

Thames Water
Draft Water Resources
Management Plan 2019

Statement of Response

Technical Appendices

**Appendix A: Response to Natural
Resources Wales representation**



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Appendix A.

Response to Natural Resources Wales representation

A. Introduction

- A.1 This document sets out the main issues raised by Natural Resources Wales (NRW) in its representation to the public consultation on our draft Water Resources Management Plan 2019 (WRMP19), hereafter referred to as the draft plan. The structure of the appendix follows the structure of the representation submitted by NRW. The issues raised by NRW are shown in **bold font** and our consideration and response to the issues are shown in numbered paragraphs below each one. We have also set out the changes that we have made to our draft plan as a result of the issues raised or where we have not made changes, we have set out the reasons for this.

B. Key issues raised by NRW

Issue 1 Legal requirements

It is not the role of NRW to comment on plans and proposals which are not within Wales except where those plans have the potential to affect Wales natural heritage and resources. Our comments on the WRMP and accompanying SEA and HRA will therefore be limited to those matters which impact on Wales. In the SEA there is no mention of the Wellbeing of Future Generations Act or Environment (Wales) Act which are key pieces of Welsh legislation which Thames Water will have to demonstrate have been considered.

- A.2 We welcome NRW's comments in relation to our draft plan and for its engagement and input through the development of the draft plan, specifically the work to examine components of the proposed Severn to Thames Transfer scheme that may affect the environment in Wales.
- A.3 Specifically in relation to the legislation cited, we can confirm that the legislation referenced by NRW has been considered and is reviewed in Section 3 and Appendix C of the Environmental Report (Appendix C of the draft plan).
- A.4 The Well-being of Future Generations (Wales) Act 2015 is identified in:
- draft WRMP19: Strategic Environmental Assessment, Environmental Report dated 13 December 2017 – Table 3.1 Key Policy Objectives derived from the Review of Plans, Policies and Programmes, for the Strategic Environmental Assessment (SEA) topic of population and human health.



- draft WRMP 2019: Strategic Environmental Assessment, Environmental Report dated 13 December 2017 Appendix C Review of Policy Plans and Programmes page C30.
- A.5 Both references were to the *Well-being and Future Generations (Wales) Act 2015* – the ‘and’ that was used has been corrected to ‘of’.
- A.6 The Environment (Wales) Act 2016 is identified in:
- draft WRMP 2019: Strategic Environmental Assessment, Environmental Report dated 13 December 2017 – Table 3.1 Key Policy Objectives derived from the Review of Plans, Policies and Programmes, for the SEA topics of Biodiversity, flora and fauna and air and climate.
 - draft WRMP 2019: Strategic Environmental Assessment, Environmental Report dated 13 December 2017 – Appendix C Review of Policy Plans and Programmes on page C22.
- A.7 We can confirm that we have reviewed and taken account of the requirements in relation to our draft plan.

Issue 2 Severn Thames Transfer – status of the option

We note that this consultation does not contain any preferred options that would have effect in Wales. The Severn Thames Transfer, involving the redeployment of water from Llyn Vyrnwy, has been considered as a scenario, should any of the preferred options be unavailable. If the transfer option becomes a preferred option in the future, we would expect to be fully consulted and all the environmental considerations and mitigation to be fully addressed. We would also expect to be given full and reasonable opportunity to comment on the revised SEA, including scoping report. We also expect to be fully consulted on any other options which may impact on Wales including the SEA and HRA.

- A.8 We note NRW’s comments in relation to options which may impact on Wales and we confirm that we will continue our ongoing engagement with NRW on matters of relevance and interest, building on the constructive dialogue we have had to date, particularly in relation to the Llyn Vyrnwy flow support option in mid-Wales.
- A.9 In response to representations received to the public consultation on the draft plan, as well as new information, we have made revisions to our draft plan. The preferred programme has been revised and is presented in Section 11 of the revised draft plan. We would like to highlight that in the long-term the revised draft plan now includes the supported Severn Thames transfer scheme from the 2080s to maintain sufficient resilience for London and the South East region to the end of the planning period in 2100. This includes the 60 MI/d Lake Vyrnwy Reservoir flow support element which is the smallest Lake Vyrnwy Reservoir flow support that we have assessed. Our dialogue to date with NRW has focused on the potential environmental effects of the 180 MI/d flow support element as the worst case position, but we have also assessed the potential effects of this much smaller flow support element in the revised draft WRMP19 SEA, Habitats Regulations Assessment (HRA) and Water Framework Directive (WFD) assessments.



- A.10 Although the Severn-Thames Transfer scheme is not required for many decades, we have nevertheless committed to undertake further work on several aspects of this option over the next five years, including further work on the Lake Vyrnwy Reservoir flow support element and the potential use of a transfer from Dwr Cymru (Welsh Water) from the River Wye. This work will examine the feasibility of the transfer, most notably establishing the magnitude of water losses that could occur during transfer, environmental and water quality concerns and the changes that would be required to the hydraulic regulation of the River Severn, as well as further more detailed consideration of possible effects on the Afon Vyrnwy and the lower River Wye. We will engage with NRW as well as other water companies, regulators and interested stakeholders as we undertake this work. The detail of this further work is set out in Appendix J to our Statement of Response and we will engage with interested parties on the scope of this work and during the activity.
- A.11 We will also ask for further comment on the main revisions to the revised draft plan as part of the ongoing engagement and consultation; this is likely to be the end of September 2018 and we will contact NRW at this time.

Issue 3 Severn Thames Transfer – further work, mitigation and opportunities for improvement

We have the following main points to make on the Severn Thames transfer option.

We recommend Thames Water:

- **Carries out further work, in discussion with NRW, on all Afon Vyrnwy waterbodies as some support high densities of Atlantic salmon. The potential impact on this species has not been fully considered to date. We believe there is a significant risk of deterioration to WFD water body status. A compliance assessment summary of ‘uncertain’ would be more appropriate. Further details on this are available in annex 1 to this letter.**
 - **Provides more detailed information on proposed mitigation measures to enable us to assess how effective the mitigation proposals might be and what the residual effects are likely to be. Potential mitigation measures are listed in annex 3.**
 - **Works with Severn Trent Water Plc and other interested stakeholders to jointly investigate opportunities to improve the environment and meet Welsh wellbeing goals around Llyn Vyrnwy.**
 - **Assesses alternative ways to use Llyn Vyrnwy, involving the use of the Vyrnwy aqueduct and a pipeline to take the water either to the lower reaches of the Afon Vyrnwy or into the River Severn.**
 - **Works with NRW and the Environment Agency together with other water companies who have an interest in the River Severn to ensure the modelling capability for the river is improved to better understand the water availability for options involving the River Severn.**
 - **Consults local Welsh stakeholders on any options affecting Wales that could potentially become preferred options in the future.**
- A.12 We note the points made by NRW (and during additional dialogue in summer 2018 in relation to the Lake Vyrnwy Reservoir flow support element) and have taken these into account in



defining the further more detailed work planned over the next five years to examine potential Severn – Thames Transfer options (including elements relating to the Afon Vyrnwy and River Wye). We hope to continue to work effectively with NRW to understand and address points of concern.

- A.13 It is recognised that there is a potential risk that the use of existing dam infrastructure for releases from Lake Vyrnwy into the River Vyrnwy will not be acceptable either due to environmental impact or inadequacy of the existing infrastructure. Assessment has been carried out of the impacts on the environment of Vyrnwy Reservoir, the Afon Vyrnwy downstream of the reservoir and a short reach of the River Severn (from the Afon Vyrnwy confluence to Shrewsbury) in relation to the largest 180 MI/d flow support element. This assessment has been shared with NRW and discussed during summer 2018. This identified further site-specific investigations to be carried out as part of the further work over the next five years as outlined above and we will work with NRW to agree and finalise the scope of these studies. Pending confirmation of the likely acceptability of releases from Lake Vyrnwy Reservoir to the downstream Afon Vyrnwy, a risk item has been included in the cost estimate to account for the risk that alternative discharge arrangements may need to be provided.

Issue 4 Water Framework Directive – compliance (Annex 1)

There is a risk of deterioration to the WFD status of the fish element of one or more waterbodies within the River Vyrnwy downstream of Lake Vyrnwy as a result of prolonged periods of elevated flows during what would naturally be low flow conditions.

We have not received sufficient evidence to agree with the assertions that the ecology of waterbodies GB109054049880, GB109054049720 and GB109054049852 will not be impacted by the proposals. Further work and dialogue is required on all Vyrnwy waterbodies, but GB109054049880 and GB109054049720 are of concern.

GB109054049720 supports high densities of Atlantic salmon and the potential impact on this species through increases in flows, velocities and changes to water quality and habitat have not been fully considered to date. We believe there is a significant risk of deterioration to WFD water body status. A compliance assessment summary of ‘uncertain’ would be more appropriate with a clearly stated requirement for further project level assessment of the issues.

- A.14 We note NRW concerns in relation to the risk of deterioration to WFD status of one or more water bodies within the Vyrnwy catchment. We can confirm that the WFD Compliance Assessment does not state that the ecology of all water bodies will not be impacted by the Vyrnwy transfer proposals. For the first WFD water body downstream of Lake Vyrnwy Reservoir (GB109054049880), the assessment of deterioration risk states: *"Provisional assessment is YES [compliant with WFD objectives] but further evidence and assessment required in consultation with NRW."* This text has also been added to water body GB109054049880 and the next two water bodies downstream (GB109054049720 and GB109054049852) while further work continues, including more detailed site specific investigations as outlined above.



- A.15 We welcome the opportunity to continue to work with NRW as part of further work on the option.

Issue 5 Strategic Environmental Assessment – next steps (Annex 2)

Conclusions about the WRMP in the SEA are based on (it appears) specific information/ data we have not seen in relation to the WFD assessment. The company states it is unable to conclude impacts in some cases and that they are still awaiting results of studies and are in dialogue with NRW. We would, therefore, expect the SEA and WFD assessments to be updated as work progresses.

We are expecting to see evidence, studies or research on issues, such as the impact of changes to water level, flow and velocity and temperature changes, on fish, macro-invertebrates and macrophytes.

We believe that insufficient work has been done to conclude that the physical environmental changes proposed will only cause minor adverse effects on fish including Atlantic salmon and brown trout (both recognised as species of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales under the Environment (Wales) Act 2016). There is a significant risk that the adverse effects could be moderate adverse, and more work is required to fully assess these risks before an impact of minor adverse can be confirmed.

Appendix H of the SEA is supposed to deal with potential effects on any designated Site of Special Scientific Interest (SSSI), but this has not been populated, so we are not able to comment on this Appendix at this stage. We informed Thames consultants about Coed Copi'r Craig SSSI and its features which have the potential to be affected by raised water levels in the Afon Vyrnwy. Other notable plant species exist on this SSSI which are not features of the site, but are of conservation interest and have the potential to be negatively impacted.

The Severn Trent Water draft WRMP, Dwr Cymru draft WRMP and United Utilities' draft WRMP are all currently out for consultation and should be considered in the cumulative assessment of impacts to the River Severn.

- A.16 We note the comments made by NRW. We confirm that Ricardo has reviewed the comments made by NRW on the draft Vyrnwy environmental assessment report and we had very helpful discussions with NRW on these comments at a meeting held on 10 July 2018. We have reflected on the concerns raised by NRW and recognise that further evidence is required to improve confidence in the environmental assessments and the magnitude of effects. We have updated our SEA, HRA and WFD assessment reports accordingly to include the commitments discussed with NRW in July 2018 to carrying out further investigations and site-specific surveys over the next five years, as outlined earlier in this response. As indicated to NRW in July 2018, these investigations will enhance the available environmental evidence on which to base refinements to our assessments and to also inform the development of any required mitigation measures. The investigations will, in particular, focus on geomorphological risks and associated implications for fish habitat in the upper reaches of the Afon Vyrnwy downstream of the reservoir.



- A.17 Appendix H of the SEA has also been updated to include the relevant SSSIs that may be affected by the Vyrnwy flow support element at 60 Ml/d capacity.
- A.18 The applicable draft WRMPs of other water companies preferred programmes (Severn Trent Water, Dwr Cymru Welsh Water and United Utilities) have been reviewed and used to undertake a cumulative impacts assessment regarding the River Severn and Afon Vyrnwy elements of the Severn-Thames transfer option included in our revised draft WRMP19.

Issue 6 Habitats Regulation Assessment- further work (Annex 3)

The current HRA contains numerous factual inaccuracies, such as watercourses assigned to the wrong catchment, and should be reviewed to ensure these are corrected. Thames Water should work with NRW as the relevant nature conservation body to ensure the HRA is updated accurately.

We believe it is premature to conclude no likely significant effects from these options, as currently insufficient work has been undertaken to demonstrate the impact. The relevant tables in the HRA should be updated to reflect this.

- A.19 A review of the Stage 1 Screening of applicable options has been undertaken and the HRA reviewed to ensure accuracy having regard to the comments made. No factual inaccuracies were identified in the HRA Report applicable to NRW's comments and as such no related changes to the HRA have been made in response. Following discussion with NRW, the comment relates to a table in the Environmental Baseline summary appendix to the SEA rather than in the HRA. We have corrected these errors in the SEA Environmental Report but can confirm that this table was not used to inform the HRA as this was based on a more specific GIS search for European sites that may be affected by each of the option elements included in the revised draft WRMP19.
- A.20 The HRA screening assessments have been modified to clarify that they assess a defined option element during which no material construction is required at Lake Vyrnwy. On this basis we are confident in our conclusion of no Likely Significant Effects (LSE) on Berwyn SPA and Berwyn and South Clwyd Mountains SAC but we would be happy to discuss this conclusion further with NRW.
- A.21 The HRA report has been reviewed to ensure the applicable objective evidence we have used to inform our screening is clearly stated. In response to the CJEU ruling on 'People over Wind' (April 2018), our HRA screening has not included consideration of any mitigation measures.

Issue 7 Mitigation

Insufficient detail on the proposed mitigation measures have been provided to NRW. There are measures that could be taken to mitigate the potential impacts of the proposed Severn Thames transfer on the fish populations and wider ecology of the Afon Vyrnwy. These could include:

- **Gradual reservoir release start-up and shut-down to avoid sudden changes in flow velocities.**
- **Variable release rates to more readily mirror natural flow variability.**



- **Gravel restoration of the upper Vyrnwy.**
- **In-stream habitat improvements through the introduction of woody debris and boulders to provide cover and preserve what little sediment exists downstream of the Lake Vyrnwy.**
- **Riparian habitat improvement on the Afon Vyrnwy.**
- **Fish passage improvements within the Severn catchment**

A.22 As discussed at the meeting with NRW on 10 July 2018, we acknowledge that more detailed site-specific investigations are required, as outlined earlier in this response document, to inform the development of specific mitigation measures relevant to the assessed effects of the Lake Vyrnwy flow release element on the Afon Vyrnwy. The scope of the proposed investigations will be discussed and agreed with NRW. However, as we set out in our meeting with NRW, it will be important to establish mitigation measures for those effects linked to the Thames Water option and differentiate these from those mitigation measures required in relation to existing adverse effects of existing abstraction and impoundment authorisations of other water companies. We note that there are no WFD Heavily Modified Water Body mitigation measures currently proposed to address the concerns raised by NRW in relation to the existing water supply impoundments. We will work constructively with NRW and other relevant water companies to investigate mitigation measures further as part of the planned investigations over the next five years.

C. Changes made to the draft plan as a result

A.23 The following changes have been made to the draft plan in response to comments made by NRW:

- Minor amendment to the title of The Well-being of Future Generations (Wales) Act 2015 has been made in Table 3.1 and Appendix C of the Environmental Report
- WFD Compliance Assessment has been updated in relation to water body GB109054049880 and the next two water bodies downstream (GB109054049720 and GB109054049852)
- Appendix H of the SEA has been updated to include SSSIs that may be affected by the Afon Vyrnwy flow support element as part of the Severn-Thames Transfer option in our preferred programme.
- The cumulative impacts assessment within the SEA Environmental Report has been updated.
- The HRA report has been reviewed and no factual inaccuracies were identified for option elements applicable to NRW and, as such, no changes were made. The HRA screening assessments have been modified to clarify they assess a defined option element during which no material construction is required at Lake Vyrnwy.
- SEA Environmental Report, HRA Report and WFD Assessment Report plus Sections 10 and 11 of the revised draft WRMP have been updated to reflect the inclusion of the Severn-Thames Transfer option in the preferred programme in the early 2080s with a 60 MI/d Lake Vyrnwy Reservoir flow support element.