checklists..¹⁸¹

What can workers do to make homeworking greener?

Trade unions support a collective approach to tackling the climate and nature crisis. Individual behaviour change alone will not be enough without wider systemic and structural changes. It is not our job as trade unionists to tell members how to lead their lives. But with many more members working from home, workers may want information on what they can do themselves to help reduce their emissions and environmental impact. Ideas and further sources of information include:

- Understand your personal environmental footprint and ways to reduce it – [the World Wildlife Fund has a good online calculator.](#)¹⁸²
- [The BBC's Smart Guide to Climate Change](#) has information on the most effective strategies individuals can use to reduce their carbon footprint.¹⁸³
- Try some [quick energy saving tips](#). Whether someone is a homeowner, private or social renter or living at home with parents, the Energy Saving Trust says there are many small actions that can help to reduce overall energy use.¹⁸⁴ They also have [advice on ways to save on energy bills in the longer term when working from home](#). For example, Energy Performance Certificates (EPCs) and energy efficiency measures.¹⁸⁵
- Some people may be eligible for a grant for energy efficiency measures, depending on their circumstances. The [Welsh Government's Warmer Homes Programme](#) funds energy efficiency programmes for eligible households.¹⁸⁶
- The way we use water has [a surprising and largely unrecognised impact on the climate.](#)¹⁸⁷ [Dŵr Cymru has water saving tips for households.](#)¹⁸⁸
- Learn more about your [digital carbon footprint and practical tips on ways to reduce it.](#)¹⁸⁹



What about switching to 'green' energy tariffs?

Many energy suppliers now offer 'green' tariffs. A 'green' tariff either means that the energy supplier matches your usage with renewable energy generation or that they contribute towards environmental schemes on your behalf (through schemes such as offsetting).

Green tariffs can be a positive way to support renewable energy and potentially reduce emissions. [But the 'green' aspect of the tariffs isn't always straight forward.](#)¹⁹⁰ And although costs have come down over time, green tariffs can be more expensive.

It is vital that employers provide help to cover additional energy usage due to homeworking. Many workers are facing higher energy bills from homeworking. There are concerns about fuel poverty and people working in cold conditions because they can't afford to put the heating on. The [Energy Saving Trust has advice](#) about understanding different tariffs, ways to reduce bills, support with paying energy bills and switching supplier.

A just transition for energy workers and consumers

Energy unions have highlighted the importance of ensuring [a just transition for workers in the energy sector](#) and securing a balanced low-carbon energy mix. They say: "We need a long-term plan with decisions taken to secure a long-term future for all, not one simply based on continued short-term profits or convenience." And they point out that: "It is essential that energy supply is secure, reliable, works in the interests of the nation and is affordable to all consumers with costs shared on an able to pay basis."¹⁹¹

The GMB has [highlighted the potential negative consequences to workers and consumers from unmanaged decarbonisation in the energy sector.](#)¹⁹² And UNISON has highlighted the instability of the growth of [smaller energy suppliers entering the market and then going bust, causing job losses and additional costs to consumers.](#)¹⁹³

Wider issues

As well as the environmental impacts the wider health, social, equality and economic impacts need to be weighed up too. Unions are working to secure longer-term approaches to more wide-spread home working that are fair and flexible enough to provide support for the different needs and circumstances of all members.

Trade unions recognise that there are real benefits but also valid concerns about what a longer term move to home working could mean. Some of the wider advantages and disadvantages/concerns that have been identified include:

Potential advantages

- Better work life balance – eg less commuting time and easier to work around caring responsibilities, household tasks and more time for family, friends and other interests.
- Some workers report better concentration and productivity, with fewer distractions.
- Access to a wider range of meetings and training events (eg with more virtual meetings and webinars available).
- An end to 'presenteeism' culture where workers are expected to be at their desks from 9 – 5 and a greater acceptance of flexible working across the board.
- It can offer improved opportunities for some disabled workers and workers with caring responsibilities.
- It supports a greater connection to the local community – people are able to support local businesses and community groups. This could support local regeneration.

- Financial savings for some workers on things like commuting, food and clothing costs.

Potential disadvantages/concerns

- Health and safety issues – lack of suitable workspaces and unsuitable/unsafe equipment, poor heating and lighting standards, isolation and stress. Potentially serious physical and mental health impacts.
- Risk of employers outsourcing costs to workers. Risk of increased fuel poverty, debt and energy rationing.
- Negative impact on work-life balance – longer working hours with fewer breaks and more 'burnout'. Less separation between work and home. Increased workloads.
- Negative impact on relationships. Increased tension with others in the home. Issues such as noise and disputes over access to the better ergonomic spaces in the house.
- Particular difficulties for workers in shared or overcrowded housing – privacy issues, concentration, lack of suitable working space.
- Concerns that those experiencing serious problems at home – such as domestic abuse - lose opportunities to access respite and support.
- A lack of every day social interactions can create boredom, a sense of isolation and reduced well-being – this may be particularly acute for workers who live alone.
- Communication problems – digital communication can result in reduced trust and more difficulty in building professional relationships, particularly for new starters. It can be harder for workers to develop informal support/development networks.

- Potential impact on jobs in other sectors (eg hospitality and retail) and fear of the 'hollowing out' of city centres in the longer term.
- Association between homeworking and more casual forms of employment. For example, zero-hours contracts and bogus self-employment. It may be easier for bad employers to take advantage of remote working to isolate staff or cut benefits, in the knowledge it may be more difficult for some workers to get together to raise concerns.
- Concerns about increased and more invasive use of surveillance technology by employers.
- Union organisation – less time in the traditional workplace means less contact with fellow workers and union reps. Online discussions are no substitute for regular formal and informal meetings to reinforce workplace solidarity.

Conclusion

Widespread homeworking developed as a necessary response to the Covid pandemic. It has played a vital role in keeping organisations going and protecting workers from the risk of infection during the pandemic. But more research is needed to fully understand the impacts and long-term implications of a more permanent shift to homeworking on a wide scale.

Unions are urging a cautious long-term approach that considers and balances the full range of economic, social and environmental impacts and supports the needs of different workers. And employers must ensure that homeworking doesn't simply outsource costs and emissions to workers.

Union reps can help efforts to gather more evidence about homeworking by encouraging members to complete this survey:

<https://phil.onlinesurveys.ac.uk/working-from-home-wfh-your-experiences>

Sources of further information:

ACAS guidance on homeworking www.acas.org.uk/working-from-home

UNISON homeworking guide <https://www.unison.org.uk/content/uploads/2020/12/COVID-19-working-from-home-guidance-and-model-policy-22-December-2020.pdf>

Energy savings trust – advice on energy efficiency for homeworkers www.energysavingtrust.org.uk/simple-steps-take-action-home-energy-efficiency/

HMRC tax relief for homeworkers - www.gov.uk/tax-relief-for-employees/working-at-home

Carbon Trust report on homeworking: www.carbontrust.com/resources/homeworking-helping-businesses-cut-costs-and-reduce-their-carbon-footprint

The energy and climate impacts of homeworking www.iopscience.iop.org/article/10.1088/1748-9326/ab8a84

Public Health Wales – homeworking research: www.phw.nhs.wales/news/home-working-can-enhance-mental-well-being-but-also-increases-risk-

Greener homeworking – action plan:





Procurement and supply chain

Introduction

The outsourcing of production, goods and services has grown significantly in the last 40 years. The end-result has often been domestic loss of jobs, worse pay and conditions, lack of union recognition, and poorer health, safety, and environmental standards. Not surprisingly unions have campaigned against these measures and called for the return of in-house services.

In 2014 the TUC motion 'Ethical procurement and union recognition' noted:

"Congress welcomes the TUC's engagement with the Ethical Trading Initiative, and supports the principle that consumers, companies, and organisations should consider the position of workers in the supply chain of goods and services before making purchasing decisions."

Unions have called for the use of social value commissioning and procurement to support jobs, local employment and skills initiatives, apprenticeships, equalities, and other social and environmental criteria.

Welsh Government action on procurement

The Welsh Government has highlighted the potential of procurement policy in its programme for government, '[Taking Wales Forward](#)'.¹⁹⁴ It has piloted a '[Better Jobs, Closer to Home](#)' project, designed to create employment and training hubs in areas of high economic deprivation.¹⁹⁵ The Wales TUC campaigned specifically for such a project. The Welsh Government has also pledged to continue to improve procurement policy, including community benefits. While a new public sector policy procurement statement is currently being drafted, Welsh Government has recently issued an [updated policy note on community benefits and social value clauses](#).¹⁹⁶

The Well-being of Future Generations Act (2015)

provides [an overarching framework for public procurement in Wales](#). It is an opportunity to transform the way procurement is delivered to ensure the £6 billion spent by public bodies in Wales supports sustainable development and delivers the best outcomes across all four pillars of well-being – social, economic, environmental and cultural – for current and future generations. This combined with procurement being one of the seven corporate areas for change in the statutory guidance means it should be a key area of focus for public bodies in meeting their obligations under the Act.¹⁹⁷

In 2018 the Welsh Government introduced a [Code of Practice 'Ethical employment in Supply Chains'](#).¹⁹⁸ The Code sets out 12 commitments expected from recipients of public money when procuring goods and services. It covers the following employment issues:

- modern slavery and human rights abuses
- blacklisting
- false self-employment
- unfair use of umbrella schemes and zero hours contracts and
- paying the Living Wage.

The code isn't just for public bodies and those involved in the supply chain for the public sector. Welsh Government encourages all businesses and third sector organisations to sign up to the code. A [guide for businesses](#) and [free online training](#) is available.

Trade unions also hope to see new provisions on procurement included in the proposed Social Partnership Bill. It is hoped that the Bill will:

- Place a duty on public bodies to work in social partnership and promote Fair Work.

The [UN Guiding Principles on Business and Human Rights](#) (UNGP) are a set of guidelines for States and companies to prevent, address and remedy human rights abuses committed in business operations.

“Private companies delivering public services are covered by the UNGP and the Modern Slavery Act (as are higher education institutions) but Wales has shown that a more ethical approach to procurement can be championed at government level and implemented across the whole of public services.”

From UNISON’s guide to Responsible Procurement in Public Services: www.unison.org.uk/content/uploads/2017/05/24408.pdf

- Require public bodies to produce a procurement strategy centred on Fair Work. This could leverage the £6.3bn that Welsh Government spends each year on products and services in order to drive change in the private sector.

UK level policy

The [Sustainable procurement in Government: Guidance to the flexible framework](#), Defra, 2011 says: “All public procurement in the UK is required to achieve value for money and is governed by the public procurement rules to ensure that it is fair and open. Importantly, there is no legal barrier to embedding sustainability within public procurement.”¹⁹⁹

In addition, the [Public Services \(Social Value\) Act 2012](#) came into force in 2013. This makes it a legal requirement for contracting authorities to consider how “social value” could be achieved through a given procurement exercise.²⁰⁰

What are the issues?

Up to 90% of an organisation’s environmental impact lies in the value chain - either upstream (supply chain) or downstream (product use phase). Analysing and taking action on your value chain is therefore a vital step for any business that wants to become more sustainable and prepare for a low carbon economy.

What an organisation buys, who it buys from, and how it uses the goods and services once bought, can have a huge influence on everything from performance and employee well-being to reputation and stakeholder relations. For this reason, the purchasing function of an organisation can play a key role in social responsibility and help integrate it at the governance level.

Procurement generally makes up a substantial part of an organisation’s budget. In the public sector alone, it accounts for around 12% of GDP and 29% of government expenditure in the member countries of the Organisation for Economic Co-operation and Development (OECD).

Up to 90% of an organisation’s environmental impact lies in the value chain – either upstream (supply chain) or downstream (product use phase)

It is important that an ethical procurement policy considers both human and workers' rights and environmental issues.

*'Sustainable Procurement is a process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to **society** and the **economy**, while minimising damage to the **environment**.'* [Procuring the Future - \(UK Sustainable Procurement Task Force, June 2006\)](#)



Reputational risk and corporate social responsibility

Companies run reputational risk when environmental and human/workers' rights abuses are identified in their supply chains. Many consumers want to buy ethically and there is increasing pressure on companies to ensure they take these considerations seriously.

Some employers have already developed strategies to ensure a more ethical approach to purchasing. They are producing policies and statements which show that they are being responsible buyers. A number of employers have produced codes on animal welfare, sustainability, environmental impact, slavery and child labour. All organisations should be developing ethical procurement policies.

Taking action

A comprehensive ethical procurement policy, which considers both environmental and social protections, is vital to securing change.

The carbon footprint of an organisation needs to be calculated against all activities. This includes the good and services that are provided by external bodies.

Some aspects of ethical procurement can be quite

challenging and complex, because the issues are outside of an organisation's direct control. It may be helpful for the employer to engage with a recognised scheme to help support change.

For example, the Carbon Trust has international certification for organisations working to measure, manage and reduce carbon emissions outside their direct operational control.

To achieve the [Carbon Trust Standard for Supply Chain](#), organisations need to complete a detailed hotspot analysis to identify the most significant areas of carbon emissions within their supply chain. This is then used to determine a baseline for emissions reduction and prioritise suppliers for future engagement. To retain the Standard on an ongoing basis, organisations must demonstrate evidence of supplier engagement, demonstrate reductions in specified parts of their supply chain, and then expand their approach to engage different areas or suppliers.

[ISO 20400, Sustainable procurement guidelines](#) provides guidance for organisations wanting to integrate sustainability into their procurement processes. It is a sector -specific application of ISO 26000, (guidance on social responsibility), which it complements by focusing specifically on the purchasing function.



Problems of the supply chain in the renewable sector

The dangers of de-coupling environmental considerations from domestic social concerns is highlighted by the off-shore wind industry in Scotland. On the one hand the growth of renewable energy is welcome, but it has failed to adequately address the supply chain issues of local jobs. [Unions have criticised the failure to invest in Scottish manufacturing yards which has led to North Sea wind farm contracts](#) being awarded to Spain, Indonesia, the UAE and China. Unless there is a strong commitment from industry and governments to develop a domestic manufacturing sector it will be difficult to get support for a green industrial strategy.²⁰¹

Raising awareness

It is important that an ethical procurement policy considers both human and workers' rights and environmental issues. Employers who treat workers badly often show little regard for the environment. And environmental degradation can have devastating consequences on people. It's important that both issues are addressed within procurement, as a focus purely on jobs will fail to deliver a sustainable future. The diagram to the right illustrates this.

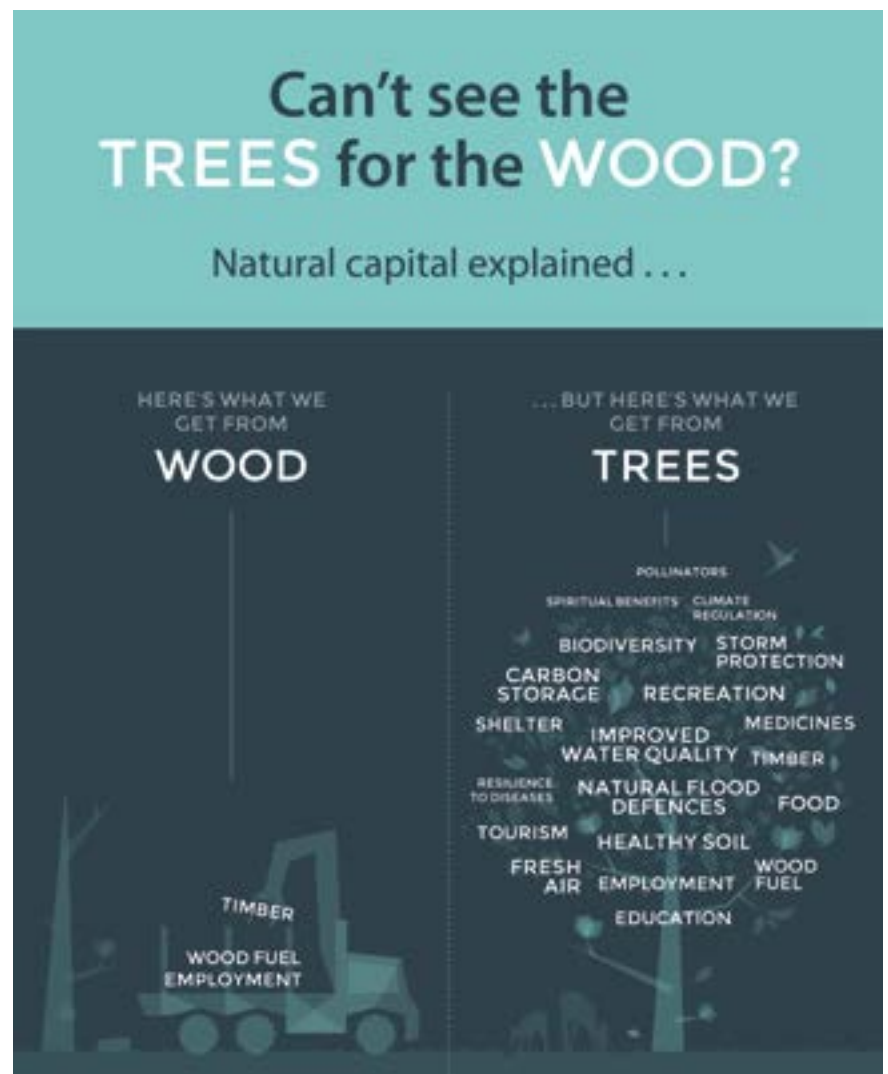


Image credit: Scottish Wildlife Trust and Glidden Design Ltd

Negotiating for change

A report on the 'State of Sustainable Public Procurement in Canada' published in 2019, contains a 10-point framework to guide best practice:

MCSP Best Practice Program Framework

In 2010, the MCSP and Reeve Consulting created a 10-point framework to guide organizations on how to create high-performing sustainable procurement programs, benchmark their progress, and develop simple action plans for continuous improvement. A sustainable procurement policy alone is not a program. In our experience, organizations that are most effective in implementing sustainable procurement have all or most of the following program framework elements in place.



1. STRATEGY AND ACTION PLAN

A sustainable procurement strategy outlines the long-term vision for a sustainable procurement program and provides a clear course of action for implementing and managing it. The best strategies and action plans are integrated into other financial and procurement business plans and transformation plans.



2. STAFFING AND RESOURCES

Staff have sustainable procurement embedded in their role descriptions and are given dedicated technical and financial resources to design, implement, and manage the organization's sustainable procurement program. Staff are supported by an internal, cross-functional sustainable procurement working group or advisory committee that oversees implementation.



3. POLICY

A sustainable procurement policy provides clarity and direction on the importance of considering green, social and ethical risks and opportunities in procurement. Good policies directly reference specific environmental and social issues of importance. They may be stand-alone or embedded into existing procurement or finance policies.



4. HIPO LIST

A High Impact Procurement Opportunities (HIPO) list is a shopping list that identifies specific product and service categories for sustainable procurement based on risk, impact, volume, spend, and/or strategic importance for sustainability. Good HIPOs are continually updated with new sustainability targets for each category, as well as new procurement categories.



5. PROCUREMENT PROCEDURES

Procedures outline how sustainability requirements will be integrated into each major type of procurement process, whether sole sourcing, multiple quotes, or competitive processes like request for proposal (RFP). This may include guidance for developing specifications, weighting and evaluating responses, and including sustainability performance requirements into vendor contracts.



6. TOOLS

Tools enable staff to take a standardized approach to assessing sustainability risks and opportunities and making informed purchasing decisions. Some examples include risk evaluation worksheets and supplier questionnaires.



7. TRAINING AND ENGAGEMENT

Training and engagement helps staff understand sustainable procurement strategy, policies, and priorities and empowers them to integrate sustainability into purchasing decisions. Training programs are most effective when they combine peer-based and individual learning and are offered at regular intervals.



8. MEASUREMENT AND REPORTING

Measurement and reporting take regular stock of performance on sustainable procurement goals and highlight successes, challenges, and opportunities. Effective measurement includes both process indicators that measure how well an organization is aligning practices with policy, and outcome indicators that measure specific social, environmental, or economic outcomes such as job creation, waste diverted or financial savings.



9. SUPPLIER ENGAGEMENT

Engaging suppliers on sustainability priorities and inviting them to be partners in addressing social and environmental risks is a critical element of a best practice program. Some suppliers may be leaders and help inform organizational efforts, while other suppliers may require training and support. Sustainability performance is an important aspect of ongoing vendor performance management.



10. LEADERSHIP AND COLLABORATION

Leadership and collaboration with other organizations and sectors helps advance the field of sustainable procurement and builds mutually beneficial resources for all stakeholders.

Credit: Reeve Consulting https://www.reeveconsulting.com/wp-content/uploads/2020/03/Reeve_2019_State-of-the-Nation-vFIN.pdf



Ecocide

The term 'ecocide' describes the large-scale destruction of the environment. Events such as the 1984 gas explosion in Bhopal, bee colony collapse and deforestation for palm oil exploitation have all been described as examples of ecocide. [The Swedish trade union movement has backed calls to recognise 'ecocide' as an international crime](#). This would mean destruction of the environment would be put on the same footing as genocide, and other international 'crimes against peace'.

The Swedish Trade Union Confederation says: "Public investment, procurement rules, taxes and subsidies must be clearly directed at the branches of human activity that contribute positively to the transition with care for workers and the environment."

Swedish ecocide campaigners say: "It is not just ecosystems who are victims of the ruthless exploitation which is legally permitted today. The workers of the world are paying a high price in the form of environmental destruction and climate change, especially in the global South."²⁰²

The framework opposite makes no reference to workers' rights. Introducing a procurement policy provides an opportunity to include these protections.

Other bargaining considerations – a checklist:

- ☑ Does any procurement policy contain any assessment criteria dealing with ethical employment in the supply chain? Has your employer signed up to the Code on Ethical Employment in Supply Chains?
- ☑ Does the policy require companies in the supply chain to report on their environmental policy, including their carbon emissions?
- ☑ Does the policy and practice support the sourcing of goods and services from local and regional businesses?
- ☑ Is there an opportunity to make the case for bringing services and the production of some goods back in-house?
- ☑ Has the employer published a [modern slavery statement](#)?

Many consumers want to buy ethically and there is increasing pressure on companies to ensure they take these considerations seriously.

Sources of further information:

Future Generations Commission - procurement guidance: www.futuregenerations.wales/work/procurement/

Ethical Employment in Supply Chains – Code of Practice: www.gov.wales/ethical-employment-supply-chains-code-practice-guidance-and-training#Codeofpractice

UNISON guide to responsible buying in public services: www.unison.org.uk/content/uploads/2017/05/24408.pdf

Anti-Slavery International www.antislavery.org

Clean Clothes Campaign www.cleanclothes.org

Electronics Watch www.electronicswatch.org

Ethical Trading Initiative www.ethicaltrade.org

Global Justice Now www.globaljustice.org.uk

Good Electronics www.goodelectronics.org

Labour behind the Label www.labourbehindthelabel.org

War on Want (WoW) www.waronwant.org

Worker Rights Consortium (WRC) www.workersrights.org



Action plan – procurement and supply chain:

Step 1: Research

- ➔ Find out who is responsible for procurement.
- ➔ Gather any existing policies and data.
- ➔ If there is already a procurement policy, check if it covers the 10 points in the MCSP framework above plus measures to safeguard workers'/human rights in the supply chain.

Step 2: Engage

- ➔ Speak to the branch committee about the idea of pursuing an ethical procurement policy (or improvements to an existing one)– get a motion to the branch.
- ➔ Get it on the agenda for a members meeting.
- ➔ Talk to other unions in the workplace to build support.

Step 3: Plan

- ➔ Put together a plan for what should be included in an ethical procurement policy, using the resources in this chapter, plus any guidance from your own union or suggestions from members etc.
- ➔ Plan a campaign to build support for change—it may be helpful to use key dates such as Workers' Memorial Day, World Environment Day or World Day for Decent Work to highlight the need for change.
- ➔ Get advice from external organisations if needed – see the resources section.

Step 4: Negotiate

- ➔ Make a business case and a moral case for a comprehensive ethical procurement policy that addresses both environmental and social responsibility.
- ➔ Set ambitious long-term goals for improvement and measurable interim targets.

Step 5: Consolidate

- ➔ Set a date to review the policy and progress.
- ➔ Encourage the employer to sign up for relevant accreditation schemes – eg the Code on Ethical Employment in Supply Chains, Carbon Trust and ISO certification, Electronics Watch monitoring to support continuous improvement.
- ➔ Ensure training and awareness raising is put in place so all staff understand changes.
- ➔ Publicise success and make members aware of the union's role in securing improvements.

Finance and investment

Introduction

Organisations should consider their environment strategy in terms of both their investment in other organisations and attracting investment into their organisation. In recent years there has been a debate about the tactics of trying to influence the investment policies of the finance and investment sector through engagement as opposed to calling for divestments that break the link with companies that have a poor record on climate change or other social justice issues. In the UK around £3 trillion is invested in pensions.

It's important that any action on pension funds, investment and banking is linked with just transition principles. Strategies should focus on better reporting and managing of climate risk alongside social dimensions. For example, consideration should be given to the impact on and support for workers and communities who are directly affected by the move away from fossil fuels (eg oil and gas workers).

A just transition for oil and gas workers

The RMT has [highlighted the plight of thousands of oil and gas workers](#) who have lost their jobs because there is no route for them to join the green recovery.²⁰³

Platform is an environmental campaign organisation which focuses on the social, economic and environmental impacts of the global oil industry. It has carried out a survey of workers in the oil and gas industry as part of a campaign focused on increasing worker consultation and power over policy decisions related to the oil and gas phase out. Over 80% of workers who responded to the survey said they would consider moving to a job outside the sector. And more than half said that, given the option of retraining to work elsewhere in the energy sector, they would be interested in renewables. Full survey report: [Offshore – oil and gas workers' views on industry conditions and the energy transition](#).²⁰⁴

It's important that any action on pension funds, investment and banking is linked with just transition principles.

What are the issues?

Responsible investment

Responsible investment is an investment strategy which integrates environmental, social, and governance (ESG) factors into investment analysis and decisions. It recognises that ESG factors can have an impact on the financial value of an investment and, also that investments have an impact on the world around us. A responsible approach to investment recognises that long-term prosperity and wellbeing requires a move away from short-term profit as the only definition of value. This aligns closely with the Well-being of Future Generations Act's sustainable development principle and wellbeing goals.

Climate investment

This is an extension of the environmental factor and calculates the climate and carbon strategy of an organisation. Mark Carney, ex-Governor of the Bank of England, has said [banks should link executive pay to climate risk management](#), as part of efforts to align the finance industry with Paris climate goals.²⁰⁵

The transition to a decarbonised economic system will require unprecedented levels of investment; estimates from the Committee on Climate Change suggest that investment in the UK's power sector alone needs to rise from around £10 billion to £20 billion annually to achieve this goal.

Standards

New disclosure requirements mean those running pension funds now need to explain how environmental, social and governance (ESG) factors are used in investment decisions. Recent high-profile campaigns have resulted in investment changes at the largest pension funds, and the pressure is set to build with greater public awareness of impact investing and fossil fuel divestment strategies.

The Task Force on Climate-Related Financial Disclosures (TCFD)

[TCFD](#) provides a framework for organisations to foresee the impacts of various scenarios of global warming on their future viability.

In 2019 the UK Government published its [Green Finance Strategy](#). This includes larger pension schemes. This has an 'expectation' for all listed companies and large asset owners to disclose in line with the TCFD recommendations by 2022. The problem with this voluntary approach is that it is unlikely to deliver at the speed required.

Parts of the investment management industry are calling on the UK regulator to make TCFD disclosure mandatory for all commercial companies with a premium listing. The Investment Association (IA), which represents 250 members with £8.5tn in assets, [has thrown its weight behind calls for compulsory environmental disclosures](#), amid concerns that listed companies are not being transparent about how climate risks are influencing the way they invest and spend.²⁰⁶

Mark Carney has recognised this by pointing out that voluntary disclosure frameworks have left "loopholes" enabling corporates to continue de-prioritising or externalising their climate risk – most commonly not taking account of their Scope 3 emissions.²⁰⁷

Finance in Wales

The Economic Contract

The [Economic Contract](#) has been designed to enable the Welsh Government to develop a new and strengthened relationship with businesses who receive its funding. It aims to drive inclusive growth and responsible business behaviours, including increasing the availability of fair work and decarbonisation

The Wales TUC want to see the Economic Contract strengthened to ensure that financial support from Welsh Government is only offered on a 'something for something' basis with organisations being expected to demonstrate that they fully align their practices with Fair Work Wales Standard(s) and the decarbonisation agenda.

The Development Banc for Wales

The Welsh Government has established the [Development Banc of Wales](#). It has a strategic focus on supporting businesses and safeguarding jobs in Wales. Development banks can play a leadership role in the transition by raising social and environmental standards and supporting key regions and industrial clusters. The Banc is already providing funding for energy efficiency and renewables and could play an important role in supporting a just transition and promoting fair work standards.

Pension funds

Pension funds are uniquely placed to help meet the challenge of delivering ethical finance to support the green recovery. They own almost a fifth of British companies. This gives pension schemes enormous influence over company behaviour on environmental and social issues. Companies have a huge impact on people and the environment: their attitude to climate change, child labour, or arms sales can affect the lives of millions. Despite this, few pension schemes ever raise such issues with the companies they own.

Pension funds are uniquely placed to help meet the challenge of delivering ethical finance to support the green recovery.



The Occupational Pension Schemes
(Investment and Disclosure) (Amendment)

Regulations 2019 require that the Statement of Investment Principles (SIP) of a Defined Benefit (DB) or a Defined Contribution (DC) scheme with 100 or more members must now state the trustees' policy in relation to:

- ☑ Taking account of "environmental, social and governance considerations (including but not limited to climate change), which the trustees ... consider financially material" over "the length of time that the trustees ... consider is needed for the funding of future benefits by the investments of the scheme" when making investment decisions.
- ☑ Taking account of "the views of the members and beneficiaries including (but not limited to) their ethical views and their views in relation to social and environmental impact and present and future quality of life of the members and beneficiaries of the ... scheme" when making investment decisions.
- ☑ "The exercise of the rights (including voting rights) attaching to ... investments ... and... undertaking engagement activities in respect of the investments ...including the methods by which, and the circumstances under which, trustees would monitor and engage with relevant persons about ...performance, strategy, risks, social and environmental impact and corporate governance".
- ☑ The trustees of DB or DC schemes with 100 or more members must update their SIP (and any DC default SIP) to include their policy in relation to a number of points concerning their "arrangement with any asset manager". The policy must cover five points, including: (i) "how the arrangement ... incentivises the asset manager to align its investment strategy and decisions with the trustees'" wider investment policy (for example, on the kinds of investment to be held and on environmental, social and governance factors).²⁰⁸



Transition Pathway Initiative

The Environment Agency Pension Fund has joined forces with the Church of England's National Investing Bodies to launch a major initiative identifying companies that pose the biggest climate change risk.

The [Transition Pathway Initiative \(TPI\)](#) launched 11 January 2017 introduces a free online tool, developed with the Grantham Institute at the London School of Economics and using data from FTSE Russell, the index provider.

The online tool ranks companies by two measures: how well their management is dealing with climate change risks, and how effective they are at achieving carbon reduction.

The business case

A growing body of evidence indicates businesses that prioritise environmental, social and governance (ESG) factors perform better in the long-term. Being environmentally sustainable, socially responsible and well governed reduces business risk and ultimately improves the bottom line. At a time when historically low interest rates and gilt yields make returns harder for pension funds to find, harnessing the green recovery promises better outcomes for their members.

**Businesses
that prioritise
environmental, social
and governance (ESG)
factors perform better
in the long-term**

Dozens of banks, investors and institutions commit to financing a just transition for the UK

Banks, investors and financial institutions have joined forces with universities and trade unions to launch the UK's first alliance to finance a just transition.

Coordinated by the Grantham Research Institute on Climate Change and Environment at the London School of Economics, The [Financing a Just Transition Alliance \(FJTA\)](#) is supported by almost 40 organisations.

The objective of the Alliance is to translate the growing commitment to a just transition across the financial sector into real world impact. This means delivering the UK's climate goals in ways that provide positive social results in terms of workers and communities and leave no-one behind.

"As we rightly ramp up our national efforts to reach net zero, it is vital we secure a just transition so that working people aren't left behind. That's why we welcome this new alliance, which will help finance a just transition to a fairer and greener economy with decent work at its heart," said Paul Nowak, Deputy General Secretary of the Trades Union Congress.

Examples of action on finance and investment

Pensions

The South Yorkshire Pensions Authority, responsible for administering the county's £9bn local authority pension scheme for its 160,000 members, has adopted a net-zero by 2030 policy to govern its portfolio.



Statement of investor commitment to support a Just Transition

[Principles for Responsible Investment](#) is supported by the United Nations.

It has issued a [Statement of Investor Commitment to Support a Just Transition on Climate Change](#) which has been endorsed by 161 investors, including the UNISON Staff Pension Scheme.

The statement says:

"There is an increasing recognition that the social dimension of the transition to a resilient and low-carbon economy has been given insufficient attention, notably in terms of the implications in the workplace and wider community. Achieving a just transition, in line with the 2015 Paris Agreement on Climate Change, will help to accelerate climate action in ways that deliver the Sustainable Development Goals.

"Investors can make an important contribution as stewards of assets, allocators of capital and influential voices in public policy to make sure that the transition produces inclusive and sustainable development...

"As investors, we commit to take action to support the just transition by integrating the workforce and social dimension in our climate practices. We will draw on the evidence and recommendations contained within the

investor guide on the just transition take action in one or more of the following areas:

- ✓ **Investment strategy:** integrate workplace and community issues into climate change policies and investment beliefs, dialogue with stakeholders and investment mandates.
- ✓ **Corporate engagement:** include workforce and community issues in climate-related engagement on corporate practices, scenarios and disclosures.
- ✓ **Capital allocation decisions:** design investment mandates across asset classes that link decarbonisation, climate resilience, decent work, and inclusive growth.
- ✓ **Policy advocacy and partnerships:** support the inclusion of the just transition in regional, national and international policies and contribute to place-based partnerships.
- ✓ **Learning and transparency:** develop systems to review and communicate progress on just transition activity as well as share best practices.²⁰⁹

Investors can sign up to the statement: www.tfaforms.com/4694571

Asset Owners

Thirty of the world's largest asset owners, with portfolios worth a combined \$5tn (£3.8tn), have committed to cutting the carbon emissions linked to companies they invest in by up to 29% within the next four years.

Members of the UN-backed [Net-Zero Asset Owner Alliance](#) – which includes Aviva, the Church of England and the \$400bn US fund CalPERS – will each set decarbonisation targets for 2025 as part of wider efforts to align their portfolios with the Paris climate goals and achieve net-zero emissions by 2050. They will also identify the top 20 emitters responsible for the bulk of their portfolio emissions and set goals for slashing emissions in key sectors including oil and gas, utilities, transport and steel.

Getting members' views

The Environment Agency Pension Fund surveyed their members, and found:

- 88% wanted their pension invested in sustainable and low carbon assets.
- 7 in 10 members thought climate change will present a financial risk to investments in their lifetime.
- And, generally, the younger the member, the greater they saw this risk to be.

Raising awareness

Unions seeking to start a campaign for responsible investment will need to get the support of their members. There are a number of ways to do this:

Moral responsibilities

In addition to highlighting the need to protect the planet for future generations, there may be factors that are linked to your sector of employment. For

example, Medact and other leading health and climate NGOs, argue that the UK health community must phase out its investments in the fossil fuel industry, with air pollution from fossil fuels being responsible for approximately 5% of all UK deaths.

The Medact report [Unhealthy Investments](#), 2015, warns that investment in the fossil fuel industry is incompatible with health organisations' moral and professional responsibilities to address these direct health implications, and the longer-term health impacts of climate change.²¹⁰

Stranded assets

Now generally accepted to be those assets that at some time prior to the end of their economic life (as assumed at the investment decision point), are no longer able to earn an economic return (that is, meet the company's internal rate of return), as a result of changes associated with the transition to a low-carbon economy. It means members pensions may be at risk if investments in oil and gas, and other high carbon sectors is continued.

Guidance for pension trustees

The Pensions Climate Risk Industry Group have developed [best practice guidance](#) for occupational pension schemes on integrating climate risk in general – and the recommendations of the Task Force on Climate Related Disclosures (TCFD) in particular – into decision-making and reporting.

Negotiating for change

Unions will need to understand the range of finance and investment activities of their employer. This could include:

- banking arrangements
- pension funds
- investment portfolios.

Finding information

Unions may need to get some specialist support prior to agreeing a negotiating plan. Sources of information and advice include:

- **Fair Pensions** - Aims to mobilise the financial power of pension investments to create change: as major shareholders in companies, pension funds have enormous power to improve corporate behaviour on the environment and human rights.
- **ShareAction** – Is a charity campaigning for responsible investment. It considers that ‘the majority of asset managers demonstrate a substandard approach to responsible investment’. This is a reason why it is important to link up with organisations who have a track record of supporting responsible investment actions.

A negotiating plan could include:

- Contact organisations that provide support for unions on ethical investment.
- Secure a commitment to an ethical investment policy and engagement strategy that supports a Just Transition. That is, one that scales up climate action and also delivers positive social impact, both in terms of maximising the social benefits of net zero and also making sure no one is left behind.
- The establishment of an investment committee with union representation.
- Full disclosure of investment portfolios.
- Calling for an ethical banking policy, the main aim of which is to switch accounts to a bank which has an ethical investment policy which supports climate action and delivers positive social impact.
- Calling on asset owners, asset managers and

service providers to sign up to the [Statement of Investor Commitment to Support a Just Transition on Climate Change](#).

Finance and investment checklist:

- ☒ Has your union got a pensions officer you can contact?
- ☒ Do you know the investment policy of your pension fund?
- ☒ Is there union representation on the board of trustees or any subsidiary bodies?
- ☒ Does the policy contain any references to ethical investment?
- ☒ Does the ethical investment policy or other investment documents make specific reference to taking action on climate or other environmental and social considerations?
- ☒ Does the policy make any reference to aligning with Paris Agreement climate targets?
- ☒ Has your organisation on environmental, social or governance grounds a) divested b) invested c) engaged with companies as a shareholder?
- ☒ Are there opportunities to raise membership awareness on the importance of this issue?

Sources of further information:

Transition Pathway Initiative:

www.transitionpathwayinitiative.org/

Grantham Research Institute on Climate Change and the Environment - Financing a Just Transition:

www.lse.ac.uk/GranthamInstitute/financing-a-just-transition/

Fair Pensions: www.fairpensions.org.uk

ShareAction: www.shareaction.org

Principles for Responsible Investment:

www.unpri.org/

The Task Force on Climate-Related Financial Disclosures:

www.fsb-tcfd.org/





Water

Introduction

The average water used per person per day is 143 litres in England and Wales. Water is becoming an increasingly expensive resource with mains, sewerage and trade effluent charges rising. Dŵr Cymru/Welsh Water has produced a [business guide to support water efficiency](#).

Companies that adopt a systematic approach to water reduction typically achieve a 20 - 50% decrease in the amount of water they use. By using less water, companies save money by reducing both water use and waste..

Welsh Government action

For public bodies in Wales, water efficiency campaigns can contribute to the realisation of the Well-being Goals defined in the Well-being of Future Generations Act.

The [Water Strategy for Wales](#) contains a general commitment to help both domestic and business customers of water supplies in Wales to become more efficient in their use of water.

In November 2017, the UK and Welsh Governments agreed an [Intergovernmental Protocol on Water Resources](#) to safeguard water resources, water supply and water quality for consumers in England and Wales. The Protocol came into force on 1 April 2018 and coincided with the replacement of the previous intervention powers the UK Government held in relation to the exercise of functions in Wales that had an effect on water related matters.

What are the issues?

Water and consumption

The key to water efficiency is reducing waste and reducing use. Reducing wastage of water needn't be difficult or expensive – many water saving ideas involve nothing more than a small change of habits.

Fixing a small thing can have a surprising impact – a tap dripping twice a second would waste 10,000 litres over the course of a year. Water supplies cost money in water, wastewater and fuel bills.

Water and energy

The storage, heating and use of water is energy intensive. The amount of energy attributable to the water collection, treatment and supply services is considerable. Heating and cooling of water on site is also an energy cost.²¹¹

Water and pollution

The principal pollutants of water courses are solvents, pesticides, and oil. It is vital that water use at work does not lead to pollution incidents. [Natural Resources Wales](#) is responsible for water management and quality in Wales.

Water and climate change

Operational emissions from the water industry account for nearly 1% of the UK's total carbon emissions. In 2017 it was 791,200 metric tons of CO₂ equivalent. This is because water treatment is energy and chemical intensive and transporting water around the country requires a great deal of pumping. Reducing water use will therefore have an impact on carbon footprint emissions.²¹²

**A tap dripping twice
a second would waste
10,000 litres over the
course of a year**

Water and health and safety issues

Under the [Workplace \(Health, Safety and Welfare\) Regulations 1992](#), employers have a duty to provide:

- ☑ **Toilets:** provide suitable and sufficient sanitary conveniences at readily accessible places.
- ☑ **Washing:** provide suitable and sufficient washing facilities at readily accessible places.
- ☑ **Water:** provide an adequate supply of wholesome drinking water and cups, readily accessible and conspicuously marked.

Tap water or water cooler?

The code of practice states that drinking water should normally be provided from the mains supply. Unfortunately, some water cooler machines have been found to contain harmful bacteria, including E.Coli. And contamination is difficult to eradicate if it gets into vending machines.

The large bottles used in water coolers, weighing nearly 20kg, can also cause manual handling injuries. Therefore, the best health, safety and environment solution is to provide tap water from the mains. If this is not possible, at least suggest your workplace reduces waste by installing mains-fed water coolers instead. As well as the increased convenience and energy and resource saving of getting rid of the heavy plastic bottles, these usually cost much less to run.

Taking action

Awareness raising

The water company supplying your workplace may have water-saving information leaflets and even posters encouraging people to conserve water. These can be used as part of your awareness-raising campaign in the workplace.

Waterwise runs [water saving week](#) (usually in May each year), and provides lots of campaign ideas. This could make a good focus for awareness-raising campaigns. And [World Water Day](#) takes place in March every year, organised by UN-Water, the United Nations agency. This can be useful for making the link between water waste in your workplace and access to clean water worldwide. You can find out more about international water campaigning [endwaterpoverty.org](#).

A quick water saving checklist:

Dŵr Cymru/Welsh Water provides the following guidance:

1. Check your bills for unusually high use.
2. Check the reading on your bill is similar to the reading on your meter.
3. Take regular water meter readings to help understand your water consumption and identify any potential leaks.
4. Check for underground pipe leaks and leaks from internal plumbing, outdoor taps, sprinklers and hoses.
5. Fix leaking taps and overflows. Check remotely located buildings and pipe work so that leaks don't go unnoticed.
6. Check that all water using devices, such as toilets, urinals and ball valves are working correctly.

Hosepipes and sprinklers use more water in one hour than a family of four use in a day.

7. Constant flushing of urinals and dripping taps can increase water consumption.
8. Use pipe insulation so that your pipes aren't at risk of freezing and splitting in cold weather.
9. Reduce water for toilet flushing:
 - ☑ Reduce the amount of water used for each toilet flush by inserting displacement devices in the cistern.
 - ☑ Where dual-flush cisterns are installed, place a clearly visible notice to explain how to operate both flushes to prevent incorrect operation and wastage.
 - ☑ New toilets may have overflows or leaks that discharge directly into the pan which may not be noticed or reported. Identify toilets with internal overflows and regularly check for discharge.

- Look for opportunities to reduce or prioritise window cleaning activities

Buy Water Efficient Equipment

- Specify low water consumption requirements for any new appliances, fittings or processes.
- High pressure spray jetters can use less water than conventional hoses as they use pressure instead of a large volume of water to clean.
- Review water usage once a year and produce plans to reduce consumption.
- Educate all staff on water efficiency initiatives and get support from management.
- Look at how to incorporate initiatives into your wider environmental policy.

Source: business.dwrcymru.com/en/help-advice/water-efficiency

Other areas for action:

Grounds

- Thousands of litres of water can be wasted every day on grounds maintenance. Hosepipes and sprinklers use more water in one hour than a family of four use in a day.
- High pressure spray jetters can use less water than conventional hoses as they use pressure instead of a large volume of water.
- Consider collecting rainwater in a tank or butt and using it for watering plants and shrubs.

Cleaning

- When washing vehicles or equipment consider recycling the water.



Leaky loos?

[Waterwise](#) has recently highlighted the problem of leaking toilets. It says a leaking toilet wastes between 215 and 400 litres of clean drinking water on average every day.

Between 5 and 8% of toilets are leaking, mostly dual flush toilets. And around 400 million litres of water is currently estimated to leak from UK toilets every day. This is enough water to supply 2.8 million people – the populations of Edinburgh, Cardiff, Belfast, Manchester, Sheffield, Liverpool and Bristol combined. This figure will increase without action.

Dual flush toilets are prone to leaks because the drop valve, which opens for a flush, sits underwater at the bottom of the cistern. Debris - like grit, porcelain or calcium – can catch in the valve causing leaks. These can then run constantly.

A leak can be silent but there may be a small ripple at the back of the bowl. Leak strips can be placed in a toilet bowl or food colouring can be put in the cistern between flushes to see whether it shows up in the toilet pan. Water companies can help with advice on how to identify leaks.

Negotiating for change

Water management checklist

	Yes	No	Don't know
Policy and Organisation			
Is water management included in your organisation's environment policy?			
Is there at least one designated member of staff responsible for water management?			
Do you know who your water supplier is?			
Measuring and monitoring			
Are water meters installed covering all water usage?			
Are readings taken regularly to check patterns of usage and ensure that the water company figures are correct?			
Does the meter register no usage during factory/office closure (if not, it could be an indication of a leak)?			
Is the amount of water used measured?			
Are there targets for reducing the amount of water used?			

	Yes	No	Don't know
Is water usage benchmarked with other comparators, eg water use against production output for manufacturing or against staff numbers? (If you are not metered the water company will make an allowance for water used per person per day. For a commercial property with only officers then 50-69 litres per person per day is typical.)			
Drinking water			
Do all staff have access to clean drinking water?			
Has the use of bottled water been eliminated?			
Leaks			
Have all leaks been fixed?			
Do staff know how to report leaks?			
Washing facilities			
Are percussion taps (that turn off after a set period) used?			
Are spray inserts in well-used taps (that reduce the amount of water used without sacrificing water efficiency) used?			
Are water and energy-efficient washing machines and dishwashers with an 'A' rating used?			
Are extended trigger handles for taps (ideal for kitchens as they reduce water used during food preparation and cleaning) fitted to tap points?			
Toilet facilities			
Are water savers like 'hippos' fitted to reduce the amount of water used each time it is flushed?			
Are dual flush toilets regularly checked for leaks?			
Pipe work			
Are water pipes well insulated to protect against frost damage?			
Alternative sources of water			
Do you harvest rainwater? This can be everything from rainwater butts through tot comprehensive roof collection measures.			
Do you re-use 'greywater' water from sinks, showers etc?			
Staff awareness			
Are staff fully aware of the importance of water minimisation?			
Are employees trained in how to use water efficiently?			

Sources of further information:

Dŵr Cymru/Welsh Water: www.dwrcymru.com

Waterwise: www.waterwise.org.uk

Natural Resources Wales – details of all water companies supplying Wales and NRW water resources management and planning: www.naturalresources.wales/about-us/what-we-do/water/water-resource-management-planning

Discover Water- information on water company performance: www.discoverwater.co.uk

End Water Poverty: www.endwaterpoverty.org



Case study: A pint doesn't have to cost the earth

Unite reps at a major brewery near Magor developed a pioneering greener workplace project. Back in 2008, the union was instrumental in setting up an initiative that saw the workforce taking the lead in energy saving. It led the way as one of Wales' first union-led green initiatives.

The result was [Project JUPITER \(Join Us People in Tackling Energy Reduction\)](#). After an initial £1.4 million company investment in the ideas and initiatives put forward by the workforce, the firm recouped its outlay in less than 18 months.

Unite set up a team of Energy Guardians and convened a meeting to look at what energy savings could be made and how they could achieve them. They came up with a set of long-and-short term goals.

Energy Guardians represented all departments at Magor and met monthly. They monitored improvements and examined the work process, looking at possible ways to cut such things as water and energy use. All of this was done with the involvement of the entire workforce, with Energy Guardians taking forward ideas that came up in their department. This developed into an energy saving mindset amongst the employees, with the knock-on effect of workers taking the message, and money saving ideas, home.

Thanks to the success of the project, the company saw:

- water usage drop 46%
- electricity usage fall 49%
- and heating bills cut by 23%.

In the first two years, the firm saved more than £2 million in bills. This was achieved through a mix of quick wins and a rolling programme of installing energy efficient equipment.



Heating, cooling, ventilation, and insulation

Introduction

Climate change targets have shone a spotlight on the carbon emissions from buildings. They underline the extent of the problem of achieving the legal standard of net zero by 2050. It's estimated that 80% of current buildings will still be in use in 2050. Yet the UK current building stock is some of the least energy efficient in Europe.²¹³

Buildings consume a huge amount of energy – heating alone represents 10% of the UK's carbon footprint. Any new build or major refurbishment offers an opportunity to try to ensure energy savings are factored in at the earliest stage. Research has shown that environmentally friendly buildings cost 2% more to build than conventional buildings, but reduce energy use by an average of 33%. The potential energy savings from a green building more than offset the initial cost premium of construction.²¹⁴

What are the issues?

Legal requirements

The [Energy Performance of Buildings Regulations 2017](#) require an [Energy Performance Certificate](#) (EPC). When a commercial building over 50m² is built, sold, or rented a non-domestic EPC is needed. This EPC is displayed in a similar way to that of a domestic property, with the energy rating shown on a scale of A-G. As with a domestic EPC, a commercial EPC is valid for 10 years.

Buildings consume a huge amount of energy – heating alone represents 10% of the UK's carbon footprint.

A non-domestic EPC will:

- Show an indication of current carbon dioxide emissions of the building; expressed in kgCO₂/m², and the primary energy use of the building.
- Provide a rating from A (most efficient) to G (least efficient).
- List cost-effective improvements that if implemented, will reduce energy use and save money.

Display Energy Certificate (DEC) – Required if you work in a public building with a floor area more than 250m² and that is frequently visited by members of the public. It must be displayed in a prominent place. Reps can check this to do a quick visual check on energy performance standards.

Overlap with health and safety law

Heating and ventilation at work are covered by health and safety legislation. [The Workplace \(Health, Safety, and Welfare\) Regulations 1992](#). Reg. 6 requires 'effective and suitable' ventilation, and Reg. 7 requires a 'reasonable' temperature. Safety reps must be consulted on how these standards are implemented. Green reps can use this opportunity to assess the environmental implications of achieving these standards.

To avoid potential conflicts of interest it is vital that there is effective liaison on the union approach. It will be important that decent standards are maintained on thermal comfort while still reducing carbon emissions.

Overlap with homeworking issues

The increase in homeworking during the Covid-19 pandemic may require a reassessment of the heating and ventilation measures. Potentially energy savings on heating that may be made by the employer could end in being picked up by a worker

working from home.

Unions will need to assess how far carbon reductions, and costs, are being passed on to workers. Any reduction in workplace emissions may be at the expense of bigger increases in domestic emissions from keeping heating on during the day. See the homeworking chapter on [page 106](#) for further considerations.

Funding for energy efficiency projects

Green Growth Wales

[Green Growth Wales](#) offers funding for Welsh energy efficiency projects. It is available to public sector organisations, the funding is repayable and interest-free.

Re:fit Cymru

[Re:fit Cymru](#) supports public sector bodies in Wales to make their buildings and assets more energy efficient. RE:FIT Cymru enables the Welsh public sector to secure guaranteed savings and reduce carbon impacts by accessing Energy Performance Contracts (EPCs).

Taking action

In 2017 the Carbon Trust produced guidance 'Heating, ventilation, and air conditioning'.

The appendix contains a checklist:

- ☑ Reduce the need. Turn off unnecessary equipment during the day and especially out of hours to reduce heat build-up in the space.
- ☑ Set higher switch-on temperatures for cooling and lower temperatures for heating. Set a gap or 'dead band' between heating and air conditioning



control temperatures of about 5°C. This improves occupants' comfort, cuts operating costs and reduces wear and tear on both systems.

- ☑ Turn HVAC systems off out of hours, unless the building is 'night-cooling'. Consider installing automatic controls to ensure equipment stays off.
- ☑ Look into areas that appear too hot or cold and consider localised thermostatic controls.
- ☑ Look out for draughts especially around poorly-fitting windows and doors. Install draught proofing to reduce heat losses and increase staff comfort.
- ☑ Check insulation levels and increase wherever practical to reduce the need for heating.
- ☑ Walk around your site at different times of the day and during different seasons to see how and when heaters and coolers are working. Check time and temperature settings.
- ☑ Take advantage of free-cooling. Where external temperatures are colder than the required internal temperature, you can ventilate the building with fresh air. 'Night cooling' is useful for cooling the building efficiently in summer

(Reproduced from CTV046v3, [Heating, ventilation and air conditioning guide](#) with the kind permission of the Carbon Trust).

Heating, cooling, ventilation, and insulation checklist

	Yes	No	Comments
Energy			
Has your organisation signed up to the Carbon Trust's carbon management programme, which helps large public and private sector organisations reduce energy use?			
If you are in a large workplace, do you have combined heat and power (CHP) generators?			
Heating and air conditioning			
Have there been any complaints about comfort conditions or reports of over-/under-heating issues?			
Have heaters/boilers been serviced in the last 12 months?			
Are heaters and air conditioning units operating in the same space at the same time?			
Is your air conditioning programmed to come on only when the temperature reaches 24oC?			
Does your heating system switch off when it gets above 19oC?			
Are the thermostats in the right places and set to the right temperature?			
Are filters and grills associated with heating, ventilation and air conditioning systems cleaned at intervals recommended by the supplier?			
Are there any obstructions in front of radiators, heaters and air ducts?			
Are doors or windows closed when the heating or air conditioning is on?			
Is your building properly insulated and draught-proofed?			
Can staff individually control heating and cooling in their workplace?			

Sources of further information:

TUC reps' guide to dealing with high temperatures at work: www.tuc.org.uk/sites/default/files/coolit_0.pdf

Carbon Trust – Heating, ventilation and air conditioning guide: www.carbontrust.com/resources/heating-ventilation-and-air-conditioning-guide

Energy Saving Trust: www.energysavingtrust.org.uk

Lighting and electrical equipment

Introduction

Lighting and electrical equipment account for a high proportion of the energy use in a building. According to the Carbon Trust, lighting uses some 20% of the electricity generated in the UK.²¹⁵ With the majority of current lighting systems still reliant on inefficient light sources there remains significant potential to move to low energy lighting such as LED.

What are the issues?

Health and well-being

Low lighting levels can cause discomfort for employees if they are insufficient to easily complete the tasks required. Glare and flicker can have an even more disruptive effect, including triggering headaches and eyestrain, especially for desk-based tasks.

Lighting levels also have an impact on health and safety at work. This is especially pertinent for sectors where risk of accidents is high, such as the

manufacturing, construction, and catering industries. The [Workplace \(Health, Safety and Welfare\) Regs 1992](#) state in Regulation 8 that every workplace must have 'suitable and sufficient' lighting, which should be natural lighting 'as far as is reasonably practicable'

Lighting levels

It is important that levels are checked to ensure minimum standards for the type of work being done.

Cost savings

Replacing legacy light sources with LED technology can reduce lighting energy costs by 70%.

The Carbon Trust has a [lighting business case tool](#) that helps calculate the business case for lighting upgrades for small and medium sized businesses.

Table 1: Required lighting levels for various activities

Illuminance (lux)	Activity	Area
100	Casual seeing	Corridors, changing rooms, stores
150	Some perception of detail	Loading bays, switch rooms, plant rooms
200	Continuously occupied	Foyers, entrance halls, dining rooms
300	Visual tasks easy/moderate	Libraries, sports halls, lecture theatres
500	Visual tasks moderate/difficult	General offices, kitchens, laboratories, retail
750	Visual tasks difficult	Drawing offices, meat inspection, chain stores
1,000	Visual tasks extremely difficult	Fine work and inspection, precision assembly
2,000	Visual tasks exceptionally difficult	Assembly of minute items, finished fabric

Source: The Carbon Trust [\[CTV049v2 Lighting Guide - 'Lighting' Fig 1, 2017\]](#)

Lighting and Electrical Equipment checklist

	Yes	No	Comments
Can staff individually control heating, cooling and lighting in their workplace?			
Are all bulbs low energy (LED or compact or modern fluorescent)?			
Is lighting on in areas, or at times of day, when there's enough daylight? Why?			
Do you have individual desk lamps?			
Do all staff turn off lights whenever and wherever they're not needed?			
Are motion sensor lights used in low-use areas?			
Is equipment regularly serviced and clearly labelled?			
Is any equipment left on when not in use? Why?			
Are there automatic power-reducing features, eg motion sensor lights, timers on water coolers, IT power-downs?			
Are all computer monitors flat screen?			
Are the energy saving features on your office activated, eg PCs, monitors and printers?			
Is equipment labelled with the amount of energy it uses?			
Does equipment have an energy monitor?			
Is new equipment installed in a way that makes it easy to use its eco-features?			
Are staff fully trained in its use?			
Do PCs automatically power down after working hours?			
Do you have seven-day timers (which ensure appliances are not left on overnight and at weekends) on shared equipment, eg printers, vending machines and water coolers?			

Sources of further information:

Carbon Trust lighting overview guide: www.carbontrust.com/resources/lighting-overview-guide

Energy Saving Trust: energysavingtrust.org.uk/advice/lighting/

Renewable energy

Introduction

Renewable energy is energy that comes, not from finite fossil fuels, but from naturally replenished sources such as wind, sun, water, ground heat, and biofuels like wood, crops, and organic waste.

Workplaces are some of the best sites for renewable energy generation. They are less likely to be in residential or very scenic areas, where planning permission can be difficult to obtain. They can install renewable energy on a larger, more efficient scale, and by building renewable energy on or near the site ('decentralised energy'), a lot of the problems associated with centralised power generation (losses in transmission, impacts on wildlife) can be avoided.

The cost of renewable energy, and the technologies that generate it, have fallen dramatically in recent years. This means the length of time it takes to repay any investment and start saving money (the 'payback time') is a lot quicker than it used to be, particularly as oil and gas costs continue to rise. There is also a wide range of financial help available to organisations.

From a trade union point of view, renewable energy has other benefits besides the obvious environmental ones: it can create more jobs on site or in the UK renewable energy industry, and the investment a company makes is a good indication of its greater commitment to the future of the company.

Workplaces are some of the best sites for renewable energy generation

What are the issues?

Natural Resources Wales provides the following summary of Wales' energy targets and policy framework:

Energy and Devolution

Energy is a reserved matter, which means strategic decisions and regulatory responsibilities relating to energy issues such as security, affordability and market fairness are made at the UK Government level. However, the Wales Act 2017 represents a shift whereby the Act devolves responsibility to the Assembly for larger scale energy generating and functions in relation to exempted energy buildings.

Wales' Energy Targets

In September 2017, The Welsh Cabinet Secretary for Energy, Planning and Rural Affairs, Lesley Griffiths proposed the following targets for Wales



- Wales to generate 70% of its electricity consumption from renewable energy by 2030
- 1GW of renewable electricity capacity in Wales to be locally owned by 2030
- By 2020 all new renewable energy projects to have at least an element of local ownership

Work is underway to ensure a framework is in place to help deliver these targets.

Welsh Energy Policy Framework

The Welsh Government's energy policy is set out in Energy Wales: A Low Carbon Transition (2012). The aim is a low carbon economy that delivers jobs and long-term prosperity working in partnership with businesses and communities to deliver a smarter low carbon energy future for Wales.

Source: www.naturalresources.wales/about-us/what-we-do/energy/energy-in-wales



Progress towards the 2030 target

In 2018, Wales reached the milestone of 50% of electricity consumption being generated by renewable energy, up from 19% in 2014 and 48% in 2017.

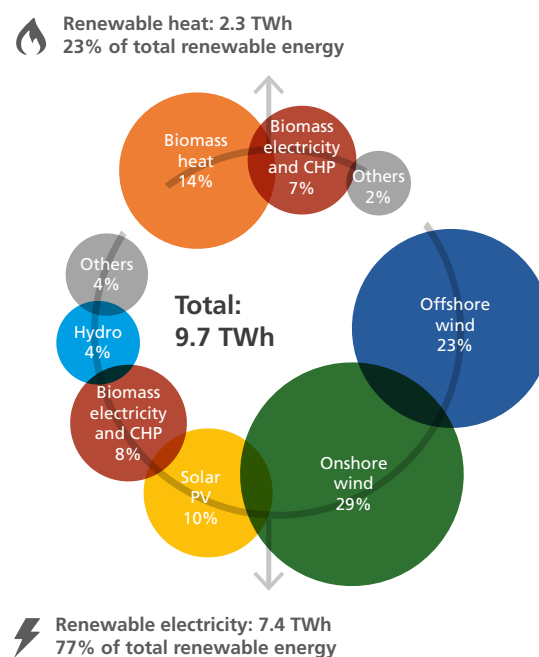
The Welsh Government has produced [a quick guide Energy generation in Wales 2018 in 5 minutes](#).

It includes this infographic showing the breakdown of the renewable energy mix in Wales as of 2018:

Renewable energy

Wind power made up over half of all renewable energy generation in 2018.

Renewable energy generation mix



Source: <https://gov.wales/sites/default/files/publications/2019-11/energy-generation-in-wales-2018-in-5-minutes.pdf>

Welsh Government says:

“The long-term trend of progress towards this target has historically been a combination of both decreasing electricity consumption and increasing renewable electricity generation. Since 2005, electricity consumption has decreased by 18% while renewable electricity generation has increased by over 500%.

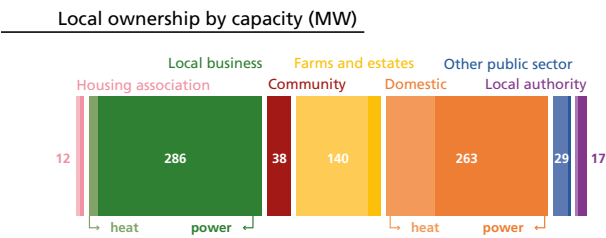
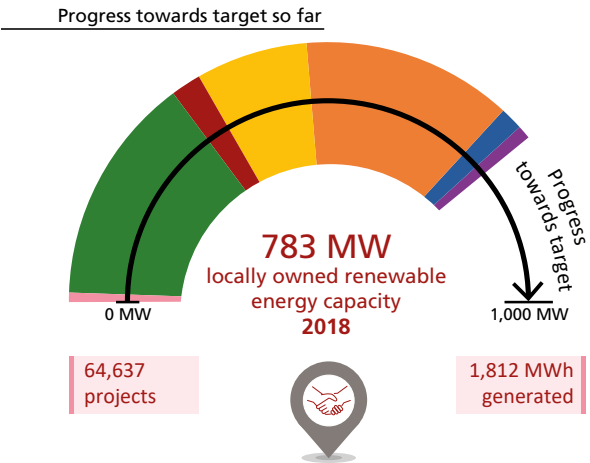
But it warns that in recent years, progress has slowed and:

“There remain significant challenges to meeting the 70% target by 2030, notably the lack of available price support for renewable generation, as well as network constraints and network unavailability in some areas restricting the ability for new projects to connect.”²¹⁶



Local ownership (2018 stats)

Local ownership target
The Welsh Government has set a target for 1 GW (1,000 MW) of renewable energy capacity to be locally owned by 2030.



Source: gov.wales/sites/default/files/publications/2019-11/energy-generation-in-wales-2018-in-5-minutes.pdf

Since 2005, electricity consumption has decreased by 18% while renewable electricity generation has increased by over 500%

Energy service

The Welsh Government provides a free [energy service](#) for public sector and community groups. The energy service provides free technical, commercial and procurement support to develop:

- energy efficiency
- renewable energy projects

The energy service helps with financial planning and funding, for example interest free loans and grants. It also has a [community energy toolkit](#) which explains how to run a project to install new renewable energy generation.

A balanced low carbon energy mix

The TUC supports a balanced energy policy which enables the UK to meet its net zero commitments. See [Voice and Place: How to plan fair and successful pathways to net-zero emissions](#) for more information.



Taking action

Before installing renewable energy, an organisation should do what it can to reduce its energy use. There is no point generating lots of 'green' electricity if it is then wasted.

The Carbon Trust recommends the following energy hierarchy:

1. Reduce the need for energy.
2. Use energy more efficiently.

3. Use renewable energy.
4. Any continuing use of fossil fuels should be clean and efficient.

(Reproduced from [CTV010v3 Renewable Energy Guide](#) with kind permission from the Carbon Trust).

Wave power is much more predictable than wind power – and it increases during the winter, when electricity demand is at its highest.

Types of renewable energy

Wind

Off-shore and on-shore turbines produce electricity by capturing the natural power of the wind to drive a generator.

Solar Photovoltaic electricity (PV)

PV materials are usually solid-state semiconductors which generate electric current when exposed to light. The Committee on Climate Change projects that 40GW of installed solar capacity will be needed by 2030 to keep on track to achieve net zero by 2050. As of January 2020, the total installed capacity of solar PV in the UK is 13.4GW.

Solar thermal or solar hot water systems

These work by absorbing energy from the sun and transferring it, using heat exchangers, to heat water.

Ground-source heat pumps (GSHPs)

GSHPs take low-level heat which occurs naturally underground and convert it to high-grade heat by using an electrically-driven or gas-powered heat pump.

Air-source heat pumps (ASHPs)

ASHPs take low-level heat, which occurs naturally in the air, and convert it to high-grade heat by using an electrically driven or gas-powered pump.

Hydro-electric power

Uses water flowing through a turbine to drive a generator that produces electricity.

Wave and tidal power

Electricity generated from the movement of wave and tidal flows. Wave power is much more

predictable than wind power – and it increases during the winter, when electricity demand is at its highest. Tidal stream energy is also predictable and consistent. It is estimated the UK has around 50% of Europe's tidal energy resource, and a study in 2004 estimated the UK's technical resource at around 16 terawatts per hour per year (TWh/year) (4% of overall supply).

Biomass

This refers to the use of a wide variety of organic material such as wood, straw, dedicated energy crops, sewage sludge and animal litter for the generation of heat, electricity or motive power.

Anaerobic digestion (AD)

AD is one method for converting biomass. It is a process in which bacteria break down organic



material in the absence of oxygen to produce a methane-rich biogas, which can be combusted to generate electricity and heat. The organic material used may include industrial wastewater, manure, garden waste and organic food residues such as vegetable peelings.

Hydrogen

Hydrogen is viewed as one of the most economic options to decarbonise industry. At present, however, it is overwhelmingly produced from fossil fuel sources. Blue or grey hydrogen is produced from natural gas, with carbon capture and storage (CCS) technology scooping up the resulting CO₂.

Green hydrogen

Green hydrogen produced from renewable electricity sources could come directly through the

existing gas network and/or from a decentralised generation source attached to the building, such as solar roof panels. The number of hydrogen boilers installed will depend on the extent of electrification we observe in the building sector. Hybrid heat pumps offer a viable option in that they allow a smooth transition to electricity-supplied heat but with the option to burn hydrogen during peak times.

Both types of hydrogen can be stored and kept in reserve, to be deployed as an inter-seasonal fuel supplementing wind and solar power. Hydrogen, its supporters claim, can also heat homes and workplaces, distributed through the existing infrastructure of the National Grid. It can be used to de-carbonise trains and buses and provide green fuel for heavy-duty vehicles, for which electric-battery technology is impractical. In synthetic form, hydrogen could even help fly zero-carbon planes.

Related issues

Carbon Capture, Utilisation and Storage (CCUS)

CCUS encompasses methods and technologies to remove carbon dioxide (CO₂) from the flue gas and from the atmosphere, followed by recycling the CO₂ for utilization and safe and permanent storage options. Some environmental organisations, including some unions, think it is an unrealistic option.

Others feel that the development and deployment of this technology will be essential if the burning of fossil fuels continue to be part of the energy mix.²¹⁷

Energy storage

As the deployment of renewable generation increases, storing cheap renewable power, and when there is an excess, discharging it when demand is higher, will become vital to the future functioning of the grid.



Combined heat and power (and cooling)

Combined heat and power (CHP) is not in itself a renewable energy, but is a more efficient way of generating heat and electricity, typically using a third less fuel than conventional sources. Electricity is generated on-site and waste heat captured for space heating, water heating, industrial processes, or also cooling/refrigeration.

District heat networks

One of the low carbon technology options for heating our buildings is heat networks, also known as district heating. A heat network is a distribution system of pipes that takes heat from a central source and delivers it to a number of buildings. The heat source can be a Combined Heat and Power (CHP) plant, energy from waste, canals, rivers etc. It is estimated by the CCC that around 18% of UK heat will need to come from heat networks by 2050 if the UK is to meet its carbon targets cost effectively.

Sources of further information:

Welsh Government – Low carbon energy guidance and services: www.gov.wales/low-carbon-energy

Energy generation in Wales 2018 report: www.gov.wales/sites/default/files/publications/2019-10/energy-generation-in-wales-2018.pdf

Natural Resources Wales – energy in Wales: www.naturalresources.wales/about-us/what-we-do/energy/energy-in-wales

Carbon Trust – Renewable energy guide for business www.carbontrust.com/resources/renewable-energy-guide

Renewable UK: Powering the future report: www.renewableuk.com

Renewable Energy checklist

- ☒ Does your employer have any written policies that reference renewable energy? This could be in the environment / climate or energy policy if they exist.
- ☒ Does your workplace generate any renewable energy?
- ☒ If so, what type(s) of renewable energy have been installed, and how much power is being generated?
- ☒ Are there opportunities to install or increase the existing amount of renewable on-site generation? Think about the current buildings and their location to make some initial judgements on potential deployment.
- ☒ Are there any local organisations you can contact to provide technical advice on potential options?
- ☒ Has your local authority got a policy on supporting industrial or commercial renewable energy generation?
- ☒ Does your employer purchase their energy supply from companies that support renewable energy?



Supporting nature and green spaces in the workplace

Introduction

Workplaces have a huge impact on nature and biodiversity. More obvious negative impacts can include high-profile industrial incidents such as toxic spills. But there can also be more subtle impacts, like the vehicle emissions generated by workers commuting to the office or the impact of purchasing decisions.

As well as negative impacts, there is also huge potential for workplaces to make a positive impact. Both by changing existing practices to prevent harm and by introducing positive, practical actions to actively support nature.

What are the issues?

Species are now being lost at unprecedented rates due to the impact of human activity on the world's ecosystems. The [2019 State of the Nature Report](#) revealed that in Wales alone, 666 species are under threat of extinction. And of the 3902 species assessed, 73 have already been lost.

The costs and consequences of nature loss and damage to ecosystems are very grave for all life on Earth, including people. All organisations need to understand the impact of their activities on nature and what action they can take to address the nature emergency. The best way to do this is by carrying out biodiversity footprinting and developing a biodiversity action plan.

Biodiversity footprinting

Biodiversity footprinting can help organisations to develop a more comprehensive understanding of the impact of their operations on plants, animals (and other organisms) and ecosystems. It can help to identify changes needed to reduce negative impacts and increase positive impact, which can be developed into a biodiversity action plan. Environmental management systems can also help to drive improvements on biodiversity. See [page 60](#)

for more information on carrying out biodiversity footprinting and action plans.

Alongside biodiversity footprinting, there are also many simple, practical actions that can be taken at a workplace level to create workplace green spaces and support nature. This chapter provides some ideas and suggestions.

Making the case for action

The business case

Biodiversity loss can have a direct impact on businesses. For example, with products becoming unavailable or more expensive because of scarcity of supply. There can be significant supply chain risks and cost implications for some businesses.

As awareness grows, more customers are demanding ethical and sustainable products and services. Organisations that can demonstrate that they operate sustainably and have a biodiversity action plan are likely to be more competitive in attracting procurement contracts and customers in future.

Investing in green spaces in the workplace can have a positive impact on staff morale, motivation and wellbeing. Schemes are often popular and the changes don't have to be expensive. And the physical and mental health and wellbeing benefits of access to green spaces are well documented. These can lead to organisational improvements like better retention of staff, fewer sick days, and improved productivity and performance.

Legal framework

In Wales, the Well-being of Future Generations Act drives the delivery of action for biodiversity by public bodies. The Environment (Wales) Act 2016 Act places a general duty to maintain and enhance biodiversity on public authorities. This means they should embed the consideration of biodiversity and

The 2019 State of the Nature Report revealed that in Wales alone, 666 species are under threat of extinction. And of the 3902 species assessed, 73 have already been lost.



ecosystems into their day-to-day activities, policies, plans, programmes and projects. They must also prepare and publish a plan setting out what they propose to do to maintain and enhance biodiversity and promote resilience.

Private sector companies who are required to report annually on greenhouse gas emissions under UK government environmental reporting guidelines are advised to aim to integrate biodiversity and ecosystem reporting into environmental reporting. Planning developments in Wales are required to '[secure a net benefit for biodiversity](#)' to receive approval.

The link between Covid and nature loss

Pandemics such as coronavirus are the result of humanity's destruction of nature, [according to leaders at the UN, WHO and WWF International](#). The illegal and unsustainable wildlife trade as well as the devastation of forests and other wild places are the driving forces behind the increasing number of diseases leaping from wildlife to humans.

The leaders are calling for a green and healthy recovery from the Covid-19 pandemic, in particular by reforming destructive farming and unsustainable diets. And they warned that even more deadly disease outbreaks are likely in future unless the rampant destruction of the natural world is rapidly halted.²¹⁸

Taking action

Supporting nature and developing workplace greenspaces – a checklist:

- ✓ Do some research and speak to members to gather ideas. Is there a disused area of land in the workplace that could be converted to a green space? Or are there other ways to support wildlife?
- ✓ Find out if members like to be involved in setting up and maintaining green spaces.
- ✓ Can green spaces also be used to provide areas for staff, visitors and the wider community? Consider how it could help provide opportunities relaxation, or for gardening and other recreational/nature-based activities.
- ✓ Speak to your ULR and consider if any opportunities for learning and development could be linked to the project.
- ✓ You may be able to get advice from local community gardening organisations or wildlife groups to help develop your plans. And organisations like the Woodland Trust and the RHS are also good sources of information.
- ✓ Find out who is responsible for managing the estate and find out what resources is the employer prepared to commit in terms of land, money and staff time? It may be helpful to make a business case as well as a moral case for taking action.
- ✓ Speak to other unions in the workplace to see if they want to be involved.
- ✓ If the employer is initiating a workplace green space, ensure a full consultation takes place so that the development of proposals fully involve workers and that opportunities to create wellbeing benefits for staff are maximised.
- ✓ Longer-term, push for a broader approach to supporting nature– call on the employer to carry out biodiversity footprinting and to develop a biodiversity management plan.
- ✓ Encourage the employer to sign-up to a recognised accreditation scheme, such as the 'Bee Friendly' scheme. And see if the employer will sign up to an environmental management system – see [page 62](#). These help organisations to identifying the risks their activities may pose to biodiversity and drive improvement.
- ✓ Celebrate success - publicise the union's role in securing workplace green spaces and support for nature. Keep members updated on progress via a noticeboard or workplace intranet.

'Bee friendly' scheme for pollinators

[Bee Friendly](#), or Caru Gwenyn in Welsh, is a Wales-wide accreditation scheme where communities, schools, universities and businesses can achieve 'Bee Friendly' status.

Developed by Friends of the Earth Cymru, in partnership with Welsh Government, the scheme is thought to be the [first of its kind](#) in the world. It aims to combat the decline of bees, butterflies and other pollinators. It aims to make Wales the first pollinator-friendly nation in the world.

"Participating groups complete "tasks" under the headings habitat, forage, pesticides and community involvement," explains Bleddyn Lake of Friends of the Earth Cymru.

"We are hoping that it will stimulate far more activism, far more interest in pollinators and be a nice way in to looking at local nature for many more people."

There are lots of simple things you can do to make your workplace 'Bee Friendly'. An action guide, FAQs, resources and application form are available from www.foe.cymru/bee-friendly-wales



Ideas for workplaces with outdoor space:

- Allow a patch of grass to grow longer - this can provide shelter for small mammals such as wood mice, voles and shrews, and food insects.
- Create an area of wildflower meadow with a [mix of wildflowers and grasses](#). This can work even as just a small patch – it doesn't have to be a large area. They are great for supporting pollinators and insects, low maintenance, and less labour-intensive than lawn.
- Develop green areas that include mix of [native trees](#), climbers, [shrubs or hedges](#). These help to provide food and shelter for a huge range of wildlife. The Woodland Trust has advice on [how to choose and plant trees](#).
- Set up a small rock garden or [gravel garden](#)– they require little water and with the right plants, can attract pollinators.
- A [rain garden](#) can help absorb water run-off and support wildlife.
- Create an 'insect hotel' by leaving a pile of dead wood in a shady spot – decaying wood will support insects and fungi and can provide cover and hibernation sites. Wood must be unstained and untreated.

- Don't be too tidy - piles of leaves and twiggy debris provide both food and habitat for lots of wildlife.
- Ponds are one of the most effective ways to support wildlife. Size doesn't matter – even a tiny pond can support lots of wildlife. Ideally ponds should be dug, but a large pot will be effective. Ponds should be shallow and have at least one sloping side to allow creatures an easy way out.
- Set up bird feeders. Providing food and water for birds can help give them a better chance of survival when there are food shortages (these can be all year round, not just in winter). Check [RSPB feeding guidelines](#).
- Can you set up composting on site? Composting reduces waste, helps produce free, healthy soil, and supports a huge range of organisms.
- Maintain all green spaces sustainably. Avoid pesticides, peat-based composts, use recycled/reused materials and save water wherever possible (collect rain water in water butts).

Ideas if there are no suitable outdoor spaces:

- Is it possible to install window boxes and planters with native species? These can encourage wildlife and improve the look of workplaces.

- [Green roofs](#) – these can range from roof gardens with raised beds and pots, to rolled-out green carpets, or planting cells that are filled with soil or compost and planted up with low growing perennials and grasses. For example, [FBU reps created a rooftop mindfulness garden at a London fire station](#).
- Could the organisation sponsor a species or habitat and raise funds for a local wildlife trust or charity?
- Consider your own supply chain - how are your purchases affecting biodiversity in other parts of the world?
- Could the employer release staff who wish to take part in a conservation day to volunteer for nature?

Sources of further information:

The Woodland Trust: www.woodlandtrust.org.uk

Wales Biodiversity Partnership: www.biodiversitywales.org.uk/

Natural Resources Wales – wildlife and biodiversity: www.naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/

The Wildlife Trusts: www.wildlifetrusts.org

RHS guidance on encouraging wildlife: www.rhs.org.uk/science/conservation-biodiversity/wildlife/encourage-wildlife-to-your-garden

Friends of the Earth Cymru – Bee Friendly Wales: www.foe.cymru/bee-friendly-wales

WWF Cymru: www.wwf.org.uk/about-wwf-cymru



Hospital UNISON rep creates a haven of green space for patients, staff and nature

Workplace union rep Stuart Egan came up with the idea of creating an orchard and community wildlife garden in a disused area at Llandough hospital. Just a few years later, over 150 trees have been planted in the orchard after a huge fundraising drive supported by UNISON members, the hospital and the local community. It's become the first of its kind in the UK, offering huge benefits for wildlife, plants and people.

The seed of the idea

Hospital worker and UNISON branch chair Stuart first came up with the idea after talking to colleagues. He explains: "It was during a conversation with some public health nurses that the health benefits of trees came up. In my 30 years-plus at Llandough, I've seen the original hospital site expand to the extent that all the green spaces which might have been used by staff and visitors for peace and reflection have gone.

"I knew there was a parcel of land right down at the end of the hospital site. It was a greenway that couldn't be built on. I could



see the potential for an orchard and green space to offer huge benefits for mental and physical wellbeing for staff, patients and the wider community. I decided to look into the idea more and gather as much information as I could."

Putting a plan together

Stuart put together a proposal which he took to the hospital board. It won the unanimous support of the senior executives. A project group was set up and a garden designer was commissioned. The project, named Ein Berllan (Our Orchard) covers 15 acres and cost £250,000. It had to be entirely funded through charitable donations. A huge fundraising drive was made by the Cardiff and Vale Health Charity and by UNISON members who got involved with everything from cake sales to sponsored head shaving.

A haven for staff, patients and families

Stuart is proud of what the project has achieved: "We want the world to know about the orchard we are creating at Llandough

Hospital to benefit staff, patients and their families. The orchard will be a haven to relax, have a cry or drink a coffee and you can even volunteer to help with the gardening. It will be the first of its kind in the UK, offering a place where you can get away from noisy wards, and be outside in the fresh air.

"There'll be allotments growing vegetables for use in the hospital canteens and we're keeping bees. In a pioneering partnership with Cardiff University, the honey produced – and the antibacterial properties contained – will be used as a basis for research into antibiotics to help save lives."

Stuart says: "It's definitely something I'd encourage others to do in their workplace. If you can see an area of land with potential do some research and come up with a proposal. Get help from experts if you need to. With the Well-being of Future Generations Act now it's very unlikely anyone will say no. The support we've had has been fantastic and it's something that will be of huge benefit for generations to come."

Offsetting

Introduction

The idea of carbon offsetting is to cancel out the carbon released by an individual or business, by paying for reductions elsewhere. For example, paying for someone else to install energy efficiency measures or renewable energy. Another well-known route is paying to plant or protect trees (which absorb CO₂ in their lifetimes).

Although offsetting can fund worthwhile schemes, and also raise awareness, there has been criticism that some offsetting is ineffective or not well regulated. It's vital to look at reducing emissions through cutting energy use and using more climate-friendly energy sources before considering offsetting – the previous sections give more guidance on this.

What are the issues?

Arguments against – a licence to pollute?

Paying for greenhouse-gas reducing projects to cancel out our own polluting activities seems straightforward. And its very simplicity is part of the appeal – just pay someone else to take care of it. There's a danger that it simply provides an excuse not to take action to cut back on polluting activity, and possibly doesn't even lead to an overall reduction in emissions, because it just pays for schemes that would have happened anyway. And, perhaps more fundamentally, we can't cancel out all the effects of pollution through offsetting.²¹⁹

Arguments for:

Good carbon offsetting programmes can have benefits by:

- Raising awareness and understanding of an organisation's carbon impact.
- Paying for energy-efficiency measures for people in poorer, usually developing countries.

- Leading to overall reductions in emissions (if done properly).
- Promoting the idea of 'the polluter pays', which has been a long-standing demand of the environmental movement.

Costs

The cost of offsetting can vary dramatically, but cheaper schemes are likely to have compromised on some of the areas below. A failed scheme will mean no environmental benefit, and potentially damage to your company or organisation's reputation in the process.

It is helpful to look for a scheme that deals properly with:

- **Additionality** – proving the scheme funds work that would not otherwise have happened.
- **Verification** – checking the work was carried out, and had the carbon impact that was promised. There are a number of different third-party verification systems in place for offsetting schemes – see the Carbon Trust guidance for details.
- **Permanence** – preparing for risks, such as the trees burning down or the project failing in some way. For example, insurance, or a range of different kinds of projects in different countries.
- **Leakages** – acknowledges and deals with carbon impacts that the project causes indirectly, such as displacing damaging agricultural practices to another area.
- **Double counting** – has a clear accounting system, to make sure emissions aren't double-counted.

For detailed guidance, see The Carbon Trust [Three Stage Approach to developing a robust offsetting strategy](#).²²⁰

Taking action

Remember it's vital to look at other ways to reduce emissions before considering offsetting.

Step 1:

→ Find out your organisation's carbon footprint.

Step 2:

→ Reduce energy use and emissions (both direct and indirect, eg products purchased), using the guidance in this handbook.

Step 3:

→ Consider high-quality offsetting projects, or funding investment in renewable energy for your own organisation.

Offset options

The Ethical Consumer has produced a [Short Guide to Carbon Offsets](#).

Official offsets

Renewables are the best form of official offset, as they address the central structural issue that is causing climate change: our reliance on using fossil fuels for energy. Within the renewable options wind and solar projects should be favoured over biomass because of concerns about the sustainability and social justice issues linked to some biomass projects. Ethical Consumer recommends offsetting at the level of individual projects, rather than just giving to a company's whole portfolio, because this is the level at which there is most information available.

Problems with official offsets

Nearly all carbon offsetting is done by for profit organisations, not charities. It has been calculated that with some schemes anything up to 70% of the

money is taken by verification costs, overheads, and project developers' profits.

Buying and retiring **EU Emissions Trading Scheme (ETS) Credits** is another offset option. However, a big problem is that the EU ETS is dysfunctional, most notably because of a large oversupply of credits.

Certified Emissions Reductions (CERs)

Companies can buy themselves out of their legal obligations through a UN scheme called the Clean Development Mechanism (CDM). Offsets certified by the UN are called CERs in contrast to Voluntary Emissions Reductions (VERs). However, experience has shown that even the UN backed CERs do not always achieve high standards.

DIY offsets

This is where the organisation makes its own direct investments. It involves giving to projects that are not official offsets but have a good chance of cutting emissions. This may include those that could create more transformational change, such as political and educational projects. This type of approach will not have certification and may not be considered as offsetting because of the difficulty of identifying a quantifiable amount of carbon cutting.

No regulation but there are standards

There is no single accreditation scheme for voluntary offsetting schemes, which means it's very hard to know whether your offsetting is really having the impact you thought. Tree planting schemes in particular have come in for a lot of criticism. Trees take a lifetime of growth to absorb carbon, and they also release that carbon again if they are burned or rotted. Large plantations may also limit biodiversity, and push local communities off their land.

Third-party standards are supposed to ensure that offsets exhibit a set of features known as VALID. (See the checklist in the box below).

Verification systems

There are a number of organisations that monitor carbon markets. One called the [Gold Standard](#) is favoured by some environmental groups as it requires projects to benefit the local population as well as cutting carbon.

Offsetting checklist:

- ☒ Does your organisation carry out carbon offsetting?
- ☒ Is the amount of offsetting set at an appropriate level compared to other parts of the carbon management strategy?
- ☒ If your organisation uses an offset scheme does it comply with the VALID test?

The VALID test for offset schemes:

Verifiability – there is a robust audit trail?

Additionality – the carbon savings are additional to what would have happened anyway.

Leakage avoided – emissions are not just moved elsewhere.

Impermanence avoided – carbon savings will be sustained over time.

Double-counting should not occur – reductions are only claimed once.

Sources of further information:

Carbon Trust – Developing a robust offsetting strategy www.carbontrust.com/de/node/948

The Ethical Consumer - A short guide to carbon offsets: www.ethicalconsumer.org/energy/short-guide-carbon-offsets





Section 4

Tools and resources



Example survey

Greener workplaces survey

We are trying to improve the impact that [employer/site] has on the climate and environment. We need YOUR views to help us! Please take a few minutes to complete this survey and return it to [rep name] by [insert date].

All answers will be treated as confidential – a summary of results will be published but individuals will not be identified [insert link to your union's GDPR privacy notice and appropriate consents]. Many thanks for your time.

[Note – some employers and unions may have online survey software that can help, if so, add "If you are able to complete this survey online at [insert web address] it will help us respond to the results more quickly."]

Name (this is optional)

Department

Email address: (this is optional)

Please tell us about any action on climate and the environment that has been taken within the organisation that you are aware of?

1. How good do you think [organisation/site] is at reducing its environmental impact? (for example, its travel, resource use/waste management, support for nature, procurement, energy and water use)

☐Very ☐Quite ☐Average ☐Not very ☐Don't know

2. How good do you think your department is at reducing its environmental impact?

☐Very ☐Quite ☐Average ☐Not very ☐Don't know

3. How good do you think YOU are at reducing your environmental impact at work?

☐Very ☐Quite ☐Average ☐Not very ☐Don't know

4. Do you think any of the following have improved their environmental performance over the past year?

[organisation name]

☐Yes ☐No ☐Don't know

My department

☐Yes ☐No ☐Don't know

Me (at work)

☐Yes ☐No ☐Don't know

5. Are you a trade union member?

☐Yes ☐No

6. If yes, how good do think the union is at tackling environmental issues?

☐Very ☐Quite ☐Average ☐Not very ☐Don't know

7. Are you aware of [insert organisation name]'s climate and environmental policies?

☐Yes ☐No

Thinking about energy use at work, we'd like to know...

8. ONE thing you think you could do at work to be more 'green'?

9. ONE thing you think [insert employer/site] could do to be more effective on climate and environment?

And thinking about travel, resource use/waste, support for nature, procurement, energy and water use, we'd like to know ...

10. ONE thing you think the union could do at work to be more effective on climate change and environmental issues?

12. Lastly, would you be interested in becoming more involved in making [employer/site] a greener place to work – for example, by attending an on-site training workshop?

☐Yes ☐No ☐Maybe

Transport review survey

How to use the survey

The main purpose of the survey is to allow you to understand how your members travel and the barriers they face in making more sustainable choices before you start making a case to management. For example if a significant number of members say that the main barrier that stops them cycling to work is the lack of secure bike storage, then you have a clear action point you can take to management to seek practical changes; you will have evidence of demand to back it up. This could then be the opening gambit in your negotiations for a Staff Travel Plan. You may also be able to identify equalities issues if the survey shows that something is a particular barrier to, for example, female members.

The survey is to be used solely to compile an overall picture; the data should not be used to identify individuals. If you have very few members, you may wish to leave out some or all of the questions on age, disability and sex/gender, in order to avoid accidentally identifying individual members.

If you do want to obtain individual travel profiles that could then be used to produce tailored travel options for members, for example mapping out door to door routes by public transport or bike, then you would need to ensure the data is dealt with according to the GDPR (speak to your union for advice). In practice, this means it would best be carried out in partnership with the employer, with the employer taking responsibility for data security.

1. How do you travel to and from work? (please tick appropriate box)

☐ Walking ☐ Bike ☐ Public transport
☐ Own car ☐ Company car ☐ Colleague's car

2. How far away from work do you live (in miles)?

1 ☐ 2-5 ☐ 5-10 ☐ 10+ ☐

3. How long does your journey to work normally take?

4. How much do you estimate you spend on travelling to work each month?

5. If you normally travel to work by car, what are the barriers that stop you travelling to work:

On foot:

By bike:

By public transport:

6. Is there anything that the organisation could do to make it easier to use a method of transport other than a car?

7. Do you have to travel as part of your working day?

8. How do you make these journeys?

(please tick appropriate box)

- ☐ Walking ☐ Bike ☐ Public transport
☐ Own car ☐ Company car ☐ Colleague's car

9. If you answered car, what are the barriers that stop you travelling in your working day?

On foot:

By bike:

By public transport:

10. Is there anything that the organisation could do to make it easier to use a method of transport other than a car?

11. Do you have any other suggestions for ways of reducing our carbon emissions through transport?

12. It will help us to understand how different groups or people are affected by travel issues if you can provide some more details about yourself. Please note that the information will remain anonymous and none of the details you provide will be used to identify you.

Disability

Do you define yourself as disabled? ☐ Yes ☐ No

Gender:

Which one of the following best describes your gender?

- ☐ Male
☐ Female
☐ Non-binary
☐ Prefer not to say

If you describe your gender with another term, please provide this here:

Q. Age: What is your age?

- ☐ Under 17 years old
☐ 18-24 years old
☐ 25-34 years old
☐ 35-44 years old
☐ 45-54 years old
☐ 55-64 years old
☐ Over 65 years old

Thank you for completing this survey.
Please return it to:



Quick checklists

Environment Policies

Find out whether the union was consulted on the environment policy. Check the review date and identify areas where it could be improved using the checklist below. Does it:

- ☒ State how as well as what should be done?
Reference responsibilities within the management structure including board member responsibilities?
- ☒ Contain targets that conform to SMART principles (specific, measurable, achievable, relevant and time-bound)?
- ☒ Have a review date?
- ☒ Reference a trade union role and recognition of environment reps?
- ☒ Cross reference more specific environmental policies?
- ☒ Be accessible and communicated?
- ☒ Reference ethical and corporate social responsibility principles?
- ☒ Include training and information for staff?
- ☒ Have a sign off and dated by the most senior individual in the organisation?
- ☒ Identify the roles and structures of committees?

Monitoring the policies

- ☒ Is the institution signed up to an environmental management system (EMS)? If so, obtain copies of relevant performance reports.
- ☒ Are you consulted during the audit process?

Inspections

- ☒ Find out if there is an established inspection system within the organisation and obtain copies of relevant documents.
- ☒ Draw up a checklist based on the subjects and areas you intend to cover.
- ☒ Carry out an inspection starting with one of your priority issues.

Adaptation and risk assessments

- ☒ Find out if your institution has carried out a climate change risk assessment. This may be general or specific to types of extreme weather events.
- ☒ Liaise with the union safety rep to review existing policy and whether there are suitable and sufficient adaptation measures in place.

Air Quality

- ☒ Contact your employer to find out if any air quality measurements have been carried out.
- ☒ Liaise with the safety rep to discuss a joint approach if you think staff and students are at risk.

Biodiversity

- ☒ Find out if your institution has carried out biodiversity footprinting.
- ☒ Get a discussion going with colleagues on the type of things that could enhance the biodiversity of the workplace.

Construction and refurbishment

- ☒ Have buildings on your sites received a BREEAM assessment?

- ☑ Are there any new build or major refurbishment projects scheduled?

Energy management

- ☑ Inspect the Display Energy Certificate (DEC) for each building. This will give you an idea of the performance standard rated from A (very efficient) – G (least efficient).
- ☑ Check whether your institution is registered with the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme.

Finance and investment

- ☑ Does the organisation have a publicly available ethical investment policy that includes environmental and social dimensions (eg just transition)?
- ☑ Is the policy reported on annually?
- ☑ Are there opportunities for staff and other stakeholders to engage?

Food policy

- ☑ Does your institution have a publicly available sustainable food policy which sets timebound targets for improvements?
- ☑ Check the People & Planet Green League for ideas on improvements like local sourcing of food <http://peopleandplanet.org/greenleague/methodology/sustainable-food>.

Procurement and supply chain

- ☑ Check whether you have a sustainable and ethical procurement policy or any reference in your strategic policy document.

Transport

- ☑ Find out what is being done to promote green transport.
- ☑ Does your employer have a Green Travel Plan that was agreed with the trade unions?
- ☑ Are any of the travel policy measures in this section being implemented?
- ☑ Are these measures fair and transparent?

Resource efficiency/waste management

- ☑ Find out who has responsibility for resource efficiency/waste management.
- ☑ Has it been quantified? Use the indicators in this section.
- ☑ What is the cost of waste disposal for your institution?
- ☑ Is there a target for waste reduction?

Water

- ☑ Find out the annual water usage and how it is metered.
- ☑ Contact management to find out how many of the reduction measures in this section are in place.

A joint model environment and climate change agreement

Joint statement on environment and climate change

The parties to this agreement recognise that climate change and environmental concerns are among the most pressing concerns facing us all. These concerns have risen up the agenda rapidly in recent years. The [organisation] and [unions] are committed to developing a shared approach to addressing climate and environmental issues through this agreement.

[The organisation], as both an employer and [insert organisation's main function/role e.g. major retailer/manufacturer] commits itself to 'leading by example' among staff and other stakeholders. [The organisation] will comply at all times with relevant environmental legislation and will work to influence the wider environmental agenda with the use of best practice and examples.

[The organisation] notes Welsh Government policy for Wales to reach 'net-zero' emissions by 2050 (with a 2030 target for the public sector) and for Wales to become 'zero-waste' by 2050. Across the UK, government policy is to reach net-zero by 2050, reduce reliance on carbon-based energy sources and to promote energy efficiency.

With this in mind, [the organisation] aims to:

- reduce [the organisation]'s carbon and environmental footprint
- work with staff, management and stakeholders on training and awareness raising
- monitor performance against achievable but challenging targets.

[The organisation] aims to be open and receptive to suggestions from staff and other stakeholders on how it can make better use of energy, reduce its environmental and carbon impact and improve its management of these areas and, in doing so, to reduce CO₂ emissions in line with Wales,

UK statutory and international obligations. [The organisation] and the recognised trade unions will encourage managers, staff and union green representatives (UGRs) to share responsibility for 'greening' the workplace. As part of this ongoing work and commitment, [the organisation] and unions will support the creation of a Joint Environment Committee (JEC) to engage in constructive dialogue between the employer and the union on how to achieve these goals.

[The organisation] accepts that the necessary changes will not happen all at once but [the organisation] and [the unions] commit to working together on a programme of continuous improvement, backed by regular monitoring of environmental impacts and issues, particularly carbon impacts, which will be reported to the JEC. The proposals formed within this agreement are not an exhaustive list and we will seek to develop this agreement further as our knowledge and experience grows. Such developments will be fed into the production of an annual environmental and carbon action plan (see below).

As part of this strategy, [the organisation] aspires to having all its workplaces accredited for environmental management via (for example) schemes such as ISO14001, EEAS, and EMAS.

{The organisation} makes a commitment to declaring a climate and nature emergency. A strategy for achieving net zero carbon emissions and supporting biodiversity will be agreed with the recognised trades unions. The targets and actions adopted will be influenced and reviewed against just transition principles.

About this agreement

This policy is agreed between the management of [the organisation] and union green representatives at [the organisation]. It covers [all sites/specific sites/ bargaining units as appropriate] and applies to all full- and part-time employees and workers (including

agency and temporary workers).

This agreement does not supersede or take precedence over any existing negotiating procedures or staff-management arrangements other than those specified in this agreement unless specified and agreed in full by the Joint Negotiating Committee (JNC) of [the organisation].

The partners to this agreement agree that any individual grievance arising out of environmental matters shall be subject to the existing grievance procedures.

This agreement shall form an appendix to the existing staff handbook.

Joint environment committee – terms of reference

The main responsibilities of the JEC will include reaching agreement on how the following aims can best be achieved:

Environmental impacts

The JEC will consider the environmental impacts of all the organisation's internal operational policies, to identify areas where action is needed to minimise environmental impact, in particular:

- addressing the issues of energy conservation, resource/waste management, and the prevention of pollution
- measuring the total 'carbon footprint' and seeking to reduce wastage, with time-bound targets for continual emissions reductions
- measuring the 'biodiversity footprint' of the organisation and seeking to reduce direct and indirect (supply chain) impacts on biodiversity and take steps to support nature and green spaces.

- ensuring that those purchasing equipment, heating, lighting, waste systems and other materials take full account of environmental impacts and particularly energy and resource use and support the introduction of environmentally friendly technology
- ensuring that those using equipment and systems seek to do so in a way that reduces excessive consumption of energy and materials and promotes re-use and recycling wherever possible.

More detailed areas of consideration (which could also form part of an action plan) are given below.

Environmental and carbon action plan

The JEC will produce a realistic environmental action plan, which sets goals and targets for environmental improvement within [the organisation], and which forms part of the annual operational plan and includes a specific carbon and biodiversity management element. Where appropriate, the action plan will be developed in conjunction with expertise from local and national organisations including the local authority, NRW, relevant trade bodies, the Carbon Trust, Waterwise, etc., building on existing recommendations where some work has already been undertaken with such organisations.

The JEC will also be invited to comment on any externally facing sustainability action plans and policies that are aimed at other stakeholders (for example, customers).

This action plan will include:

- the business case for change
- clear targets that are understandable, tangible and up to date
- a plan for delivery

- a way of prioritising projects, including an assessment of payback times
- responsibilities for delivery; and systems for communicating and monitoring impacts through work with staff, managers and UGRs
- a system for monitoring performance against this action plan.

Employee engagement

The JEC will ensure that all staff are involved in this initiative, by:

- disseminating to staff all information on matters relating to 'greening [the organisation]'
- ensuring all staff are made aware of the environmental agreement and the work of the JEC, including through the website, staff inductions and appropriate training courses and awareness-raising events
- feeding recommendations upwards to the senior management team and reporting back on outcomes.

Energy and environment audits

The JEC will carry out joint 'green' audits using checklists within the 'Greener workplaces for a just transition' guide, or those provided by organisations such as the Carbon Trust. It will incorporate the results of these audits into the Environmental and Carbon Action Plan (see above).

The partners agree that any analysis of environmental issues and impacts (for example, audits) will be undertaken with the full cooperation of all partners, and that such analysis will be solely for the purposes of environmental improvement. Any analysis will not be used in relation to other issues such as pay, performance appraisal, disciplinary procedures, etc.

The structure of the joint environment committee

The partners agree to ensure that [all departments/sites/regional offices] are represented on the JEC, and that member of the JEC are provided with all relevant information concerning the environmental issues within the workplace and their duties/responsibilities as members of the committee. Although participation by staff will be on a voluntary basis, the unions agree actively to encourage their members to participate fully in all environmental initiatives and opportunities, and encourage union reps and other interested members to put themselves forward as UGRs.

[The organisation] will ensure that [a senior management champion, ideally directors responsible for both facilities/energy management and HR] remains on the JEC, in order that the committee is able to take effective decisions. [The organisation] will ensure that such other management-side representatives attend the JEC on a regular or ad-hoc basis as may be required by the partners, including for example IT and contractor representatives.

Where there are environmental concerns regarding policies that form part of the existing Staff Handbook or other policies negotiated with the JNC (for example, HR policies on working time or home-working policy, the JEC will work with the JNC to address any concerns.

Similarly, where there are areas of overlap with health and safety policy the JEC will work with the Health and Safety Committee to come to common solutions.

The Joint Environment Committee will meet at least four times a year to carry out the tasks outlined in this agreement, and will annually agree a chair and secretary, to be alternated between the management side and the union side. Standing items at these meetings will include the Action

Plan and quarterly energy usage figures for [the organisation/list of sites as applicable].

Union green reps (UGRs)

[The organisation] recognises that union reps play a key role in encouraging employee engagement in climate and environmental initiatives, and so help develop good practice in areas such as transport, energy and resource use at [the organisation head office and its regional offices], in line with this agreement. They will also assist more broadly in supporting the implementation of [the organisation]'s environmental policies.

UGRs will be allocated reasonable facilities time (not less than [X days per month/X proportion of their working time] plus an additional 10 days of related training per year) to carry out their duties in relation to environmental issues, including attending meetings with management, and with the union, on green issues, consulting with colleagues, attending training, preparing paperwork and materials.

Environmental issues to be considered

The JEC shall consider what action needs to be taken to address the following areas.

Reducing emissions and energy use

The partners undertake to work together towards:

- putting in place a plan to reduce emissions in line with the Paris agreement targets
- ensuring purchases meet the latest energy and environmental standards, are sourced from suppliers with good employment and environmental standards, and are easy and safe to use
- ensuring eco-options are enabled and staff are trained on using equipment in an eco-friendly way

- ensuring equipment is regularly serviced, and clearly labelled with energy ratings / the amount of energy it uses / whether it can be turned off
- exploring automatic options like motion sensor lights in low-use areas, and automatic power down of PCs after working hours, which are popular with staff and increasingly widely implemented – they are also often recommended in Carbon Trust expert surveys
- ensuring all lighting is sustainable and energy efficient
- ensuring building management systems (BMSs) are optimised for efficient energy use, for example in the timing and local and/or thermostatic control of heating and cooling systems
- the sourcing of electricity from a 'green' tariff
- where appropriate, on-site renewable alternatives in particular solar water heating and combined heat and power (CHP)
- particularly encouraging energy-saving measures in those aspects of the operation that are most energy intensive.

Resource use and purchasing

The partners undertake to work together towards:

- continually seeking ways to minimise the use of resources including energy, equipment and goods such as non-recycled raw materials including paper and packaging, and disposable items, particularly when new systems, practices or locations are introduced
- carrying out regular waste audits and applying the waste hierarchy to reduce waste going to landfill

- developing a long-term plan for reaching 'zero-waste' and moving towards a 'circular model' of resource management
- purchasing supplies from sustainable sources – i.e. sources that are local where possible, accredited under ISO14001 and preferably EEAS/EMAS
- increasing the purchase of supplies that are reused, re-usable, recycled or recyclable (in that order of priority)
- working with suppliers and partner organisations to obtain the lowest environmental impact, eg obtaining life-cycle assessments
- considering the toxicity of products and the health impacts on the workers producing them, before purchasing
- consulting with staff before any major purchasing decisions such as changes to layout, equipment or systems which may have resource use implications and could result in wastage if changes need to be re-done or undone
- using outside or community agencies for old or redundant equipment
- implementing low-cost water saving initiatives and investigating payback times and feasibility of larger-scale water saving measures such as low-flush toilets.

Food

The partners undertake to work together towards:

- providing catering options that have a lower environmental impact (eg are locally sourced, and not over-packaged or overprocessed -which is very carbon intensive- and where possible are freshly prepared

- ensuring staff have access to facilities that enable them to prepare drinks and snacks in an environmentally friendly way rather than relying on drinks and snacks in disposable packaging (for example, drinking water taps, washing-up facilities for mugs).

Transport

The partners undertake to work together in full consultation with the JNC to design a travel plan that encourages sustainable modes of transport. Such a plan will seek to engage local authority and other local transport providers where appropriate, and will look at options such as:

- a car sharing scheme
- the provision of a low-cost cycling scheme including either a mileage allowance for bicycle-users, a tax-free scheme for the purchase of bicycles for work-related use, or both
- fuel performance of car fleet/essential car user schemes
- encouraging the use of video conferencing and teleconferencing
- discouraging the use of air travel, particularly for short-haul journeys within the UK/Northern Europe
- other integrated transport provisions.

Other

Environmental considerations will be given due regard when decisions are made to move, refurbish or improve access to premises, including all regional and satellite offices. Where [the organisation] is a tenant rather than a building owner, it will work with the landlords to ensure environmental considerations are taken into account.

Consideration will be given to the use of plants both inside and outside the working environment (including 'green roofs') to improve CO2 absorption, air quality, flood risks, natural shading and cooling, biodiversity, and a more pleasant working environment.

Consideration will be given to the ethical and environmental dimension of [the organisation]'s investments including its pension scheme.

Signed – on behalf of [the organisation]

Name and position

Date

Signed – on behalf of [the union(s)]

Name and position

Date

Note: You may wish to include as appendices:

- existing energy and resource management arrangements
- current energy supply arrangements, e.g. suppliers and tariffs currently used
- current energy use monitoring arrangements, e.g. number of meter points, location of thermostats, policies on workplace temperature, etc.
- existing/current 'action plans' in place
- a review of progress against previous action plans where these are already advanced
- current provisions for recycling and other environmental initiatives, including who provides this service and where the recycling is carried out
- current environmental rep contacts and other JEC members.



Climate emergency declaration checklist

If your organisation has declared a climate emergency use the checklist below to carry out an initial evaluation:

- 1. Climate emergency** – Has the organisation declared a climate emergency? Some organisations have made some level of commitment. This may be gesture politics, but it can be used as a pressure point if the actions fail to reflect the seriousness of the issue.
- 2. Targets** – Does the policy contain specific targets? This could be 'carbon neutral' by a certain date, or 'net-zero'. There is a difference – net-zero is a stricter standard aligned with Paris climate targets. Check whether the commitment is for just the organisation's operations or wider across the whole supply chain. There may also be other associated targets.
- 3. Contacts** – Do you know the key contacts to link up with? Find out who the senior manager is with responsibility for this work.
- 4. Skills and training** – Does the strategy contain any reference to vocational education and training? This may be relevant for staff in your workplace that may need to access upskilling or retraining for new or changing posts.
- 5. Actions** – Are the actions contained in the strategy likely to achieve the targets? A common weakness of climate strategies is that the actions identified fail to reflect the scale of ambition. Identify the strengths and weaknesses and consult with others to present an alternative.
- 6. Consultation** – Were the unions engaged in the production of the strategy? Check whether a working group has been set up to monitor and influence the strategy. If there is try and get union representation.
- 7. Local authority engagement** – Is there a joint campaign that you can join or help to set

up? Check if your local trades union council or regional TUC are active on this issue. Make sure that social justice / equality issues like fuel poverty and unequal access to training and employment are covered. A common weakness of local authority strategies is a failure to prioritise issues that can make the biggest reduction in carbon emissions. A typical example is a lack of comprehensive policies on housing, renewables, and energy efficiency. Be ambitious. Press for direct labour schemes that also address employment issues in the supply chains.

- 8. Communication** – Have you discussed this in the branch and informed your union of progress? Make sure that progress and setbacks are reported to the branch. Reflect on the potential impact of any local strategy on your members including their terms and conditions. Use local and regional forums to exchange information and request advice. Report progress to union regional and national officers to help with the circulation of case studies and further guidance.

The Greener Jobs Alliance has produced a checklist for assessing Local Authority climate emergency declarations. www.greenerjobsalliance.co.uk/wp-content/uploads/2020/08/GJA-Guidance-doc.pdf

Transition agreement / Model GND letter

Based on a UCU example from Green New deal for Colleges and Universities

Model GND Claim Letter

Dear X,

Our [union] branch has resolved to pursue a local claim and campaign focusing on making significant progress towards addressing the challenges that we are all now facing as a result of the climate and nature emergency.

[Union name] have established policy in this area where our members are expecting the organisations within which we work to be taking significant steps to reduce greenhouse gas emissions and other environmental impacts.

We look forward to exploring more areas of common ground to negotiate on and deliver joint and positive action in addressing the climate and nature emergency. To this end our Green New Deal claim has the following components: (See potential claim areas below as suggestions which can be refined/expanded upon following branch committee plan/priorities with specific targets/requests)

1. Declare a climate and nature emergency and develop associated policies. Or, review the climate and nature emergency declaration and associated policies.
2. Recognise green reps appointed by [union] including the facility time available to carry out functions and training.
3. Develop (or review) carbon, energy and biodiversity management policies to ensure consistency with agreed values [insert organisation values here as examples] and revisit targets.
4. Review the organisation's travel policy.

5. Review the ethical investment and banking policies to ensure consistency with agreed values and targets.
6. Review other operations to ensure consistency with agreed values and targets that include:
 - a. Supply chain, procurement and workers' rights
 - b. Food and land use
 - c. Water and resource use/waste
 - d. Air pollution
 - e. Transport and travel policy
 - f. Staff training.

In response to these areas the Committee would like to make clear that we expect, an agreed action plan to incorporate the above, which should include monitoring, implementation and review processes, including how the trade unions will be consulted.

Subject therefore, to measurable progress on this within an agreed timeframe we wish to progress [on any established action plan or existing proposals if in place] as well as furthering our negotiations on the above areas.

The branch reserves our position to escalate via other means, if we do not feel sufficient progress is being made to significantly improve the organisation's approach to addressing the climate and nature emergency and meeting the claim.

[Union] members are very interested in sitting down with management to discuss this in more detail. In particular we formally request the carrying out an agreed action plan to undertake the above work within [insert no of months].

We trust that you will consider this request and look forward to discussing this with management at the earliest opportunity.

Green / environment rep appointment form

To [the employer]

Please amend your records accordingly.

Union green representative's details

Name

Work department

Work telephone number

Work email address

Union

Union green representative's bargaining unit

Details of workplace/work departments covered

Name of Branch

Branch Number

Signature of Branch Secretary/Area Organiser

Date

How to use the form

Once the UGR appointment has been ratified by the Branch Committee, the Branch Secretary/Area Organiser completes the details and signs and dates the form.

Branch Secretary/Area Organiser sends copy to the employer as written notification of appointment with explanatory letter if appropriate.

Branch Secretary/Area Organiser keeps a copy for their own records.

Branch Secretary/Area Organiser contacts local [name of union] office to advise that the member is a UGR.

Branch Secretary/Area Organiser arranges training for the new UGR.



Sources of further information

There are a large number of organisations that provide information and support. The list below is a summary of some of the main ones that you may find useful.

Wales TUC Cymru - Is the voice of Wales at work. With 48 member unions, the Wales TUC represents around 400,000 workers. www.tuc.org.uk/wales

It has published 'A green recovery and just transition' www.tuc.org.uk/green

Trades Union Congress – The TUC is the UK federation of unions and has produced a range of resources on climate and industrial strategy www.tuc.org.uk

European Trade Union Confederation – The ETUC is the European federation that the Wales TUC is part of. It has published a Quick Walkaround Checklist in its Green Reps Guide www.etuc.org/sites/default/files/ETUC_greenworkplaces_guide_GB_1.pdf

International Trade Union Confederation – The ITUC is a global federation of unions. www.ituc-csi.org/ It has set up a Just Transition Centre which has produced a range of climate related resources www.ituc-csi.org/just-transition-centre

Your union – Check your union website to see what information on environment / climate change is available. Some unions have a dedicated part of the site, so it is easier to track down the information. If your union provides no resources, or they are difficult to locate, consider raising this in your branch to see if the situation can be improved.

Union Green Rep networks – Some unions like PCS and UCU have established national networks for their green reps to facilitate information sharing and co-ordinating campaigns.

Greener Jobs Alliance – The GJA was set up in 2010 to promote joint work between unions,

environmental groups, and student organisations. It produces a bimonthly newsletter and other resources for green reps. These include free training courses on climate change, air pollution and just transition. www.greenerjobsalliance.co.uk

Labour Research Department – LRD publishes a range of union focused material including in September 2019 'Union action on climate change – A trade union guide' www.lrd.org.uk/

Campaign Against Climate Change Trade Union group – CACCTU is a campaign group which a number of unions are affiliated to. It published the 'One million climate jobs' pamphlet. www.cacctu.org.uk/

Trade Unions for Energy Democracy – TUED campaigns for democratic direction and control of energy as a key part of solving the climate crisis. www.unionsforenergydemocracy.org

Trade Union Clean Air Network – TUCAN has been set up to provide support for unions on air pollution at work. A number of unions have signed the charter and other resources for reps can be found on the website. www.greenerjobsalliance.co.uk/air-pollution/

Cynnal Cymru/Sustain Wales - an independent sustainable development charity in Wales. Its mission is to accelerate progress towards a fair and just society, an inclusive low carbon economy and a thriving natural environment. It is the Living Wage accreditation body for Wales and is also a Carbon Literacy training provider. www.cynnalcymru.com

Centre for Alternative Technologies – CAT, based in Wales, offers practical solutions and training to support a zero-carbon transition. www.cat.org.uk

Institute for Public Policy Research – IPPR is a progressive policy tank that has published a range of climate related research. www.ippr.org

New Economics Foundation – NEF has recently prioritised the Green New Deal in its research publications. www.neweconomics.org

Friends of the Earth Cymru – FoE Cymru has published a 'Climate Action Plan for Wales' in August 2020 www.foe.cymru

Greenpeace – Environment campaign organisation. www.greenpeace.org.uk/

People & Planet – P&P is a student-based network campaigning for social and climate justice. www.peopleandplanet.org/

Students Organising for Sustainability (SOS-UK) – Linked with the National Union of Students it supports students to learn act and lead on sustainability. www.sustainability.nus.org.uk

Tyndall Centre - The Tyndall Centre has centres in the UK provide climate change research. www.tyndall.ac.uk

Extinction Rebellion (XR) – XR is a global environmental movement with the stated aim of using nonviolent civil disobedience to compel government action. www.xrcymru.wales

Aldersgate Group - Advocate the business case for decarbonising the UK economy, improving resource efficiency and investing in the natural environment. www.aldersgategroup.org.uk

Green Alliance - Is an independent think tank and charity focused on ambitious leadership for the environment. www.green-alliance.org.uk

Green New Deal – Is an activist group building coalitions to promote a green new deal www.greennewdealuk.org

Hazards Campaign – Is a trade union focused campaign organisation supporting health and safety at work www.hazardscampaign.org.uk

ShareAction – A charity building a movement for responsible investment. www.shareaction.org

Glossary of terms

(Note items in **bold** are cross referenced)

Adaptation - Changes to cope with the impacts of **climate change**, for example changing working practices to cope with higher summer temperatures, building bigger sea defences, diversifying crops, increasing irrigation or improving health services.

Base year - Targets for reducing GHG emissions are often defined in relation to a base year. In the **Kyoto Protocol**, 1990 is the base year for most countries. Other base years like 2015, the date of the **Paris Agreement** is now more commonly used.

Biodiversity - The wealth of life on Earth, from plants and animals to micro-organisms. If biodiversity is damaged (for example if habitats are destroyed or animals become extinct) then the planet becomes more vulnerable to further environmental change.

BMS Building management system -

Computerised control of a building's energy use such as heating, lighting, air conditioning, etc.

Carbon - An element in fossil fuels, and in **carbon dioxide**. Often used as shorthand for both of these, but when talking about measurements, it is important to be clear whether these are expressed in tonnes of **CO₂**, or of carbon (1 tonne carbon = 3.67 tonnes **CO₂**)

Carbon audit - A way of measuring the **CO₂** emissions of an organisation, sometimes only from direct energy use (eg energy bills, **fossil fuel** use), it can include emissions from direct sources like transport and indirect sources like purchasing of supplies.

Carbon budget - This is an allocated amount of carbon emissions that should be at least consistent with the **Paris Agreement** of keeping global warming below 1.5 degrees centigrade.

Carbon Capture, Usage and Storage - CCUS is the removal of **CO₂** from fossil fuels either before or after

combustion. In the latter the **CO₂** is extracted from the flue gas. The **carbon** then needs to be utilised or stored with zero emissions.

Carbon cycle - The cycle in which **carbon** is stored and released between the plants, land, sea, and atmosphere.

Carbon dioxide (CO₂) - A colourless and odourless gas formed from the burning of all **fossil fuels**, wood, and from **deforestation** and other sources. All animals breathe in oxygen and exhale carbon dioxide, while plants absorb **CO₂** and give off oxygen. Carbon dioxide is the major greenhouse gas that contributes to global warming.

Carbon dioxide equivalent - Used to compare the different warming effects of other greenhouse gases, including water vapour, which is partly due to the length of time they linger in the atmosphere. For example, over the next 100 years, a kilogram of **methane** has 23 times the warming effect as a kilogram of **carbon dioxide**.

Carbon footprint - The total amount of **carbon** emitted by a workplace, individual or household over a year, or by a product during its manufacture or whole life cycle, through its use of fossil-fuel based energy. See **carbon audit**.

Carbon neutral - A person, organisation, process or product that has dealt with **carbon emissions** by a combination of reducing them (**energy efficiency**) and offsetting them.

Carbon sequestration - Removing **carbon dioxide** from the atmosphere and storing in 'carbon sinks' like trees and oceans (which happens naturally), or pumping it underground in depleted oil and gas reservoirs, coal streams and saline aquifers.

Carbon Trust - An independent not-for-profit company set up by the UK government to encourage business to adopt **energy efficiency** and low carbon technologies.

Circular economy - keeps resources in use as long as possible and avoids waste.

Climate change - Long-term trends in the average climate, including temperature and rainfall patterns. The **IPCC** has stated clearly that climate change is primarily caused by human activity.

Climate Change Act 2008 – First piece of legislation in the world to establish legally binding carbon budgets and targets

CO₂ - see **carbon dioxide**.

Combined Heat and Power (CHP) - The generation of electricity on-site combined with the use of waste heat from the generation process.

Committee on Climate Change – Established by the **Climate Change Act** to provide independent advice to government on building a low-carbon economy and preparing for climate change

Conference of the Parties (CoP)– The CoP is the governing body of a United Nations international convention. The Climate Change convention is held every year normally in November.

Deforestation - Clearing forests, often through burning, to use the land for grazing animals or growing crops, or the wood for fuel. A major contributor to **carbon dioxide emissions** and **nature loss**.

Ecocide - the destruction of large areas of the natural environment as a consequence of human activity.

Ecosystem – a community of animals and plants interacting with each other and with their physical environment such as soils, water, nutrients and all types of living organisms.

Ecosystem services - essential functions for human communities provided by **ecosystems**, eg food,

water, air.

EEAS Energy Efficiency Accreditation Scheme – a UK environmental management system focusing on energy use, now managed by the **Carbon Trust**.

EMAS Eco-Management and Audit Scheme – an **environmental management system** set up by the EU.

Emissions - In the industrial context, emissions are the gases, liquids and solid matter given off by, among other things, factories and motor vehicles. Often used to refer to substances discharged into the air. In climate change terms, emissions the release of a greenhouse gas like **CO₂** into the atmosphere.

Emissions trading - A system that allows countries or businesses that have committed to **CO₂** reduction targets to 'buy' or 'sell' **emissions** permits among themselves, in theory allowing participants to reduce emissions where it is most cost-effective to do so. EUETS is the largest current scheme.

Energy efficiency - Using less energy to perform the same function.

Energy Savings Trust (EST) - An independent not-for-profit organisation, set up by the UK government to promote energy saving in the domestic, community and transport sectors.

Environment Act 2016 - The Environment (Wales) Act 2016 requires Welsh Government to reduce emissions of **greenhouse gases** (GHGs) with a system of interim emissions targets and **carbon budgets**. It also puts in place a **Biodiversity** and Resilience of Ecosystems Duty.

Environmental management system (EMS) - A voluntary system designed to continually improve the organisation's environmental performance. Examples include **EMAS**, **ISO14001**, and **EEAS**.

Fossil fuel - **Carbon**-based underground deposits used as an energy source – includes crude oil, coal and natural gas.

Fuel cells - Fuel cells generate electricity by reacting **hydrogen** and oxygen. There are already prototype vehicles running on fuel cells, though so far the technology is very expensive.

Fuel poverty - A household needing to spend more than 10 per cent of household income to achieve a warm enough home.

Green New Deal – Originated in 2007 to promote a green industrial strategy. Has now been adopted as a key part of the process of 'building back better'. Some unions are incorporating GND or 'transition agreement' bargaining into negotiations with employers.

Green rep - A union member elected to promote the environmental concerns of members, to the employer, and to work with the employer, the union and colleagues to address these concerns. Green reps are also known as environment or sustainability reps.

Greenhouse effect - The warming of the earth's climate caused by gases in the atmosphere trapping the sun's heat. This has always happened (otherwise the earth would be inhospitably cold) but the effect is increasing, due to increased greenhouse gas emissions from human activity.

Greenhouse gas (GHG) emissions - Gases released into the open air from human activities such as generating electricity, transport and agriculture. These gases intensify the **greenhouse effect**, raising the world's average temperature. The main greenhouse gases emitted due to human activity are **carbon dioxide**, **methane**, and **nitrous oxide**. Others include hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Greenwash - Disinformation produced by an organisation to 'look green' in public, when it is actually not doing much for the environment.

Gigawatt hour - One gigawatt hour is equal to 1,000 **megawatt hours**.

HSE - The Health and Safety Executive – the body responsible for enforcing, encouraging and regulating workplace health, safety and welfare.

HVAC - Heating, ventilation and cooling.

Hydrocarbons - Chemical compounds that contain only **hydrogen** and **carbon**, for example, fossil fuels (e.g. oil, gas, coal) or biomass.

Hydroelectric power - Electricity produced by the power of water (often held in dams) driving turbines.

Hydrogen – Occurs in gas or water and can be used for storing energy. Energy is required to separate hydrogen from its source. This could be from fossil fuels with **CCUS** or using electricity from renewable sources. Hydrogen projects for home heating and transport are currently being developed.

Intended Nationally Determined Contributions – INDCs (also referred to as NDCs) are (intended) reductions in **greenhouse gas emissions** under the United Nations Framework Convention on Climate Change (UNFCCC).

Intergovernmental Panel on Climate Change (IPCC) - The group of scientists gathered by the United Nations to examine the causes and impacts of climate change and recommend actions in regular reports.

ISO14001 - An international **environmental management system** and standard.

Joint Environment Committee (JEC) - A committee to ensure ongoing environmental improvements in the workplace, with both management and union

representatives. In some workplaces it may be appropriate to integrate this with the Health and Safety Committee to make a Joint Health, Safety and Environment Committee.

Just transition - The International Trade Union Congress (ITUC) describes Just Transition as “a tool for a fast and fair shift to a low carbon and climate resilient society”.

Kilowatt - 1000 watts

Kilowatt hour (KWh) - The standard measure of how much energy is used, which appears on utilities bills.

Life-cycle assessment (LCA) - An assessment of the environmental impacts of a work process or product through its manufacture, use and disposal.

Low Carbon Delivery Plan (LCDP2) – The Welsh Government’s second statutory decarbonisation plan is scheduled to be published in the autumn of 2021. It will describe the policies and approach to meet Wales’ second **Carbon Budget** (2021-25) and propose policies and actions for the longer term.

Megawatt hour (MWh) - One megawatt hour is equal to 1,000 kilowatt hours.

Methane (CH₄) – a greenhouse gas released from decomposing waste and farm animals, 23 times more potent than **CO₂**.

Mitigation – Actions to prevent further **climate change** by adopting measures that will reduce **emissions**

MtC - Million tonnes of carbon.

Mtoe - Million tonnes of oil equivalent – another way of measuring energy use.

Natural Resources Wales – a Welsh Government Sponsored Body. Its purpose is to ensure that

the natural resources of Wales are sustainably maintained, enhanced and used. It has largely taken over the functions of the Countryside Council for Wales, Forestry Commission Wales and the Environment Agency in Wales, as well as certain Welsh Government functions.

Nature loss – describes the global decline in animals and plants. Species are now being lost at unprecedented rates due to the impact of human activity on the world’s **ecosystems**.

Net zero - Refers to achieving an overall balance between **greenhouse gas emissions** produced and taken out of the atmosphere. Often used along with **carbon neutral** although it is broader as it includes other greenhouse gases not just **CO₂**. Neither are as demanding as **zero carbon** which does not allow for any **offsetting**.

Nitrous oxide (N₂O) - A **greenhouse gas** that comes mainly from agricultural fertilisers as well as the burning of **fossil fuels** and wood.

Offsetting - to cancel out the carbon released by an individual or business, by paying for reductions elsewhere.

Paris Agreement – The Paris Agreement is a legally binding international treaty on climate change. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. It has been signed by most of the world’s governments. It was a product of COP21 held in Paris in 2015.

ppm or ppb - Abbreviations for ‘parts per million’ and ‘parts per billion’, respectively – the units in which concentrations of **greenhouse gases** are commonly presented.

‘Polluter pays’ principle (PPP) - The principle that countries or businesses should in some way compensate others for the effects of pollution that they (or their citizens) generate or have generated.

Precautionary principle - Part of the Rio Declaration: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

Recycling - The reprocessing of waste materials or products for use in their original purpose (closed-loop recycling) or for another purpose (open-loop recycling).

Renewable - Resources that can be regenerated relatively quickly.

Renewable energy - Energy that is easily replaced or supplied by a nearly infinite source, such as the sun or the wind. Some examples are solar, wind, hydropower and geothermal.

Sustainable development - "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (from the classic Brundtland report, 1987).

Sustainable Development Goals (SDGs) – Adopted by the United Nations in 2015 they set out 17 goals and 169 actions to be achieved by 2030. The goals recognise that ending societal problems such as poverty must go hand-in-hand with strategies that improve health and education, reduce inequality and support economic growth all while tackling climate change and working to preserve our oceans and forests.

Triple bottom line - Includes environmental and social impacts, rather than the single financial bottom line. Often used in the context of corporate social responsibility (CSR) policies.

TWh - One terawatt hour is 1,000 gigawatt hours.

Watt (W) - A measure of how fast an electrical appliance uses energy. For example, a 60W

conventional light bulb uses energy three times faster than a 20W CFL bulb.

Well-being of Future Generations (Wales) Act 2015 - The Act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

Zero carbon - Workplaces or homes that use no fossil fuels, only renewable.

Zero waste – This means that no residual waste goes to landfill and everything is either re-used or recycled. Zero waste seeks to eliminate rather than merely manage waste.

End notes

- 1 <https://www.tuc.org.uk/sites/default/files/2020-06/A%20green%20recovery%20and%20a%20just%20transition%20Wales%20TUC%20May%202020.pdf>
- 2 https://www.tuc.org.uk/research-analysis/reports/general-council-report-2020?page=2#section_header
- 3 <https://congress.tuc.org.uk/composite-02-the-economy/#sthash.3886VMp7.dpbs>
- 4 <http://www.greenerjobsalliance.co.uk/wp-content/uploads/2020/05/Rescue-and-Recovery-discussion-paper.pdf>
- 5 <https://link.springer.com/article/10.1007/s00376-020-9283-7>
- 6 https://easac.eu/fileadmin/PDF_s/reports_statements/Extreme_Weather/EASAC_Press_Release_Extreme_Weather_Events_March_2018.pdf
- 7 https://easac.eu/fileadmin/PDF_s/reports_statements/Extreme_Weather/EASAC_Press_Release_Extreme_Weather_Events_March_2018.pdf
- 8 <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>
- 9 <https://www.zsl.org/sites/default/files/LPR%202020%20Full%20report.pdf>
- 10 <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf>
- 11 <https://naturalresources.wales/evidence-and-data/research-and-reports/state-of-natural-resources-interim-report-2019/challenges/?lang=en>
- 12 <https://www.nature.com/articles/s41586-020-2784-9>
- 13 <https://www.projectseagrass.org>
- 14 <https://phys.org/news/2020-01-hottest-year-eu.html>
- 15 <https://www.bbc.co.uk/news/science-environment-52485712>
- 16 <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
- 17 <https://unfccc.int/process/the-paris-agreement/status-of-ratification>
- 18 <https://www.ipcc.ch/sr15/>
- 19 <https://www.unenvironment.org/resources/emissions-gap-report-2019>
- 20 <https://www.ukcop26.org/>
- 21 https://www.theguardian.com/environment/2020/nov/20/pressure-grows-on-boris-johnson-over-uk-carbon-emissions-plan?CMP=Share_iOSApp_Other
- 22 <https://www.theguardian.com/environment/2020/nov/20/pressure-grows-on-boris-johnson-over-uk-carbon-emissions-plan>
- 23 <https://www.leaderspledgefornature.org/>
- 24 <https://www.tuc.org.uk/research-analysis/reports/voice-and-place-how-plan-fair-and-successful-paths-net-zero-emissions>
- 25 <https://www.tuc.org.uk/research-analysis/reports/voice-and-place-how-plan-fair-and-successful-paths-net-zero-emissions>
- 26 <https://www.theccc.org.uk/wp-content/uploads/2017/12/CCC-Building-a-low-carbon-economy-in-Wales-Setting-Welsh-climate-targets.pdf>
- 27 <https://www.theccc.org.uk/wp-content/uploads/2017/12/CCC-Building-a-low-carbon-economy-in-Wales-Setting-Welsh-climate-targets.pdf>
- 28 <https://community-tu.org/britain-needs-our-steel/#8925b471>

- 29 <https://www.theccc.org.uk/wp-content/uploads/2020/12/Progress-Report-Reducing-emissions-in-Wales.pdf>
- 30 <https://www.theccc.org.uk/publication/the-path-to-net-zero-and-progress-reducing-emissions-in-wales/>
- 31 <https://www.theccc.org.uk/2020/12/17/net-zero-wales-by-2050-wales-faces-a-decisive-decade-to-get-on-track-to-an-emissions-free-future/>
- 32 https://www.ituc-csi.org/IMG/pdf/just_transition_-_a_business_guide.pdf
- 33 https://www.tuc.org.uk/sites/default/files/A_Just_Transition_To_A_Greener_Fairer_Economy.pdf
- 34 <https://www.tuc.org.uk/sites/default/files/2020-06/A%20green%20recovery%20and%20a%20just%20transition%20Wales%20TUC%20May%202020.pdf>
- 35 <https://www.ituc-csi.org/just-transition-in-the-paris>
- 36 <https://cop24.gov.pl/presidency/initiatives/just-transition-declaration/>
- 37 <http://www.oecd.org/environment/cc/g20-climate/collapsecontents/Just-Transition-Centre-report-just-transition.pdf>
- 38 <https://www.ituc-csi.org/just-transition-centre>
- 39 https://www.ituc-csi.org/spip.php?page=more&id_rubrique=602
- 40 <https://www.ituc-csi.org/cpow-campaign-en>
- 41 <https://www.ituc-csi.org/climate-proofing-work>
- 42 <https://www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition.html>
- 43 <https://www.bmj.com/content/371/bmj.m3785>
- 44 <https://unfccc.int/gender>
- 45 <https://www.theccc.org.uk/wp-content/uploads/2016/07/UK-CCRA-2017-Wales-National-Summary.pdf>
- 46 <https://publichealthmatters.blog.gov.uk/2018/11/26/the-climate-change-act-10-years-on/>
- 47 <https://neweconomics.org/2018/11/climate-change-and-the-health-gap>
- 48 www.newscientist.com/article/2258774-air-pollution-linked-to-greater-risk-of-dying-from-covid-19-in-the-us
- 49 <https://www.mpg.de/12823232/polluted-air-shortens-the-lifespan-of-europeans-by-about-two-years>
- 50 [https://phw.nhs.wales/services-and-teams/environmental-public-health/air-quality/air-pollution-and-health-fact-sheet/#:~:text=In%20Wales%2C%20based%20on%20the,at%20typical%20ages\)%20each%20year.](https://phw.nhs.wales/services-and-teams/environmental-public-health/air-quality/air-pollution-and-health-fact-sheet/#:~:text=In%20Wales%2C%20based%20on%20the,at%20typical%20ages)%20each%20year.)
- 51 <http://www.greenerjobsalliance.co.uk/air-pollution/>
- 52 <https://gov.wales/clean-air-plan-wales-healthy-air-healthy-wales>
- 53 <https://www.unenvironment.org/news-and-stories/story/how-climate-change-disproportionately-impacts-those-disabilities>
- 54 <https://www.theguardian.com/environment/2020/jun/18/environmental-justice-means-racial-justice-say-activists>
- 55 <https://wbg.org.uk/wp-content/uploads/2020/10/WBG-Report-v10.pdf>
- 56 <https://www.tuc.org.uk/blogs/next-steps-social-partnership-wales>
- 57 <https://gov.wales/more-equal-wales-strengthening-social-partnership-white-paper>
- 58 <https://waterfront.eventscase.com/EN/walesclimateweek/On-demand>
- 59 <https://www.bbc.co.uk/news/uk-wales-politics-48093720>
- 60 <https://gov.wales/what-is-the-welsh-government-doing-to-tackle-climate-change>
- 61 <https://gov.wales/welsh-public-sector-be-carbon-neutral-2030>
- 62 <https://www.tuc.org.uk/sites/default/files/2020-06/A%20green%20recovery%20and%20a%20just%20transition%20Wales%20TUC%20May%202020.pdf>
- 63 <https://gov.wales/written-statement-one-year-anniversary-following-declaration-climate-emergency>
- 64 <https://www.bbc.co.uk/news/uk-northern-ireland-38077948>
- 65 <https://gov.wales/written-statement-welsh-government-response-fair-work-wales>
- 66 <https://www.carbonbrief.org/media-reaction-boris-johnsons-10-point-net-zero-plan-for-climate-change>
- 67 <https://www.tuc.org.uk/research-analysis/reports/rebuilding-after-recession-plan-jobs#:~:text=New%20research%20by%20Transition%20Economics,over%20the%20>

- next%20two%20years.&text=research%20and%20development%20in%20de%2Dcarbonising%20technology%20in%20manufacturing%2C%20including,create%20over%2038%2C000%20new%20jobs
- 68 <https://gov.wales/written-statement-one-year-anniversary-following-declaration-climate-emergency>
- 69 <https://www.tuc.org.uk/research-analysis/reports/job-creation-wales-infrastructure-investment>
- 70 <https://www.tuc.org.uk/news/all-governments-talk-green-industrial-revolution-it-slow-start>
- 71 <https://www.legislation.gov.uk/ukpga/2008/27/contents>
- 72 <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>
- 73 <https://www.tuc.org.uk/research-analysis/reports/voice-and-place-how-plan-fair-and-successful-paths-net-zero-emissions>
- 74 <https://www.futuregenerations.wales/making-it-happen/international/>
- 75 <https://gov.wales/wellbeing-wales>
- 76 <https://www.theccc.org.uk/publication/the-path-to-net-zero-and-progress-reducing-emissions-in-wales/>
- 77 <https://gov.wales/sites/default/files/publications/2019-05/environment-wales-act-2016-biodiversity-resilience-ecosystems.pdf>
- 78 <https://naturalresources.wales/evidence-and-data/research-and-reports/state-of-natural-resources-report-sonarr-for-wales-2020/?lang=en>
- 79 <https://gov.wales/natural-resources-policy>
- 80 <https://naturalresources.wales/about-us/area-statements/?lang=en>
- 81 <https://gov.wales/prosperity-all-national-strategy>
- 82 <https://gov.wales/prosperity-all-economic-action-plan>
- 83 <https://gov.wales/sites/default/files/publications/2019-09/wales-procurement-policy-statement.pdf>
- 84 <https://seneddresearch.blog/2018/09/13/active-travel-act-five-years-on-short-cut-or-long-road/>
- 85 <https://www.walesonline.co.uk/news/wales-news/cycling-shot-up-125-per-19268181>
- 86 <https://research.senedd.wales/research-articles/active-travel-act-five-years-on-short-cut-or-long-road/>
- 87 https://gov.wales/sites/default/files/publications/2019-06/low-carbon-delivery-plan_1.pdf
- 88 <https://gov.wales/low-carbon-delivery-plan-2-engagement-plan>
- 89 https://www.onetcenter.org/dl_files/Green.pdf
- 90 <https://www.gov.scot/publications/transition-commission-interim-report/>
- 91 https://www.cedefop.europa.eu/files/3078_en.pdf
- 92 https://www.futuregenerations.wales/priority_areas/skills-2/
- 93 https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1196
- 94 <https://workingwales.gov.wales/>
- 95 <https://businesswales.gov.wales/skillsgateway/>
- 96 <https://businesswales.gov.wales/skillsgateway/skills-development/regional-skills-partnerships>
- 97 http://www.greenerjobsalliance.co.uk/wp-content/uploads/2016/04/Green_skills_manifesto_2013_to_print_1_compressed.pdf
- 98 <https://www.pcs.org.uk/resources/green-workplaces/green-reps>
- 99 https://www.ucu.org.uk/media/6743/UCU-environment-rep-handbook-staff-organising-for-sustainability/pdf/UCU_Environment_Reps_Handbook.pdf
- 100 <https://www.tuc.org.uk/research-analysis/reports/union-effect-greening-workplace>
- 101 <https://www.tuc.org.uk/research-analysis/reports/union-effect-greening-workplace>
- 102 <https://www.carbontrust.com/what-we-do/measure-and-evaluate>
- 103 <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>
- 104 <https://library.prospect.org.uk/id/2016/00619>
- 105 <https://gov.wales/team-wales-approach-tackle-climate-change>
- 106 <https://library.prospect.org.uk/id/2016/00619>
- 107 <https://naturalresources.wales/about-us/corporate-information/carbon-positive-project/?lang=en>

- 108 https://www.iucn.nl/files/publicaties/a_compass_for_navigating_biodiversity_footprint_tools_-_final_1.pdf
- 109 <https://www.biodiversitywales.org.uk/Section-6>
- 110 <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>
- 111 <https://www.wuutilities.co.uk/media/3709/protecting-enhancing-biodiversity-our-biodiversity-plan-2019-20.pdf>
- 112 <https://www.iso.org/iso-14001-environmental-management.html>
- 113 <https://shop.bsigroup.com/ProductDetail?pid=000000000030339300>
- 114 https://ec.europa.eu/environment/emas/index_en.htm
- 115 https://en.wikipedia.org/wiki/Eco-Management_and_Audit_Scheme
- 116 <https://www.groundwork.org.uk/hubs/southwales/greendragon/>
- 117 https://www.eauc.org.uk/sustainability_leadership_scorecard
- 118 <https://www.carbontrust.com/what-we-do/assurance-and-certification>
- 119 <https://www.carbontrust.com/what-we-do/assurance-and-certification/carbon-neutral-certification>
- 120 <https://www.iema.net/engage/policy-horizon/environmental-management>
- 121 [https://www.carbontrust.com/news-and-events/news/two-thirds-of-major-uk-companies-to-incorporate-climate-change-risks-and#:~:text=News-Two%2Dthirds%20of%20major%20UK%20companies%20to%20incorporate%20climate%20change,in%20this%20year's%20annual%20reporting&text=Two%2Dthirds%20\(67%25\)%20of,today%20by%20the%20Carbon%20Trust.](https://www.carbontrust.com/news-and-events/news/two-thirds-of-major-uk-companies-to-incorporate-climate-change-risks-and#:~:text=News-Two%2Dthirds%20of%20major%20UK%20companies%20to%20incorporate%20climate%20change,in%20this%20year's%20annual%20reporting&text=Two%2Dthirds%20(67%25)%20of,today%20by%20the%20Carbon%20Trust.)
- 122 <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf>
- 123 <https://www.weforum.org/agenda/2019/01/these-are-the-biggest-risks-facing-our-world-in-2019/>
- 124 <http://www.greenerjobsalliance.co.uk/wp-content/uploads/2020/08/GJA-Guidance-doc.pdf>
- 125 <https://www.theguardian.com/environment/2020/nov/20/pressure-grows-on-boris-johnson-over-uk-carbon-emissions-plan>
- 126 <https://www.ucu.org.uk/article/10844/The-future-we-choose>
- 127 https://en.wikipedia.org/wiki/The_Lucas_Plan#:~:text=Film%3A%20The%20Plan%20%28That%20Came%20from%20the%20Bottom,Mick%20Cooney%2C%20Ron%20Mills%20and%20Bob%20Dodd.%20%5B6%5D
- 128 <http://lucasplan.org.uk/more-about-the-lucas-plan/>
- 129 <https://www.climateassembly.uk/report/>
- 130 https://www.ucu.org.uk/media/10443/UCU-climate-change-poster/pdf/Climate_action_poster_Sep19.pdf
- 131 <https://www.bbc.co.uk/news/stories-53640382>
- 132 unionlearn.org.uk/case-studies/unison-carbon-literacy-training-stockport
- 133 Department for Transport statistics, Table TSGB0108, Usual method of travel to work by region of residence: Great Britain, October to December 2018 <https://www.gov.uk/government/statistical-data-sets/tsgb01-modal-comparisons>
- 134 <https://gov.wales/greenhouse-gas-emissions-infographic>
- 135 <https://airqualitynews.com/2020/07/03/the-crucial-link-between-air-pollution-and-biodiversity-loss/>
- 136 <https://www.clientearth.org/uk-air-pollution-how-clean-is-the-air-you-breathe/>
- 137 Cardiff and the Vale University Health Board, Moving forwards: Healthy travel for all in Cardiff and the Vale of Glamorgan, 2017 p 19
- 138 Cardiff and the Vale University Health Board, Moving forwards: Healthy travel for all in Cardiff and the Vale of Glamorgan, 2017 p 19
- 139 Department for Transport, Annual bus statistics: England 2016/17, 2017
- 140 BBC News, Newport was Wales' most congested city in 2017, figures show, February 2018
- 141 <https://www.travelknowhowscotland.co.uk/pages/view/downloadable-travel-plan-template-and-guidance-notes>
- 142 <https://www.cyclinguk.org/cycle-friendly-employer>
- 143 <https://www.cyclinguk.org/article/cycling-guide/overcoming-barriers-riding-work>

- 144 <https://www.traveline.cymru/business/>
- 145 <https://www.gov.uk/plug-in-car-van-grants>
- 146 <https://como.org.uk>
- 147 <https://gov.wales/sites/default/files/consultations/2019-12/consultation-circular-economy-strategy.pdf>
- 148 <https://www.ellenmacarthurfoundation.org/publications/completing-the-picture-climate-change>
- 149 <https://www.carbontrust.com/news-and-events/insights/a-new-era-for-supply-chains>
- 150 https://gala.gre.ac.uk/id/eprint/29669/7/29669%20WEGHMANN_Safe_Jobs_in_the_Circular_Economy_2020.pdf
- 151 <https://gov.wales/sites/default/files/publications/2019-05/towards-zero-waste-our-waste-strategy.pdf>
- 152 <https://gov.wales/increasing-recycling-businesses>
- 153 <https://naturalresources.wales/evidence-and-data/research-and-reports/waste-reports/industrial-commercial-waste-survey/?lang=en>
- 154 <https://businesswales.gov.wales/managing-waste>
- 155 <https://zerowasteeurope.eu/2019/05/a-zero-waste-hierarchy-for-europe/>
- 156 <https://www.wrap.org.uk/sites/files/wrap/WRAP%20EMS%20guide%20June%202013.pdf>
- 157 <https://wrap.org.uk/content/what-is-courtald>
- 158 <https://www.iso.org/iso-14001-environmental-management.html>
- 159 <https://eplca.jrc.ec.europa.eu/>
- 160 <https://www.lifecycleinitiative.org>
- 161 <https://partners.wrap.org.uk/assets/4105/>
- 162 <https://www.wrap.org.uk/content/wrap%E2%80%99s-5-5-5-approach-maximising-waste-reduction>
- 163 <https://www.wrap.org.uk/content/waste-%E2%80%93-how-much-it-costing-me>
- 164 <https://us6.campaign-archive.com/?u=c0baca4990b9062dd6688dd4f&id=206679cac4>
- 165 <https://wrapcymru.org.uk/grants>
- 166 <https://wrap.org.uk/content/we-wont-fix-climate-change-if-we-dont-stop-wasting-food>
- 167 <https://www.lovefoodhatewaste.com/why-save-food#:~:text=The%20average%20family%20of%20four,save%20food%20from%20the%20bin.>
- 168 <https://www.theguardian.com/environment/2020/sep/04/war-on-plastic-could-strand-oil-industrys-300bn-investment>
- 169 <https://www.theguardian.com/environment/2020/sep/04/war-on-plastic-could-strand-oil-industrys-300bn-investment#:~:text=The%20war%20on%20plastic%20waste,according%20to%20a%20new%20report>
- 170 <https://www.wrapcymru.org.uk/plastic-route-map>
- 171 <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/coronavirusandhomeworkingintheuk/april2020>
- 172 <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/coronavirusandhomeworkingintheuklabourmarket/2019#regions-of-homeworkers>
- 173 https://www.cipd.co.uk/Images/embedding-new-ways-working-post-pandemic_tcm18-83907.pdf
- 174 <http://www.bco.org.uk/News/News46982.aspx>
- 175 <https://energysavingtrust.org.uk/simple-steps-take-action-home-energy-efficiency/>
- 176 <https://www.bbc.co.uk/news/technology-55164410>
- 177 <https://iopscience.iop.org/article/10.1088/1748-9326/ab8a84>
- 178 <https://www.theguardian.com/business/2020/oct/04/working-from-home-in-uk-over-winter-will-add-100-to-fuel-bills>
- 179 <https://www.carbontrust.com/resources/homeworking-helping-businesses-cut-costs-and-reduce-their-carbon-footprint>
- 180 www.climateperks.com/
- 181 <https://www.unison.org.uk/content/uploads/2020/12/COVID-19-working-from-home-guidance-and-model-policy-22-December-2020.pdf>
- 182 <https://footprint.wwf.org.uk/#/>
- 183 <https://www.bbc.com/future/smart-guide-to-climate-change>
- 184 www.energysavingtrust.org.uk/hub/quick-tips-to-save-energy

- 185 <https://energysavingtrust.org.uk/simple-steps-take-action-home-energy-efficiency/>
- 186 <https://gov.wales/get-help-energy-efficiency-households>
- 187 <https://www.bbc.com/future/article/20200326-the-hidden-impact-of-your-daily-water-use>
- 188 <https://www.dwrcymru.com/en/help-advice/water-saving-tips-for-households>
- 189 <https://www.bbc.com/future/article/20200305-why-your-internet-habits-are-not-as-clean-as-you-think>
- 190 <https://www.which.co.uk/news/2019/09/how-green-is-your-energy-tariff/>
- 191 <https://www.unison.org.uk/content/uploads/2019/01/just-transition-to-low-carbon-leaflet.pdf>
- 192 <https://www.gmb.org.uk/campaign/switched>
- 193 <https://www.unison.org.uk/content/uploads/2019/05/2019-Energy-Annual-Report.pdf>
- 194 <https://gov.wales/sites/default/files/publications/2017-08/taking-wales-forward.pdf>
- 195 <https://gov.wales/sites/default/files/publications/2019-08/paper-2-better-jobs-closer-to-home.pdf>
- 196 <https://gov.wales/procurement-guidance-on-social-value-clauses-community-benefits.html#section-55969>
- 197 <https://www.futuregenerations.wales/work/procurement/>
- 198 <https://gov.wales/ethical-employment-supply-chains-code-practice-guidance-and-training>
- 199 <https://www.gov.uk/government/publications/sustainable-procurement-in-government-guidance-to-the-flexible-framework>
- 200 <https://www.gov.uk/government/publications/social-value-act-introductory-guide>
- 201 http://www.stuc.org.uk/files/Policy/Research-papers/Renewable_Jobs_Crisis_Covid-19.pdf
- 202 <https://www.stopecocide.earth/newsletter-summary/thedish-labor-movement-calls-for-ecocide-as-a-crime->
- 203 <https://www.energyvoice.com/renewables-energy-transition/280564/jake-molloy-just-transition-holyrood-westminster/>
- 204 <https://platformlondon.org/p-pressreleases/press-release-oil-gas-workers-report/>
- 205 <https://www.theguardian.com/business/2020/oct/13/mark-carney-says-banks-should-link-executive-pay-to-paris-climate-goals>
- 206 <https://www.theguardian.com/environment/2020/oct/19/call-climate-risk-reports-mandatory-ftse-listed-firms>
- 207 <https://www.edie.net/news/11/Mark-Carney--Climate-considerations-must-be--embedded-in-every-financial-decision-for-a-truly-green-recovery/>
- 208 <https://www.legislation.gov.uk/ukxi/2019/982/contents/made>
- 209 <https://www.unpri.org/download?ac=10382>
- 210 <https://www.medact.org/wp-content/uploads/2015/02/UnhealthyInvestments-Spreads-Final-Version.pdf>
- 211 <https://www.statista.com/statistics/485823/greenhouse-gas-emission-of-the-water-treatment-and-supply-sector-uk/>
- 212 <https://waterwise.org.uk/>
- 213 <https://www.theguardian.com/environment/2020/oct/08/uk-will-take-700-years-to-reach-low-carbon-heating-under-current-plans>
- 214 <https://energysavingtrust.org.uk/>
- 215 <https://www.carbontrust.com/news-and-events/insights/challenging-the-accepted-wisdom-around-leds-and-energy-efficiency>
- 216 <https://gov.wales/sites/default/files/publications/2019-10/energy-generation-in-wales-2018.pdf>
- 217 <https://www.iea.org/reports/ccus-in-clean-energy-transitions>
- 218 <https://www.theguardian.com/world/2020/jun/17/pandemics-destruction-nature-un-who-legislation-trade-green-recovery>
- 219 <https://www.greenpeace.org.uk/news/the-biggest-problem-with-carbon-offsetting-is-that-it-doesnt-really-work/>
- 220 <https://www.carbontrust.com/resources/developing-a-robust-carbon-offsetting-strategy>

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Go Green at Work

Tackling Climate Change

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