



APPENDIX I - REGIONAL PLANNING AND WATER COMPANY WRMP ALIGNMENT

This appendix summarises how water companies and other sectors have worked together to produce the regional plan and ensure that there is alignment between the regional plan and the WRMPs. This includes an explanation of the governance and assurance that WRW has adopted. It also explains how we engaged with other regions through reconciliation to ensure that alignment extends beyond the WRW boundary.

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I.1. Introduction to WRW

Water Resources West is a regional group that provides strategic oversight and co-ordination of water resources matters across the river catchments of the West of England and the cross-border river systems with Wales. The Water Resources West group has five core members, namely Dŵr Cymru Welsh Water¹, Hafren Dyfrdwy, Severn Trent Water, South Staffs Water and United Utilities Water. We work together with other abstracting sectors, the sectoral regulators and neighbouring water companies.

Our region has varied hydrological and geological characteristics and supports a diverse range of natural environments. We rely on several shared major rivers such as the Severn, Dee, Trent and Wye, to supply large conurbations such as the West Midlands, Greater Manchester, Liverpool and Cardiff. Abstraction in the region supports a wide variety of businesses: industrial production, energy production and food production as well as supporting the canal system.

¹ Only parts of which are situated in the Water Resources West region.



I.2. Water Resources West governance overview

Our governance structure was created to enable water companies, regulators and other abstracting sectors to participate in the planning process and influence our regional plan. The governance structure within Water Resources West encompasses the CEO group, the Senior Management group and several working groups (i.e. River Trent and River Severn working group) as well as stakeholder management groups and the management structures for each workstream. The organogram in Figure 1 below explains the wider governance structure within Water Resources West.

CEO Group

This group includes the CEOs of the five water companies that are core members of Water Resources West. It also includes senior directors from the regulatory members of WRW. This group meets at least once a year to guide the work of the group and approve the submissions made by Water Resources West during the regional plan process. The group has an independent chair who is responsible for overseeing our regional group's strategic direction, adding insight and advice as well as challenging the group.

It is important to note that “signoff” or “approval” at the CEO group means that consensus has been reached amongst group members to proceed to the next stage of the process. It does not indicate endorsement of the plan by the regulators.

Senior Management Group

The multi-sector senior management group has been actively engaged in the development of this plan, following a programme of work aligned to the methodologies. The group is formed by representatives for all Water Resources West members (water companies, other sectors and regulators). The group takes decisions by consensus to ensure transparency in the planning process, following agreed terms of reference. In the event that a decision cannot be obtained by consensus at the senior management group, this could be escalated to the CEO group. In practice, such an escalation has not been required during the development of this plan.

The group has previously reviewed the August 2021 and January 2022 submissions to regulators as well as the draft plan submission. Note that advisory members, i.e. regulators, participated in the senior management group reviews of the plans. Approval of a plan by this group means that consensus has been reached amongst group members to proceed to the next stage of the process. It does not indicate endorsement of the plan by the regulators.

Assurance

Water Resources West has followed a dedicated approach to governance and assurance in producing all regional plan documentation and underlying data. Water Resources West has an active assurance group, where the assurance leads from each of the four core member water companies coordinate the assurance activity with the Water Resources West programme team. External assurance has been provided by Jacobs on Water Resources West's use of the company assured data. This process involved the collation of inputs from water companies into a regional table by the Water Resources West regional plan development manager. The regional tables were then provided to Jacobs along with the source information and checks were completed to ensure the information in the regional tables were consistent with the information provided by the companies.

Underlying data and accompanying planning tables have been prepared by the core water company members following the agreed methodologies. These have been subject to governance



and assurance within each of the companies, with the level of assurance proportionate to the risks. Where companies determined that risks were higher, they sought external assurance.

The output of the regional plan assurance confirmed that “the Water Resources West data handling process is suitably robust, and the data used by Water Resources West is fully consistent with the data provided by Severn Trent Water, United Utilities, South Staffordshire Water, Hafren Dyfrdwy and Dwr Cymru Welsh Water, with only a small number of issues identified with the tabulated data, primarily relating to incorrect decimal places for certain values.” These small issues were addressed prior to submission.

The above statement is caveated by the fact the external assurers were not able to check WRW’s handling of the final data for some companies because it was not available at the time of the audit. However, Jacobs stated that “should WRW follow the same process in processing final company updates to the data tables, there should be no issues.”

Jacobs concluded that

- “there is alignment between the draft WRW plan and the four companies’ draft Water Resources Management Plans”, and
- “on the basis of the above, we consider the WRW plan has been developed in accordance with the National Framework and relevant guidance and policy”.

Workstream management

Our regional plan work is split into multiple workstreams. Most workstreams are led by a water company representative who is accountable for delivery of the workstream on behalf of the region (see Section I.4). The non-PWS workstream is led by an experienced water resources project manager employed specifically to represent the interests of the non-PWS sectors by taking accountability for the delivery of this workstream. The workstream leads are supported by a programme manager and a full-time Director of Water Resources West.

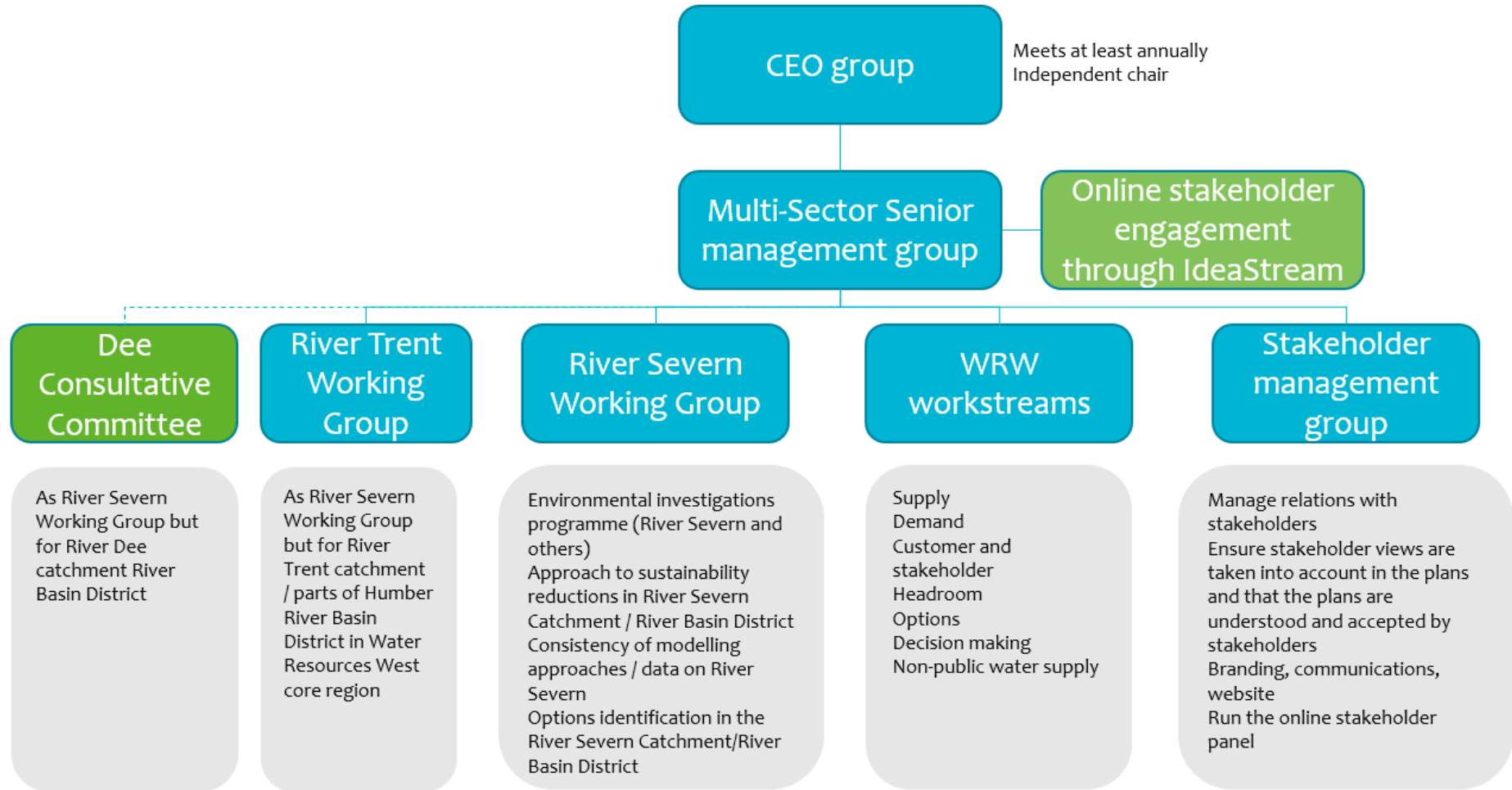
Each workstream has a defined programme of work and milestones to be achieved. Workstream leads work closely together to ensure consistency of inter-linked elements (for example, supply and demand workstreams around demand centre forecasts to feed into supply models). Workstream leads are responsible for ensuring the milestones are achieved and deliverables are available to provide inputs for the regional plan documentation. Progress against each milestone is tracked by the programme manager and discussed at the Senior Group meetings every month.

Each core member water company has a company lead representative into WRW, who attends the senior management group. They are Head of Water Resources (or equivalent) for the company. They are accountable for ensuring that there is consistency between the regional plan and their company plan, and for ensuring that their company’s needs are met through the regional planning approach.

These roles and responsibilities were agreed by the senior management group in March 2020, early in the development of the regional planning approach.



Figure 1. Water Resources West organogram





I.3. Regional and company-level water resources management plans

Regional planning, although not statutory in nature, is based on the same principles as company level water resources management planning. This means that both plans follow the same Water Resources Planning Guideline and for regional planning, the National Framework for Water Resources 'Must', 'Should' and 'Could' statements.

We described how our regional plan reflects the 'Must', 'Should' and 'Could' statements outlined in the National Framework for Water Resources in Appendix A. Water Resources West's approach is to carry out all of the underlying technical work (e.g. supply and demand forecasts and selection of best value options to solve deficits) to meet the needs of both the WRMPs and the regional plan. This technical work follows both the WRW methodologies and the Water Resources Planning Guideline and is used consistently in both regional and company level plans. Decisions on which options to select in the plan are, in accordance with the WRPG and the Water Industry Act 1991, decisions for the water companies and ultimately their boards to take. The role of WRW is to support that decision making by providing consistent evidence which reflects national, regional and multi-sector needs into each company's decision making.

Appendix E contains useful commentary on the approach taken by each water company in developing the supply balance tables and serves as evidence for this alignment and consistency of approach. The alignment between regional and company-level plans is also evidenced in our customer research and stakeholder engagement. The company level customer research undertaken in 2021 and 2022 has been used to shape our draft plan. Likewise, the stakeholder engagement undertaken at regional level in January and February 2021 was used to shape the company-level plans. Furthermore, the water company level draft plan consultation responses to the draft plans will be analysed to provide a regional view and will shape the final regional plan and final WRMPs. More details on the customer research and stakeholder engagement shaping our regional and water company level plans is provided in Appendices F and G.

The regional and company level-plans therefore share the same forecasts of supply and demand for public water supply, and the same selection of options to meet the supply demand balance. The main difference between the regional and company-level plans is the engagement with the non-public water sectors and the delivery of environmental destination (beyond the impacts of abstraction reductions), both of which are undertaken at regional level only. For public water supply and demand, while both the regional plan and the individual WRMPs are complete plans, the reporting in the regional plan emphasises the regional picture and reporting in the WRMPs provides more detail for the individual companies.

I.4. WRW planning approach

Planning approach

Our planning approach is informed by the National Framework and the Water Resources Planning Guideline. The overall approach was set out in a methodology paper and agreed by the senior management group and the CEO group. In setting our overall approach, we adopted the following principles for the regional plan:

1. Consistency between WRMPs and Regional Plan, with consistent inclusion of schemes which bring joint benefits, (noting that some non-PWS only schemes may be in the regional plan but not WRMPs)
2. Accountability for statutory WRMP is with Water Company Boards
3. Elements which need to be aligned for effective regional planning are agreed up front



4. Companies commit to aligning WRMPs for the agreed elements
5. WRMPs and the regional plan are developed together by companies on a zonal basis
6. Fully involve non-PWS sectors to ensure their sector needs are reflected in the West regional plan
7. Iteration is used to optimise the plan across the region and with other regions
8. Consultation and consensus building is used to develop the plan
9. Planning scenarios will be agreed with other regions and the National Framework
10. 60 year plan (2025 – 2085) with preferred options in the first 25 year period then indicative look ahead from 2050 to 2085
11. Adaptive plan to allow for external dependencies on other regions / sectors – with a single preferred pathway
12. Resilience to non-drought hazards used as a factor in options appraisal (full assessments not in regional plan, in line with national steer on how to produce a regional plan)
13. Assurance will demonstrate that the regional plans and WRMPs are consistent

Through this approach, we will keep the WRMP and regional plans synchronised during the stages of development all the way through to final WRMPs and the final regional plan in 2023. The underlying plan and the evidence for that plan will be the same in the WRMPs and the regional plan. There will be more company specific detail presented in the WRMPs than the regional plan, but they will be fully consistent.

It is important to recognise that WRW is a cross-border group, covering parts of Wales and parts of England. The cross-border catchments of the Dee, Severn and Wye are major shared resources. Our plan development will reflect policy and legislation in Wales and in England. This includes the Environment (Wales) Act 2016 and the Well-Being of Future Generations (Wales) Act 2015. The net-benefit to the people and environment of Wales under this legislation will be particularly important to consider as the potential for transfers of water between Wales and England are considered. Further details of how policy and legislation from both sides of the border is reflected in our plan are given in the Decision Making methodology.

Collaboration, consensus building and consultation are a fundamental part of developing WRW's regional plan. This starts with WRW's governance: the senior management group is a multi-sector group, where all members take decisions by consensus². The regional plan is built through collaborative working of its members, as agreed at the senior management group. However, to ensure that the plan reflects the needs of the region, we also need to engage with a wider group of stakeholders in both Wales and England (See Appendix G). Engagement and stakeholder feedback have been used to set our ambitions and outcomes as reported in Table 6 of the draft regional plan.

This approach is summarised in the Framework shown in Figure 2.

² If decisions cannot be taken by consensus at the WRW senior management group, the WRW terms of reference allows them to be escalated to the WRW CEO group which has an independent chair. Also note that ultimately a transfer option (import/export) or a joint option can only be selected as part of a preferred plan if all the affected companies confirm that they will adopt the option in their preferred plan. Decisions on WRMPs are ultimately taken by water company boards and the regional plan will remain consistent with those decisions. Regional planning gives consistent evidence to support those decisions. Further details are given in the decision making methodology.



Figure 2. Water Resources West's framework for regional planning.

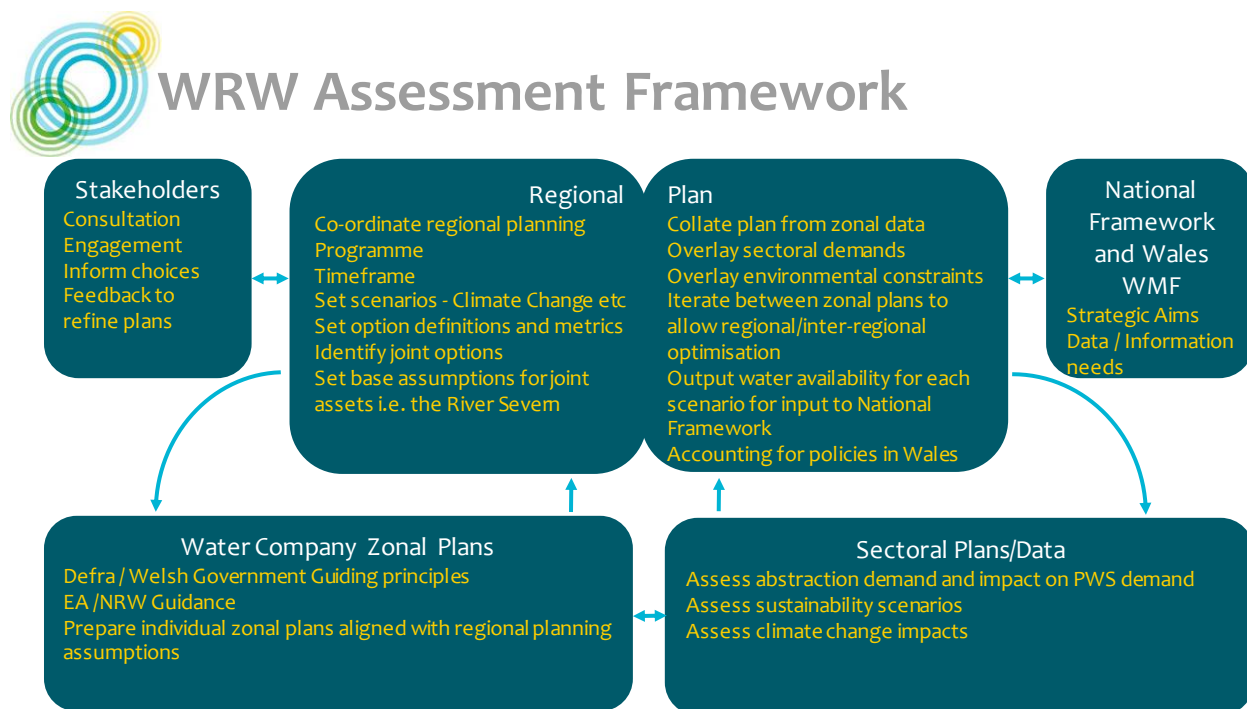
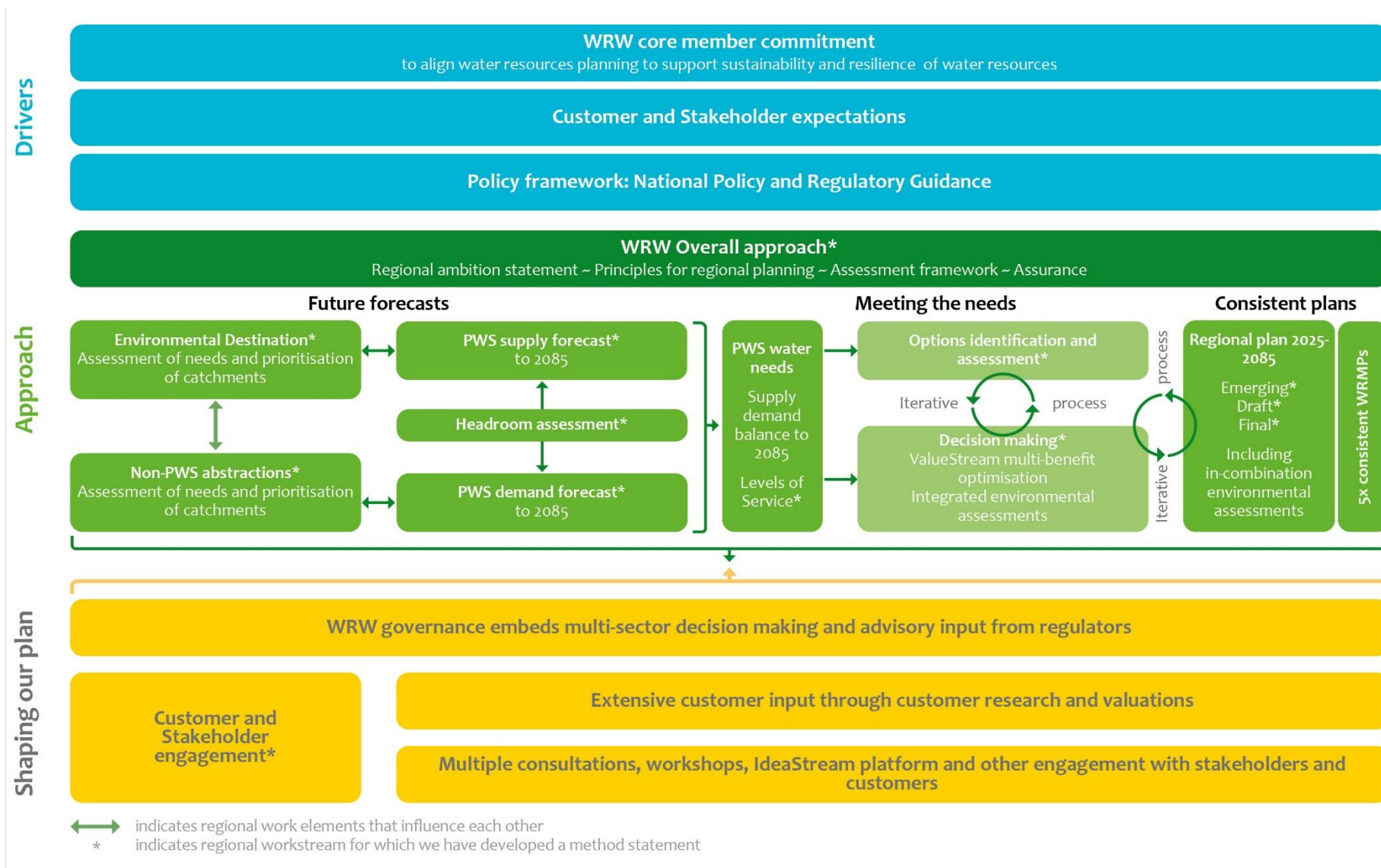


Figure 3 below showcases the overarching drivers for regional planning, the interactions between different workstreams and the most important factors that shape our regional plan. It also clearly shows how the selection of options for the best value regional plan is informed by an iterative process between option identification and decision making, based on the metrics outlined above. The figure also shows how important the stakeholder and customer views are when deciding the mix of options we consider for selection. Last but not least, the highly collaborative nature of our work between neighbouring water companies, regulators and other sectors is central to shaping the regional plan and the WRMPs.



Figure 3. Regional planning: drivers, approach and factors that shape our regional plan.





I.5. Programme of work

Our programme of work is split into multiple workstreams and deliverables, as detailed in Table 1. Our work is framed by robust methodologies for each workstream, which were first shared with regulators in April 2020. Subsequently, these method statements were updated based on regulatory feedback. The methodologies have been approved by our multi-sector senior management group. We also sought an external expert review of our methodologies. This provided additional assurance that the approaches are appropriate for implementation. The methodologies used to prepare this version of the plan also take into account feedback received from regulators.

Table 1. Summary of Water Resources West workstreams and deliverables.

Workstream	Deliverables	Methodology link
Overall	<ul style="list-style-type: none"> Statement of resource need (including statement of ambition) Emerging regional plan Draft regional plan Final regional plan 	Overall approach methodology on WRW website
Demand	<ul style="list-style-type: none"> Household water consumption forecast (including population and property projections) Non household water consumption forecast (including population and property projections) Leakage forecast Forecast of minor components of water demand 	Demand forecast methodology on WRW website
Supply	<ul style="list-style-type: none"> Identification of the amount of public water supply (PWS) available across Water Resources West forecasted over a 60 year period from 2025 to 2085 (with climate change impacts interpolated / extrapolated from the 2070s). Generation of a 1 in 500 year supply demand balance for public water supply for each Water Resource Zone in the region. 	Supply forecasting methodology on WRW website
Headroom	<ul style="list-style-type: none"> A review of the headroom used in WRMP19 by the four water companies A recommended approach to headroom for the next round of water company WRMPs (expected by 2023) and for the WRW regional plan in respect to public water supply (PWS) Target headroom values in mega litres per day (Ml/d) for each water resource zone (WRZ) in WRW for each year in the planning horizon. 	Headroom methodology on WRW website
Service levels	Determination of the frequency of imposing customer demand restriction through the use of: <ul style="list-style-type: none"> Temporary Use Bans Non-essential Use Bans 	Levels of service methodology on WRW website



Workstream	Deliverables	Methodology link
Environmental destination	<ul style="list-style-type: none"> • An environmental outcome statement • A list of abstraction licence changes to be included in the supply forecast • An environmental destination statement for water resources which: <ul style="list-style-type: none"> ○ Describes the environmental outcomes you are proposing for the region building on the Abstraction Plan baseline for 2027, including the outcome for each catchment, water dependent protected site and each groundwater body in terms of the level of environmental protection ○ Explains the decision making process and rationale you used, including which stakeholders were involved and whether any stakeholders aspirations were not accommodated ○ Clearly explains what improvements you have decided not to include in your proposals and why ○ Sets out the short, medium and long-term actions required to achieve the long-term destination, including proposed abstraction changes and other actions required to protect and improve the environment. ○ Clearly states whether the proposed actions are expected to achieve the long-term destination and, if not, what further work is needed to help make this happen (further investigation, for example) ○ Outlines the uncertainties and a plan to reduce those uncertainties over time 	<p>Environmental destination methodology on WRW website</p> <p>Environmental Destination Catchment prioritisation and constrained list of options supplementary note</p>
Non-Public Water Supply	<ul style="list-style-type: none"> • Understanding scale of non-PWS abstractions • Forecast of non-PWS abstractions • Prioritised management units • Regulator consultation and signoff • Matrix of prioritised management units and abstractors • Assessment of priority management units and action plan • Non-PWS engagement 	<p>Non-PWS methodology on WRW website</p> <p>Non-PWS principles and catchment Methodology supplementary note</p>
Decision-making	<ul style="list-style-type: none"> • Results of iterative decision modelling within region and with other regions –focussed on zones with shared options for emerging plan • Clearly articulated set of strategic choices with implications for the emerging plan • Fully completed decision modelling (including post consultation refinement) and including zones with no shared options for draft plan • Preferred plan (with list of options selected) informed by the strategic choices for draft plan • Alternative plans for consultation which represent different strategic choices for draft plan 	<p>Decision making methodology on WRW website</p> <p>Decision metrics supplementary note</p> <p>Decision process supplementary note</p>



Workstream	Deliverables	Methodology link
	<ul style="list-style-type: none"> Options selected in what-if scenarios for draft plan Updated outputs of decision modelling (if required following consultation) for final plan Preferred plan (with list of options selected) informed by the strategic choices (post consultation) for final plan Updated alternative plans and what-if scenarios (if required following consultation) for final plan 	<p>Decision metrics definitions</p> <p>Adaptive planning supplementary note</p> <p>Best value trade-offs supplementary note</p>
Options development	<ul style="list-style-type: none"> Identification of the potential options (supply side and demand side) available to meet any public water supply (PWS) and non-PWS sector deficit across Water Resources West, forecast over a 60 year period from 2025 to 2085. Identification of multi-sector options that would contribute at a regional level Definition of a set of multi-criteria benefit metrics for each option. 	<p>Options development methodology on WRW website</p>
Customer and stakeholder engagement	<ul style="list-style-type: none"> Evidence of stakeholder views and effective consultation for inclusion in the regional plan deliverables—all tied into the key decisions needed for other workstreams Customer views, preferences and valuations and evidence of effective consultation for inclusion in the regional plan deliverables—again all tied into the key decisions needed for other workstreams Consistent stakeholder messaging to support the objectives of Water Resources West and its regional plan A working group with other regions and water companies to ensure alignment and integration of customer and stakeholder views and messaging Any stakeholder and customer research will align with the objectives and timescales of the Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) 	<p>Customer and stakeholder methodology on WRW website</p>

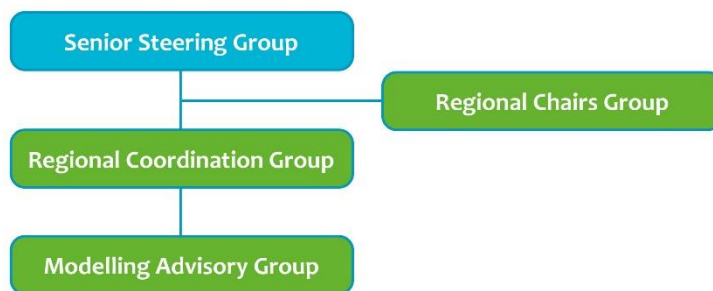


I.6. National framework and regional reconciliation

Inter-regional governance

Although all regions are following the best value planning approach and drawing on the National Framework ‘Must’, ‘Should’ and ‘Could’ statements, there are common challenges and opportunities that require close collaboration to resolve. These stem from the need to resolve deficits in one region by importing water from another, via large water transfers. Collaborative working at regional level has been enabled by a robust inter-regional governance structure, devised to ensure that regional plans can be reconciled effectively according to a pre-established schedule.

Figure 4. Inter-regional governance structure.



The inter-regional governance structure is defined by several groups, namely the Senior Steering Group, the Regional Chairs Group, the Regional Coordination Group (which also has a working group with a subset of members) and Modelling Advisory Group.

The regional coordination group includes representatives of regional groups, government and regulators which meet monthly to deliver progress, drive ambition and ensure alignment between plans. Its primary role is to coordinate the planning activities between regions including the reconciliation process.

The Senior Steering Group has over 40 representatives from government, regulators, water companies, water using sectors, academia and environmental NGOs. The group provides strategic steer on key decisions and oversight of ongoing work.

The Modelling Advisory Group comprises technical experts from each regional group and the regulators; this ensures that technical methods are aligned so cross-regional options (i.e. transfers) can be explored.

Finally, the Regional Chairs Group reviews and escalates issues during the process of reconciliation between the regions. The group can also devise actions needed to reach agreement across all regions and water companies on the schemes considered for inclusion in the reconciled regional plans.

Inter-regional reconciliation

The inter-regional reconciliation process involves a relatively short (6-8 weeks) and intense period of liaison between the five regional groups and briefing sessions to other groups involved in the inter-regional governance (i.e. RCG). This is necessary to ensure that:

- each region understands the needs of other regions
- water transfer options to help/get help from other regions are considered and understood at high-level
- where such transfer options are identified, the work needed to explore these is agreed between interested parties
- ultimately, regional plans are aligned, akin to the pieces of a puzzle



- groups within the inter-regional governance structure are updated on the reconciliation progression so that any issues can be escalated and addressed swiftly

So far, the five regional groups have gone through two reconciliation processes, one between September and November 2021 and another in April-May 2022. Both reconciliation processes assumed ambitious demand reduction policies as part of baseline demand supply balances and focused on identifying supply-side options, in particular water transfers within and between regions. Each reconciliation period involved identifying a consistent selection of options across the regions and a period of stress testing the plans, using the information gathered during the two rounds. During each of the reconciliation periods, the five regional groups had the opportunity to explain the nature and size of the supply issues they are likely to face out to 2085. Each region also outlined whether they had sufficient options available for development to bridge any water resources deficits and whether they would need support from other regions to address residual deficits. Throughout the reconciliation process, we worked with those who would benefit from transfers of water to ensure we can make such transfers accessible and equitable. Hence, Water Resources West could be a source region from which water can be transferred to other, more resource scarce regions. Both reconciliation processes indicate that Water Resources West can help other regions meet their needs via such transfers, while maintaining our own regional resilience and security of supply.

The first reconciliation (2021) revealed that some of the transfer options proposed by Water Resources West were of interest to a number of parties, most notably Water Resources South East. During the second reconciliation (2022), it became clear that while Water Resources South East was still firmly interested in transfers from Water Resources West, other parties concluded they have sufficient resource or they have shown preference for other strategic resource options (SROs). Therefore, the only inter-regional transfer options that feature in our draft regional plan are the Severn Thames Transfer (to benefit Water Resources South East and Severn Trent Water) and Grand Union Canal (to benefit Water Resources South East).

Strategic Resource Options (SRO) governance

Some schemes within the regional plan have been identified previously by Ofwat as being strategic in nature and therefore were deemed as needing expenditure to develop to a greater level of maturity than a normal sized scheme in WRMP development due to their national importance and complex nature. Therefore, Ofwat made an allowance for them at the price review in 2019 and established governance to support the companies in the development of these options. Hence, the Regulators' Alliance for Progressing Infrastructure Development (RAPID) has been formed to help accelerate the development of new water infrastructure and design future regulatory frameworks. The joint team is made up of the three water regulators: Ofwat, Environment Agency and Drinking Water Inspectorate. It provides a seamless regulatory interface, working with the industry to promote the development of national water resources infrastructure that is in the best interests of water users and the environment.

The RAPID gated process

The gated process relates to the funding of investigations and development of water resource solutions from April 2020 until March 2025. There are four gates during this period. At each gate, companies submit information about their work on a solution, which is assessed to ensure companies are making progress on investigation and development of solutions. Ofwat also decides whether companies should continue to be allowed funding to further investigate and develop a solution to the next gate.



The purpose of the gated process is to ensure at each gate that:

- companies are progressing strategic water resource solutions that have been allocated funding at PR19;
- costs incurred in doing so are efficient; and
- solutions merit continued investigation and development during the period 2020 to 2025.

Gate one is a first opportunity to check progress on investigations and development of solutions in the gated process. At gate one, all solutions are expected to proceed to gate two, meaning that companies can continue to spend ring-fenced funding on their investigation and development to gate two, unless there is a really clear reason why they no longer merit this.

Gate two will look at the solutions in more detail with focus on ensuring that funding for continued investigation and development of solutions is aligned to water resources planning. Decisions about whether or not a solution goes ahead will be made through water resources planning and subsequently applications for local planning and environmental consents.

As part of the gated process, RAPID leads assessments to assess whether expenditure should be permitted through price limits; however this is different from the decisions on whether these schemes should be included in WRMPs (decisions which are for water companies to take forward, with support from assessments made for the regional plan). The water companies that have strategic schemes have been working together to establish common assessment methodologies through the all company working group (this group is not part of any official governance structure).

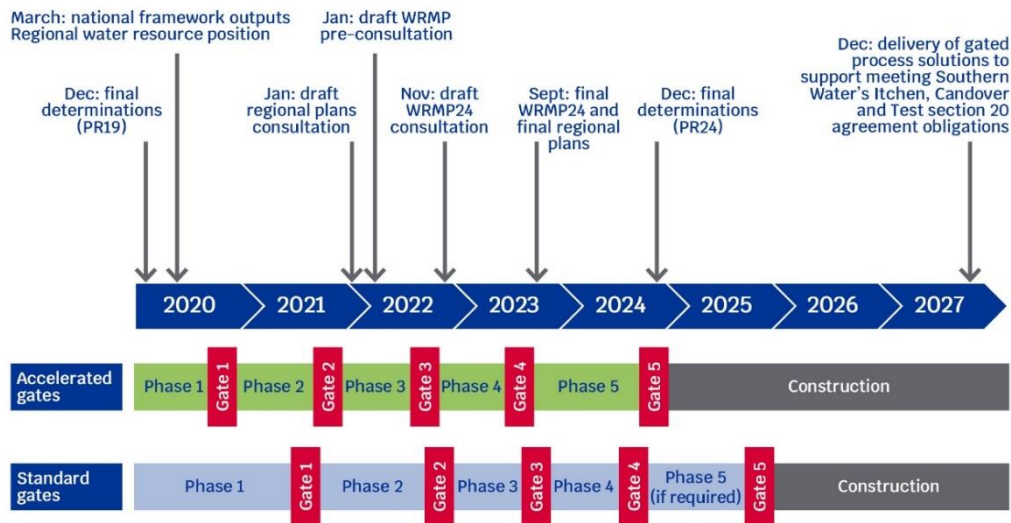
Timing of the gates

The figure below highlights the timing of the gated process and how this ties in with the regional plan and WRMP submissions and consultations. It is important to note that there are 'standard' gates and 'accelerated' gates that follow a tighter timeline. The SROs that feature in the accelerated gates are those that are more urgently needed to address large deficits in areas that face water scarcity, which could not otherwise be met through other, smaller scale options.



Figure 5. Timing of gated process. Courtesy of RAPID.

Gated process for potential strategic regional water resource solutions



1.7. Next Steps

As we work towards our final regional plan, we will apply the same best value planning principles outlined above and continue our close collaboration with regulators, other regions, other sectors and stakeholders. We will continuously review evidence from customer research and stakeholder engagement to shape the outcomes for the final plan.

We will also review the governance processes to ensure they remain robust and that any lessons learned can be applied to improve processes for future regional planning rounds.

Likewise, the inter-regional reconciliation governance process will also evolve and improve over time. We will hold a regional lesson's learned exercise and will support any similar reviews that others may carry out.

