



Chapter 4: Consideration of Alternatives

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4. Consideration of Alternatives

4.1 Introduction

4.1.1 This chapter presents a preliminary summary of the alternatives that have been considered by the Applicants to arrive at the Proposed Development as described in **Chapter 3: The Proposed Development** in PEI Report **Volume 2**. This consideration is described by reference to three principal sections:

- a. The Water Resource Management Plan (WRMP) and Regional Plan process;
- b. The period to Phase One Public Consultation, including information provided to the Regulatory Alliance for the Progression of Infrastructure (RAPID); and
- c. The period since Phase One Public Consultation.

4.1.2 The chapter begins with a description of the relevant legislation and policy.

4.1.3 There are no supporting figures or appendices for this chapter.

4.2 Legislation and Policy

4.2.1 This section outlines the legislation and policy that is relevant to the consideration of alternatives and, specifically, the matters that will need to be addressed in the Environmental Statement (ES) or other reports to accompany the Development Consent Order (DCO) application.

Legislation

4.2.2 Schedule 4 (2) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') (Ref. 1) requires that the ES includes:

"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

4.2.3 The ES will include a chapter that will respond fully to the requirements of the EIA Regulations.

Policy

4.2.4 National Policy Statement for Water Resources Infrastructure (NPSWRI) (Ref. 2) includes section 3.5 'Assessing Alternatives' which states:

“The applicant should comply with the legal obligations and policy set out in the National Policy Statement on the assessment of alternatives as set out here:

- a. the Environmental Impact Assessment Regulations requires projects with significant environmental effects to include a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the significant effects of the project on the environment.*
- b. other specific legal obligations requiring the consideration of alternatives, for example, under the Habitats Regulations and Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Water Framework Directive Regulations) ;*
- c. policies in the National Policy Statement requiring consideration of alternatives, for example, the flood risk sequential test and the assessment of alternatives for developments in National Parks, the Broads and National Landscapes.*
- d. Information from the water resources management plan options appraisal process (and associated statutory assessments) will be relevant to demonstrate how alternative options have been considered, insofar as required under paragraph 3.5.1 and noting that the question of need would not be reopened when considering applications for development consent.*
- e. The consideration of alternatives, as required under the Environmental Impact Assessment Regulations, must begin in the earliest stages of scheme evolution. The starting point should be a review of the optioneering carried out for the regional and water resource management plan development processes [discussed in 2.5]”.*

- 4.2.5 The ES will include an Alternatives chapter that will comply with the policy set out in the NPS. The DCO application will also be accompanied by a Habitats Regulations Assessment, a Water Framework Directive Assessment and a Flood Risk Assessment, which will respond to specific legal and policy requirements referred to in the NPSWRI.

4.3 Water Resource Management Plan and Regional Plan Process

- 4.3.1 Each water company is required to prepare and regularly update a Statutory WRMP which looks ahead over a minimum 25-year period to set out proposals to ensure that customer supplies are secure, taking into account changes to water supply through climate change and environmental legislation and policy, and customer demand, including through planned growth and customer behaviour. WRMP24 is the process of preparing and

approving a WRMP for the period 2025 to 2075. Both Severn Trent (ST) and Affinity Water (AfW) have prepared their own WRMP24s. ST published the final version of its plan in April 2025 (Ref. 3) and AfW published the final version of its plan in October 2024 (Ref. 4).

- 4.3.2 Alongside the WRMP24 process, water companies work together as part of five regional groupings to prepare Regional Plans. These regional groupings enable water companies, environmental and financial regulators and other stakeholders to work collaboratively on shared regional water resource plans. These plans are consistent with and integrate with the WRMPs at individual water company level, and the five regions work together to ensure there is consistency between Regional Plans, particularly over the details of existing and proposed water resource transfers between regions. ST lies within the Water Resources West (WRW) region. AfW's Central and South East regions lie within the Water Resources in the South East (WRSE) region and its East region lies in the Water Resources East (WRE) region. For the Proposed Development, WRW and WRSE are the relevant regions, although WRE will benefit from a new transfer between AfW and Anglian Water. Both WRW and WRSE have prepared and consulted on their Regional Plans for the 2025 to 2075 period, with work progressing in parallel with the WRMP processes. The WRW's Regional Plan (Ref. 5) and the WRSE Regional Plan (Ref. 6) were published in June 2025.
- 4.3.3 The GUC Transfer project was first identified as a potential new water resources option as part of the preparatory work for the WRMP and Regional Plan processes.
- 4.3.4 At an early stage in the WRMP and Regional Plan processes, lists of potential water resources options were identified for consideration and assessment. These options included demand management measures such as leakage reduction, water efficiency and drought options (including temporary use bans), supply options including new water resources infrastructure such as desalination plants, water recycling, reservoirs, water transfers within or between water companies or regions, catchment management options and drought supply options such as drought orders or drought permits. Options were initially identified on an unconstrained options list and subject to an initial level of assessment to ensure that they were technically feasible and that they would have a water resources benefit. This resulted in a constrained options list that was then subject to further and more detailed assessment of their feasibility, and which resulted in the identification of a list of feasible options. Those feasible options were then taken forward and considered in depth through preparing and consulting on the AfW WRMP.
- 4.3.5 An option to treat and transfer water through the canal network was first identified as part of the earlier AfW WRMP19 process (for the period 2020 to 2045) (Ref. 7). In that plan, a number of other strategic and other water

resources options were selected as part of the preferred plan based on the assessment work undertaken at that time, and in light of the future supply demand balance challenges presented in that plan. The GUC Transfer Option was selected as the next strategic option for development should one or more of those options not come forward, or if the scale of the supply demand balance were to worsen from that identified in the plan.

- 4.3.6 For the WRMP24, water companies worked collaboratively within regional groupings to ensure that consistent methodologies and data were used for both the WRMP and Regional Plan processes, including the identification and assessment of options.
- 4.3.7 The GUC Transfer Project was identified and considered through the WRMP24 and Regional Plan processes as firstly a supply of water from the Minworth WwRC, and secondly its transfer from ST to AfW through pipeline and canal transfer, including its treatment for public water supply. The transfer of water from ST to AfW is also an inter-regional transfer between WRW and WRSE. Extensive liaison and collaboration took place between ST and AfW, and WRW and WRSE, as part of the preparation of the WRMP24s and Regional Plans to ensure that the GUC Transfer Project was consistently represented and assessed through these plan processes.
- 4.3.8 A number of alternative GUC Transfer Options were identified and assessed through the WRMP and Regional Plan processes, informed by technical, environmental and costing information from the RAPID process (described in section 4.4). This enabled the WRMP and Regional Plan investment modelling to test the scale, phasing and timing of the available GUC Transfer Options. Environmental assessments of the options were also completed. Options included the development of the GUC Transfer Project as two separate phases of 50 MI/d (megalitres a day), or the development of a single 100 MI/d option. Options for Minworth WwRC to solely provide water for the GUC Transfer Project, or additionally to provide water for the potential Severn to Thames Transfer Project were also assessed. As part of the investment modelling undertaken for the WRMP and Regional Plan, the timing of the delivery of the GUC Transfer Project was also considered, with earliest delivery being identified as 2032, but with sensitivity around this date explored to see whether later delivery of the option might result in alternative options being selected in the WRMP and Regional Plan.
- 4.3.9 As an outcome of all of the work summarised above, the GUC Transfer Project was selected as part of the preferred WRMP24 and Regional Plans, as explained in the following paragraphs.
- 4.3.10 The WRSE Regional Plan and AfW WRMP are 'adaptive' plans, which identify a wide range of potential futures based on different combinations of climate change, population growth and environmental policy forecasts. The plans are adaptive as 'least regret' options are selected in the plans, ensuring that the plans and the preferred options within them are adaptable

to any of the futures that are forecast to be encountered. Nine potential future pathways are identified in the plans, with the ability for any of the pathways to be followed as the plans adapt. For the purposes of reporting, one is selected as the 'reported pathway'. In the draft WRSE Regional Plan and AfW's draft WRMP (both published in November 2022), a first 50 MI/d phase of the GUC proposal was selected for delivery in the early 2030s in all branches of the adaptive plan. A second 50 MI/d phase was required by 2040 in the plan's reported pathway and the high pathway (the most challenging future in the adaptive plan).

- 4.3.11 Following consultation on the draft WRSE Regional Plan and AfW's Draft WRMP and following further investment modelling using updated costs and other information for Strategic Resource Options (SRO), the Revised Draft WRSE Regional Plan and AfW revised WRMP were published in August and September 2023 respectively. The revised draft plans selected the GUC Transfer Project as a single 100 MI/d phase for delivery in 2032 in all branches of the adaptive plan. The Regional Plan and WRMP identified that whilst selecting the GUC Transfer Project as a single 100 MI/d scheme increased the costs of the plan, it was considered to be an important step in the development of a robust and resilient regional water resources solution for the south east. It was also noted that bringing forward a full 100 MI/d transfer earlier in the planning period accorded with the consultation responses on the draft Regional Plan and draft WRMP which supported the earlier delivery of the full 100 MI/d scheme.
- 4.3.12 The GUC Transfer Project was selected in the WRSE Regional Plan and AfW's WRMP as a key part of the regional solution, enabling AfW to meet abstraction reduction commitments in the 2030-2035 period, allowing for earlier delivery of further environmental ambition in its supply area compared to a plan without the GUC Transfer Project. The GUC transfer proposal also enables AfW to reduce the existing import from Grafham, benefiting the Water Resources East region through enabling a new reverse transfer between AfW and Anglian Water, which will ultimately help to support Cambridge Water.
- 4.3.13 AfW's final WRMP24 was published in October 2024, confirming the selection of the single 100 MI/d GUC Transfer Option for delivery in 2032. WRSE's final Regional Plan was published in June 2025 and confirms the selection of the GUC Transfer Option on the same basis.

No Development Scenario

- 4.3.14 A 'no development' scenario would not deliver the new water supply requirements clearly established through AfW's WRMP24. The 'no-development' scenario is therefore not assessed as a reasonable alternative as part of the EIA. This does not preclude the use of the 'no-development' position (also referred to as a 'do nothing' scenario) in certain technical

chapters of this PEI Report where this is required to present future baseline conditions in relation to the impact assessment.

4.4 Period to Phase One Public Consultation

- 4.4.1 This section outlines the works undertaken to support the RAPID process and to inform Phase One Public Consultation.

Regulatory Alliance for the Progression of Infrastructure Development (RAPID)

- 4.4.2 RAPID comprises experts from the Environment Agency, Ofwat and the Drinking Water Inspectorate. Its purpose is to help accelerate the development of new water infrastructure and design future regulatory frameworks for them, focusing on Strategic Resource Options (SRO). SROs are strategic schemes that have the potential to provide solutions to water needs for regions and between regions across England. RAPID's work facilitates the investigation of potential SROs to better understand the amount of water they can provide, the earliest date the water will be available and the area(s) that would benefit. RAPID works alongside the five regional water resources planning groups, to ensure the timely delivery of new infrastructure. Where necessary, RAPID assists the regulators in identifying and overcoming potential regulatory and commercial barriers. The RAPID process involves a series of technical, financial and environmental investigations and studies which are reported through a series of RAPID gates. These enable RAPID to receive and consider the outcomes of studies and investigations on the SROs, set out and consult on their draft conclusions, and provide a final decision on whether and how the SRO should continue to be assessed and promoted.
- 4.4.3 The GUC Transfer project is identified and has been progressed through the RAPID process as two constituent SROs – Minworth SRO for treating and providing the water to the canal network, and GUC SRO for transferring the water through the canal network, treating it and transferring it into public supply.
- 4.4.4 For the Minworth SRO and GUC SRO, the RAPID process to date comprises:
- a. Gate 1 Reports submitted to RAPID in July 2021;
 - b. Gate 2 Reports submitted to RAPID in November 2022; and
 - c. Gate 3 Reports submitted to RAPID in May 2025.
- 4.4.5 Gate 4 Reports will be submitted to RAPID after the DCO application for the Proposed Development has been submitted to the Planning Inspectorate and accepted for Examination.

Site and Route Optioneering

- 4.4.6 Through the RAPID gate process, optioneering exercises have been undertaken to assess the following:
- a. Site locations for the Advanced Water Treatment Plant (AWTP) at Minworth;
 - b. Routes for the transfer of treated water from Minworth to the canal network;
 - c. Storage and water treatment site options at the southern end of the Grand Union Canal; and
 - d. Routes for the transfer of water from the storage and water treatment site to AfW storage.
- 4.4.7 This work has informed, as appropriate, the position set out within the AfW WRMP24.
- 4.4.8 Ongoing optioneering work during Gate 3 was undertaken using an evaluation process comprising engineering, environmental, planning and land appraisals. This evaluation process included a review of the optioneering work undertaken during Gates 1 and 2.
- 4.4.9 Exclusionary criteria were used to ensure that identified options avoided, as far as practicable, constraints and designations that are likely to represent significant challenges to securing necessary consents for development and pose risks to delivery of the scheme. These criteria were used to define the initial route corridors and sites available to the project, seeking to identify and exclude sites and options. Exclusionary criteria differ for site and pipeline development, reflecting that pipeline developments have less requirement for above ground, permanent development.
- 4.4.10 Site and route options were then screened against engineering, environment, planning and land criteria. This facilitated a comparison assessment of the corridors and sites against criteria derived from national policy objectives and/or engineering requirements and known environmental limitations that inform the project's design. This stage was used to identify which pipeline corridors and sites were considered less preferable and unlikely to proceed.
- 4.4.11 The next stage involved workshops with and discussions between engineering, environment, planning and land specialists to discuss their respective findings, identify the options with the greatest potential and discuss and challenge the justifications for their selection or rejection. The workshops and discussions enabled the outcomes to be carefully reviewed to ensure all options were considered comparatively as appropriate, with the results robustly tested. The workshops considered the need for verification of assessments undertaken and also identified areas where additional

consideration of opportunities and constraints relating to options identified as having the greatest potential was necessary.

- 4.4.12 The options with the greatest potential were presented for consideration at Phase One Public Consultation. Further information on this stage of optioneering work can be found in the Site and Route Evaluation Report (Ref. 8) that was provided at Phase One Public Consultation and can be found on the project website.

4.5 Period to Phase Two Public Consultation

- 4.5.1 A detailed account of the scheme development and optioneering work since Phase One Public Consultation is provided in the Scheme Development and Options Report (SDOR) that forms part of the Phase Two Public Consultation material. The optioneering work has been informed by feedback from Phase One Public Consultation and ongoing design development, environmental assessment and engagement. An overview is provided in the following sections.

Minworth AWTP (Part 1a)

- 4.5.2 Having identified a proposed location for the AWTP at Phase One Public Consultation the focus of the ongoing design work has been to ensure that both an optimum treatment process and appropriate location for the required buildings and infrastructure is being taken forward. This has been informed by ongoing engineering investigations and environmental surveys. Further details are presented in Chapter 5 of the SDOR.

Minworth to Atherstone Pipeline (Part 1b)

- 4.5.3 Work since the Phase One Public Consultation has included:
- a. A review of issues arising from other third-party developments proposed along and interacting with the preferred pipeline corridor;
 - b. A review of potential routes around the village of Hurley;
 - c. Further consideration of the appropriate location for the required Break Pressure Tank (BPT);
 - d. A further review of a potential pipeline corridor route and outfall location to the south of Atherstone, and
 - e. Ongoing refinement of the pipeline corridor generally.
- 4.5.4 Further details are presented in Chapter 6 of the SDOR.

Works to the Coventry, Oxford and Grand Union Canals (Part 2) and Works to the Daventry and Drayton Reservoirs (Part 3)

4.5.5 Work since the Phase One Public Consultation has included:

- a. identifying the appropriate works and infrastructure necessary along those sections of the canal network to be used for the purposes of water transfer, and
- b. the undertaking of further design development on those identified works and infrastructure.

4.5.6 The following types of works and interventions have been considered:

- a. The amount of canal bank raising and modifications;
- b. The introduction of transfer locks as an alternative to bank raising;
- c. Further investigation of pumped and gravity lock bypasses;
- d. Further investigation of works to existing reservoirs serving the canal network;
- e. Potential works to a bridge and aqueduct, and
- f. Works to weir structures.

4.5.7 Further details are presented in Chapter 7 of the SDOR.

Abstraction, Storage and Treatment (Part 4a)

4.5.8 Work since the Phase One Public Consultation has included:

- a. further assessment of storage / treatment site options, including additional sites identified through consultation feedback; and
- b. further consideration of the engineering requirements for the storage and treatment works and the appropriate location for those elements on the proposed storage and treatment site known as the 'Galley Water Treatment Works' (formerly known as 'Site B').

4.5.9 Further details are presented in Chapter 8 of the SDOR.

Pipeline to an underground reservoir near Luton (Part 4b)

4.5.10 Work since the Phase One Public Consultation has included:

- a. a review of the pipeline options following the decision to progress with Site B as the preferred option for locating the water treatment and storage and, therefore, confirming the starting point of the transfer pipeline;
- b. a review of the SP2 pipeline corridor (the section of pipeline from Site B to the north of Eaton Bray), including options SP2A and SP2B; and

- c. a review of the SP10 pipeline corridor (the section of pipeline from the north of Eaton Bray to the underground reservoir near Luton).

4.5.11 Further details are presented in Chapter 9 of the SDOR.

4.6 Next Steps

- 4.6.1 As required by the EIA Regulations, the ES will include a full account of the reasonable alternatives studied by the Applicants, which are relevant to the Proposed Development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects. This will include any alternatives that might emerge through Phase Two Public Consultation feedback.

4.7 References

- Ref. 1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: <https://www.legislation.gov.uk/uksi/2017/572/made> [Accessed 24/11/2025].
- Ref. 2 Department for Environment, Food & Rural Affairs (Defra) (2025) National Policy Statement for Water Resources Infrastructure. Available at: https://assets.publishing.service.gov.uk/media/6437e3a2f4d420000cd4a1a7/E02879931_National_Policy_Statement_for_Water_Resources.pdf [Accessed 24/11/2025].
- Ref. 3 Severn Trent. (2025). Water Resource Management Plan. Available at: <https://www.severntrent.com/about-us/our-plans/water-resources-management-plan/wrmp24-final-documents/>
- Ref. 4 Affinity Water. (2024). Water Resources Management Plan. Available at: <https://affinitywater.uk.engagementhq.com/wrmp>
- Ref. 5 Water Resources West. (2025). Water Resources West Regional Plan. Available at: [Water Resources West Final Regional Plan — Water Resources West](#)
- Ref. 6 Water Resources South East. (2025). WRSE Regional Plan. Available at: <https://www.wrse.org.uk/library/?category=theregionalplan>
- Ref. 7 Affinity Water. (2019). Water Resources Management Plan. Available at: https://cms.affinitywater.co.uk/docs/water_resources/archives/affinity-water-resources-management-plan-2019.pdf
- Ref. 8 Grand Union Canal Transfer. (2024). Grand Union Canal Transfer: Site and Route Evaluation Report, September 2024. [Report] Available at: [Grand-Union-Canal-Transfer-Site-and-Route-Evaluation-Report_Sept-24-1.pdf](#) [Accessed: 24/11/2025].