

November 2023 Response to Future Generations Wales.

Thank you for taking the time to respond to my email and for adding topical links, describing your concerns in correspondence.

I've read the core objectives that the Commissioner aspires to achieve. I would appreciate this opportunity in turn to respond to your letter. I think it will offer clarity and further I seek to clarify the reasons why I contacted the commissioner for Future Generations for Wales.

I am an expert witness on the subject of water sustainability and conservation. I believe I can help, if you are willing to establish a strategic scrutiny committee. Water conservation will meet many of the community and green agenda objectives you seek, you just need to spend some time exploring the opportunities. My work is based on the myriad of practical water conservation applications, *(these are not difficult to understand)*, programme delivery, jobs creation and investment. In recent years, I've chosen a direction to study the public sector: policy makers, central government, advisors, national and regional regulators, property developers, climate change, wildlife, poverty action charities and campaigners. I see the issues, I think I know how to fix them. I see the potential, the innovation and the link with your role in policy and making change happen.

My research conclusions.

- There are more academic professionals on the Climate Emergency panel of experts for the University College London (UCL), than practically employed in water conservation work in the UK.
- To describe the water conservation industry as a cottage industry, is to place it on a far higher plinth by comparison with almost any recognised cottage industry I can think of.
- I have found it extraordinary to discover both environment and regulatory advisors shaping national policy, possess no practical foundation in water conservation applications or jobs creation.

Your concerns.

"The increase in some intensive farming practices is one of many serious and direct threats to our rivers in Wales, which are deteriorating at an alarming rate..." Commissioner Derek Walker.

"Conserving our nations water is an important issue"...

"Not enough action is being taken to prevent damage to our rivers and water"...

"Water conservation is not an area we have explored before"...

"We recognise the importance of increasing green skills and jobs".. Petranka Malcheva Change Maker.

Preparing questions for some of the leading answers that need to be solved.

- Water savings has been covered for years, people already know about rainwater harvesting and water savings - why does it matter?
- How will water conservation make significant inroads into reducing water usage and sufficiently to avoid the construction of new reservoirs and ever greater river water abstraction - it seems hardly possible does it?
- How is water conservation going to sort out our river pollution - don't we need better and bigger water treatment plants?
- If it's not going to be funded by the public sector or industry, then how could the work be funded?

- Won't water conservation also impact upon water company revenues, for all those consumers who are on water meters if they reduce their water bills?
- How could communities be expected to tackle all of the underground leaks - isn't this supposed to be the responsibility of the water companies?

An illustration on how upgrading an obscure water treatment plant in a London Borough will affect Wales.

- Thames Water wants more water.
- The company has prepared a new multi-million scheme called The Teddington DRA project, this is known as a Capital Project - did you know that they make a lot of money from these schemes?
- They will take an extra 75,000 cubic metres of water (m³) per day from the Thames river, providing it for drinking water.
- The river can't cope with this much abstraction, the water level after abstraction may fall so low, it won't be able to flow over the weirs.
- To compensate for this the water company will pump 100,000 cubic metres of trade effluent each day back into the river, maintaining river levels and getting rid of partially treated trade effluent it doesn't want.
- If the company doesn't obtain approval for the estimated £350 million scheme, it will look for water from other sources and Wales is being investigated for new abstraction and infrastructure for an additional 155,000 cubic metres per day to be used in London. Do you think Wales' already over-abstracted rivers will cope with this extra demand - there are other schemes under investigation too?

What can the community do about this?

- At a local level very little. They can form a community campaign against the scheme because they are unhappy about leisure activities taking place in future in a river polluted by trade effluent - 24K signatures to date.
- They can complain to local community leaders about the construction of massive new underground tunnels, treatment works superstructures, but the decision is taken by the National Infrastructure Commission, not local authorities. Do you think spending on infrastructure like this should be counted as new green jobs?
- They could propose an alternative community led initiative to render the scheme less attractive, if they can come up with a better solution. But are the national government, regional or community leaders going to accept a community enterprise proposal?
- If objections become too great, it may force the water company and the Infrastructure Commission to abandon this proposal and seek alternative water resources. The Powys water abstraction scheme is already on the agenda.
- Climate Emergency will do the rest in the future because we never take action in prioritising conservation first.

Compare Thames Water performance versus community enterprise.

- Thames water, along with every other major water company in the UK are failing to contain the amount of waste water they need to treat before they have to discharge it, relying on mother nature to complete the dirty work.
- For decades Thames Water has been unable to keep up with the number of water leaks, publishing their latest failures for over 62,000 metric tonnes/day, a third of which they claim, is caused by customers in the Capital.
- Turning the Tide on Water Usage, is the latest publication for the city of London, describing; "54,472 water conservation measures undertaken, potentially leading to an ongoing saving of 618,052L/day." It sounds impressive, but that's only 618 metric tonnes/day.
- The water conservation measures claimed equates to around 13.5K properties and projects implemented out of a total of 3.8 million homes in the built environment. They've been

- awarded Best News Brand Campaign for this achievement but we actually need 850,000 metric tonnes/day water savings in London.

It's time for a change in direction.

- The community is best placed to do this work, and will make an outstanding contribution to water conservation targets, through their own operations and enterprise.
- A new community led conservation enterprise for social employment will offer better penetration to access both domestic and I&C consumer's premises to carry out the essential work to reduce the Capital's water consumption.
- Just 10% of the built environment in London will produce 3.5 times the water savings by comparison with daily abstraction rates for the Teddington river water abstraction scheme.
- The water conservation project will cost 1/4 of the proposed Teddington DRA to implement.
- A community led programme will create thousands of new jobs, and achieve a far better water conservation outcome, avoiding the need for river water abstraction schemes from Wales.
- Community enterprise will plug the skills gap for leak detection and repairs personnel. Thames Water can't find enough people to do this work.
- Stop thinking that community enterprise is small and ineffective in tackling the major issues we face - it's time to take ownership of water conservation duties away from the water companies.

What's going to happen if we don't conserve enough water in the future?

- We need more water, the government estimates 1.46 billion metric tonnes a year, about the same as the entire Thames river basin and tributaries. They're not sure where we will discover new sources to meet demand.
- Water companies want £96 billion to cover costs for increased storage, abstraction and effluent treatment capacity. Their estimates aren't enough, they'll demand more investment in the future. None of this money will be used for the purposes of water conservation.
- Household water bills will now rise year on year, for the next decade, at the fastest rate since the invention of the water meter and the great sanitation projects of the Victorian era laid down our industrial water supplies system. The gap between rich and poor will grow wider.
- We need millions of new homes. Housing developers are facing challenges obtaining planning permission. Peak Water, water neutrality zones are spreading. Government relaxation of pollution laws won't make the difference - there's simply not enough water to go around.
- Thames water is investigating large-scale abstraction from Powys - those rivers are already over-abtracted. More schemes like this one will appear in the future. Wales is being targeted.

The better way.

- The community maintains a position on the executive board for every water company in the country.
- There are sufficient water savings in the built environment, for domestic, industrial and commercial (I&C) consumers, to cover the annual water use for every new home we need to build until 2050.
- There are enough water savings to be able to cap every new homeowner's water bill for the next 10 years, including every local school, care home and hospital. It's not going to need funding from the public sector, water companies, or property developers to do this.
- There is enough money tied up in water conservation for us to exploit, to avoid the construction of reservoirs and ever greater river water abstraction.
- If we keep expanding our infrastructure, without conserving what we have, one drought in sequence, and one day, we will run out.

Commissioner for the Future Generations Wales.

- Over 60,000 jobs could be created in the economy by 2022 with infrastructure investment.
- A 'green and just recovery' would aim to deliver good quality livelihoods whilst supporting rapid decarbonisation and improving biodiversity in Wales.

Do you still believe investment in water infrastructure over water conservation is the right way to go after reading about the Teddington DRA scheme and investigations for welsh water sources for London?

Changemaker Definition:

"Achieve positive action for the greater good by taking innovative action. It is also to influence and inspire others to join, support and contribute to the change effort until it is achieved."

After 34 years researching this topic, it's time for the next generation to take over, to sort out the mess that my generation has them to fix. You are needed to lead the charge, please don't leave this up to the water companies to fix.

I hope this offers a contribution to your knowledge base on the subjects of water conservation and social employment.

Kind regards

Matthew Middleton
The Water Conservationist

07914 338175

Sent: Thursday, November 23, 2023 at 3:09 PM
From: "Contact Us" <contactus@futuregenerations.wales>
To: "matthew.middleton@mail.com" <matthew.middleton@mail.com>
Subject: Re: The Water Conservationist's Guide to the Forgotten Utility

Dear Matthew,

Many thanks for your email. Please see attached a letter in response.

Yours sincerely,

Petranka Malcheva

Change Maker

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From: Matthew Middleton <matthew.middleton@mail.com>

Sent: 30 October 2023 21:04

To: Contact Us <contactus@futuregenerations.wales>

Subject: The Water Conservationist's Guide to the Forgotten Utility

Dear Future Generations Wales,

Here is my initiative, which is gaining some traction in the North East of England, although I live in Wales!

I've attached a journal but it's very detailed, so you don't have to read this if you don't want to. However, I thought that you might be interested in a summary concerning this topic, if you're looking to follow ideas that might prove successful for large scale conservation and social employment models in the future?

Background.

The water regulator Ofwat, has announced the largest ever investment in consultation; £100's of millions, seeking wider engagement for water conservation ideas and solutions. They have done this because we are running out of water, we need far more water in the future, so we are going to have to reduce the amount of water we use.

If you're interested to find out why?

Here is an article by the Grantham Scholar Martin Appleby for Sheffield University's Sustainability Institute.

Grantham Institute link and extract about peak water in the UK:

<https://grantham.sheffield.ac.uk/how-much-water-does-the-uk-use/#:~:text=At%20home%2C%20the%20average%20UK,water%20per%20day%20per%20person.>

- The Government estimates that an extra 4 billion litres of water will be needed per day by 2050.
- Increased water demands are compounded by the fact that water companies are going to start extracting less water (1 billion litres per day) from natural supplies due to decreased rainfall.
- The hidden water cost is your total water use based on all the things you do, all the products you buy and use and anything else that could possibly use water (including electricity generation!). Taking hidden water costs into account it's estimated a person in the UK uses 3000 litres of water per day.
- We are using more water each year, so we need more water each year and we are extracting less water each year. At some point we do have to look at how we all use water and find ways to reduce it.

My response: If Martin is correct about the extra annual 1.46 billion metric tonnes needed, (this is about the same as the entire annual flow rate for the Thames basin and tributaries), but the best the government has been able to suggest so far, is to try to "discover" new water sources in future - from somewhere?

Hence there is a new Ofwat water conservation fund!

The Scope of the Project Initiative.

I began to perceive the link between water conservation and social employment a few years ago. I started to imagine, applying my own experience, what it would be like, if we were to witness a national plan implementing a water conservation programme - the proof that the work is actually being carried out at scale.

I have been approached by the Net Zero Leadership team:

www.northoftyne-ca.gov.uk

www.netzeronortheastengland.co.uk

They are interested in sponsoring a proposal intended for submission to the current unitary mayor and future North East Mayoral Combined Authority (NEMCA). These new devolved power sharing, regional net zero centres, might offer fresh hope for action concerning new social employment in the future.

The initiative has also attracted the attention of the North East Universities consortium In-TUNE, lead by the University of Durham, head of business and impact, alongside their policy and social impact teams.

The Vision

I hope the introduction to my research will prove insightful and visionary. My purpose is to galvanise commitment in support for the largest Social Enterprise ever created in Western Europe and in pursuit of a National Water Conservation Programme, aimed at improving the lives of thousands of people through quality of employment and occupational health, (Ref; Journal entry page 3 point 8, 'Build Back Better'). Climate Emergency requires big thinking, and water conservation offers a largely untapped resource to exploit to these ends.

The Proposal for a National Water Conservation Target.

Energy is consumed to pump a tonne of water, more to treat it and more to heat it.

The largest industrial energy consumers in the country in many regions are the water companies.

The biggest water wasters are industrial and commercial (I&C) consumers.

- The exercise to reduce water consumed annually by 1 billion metric tonnes, (My Ref; Journal P. 2 point 4).
- Measure sufficient water offset, adding capacity to cover the building of, and annual water usage for over 4 million new homes, (My Ref; Journal P. 3 point 9).
- Avoid the construction of new reservoirs and ever greater river water abstraction by achieving significant reductions via the combination of water wastage and efficiency savings.
- Significantly reduce the amount of effluent the water companies treat.
- Begin the task of reducing daily national water consumption per capita from what must soon become 150 litres.

Conservation Programme Objectives.

- The project should be completed within 10 years and include all 125K public use buildings, (My Ref; Journal P. 2 point 6).
- The conservation programme will not require funding from the central government, any local public sector agencies or water companies, (My Ref: P. 3 point 8).

Communities Target.

- Create 35K new community enterprise water conservation jobs with transferable skills to the construction sector.
- Improve representation for the welfare needs of employees, personal and family debt management, occupational health and action for change with major financial institutions.
- Deliver new water conservation research, study & training programmes, (My Ref; P. 4 point 10).
- Support new commercial services and new products applications, (My Ref: P 4 point 11).
- Combine business development opportunities for local companies.

The scale of the challenge.

- I am pressing leaders to recognise the scale of the task we face concerning water conservation. I calculate a figure of 1 billion metric tonnes annual reductions is possible - this tests me to the limits of my knowledge.
- The exercise would need thousands of people employed to achieve, millions of people hours, and take years to complete.
- Tackling industrial water savings, requires an industrial response, which means it would probably require between 8 - 12 centres of excellence, (*Amazon warehouse sized units*), strategically placed around the country. The project wouldn't be without significant, negative environmental impact, but herein lies the proof that the work is actually being done.
- Reducing annual water consumption by 1 billion tonnes will only provide around 13.5 litres, future per capita savings, against government policy for national savings of 50 litres savings per head per day. But there remains no meaningful plan to achieve this.
- I conclude it is up to the community to shape policy, to build the systems, processes & procedures to carry out this work, and that we won't require funding from central government, public agencies, water companies or local authorities to do it.
- I lobby to get decision makers to recognise the scale of the challenge, because the cracks are beginning to show - we are starting to run out.
- I take the view that Climate Emergency requires big thinking, not simply magic bullets, and Net Zero leadership teams and universities must begin the task of contributing to the complex business plan needed to tackle this issue.

- There are 1.4 million industrial processes consuming water everyday in England alone, and a lot of money tied up in water usage that we can exploit.
- The question I pose is how we should use this cash to create social employment, future centres of excellence, and a successful strategy to make sure industrial and commercial (I&C) consumers are engaged in readiness - they need to play their part.

The waste of lives and public money.

- I am a witness to the lost generation on subjects of water sustainability, the attainment of national water conservation targets and social justice - the gap between rich and poor grows wider.
- I read Parliamentary Scrutiny Committee findings (2019), describing £12 billion invested in Local Enterprise Partnerships that was meant to create new employment, but showed no evidence of any new jobs that wouldn't have been created anyway. I wonder if that's also the case in Wales?
- I see data highlighting the drop out rates for apprenticeships is now nearly 50% and over 7.2 million of our national workforce employed on the minimum wage or in the gig economy.
- Industrial water conservation could tackle these issues, if people are given the chance to actually run the operations, through their own enterprise, and will make an outstanding contribution to the national policy on water sustainability. This is not as difficult as it might sound.
- It remains only a hugely ambitious proposal....

My response to The Centre for Climate and Social Transformations (CAST) and CCC commissioned report: Implications of Behavioural Science for Effective Climate Policy.

- Until such time as the Climate Committee and government comprehends the scale of the challenge and applies measurable, economic value for human life, no significant behavioural changes will take place.
- Millions of people will never regard a future age of nature as theirs to own.
- Water conservation offers a beacon of hope for change and should have been included in the behavioural impact paper.

I hope this offers a contribution to your knowledge base on the subjects of water conservation and social employment.

Kind regards

Matthew Middleton

The Water Conservationist

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