



Llywodraeth Cymru
Welsh Government

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Net zero sector skills

We want your views on the skills needed to support our transition to net zero for each emission sector in Wales.

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Introduction

The Senedd formally committed Wales to achieving net-zero emissions by 2050. Net Zero can be defined as balancing the amount of greenhouse gases we put into the atmosphere with those we take out. Our aim is to get to net zero by 2050. However, we recognise that we must transition to Net Zero in a just way. We must take every Welsh citizen with us, leave no-one behind and provide our workforce with the skills for a greener, fairer and better future. We know the challenge to meet our net zero commitment is difficult but also provides us with exciting opportunities as the technologies of the future economy emerge. Preparing our workforce with future skills needs for this will require a collaborative approach across the whole economy.

The Net Zero Skills Action Plan^[footnote 1] ('the Plan') was launched in February 2023. The plan sets out this Government's commitment to support our just transition to net zero through a more co-ordinated approach. It prioritises 7 key areas and contains 36 actions, recognising the importance of skills in supporting our net zero challenges by equipping our current and future workforce with the right options and opportunities.

In the development of the Plan, research and evidence was commissioned to inform the plan's actions, this included the evidence from the Wales Centre for Public Policy (WCPP). Their Net Zero skills: Insights and evidence from emission sectors in Wales ^[footnote 2] Report set out the current net zero skills position across Wales, the future skills needs and gaps to meet the changing demands on the workforce for the transition to net zero.

Action 1 within the Plan committed to undertake a consultation to look at the skills landscape across our eight emission sectors in more detail. This consultation document sets out our understanding on the current position on skills for each sector, links to existing policy commitments and what skills are needed in the short, medium and long term. The outcome of this consultation will

support the development of sector skills roadmaps ('the Roadmaps').

Since the Plan's publication, additional research and evidence has been commissioned, which includes but not limited to, the Just Transition Call for Evidence, which closed on 15th March. There have also been a number of sector specific reports and industry leading bodies reports that have been published. These include the Climate Change Committee Report - a Net Zero Workforce report [\[footnote 3\]](#), a review of Vocational qualifications, the Regional Skills Partnership Annual Reports and Sector reports, such as Electrical Contractor Association (ECA) and Construction Industry Training Board (CITB) and the Chartered Institute for Wastes Management (CIWM) report 'Beyond Waste: Essential Skills for a Greener Tomorrow'[\[footnote 4\]](#). The outcomes of these reports will be fully considered as part of the development of the Sector roadmaps.

[\[1\] Net zero skills action plan | GOV.WALES](#)

[\[2\] Net zero skills: Insights and evidence from emissions sectors in Wales | WCPP](#)

[\[3\] A Net Zero workforce - Climate Change Committee \(theccc.org.uk\)](#)

[\[4\] Beyond-Waste-Essential-Skills-for-a-Greener-Tomorrow.pdf \(circularonline.co.uk\)](#)

Why are we consulting?

The direction of travel to meet the net zero commitments is further ahead in some emission sectors than others. Further research and consideration is needed to fully understand the size and complexity of the challenge. This will provide opportunities to explore potential solutions to secure accessibility for all

and strive to ensure no one is left behind.

In some sectors there is confusion amongst the workforce, industry, businesses and stakeholders on the direction of travel and how these changes could impact on the skills of their workforce or an individual's career pathway. There is currently limited detailed information on the overall economy wide skills landscape (including qualifications requirements) across Wales.

The consultation provides an opportunity to strengthen our understanding of the current skills position for each emission sector in Wales, as outlined in Net Zero Wales^[footnote 5].

[\[5\] Net Zero Wales Carbon Budget 2 \(2021 to 2025\) | GOV.WALES](#)

What are we consulting?

We are seeking your views on the following areas:

- definition of Net Zero Skills
- mapping key milestones - these can include new investments and developments that will impact sector skills in Wales, policy and legislation impacts (for example the new Agriculture Bill), changes in technology, transitioning impacts of sectors and critical dates
- new, emerging or increased net zero skills demands in Wales
- what the potential impacts and challenges are for these skills requirements and how they could be addressed
- what groups are currently in place with a remit of considering net zero skills within sectors
- what the emerging and cross cutting issues are including, supply chains, technology, Artificial Intelligence and Circular Economy
- challenges and barriers employers face in growing their workforce to meet

our net zero commitment

Outcome of the consultation

The consultation will inform the Roadmaps which will be published next year. The Roadmaps will:

- outline key milestones in terms changes in industry practices aligned to carbon reduction, new technologies, investment, policies, transitioning activities etc; all factors that will have an impact on the skills needed to support these key shifts
- summarise key investments/projects coming into Wales that have an impact on skills
- include key actions to develop skills that were identified from the consultation, competencies and understand workforce demand
- map new or updated legislation, policy developments, transitioning impacts or any other identified milestones

Capturing this detail will inform and allow planning and policy on skills to shift to the forefront in order to stimulate and create the workforce of the future. This work will also align with the Climate Change Pathways.

Annex A provides a visual summary of the aims and objectives of the Net Zero Sector Roadmap.

Who is the consultation for?

The consultation is aimed at:

- industry representative bodies

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- employers
- individuals
- trade unions
- local authorities
- learning providers, including FE, HE, Apprenticeship Work Based Learning Providers, employability programme providers and private providers and HMPPS
- anyone with an interest in skills to support our future economy

Net zero skills definition

There is currently no universal definition or agreed understanding from across organisations of what net zero skills are. There is a need to develop a definition for use in Wales and gain a common understanding of the jobs and skills that will be required, with a clear flow of information between government, private sector, employees and training provision on the skills needed.

Therefore, there is an immediate need to build a shared understanding of net zero skills across Wales. This will help businesses understand the opportunities they can create, and more broadly for industry, stakeholders and government to understand how we best grow and support net zero skills.

The Office for National Statistics (ONS) undertook a consultation last year on defining what a green job is. In March 2023 the ONS published the definition for a green job as: 'Employment in an activity that contributes to protecting or restoring the environment, including those that mitigate or adapt to climate change'

ONS will also be developing a detailed framework to underpin the definition, including the identification of appropriate activities (what the definition does and does not cover) and grouping them into useful sub-categories. ONS will be

publishing a green jobs article in Quarter 3 2023 which will bring together their research and estimates. Going forward, green jobs questions will also be incorporated into other ONS surveys. This definition could also allow the reporting and tracking of jobs across the UK to highlight growth, opportunities and potential areas of action.

Taking into account the ONS' definition of green jobs and considering the other definitions that have been published, we have drafted a potential definition on net zero skills in Wales: 'An umbrella term that refers to skills, competencies and knowledge within employment that supports our transition to a net zero economy. This can relate to all sectors, organisations and industries, whether directly or indirectly, on their path to net zero.'

Well-being of Future Generations Act

The Well-being of Future Generations Act provides us with a comprehensive framework to ensure that future generations have at least the same quality of life as we currently experience, to create a Wales that we all want to live in, now and in the future. This will allow us to both minimise the impacts but crucially maximise the opportunities it provides for Welsh workers and communities. This will support our impact on improving the lives of the people of Wales by identifying and enabling access to the right skills and qualifications, improving their chances to enter quality employment or enable progression opportunities within employment. In addition this will support the growth of the economy by strengthening net zero skills to enable continued development of a highly skilled workforce.

We aim to use the Well-being for Future Generations Act and the guiding principles for tackling the transition in Wales. This will allow us to both minimise the impacts but crucially maximise the opportunities it provides for Welsh workers and communities.

Sectors

The Net Zero Skills Action Plan Annex 1 Stronger, Fairer, Greener Wales: Net Zero Skills Action Plan [Skills emission sector overview and cross cutting themes | GOV.WALES](#) sets out the net zero skills position in Wales, against the backdrop of our 8 emission sectors set out in Net Zero Wales. In developing the Plan, research and evidence was commissioned from the Wales Centre for Public Policy (WCPP) to determine the current net zero skills position across Wales on each of the 8 emission sectors, future skills needs and gaps to meet the changing demands on the workforce for the transition to net zero. Welsh Government has also undertaken extensive engagement with internal and external stakeholders to discuss the net zero skills landscape across Wales. The tables below provide a summary of the high level findings of the report.

Electricity and heat generation

About

The electricity and heat generation sector in Wales covers the production of electricity from fossil fuel, low carbon and renewable generation. It also includes the generation and supply of heat, such as through heat networks.

Skills Summary

There are currently significant labour shortages in this sector with a huge growing demand for new skills. The Net Zero transition is likely to see significant growth in sectors such as renewable energy generation, low-carbon hydrogen, Carbon Capture Utilisation & Storage (CCS), building construction and retrofit, waste management and electric vehicle manufacturing, among others. The Skills

and Net Zero Expert Advisory Group^[footnote 6] found:

“ A rapid increase in renewables, hydrogen and CCS will be needed for the Net Zero transition. So too will a greatly enhanced energy transmission system. This could require additional high-quality jobs nationwide, as well as in particular regions of the UK that are appropriate for low-carbon power generation, potentially focussed in areas that are priorities for addressing socioeconomic inequalities. Currently the energy supply sector predominantly employs workers who are white and male. It may be that workers previously employed in the oil and gas industry can retrain to provide this workforce, but it is possible these numbers will be insufficient to fill all the jobs. The North Sea Transition Authority will therefore have an important role in realising a fair and sustainable transition to Net Zero. There is a need to ensure departing oil and gas workers are supported to reskill and enter these industries. There may also be a need to build an expanded future pipeline of workers to deliver renewables, CCS and hydrogen. There is an opportunity to create new jobs nationally, and to attract a more diverse pool of workers. Importantly, the necessary changes and enhancements to the energy transmission system across the UK will also have major workforce and skills implications. ”

The Wales Centre for Public Policy also found:

“ “Existing workers in these carbon intensive sectors, such as oil, gas may have transferrable skills to move into these occupations. There would be upskilling requirements for individuals to move from carbon intensive sectors to jobs in renewable energy and hydrogen.” ”

Current position

In Wales we want to generate renewable energy to at least fully meet our energy needs and utilise surplus generation to tackle the nature and climate emergencies. We will accelerate actions to reduce energy demand and maximise local ownership retaining economic and social benefits in Wales. There is already a lot of work underway to drive this forward that will have skills implications, these include:

- the recently published Heat Strategy consultation^[footnote 7] will guide our approach to decarbonising space heating and hot water for our buildings in Wales
- the Renewable Energy Deep Dive was established to identify opportunities and barriers to significantly scaling up renewable energy in Wales and identified a series of recommendations aimed at maximising the benefit of renewable energy for Wales. A Written Statement was published in December 2021 and included recommendations broken down by five key themes -Strategic Leadership; Grid Infrastructure; Consenting, licensing and supporting advisory arrangements; Finance; and Opportunities in Wales. The recommendations included:
 - a vision for renewable energy in Wales which makes clear that ‘we want Wales to generate renewable energy to at least fully meet our energy needs and utilise surplus generation to tackle the nature and climate emergencies
 - scaling up local energy plans to create a national energy plan by 2024 and mapping out future energy demand and supply to identify gaps to enable Wales to plan for a system that is flexible and smart
 - a commitment to work with Natural Resources Wales to carry out with an end-to-end review of the marine licensing, consenting and supporting advisory processes to remove barriers. This includes identifying marine ‘strategic resource areas’ to signpost appropriate and inappropriate areas for development at sea by 2023

- a promise to explore ways of drawing down additional investment in renewable energy generation in Wales, prioritising local and community ownership to maximise local economic and social value. A separate subgroup of the Deep Dive group provided a suite of recommendations aimed at exploring ways of drawing down additional investment in renewable energy generation in Wales
- renewable energy targets - The Welsh Government recently consulted on an ambitious but credible target for Wales to meet our own needs through renewable electricity by 2035. Our proposed local ownership target demonstrates our ambition for communities to benefit directly from hosting renewable energy developments. We will need a range of renewable technologies of different types and scales to address the climate crisis and meet our energy targets. Wind and solar energy are the most mature and cost-effective technologies and are likely to make the most significant contribution to our energy mix in the short to medium term. The consultation closed on 18 April and the Minister for Climate Change will announce the outcome of this review later this year
- floating offshore wind has the potential to contribute significantly to Wales and Great Britain's future net zero energy system and is a fantastic opportunity to bring social and economic benefits to our coastal communities. We are working with industry, the Crown Estate and the UK Government to make this a reality
- the Regional Energy Plans we've co-developed with Growth Deal teams and local authorities have set out the scale of the opportunity for clean jobs

Challenges Identified

One of the key challenges is to attract individuals into the sector and ensure they have the skills to implement and maintain low carbon heat. There is a need for the right skills for the growing number of consenting and licensing decisions for the transition to a net zero energy system.

Residential Buildings

About

The residential buildings sector covers emissions from energy usage in homes, as well as work to reduce embodied carbon in constructing and retrofitting residential properties. This chapter covers the residential sector (all of Wales's housing including owner occupied, privately and socially rented homes).

Skills Summary

Net Zero Wales sets out an expectation that the homes and buildings of Wales need to be Net Zero Carbon by 2050 and future intervention to support those in fuel poverty must take further account of the need to tackle climate change by decarbonising the housing sector. Since 2010 to the end of March 2022, we have invested more than £420m to improve home energy efficiency through the Warm Homes Programme, benefitting more than 73,000 lower income households. The new Warm Homes Programme will play a part in its delivery, supporting apprenticeships and skills growth in low carbon heating and related energy efficiency trades. Suppliers will be encouraged to exemplify the Welsh Government's commitment to a circular economy.

In regards retrofit, the Welsh Homes Net Zero Carbon Hwb has been established by Welsh Government as an all-Wales agency to help developers, residential social landlords, housing associations and owners reduce the amount of energy and carbon in building and running homes. The Hwb will become a trusted source of best practice, providing direction, consistency, and a greater sense of purpose to developers and social landlords alike. This will include support development of skills needs in Wales.

It is clear that the sector is forward thinking and understands the fundamental role the skills system will play in supporting the industry now and in the future. The importance of the future focus is well recognised as are two fundamental cohorts of workers that are needed to grow the sector:

- the new generation of workers
- upskilling the existing workforce

Both need to be suitably equipped to meet the net zero ambitions in the built environment.

Challenges Identified

One of the key challenges facing the housing sector is the availability of skills to realise our shared ambitions. Skills needs primarily revolve around the broader need to decarbonise housing, including retrofitting current housing stock to improve energy efficiency with more efficient heating systems as well as building new with significantly lower emissions. Some of the challenges in the residential buildings sector to address skills needs are already clear, however, in some areas further knowledge and understanding is needed on the direction of travel for the sector.

We already understand that, for example, the use of modern methods of construction will alter the profile of jobs in construction, as off-site manufacturing will offer the potential to produce higher quality and more efficient homes. There are shortages of competent and qualified renewable energy and maintenance engineers, there is a high demand for pre and post-construction skills including asset management, surveying, design, energy assessment, green financial products, data management and retrofit coordination and new technologies will require adaptations of existing skills.

Good progress has been made identifying the skills requirements across the

Optimised Retrofit Programme and the publication of the Skills Matrix. However, these skills need to be developed across the whole supply chain, this includes the development and evaluation of new products along with the workforce required for the manufacture, installation and maintenance of homes as well as utilities. These may not be new skills but can harness and use transferable skills from across all sectors.

Findings from the WCPP report highlighted the challenges we currently face with regard to an ageing workforce and the need of succession planning to encourage young people into this sector as preparing for the transition from older workers.

It is paramount that government works collaboratively with industry bodies, Trade Unions and other key stakeholders to strengthen and agree the skills and competence needed to deliver the future needs of the sector.

Transport

About

Emissions from the transport sector include those from cars, trucks, buses, taxis and railways within Wales along with our share of emissions from international aviation and international shipping.

Skills Summary

Net Zero Wales outlines that transport has a significant role to play in helping Wales reach net zero and generating wider benefits across health, air quality, accessibility and the economy.

The Transport Strategy, launched in 2021, sets out how the transport system will be shaped over the next 20 years. Llwybr Newydd, translates as “new path” and the strategy is underpinned by the need to “change the way we travel” and states that the “climate emergency is one of the biggest defining issues of our time”. The strategy identifies 3 priorities with the aim to develop an accessible, sustainable and efficient transport system in Wales.

A detailed five-year National Transport Delivery Plan and Regional Transport Plans will support the key priorities and tailor delivery to the needs of every part of Wales.

There is an identified need to build skills and capacity in partner organisations that include local authorities and delivery organisations. Major challenges in delivering innovation in transport need to be explored including digitalisation opportunities. New thinking and innovative approaches are identified as key skills required within the legal, economic, technical and social areas which will help overcome the challenges that change will bring.

Current position

There are several consultation exercises underway within the Transport sector, aimed at supporting the aims of the strategy. They include:

- consultation on a zero emission vehicle (ZEV) mandate and CO2 emissions regulation for new cars and vans in the UK^[footnote 8]. The aim of the consultation is to create targets for new cars and vans that emit zero greenhouse gas emissions at the exhaust between 2024 and 2030. This is a joint consultation, published by the UK Government, Scottish Government, Welsh Government and the Department of Infrastructure for Northern Ireland
- bus Franchise^[footnote 9] - a consultation was undertaken in 2022 that set out proposals for a new legislative model for bus services in Wales. It centred around the need to deliver a bus system that focused on maximising

benefits to the public. The outcomes from the consultation will shape a pending Bill for consideration by the Senedd. A priority focus of the new Bill will be to increase the use of bus services across Wales and is an important step towards meeting the targets set out in Net Zero Wales. This new model will be vital to make this change and will require both bus operators and public authorities to adapt to new ways of working, planning networks and delivering services

- roads Review[[footnote 10](#)] - there is a need to reduce car journeys and increase the number of people walking, cycling and using public transport
- EV Charging Strategy 2021 and Action Plan [[footnote 11](#)]- The EV charging strategy was published in March 2021. This contains our vision for EV charging in Wales that 'By 2025, all users of electric cars and vans in Wales are confident that they can access electric vehicle charging infrastructure when and where they need it'

Challenges Identified

The sector, in order to meet emissions targets, is facing a significant change in terms of the transport system as a whole. The impact of which will result in marked changes to skills and employment within the sector, alongside many opportunities for workforce growth. Specialist skills in maintenance and engineering have already been identified as needed in greater volumes as well as new and emerging skills in roles associated with the designing and managing of active travel and public transport systems. These include:

- road: uncertainty around electrification and hydrogen options to decarbonise road transport and the scale of change is presenting as a challenge. Battery electric vehicles will require increased number of electricians with much of the existing workforce needing to be upskilled for the installation element as well as the repair and maintenance side. Digital skills such as software engineers will also be required and opportunities to benefit from UK wide supply chain growth will also impact on skills and workforce requirements.

The Wales Centre for Public Policy found:

“ It is challenging to estimate the overall effects of the transition to net zero on employment in the road transport sector in Wales. While there are opportunities for job creation in automotive and electric vehicle battery manufacture, these would require significant new investment in Wales, given the existing regional distribution of the industry across the UK” ”

- rail: skills needs will need to align to the electrification shift that is already underway within the sector in addition to battery and hydrogen powered train transport options. Jobs and skills will be required predominately in manufacturing, in addition to infrastructure roles in engineering, maintenance, project managers as well as operations and signalling roles. The main challenge is replacing those due to retire or leave the industry and how to stimulate interest in the sector which is currently running with a high rate of unfilled vacancies
- active Travel: the challenge for this sub-sector will be in harnessing the links between academia and the industry in order to deliver options for active travel. Roles that will be fundamental to this shift will include those in civil engineering and planning occupations

Public Sector

About

The public sector has a role in not only removing carbon from its own estate but within their span of leadership, influence and operations. The importance of the public sector cuts across the other emissions sectors in support of the drive to change.

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Skills Summary

In November 2020 the Local Government Climate Strategy Panel (CSP) was established to give direction and join up to the work going on across Wales. Skills is recognised by CSP and the Welsh Local Government Association (WLGA) support programme as an essential cross cutting theme across all the strands of work. Through the CSP and the Climate Officers Group (COG) the work is helping build capacity and understanding within Local Authorities so more have expertise to, for example, collect, improve and report on emissions, feeding into the annual WG emissions monitoring for the public sector. A principle of their work is 'do once for Wales', where possible to avoid all 22 Local Authorities duplicating or commissioning expertise separately, and work to build confidence, capacity and in house understanding.

The WLGA support programme has four strands of work ongoing - leadership, transport and infrastructure, procurement and land use. The WLGA is leading a programme of work to engage with Human Resources Departments, Finance Heads, encouraging carbon literacy training for all staff and Masterclasses in particular topic areas. Further work is needed to analyse the 4 strands of work from a skills perspective and consider how they will meet Local Government needs.

The leadership programme is fundamental as it aims to build climate leadership skills, including development of a tool to help increase understanding and skills in climate decision making.

We need to develop skills to adapt to the impacts of climate change and the skills needed to do that as opposed to net zero skills alone. We will need to make changes to buildings to cope with extreme heat, changes to flood defences, infrastructure projects such as roads and rail will have to take account of extreme weather. All of this will need existing professionals to be upskilled and also require new trainees to understand the impacts of climate change.

Procurement accounts for nearly 70% of Local Authority emissions and not just for procurement specialists, it is for those procuring goods and services to understand and make appropriate decisions.

The NHS will need people with Net Zero skills from a wider range of sectors to support reducing carbon emissions and energy to enable the NHS to continue providing healthcare services across communities in Wales.

Current position

A huge amount of work is going on across local authorities. To help give strategic direction the **public sector routemap** to Net Zero by 2030 has been adopted as a high level framework, focussed on transport, building, land use and procurement. Task and finish groups in each area are supporting delivery of the LA commitments in Net Zero Wales.

The NHS Wales Decarbonisation Strategic Delivery Plan^[footnote 12], sets out the NHS's ambition and commitment to decarbonisation and to deliver improving energy efficiency with actions to:

- provide building and energy managers with additional training in best practice use of Building Management Systems for carbon reduction
- ensure trained resource is in place to optimise energy use by Building Management System controls

Challenges Identified

Evidence has suggested that across the board Local Authority staff need to upskill to meet the climate challenge, regardless of their role.

Within the Public Sector Readiness for Net Zero Carbon by 2030 Report found that Public bodies need to understand the staff capacity and skills they have in

place through robust workforce planning. Training will play a crucial role in ensuring staff understand their decarbonisation responsibilities and are best equipped to deal with the task at hand. There is also an opportunity to share the knowledge, expertise and capacity that exists within the public sector as well as the private and third sectors.

Industry and Business

About

The industry and business sector includes manufacturing, construction, operation of machinery, food processing and the extraction and production of fossil fuels. The Sector also covers emissions arising from industrial and commercial buildings.

Skills Summary

There is clear potential for growth in this sector which could provide increased job opportunities across the entire supply chain along with development of a range of skills in areas like the agroforestry, processing, manufacturing and construction sectors.

Current position

Many key Welsh economic sectors fall within this industry and business emissions sector and there is a substantial diversity of skills needs and gaps according to the specific industry and role in question.

The Wales Centre for Public Policy found:

“ Within heavy industry future skills needs are likely to be determined by the technological solutions for decarbonisation that are selected in the various subsectors. These include ‘fuel switching, carbon capture and storage, low-carbon hydrogen, and engineered emissions removals’ (Welsh Government, 2021c: 118).

“ Businesses are trying to work out what technological changes are likely to work for them, including options for electrification, hydrogen power, and carbon capture, utilisation, and storage (CCUS). Electrification is considered to be costly and time-consuming, whereas there is currently less of a business case for hydrogen as the technology is not yet as advanced; sector experts told us that some businesses may wait to decarbonise until hydrogen is more feasible.

“ There was evidence to suggest that some employers may be some reluctant to invest in skills until there is more certainty about the technology that will be used. There will be a need both to retrain the existing workforce and to support those at risk of redundancy to reskill in other areas. However, future technologies will determine the future size and composition of the workforce and ultimately the nature and scale of this adjustment. For example, electric arc furnaces in the steel industry, require fewer workers than other technologies such as carbon capture or hydrogen (Green Jobs Taskforce, 2021; UK Steel, 2022).” ”

The Manufacturing sector is key to the social and economic prosperity of Wales, as well as being part of our national identity and heritage. The sector has around 150,000 jobs and contributes 16% of our national output which is significantly higher than the UK average.

‘Manufacturing Future for Wales – Our Journey to Wales 4.0’ was published in May which recognises the strategic importance of the sector to Wales, and the need to have a coordinated approach to future-proof existing capability and

respond to our biggest challenges and opportunities. It sets out the areas where we will focus our collective efforts, framed against six strategic objectives:

- Address the climate emergency by decarbonising the manufacturing sector in Wales, underpinned by Circular Economy methodology.
- Develop the conditions to anchor key manufacturing companies in Wales including the provision of modern infrastructure and resilient supply chains.
- Identify and develop the necessary leadership and workforce skills required to achieve 'Wales 4.0'.
- Strengthen collaboration between stakeholders to embrace technological change and deliver more commercial Innovation at pace.
- Embed 'Fair Work' employment principles in Wales, promoting inclusivity, security, and protecting our cultural heritage.
- Mobilise business support to equip Welsh manufacturers to meet future demand for products of strategic importance.

Challenges Identified

As we transition to Net Zero, we must ensure it is planned effectively and equitably, not simply protecting industries and their employees, but strengthening them, developing skills for future markets, and ensuring the most vulnerable in society are not unfairly burdened with the costs of change.

Digital and 'smart' technological solutions can also facilitate resource efficiency within manufacturing. In parallel, with the investment in infrastructure we also need to invest in people to develop and grow the right skills, this includes reskilling current industries to adapt to the transition to a low carbon future.

Land Use, Land Change and Forestry

About

The Land Use, Land Use Change and Forestry (LULUCF) sector covers carbon emissions and sinks associated with land use including from forestry, urban land use and peatland.

Skills Summary

A forestry and timber sector skills plan will be developed alongside the Timber Strategy in 2023. It is aimed at supporting built environment professionals across the sector to develop timber technology knowledge and skills to ensure the industry makes the best use of timber in construction. The Home Grown Homes 2 project supports the Strategy and Skills Plan delivering a number of work programmes which aims to increase the use of timber in house building.

Current position

The timber industry in Wales is an established and valued part of our economy. The sector has a crucial role to play in the environmental and economic future of Wales. Timber allows us to build sustainably and contributes to climate change mitigation by capturing carbon within buildings for their lifetime. The Timber strategy will focus on how we can move towards higher value timber products produced in Wales from Welsh wood – those products that will make the greatest contribution to helping us to meet the 2050 net zero target and to growing the value of the sector in Wales. Growth in the sector should see an increase in job opportunities across the forestry supply chain as we create and manage new and existing woodlands to benefit the economy and the

environment. A sector skills plan, developed alongside the Strategy will focus on future development of skills in the agroforestry, processing, manufacturing and construction sectors.

Work has begun to develop a National Forest for Wales. The National Forest will create areas of new woodland and help to restore and maintain some of Wales' irreplaceable ancient woodlands. In time it will form a connected network running throughout Wales, which will bring social, economic and environmental benefits.

Coal tips are a legacy of Wales' mining past. In order to ensure communities are safe and to mitigate the impact of climate change on these areas of land the Welsh and UK Governments set up a Coal Tip Safety Taskforce. A consultation on the Coal Tip Safety (Wales) White Paper was announced in May 2022 with the outcomes published in November 2022. The paper set out legislative proposals for the introduction of a new statutory management framework aimed at providing a new consistent approach to management, monitoring and oversight of disused tips and help mitigate potential impacts from climate change. A Net Zero Skills & Coal Tip Safety Skills Assessment was carried out in 2021. The aim was to map existing level of resource and capture options on how to improve and address skills and resource gaps. The exercise aimed to set a baseline to build upon and to form an evidence base.

Outcomes of the assessment concluded there is insufficient resource capacity and capability within the current labour market with current training options being informal and ad-hoc. A noted skills shortage was concluded with risks in replacing staff being considered high. Roles in engineering, flood management, frontline services, infrastructure and highways are the main workforce make-up for coal tip safety within Local Authorities.

Challenges Identified

There are a number of challenges to ensure the sector is equipped to meet the

future skills demands, some have already been outlined within the section. In addition, there is an increase in demand for existing roles is the main anticipated change during the transition.

Agriculture

About

The agriculture sector covers soil, livestock, and waste and manure management.

Skills Summary

Evidence suggests the following net zero skills and knowledge will be needed in the agriculture sector:

- Farm Carbon Assessments, including using carbon calculators and managing Carbon Credits.
- Climate change literacy.
- Adaptation: Future proofing for climate change.
- Water/irrigation management.
- Soil carbon management/peat restoration.
- Grassland management/multi-species leys.
- Livestock management options (breeding).
- Methane suppressing products.
- Nitrate inhibitors for inorganic fertilisers.
- Manure management/Slurry storage and treatment – acidification/Anaerobic Digestion.
- Bioenergy/biomass/renewable energy/efficiency measures/fuel and energy efficiency.

- Forestry planting and management.
- Recording and reducing on-farm food waste.
- Hydrogen.
- Horticulture and controlled environment agriculture.
- Increasing circularity on farm.

Current position

The agricultural sector within Wales plays a pivotal role in our response to climate change, alongside producing high quality food and sustaining our rural economy. While reducing emissions is critical for climate mitigation, more needs to be done to ensure the agriculture sector is resilient and has the necessary skills to meet the challenges of the climate emergency.

The Welsh Government's **Net Zero Wales** mitigation plan sets out our pathway (2021 to 2025) to net zero by 2050. It describes how the actions of many will put us on a path to net zero and a greener, stronger, fairer Wales. The plan contains 123 policies and proposals, including key proposals for upskilling the agriculture sector.

The Welsh Government's **Climate Conscious Wales** adaptation plan sets out the actions we are taking to develop a sustainable, evidence-based agriculture policy which will support climate change adaptation. Associated actions include improving nutrient management and the resilience of soils and water, engaging in research on agricultural climate adaptation, and assessing future crop viabilities.

Legislation and Sustainable Land Management

The first ever Agriculture (Wales) Bill adopts Sustainable Land Management (SLM) as the framework for future agricultural support and regulation within

Wales, contributing to our obligations under section 4 of the Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016.

The Bills power of support enables us to introduce the Sustainable Farming Scheme (SFS). The SFS is still being developed but is intended to be the main source of government funding for farmers from 2025 onwards. The scheme is being designed to support farmers in the ongoing sustainable production of food, alongside tackling the climate and nature emergencies. We have proposed that part of the scheme entry process will be the completion of a Sustainability Review including a carbon assessment. There will be a further consultation on SFS design towards the end of 2023. No final decisions will be made until this consultation is concluded. Farmers will start to transition into the SFS in 2025.

The Skills and Knowledge Transfer Programme has been developed to support a more professional, profitable and resilient land-based sector, the knowledge transfer programme, Farming Connect, is designed to deliver against the sustainable land management objectives. The Programme will build on its achievements over the last seven years of delivery through the ongoing targeted support which will help both today's and future generations prepare for the opportunities and challenges ahead. The Programme will support all businesses to increase efficiencies –for example through benchmarking, knowledge transfer, innovation, utilising new technologies or setting up diversified ventures – enabling farming businesses to lower costs and increase profitability while maintaining the highest standards of animal health and welfare and land management.

Maintaining strong links with sector commissioned research and future consultations on skills will be imperative as we continue our partnership way of working. The Agricultural Advisory Panel for Wales takes a proactive approach, and working with Lantra and Farming Connect are aiming to undertake a Skills and CPD review in the Autumn. This will in turn inform the Agriculture Skills Strategy that is currently in development, a commissioned piece of work on behalf of the Welsh Government.

Challenges Identified

Transitioning to net zero in agriculture is a technical, cultural and societal challenge and the sector will need significant support to ensure it is equipped with the skills and knowledge to enable a just and timely transition within the rural community.

Waste and Circular Economy

About

The waste management sector covers the collection and treatment of waste and recycling. It is an important economic sector in Wales, and a part of the foundational economy.

The Welsh Government is committed to progressively reducing the waste produced in Wales, so that we can meet our one planet resource use, zero waste and net zero goals set for 2050. To achieve this, we need to move towards a circular economy, where resources are kept in use for as long as possible to avoid waste. Resource and waste management will no longer be about burning or landfilling waste - moving to net zero will require a focus on waste prevention, together with an increase in re-use, repair and recycling resources. The challenge for the waste management sector will be to assist all sectors to adopt circular economy approaches to help meet the 2050 goals.

As such, the circular economy is a key cross-cutting theme for all sectors in the journey to net zero.

Skills Summary

This summary is drawn from work carried out by the professional body for the resource and waste sector, the Chartered Institution of Wastes Management (CIWM), and also by work carried out for the Welsh Government by WRAP Cymru and the Wales Centre for Public Policy (WCPP).

The latest 2023 report from CIWM [\[footnote 13\]](#) concludes that

“In the future, to enable a truly circular economy, the waste and resource management sector will need to transition further and evolve in response to ever increasing pressure to enact positive change in the way that materials are managed. This will need a sector that actively engages with corporate and public consumers to educate, advise and steer decision making in the design, development and consumption of materials. It will include the exploration of new technologies, systems, behaviours and policy, and will become a sector intrinsically linked to all others.” ”

The report notes that, within the UK waste sector, there is an ageing workforce and concludes that there is clearly a lot more to do to attract a diverse workforce that is reflective of wider society.

Responses to CIWM’s engagement with its members and other key stakeholder identified the following roles as central to the sector’s future transition:

Circular Economy specialists

- Alternative business models (leasing & retained ownership).
- Strategy development.
- Built environment.
- Food systems.

Design of products and packaging

- Reuse and refill.
- Recycled content and recyclability design.
- Alternative materials.

Recycling

- Recycling managers – optimising recycling.
- Material sorting.
- Technology development for difficult to recycle material.

Renewable energy

- Circularity of materials for infrastructure.
- Anaerobic Digestion.

Change management

- Circular systems.
- Behaviour change.
- Transition planning and implementation.

Current position

The term 'waste' in its broad sense is in many ways seen as a redundant 20th century concept. The CIWM report concludes that changing the perception of the sector will help eliminate preconceptions of the jobs and skills sets needed. Re-badging as a circular economy services sector, which assists all resource

using and wasting sectors in Wales to meet the one planet resource use, zero waste and net zero goals set for 2050 by Welsh Government.

The Welsh Government's circular economy strategy, Beyond Recycling [\[footnote 14\]](#), sets out a number of key target milestones to be met by 2025, 2030 and 2050. For example, the ban on single use plastics to commence in 2023, workplace recycling regulations introduced in 2024 and a waste tracking system from 2025. These milestones will require changes to practices in the very near future and implementing these effectively will require the requisite skills to do so.

Reducing emissions from landfill and energy from waste facilities need to be the primary focus as they are the major emitters of carbon in terms of how waste is managed. As identified in Net Zero Wales and the circular economy strategy, Beyond Recycling, this will be achieved through a combination of reducing the waste going to waste facilities through a circular economy approach (waste prevention, reuse, repair and remanufacture, and recycling what cannot be prevented); and re-engineering energy from waste (incineration) and landfill facilities to reduce their on-site emissions, for example, carbon capture and storage for energy from waste, and increasing methane gas capture and utilisation on landfills).

Challenges Identified

The research carried out for the CIWM report Highlighted some key challenges, including the following:

- skills readiness: while skills provision is generally available for existing sector needs, there are gaps in provision for new skills requirements (CIWM report page 26, Qu 5: Are we skills ready). It highlights the need for more multi-skilled workers which “could prove challenging as the ageing profile of the workforce suggests that the UK resources and waste sector has the potential

to lose valuable technical knowledge and skills in the coming years unless careful succession planning is put in place”

- increasing sector attractiveness: the CIWM report identifies a need to attract more people into the sector, championing its green credentials. The report explains that “Research conducted with students and early career professionals has indicated that the sector is not often seen as an attractive option for future careers. This is partly due to the perceptions of working with ‘waste’, but also because of a lack of understanding of what the sector delivers and the breadth of roles available”. (CIWM report page 30)
- tools and support for collective success: the CIWM report identifies a need for “investable conditions for our sector and clear timeframes for policy implementation to allow us to invest in people, services and systems and to secure the sites we need to transition to a more circular economy”. (CIWM report page 30)

Cross Cutting Themes

Digital

Digital skills are referenced as an overarching ‘Mission’ within the Digital Strategy for Wales. “Mission Three” sets out the ambition of how we will “Create a workforce that has the digital skills, capability and confidence to excel in the workplace and in everyday life”. Aligned to the Digital Strategy for Wales, Professor Phil Brown published his final report into the impact of digital innovation on the economy and the future of work in Wales in September 2019. Professor Brown spoke of Wales facing a “race against time”, with the pace and scale of digital innovation having the potential to overtake our ability as a nation to respond. His report provided an evaluation of the realities and trends that will shape the future of work in Wales and the underlying drivers of the Welsh economy in the context of the fourth industrial revolution.

Procurement

There are a number of key activities taking place to strengthen individuals in procurement skills. These include:

- Cyd [\[footnote 15\]](#) (formerly known as the procurement centre of excellence) alpha pilot provides practical support to procurement staff in relation to applying policy to their work. The Cyd alpha policy context is net zero and a key deliverable is a procurement journey which is being co-designed and developed in partnership with the public sector procurement community. The procurement journey is an interactive website enhanced with rich media. Training, guidance, case studies and best practices are being embedded within the procurement journey
- the procurement digital action is developing a series of digital tools to help with embedding policy throughout the procurement lifecycle. One tool is the policy mapping tool which is scheduled for development to be completed by October 2023. The rollout will then take place at a later date. This tool will give Welsh Government and wider public sector the capability to ask tailored questions specifically for each procurement and to map those responses to tender data which will allow for a richer analysis of what is actually happening on the ground
- the publication of the Welsh Procurement Policy Notes (WPPN 06/21 'Taking Account of Carbon Reduction Plans' and WPPN 12/21 Addressing CO₂e in supply chains) which provides advice on actions to improve data collections and emissions quantification by moving to supplier activity based data away from reliance on economic proxies (£/Kg CO₂e)

Welsh Language

Wales needs a confident, bilingual workforce. Changes brought about by decarbonisation have the potential to affect the level of Welsh language use

across sectors. For those sectors where customer engagement and behaviour change are key skills needs, such as residential buildings and waste management, there is a recognition that customers who speak Welsh will want to engage with someone who also speaks Welsh. Increasing the number of people who can learn through the medium of Welsh is a priority– crucial to the success of our Cymraeg 2050 policy and to the new strategic duty in our bill to expand Welsh medium tertiary provision.

Innovation

Innovation is crucial to ensure we maximise our investment across Wales and deliver the fundamental changes needed for our workforce to meet our net zero commitment.

The Net Zero Skills plan is aligned with the Innovation Strategy (which set out the vision for how innovation can support delivery of the commitments set out in our Programme for Government, in order to foster a vibrant innovation culture in a stronger, fairer, greener Wales) to embed net zero skills working in partnership with our industry bodies and delivery organisations.

Employer Challenges

The challenge to meet our net zero commitment is huge and our future skills needs will require a collaborative approach across the whole economy. The Net Zero Skills Action Plan found that:

- evidence suggests that businesses, employees and school leavers share a similar level of confusion and lack of information when it comes to understanding what is meant by green/net zero jobs and the skills required for these jobs. Skills requirements will continue to evolve as decarbonisation advances and we need to ensure we understand what these skills needs are

and how we can fully utilise transferable skills that allows the skills system to respond and deliver effectively

- feedback from stakeholders suggests there has been a decrease in investment in training for employees as a result of the current economic challenges. Pre-pandemic, evidence from the Employer Skills Survey 2019 showed employer investment in training in Wales had declined relative to previous years. Some employers are not aware of the positive impact of qualifications and skills in supporting their transition to net zero and how this can benefit their business

Since its publication we have undertaken a series of presentations across a wide range of stakeholders, industries and employers to promote and raise awareness of the Net Zero Skills Action Plan. The majority of feedback from employers has been consistent, this includes:

- lack of understanding in the benefits of upskilling staff
- lack of understand on what training is needed and why
- limited understanding of what courses are available
- some courses or training were not available in Wales or equivalent/similar courses did not meet their needs.
- limited short, sharp, bitesize training
- some were unable to release staff for a week or more for training
- employers could not afford training due to the cost of living crisis
- limited funding/resources/support available to upskill
- replacing retiring workers as well as prepare for the transition
- strengthen redressing the gender imbalance in some sectors

In addition, individuals may not have sufficient knowledge or understanding of the types of quality job opportunities associated with net zero skills and their earning potential. Therefore, these individuals may not be assessing these opportunities, which has exacerbated the skills shortage in these sectors.

We recognise the need to support people to upskill and provide opportunities to

enable individuals to utilise existing skills and qualifications to support the growing demands within this sector. We need to help employers and individuals build a better understanding of net zero skills and what that mean for them and what support is available. We are currently developing this material linking with the wider climate change team to share and promotes these key messages.

[\[6\] Skills-and-Net-Zero-Expert-Advisory-Group.pdf](#)

[\[7\] Heat strategy for Wales | GOV.WALES](#)

[\[8\] Consultation on a zero emission vehicle \(ZEV\) mandate and CO2 emissions regulation for new cars and vans in the UK | GOV.WALES](#)

[\[9\] Bus Services \(Wales\) Bill \(overview\) | GOV.WALES](#)

[\[10\] Roads review | GOV.WALES](#)

[\[11\] Electric vehicle charging | GOV.WALES](#)

[\[12\] NHS Wales decarbonisation strategic delivery plan | GOV.WALES](#)

[\[13\] https://www.circularonline.co.uk/wp-content/uploads/2023/03/Beyond-Waste-Essential-Skills-for-a-Greener-Tomorrow.pdf](https://www.circularonline.co.uk/wp-content/uploads/2023/03/Beyond-Waste-Essential-Skills-for-a-Greener-Tomorrow.pdf)

[\[14\] Beyond recycling | GOV.WALES](#)

[\[15\] Cyd Cymru Home - CYD](#)

Consultation questions

The response forms contains questions on the following:

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Section 1: emission sectors

[Only answer questions in the sectors you have an interest in or move to section 2 - general sector skills questions]

Please tick which sectors you are responding to?

[Please note agriculture and Circular Economy's sectors have different questions – if you are responding to these sectors please move to question 1.2 or 1.3]

1.1 Sector

Please tick the appropriate sectors

Electricity and Heat Generation

Residential Buildings

Transport

Public Sector

Industry and Business

Land Use, Land Change and Forestry

Agriculture

Please go to section 1.2

Wast and Circular Economy

Please go to section 1.3

Mapping & key milestones

1. What investment, policies, transitioning impacts, technologies are expected to be implemented in Wales that will impact the net zero skills needs in Wales and their timescales?
2. Will these result in new jobs being created or broadly maintaining the existing number of jobs, but with a level of upskilling required or changes to the types of occupations? If so, please give details of opportunities and potential geography.
3. What will be the new, emerging or increased net zero skills demands in Wales as a result?
4. What are the key milestones or timescales to deliver these skills in Wales?
5. What cross-cutting circular economy skills do you consider are required in your sector? (for example, eco-design, re-use, repair, remanufacture, reprocessing)"?

Addressing the skills needs

6. Is there provision to deliver these skills offered in Wales?
7. If not, are they being delivered elsewhere in the UK and can Wales based employers and individuals access this provision?
8. If these skills are being delivered in Wales, is the scale appropriate currently and does it meet Wales' future workforce needs?
9. What do you see as the barriers to address the skills needs in Wales?
10. What action is needed to remove those barriers?
11. What is the impact if these skills are not available in Wales?

Links to other sectors

12. Are there any dependencies with other sectors, with specific links to skills? If

so, what are these and what are their impacts?

Skills Groups

13. What groups (steering, advisory) exist currently to gather and capture information on skills needs, undertake mapping and monitoring, or advice on future industry/sector requirements?
14. What research have these groups already undertaken?

1.2 Agriculture

Mapping & Key Milestones

1. The Agricultural Bill (Wales) is leading to the Sustainable Farming Scheme in 2025, what new and transitioning skills are required to support new farming practices in Wales?
2. Which emerging technologies would you expect to be rolled out and widely adopted by the agricultural sector in Wales over the coming years?
3. What additional investment in skills would be required to support these emerging technologies?
4. What are the key milestones or timescales to deliver these skills in Wales?

Addressing the skills needs

5. What type of skills are most needed?
6. Is there provision to deliver these skills offered in Wales?
7. If not, are they being delivered elsewhere in the UK and can Wales based employers and individuals access this provision?
8. If these skills are being delivered in Wales, is the scale appropriate currently

and does it meet Wales' future workforce needs?

9. What do you see as the barriers to address the skills needs in Wales?
10. What action is needed to remove those barriers?
11. What is the impact if these skills are not available in Wales?

Skills groups

12. What groups (steering, advisory) exist currently to gather and capture information on skills needs, undertake mapping and monitoring, or advice on future industry/sector requirements?
13. What knowledge or skills gaps are you aware of in the agriculture sector (including on farm or the wider supply chain) that are hindering Wales' transition to net zero and/or adaptation to climate change?
14. What format of training/knowledge transfer would best address the knowledge/skills gaps?
15. Do you have any feedback or ideas/suggestions regarding the skills and knowledge transfer currently on offer for those in Wales?

1.3 Waste and Circular Economy

Mapping and key milestones

1. What investment, policies, technologies or trends are expected in Wales that are likely to change the skills needed in the waste and circular economy sector?
2. Will these changes result in new jobs? If yes, please give details of new jobs and skills needed.
3. Will these changes result in new skills or occupations within the existing waste management sector jobs? If yes, please give details of the changes and skills needed.

4. What are the key timescales to deliver these skills in Wales, especially in relation to the targets and action milestones in Net Zero Wales and Beyond Recycling?

Addressing the skills needs

5. Is there provision for the workforce to train or develop these skills in Wales?
6. If not, are they being delivered elsewhere in the UK and can Wales based employers and individuals access this provision?
7. If these skills are being delivered in Wales, is the scale appropriate currently and does it meet Wales' future workforce needs?
8. What do you see as the barriers to address the skills needs in Wales?
9. What action is needed to remove those barriers?
10. What is the impact if these skills are not available in Wales?

Skills groups

11. What groups (steering, advisory) exist currently to gather and capture information on skills needs, undertake mapping and monitoring, or advice on future industry/sector requirements?
12. What research have these groups already undertaken?

Section 2: general questions

Consultation Overview Chapter

1. What skills are needed in Wales to meet the current and future net zero skills gaps?
2. Will these result in new jobs being created or broadly maintaining the

existing number of jobs, but with a level of upskilling required or changes to the types of occupations? If so, please give details of opportunities and potential geography.

3. How can we future proof our skills delivery to meet our net zero ambitions?
4. What are the key milestones or timescales to deliver these skills in Wales?
5. Is the infrastructure in place in Wales to meet these needs?
6. What do you see as the impacts/barriers to address the skills needs in Wales?
7. What action is needed to remove those barriers What is the impact of these skills not being available in Wales?
8. What groups (steering, advisory) exist currently to gather and capture information on skills needs, undertake mapping and monitoring, or advice on future industry/sector requirements?
9. What cross-cutting circular economy skills do you consider are required in your sector? (for example, eco-design, re-use, repair, remanufacture, reprocessing)?"

Section 3: net zero skills definition

1. Is the draft definition of Net Zero Skills (page 7 of this consultation) easy to understand? Please consider how clear the definition is in regards to the work you and others do and whether it can be applied in a practical manner.
2. Are there ways the definition could be made clearer? If further information is needed to accompany the definition, what information would be most useful?

Section 4: digital

1. What are the digital skills needed within the sector to support our net zero commitments?
2. Is there provision to deliver these skills offered in Wales?
3. If not, are they being delivered elsewhere in the UK and can Wales based

employers and individuals access this provision?

4. If these skills are being delivered in Wales, is the scale appropriate currently and does it meet Wales' future workforce needs?
5. Are there any barriers to address these skills. If so, what are they and how can they be addressed?

Section 5: employers challenges chapter

1. What are the key challenges employers face to upskill their staff in net zero skills?
2. What are the solutions to overcome the challenges?
3. What would encourage employers to invest in skills for their workforce?
4. What are the restrictions to developing Welsh supply chains, with regard skills?

Section 6: innovation

1. Our recently published, mission-based Wales Innovates strategy recognises the transition to net-zero as probably the greatest economic opportunity of our time, where innovation will be critical to our success, so what additional skills will be needed to ensure the development and adoption of new ideas?

Section 7: Welsh language

1. We would like to know your views on the effects that net zero skills would have on the Welsh language, specifically on opportunities for people to use Welsh and on treating the Welsh language no less favourably than English. What effects do you think there would be? How could positive effects be increased, or negative effects be mitigated?
2. Please also explain how you believe the proposed policy net zero skills could

be formulated or changed so as to have positive effects or increased positive effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language, and no adverse effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language.

Section 8: additional comments

We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

Please enter here:

Responses to consultations are likely to be made public, on the internet or in a report. If you would prefer your response to remain anonymous, please tick here:

UK General Data Protection Regulation (UK GDPR)

The Welsh Government will be data controller for Welsh Government consultations and for any personal data you provide as part of your response to the consultation.

Welsh Ministers have statutory powers they will rely on to process this personal data which will enable them to make informed decisions about how they exercise their public functions. The lawful basis for processing information in this data collection exercise is our public task; that is, exercising our official authority to undertake the core role and functions of the Welsh Government. (Art 6(1)(e))

Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about or planning future consultations. In the case of joint consultations this may also include other public authorities. Where the Welsh Government undertakes further analysis of consultation responses then this work may be commissioned to be carried out by an accredited third party (for example, a research organisation or a consultancy company). Any such work will only be undertaken under contract. Welsh Government's standard terms and conditions for such contracts set out strict requirements for the processing and safekeeping of personal data.

In order to show that the consultation was carried out properly, the Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. If you do not want your name or address published, please tell us this in writing when you send your response. We will then redact them before publishing.

You should also be aware of our responsibilities under Freedom of Information legislation and that the Welsh Government may be under a legal obligation to disclose some information.

If your details are published as part of the consultation response then these published reports will be retained indefinitely. Any of your data held otherwise by Welsh Government will be kept for no more than three years.

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Under the data protection legislation, you have the right:

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- to require us to rectify inaccuracies in that data
- to (in certain circumstances) object to or restrict processing

- for (in certain circumstances) your data to be 'erased'
- to (in certain circumstances) data portability
- to lodge a complaint with the Information Commissioner's Office (ICO) who is our independent regulator for data protection

For further details about the information the Welsh Government holds and its use, or if you want to exercise your rights under the UK GDPR, please see contact details below:

Data Protection Officer:

Welsh Government
Cathays Park
Cardiff
CF10 3NQ

Email: dataprotectionofficer@gov.wales

The contact details for the Information Commissioner's Office are:

Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF

Telephone: 0303 123 1113

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