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Business Case Executive Summary

Only Rainwater into Windermere

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ORiW Business Case Executive Summary

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1. Business Case Document Guide and Programme Background

Purpose of the Document Guide and Programme Background. The document provides the programme context and explains how the Business Case documents, appendices and supporting technical evidence fit together.

Business Case Document Guide. The Business Case comprises the Strategic, Economic, Commercial, Financial and Management Cases, supported by a Glossary, Risk Register and Economic Case Appendices. Together, these documents present the rationale for intervention, option appraisal, delivery, funding and financing considerations, and proposed programme management arrangements. The Business Case is underpinned by engineering, environmental, modelling, deliverability and climate resilience evidence. The Document Guide directs readers to the principal reports explaining the development, feasibility and deliverability of the options and to the wider supporting technical evidence.

Purpose and scope of the ORiW Business Case. The Business Case applies HM Treasury's Five Case Model to assess approaches to achieving the ORiW objectives and identify the option offering the strongest overall value for money. It reflects the evidence available at this early appraisal stage and has been developed on behalf of the multi-agency Steering Group. The most preferred way forward identified at this stage is not a final solution and may be refined as further evidence is gathered and designs are developed. Under a standard Green Book approval process, independent scrutiny of the option-selection rationale and structured stakeholder engagement beyond the Steering Group would be required before progressing to Outline Business Case stage.

Programme background. Windermere is England's largest natural lake and an internationally recognised freshwater environment with substantial ecological, cultural, recreational and economic value. Previous investment has reduced nutrient inputs, and AMP8 investment is expected to reduce sewage spills and deliver further improvements. However, modelling indicates that climate change will intensify the effects of the nutrients that remain, increasing cyanobacteria risk and ecological pressures, particularly in the North Basin. More transformational reductions in wastewater inputs are associated with materially improved ecological condition and the elimination of cyanobacteria risk days in both basins.

The Ambition. The ORiW ambition is to remove wastewater and urban runoff discharge risks to Windermere and its surrounding catchment, where feasible, increasing the lake's resilience to future climate conditions. ORiW is being developed alongside AMP8 as a longer-term programme and explores whether more fundamental changes to wastewater infrastructure are needed, rather than relying solely on incremental improvements.

Application of the Five Case Model. The Five Case Model has been applied in full. The Strategic, Commercial, Financial and Management Cases are commensurate with Strategic Outline Case stage. The Economic Case requires independent scrutiny of the option-selection rationale and wider stakeholder engagement before a formal Strategic Outline Case submission under a Green Book approval process.

Scope and boundaries of the ORiW programme. ORiW addresses treated and untreated discharges from United Utilities' public drainage system, private wastewater treatment works and septic tanks, and highway and urban surface water runoff. Other diffuse pollution sources, including agricultural runoff, fall outside ORiW and are being addressed through complementary initiatives.

2. Strategic Case

Purpose and scope. The Strategic Case establishes why intervention beyond currently committed investment is necessary to achieve the programme objectives. It sets out the strategic rationale for ORiW, defines the outcomes the programme is seeking to achieve, and explains why a coordinated catchment-wide approach is required. It also provides the foundation for subsequent business case development and option appraisal. There are two pieces of work left to be done before the project can proceed to SOC stage: 1. independent review of the options selection rationale and 2. wider stakeholder engagement beyond the Steering Group.

Strategic fit. ORiW is aligned with national, regional, local and regulatory priorities for water quality, climate resilience and catchment-based action. The programme supports emerging water sector reform, environmental improvement objectives and local economic and environmental ambitions. It provides a

practical delivery mechanism through which multiple organisations can contribute to shared outcomes for Windermere.

Case for change. Windermere faces increasing environmental pressures that are expected to intensify under future climate conditions. While existing regulatory and investment frameworks deliver important improvements, evidence suggests they may not be sufficient to secure the lake's long-term ecological resilience. The environmental, social and economic value at risk, combined with fragmented responsibilities, creates a strong case for coordinated intervention.

The baseline. Committed AMP8 investment improves outcomes but does not fully address long-term challenges across the catchment. Environment Agency modelling indicates that ecological pressures remain in the North Basin under future climate scenarios, even after planned investment. In contrast, more transformational reductions in wastewater inputs are associated with materially improved ecological condition and the elimination of harmful cyanobacteria risk days.

Objectives and Critical Success Factors. The programme objectives define the outcomes ORiW is seeking to achieve, while the Critical Success Factors establish the conditions options must satisfy to progress. Together they provide a consistent framework for option development and appraisal. Key themes include wastewater and runoff reduction, environmental enhancement, stakeholder alignment, resilience to future pressures and early intervention.

Risks, constraints, and dependencies. The programme faces several strategic risks and dependencies that will influence future delivery. These include affordability and acceptability, funding and financing arrangements, consenting requirements, discharge permit requirements, land availability, climate uncertainty and the need for sustained stakeholder support. Successful delivery will depend on effective coordination across organisations operating under different regulatory and investment frameworks.

Stakeholder engagement and communication. Stakeholder engagement is essential to ensure future decisions are informed by technical, regulatory, and local and community perspectives. Engagement undertaken to date has helped shape the evidence base and programme direction, while future engagement will focus on testing assumptions, identifying delivery challenges and building support for subsequent business case stages. Given the breadth of organisations and communities affected, a structured and comprehensive engagement strategy will be critical to programme success.

3. Economic Case

Purpose and scope. The Economic Case assesses how best to achieve the ORiW vision by comparing feasible strategic options across four appraisal pillars. The assessment is intended to identify the most preferred way forward for further development rather than a final engineering solution. It provides a structured basis for comparing options, understanding the trade-offs between them, and identifying the approach that offers the strongest overall balance of environmental outcomes, affordability and acceptability, resilience and deliverability.

Optioneering. A structured optioneering process was undertaken to identify a shortlist of feasible strategic options capable of achieving the ORiW vision. The longlist was screened against the programme SMART objectives and Critical Success Factors before being developed into four shortlist strategic options based on alternative discharge locations (Windermere, River Leven, Ulverston and Barrow-in-Furness) and assessed across rising main, tunnel and hybrid conveyance configurations.

Pillar 1: Environmental and Social Value. All shortlisted options generate substantial environmental and social value, with amenity benefits from improved lake condition representing the dominant source of monetised benefits. Differences between options are primarily driven by the timing of benefit realisation, construction impacts and whole-life carbon emissions rather than the scale of the long-term environmental outcome achieved

Pillar 2: Whole-life Cost. Whole-life cost is a key differentiator between options, with conveyance method and discharge location driving most of the variation. The appraisal assumes an aspirational 2030 construction start date to provide a consistent basis for assessment; this is an appraisal assumption rather than a committed or validated programme date. A robust assessment of the pre-construction development programme will be undertaken during the next phase of the project. Rising main options are generally the lowest-cost solutions, tunnel options the highest-cost, and hybrid options sit between the two, balancing cost with improved deliverability and reduced disruption. A significant proportion of the cost is common to all

options including work for first time sewerage, first time treatment, highway drainage and reducing weather dependent flows.

Pillar 3: Place-based and Distributional Effects. Distributional impacts favour options where the long-term infrastructure burden and benefits fall on the same community and are least favourable where infrastructure burdens are transferred to more vulnerable communities. The assessment identifies Windermere as the strongest-performing option on distributional grounds, Ulverston as a manageable trade-off, and Barrow as the least favourable due to its higher concentration of deprivation and poorer health outcomes.

Pillar 4: Risk, Resilience and Deliverability. Deliverability, future adaptability and long-term resilience are critical considerations in identifying the most preferred option. Rising main options are associated with substantial construction disruption and delivery risk, while the Ulverston Tunnel and Hybrid options provide the strongest balance of constructability, water quality confidence and long-term operational adaptability.

Conclusion. The Ulverston Hybrid Option provides the strongest overall balance of environmental outcomes, resilience, deliverability, distributional acceptability and value for money. With an estimated whole-life cost of £3.9bn and a central BCR of 1.93, it is identified as the most preferred way forward at the current stage of assessment.

Next steps. Further evidence and option refinement are required before a preferred option can be confirmed at Outline Business Case stage. Priorities include additional flow and water quality monitoring and modelling, national and local amenity valuation research, discharge consent pre-application discussions, confirmation of engineering assumptions, and further testing of option sensitivities and design refinements.

4. Commercial Case

Purpose and scope. The Commercial Case sets out how potential delivery and procurement approaches for ORiW will be developed to support value for money, deliverability and regulatory alignment. At this stage, it identifies the works and services that may be required and considers potential delivery models, packaging approaches, market capability, commercial dependencies and next steps, rather than defining a confirmed delivery model.

Service requirements. Delivery of ORiW is expected to require procurement of a diverse range of works and services, including distributed in-catchment interventions, larger-scale strategic infrastructure and programme-wide support services. These components vary in scale, complexity and delivery requirements, depending on the delivery route, and conveyance and discharge configurations currently under consideration.

Delivery and procurement approach. A single delivery model is unlikely to be appropriate across the programme. Instead, ORiW may require a packaged and potentially hybrid approach, with different delivery models applied to different types of works and services. Delivery model selection will be informed by value for money, risk allocation, funding and financing requirements, regulatory requirements and deliverability.

Market capacity and deliverability. Existing AMP8 delivery arrangements and recent major infrastructure procurement provide evidence of available supply chain capacity and capability, including specialist expertise for large and complex infrastructure projects, providing a strong foundation for delivery.

Commercial constraints and dependencies. Delivery and procurement approaches will be influenced by regulatory requirements, planning and consenting processes, discharge permit approval processes, programme definition, affordability and acceptability considerations, funding and financing requirements, interfaces with existing programmes and supply chain capacity. These factors will shape how the programme is structured and delivered.

Next steps. Further work is expected to focus on delivery model assessment, packaging strategy development, procurement design and regulator and market engagement. This will support development of the evidence base and inform future commercial decisions as the programme evolves.

5. Financial Case

Purpose and scope. The Financial Case assesses the affordability, financing and funding of the ORiW Programme, from the perspective of United Utilities. The scope of this Financial Case reflects requirements for early-stage Programme development and considers the financial context and requirements based upon assumptions that are to be developed in further stages.

United Utilities' financial position and PR24. United Utilities is in a strong financial position, with stable credit ratings and the ability to raise finance through capital markets should a balance sheet funding approach be pursued. Alternative delivery models, including Specified Infrastructure Project Regulations (SIPR) and Direct Procurement for Customers (DPC), are potential alternative options, but require further assessment of financial and delivery implications and value for money. Ofwat's PR24 final determination for United Utilities approves increase in expenditure over AMP8, which will drive an increase in customer bills over the period. Any bill increase from the Programme needs to consider affordability and acceptability in the context of these existing and projected bill increases.

Cost estimate of the most preferred option. The most preferred option for this stage of assessment, Ulverston Hybrid, has an estimated undiscounted capital cost of £3.7 billion (real terms, 2025 Q3) with an undiscounted whole life cost over the 100-year appraisal period of £8.5 billion (real terms, 2025 Q3). The discounted value of this whole life cost is £3.9 billion (base year 2026/27) and is reflected in the Economic Case. Presentation of costs in real terms without discounting reflects Ofwat's standard approach to provide transparency of costs before assumptions for discounting or inflation. Estimates of costs after inflation assumptions are also presented in this case.

Resources to fund the Programme. Customer bills are expected to be the primary funding mechanism, subject to Ofwat approval. Given recent bill increases approved under PR24, customer and stakeholder affordability and acceptance is important. Early analysis suggests In-House delivery could have the lowest customer bill impact, while DPC delivery could lead to the highest medium-term bill increases and uneven intergenerational distribution of costs to customers. These assumptions will evolve as the scope, and commercial arrangements are developed and are not definitive at this stage of Programme development.

Drivers of value for money. Value for money will be influenced by balancing cost efficiency with risk allocation. All delivery models provide opportunities for competitive tendering. SIPR and DPC models also offer additional flexibility in the allocation of financing, construction and operational risks, creating opportunities to align risks with the parties best placed to manage them. However, the benefits of these arrangements are not guaranteed and need to be considered alongside administrative costs associated with their procurement and delivery.

Next steps. Further work is expected to focus on development of a financial model to compare delivery routes; assessment of impacts to financial statements; and impacts to any internal or external financial performance targets or requirements. Customer willingness to pay studies should be undertaken. Throughout, this should be underpinned by continued engagement with Ofwat on delivery models and regulatory requirements to achieve project development cost approval and approval of bill increases.

6. Management Case

Purpose and scope. The Management Case sets out the proposed approach to governing and delivering ORiW, including benefits realisation, monitoring and evaluation, and risk management. Reflecting the programme's early stage, it provides an indicative framework covering governance, phased delivery, change management, risk and contingency arrangements, and the next steps needed to develop a more defined delivery approach.

Programme governance arrangements. Delivery of ORiW will require a governance structure capable of providing strategic oversight while coordinating activity across multiple organisations, regulators and delivery partners. Clear accountabilities, effective decision-making and robust assurance arrangements will be critical to successful programme delivery.

Programme delivery. ORiW represents a coordinated programme of projects across the Windermere catchment. Different projects are expected to progress at different rates, creating opportunities for some interventions to deliver benefits ahead of others. Programme progression will be influenced by key activities including regulatory approvals, planning and consenting, discharge permitting, environmental impact assessment, technical development, land requirements, funding and financing and procurement.

Change management. Delivery of ORiW will require changes in behaviours, practices and ways of working across the catchment, alongside delivery of physical infrastructure. A proportionate change management approach will be needed to support stakeholders, maintain long-term engagement and ensure that programme interventions are successfully adopted, helping to translate investment into lasting environmental, social and economic outcomes.

Benefits realisation, monitoring and evaluation. Benefits are expected to be realised progressively through the combined impact of interventions across the catchment. A coordinated approach to monitoring and evaluation will be required to track outcomes, demonstrate benefits and support adaptive programme management as understanding develops.

Risk management. Delivery of the programme will require active management of regulatory, permitting, consenting, environmental, technical, commercial and stakeholder risks. Robust risk management arrangements will be required to manage dependencies, inform decision-making and maintain programme momentum as delivery approaches are developed.

Next steps. Further work is expected to focus on refining the programme scope, regulatory pathway, planning and consenting approach, discharge permitting process, delivery model, funding and financing arrangements and supporting evidence base. These activities will help inform future decisions and the development of a more detailed and deliverable programme approach.