# DRAFT WATER RESOURCES MANAGEMENT PLAN 2024 Non-technical Summary

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	About this document	4
1	Getting your views	5
	About Hafren Dyfrdwy	6
	Where we get our water from	8
	Where we supply water - our Water Resource Zones (WRZs)	8
	What is a WRMP?	9
	Progress against WRMP19	9
	Working with others	10
	What are the challenges we face?	11
ľ	Challenge 1 – the climate emergency	12
	Challenge 2 – the nature emergency	12
	Challenge 3 – population and demand	13
	Challenge 4 – reducing leakage	14
	Challenge 5 – delivering best value for customers	14
	What we have learned from customers and stakeholders so far	15
	We have sought customer views	15
	Our Stakeholders	15
	Outputs from Customer Research	16
	What we plan to do	17
	Water resources	18
	Best value for customers	19
	Climate emergency	20
	Nature emergency	21
	Tackling leaks	22
	Population and water demand	22
	Our plan for our water resource zones	23
	Saltney Water Resource Zone	24
	Wrexham Water Resource Zone	25
	Llanfyllin Water Resource Zone	26
	Llandinam and Llanwrin Water Resource Zone	27



# ABOUT THIS DOCUMENT

This is a non-technical summary of our draft Water Resources Management plan (dWRMP) for 2024. It's designed to give you a view of the challenges facing your water supply and the actions we plan to take as a result.

The main plan includes much more detail, including the full information we used when coming to our decisions and the different options we considered. You can find the main plan <u>here</u>.

### GETTING YOUR VIEWS

This summary is part of the draft WRMP which will eventually update the one we published in 2019. It is draft because we want customers and other stakeholders to let us know what they think about our plan.

We welcome your feedback on this draft plan, in particular:

- Do you support our draft plan?
- Do you agree our draft WRMP represents a fair interpretation of the WRMP guidelines as set out by Natural Resources Wales and supports Welsh Government policies and ambitions, such as Well-being for Future Generations Act and the Water Strategy for Wales?
- Do you agree with our strategic priorities and pace?
- Do you agree the planning scenarios used represent a fair assessment of the likely future?

You can share your feedback by emailing water@gov.wales who will collate and share all feedback with us.

- Do you agree that we should place a greater emphasis on Blue/Green (nature based solutions) and the use of partnership activities to solve future challenges over more traditional increases in asset capacity?
- Do you agree with our approach to protecting our environment across our areas and in the places where we draw water?
- How would you prefer us to engage with you in the future?

# ABOUT HAFREN DYFRDWY

We're one of 11 water and sewerage companies in England and Wales and we provide water services to Mid- and North-East Wales.

We're proud to support our customers with worldclass water services at an affordable price. We think it's important that we put our customers - and the places where they live - at the heart of what we do.

Here are some key facts about us:



### WHERE WE GET OUR WATER FROM

We source our water from the environment - from rivers (61%) boreholes (30%) and the rest from small upland reservoirs and springs.

The water is made good to drink at one of our five water treatment works before travelling through a network of pipes to your taps.



### WHERE WE SUPPLY WATER - OUR WATER RESOURCE ZONES (WRZS)

Each WRZ covers the largest area where all customers effectively get their water from the same source or group of sources and would be equally affected if we had to restrict water use.

Our supply area stretches from Wrexham in the north to Llanidloes in the south.



### WHAT IS A WATER RESOURCES MANAGEMENT PLAN (WRMP)?

It's important that we have a plan in place to make sure our customers continue to have a secure supply of water in the future. Over time things change, for example, we might find that our sources of water are impacted by climate change or the way that people use water in our area changes.

All water companies in Wales need to publish their plans every five years. This will be our second WRMP – we produced our first in 2019 soon after Hafren Dyfrdwy was formed.

Our plan provides an assessment of how our water system performs now and in the future by:

- Estimating how much water we can provide (supply) and how much water our customers will need (demand) over at least the next 25 years;
- Ensuring that our supply can always meet demand in the face of climate change, the need to do more for the environment and shifts in population, and;
- Assessing whether we will be able to meet our customers' needs during a drought – when demand is at its highest – while still protecting the environment.

Although the minimum period over which we need to plan is 25 years we have chosen to look ahead further – all the way to 2085 – to help us understand and prepare for potential climate change impacts.

#### PROGRESS AGAINST WRMP19

No supply options were proposed in our last WRMP published in 2019.

Our strategy did contain leakage reduction and demand management, with a focus on reducing household water usage.

We are continuing to make progress in these areas.

**Leakage:** In 2020/21 we reported a 6.6% reduction and are on target to achieve 15% by 2025. We have secured Ofwat Innovation Funding to explore use of fibre networks to detect leaks in partnership with Dŵr Cymru Welsh Water.

**Household water usage:** The COVID-19 pandemic has impacted how much water our customers are using. In 2020/21 we reported a 4.5% increase on the three-year average for per capita consumption (the amount of water each person uses in the home) reflecting increased use of water for washing and cleaning, and the shift to more people working from home. We are continuing to offer water efficiency products, home water efficiency audits and our education programme in schools.

### WORKING WITH OTHERS

Water companies in England are now required to work together regionally. This is not a requirement in Wales. However, as Hafren Dyfrdwy owns assets and shares resources with companies in England, we have a pivotal role to play to ensure that the Upper Severn and Dee catchments are well represented and have therefore been actively involved with the Water Resources West (WRW) regional group.

Since WRW was formed, we have worked closely with the core members, aligning methods and approaches where appropriate, and sharing data and knowledge. Following feedback during our stakeholder consultation, we became core members in May 2022. We believe that this will help give a better representation of the Upper Severn and Dee catchments in the regional plan.

There is direct alignment between our dWRMP and the Water Resources West draft regional plan which has been published at the same time.

We've already started talking to people about our plans. You can find out more about this in later sections.

# WHAT ARE THE CHALLENGES WE FACE?

When we look to the future, we need to think about what might happen to affect either:

- Supply getting raw water from reservoirs and rivers, making it clean and safe to drink, and sending it through pipes to customers; and
- Demand the number of people in our area of Wales and how they use water in their homes and businesses.

We have highlighted the key challenges that we face in the next few sections.

### CHALLENGE 1 – THE CLIMATE EMERGENCY

We are seeing a trend towards hotter, drier summers and warmer, wetter winters across Wales:

- Annual average temperatures have increased 0.9°C from the mid-1970s to mid-2010s, with more records being broken (e.g. during the 2022 heatwave peak temperatures reached 37°C)
- Annual mean rainfall has increased by 2% from 1402mm in the mid-1970s to 1430mm in the mid-2010s
- Sunshine hours have increased by 6.1% between the mid-1970s and the mid-2010s.

Looking further into the future, forecasts suggest more extreme changes in the years to come:

### CHALLENGE 2 – THE NATURE EMERGENCY

We need to make sure our region, and in particular those areas from where we take water, are not harmed by what we do. We have a duty under section 6 of the Environment (Wales) Act 2016 to maintain and enhance biodiversity – the living environment – where we operate.

Our supply area straddles four counties - Powys, Denbighshire, Flintshire and Wrexham – all with their own unique landscapes, communities and natural value. We serve a relatively small area of Wales, but 60% of that area is on land that is protected as either Sites of Special Scientific Interest (SSSI) or Special Areas of Conservation (SAC). We take our role in protecting and enhancing these areas now and into the future seriously.

	2050s	2080s
Annual Temperature (°C)	+1.1	+2.3
Summer Rainfall (%)	-15	-26
Winter Rainfall (%)	+5	+13

Unless we adapt to these changes in a timely manner, we could begin to experience periods of water scarcity in the future, affecting families and businesses. Our long-term plans take into account the likelihood of broader impacts on climate and the effects these could have on water supply. In line with Welsh Government Guidance, we have used a higher climate change impact of 4°C warming when developing our plans

### CHALLENGE 3 – POPULATION AND DEMAND

We need to ensure we continue to provide a reliable supply of water to our customers. Clearly, we need to think about the number of people using water – and how they use it – in the years to come. In our area, population growth is not expected to put a significant strain on water supply networks over the coming decades.

Following the easing of COVID lockdown, household water consumption has fallen from 2020/21 levels. However, it remains high compared to prepandemic levels. It's still uncertain what a 'new normal' looks like and this presents a challenge for the future.

What we do know is that the way people live and work is changing. More people are choosing to work

from home or nearer to home. This is supported by the Welsh Government's strategy that aims for 30% of the population in Wales to adopt this way of working. This potentially has an impact on the amount of water each person uses in their homes and may change how much water some businesses use as well.

Reducing the amount of water used by each customer means we're in a better place to cope with future challenges to our supply. It also means we can do more to protect the areas we take water from.



### CHALLENGE 4 – REDUCING LEAKAGE

Reducing leakage from our networks means we can leave more water in the environment, benefitting nature and using less energy to deliver it to customers through our network of pipes.

We plan to reduce leakage for a number of other reasons:

- Our customers tell us they think too much water is being lost through leakage;
- Ofwat and other key stakeholders have given a clear message to the water industry that they expect to see ambitious and innovative leakage reduction programmes;
- We would need to treat less water to put into supply, reducing our energy use for pumping and through the treatment process and reducing our carbon footprint, and;
- Taking less water to treat and put into supply will leave more in nature, helping to improve the aquatic environment.

### CHALLENGE 5 - DELIVERING BEST VALUE FOR CUSTOMERS

We are mindful of the current cost of living crisis affecting people. This means that we need to deliver our core commitments as efficiently as possible and make sure that any additional expenditure is proportionate and affordable. We will always look for ways to do things that add value (such as improving biodiversity) whilst carrying out our core functions, which will help us to deliver a best value plan.

Currently our customers have the lowest water bill in Wales and we will ensure that any additional investment is justified in our business plan submission to Ofwat.



# WHAT WE HAVE LEARNED FROM CUSTOMERS AND STAKEHOLDERS SO FAR?

### WE HAVE ALREADY SOUGHT CUSTOMER VIEWS

We believe It's important to get the views of customers when we make plans that will affect them. We have spent a lot of time in late 2021 and early 2022, talking to customers to understand what is important to them and where they believe we should focus our efforts.

We also asked customers about how we should prioritise investment. Their views are summarised on the next page.

### OTHER STAKEHOLDERS

As well as our customers, we spoke to a large number of regional and national organisations to get their views whilst developing this plan. These included Ofwat, Cadw and other water suppliers. We have worked closely with Natural Resources Wales (NRW), consulting throughout our plan development.

We incorporated their feedback when developing our dWRMP and we welcome further feedback from all stakeholders and customers on our draft plan.

### OUTPUTS FROM CUSTOMER RESEARCH UNDERTAKEN IN SPRING 2022

Highest priority for investment



Currently, about 22% of all water we put into the network is lost through leakage.

Many customers were disappointed to learn this and felt it should be a priority for us to address despite the fact it doesn't create a risk to water supplies.

We asked customers about how we could influence people to be more efficient in how they use water in their homes and businesses.

We have set ourselves a stretching target to reduce the amount of water each person uses. We will need to invest in education and water efficiency products to help people change their behaviour.

About 60% of homes in our area have water metering. Smart meters are seen as a way to manage water usage as they provide personalised data so people can see what they're using.

Customers expressed mixed views on smart meters – while some could see the benefits, others were unsure. In the current economic climate we don't believe smart metering is a priority for our customers.



We asked customers about temporary usage bans, also known as hosepipe bans. Our reservoirs and other sources of water are sufficiently large that we only expect to need a hosepipe ban once every 40 years. Most customers told us they were quite relaxed about this frequency and that we didn't need to change our service levels in this area.

Lowest priority for investment



We have a supply surplus in all zones, however not enough to provide a viable water transfer to our neighbouring companies at the current time. We will keep this under review.

While most customers we spoke to didn't have objections in principle to transferring water out of our area if we had a surplus, we know this is a sensitive subject with a complex history. We would only agree to any schemes or proposals that would bring a significant well-being benefit to our customers and communities and not harm the environment.



There are about 15,000 properties in rural Powys with their own private water supplies. Welsh Government policy is that companies should think about what support they can give to these customers during times of drought.

When we asked customers about this, they said that whilst it wasn't a top priority to them, we should support these communities with alternative supplies such as tanks and access to reservoirs for farmers.

# WHAT WE PLAN TO DO

## WATER RESOURCES

We published our first WRMP in 2019 as the newly formed Hafren Dyfrdwy. The plan combined the Wrexham area (formerly Dee Valley) and the Powys area (formerly Severn Trent).

We created four new water resource zones (WRZs) to cover the areas where we supply water to customers. WRZs help us to manage our water resources. Each one covers the largest area where all customers effectively get their water from the same source or group of sources and would be equally affected if we had to implement a hosepipe ban.

Following guidance from NRW and Welsh Government, we looked at how our WRZs might cope with a range of drought, climate change and future demand scenarios.

Even under the most extreme scenarios we expect to maintain a surplus for the foreseeable future. This means that the amount of water available under the most severe climate change and drought scenarios will be more than enough to meet the future demand needs of the changing population and growing industry in our area.

Water Resource Zone	Major Source of Water	Balance of sup (% su	ply over demand Irplus)
		2025	2085
Wrexham	River Dee	8%	23%
Saltney	Import from Chester	38%	49%
Llandinam	Local boreholes	22%	52%
Llanfyllin	Import from Shrewsbury	29%	54%

### BEST VALUE FOR CUSTOMERS

We expect our water supply to remain in surplus across our area, meaning that we do not need to make any investment in new sources of water.

This helps us to keep customer bills low during the current cost of living crisis.

Although there is no need to invest in water supply schemes, we propose to:

- reduce leakage by 10% over the next 5 years and by 50% over the longer term;
- develop innovative ways to improve water efficiency;
- support customers in driving down their water usage;
- continue to protect and improve the local environment.

We think this approach brings many benefits as shown in the table below.

Popofit	Demand side measures		Environmental
Denent	Leakage reduction	Increased water efficiency and demand management	improvements
Takes less water from the environment	<b>S</b>	$\bigcirc$	
Reduces carbon footprint			$\bigcirc \bigcirc $
Improves biodiversity			
Creates investment in the Welsh economy			
Improves resilience of supplies	<b>S</b>		<b>S</b>
Improves water quality within catchments			
Helps meet other wellbeing goals	<b></b>	$\checkmark$	

### CLIMATE EMERGENCY

Whilst climate change will not lead to shortages of water until at least 2085, we still need to play our part in helping to reduce emissions.

We adopted a Triple Carbon Pledge in 2019 to:

- achieve net zero operational carbon emissions by 2030;
- generate or buy in 100% renewable electricity;
- move our vehicle fleet to 100% electric by 2030.

Specific actions that we are taking to meet our pledges include:

- Reducing carbon emissions by generating more renewable energy;
- Restoring peatland on the land we own to capture more CO2 and improving biodiversity;
- Improving our energy efficiency to offset future demands of customers and more stringent water treatment quality requirements;
- Increasing the amount of renewable-backed energy we buy, and;
- Decarbonising our fleet of vehicles and encouraging employees to use low-carbon electric cars.



### NATURE EMERGENCY

Our natural environment is important to the wellbeing of our employees, local communities, and customers. We will play our part in the vision to create a better future for Wales, through the sustainable management of natural resources (SMNR) approach. In 2019 we committed to increase biodiversity by improving 450 hectares of our land by 2025. We're pleased to say we have delivered on this commitment with:

- 80 hectares of peatland restored and 410 hectares of other habitat improved across our estate at Lake Vyrnwy - in partnership with RSPB Cymru, and;
- 65 hectares of nature reserve land improved near Wrexham – in partnership with North Wales Wildlife Trust.

We've also carried out biodiversity surveys at our largest operational sites. We'll use this information on our Biodiversity Strategy to drive biodiversity improvements across all our sites.

Other actions include the following:

Mid Wales area	North East Wales area
Working with Montgomeryshire Wildlife Trust to deliver their Pathway to Pearls project around Welshpool, creating wildlife corridors for the Pearl Fritillary butterfly and other insects	Working with North Wales Wildlife Trust and the Clywd Range and Dee Valley AONB on projects to improve urban and rural green infrastructure, for example the Wrexham Industrial Estate Living Landscape project
Delivering our River Pledges to stop our sewage works harming rivers	Working with NRW on the construction of a fish pass at Horseshoe Falls (a UNESCO World Heritage Site) near Llangollen
Expanding our Visitor Experience, walking trails and educational offerings at Lake Vyrnwy and Clywedog Reservoir	Identifying opportunities to restore peatland and boost habitat at our Pendinas, Cyfynwy, Nant y Ffrith and Penycae reservoirs
With Open Newtown and Montgomeryshire Wildlife Trust, improving the walking route between Newtown and Pwll Penarth Nature Reserve	With the Dee Catchment Protection group, identifying opportunities to promote sustainable land management practices across the Dee catchment, for example by reducing use of pesticides and improving nutrient management
Revising our Forestry Management Plan for the Vyrnwy estate commercial forest to include a greater variety of species, increased numbers of native broadleaf and sections of frfidd habitat	

## TACKLING LEAKS

We are on track to reduce leakage by 15% from 2019/20 to 2025, but we know we need to go further. We therefore aim to reduce leakage by a total of 50% from 2019/20 to 2050.

This will help us in achieving our goal of being Carbon Net Zero by 2030, as we would need to treat less water to put into supply, reducing the energy used for pumping and the treatment process and reducing our carbon footprint. Abstracting less water to treat and put into supply will leave more in the natural world, helping to improve the aquatic environment.

As part of our journey to halving the current level of leakage, we propose to reduce it by 10% between 2025 to 2030.

We will continue our current strategy to drive down leakage through a mix of active leakage control, pressure management and renewing water mains. In the longer term we will need to find a better way to reduce leakage on customer owned service pipes (which currently accounts for about a quarter of all leakage). This may mean implementation of smart meters and taking on the ownership of these pipes so that we can accelerate the rate at which they are replaced.

# POPULATION AND WATER DEMAND

Our plan provides a reliable supply of water to our current and future customers. Population is predicted to fall slightly over the next 60 years in our area. However, we still need to think about water efficiency – how people and businesses use water. Using less water will make supplies even more resilient, reduce carbon emissions and improve the environment.

We have no plans to make every customer have a water meter. The reason for this is that we are in surplus and customer research shows limited appetite for universal metering. We may undertake a limited trial of smart meter technology between 2025 to 2030 to understand what might work in upland rural areas with limited access to power and telecoms.

We will continue to offer our customers the option to switch to a water meter at no cost if they want to.

Although companies in Wales do not have a government target regarding how much water each person uses, we intend to help customers reduce water usage from about 140 to 118 litres per person per day as part of our preferred plan through a mix of education, providing advice and water saving products. In more detail the elements of our water efficiency programme are:

- Provide free and subsidised water saving devices to our customers.
- Social housing home water efficiency checks - working with housing associations where we will carry out an assessment of current use within a customer's property to include:
  - Helping customers to reduce their water use through simple changes of behaviour;
  - Installation of water saving devices;
  - Repairing leaks on internal fittings where it is simple to do so.
- Schools Education as part of our ongoing education programme, we visit schools across the region to talk to pupils about water and how to use it more wisely.
- General customer education increase customers' understanding of water efficiency through a mix of direct communication, messaging, media and events.

To help engage with our customers and to promote our water efficiency messaging we will also develop a community education vehicle. We will continue to offer our customers the free meter option and will continue with our maintenance strategy to replace old or broken meters reactively.

# OUR PLAN FOR OUR WATER RESOURCE ZONES

Here is some more detail about what we plan to do in each one.

### SALTNEY WATER RESOURCE ZONE

Saltney is the smallest of our WRZs. It spans both sides of the River Dee and includes Saltney and Bretton in the west and Sealand to the northern extent.

Population	12,530
Number of properties	6,120
Average Household consumption	111 Litres per person per day
Type of Supply	Bulk Import from Severn Trent
Is there planned demand management activity?	Yes, leakage reduction by 50% of 2019/20 levels by 2050, with a 10% reduction in 2025 to 2030, and water efficiency projects

### PLANNED ENVIRONMENTAL WORK

We'll be focussing on biodiversity improvements which will bring water quality benefits and improve resilience of our water sources. However, we have no environmental destination work specifically planned for this WRZ.

Due to the water supply coming from a bulk import from Severn Trent, we have not identified any specific need or actions within this zone. We will continue to work with Severn Trent to identify any opportunities for contributing to environmental improvements that benefit our customers.



### WREXHAM WATER RESOURCE ZONE

Wrexham is the largest of our WRZs. The city of Wrexham contains the largest population (around 65,000 people). The zone includes Berwyn to the southern extent and the towns of Y Waun (Chirk) and Llangollen. We export a small amount of water from the Wrexham zone to Severn Trent, supplying parts of Chester.

Population	142,300
Number of properties	76,220
Average Household consumption	141 Litres per person per day
Type of Supply	River Dee, supported by reservoirs and small groundwater source
Is there planned demand management activity?	Yes, leakage reduction by 50% of 2019/20 levels by 2050, with a 10% reduction in 2025 to 2030, and water efficiency projects

### PLANNED ENVIRONMENTAL WORK

The Dee and its estuary has a high conservation value, it is designated as two Special Areas of Conservation (SAC), and notified as three separate Sites of Special Scientific Interest (SSSIs).

The Dee flows through a mixture of rural and urban landscapes and is at risk from both agricultural and industrial pollution sources.

We aim to work through the Dee Catchment Protection Group to minimise risks from these sources. This would include land management advisory services and practical activity such as creating buffer strips alongside the river and improving drainage on farms and industrial units.

Several of our reservoir sources sit within the uplands of Denbighshire and Flintshire, surrounded by peatland and ex-mining sites. We see regular colour, taste and odour issues at some of these reservoirs, resulting in water that is difficult and expensive to treat.

We will work with the Clwyd Range & Dee Valley AONB to restore the upland habitats in these reservoir catchments, slowing the flow of water through the catchment and reducing run off into our reservoirs. This will include exploring opportunities for forestry and woodland habitat improvements which will have biodiversity and water quality benefits.

We will also work with the neighbouring landowner at Pendinas reservoir to repair the leat which feeds the reservoir, improving water capture and quality.

### LLANFYLLIN WATER RESOURCE ZONE

Llanfyllin WRZ comprises of a number of rural communities in Montgomeryshire. The town of Llanfyllin is located in the centre of the zone. Other towns in the zone include Llanfair Caereinon and Llangadfan towards the south and Llansilin towards the north.

Population	12,080
Number of properties	7,020
Average Household consumption	150 Litres per person per day
Type of Supply	Bulk import from Severn Trent
Is there planned demand management activity?	Yes, leakage reduction by 50% of 2019/20 levels by 2050, with a 10% reduction in 2025 to 2030, and water efficiency projects

### PLANNED ENVIRONMENTAL WORK

Our main focus is biodiversity improvements across the Vyrnwy estate working in partnership with RSPB. These will bring water quality benefits and improve resilience of our water sources.

Work will include peatland restoration, grassland and woodland habitat improvements and invasive species management. This will have wide ranging benefits including water quality and carbon capture. We will seek to work with our farming tenants and neighbouring landowners to create and improve habitats for key species such as curlew, merlin, peregrine and the Welsh clearwing moth.



### LLANDINAM AND LLANWRIN WATER RESOURCE ZONE

Llandinam and Llanwrin is a rural WRZ in Powys. It contains the towns Y Trallwng (Welshpool) to the north, Llanidloes to the south, Machynlleth to the west and Trefaldwyn (Montgomery) to the east. Most of our customers in this area are supplied by our largest groundwater abstraction.

Population	37,490
Number of properties	22,590
Average Household consumption	179 Litres per person per day
Type of Supply	Groundwater abstractions
Is there planned demand management activity?	Yes, leakage reduction by 50% of 2019/20 levels by 2050, with a 10% reduction in 2025 to 2030, and water efficiency projects

### PLANNED ENVIRONMENTAL WORK

Our focus will again be on catchment level investigations and biodiversity improvements to bring water quality benefits and improve resilience of our water sources.

Clywedog reservoir is situated within this area and although we do not use it as a source of drinking water supply to our customers, we do own the dam and areas of land surrounding it, including small areas of woodland. This presents opportunities for additional tree planting as well as improving the visitor experience to increase wellbeing benefits.

In addition, there is a disused reservoir near Machynlleth – Esgaireira – which already has an improved healthy ecosystem following a sympathetic lowering of the dam. There is evidence of key species on site and we plan to further develop it into a local nature reserve.



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#### RHAGOROL O'R TAP WONDERFUL ON TAP

