

1. Introduction

- 1.1. This submission is made by Unite, the UK's largest trade union with over one million members across all sectors of the economy, including manufacturing, financial services, transport, food and agriculture, construction, energy and utilities, information technology, service industries, health, local government and the not-for-profit sector. Unite also organises in the community, enabling those who are not in employment to be part of our union.
- 1.2. Of particular interest to this consultation Unite represents over 30,000 members in the Energy & Utilities sector many of whom are employed directly in the Water Industry and over 1.3 million members who are customers in every nation of Great Britain.
- 1.3. Unite therefore welcomes the proposals to force the industry to clean up its act and inwardly invest to prevent wastewater flowing into our rivers and seas. In order to complete this task, however, will require years of work undoing the damaged caused by decades of asset stripping and underinvestment.

2. Consultation Questions

Ch2 – Regulating through the price review

Q2.1: Do you agree with the challenges facing the sector and the ambitions for PR24 we have identified?

Q2.2: Do you agree that continuing to use our three building blocks helps push companies to meet our ambitions for PR24?

Q2:3: Do you agree that we have struck the right balance between what's in and what's outside of the price control?

Q2.4: Do you have any comments on our approach to evaluating progress? What specific evaluation questions (based within the four key ambitions) do you think an evaluation should look to answer?

2.1. In order to reduce emissions, the water industry will need to tackle not just CO₂ but also methane releases into the atmosphere. A study published in 2019¹ into the greenhouse gas (GHG) emissions from a 37km long urban sewer system covering 13km² over 3 years, were different probably dependant on diet as it relied on the bio-enzymes present. The study worked out that for a city the size of Xi'am in China the emissions averaged 199 tonnes per day. The study also examines the concentrations in branch pipes over main pipes and found that the branch pipes concentrations were higher. the average concentrations of CO₂ in branch pipe, sub-main pipe, and main pipe were 5,916 mg/L, 2,871 mg/L, and 1,830 mg/L, respectively, and the average CH₄ concentrations were 2,937 mg/L, 1,445 mg/L and 914 mg/L, respectively. Using the middle figure from these findings, Water UK states that its members treated 15,315 million litres per day. If so this works out to be around 44,000 tonnes of CO₂ per day and around 553,250 tonnes of CO₂e

¹ Non-negligible greenhouse gases from urban sewer system by Pengkang Jin, Yonggang Gu, Xuan Shi & Wenna Yang

of methane² that needs to be tackled per day and reduced to zero. This means ensuring that the sewers are air tight and extracting the GHG for disposal. A way of quickly reducing the burden is to use the methane to create hydrogen, a gas that is in high demand, especially in heating systems and as a transport fuel. There are two main ways of extracting hydrogen from methane. The current most commonly used route of Steam methyl reformation using around 25 litres of water to create steam which breaks down some of the methane into CO₂ and releases hydrogen (but this simply creates more CO₂ and not all the methane is converted) or the route being explored by Graforce³ in Germany to use extreme heat (which they generate using an electric plasma) to split the methane into hydrogen and black carbon powder that can be used to create anything from simple carbon fibre to industrial diamonds, to modern miracle materials like graphene and carbon nano tubes.

- 2.2. Unite agrees that Ofwat has identified the main challenges facing the sector. Unite does not agree, that the ambitions for PR24 are achievable in the timescales provided. Unite does not agree that the right balance has been struck regarding price controls, relating to what is within or outside price controls. Unite believes that the 45-year experiment with privatisation has failed spectacularly, confirming that business and greed are no way to provide a public service. If there was no alternative but to allow this situation to spiral further into debt and the collapse of the industry which supplies the UK with its drinking water, then the approach would not be going far enough. Unites' evaluation is one horrified by the situation that has been allowed, by successive governments to develop, especially in the last decade. The four key ambitions do not go far enough, fast enough, held back potentially by the knowledge of what is affordable, under the current system.
 - Q3.2. Do you agree with our proposals to:
 - a) Continue to include network reinforcement in the network plus price controls?
 - b) Remove wastewater site-specific developer services from the wholesale wastewater network plus price control?
- 2.3. The water industry is creaking under the strain of its £85.2 billion⁴ of debt. Therefore, the suggestion that £91 billion is to be spent on the water industry is according to written answers to the House of Lords⁵ and Ofwats presentation more than the value of the industry (£88 billion) and this £91 billion is a reduction from the industries business plans submitted which suggested that £106.9 billion was required to plug the financial and physical leaks in the corporate finances and infrastructure which have caused the current crisis. Thames has already warned that unless things change it might run out of money to manage its debts before the Thames Tideway is opened next year and because its business plan was deemed inadequate it may be penalised.
- 2.4. Applying frontier shift and RPEs, Ofwat's total expenditure allowance for the sector is £88.1 billion. Unite questions why Ofwat does not simply recommend renationalisation as

² Based on the latest International Panel on Climate Change estimated global warming potential of methane when compared to Carbon Dioxide (CO₂)

³ See the pilot facility at a waste treatment facility in Berlin

 $^{^4}$ See the 2023 article featuring Professors David Hall and Dieter Helm at footnote 3

⁵ Baroness Hayman of Ullock informed the House of Lords that: "The cost of nationalisation was calculated in a report published by the Social Market Foundation titled 'The cost of nationalising the water industry in England' was £90 billion. [HL363] this figure originated from a press release in February 2018 that can still be found on the Social Market Foundation https://www.smf.co.uk/water-nationalisation-cost-90-billion/

they are advocating spending more on the industry than it is worth currently, by its own admission.

- 2.5. David Hall, visiting professor at the Public Services International Research Unit at the University of Greenwich, highlighted⁶ that when the industry was sold off there were huge tracks of land and zero debt. Since that time investors have sold off every asset they could and created a debt mountain and of the money invested by its shareholders, when adjusted by inflation, this amounts to £5.5 billion between 1989 and 2023. Over the same period, the amount of "retained earnings" profits left over once things like dividends have been paid out, that can be used to invest in a business had dropped by £6.7bn in real terms. Meanwhile, the total amount that these firms paid out to their shareholders in dividends grew to £72.8bn, when taking inflation into account.
- 2.6. Professor Dieter Helm, professor of economic policy at Oxford University, the problem is not the payment of dividends per se, or their reluctance to make additional cash injections. It is the level of debt taken on by some companies without the regulator intervening. Professor Helm highlighted that some of this debt was taken out just to pay the shareholders dividends.
- 2.7. Given the valuation of any previously nationalised industry should be based on its sale value plus any value added to its worth by its investors, then the cost of renationalising should be given back to the nation for as little as £1 as every water company has taken out far more than they have put in and left the industry heavily in debt. Indeed, Thames Water, the largest of these privatised water companies, is on the verge of collapse with them expecting the tax payer to step in and bail it out of the £15.2 billion hole it has gotten itself into.
- 2.8. Unite would like to stress that, in relation to the debts of Thames and the other water industry, that the individual companies need to pay down their debts, with no detrimental impacts to the taxpayer, consumer, or employees, in order to make them a viable ongoing proposition as soon as is practicable.
- 2.9. If the worst comes to the worst the government can obtain loans at a far lower cost than is available commercially, for renationalisation of water and if a similar amount was paid back to the tax payer as is proposed as compensation, this would significantly increase the availability of revenue to implement the positive changes that Ofwat is calling for in PR24.
- 2.10. The payment of even as little as £1 for water companies, may be the worst-case scenario for the taxpayer, as Unite members report buildings and "assets" that appear on the books, which are crumbling, due to being mothballed or through lack of maintenance. If the shareholders are to receive anything for the industry a full and proper survey and physical assessment would need to be carried out to ensure the taxpayer receives value for money.
- 2.11. To be clear Unite does not believe that an "adapted water trading incentive or a new water trading incentive" or anything resembling it to utilised at PR29. Unite believes in renationalisation and direct parliamentary oversight as the only logical solution, especially given the failure of Ofwat to act as the guardian of the public's interest.
- 2.12. Among the key areas Ofwat are now suggesting, that they intend to clamp down harder on water companies, so they stop dumping untreated waste water into rivers, lakes and

⁶ https://www.bbc.co.uk/news/articles/cw4478wnjdpo

other bodies of water and they should innovate and be persuaded into making changes through the use of incentives and financial penalties. To deliver on this requirement is needed in this area are more treatment facilities and the utilisation of the gasses found naturally in sewers. As Ofwat is aware sewer gasses are a mixture of inorganic gases created by the action of anaerobic (needing no oxygen) bacteria on sewage and sludge. This gas can contain hydrogen sulphide, ammonia, CO₂, methane, nitrogen, and hydrogen, traditionally these gasses are simply released into the air to prevent the potential for explosions. Due to the concentration of GHG's this release is no longer ideal as it simply adds to global warming and defeats the efforts to reach Net Zero. Hydrogen is in high demand industrially and is seen by many as an element which could replace fossil fuels in various transport modes and the shipping industry have expressed an interest in the use of ammonia⁷ or as a feedstock for fertilisers. Ammonia is also seen as a vehicle to transport the hydrogen or be utilised directly as a drop in solution into ships gas turbine engines.

- 2.13. Methane is another fuel source especially once it has been 'sweetened' by extracting the non-combustible components by bubbling the gas through a range of capture medium. Methane is a powerful GHG whose concentration levels continue to increase in the atmosphere despite efforts globally. These gasses can be used to generate power and treat the waste far faster than is currently the case, without the utilisation of acids to extract the nitrogen and raise the purity levels of waste water discharges..⁸
- 2.14. Climate change is already warming our planet to levels not previously experienced by man, and it is only going to get hotter, until the world governments agree on a way to drive down emissions and capture more Greenhouse Gasses (GHG's) than are emitted to start to reverse the trend and bring us back from the brink. At present, according to the UNFCCC⁹ we are on track to exceed 2.3°C of average warming, above preindustrial¹⁰ levels of GHG's.
- 2.15. While the UNFCCC are attempting to obtain a binding agreement from all 198 recognised nations to achieve a maximum warming of 1.8°C with the aim of returning below 1.5°C as fast as possible, agreement appears difficult to achieve. This warmed planet means that the water cycle operates faster and faster as more heat drives greater evaporation, extreme weather patterns and the resultant droughts, increased desertification, monsoon downpours, which cause of major floods in the UK.
- 2.16. The growth of urbanisation and its impermeable surface coverings means that flooding cannot be slowed by the rain soaking into the ground and instead it just bounces off with nowhere to go. Generally, this results in the flooding of our sewers, which were designed to be washed through by a normal Victorian downpour to drive waste around minor obstructions to where it needs to go, not monsoons. Consequently, in order to provide the capacity to collect and deposit rainwater without flooding and overwhelming the sewage system requires the help of both existing planning authorities, new developments and huge levels of investment to create a new network of pipes and drains with the inevitable planning delays.
- 2.17. In low lying areas, like the fens, a network of drainage ditches and canals were constructed over 200 years ago for the purpose of drainage which were later turned into

⁷ https://www.emsa.europa.eu/newsroom/latest-news/item/4833-potential-of-ammonia-as-fuel-in-shipping.html

⁸ https://www.graforce.com/images/pdfs/Plasmalysis-dirty-water.pdf

⁹ United Nations Framework Convention on Climate Change (UNFCCC) the UN body that is attempting to bring every nation together to work and reverse the warming of the planet.

¹⁰ 1750 to 1850 is taken as the benchmark definition of preindustrial period.

a transport network for the early industrial Britain. There are two ways to keep a drainage canal network open. Run boats up and down it to more evenly distribute the silt or dredge it regularly. In some areas, however, the drainage canals have simply been abandoned leaving large swathes of low-lying land at risk of flooding. The Conservative government gave the management of this to the charity sector and was making donations to pay for the upkeep of the drainage capability, but this has in no way matched demand.

- 2.18. Climate change also causes fresh water supply shortages, which can lead to the odd situation of flooded areas, often several feet underwater, facing a hosepipe ban and a reliance on bottled water. If there was a rainwater drainage network separate from the sewers, then this too needs to run first into storage and holding tanks to allow any solids to be collected and disposed of before the holding tanks are used to provide supplies and avoid the need to draw water from rivers, canals and lakes.
- 2.19. Unite believes to make changes there needs to be major capital investment and currently the majority of the income of water companies is ploughed into debt management. For this reason, Unite feels that there needs to be price controls at the levels proposed to ensure that the water companies do not try to make the customer pay for their mistakes and at the same time focus their mind on the management of the asset rather than profits, bonuses and dividends. Unite feels, however, that the companies must be forced to show that they have the qualified staff available to deal with a crisis should one occur. So many water companies are in our view operating with a skeleton workforce who have not enough opportunity to progress due to the companies' actions in cutting back.
- 2.20. This needs to be addressed by Ofwat to ensure that the consumer receives the service they are paying for in a timely manner and in this regard Unite agrees that the water companies are failing repeatedly to get the basics right. Unite believes this is due to reductions in staffing and an over reliance on the staff's good will to finish a job properly if they can with the resources available.
 - Q3.3 Do you agree that the inclusion of network reinforcement in cost sharing would be enough to manage uncertainty around the volume and mix of network reinforcement work to be delivered?
 - Q3.4. For water site-specific developer services:
 - a) Do you agree with our proposal to exclude new developments of more than 25 properties from the wholesale water network plus price control at PR24, but with transitional arrangements for companies with low levels of competition?
 - b) Do you think that new developments of 25 properties and fewer should remain in the wholesale water network plus control or be removed? If they were removed from the price control, what alternative protections could we introduce to protect new connection customers from monopoly power?
 - Q3.5. Do you agree with our proposals:
 - a) To raise the size threshold above which companies should deliver schemes through DPC to around £200m lifetime totex?
 - b) For companies to deliver schemes through DPC by default above this threshold?
- 2.21. Ofwat in its determination is calling for the water industry to tackle the situation they find themselves in and undo decades of underinvestment, utilising an unrealistically tight budget which Unite believes is unachievable. Unite feels that such a tight budget could lead to cuts in staffing to pay for the work. Unite believes, however, that there are opportunities in the planning process to ensure that new housing developments are not

simply built, expecting there to be enough waste water treatment and fresh water supplies. That any pipework removing rainwater, does not automatically deposit this water into sewers, but uses technology like permeable surfaces to allow the soil to absorb rainfall and that contributions are made toward the creation of new facilities. Sadly, the suggestion is to not apply price limitations in PR24 to developers of more than 25 properties, but if this is the case what Ofwat can do is give permission to the water companies for the area to refuse access connections to their services if the developers do not contribute to the above measures of flood prevention, water management and ultimately the cost of fresh water provision and waste water treatment.

- 2.22. The solutions relied on in the past, to keep the water industry in line, has been levied through the use of financial penalties. The problem is that to pay these penalties, requires the water companies to have the spare capital which currently the water companies simply do not have, if you believe their balance sheets. They claim that the only way to pay fines and penalties may end up being financed out of a reduction in the numbers directly employed and therefore a reduction in capability. For this reason, the supreme court decision in Manchester Ship Canal -v- United Utilities¹¹ is particularly problematic as it will open the door to everyone, young and old, to bring an action if they suffered any detriment due to the release of untreated waste into watercourses in addition to those fines brought by Ofwat.
- 2.23. Unite is not suggesting that Ofwat should not bring financial penalties when they are justified but is suggesting that Ofwat should be concerned about the reduction of services, speed of reaction to issues and ultimately the potential for a reduction in water quality that could result in more fines and if this should lead to more job losses, etc.
- 2.24. Unite supports Ofwats aims to see water quality improvement and a reduction in the volume of untreated waste released but the reality is that this will in many areas require a new and clearly separate network of pipes with each clearly ladled so there is no confusion between drainage and waste water as has happened in the past.
- 2.25. Unite believes that company law is being exploited to keep the flow of funds continuing into shareholders pockets via holding companies and their parent organisations. Unite is therefore pushing for full renationalisation with a controlled return on investments by private equity firms to prevent this wholescale exploitation of water company finances. This should result in more inward investment that can be used to improve services including undoing the staff cuts of the past.
- 2.26. Unite believes that Direct Procurement for Customers (**DPC**) where a water or wastewater company competitively tenders for services in relation to the delivery of certain outcomes is a quick way to deskill the existing workforce, reduce security of the service and increase the delivery of jobs by workers by high priced agency staff, bogus self-employed or workers on a zero-hour contract basis. Outsourcing in this way is a fast way to increase the cost to carry out the work as the contractor will either subcontract the work to workers who have next to no job security or loyalty to the brand but are simply there to augment their income while the work is available. If the work is not there, they may have rival commitments to others meaning that work will not be carried out when required but when they get round to it, if at all. Unite is clearly opposed to any expansion of agency work of zero hours contracts and would rather like to see more insourcing of work to directly employed staff on a flexible role basis. Any such employee would of course need to have

6 of 8

¹¹ THE MANCHESTER SHIP CANAL COMPANY LIMITED -and- UNITED UTILITIES WATER LIMITED [2019] EWHC 1495 (Ch)

the required skills to be deployed in that way. As a model to deliver large scale projects, Unite believe, DPC is a quick way to increase the cost of a project.

- Q3.6. Do you have any views on any other aspect of our proposals in relation to:
 - a) The design of price controls;
 - b) Water resources;
 - c) Developer services;
 - d) Retail activities;
 - e) Bioresources:
 - f) Other controls;
 - g) The revenue forecasting incentive mechanism; or
 - h) Direct procurement for customers?
- 2.27. As has been highlighted above Unite believe that the price controls are forcing the consumer to pay for the greed of water industry management and past shareholders who even now attempt to pick the bones of an industry that may not have been perfect but one which had the assets in 1989 to pay for upgrades. Sadly the shareholders had other ideas. Unite feels that the designs do not offer enough of a carrot or threat from the stick to affect much change.
- 2.28. On Water resources, Unite welcomes any investment into ensuring enough of the asset operational to meet demand. Unite feels more needs to be done to ensure housing and industrial developments pay their way. Unite welcomes the work to force investment into resilience/water storage but feels that the insistence on the need for this work should have happened before water companies were forced to extract water illegally.
- 2.29. On Developer Services, Unite feel that for decades developers have simply taken the fresh water supplies and plumbed in the waste water and drainage pipes (often the wrong way round) without contributing anything substantive toward the additional burden placed on the incumbent water company. Unite is not confident that the PR24 proposals are workable in their current form and feel they need work.
- 2.30. On Retail Activities, Unite believe that the supply of water and the treatment of waste water is a fundamental service that is there for the betterment of public health and hygiene and therefore should be beyond the scope of retail activities. Unite does not believe in business knows best as the way to operate a public service and would prefer the water industry to return to public ownership after what has been a 35-year failed experiment that has rung up such debt and neglect of the industry through lack of investment and profiteering that it is putting the lives of the general public at risk. Just how bad has the industry have to get before the government has no choice but to renationalise.
- 2.31. On Bioresources, Unite believe that the utilisation of these should have been explored far sooner than today. The UK is facing an energy crisis caused by insufficient investment by the last government into resilience leaving the country for the first time since 1948 in a situation where we have no energy security of supply, being wholly reliant on imported electricity. The Bio resources of the water industry could come to the rescue in that the water industry is one of the largest consumers of energy but currently allows thousands of tonnes of methane and hydrogen from waste water to escape into the atmosphere, enhancing global warming rather than tackling it. By capturing and using this resource it is possible for the water industry to be independent of national grid supplies of electricity and may become a net exporter of energy rather than a consumer. To do this needs investment, but an investment which will more than pay for itself, provide employment, help tackle climate change and could provide the much-needed cash to address, at least some of the debt mountain.

2.32. Unite does not feel the need to expand further on comments regarding the rest of these areas.

3. Conclusion

- 3.1. Unite feels that the measures imposed by Ofwat do not go far enough to redress the situation. The union believes that careers and employment levels will be put at risk as the budgets of the water companies become squeezed as a result of the PR24 determinations.
- 3.2. Unite believe that this is an opportunity missed and that so much more could have been achieved.
- 3.3. Further Unite believe that after 35 years of underinvestment, asset stripping, profiteering, mounting debts and fat cat shareholders and directors the water industry is on the verge of collapse. As a result the only realistic outcome needs to be renationalisation rather than removing the monopoly status and introducing retailers of water that will drain the provider of resources as they attempt to make profits.
- 3.4. Unite believe that waste water provides access to a largely untapped resource which might provide sources of energy, employment, much needed financial resources and help tackle climate change.
- 3.5. Unite would therefore suggest that Ofwat reconsider the path they have chosen with their PR24 determinations.
- 3.6. Unite is happy to work with Ofwat and the government to provide a conduit for workers views in order to make the transition to a better water industry possible, but as has been illustrated there are some major problems to overcome

Simon Coop National Officer Energy and Utilities Unite House 128 Theobalds Road Holborn WC1X 8TN

For further information please contact Colin Potter, Research Officer in the Unite the Union in the first instance via email at colin.potter@unitetheunion.org or by calling 07980 867474.