



Comisiwn **Seilwaith**
Cenedlaethol **Cymru**
National **Infrastructure**
Commission **Wales**

Annual Report 2021/22

November 2022



The National Infrastructure Commission for Wales (NICW) was established in 2018 as an independent, non-statutory, advisory body to Welsh Ministers.

Its key purpose is to analyse, advise and make recommendations on Wales' longer term strategic economic and environmental infrastructure needs over a 5–80-year period.

NICW conducts studies into Wales' most pressing infrastructure challenges and will make recommendations to the Welsh Government.

The advice provided by NICW will be impartial, strategic and forward looking in nature.

NICW is accountable to the Welsh Ministers for the quality of its advice and recommendations and its use of public funding.

Contents

4	Infrastructure for our Changing Climate: An Introduction from the Chair and Deputy Chair
6	The National Infrastructure Commission for Wales: Turning Great Ideas into Great Infrastructure
8	NICW Year in Review: 2021/ 22
9	Infrastructure Policy Context
11	NICW Organisational Development
15	Our 2022/23 Budget
17	Our Current and Forthcoming Work Programme
17	Renewable Energy: 2022/23
20	Flooding: 2023/24
21	Climate Resilience and Existential Risk: 2024/25
22	Other Areas
23	Introducing the New Commission
23	Helen Armstrong
24	Jenifer Baxter
25	Steve Brooks
26	David Clubb
27	Aleena Khan
28	Eluned Parrott
29	Eurgain Powell
30	Nick Tune
31	Engagement/Resources

Infrastructure for our Changing Climate

An Introduction from the Chair and Deputy Chair

For tens of thousands of years, humans have adapted to their environment. Today, we live in a geological era known as the anthropocene, which means that human activities are a dominant force on our ecosystem.

The consequences of human activity, cumulative across many decades and carried out with insufficient regard for future generations, are now all too apparent in every facet of life. Blessed as we are with our temperate climate, we must nonetheless react with urgency to the natural disasters at home and globally that have become turbo-charged by the climate crisis. Wales, and our infrastructure, will not go untouched by our own climate catastrophes over the coming years. As a nation we must collectively further mitigate our impacts on the planet, and adapt to our fast-changing environment.

This is the context that has shaped the new Remit and Terms of Reference for the National Infrastructure Commission for Wales. Our overall objective – to provide advice to the Welsh Government on the long term infrastructure needs of Wales – remains

paramount. However, this new framework in which we operate is now heavily influenced by the science of climate change, the impacts of climate change on the poorest and most vulnerable in society, and the increasingly fragile state of our natural environment.

We are happy that our steer from our Remit and Terms of Reference are strongly influenced by:

- 1.** The Nature Emergency
- 2.** The Climate Emergency
- 3.** The Socio-economy Duty
- 4.** The Wellbeing of Future Generations Act.

The timescale of our remit has also changed significantly, with our time horizon extended to eighty years into the future, reflecting an intergenerational perspective, and one which more appropriately aligns with the expected lifetime of infrastructure developments.

Emergencies demand a rapid response. Business as usual will not allow us to play our role globally in mitigating climate impact; nor will it allow us to respond with sufficient alacrity and agility to the inevitable challenges we will face.

A growing cohort of civil society has come to recognise that we must deploy all our resources in response to the crisis. We are delighted that the new Commission reflects a Wales comfortable with its diversity, made up of individuals who are determined and able to answer the call.

Our work programme for 2022–2025 includes renewable energy and flooding, two key themes within mitigation and adaptation. We aim to engage with young people to better understand the perspectives of the infrastructure users of 2100 and beyond. We will celebrate good practice, challenge a lack of urgency and support the change makers. The future citizens of Wales deserve no less.



Dr David Clubb
Chair



Dr Jenifer Baxter
Deputy Chair

The National Infrastructure Commission for Wales

Turning Great Ideas into Great Infrastructure

We have moved quickly to identify our organisational values and ways of working for the next three years. These will be our guiding principles and reflect our remit set out by the Welsh Government but also our collective commitment as individual Commissioners working towards a common purpose.

Our Aims:

1. To provide radical, challenging and evidence-informed advice and guidance to a variety of audiences, but principally Welsh Government, that will inform and future-proof decisions on infrastructure deployment from 2030–2100.
2. To use the frameworks of the Wellbeing of Future Generations (Wales) Act 2015, the climate and nature emergencies, and the socio-economic duty, to guide our deliberations.
3. To support initiatives, organisations or policies that aim to create and maintain resilient and adaptable infrastructure that delivers wellbeing until 2100 and beyond.



Our Objectives (taken from the Welsh Government's Programme for Government)

Build an economy based on the principles of fair work, sustainability and the industries and services of the future.

Build a stronger, greener economy as we make maximum progress towards decarbonisation.

Embed our response to the climate and nature emergency in everything we do.

Make our cities, towns and villages even better places in which to live and work.

Celebrate diversity and move to eliminate inequality in all of its forms.

Our Desired Outcomes

If NICW is functioning effectively we will see the following outcomes as a result of our work:

During this Commission period 2022–2025

Future policy that improves the capture of wealth from renewables; that better manages land for various infrastructure uses; and that builds on a better understanding of local community perspectives

Future policy and practice is better informed about ways to minimise the impact of flooding on Wales' communities and infrastructure

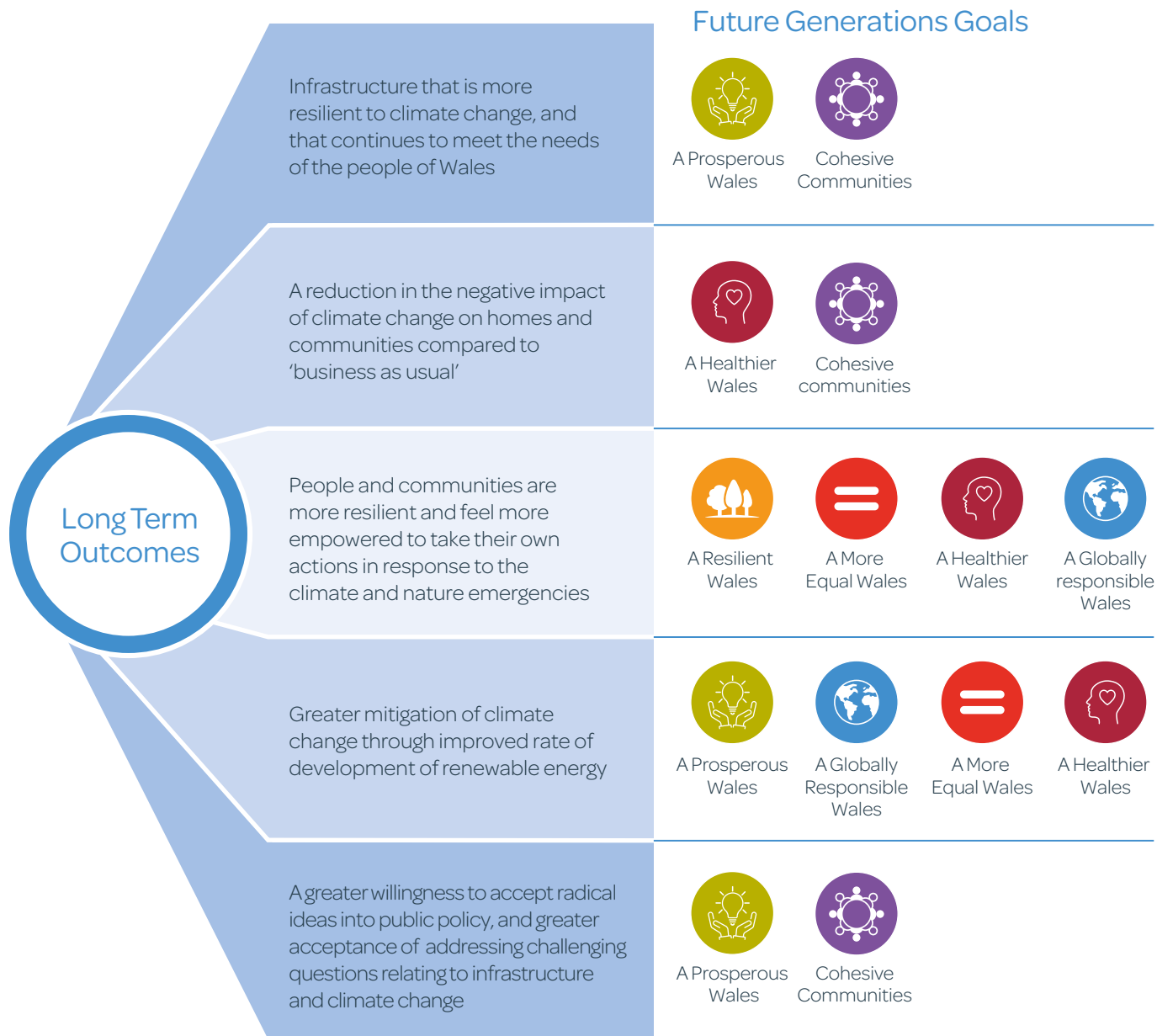
NICW and other stakeholders are better informed about how to communicate long-term risks to communities most vulnerable to climate change impacts

NICW's activities and recommendations are better informed by a wide and diverse range of stakeholders

An enhanced profile and reputation for NICW.



Longer Term Outcomes



NICW Year in Review: 2021/22

Infrastructure Policy Context

Following the elections to the Senedd in May 2021, a new impetus and drive for setting new direction in policy and practice is evident. Following the establishment of a new Welsh Government, a new Climate Change Ministry was created and is being led by Julie James MS, and supported by Lee Waters MS as Deputy Minister. The National Infrastructure Commission for Wales, (NICW), welcomes this strategic joined-up approach to bring all the climate change related policy areas together under one portfolio. We do not underestimate the challenge this brings, and we endorse and commend the additional cross-Government coordination by officials that is needed to help tackle the climate and nature emergencies.

In October 2021, [Net Zero Wales](#), the plan for Wales' second carbon budget was published. This sets out 123 policies and proposals to reduce carbon across all Government policy areas by 2025. Whilst this time frame is out of the scope of NICW it is important for us to be aware of these proposals to ensure we do not duplicate ideas; we will continue to liaise with Welsh Government Ministers and officials on our thoughts and proposals to ensure we add the most value and thought to future policy making. In December, the [Wales Infrastructure Investment Strategy](#) was published which sets out the Welsh Government's 10 year vision of the outcomes that investment in infrastructure should enable. This approach to investment is welcomed and marks a shift to tailoring decisions based on wider environmental and social needs as well as

economic considerations, in line with the Well-being of Future Generations Act.

Just a few weeks before the election, the Welsh Government published [Llwybr Newydd: the Wales transport strategy](#) which set a new target for 45% of journeys to be by sustainable means across Wales by 2045. This has been backed up with a [White Paper](#) on the future of bus services in Wales including proposed provisions to introduce franchising across the country. Allied to this, the [Roads Review](#) has been established to assess the strategic need for identified road schemes and if their continued funding and support from the Welsh Government is in the long term best interests of the nation. These have recently been supplemented by publication of the draft [National transport delivery plan](#) which brings together transport related activity in place. In 2022/23 NICW intends to monitor the outcomes of the Roads Review process and assess how we can support the ongoing implementation of their recommendations.



NICW considers these plans to be ambitious, recognising that behaviour change will be a key issue and that the location of new development is crucial in making public transport more accessible, easier to use and more practical to plan. This thinking, which NICW recognises is thread throughout national planning policies, including [Future Wales](#), needs to be applied to decision making across the public sector, including in the development of new health and education facilities.

The publication of Future Wales has also established a new horizon for energy planning. TAN8 and the SSAs are no more. These have been replaced with Pre-Assessed Areas for Wind Energy, which outlines the Welsh Government's strategic, spatial approach to the consenting of on-shore wind farms. NICW considers this a sensible approach and continues the leadership in this area shown through preceding documents; we welcome the consistency in approach to determine Developments of National Significance for renewable energy. However the issue of grid connections is still complex and has yet to be resolved in a timely manner.

On the grid, in late 2021, the [Renewable Energy Deep Dive](#) published its report and included commitments to look at options for supporting new, flexible grid connections for renewables and energy storage solutions. We also note in the First Minister's [legislative programme announcement](#) of the intention to introduce an Infrastructure consenting Bill to the Senedd. Reducing the complexity of infrastructure projects whilst still delivering benefits to host communities is key; NICW intends to monitor the progress of this Bill and will seek to respond to and influence its outcomes where possible.

NICW believes the issue of unlocking the grid issues is crucial to take Wales' renewable energy potential forward. We need to look closely at where the tensions are in both consenting and delivering schemes in order to make the passage of new developments as smooth as possible. This includes engaging with local communities to canvas opinion and feedback as well as ensuring that the benefits of new developments are kept in Wales as much as possible. We will undertake work during 2022/23 to provide evidence supporting activity in this area. In May 2022, [NICW Commissioners undertook a fact finding day](#) to scope out some of the current issues prevalent in preparing Wales' infrastructure to accommodate future renewable developments.

We are beginning to think about our 2023–25 work on flooding and climate change resilience. We have been mandated to undertake this work through the [Co-operation Agreement](#) between the Welsh Government and Plaid Cymru. A lot of work has been undertaken in this area recently, including the announcement of an [independent review](#) of local government section 19 reports and Natural Resources Wales reports into the extreme flooding in the winter of 2020–21, led by Professor Elwen Evans. We hope to work alongside Professor Evans to ensure that our work is complementary. In addition, Wales' independent flood and coastal erosion committee is taking forward two separate reviews. The first explores the financial resources available to flood risk management authorities to help maximise access to funding and investment opportunities to support flood delivery. The second review being undertaken is focused on assessing the scope of current flood risk management responsibilities and the need for legislative changes. NICW will be using these reports to refine our work packages to ensure that we can undertake our remit in an effective manner.

During the course of our project activity we will work with experts from across Wales and beyond, to ensure that our approach is informed by practical experience, and supported by policy coherence locally, regionally, Wales-wide and with key UK institutions or policies.

NICW Organisational Development

In September 2021 **David Clubb was announced as the new Chair of NICW** by the Deputy Minister for Climate Change, Lee Waters MS. This was followed by a **scrutiny session** by the Senedd's Climate Change, Environment and Infrastructure Committee. We anticipate scrutiny by the relevant Senedd Committee becoming an annual event, and NICW welcomes the opportunity to describe our activities in detail and to receive feedback from elected representatives.

Following discussions between the Chair and Deputy Minister, changes to the Commission's Remit and **Terms of Reference** were agreed. These changes included making the climate and nature emergencies the cornerstones of the

Commission's work in relation to infrastructure, an extended 'forward look' period from 30 to 80 years as well as amendments to the work practices of the Commission and Commissioners.

A budget of £400,000 was also agreed for the 2022/23 financial year which was to cover NICW running costs as well as enabling it to commission research. A revised **Remit Letter** was issued by the Deputy Minister in April 2022.

In March the Welsh Government commenced a public appointments exercise to appoint a Deputy Chair and 6 new Commissioners to NICW. Adverts were placed in relevant journals and media outlets as well as being advertised on social media. A **blog post** and video were also used to attract applicants from as large a field as possible. The process attracted a large amount of applications from a cross section of people and, following an assessment process, the **Deputy Minister** announced the appointment of a group of "dynamic, diverse and refreshed" members to the Commission in early June 2022. The Commissioners introduce themselves later in this report.



We have taken the opportunity of having a refreshed Commission to update our branding which appears across our social media, communications and the layout of this document.

The new Commission **met for the 1st time** at the end of June 2022 and quickly moved to establish its work programme, ways of working and approaches. These will no doubt evolve over the lifetime of the current Commission and we will endeavour to keep our stakeholders up-to-date on latest developments and our areas of interest. However, we also very much welcome proactive approaches from colleagues across the infrastructure and built environment sectors to discuss issues and explore where NICW can support or add value to their work. We look forward to hearing from you!

NICW has agreed on a number of internal 'ways of working' and Inner Development Goals that support the Commissioners and Secretariat in delivering to their full capacity. NICW's work is likely to be most effective where there is clarity in internal communication, good project management, and sufficient direction on expectations for Commissioners with a finite time allocation.

The Commissioners and Secretariat have committed to working in a spirit of mutual respect and understanding. They have also agreed on working on improving a series of key inner development goals¹ that include:

- Long term visioning and orientation, as explicitly required by our remit
- Connectedness; Having a keen sense of being connected with and/or being a part of a larger whole, such as a community, humanity or global ecosystem

- Sense-making; skills in seeing patterns, structuring the unknown and being able to consciously create stories.

Other Inner Development Goals that NICW has deemed as important for our work programme are:

- **Optimism;** Ability to sustain and communicate a sense of hope, positive attitude and confidence in the possibility of meaningful change
- **Creativity;** Ability to generate and develop original ideas, innovate and being willing to disrupt conventional patterns
- **Openness and learning mindset;** Having a basic mindset of curiosity and a willingness to be vulnerable and embrace change and grow
- **Courage;** Ability to stand up for values, make decisions, take decisive action and, if need be, challenge and disrupt existing structures and views
- **Communication skills;** Ability to really listen to others, to foster genuine dialogue, to advocate own views skillfully, to manage conflicts constructively and to adapt communication to diverse groups
- **Integrity & authenticity;** A commitment and ability to act with sincerity honesty and integrity

We are developing a framework to support our activity over the next three years, and although this is still in development, it will tie in our long-term aspirations for the people and communities of Wales, with our immediate activities. We will conduct an ongoing and multi-year programme of engagement, with young people being a specific area of focus.

1 <https://www.innerdevelopmentgoals.org/framework>

Wales' Infrastructure in Context

Population

Wales current population:

3,107,500



Wales population estimated to be

3,303,388 by 2045



Carbon Emissions

Wales' carbon emissions in 2019 were:



39 million tonnes of carbon dioxide (CO₂)

Wales target emissions by carbon

**Carbon Budget 2
(2021–2025)**



37%

average
reduction



**Carbon Budget 3
(2026–2030)**



58%

average
reduction



2030

63%

reduction



2040

89%

reduction



2050

at least
100%
reduction
(net zero)



Energy

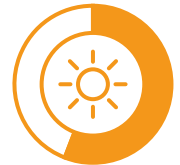
10 TWh

of Wales' current energy was generated
by renewable sources in 2020.



56%

of Welsh electrical energy demand is
generated by renewable sources in Wales.



Flooding

Number of Wales homes and businesses
liable to flooding:

245,000



Number of Wales homes and businesses
protected by flood prevention schemes:

112,600



Internet

93% of Welsh households
have at least 30 Mb/s



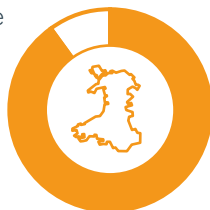
3% still cannot access broadband
at speeds of 10 Mb/s



At least one mobile
operator provides
4G geographic
coverage in

90%

of Wales



93%

of UK households
have voice
coverage
from all four
operators

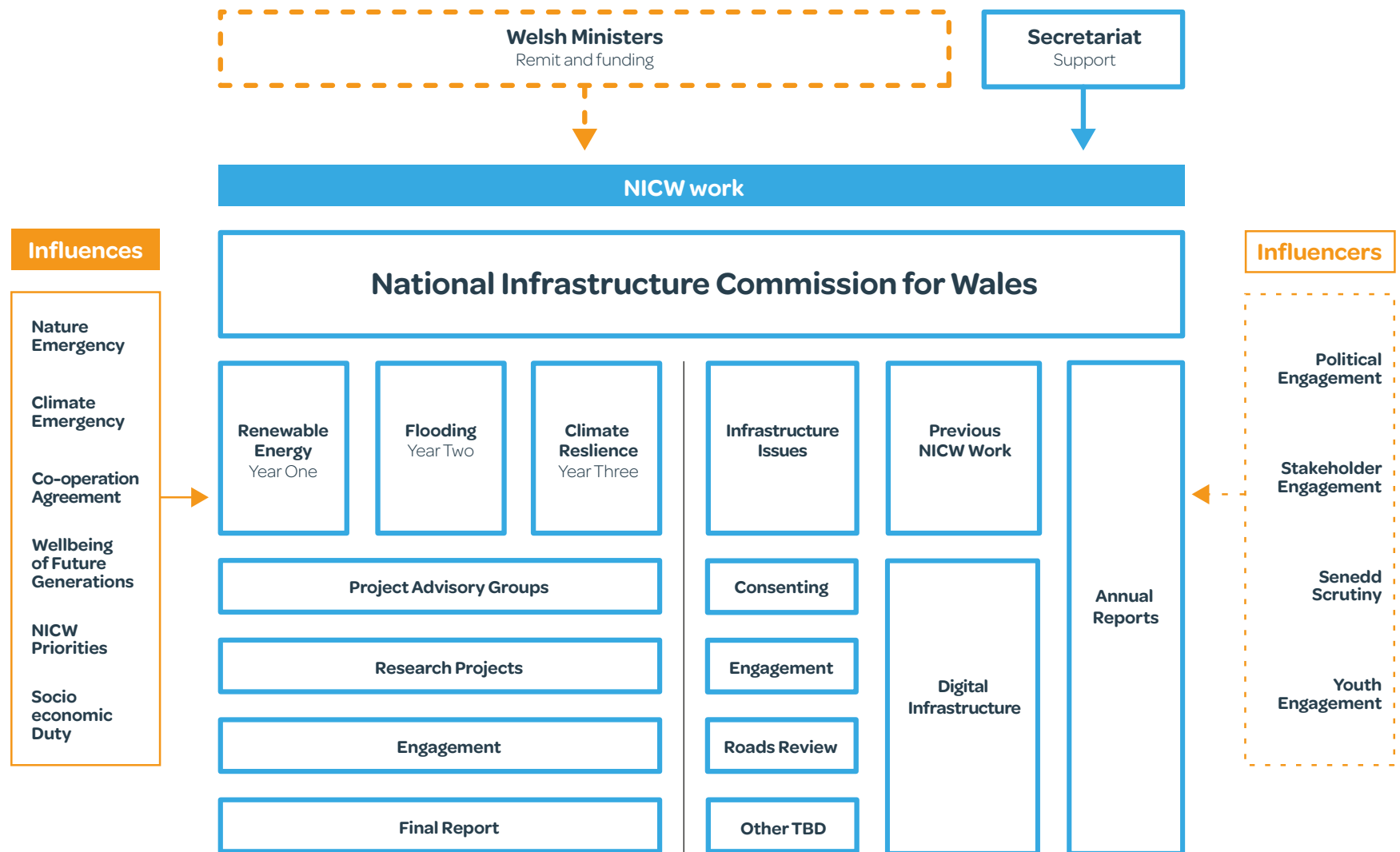


68%

of rural
households have
voice coverage
from all four
operators

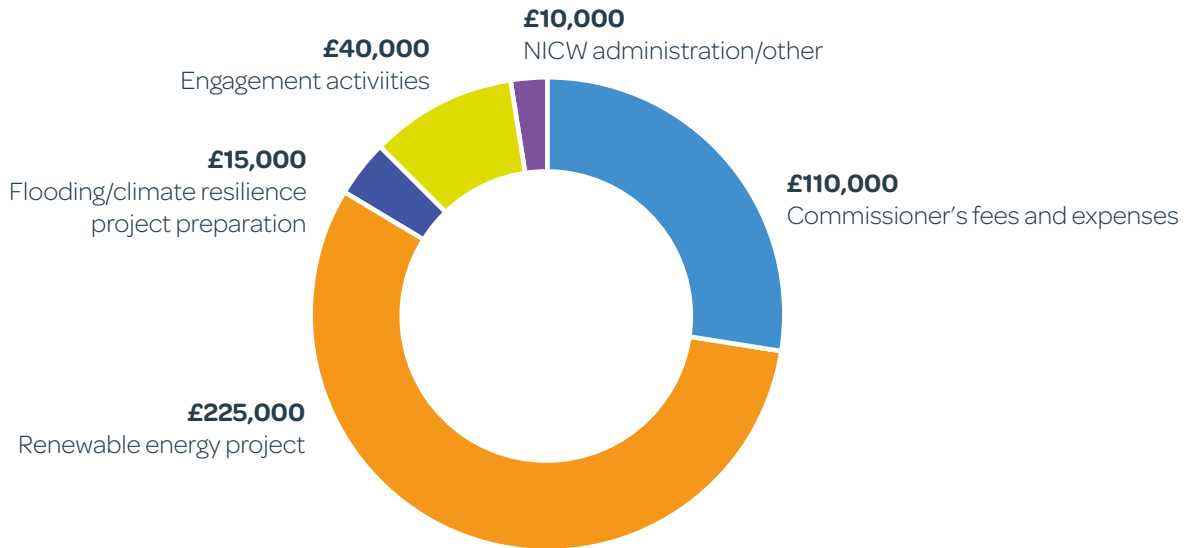


NICW Context and Work Programme



Our 2022/23 Budget

NICW Financial Allocations 2022/2023: £400,000 Budget



For the first time in 2022/23 NICW has been allocated a specific budget from the Welsh Government in order for it to drive forward its work and, specifically, to undertake research to further its aims and objectives. We publish our intended areas of spend for transparency.

From our £400,000 budget allocation we have reserved the vast majority of it, over 55%, to undertake the renewable energy project which is outlined in more detail. This will be spent primarily on three research contracts and the incidentals associated with producing and publishing a report which will bring this research together with robust recommendations for the Welsh Government.

We are also preparing for the future with funds allocated to help Commissioners to prepare for our years 2 and 3 work, to ensure that we are ready to begin our work in the flooding and climate resilience area at the earliest opportunity. We also have set aside funds to help us with our engagement and communications activity; it is felt that this aspect is especially important in our first year to establish strong engagement practices, particularly with young people, the public and



stakeholders, to ensure that our focus is in the right direction and we are reflective and considerate of the views of people that will be users of the infrastructure in Wales for many years to come.

We realise that we have been given a one year budget settlement by the Welsh Government,

with no guarantee that this will continue. However, the commitments made in the Cooperation Agreement together with the demonstration this year that NICW can be effective with its work, will give us a strong platform for making a case for continued funding in the future.



Our Current and Forthcoming Work Programme

Our major areas of work over the term of this Commission have been set for us by our Remit letter from the Welsh Government. We also have a requirement to monitor the outcomes of previous NICW reports. The Commission is also free to investigate other aspects of infrastructure provision which it will continue to scope out over time. Below is a summary of our planned work to date and our current thinking and proposals.

Renewable Energy: 2022/23

Project Overview

Our 2022/23 work will be primarily focussed on our *Preparing Wales for a Renewable Energy 2050* project. Following our new remit from Welsh Ministers we will be looking at how renewable energy tensions can be eased, how communities can be better engaged and how Wales can seek to maximise the benefits renewable energy brings to the country.



As identified above, Wales is part way through its second carbon budget, a journey undertaken by statute and with the ultimate goal of (net) zero greenhouse gas emissions in Wales by 2050. The 2020s will require a huge shift in carbon intensity, a greater drop than in the previous three decades.

To this end the programme as a whole seeks to ascertain:

- Is Wales' infrastructure and society prepared for the challenge, and for the changes that will be needed?
- How can we ensure that the poorest in society are not further disadvantaged by the structural changes? And what will infrastructure developers need to consider if they are to respect Wales' declaration of both Nature and Climate Emergencies?
- What will future spatial and energy policies from the Welsh Government need to address?
- What additional work is required to identify what infrastructure will be needed to deliver a zero-carbon economy powered by renewables?

The programme is based around 3 research projects:

Maximising the Co-benefits of and Managing any Tensions that Arise from a 2050 Renewable Wales.

Research Consultants: Mace Consult

We are interested in how the amount, type and location of future renewable energy generation (electricity and heat) and its supply and management will create tension between other forms of land use and infrastructure, and how these can be prepared for and managed in order to meet our obligations and needs as rapidly as possible.

NICW would like to know what policy and/or regulation should be considered to maximise the benefits from co-locating different infrastructure related to renewable energy deployment, and the opportunities from a large increase in renewable energy deployment by 2050.

Work being carried out for the Welsh Government will use assumptions resulting in various scenarios that will suggest different pathways to a zero carbon system. This project will focus on the commonalities amongst the different assumptions and scenarios within the pathways, to provide the most likely 'hot spots' for infrastructure development challenges to be able to accommodate rapidly increasing renewable energy deployment whilst minimising the impact to natural and social infrastructure.

Mid Wales Community Engagement

Research Consultants: The Centre for Sustainable Energy, The Centre for Alternative Technology and Dulas

We are interested in understanding how the potential of mid Wales, as an area to generate significant amounts of renewable energy, can be unlocked in terms of infrastructure and community support. Mid Wales has long been recognised as having a huge onshore wind potential. There are at least two significant challenges in being able to benefit from this resource, namely: moving the electricity from production to where it is has most value; and local perceptions of landscape use and change.

The first issue is predominantly a policy/planning/engineering issue. The second issue could be informed by a local engagement approach that is complementary to the Local Area Energy Plan process currently being undertaken by both Ceredigion and Powys County Councils. This project is engaging with communities in these

areas to understand their views on energy, and to ascertain their ambition for local generation and use as well as testing attitudes to large scale renewable energy, and obtaining feedback on preferred local solutions to low-carbon energy generation, including opportunities for local benefits.

Net Zero Infrastructure Strategy

Research Consultants: Arup

The final project seeks to understand how infrastructure development could and should be influenced to ensure that more wealth from energy generation technologies can be captured and retained in Wales and how we should be planning infrastructure investments so that energy projects that fulfil Future Generations Goals in Wales are prioritised.

There are many potential paths to achieving a net zero, renewably powered 2050. Some of these paths could be tweaks to 'business as usual' which has led to shortfalls in the benefits achieved for the energy bill payers of Wales.

For example, projects that are wholly or partially owned by organisations or individuals based in Wales provide greater value on an individual basis than those that are not; however local ownership of projects alone would likely not enable a sufficiently rapid transition to a low carbon economy and would jeopardise the overall goal of mitigating the nature and climate emergencies.

NICW would like to know if there are infrastructure interventions that will support development of energy projects that deliver more of the well-being goals and how Wales can increase its local ownership of energy generation technologies, and over time, what sort of infrastructure strategies should be considered to increase local ownership and/or local spend on renewable energy and its associated infrastructure.

All 3 projects will ultimately provide NICW with recommendations to make to Welsh Ministers on what needs to change in the current regulatory/policy framework in order to achieve its overarching goals. All of these projects involve engagement with stakeholders and young people. We hope to report our findings in the summer of 2023.



Project Governance

This work is being overseen by a Project Advisory Group made up of experts in energy and infrastructure with a Wales focus. This group's role and purpose is to support and act as critical friend to challenge the consultants undertaking the research work and add value to their work. We are grateful to the members of the PAG for giving up their time to help drive this project forward.

Flooding: 2023/24

Across Wales over 245,000 properties are at risk of flooding from rivers, the sea and surface water with almost 400 properties also at risk from coastal erosion. As the climate changes we can expect those risks to increase, with more frequent and severe floods, rising sea levels and faster rates of erosion of the coast. Flood events such as those witnessed in 2020 will become more common in the future which means increasing efforts to recognise and reduce the risk, manage the effects, and adapt our communities and infrastructure in areas prone to flooding or coastal erosion so they are prepared for future severe weather events and rising sea levels.



Project Advisory Group Members

Aleena Khan

NICW Commissioner and Chair of the PAG

Nick Tune

NICW Commissioner

Carole-Anne Davies

Design Commission for Wales

Liz Dunn

Burges Salmon

Claire Dykta

National Grid

Ben Godfrey

Western Power Distribution

Dafydd Gruffydd

Menter Môn

Ben Lewis

Stantec

Bethan Lloyd-Davies

Ceredigion Council, representing WLGA on energy

Jennifer Pride

Welsh Government

Neil Reynolds

Chair of ICE Wales, representing the Welsh Infrastructure Alliance

Rachel Shorney

Scottish Power Energy Networks

Luke Sweeney

National Infrastructure Commission

Bethan Winter

Wales and West Utilities

RenewableUK Cymru

Solar Energy UK

The **Climate Change Risk Assessment for Wales** was updated in 2021. 26 risks from climate change in Wales have increased in urgency score in the last five years, 3 of these relate to flooding:

- The risk of climate change impacts, especially more frequent flooding and coastal erosion, causing damage to our infrastructure services, including energy, transport, water and Information and Communication Technologies (ICT)
- Increased severity and frequency of flooding of homes, communities and businesses.
- The impact on coastal businesses due to sea level rise, coastal flooding and erosion.

Flooding and climate change resilience is clearly a complex multi-faceted long term issue that requires collaboration and multi-disciplinary thinking and solutions.

The 2021 **Co-operation Agreement** refers to the need to plan strategically to respond to the reality of the increasing risk of flooding, asking *“the National Infrastructure Commission for Wales to conduct and assessment of how the nationwide likelihood of flooding of homes, business and infrastructure can be minimised by 2050”*. This will be our priority project in our second year and planning for this is already underway.

As noted, there is already much work being undertaken in this area and it is vital to ensure that NICW’s work adds value and does not duplicate work undertaken. We will collaborate with a range of stakeholders to develop a scope for this work that will be supported by a multi-disciplinary Project Advisory Group, ensuring that our efforts complement other initiatives such as the delivery of **Wales’ Flood and Coastal Erosion Risk Strategy** measures (published in October 2020) which has a specific objective on “Preparedness and Building Resilience” and the review of the National Adaptation Plan for Wales.

Climate Resilience and Existential Risk: 2024/25

In year three, 2024–25, the Commission intends to carry out a project on the communication of existential risks to the general population.

We envisage recruiting a task and finish group to help us scope the work, aiming to carry out a national conversation on climate related risks to a range of (likely coastal) communities, citing Fairbourne and other highly vulnerable communities as an example.



We intend to procure a suitably qualified organisation or consortium to carry out the research, analysis and recommendations for the project scope, and then support the successful contractors with delivery of the project, such that it meets expectations of quality, relevance and coherence with Welsh Government policy, legal obligations and other commitments.

We will continue to develop our thinking in this area.

Other Areas

Digitalisation

- We will monitor the recommendations made in the NICW Digital Infrastructure in Wales Report, refresh our evidence from stakeholders and provide an update to the Welsh Government on our views on the progress being made.
- We will aim to understand the role of digital twins, the internet of things and big data in connecting our critical infrastructure together and allowing communities to be better resourced for their needs.



Implementation of the Roads Review

- Following the publication of the Roads Review Panel report we will monitor the implementation of the review and provide the Welsh Government with advice on how the recommendations can be taken forward and remain in active consideration.

Infrastructure Consenting

- We await with interest the publication of the Welsh Government's Infrastructure Consenting Bill and we will actively engage with the Welsh Government through the passage of the Bill and implementation.
- We will liaise with and support the Welsh Government to ensure more rapid infrastructure consenting is delivered while maintaining effective due diligence.

Engagement/Collaboration

- We will develop a plan as to how we will engage with stakeholders, and, in particular, young people, in our work.
- We will aim to consistently engage with a range of stakeholders across the sector with a broad range of views to ensure that we can make fully informed recommendations to the Welsh Government.
- We will engage across Welsh Government advisory boards to ensure that a consistent and active approach to infrastructure projects is developed creating a connected environment delivering sustainable solutions for future generations alongside cohesive communities where businesses thrive.

Introducing the New Commission

Helen Armstrong



I had a long career in housing, responsible at times for bricks and mortar and the built environment as well as communities and the people who lived in them. My perspective on infrastructure is holistic, constellated around the wellbeing of people – homes, communities, education, health, work, digital, broadband etc. I'm also interested in the cross-cutting themes of social justice and mental health; a report published in the journal Nature last September found more than 75% of young people are anxious about climate change. This work is urgent.

I'll be leading, with one of the other Commissioners, on our Year 3 project on communicating existential risk. This is a really important area of work, as it is essential that the population understands what is happening and can get involved in developing solutions.

My career in housing was focussed on growth and innovation, looking for new ways to solve difficult problems, and I'm pleased to put these skills to the most pressing problem ever to face humanity, ensuring the future liveability of the planet for ourselves and all the people to come after us.

Jenifer Baxter



I was in school when the Rio Earth Summit took place in 1992 and it was then that I began to understand more about humans' impact on the planet and became an environmentalist. How humans behave and how we evolve through technological development is where my interest really peaked and I took my first degree in Environmental Engineering at Cardiff University in the tail end of the 90s.

Since then I have gone on to study and work in sustainable development and engineering, I have moved between materials and energy and had the opportunity to work in the private, charity and public sectors. I was the Chief Engineer at the Institution of Mechanical Engineers where designing and

building infrastructure was the core of our members' activities – this gave me space to consider how infrastructure is key to both the mitigation of and adaptation to climate change.

Today I work in the development of renewables and hydrogen plants assisting some of our heavier energy users to switch out fossil fuels for a low carbon alternative. In my role as Deputy Chair of the Commission I want to see us supporting Wales to convert our great ideas into great infrastructure that will both inspire and serve our nation through the energy and digital revolution we have ahead of us.

In my spare time you can usually find me exploring the mountains across Wales and bagging trig points with my Welsh Sheepdog Morys.

Steve Brooks



I've always been fascinated by how people shape their environment and how their environment shapes them. I was born and raised on one of England's most deprived estates and experienced first-hand the impacts of poor housing, poor transport and a poor urban realm. For me, environmental sustainability and social justice are two sides of the same coin.

Over the last 20 years, I worked with several organisations focused on making Wales a more sustainable nation. From the Sustainable Development Commission (the predecessor body of the Office for Future Generations) to the green transport charity Sustrans, my

work has focused on supporting and challenging policy makers and those charged with delivering a better future for Wales. And that's my simple mission as a commissioner. Two decades on from the dawn of devolution, Wales remains a profoundly unequal society. We face a number of long term threats, not least the climate and nature emergencies, as well as profound structural changes in the global economy. Our infrastructure has a vital role in making Wales future ready.

Outside work, you can usually find me exploring cities on foot or on a bike, obsessing about all things Nordic, and spending time with friends and family.

David Clubb



I have always been interested in science and nature. I remember hassling my dad to take the car out of gear when we were going downhill, and in the 70s that was an unusually prescient approach to fuel economy! Not that he always took my advice on such matters.

In the decades since I deepened my academic, practical and policy experience in physics, renewable energy and sustainability. I have worked for public, private and third sector organisations in Wales, Spain, Denmark and England.

Since moving to Cardiff in 2012 I've made a real effort to learn Welsh, and although I'm comfortable communicating in most situations, I still find live Radio Cymru interviews a challenge.

I want the Commission to take a multi-generational view, ensuring that we consider the infrastructure needs of the citizens of Wales in 2100 to carry out their everyday activities in the face of significant climate-driven challenges.

Aleena Khan



I support innovation in developing sustainable infrastructure in Wales. To widen my understanding and experience in this area I undertook field study trips to Copenhagen, Denmark, and Los Angeles, USA. This gave me diverse insight into the challenges in developing excellent, integrated urban and transport infrastructure programmes in cities with differing challenges.

Volunteering to improve sanitation and infrastructure in the Ecuadorian Amazon rainforest and working on animal conservation projects in Namibia for endangered species provided me with a greater appreciation for the importance of shared values and practical solutions in physically and economically challenging environments. The desire to make a positive change to communities inspired me to study Urban Planning and Development BSc and Transport and Planning MSc at my home University of Cardiff; It gave me a

localised perspective on the opportunities we have in Wales to be innovative and creative in the way we develop infrastructure, provide energy and plan safe and accessible transportation.

Having worked at Transport for London (TfL) as a city planner, contributing towards the development of transport strategy and policy in London, I additionally understand the benefit of good governance and the benefit Wales. I worked on the 'New Draft London Plan' and was inducted into the 'Mayoral Infrastructure Levy 2' examination steering group – which achieved its strategic aim of securing additional funding for Crossrail.

A personal outcome of mine is providing transport infrastructure for a national community that is sustainable, economic, and inclusive for everybody's needs. As a transport planner at ATKINS, I'm determined to deliver on this objective.

Eluned Parrott



I'm delighted to rejoin the National Infrastructure Commission for Wales as it sets its focus towards some of our society's greatest challenges. Growing up in a campaigning family under the shadow of the Cold War, I was always aware of each generation's responsibility to bequeath a living world to the next. In my life, I've seen environmentalism move from being the marginalised concern of left-field campaigners, to being the focus of international treaties. To me, that progress is proof that we can make change in the World, but clearly there's a long road ahead.

My career has taken me on a long and winding journey. Having studied Music in university intending to become a teacher, I went on to become a science communicator, a charity marketing professional, a research engagement leader and a politician.

I am now Head of Wales for the Institute of Physics, Chair of the Council for Wales of Voluntary Youth Services, and a Trustee of the National Botanic Garden of Wales. It's a path of great variety, but there has always been one goal: finding a place where I can make a difference.

I'll be working with Eurgain Powell in leading our second year project – looking at how we can mitigate the impact of flooding on the communities of Wales. As our climate changes and we experience more extreme weather events, it is crucial that we understand the level of risk we face and the steps we need to take to prevent natural events becoming human disasters.

Outside work, you'll find me travelling with my family, studying for my MSc in Psychology, or knitting something of little use and less beauty.

Eurgain Powell



I feel very passionate about making a difference and protecting our planet for future generations, and am very excited about making a difference in my role as new Commissioner. I've always loved, and been inspired by, the natural environment thanks to growing up with David Attenborough documentaries! I feel lucky to have been able to follow my passion, becoming an experienced sustainability practitioner with 20 years of experience working within the public and third sectors in Wales. Over that time I've advised on policy development in climate change, transport, the built environment and procurement, and have implemented a range of successful initiatives at a national and local level.

I've worked for a range of organisations including the (first) Future Generations Commissioner for Wales, Climate Change Commission for Wales, Forum for the Future and Carmarthenshire County Council taking forward sustainability and climate change projects. I'm currently the Sustainable Development Programme Manager within Public Health Wales' Health and Sustainability Hub.

When I'm not working I'm busy supporting local sustainability projects in Penarth, and love spending time outside in nature, running, cycling and walking the dog.

Nick Tune



I have been working for many years (globally and within Wales) on pioneering sustainable infrastructure solutions. In 2005 I set up the Building Research Establishment in Wales and during my 10 years at BRE I developed the UK's first zero carbon Passivhaus (at the Works, Ebbw Vale), established the Heads of the Valleys Low Carbon Zone which initiated the housing energy retrofit programme Arbed. I also established the National Solar Centre at the Eden Project and two university research centres at Cardiff University. In 2015 I set up coBuilder UK with the aim of making it easier to share data

across the construction supply chain and in 2017 I became a fellow of the Institute of Engineering and Technology and joined Atkins as Digital Director.

As the world is at a tipping point in regard to climate change and technological advancements, it is professionally a really exciting time, whilst personally a really worrying one for our future generations. The National Infrastructure Commission Wales has a once in a lifetime opportunity as there is the will from politicians, business leaders and communities to really make a change and I can't wait to help make a difference.

Engagement/Resources



You can email us at NationalInfrastructureCommissionforWales@gov.wales



You can telephone the Secretariat on **0300 025 5200/5040**.



You can check out our [LinkedIn](#) Page.



You can view our [Twitter](#) Feed.

We maintain a register of our engagements online:

<https://nationalinfrastructurecommission.wales/about/>

Our new Remit Letter can be viewed here:

<https://gov.wales/national-infrastructure-commission-wales-remit-letter>

Our updated Terms of Reference can be viewed here:

<https://gov.wales/national-infrastructure-commission-wales/terms-reference>

Our register of interests can be viewed here:

<https://gov.wales/national-infrastructure-commission-wales-commissioners-register-interests>

Our meeting notes can be found here at:

https://gov.wales/publications?keywords=&All_=All&field_external_organisations%5B5328%5D=5328&publication_type%5B8%5D=8&published_after=&published_before=

The Renewable Energy Project Advisory Group Terms of Reference can be found here:

<https://nationalinfrastructurecommission.wales/wp-content/uploads/2022/07/Terms-of-Reference-renewable-energy-PAG-Version-1.0.pdf>

Our Digital Infrastructure in Wales Report can be found here:

<https://gov.wales/digital-communications-infrastructure-wales-report>

The Welsh Government response to our Digital Report can be found here:

<https://gov.wales/report-digital-infrastructure-welsh-government-response>