Growth Cost Change 2026

Growth in Water Resources - Enabling data centre growth

UUW26-03

April 2026

United Utilities

Water for the North West

Executive Summary

The UK Government's AI Growth Zone initiative and wider industrial growth activity are accelerating large-scale data centre development across Greater Manchester. These facilities are critical to national priorities for artificial intelligence (AI), cloud computing and secure digital infrastructure. The Government's refreshed major projects portfolio, reduced to around 80 nationally significant projects, reinforces this wider national focus on priority digital and enabling infrastructure, including Manchester Digital Campus. This signals the importance of targeted oversight and accelerated delivery for developments that support the UK's digital and economic objectives. These developments also introduce significant and time-critical water demand. UUW has received multiple formal applications and advanced enquiries for new water supplies, with commissioning windows beginning from September 2027.

A single large-scale data centre can also deliver substantial economic value, supporting over 300 direct jobs, around 2,300 jobs across supply chains and supporting sectors, and up to £390 million in annual GVA by the early 2030s, provided enabling infrastructure is in place.

In response, UUW's investment proposals total £178.9 million (£175.0 million in AMP8) to ensure water infrastructure does not become a constraint on delivery. The programme is targeted at immediate and confirmed demand only. It does not assume all potential future data centre growth across Greater Manchester will proceed, nor does it seek to build ahead of uncertain longer-term demand.

The proposed response has two stages. Stage 1 focuses on East Manchester and supports confirmed data centre demand through the Manchester Ring Main. It includes a new clarification treatment process at [✂](£53.5 million) to increase treatment throughput within the existing system during periods of peak demand, and dedicated pipeline connections from the Manchester Ring Main to seven known data centre sites (£67.9 million). [✂] does not create a new raw water resource. Instead, it enables more water to be treated and supplied when demand is highest.

Stage 2 (£57.5 million) focuses on North Manchester and comprises a targeted package of water resource, treatment and network interventions to support the Northern Gateway Rochdale development. This development has a confirmed demand of 6.5 Ml/d and requires a dedicated, location-specific supply solution. The proposed works are sized only to meet this requirement.

Together, Stages 1 and 2 provide a proportionate, deliverable and targeted response to confirmed demand within AMP8. They will commence in parallel, reflecting both the urgency of near-term requirements and the need to protect wider system resilience as developments progress. The programme has been designed to meet known needs while avoiding over-commitment to uncertain future demand.

This enhancement case is not intended to represent the long-term end state for industrial water supply. UUW's wider approach to sustainable industrial growth is guided by a water hierarchy that prioritises demand management, water efficiency and reuse where feasible before new potable supply. In that context, the [✂] intervention should be understood as a near-term treatment capacity response within the existing system. It provides the capacity needed to support committed development now, while preserving flexibility to transition over time towards more sustainable supply solutions.

Given the scale of the infrastructure required, and the risk that significant up-front charges could become a barrier to growth, UUW proposes that all costs are funded through the RCV and recovered from end customers through special agreement supply prices. Regulatory support is now required to enable timely delivery, including in-period funding approval and planning alignment, so that water infrastructure does not become a barrier to regional economic growth or national digital ambitions.

Contents

1. Guide to evidence

Table 1 highlights where the key evidential components of our case are located within the document or its annex. It is to help readers easily navigate to the supporting information that underpins our assessment and justification and provide clarity on which key evidential requirements our document is focused on. Alphabetic references refer to *UUW26-04 Growth in Water Resources – Enabling data centre growth annex*

Table 1: Signposting to key sections of the document

Assessment area	Key requirements	Section reference
Need for step change in investment	Growth in demand beyond PR24 forecasts.	2.5
	Demonstrated there is no overlap with PR24 base or enhancement allowances.	2.7, 4, D
	Demonstrated clear evidence of insufficient surplus capacity.	2.5, 3.9
	Alignment with other regulatory processes (e.g., WRMP annual reviews).	2.5, 3.3
	Risks to service arising from increased demand.	2.4, 3.8, 3.9
	Progress update on existing PR24-funded investments.	2.3, D
	Summary of customer and stakeholder engagement on needs.	2.6, 3.3, C
Best option for customers	Strategic alignment with long-term planning frameworks (WRMP, DWMP etc.).	2.5, 3.3, B
	Consideration of a broad, innovative longlist of options.	3.2
	Whole-life assessment of value for customers and the environment.	3.3
	Review of opportunities to accelerate planned future schemes.	3.6, 3.9
	Quantified customer and environmental benefits.	3.7, 3.8
	Evidence of customer engagement on options.	3.3, C
Robust and efficient costs	Use of established costing methodologies.	4.3
	Demonstrate efficiency via benchmarking, including: PR24 benchmarks, historical outturns, external benchmarks, procurement and third-party assurance.	4.4, 4.5
	Detailed cost breakdowns showing full cost build-up.	4
	Evidence that costs do not overlap with existing funded PR24 base allowances.	2.7, 4
	Explanation of differences from historical or comparative benchmarks.	4.4, 4.6
	For accelerated AMP9 spend: show early delivery is efficient and in customer interests.	2.2, 3.6, D
Customer protection	Propose a Price Control Deliverable (PCD) for each investment proposal to monitor delivery and protect customers.	5.1
	Confirmation that deliverables cover scope and benefits.	5.1, 5.2
Investment delivery plans	Identification and management of design and delivery risks, and these are being monitored and mitigated.	6.2, 6.3, B, D, F
	Evidence of engagement with relevant stakeholders, including evidence of permissions or consultation (EA, DWI, local authorities).	2.3, 2.6, 6.3, B
	Evidence of supply-chain readiness and resource availability.	6.1, 6.3, D
	Demonstrate that our AMP8 commitments are on track, providing confidence in deliverability.	2.3, 3.6, 6.1, D
	Outline delivery schedule (detailed version available on request).	3.6, 6.3, D

Source: UUW analysis

Please note that evidence to support this case can be found in both this case and its respective annex. Therefore both documents should be read together.

2. Investment Need

The section explains why rapid and location-specific data centre growth in Greater Manchester creates a material, externally driven increase in water demand that was not reflected in WRMP24 or PR24. It demonstrates that existing allowances are insufficient and sets out a targeted two-stage AMP8 programme to meet confirmed demand from September 2027 without over-building for speculative growth.

2.1 Supporting growth in data centres in the North West

2.1.1 Our proposals set out targeted investment in Water Resources and Network Reinforcement to support new industrial growth associated with large-scale data centre development in Greater Manchester. In line with Ofwat's Growth Guidance[1] we are proposing investment of £178.9 million (£175.0 million in AMP8) of investment to ensure water infrastructure does not become a constraint on delivery. This is in support of the Government's Industrial Strategy[2] and its plan for Delivering AI Growth Zones[3], both published in 2025.

2.1.2 Greater Manchester is seeing accelerating interest in large-scale data centre development. These facilities support national priorities for artificial intelligence, cloud computing and secure digital infrastructure, but they also introduce significant and time-critical water demand. UUW has received several formal applications and advanced enquiries for new water supplies associated with these developments. Demand is concentrated in East Manchester around the Manchester Ring Main and, more recently, in North Manchester at Northern Gateway Rochdale.

2.1.3 This enhancement case is focused on immediate and known requirements where location, scale and delivery timescales are sufficiently certain to justify investment within AMP8. It does not seek to provide a solution for all potential future data centre growth across the region. Instead, it is targeted at confirmed and high-confidence demand that now requires a timely infrastructure response.

2.1.4 To respond to this demand, UUW is proposing a two-stage enhancement programme. Stage 1 focuses on East Manchester and comprises additional treatment throughput at [✂] together with dedicated pipeline connections to confirmed data centre sites served from the Manchester Ring Main. Stage 2 focuses on North Manchester and comprises a targeted package of water resource, treatment and network interventions at Northern Gateway Rochdale to provide a dedicated, location-specific supply solution for a confirmed development.

2.1.5 Together, these stages represent a proportionate and deliverable response to confirmed demand within AMP8.

2.1.6 Table 2 below summarises the status of current data centre proposals.

Table 2: Status of data centre proposals

Confidence Level	Number of Proposals	Description
High confidence	7	Sites with confirmed location, commissioning date (2027–2029), and known infrastructure requirements.
Medium confidence	4	Sites with defined locations and preliminary build-out plans. Discussions ongoing regarding service need and timeline.

[1] "IN 26/01 Submission of cost change applications between 1 March and 1 May 2026", February 2026, Ofwat https://www.ofwat.gov.uk/wp-content/uploads/2026/02/Cost-change-process-information-notice.pdf

[2] "Industrial Strategy" policy paper, June 2025, UK Government Department for Business and Trade, https://www.gov.uk/government/publications/industrial-strategy

[3] "Delivering AI Growth Zones" policy paper, November 2025, UK Government Department for Science, Innovation & Technology, https://www.gov.uk/government/publications/delivering-ai-growth-zones/delivering-ai-growth-zones

Confidence Level	Number of Proposals	Description
Low confidence	8	Early-stage enquiries with general location interest but limited detail on timing, scale, or service requirements. Potential demand but not yet actionable.

Source: UUW analysis

2.1.7 While there is potential for wider growth across Greater Manchester over time, this enhancement case is explicitly focused on immediate and known requirements where location, scale and delivery timescales are sufficiently certain to justify investment. Further growth may emerge, but it is not relied upon to justify the proposed interventions.

2.2 A staged and targeted programme

2.2.1 The proposed enhancement involves a focused programme of capital delivery to support confirmed, time-critical data centre connections within AMP8. The programme has been structured to align with known demand certainty and delivery complexity so that infrastructure can be brought into service within required timescales.

Table 3: Summary of proposed AMP8 delivery programme (£m, 2022-23 CPIH prices)

Stage	Category	AMP8 Value[4]	AMP9 Value[5]	Description
Stage 1A	Water treatment	53.5	0.0	New clarification treatment process [✂]in East Manchester to increase treatment throughput within the existing system so the Manchester Ring Main can meet periods of peak demand associated with confirmed data centre growth from September 2027.
Stage 1B	Network infrastructure	67.9	0.0	Dedicated pipeline connections in East Manchester from the Manchester Ring Main to confirmed data centre sites, sized to meet high and concentrated cooling demand.
Stage 2	Water resources, storage, treatment and network	53.6	3.9	Coordinated enabling works in North Manchester for Northern Gateway Rochdale, including a storage enhancement option at Whiteholme Reservoir, new water resources, treatment upgrades, and dedicated pipeline and pumping infrastructure.
	Total	**175.0**	**3.9**	

Source: UUW analysis

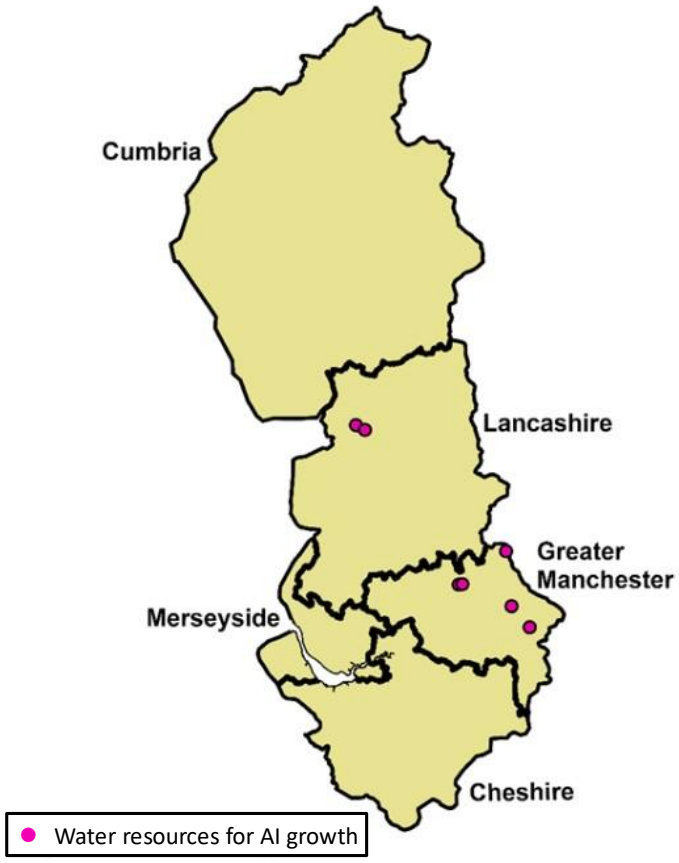
2.2.2 Together, these stages provide a proportionate and deliverable AMP8 response to confirmed data centre demand in East Manchester and North Manchester, while avoiding premature commitment to wider speculative growth.

2.2.3 The programme of enhance delivery across the North West of England is shown in Figure 1.

[4] Capex and Opex

[5] Capex

Figure 1: Map of planned investment to support data centre growth



2.3 What we are already doing to facilitate growth in this area

2.3.1 UUW is already progressing development and delivery activity in response to confirmed and high-confidence data centre demand in Greater Manchester. This includes developer engagement, route scoping and costing for Stage 1B pipeline connections, concept design for the[✂]clarification process, cumulative peak demand modelling, and coordination with Greater Manchester Combined Authority, local planning authorities and the Northern Gateway Rochdale developer.

2.3.2 This work provides confidence that the most immediate elements of the programme are moving beyond concept stage and can be progressed through UUW's established capital delivery, procurement and governance frameworks within AMP8. Further scheme description, stakeholder engagement and development evidence is provided in *UUW26-04 Growth in Water Resources – Enabling data centre growth annex,* Appendices A and C.

2.4 Key delivery risks, constraints and uncertainties

2.4.1 The proposed programme is targeted and deliverable, but its delivery within AMP8 is subject to a number of recognised constraints. These include the need to integrate new treatment infrastructure within the operational footprint at [✂], the complexity of delivering strategic pipelines through dense urban areas in East Manchester, the requirement to size assets for concentrated peak cooling demand, and the need to coordinate multiple linked interventions for Northern Gateway Rochdale. Confirmed demand from September 2027 also requires planning, design, procurement and delivery activity to progress at pace.

2.4.2 These factors do not undermine the case for investment. Rather, they reinforce the need for early mobilisation, phased delivery and close coordination across treatment, transfer and site-specific supply

infrastructure. UUW has already undertaken early design, scoping, hydraulic modelling and stakeholder coordination to manage these risks, and the programme will continue to progress through established capital delivery and governance frameworks. More detailed delivery risks, mitigation measures and programme controls are set out in Section 6.

2.5 What has changed since WRMP24 and PR24

2.5.1 At the time UUW prepared its WRMP24 and PR24 business plan, the scale, location and timing of the data centre demand now emerging across Greater Manchester were not sufficiently certain to justify inclusion of bespoke water infrastructure within baseline plans. While digital infrastructure growth was recognised in principle, there was insufficient confidence in site-specific demand, commissioning dates and cumulative system impacts to support investment in dedicated water resource, treatment or network infrastructure.

2.5.2 That position has now changed materially. UUW has received multiple formal applications and advanced pre-development enquiries for new water supplies associated with data centre developments in East Manchester and North Manchester. Demand is now focused around identified locations served from the Manchester Ring Main and at Northern Gateway Rochdale, with initial commissioning windows expected from September 2027 onwards. The requirement is therefore no longer based on broad market signals alone. It is now linked to defined developments, clearer delivery timescales and progressed infrastructure requirements.

2.5.3 The change is also reflected in the forecast demand profile. At PR24 and WRMP24, no demand requiring intervention was reflected in the forecast period. The current position is materially different, with demand requiring intervention rising from 3.5 Ml/d in 2027 to 28.4 Ml/d by 2032 and 2033, as shown in Table 4. This demand is derived from individually identified developments that are sufficiently mature in location, timing and infrastructure need to support inclusion within the AMP8 programme.

Table 4: Forecast average daily water demand (Ml/d)

Year	Total demand requiring intervention	Stage 1 demand	Northern Gateway Demand
2027	3.5	3.0	0.5
2028	5.1	3.0	2.1
2029	7.5	3.0	4.5
2030	11.6	7.2	4.5
2031	24.6	18.2	6.5
2032	28.4	21.9	6.5
2033	28.4	21.9	6.5

Source: UUW analysis

2.5.4 This change is also material relative to the PR24 and WRMP24 baseline, where no such demand requiring intervention was reflected at any point in the forecast period, as shown in Table 5. The current requirement therefore represents a material and externally driven change in demand rather than a shortfall against previously funded activity

Table 5: Change in forecast data centre demand since PR24 / WRMP24

Metric	PR24 / WRMP24 position	Updated position	Change
2027 demand requiring intervention	0 Ml/d reflected	3.5 Ml/d	+3.5
2028 demand requiring intervention	0 Ml/d reflected	5.1 Ml/d	+5.1
2029 demand requiring intervention	0 Ml/d reflected	7.5 Ml/d	+7.5
2030 demand requiring intervention	0 Ml/d reflected	11.6 Ml/d	+11.6
2031 demand requiring intervention	0 Ml/d reflected	24.6 Ml/d	+24.6

Metric	PR24 / WRMP24 position	Updated position	Change
2032 demand requiring intervention	0 Ml/d reflected	28.4 Ml/d	+28.4
2033 demand requiring intervention	0 Ml/d reflected	28.4 Ml/d	+28.4

Source: UUW analysis

2.5.5 The level of certainty underpinning the case has also increased since WRMP24 and PR24 FD. Developer engagement has moved from limited and exploratory discussions to multiple formal applications and advanced enquiries. Site certainty has improved, with demand now concentrated in the locations driving this case. Commissioning dates are clearer, with high-confidence sites identified between 2027 and 2029. Demand volumes and infrastructure requirements are better understood through direct engagement, scheme scoping and cumulative peak demand modelling. Together, this means the requirement can now be sized, sequenced and targeted against known needs within AMP8, as summarised in Table 6.

Table 6: Change in demand certainty since WRMP24 / PR24

Factor	Position during WRMP24 / PR24	Position now	Why this matters
Developer engagement	Engagement with data centre developers was limited and largely exploratory.	UUW has received multiple formal applications and advanced pre-development enquiries for water connections.	The requirement is now linked to defined external demand rather than general market interest.
Site certainty	There was no clear clustering of large-scale demand in the locations now driving this case.	Demand is now focused around the Manchester Ring Main and Northern Gateway Rochdale, with identified sites including Stockport, South Heywood and Northern Gateway.	Investment can now be targeted to specific locations rather than assumed across a broad region.
Commissioning dates	Commissioning windows were not sufficiently clear to support AMP8 planning assumptions.	Initial commissioning windows are now expected from 2027 onwards, with high-confidence sites identified between 2027 and 2029.	The need now falls within AMP8 and cannot be addressed through later planning cycles alone.
Demand definition	Demand volumes and infrastructure requirements were not sufficiently defined to justify bespoke water resource, treatment or network investment.	Average and peak demand requirements are better understood through direct engagement with developers and scheme scoping.	Infrastructure can now be sized and sequenced against known requirements rather than high-level assumptions.
Understanding of peak demand	There was limited understanding of the cumulative effect of concentrated cooling demand on treatment throughput and transfer requirements.	UUW has completed cumulative peak demand modelling across the Strategic Resource Zone to assess risks and mitigation options.	This confirms that the issue is not only total demand, but also system performance during peak periods.
Policy / growth context	There was no formal policy framework giving confidence in accelerated, regionally coordinated data centre delivery.	The AI Growth Zone initiative has increased policy clarity and accelerated planning for data centre development across Greater Manchester.	This provides stronger external evidence that the demand is strategically significant and progressing at pace.
Delivery maturity	No basis existed for progressing dedicated infrastructure within baseline plans.	Stage 1B routes have been scoped and costed, concept design at [✂] is complete, and early design and mobilisation work has commenced.	The programme has moved beyond general forecasting into an actionable AMP8 delivery requirement.

Source: UUW analysis

2.5.6 The wider policy and growth context has also strengthened since PR24. At the same time, UUW's own delivery readiness has advanced. Stage 1B routes have been scoped and costed, concept design at

Godley is complete, and early design and mobilisation activity has commenced. The programme has therefore moved beyond general forecasting into an actionable AMP8 delivery requirement.

2.5.7 For these reasons, the current requirement could not reasonably have been forecast and funded through the standard assumptions underpinning WRMP24 and PR24. The proposed enhancement case therefore reflects a material change in externally evidenced demand, now sufficiently certain, location-specific and time-critical to justify targeted investment within AMP8.

2.6 Supporting policy and stakeholder evidence

2.6.1 The wider policy and stakeholder context has also strengthened since PR24. National government policy now provides clearer support for AI infrastructure, data centres and the enabling infrastructure required to serve them[6]. At the local level, Greater Manchester Combined Authority, local planning authorities and the Northern Gateway Rochdale developer have helped provide greater confidence in the scale, pace and location of growth now requiring water infrastructure**.**

2.6.2 UUW has also undertaken direct engagement with developers, local stakeholders and regulators to inform the proposed response. This includes formal applications and advanced pre-development enquiries, route and option development work, early engagement with the Environment Agency, and letters of support from Greater Manchester Combined Authority and the Northern Gateway Rochdale developer. Further supporting detail is provided in *UUW26-04 Growth in Water Resources – Enabling data centre growth annex*, Appendix B on policy and regulatory support and Appendix C on stakeholder and developer engagement.

2.7 Why existing allowances are not sufficient

2.7.1 The PR24 Final Determination included allowances for maintaining existing levels of service, supporting routine household and commercial growth, and progressing long-term water resource schemes through established planning routes. It did not include provision for the bespoke infrastructure now required to support large-scale data centre development in the locations covered by this case

2.7.2 In particular, existing allowances do not provide for:

- a new clarification process at [✂] to increase treatment throughput within the existing system so that peak demand from data centres can be accommodated without affecting supplies for existing customers;
- dedicated pipeline infrastructure to serve data centre developments with high and concentrated cooling demand; and,
- the package of water resource, treatment and network interventions required to support the Northern Gateway Rochdale development.

2.7.3 This enhancement case is therefore additional to PR24 in both scope and purpose. It is not seeking funding for routine growth, baseline maintenance or activity already reflected in existing allowances. Rather, it responds to a distinct class of externally evidenced demand that requires targeted treatment, transfer and place-specific supply investment within AMP8.

[6] AI Opportunities Action Plan Government Response

3. The best option for customers

This section shows how UUW used robust unconstrained and constrained optioneering to identify the most proportionate, deliverable and efficient solution within AMP8. It concludes that the preferred two-stage programme best balances near-term deliverability, customer protection, system resilience, and alignment with national digital and AI growth policy.

3.1 Our proposals are based on robust optioneering

3.1.1 UUW has undertaken structured optioneering to identify the most appropriate way to meet confirmed and emerging water demand arising from large-scale data centre development in Greater Manchester. The purpose of this process was to ensure that the proposed AMP8 programme represents a proportionate, deliverable and efficient response to confirmed demand in East Manchester and North Manchester, rather than a broader or more speculative infrastructure build-out.

3.1.2 The AMP8 programme has been shaped by three primary considerations:

- **Deliverability within AMP8:** only interventions that can be fully consented, designed and constructed within the AMP8 period have been included. This excludes options that depend on legislative change, unproven regulatory routes, or long abstraction licensing and development lead times.
- **Use of existing strategic assets:** wherever possible, the programme has been designed to build on existing abstraction, pumping, treatment and network infrastructure. This reduces capital cost, regulatory complexity and delivery risk compared with options requiring wholly new systems.
- **Sequencing with demand certainty:** interventions have been prioritised where there is confirmed or high-confidence near-term demand, with later-stage options intentionally deferred until greater certainty exists on longer-term growth, location and regulatory frameworks.

3.1.3 The optioneering process was undertaken in two stages. Unconstrained optioneering was used to understand the full range of interventions that could in principle support large-scale data centre demand over the longer term. Constrained optioneering was then applied to identify those options that represent a credible, proportionate and deliverable solution within AMP8, aligned to confirmed demand from September 2027.

3.1.4 Table 7 describes the wider long list of technically plausible options considered through unconstrained optioneering. Section 3.3 explains which options were progressed as the preferred AMP8 programme. Section then explains why non-viable options were discounted. Together, these sections demonstrate that the proposed two-stage programme is the result of a structured and evidence-based optioneering process rather than a predetermined solution.

3.2 Unconstrained optioneering – long-term options considered

3.2.1 Unconstrained optioneering was undertaken to understand the full range of interventions that could, in principle, support water demand associated with large-scale data centre development in Greater Manchester over the longer term. The purpose of this stage was to ensure that the full option space was explored before applying AMP8-specific delivery, timing and proportionality constraints.

3.2.2 A wide range of interventions was considered, including strategic resource transfers between supply zones, new or reinstated abstraction sources, large-scale storage, and small-scale water reuse opportunities. Several of these options are technically feasible in principle and could offer wider environmental or operational benefits over a longer planning horizon. However, technical potential alone was not sufficient to justify progression into the preferred AMP8 programme.

3.2.3 Each option was assessed against three core criteria:

- Feasibility;
- Deliverability in AMP8; and,
- Environmental and social benefit.

3.2.4 The assessment recognises that many unconstrained options perform reasonably on feasibility because they are based on established technologies or known resource opportunities. However, technical plausibility alone is not sufficient to justify progression where delivery risk, regulatory uncertainty and proportionality remain key considerations. The table below summarises the outcome of this unconstrained assessment.

Table 7: Unconstrained option assessment

Option	Feasibility (0–5)	Deliverability in AMP8 (0–5)	Environmental and social benefit (0–5)	Summary
[✂]	-]	2	2	Technically feasible transfer but requires new strategic connections and provides limited environmental benefit
[✂]	-]	2	2	Similar profile to [✂] option. Feasible but constrained by delivery risk and limited wider benefits
Small final effluent options	2	1	4	Strong environmental benefit and asset reuse, but not deliverable within AMP8 due to regulatory barriers
Existing aquifers	3	2	3	Makes use of existing sources with moderate environmental benefit, but abstraction licensing risk limits deliverability
New reservoir	1	0	2	Long-term resilience benefit but requires wholly new infrastructure and is not deliverable within AMP8

Source: UUW analysis

3.2.5 The unconstrained assessment shows that a number of options may have longer-term potential, but most could not credibly be consented, designed and constructed in time to meet confirmed demand from September 2027 onwards. In other cases, options depended on regulatory change, large-scale new infrastructure, or assumptions about future demand that are not yet sufficiently certain. For these reasons, the unconstrained long list did not represent a proportionate or deliverable AMP8 response to the identified requirement**.**

3.3 Constrained optioneering – options progressed

3.3.1 Constrained optioneering was undertaken to identify those interventions that represent a credible, proportionate and deliverable response to confirmed data centre water demand within AMP8. Only options that met all three assessment criteria were taken forward: technical feasibility, deliverability within AMP8, and appropriate environmental and social performance. The purpose of this stage was to move from the wider long list of technically plausible interventions to a focused programme aligned to confirmed and high-confidence demand in Greater Manchester from September 2027 onwards.

3.3.2 The constrained assessment focused on solutions that are technically proven, can be fully consented, designed and constructed within the AMP8 period, and provide the required supply, treatment and transfer capability without creating disproportionate delivery risk or relying on uncertain regulatory change. Options were also required to align with the location, scale and timing of confirmed demand in East Manchester and North Manchester.

3.3.3 This assessment identified a preferred two-stage delivery programme within AMP8. The programme combines targeted treatment capacity enhancement within the existing potable system and dedicated network infrastructure in East Manchester with a place-based package of enabling works for a defined development at Northern Gateway Rochdale in North Manchester. These interventions represent the minimum coordinated programme required to meet the identified demand while protecting wider system performance and customer outcomes.

3.3.4 Table 8 summarises the preferred AMP8 programme identified through constrained optioneering and the justification for progressing each element.

Table 8: Two-Stage Strategy Framework (total expenditure in £m, 2022-23 CPIH prices)

Stage	Category	Description	AMP8 Value	Justification
Stage 1A	Water Resources / treatment	New clarification treatment process at [✂]	53.5	Only viable option to increase treatment capacity within the existing system at the required scale and pace so that the Manchester Ring Main can meet peak demand associated with confirmed data centre growth in East Manchester within AMP8. Supports confirmed demand while protecting wider system performance and resilience.
Stage 1B	Infrastructure	Dedicated pipeline connections from the Manchester Ring Main to data centre sites	67.9	Sole-use infrastructure required to meet high peak cooling demands at confirmed data centre locations in East Manchester. Fully scoped and aligned with developer build-out programmes.
Stage 2	Water resources, storage, treatment and network	Northern Gateway Rochdale enabling works, including a storage enhancement option at Whiteholme Reservoir, new water resources, treatment upgrades, and dedicated pipeline and pumping infrastructure	53.6	Required to meet a confirmed 6.5 Ml/d demand at a defined development site in North Manchester without placing undue pressure on the wider system. Deliverable within AMP8 using proven engineering solutions.

Source: UUW analysis

3.3.5 The Stage 2 package has been designed around options already identified through WRMP24. This provides a clear line of sight between the preferred AMP8 response for Northern Gateway Rochdale and UUW's established water resources planning framework. Table 9 below shows the relevant Stage 2 options and their corresponding WRMP24 option references.

Table 9: Stage 2 options and corresponding WRMP24 references

Stage 2 intervention	Description	WRMP24 option ID
Whiteholme reservoir	Storage enhancement	WR065b
Swineshaw boreholes	Groundwater abstraction	WR109
Damas Ghyll	Surface water intake and transfer	WR187
Lancaster process loss recovery	Washwater recovery	WR191

Source: UUW analysis

3.3.6 All elements of the programme deliver supply-side benefits within AMP8 and are aligned to confirmed demand. Together, they form a coherent response to the immediate requirement for additional treatment throughput, dedicated transfer infrastructure and place-specific supply capability. Proposed cost recovery arrangements, including the use of Special Agreements for dedicated infrastructure, are set out in Section 4.2.

3.3.7 Additional scheme-specific supporting detail for the preferred programme is provided in *UUW26-04 Growth in Water Resources – Enabling data centre growth annex*, Appendix A. Supplementary rationale for unconstrained option scoring is provided in Section 5.

3.3.8 The constrained options are summarised in the scored assessment below.

Table 10: Scored assessment of constrained options

Option	Feasibility (0–5)	Deliverability in AMP8 (0–5)	Environmental and social benefit (0–5)	Summary
Stage 1A – [✂]	5	5	4	Proven treatment upgrade at an existing site. Fully deliverable within AMP8 and aligned to confirmed demand, with managed environmental impacts
Stage 1B – Manchester Ring Main connections	5	5	4	Established approach using dedicated infrastructure to meet high peak demand at confirmed sites while protecting wider system performance
Stage 2 – Northern Gateway Rochdale enabling works	5	5	4	Coordinated package of water resource, treatment and network interventions using proven solutions to meet a defined 6.5 Ml/d demand

Source: UUW analysis

Rationale for scoring

Feasibility – typical score: 5

3.3.9 All constrained options are based on proven technologies and established operational approaches. They build on existing abstraction, treatment and network assets and do not rely on novel processes or untested delivery models. The scope and scale of each intervention are well understood and have been developed through engineering assessment and optioneering, supporting a high level of technical confidence.

Deliverability in AMP8 – typical score: 5

3.3.10 Each constrained option can credibly be fully consented, designed and constructed within the AMP8 period. The options do not depend on regulatory change, new policy frameworks or highly uncertain third-party arrangements. Delivery has been sequenced to align with confirmed commissioning requirements from September 2027 onwards and can be progressed using established capital delivery frameworks, providing a high degree of confidence that infrastructure will be available when required.

Environmental and social benefit – typical score: 4

3.3.11 Environmental and social performance has been assessed with reference to protection of existing customers, efficient use of existing assets, avoidance of unnecessary new abstractions, and maintenance of wider system resilience. The constrained options make use of the existing potable system where appropriate and provide dedicated infrastructure to serve specific developments, reducing the risk of adverse impacts on other customers or the environment. While the near-term response relies on potable system interventions, this is considered proportionate and necessary to meet confirmed demand within AMP8 and preserves flexibility for transition to alternative or lower-impact supply solutions in future planning periods.

3.3.12 Taken together, the constrained assessment demonstrates that Stage 1A, Stage 1B and Stage 2 are the only options that meet all three criteria strongly enough to justify progression as the preferred AMP8 programme. They are technically credible, deliverable within the required timescales, and proportionate to the confirmed demand now requiring intervention in Greater Manchester.

Best value assessment

3.3.13 For this submission, we have used a valuation tool that evaluates the most cost-beneficial approach out of the constrained options identified through the optioneering process. This analysis draws on our work to develop a broader "six capitals" based valuation approach to reflect changes in regulatory and government approaches to valuations of service, the environment and amenity values.

3.3.14 This assessment has been used to compare the constrained options identified through the optioneering process and to confirm whether the preferred AMP8 programme represents the most proportionate and deliverable response to confirmed demand in Greater Manchester from September 2027 onwards.

3.3.15 The outcome of the assessment supports progression of the preferred two-stage programme because it performs most strongly when considering near-term deliverability, alignment to confirmed demand, efficient use of existing assets, and protection of existing customers from unnecessary cost and risk.

3.3.16 The assessment considers, as a minimum:

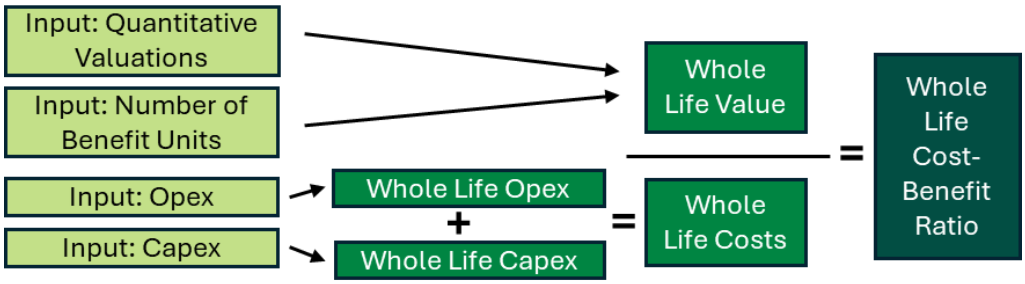
- whole-life cost to customers;
- delivery and programme risk;
- flexibility and scalability to respond to demand uncertainty;
- alignment with regional water resources strategy and longer-term resilience; and,
- environmental and social impacts beyond minimum acceptability thresholds.

Our Approach

3.3.17 Our approach comprises three key steps as summarised in Figure 2 and described in further detail below:

- Calculating the whole life value
- Calculating the whole life cost; and,
- Comparing the whole life cost-benefit ratio across different solutions.

Figure 2: Cost benefit analysis flow diagram



Source: UUW analysis

Whole life value

3.3.18 We calculate whole life value of an investment solution as the present value of the total benefits accrued over a 30-year assessment period. This is derived by:

- Multiplying the number of projected benefit units from the investment solution by the annual quantitative valuation; and,
- Calculating the compounded value over the investment horizon and discounting it using the Social Time Preference Rate, in line with the HM Treasury Green Book.

Whole life cost

3.3.19 We calculate the whole life cost of an investment solution by adding the whole life capital expenditure and the whole life ongoing operating costs. Capital expenditure includes capital overheads but excludes the effect of taxation. Whole life cost has been calculated on a consistent basis to the approach taken

for PR24 investment appraisal. The present value of capital expenditure has been converted to a stream of annual costs over a 30-year appraisal period. To calculate the present value of these costs, and associated operating costs, the Social Time Preference Rate was used for discounting, consistent with the HM Treasury Green Book. Costs are in 2022/23 price base, using the CPIH financial year average.

Cost benefit ratio

3.3.20 The cost-benefit ratio is calculated by dividing whole life value by whole life cost.

Quantification of benefits

3.3.21 Table 11 summarises quantified benefits for the solutions included within this business case, together with the whole life cost and benefit ratio, supported by the detail provided below.

Strategic Growth, Policy Alignment and Enabling Benefits

3.3.22 The proposed water infrastructure investment is required to enable planned and policy aligned data centre developments in Rochdale, which form part of a wider Greater Manchester and North West digital and AI growth agenda. The programme provides timely additional supply capability to meet confirmed demand, reducing the risk of delayed commissioning and lost/deflected investment, with a net-neutral CBA outcome (net benefit = 1) through the stated Special Agreement.

Wider Societal, Place Based and Cross Sector Benefits

3.3.23 In September 2024, the UK [✂] (CNI), placing them alongside energy and water due to their role in hosting essential public and economic data and strengthening resilience to [✂].[7] In this context, the investment aligns with an outcomes-focused approach recognising the role of water companies in enabling sustainable development where benefits accrue across the wider economy, and reinforcing the need for collaboration and systems thinking across sectors and partners to deliver resilient outcomes at pace. While these wider benefits are not fully captured through conventional water-sector appraisal metrics, they represent legitimate cross-sector outcomes that depend on the timely provision of water and wastewater infrastructure and are consistent with an emphasis on collaboration and systems thinking treating communities, infrastructure and the environment as integrated systems and working with partners to deliver outcomes at pace.

Benefits Calculation Scope (Avoiding Double Counting)

3.3.24 Quantified benefits are limited to those directly attributable to the additional supply capacity required to serve confirmed data centre demand, together with the associated commercial revenues. Wider socio-economic impacts are captured qualitatively to avoid double counting, as these arise from the data centre developments rather than the water enhancement itself; however, evidence from Oxford Economics indicates that a large data centre campus can increase economic activity by around £160m, labour income by over £90m, and support around 1,800 jobs, providing context for the wider benefits enabled by timely delivery of utility capacity.

Spillover benefits

3.3.25 There are also likely to be additional spillover effects from establishing data centre campuses in terms of overall employment and education across the region through agglomeration effects, home price rises, retail activity and increase in the technological workers. There are studies[8] estimating these wider benefits as a resulting from data centres.

Alternate Option

3.3.26 Our alternate option is net beneficial as per the previously stated Special Agreement, with a lower whole-life cost, but requiring higher upfront capex to build the effluent transfer infrastructure. The

[7] UK Government (DSIT), "Data centres to be given massive boost and protections from cyber criminals and IT blackouts" (12 Sept 2024) https://www.gov.uk/government/news/data-centres-to-be-given-massive-boost-and-protections-from-cyber-criminals-and-it-blackouts. See also UK Parliament Written Statement (HCWS89), "Designation of UK Data Infrastructure as Critical National Infrastructure" (12 Sept 2024). https://questions-statements.parliament.uk/written-statements/detail/2024-09-12/HCWS89

[8] See Oxford Economics, "Google Data Centres, Economic Impact and Community Benefit" (April 2018).

proposal to pump treated final effluent to the data centres is not currently compliant with the regulatory framework: sewerage undertakers' duties are framed around emptying sewers and effectually dealing with their contents, and any effluent transfer/discharge activity is regulated and may require an environmental permit—operating without one is an offence, and any loss of containment risks pollution offences if polluting matter enters controlled waters.

Table 11: Whole Life Costs and Benefits for the Solutions

Site	Whole Life Cost(£m)	Whole Life Benefit (£m)	Cost Benefit Ratio
Data Centres Stage 1	160.76	160.76	1.00
Data Centres Stage 2	82.11	82.11	1.00
Alternate Option	143.43	143.43	1.00

Source: UUW analysis

3.4 Customer Research

3.4.1 It is vital we engage with customers and stakeholders across the entire region about their water and wastewater services. We have undertaken an iterative research approach to understanding customers' views on Regional Growth and Asset Health. For this submission, we therefore reviewed recent and relevant research from our established body of customer research, including key projects which informed the PR24 business plan. Building on this existing knowledge base, we then undertook targeted bespoke research using both qualitative and quantitative methods.

3.4.2 We have taken steps to ensure our customer research approach is proportionate and comprehensive, with the quantitative survey elements using a robust sample allowing for sub group analysis, and qualitative research using members of our existing research community.

Our Customer Engagement Approach

3.4.3 Through a research synthesis of existing data and insight, we understand that customers want and value regional growth, driven by concerns for a growing population, climate change and the economy. The optioneering process for enabling data centre growth took into account customer preferences, customer prioritisation of water demand, impact on bills and system resilience.

3.4.4 We sought to understand customer views through our bespoke Regional Growth research (2026)[9]. As part of this research, we explored customer concerns which would impact the UUW business forecast. "Advancements in new technology" and "the Economy" were identified by 81% and 85% of customers as challenges which meant that UUW would need to adapt and amend its plan. Customer consideration on advancements in new technology demonstrates how customers expect us to react to the AI Growth Zone programme, and the associated scale and concentration of water demand from data centre development.

3.4.5 There is evident customer concern for the economy. Enhancing water infrastructure to support the North West AI Growth Zone is expected to boost economic development in the region. Participants also felt UUW should invest proactively in major long term challenges, while taking a more reactive approach to short term issues.

3.4.6 We also engaged with stakeholders such as the Greater Manchester Combined Authority (GMCA). It plays a key role in prioritising the needs of local people, communities and businesses, which includes accountability for planning. We've held several discussions with the GMCA on our plans to deliver the water infrastructure required to support the growth of data centres across the North West AI Growth Zone. It has expressed its support for the strategic importance, urgency, and regional value of the water

[9] Explain Research on behalf of United Utilities Water, Regional Growth Research, 2026

investment proposed to meet data centre demand within the AI growth zone around Manchester. See letter of support in *UUW26-25 Letters of suppor*t.

3.4.7 Customer research evidenced that their views on investment are driven by strong fairness and environmental concerns. Participants felt domestic customers should not subsidise wealthy tech companies, citing excessive water use, the risk of reduced household supply, and wider environmental impacts.

3.4.8 These concerns are addressed by our proposed approach to cost recovery for this significant investment. These proposals are detailed in section 4.2. They reflect the bespoke (and unusually substantial) nature of the infrastructure and the need to protect existing customers while enabling strategically important development. Our proposal aligns funding responsibility with those who benefit from the assets (third parties, rather than the generality of customers), while ensuring efficient delivery and value for money – both pervading concerns for customers in the North West.

3.4.9 Our proposals will see the investment costs charged to developers, not the generality of customers. This not only addresses customer concern on fairness and bill increases but also ensures those that primarily benefit from and drive the investment (the third parties) are those that pay for the investment. Our investment proposals are also targeted to ensure that short term interventions are minimised, focusing on longer term more sustainable interventions, to maximise efficient long term investment for the long term prosperity of the region.

3.4.10 We plan to conduct further customer acceptability research before any application for an in-period revenue adjustment, pending Ofwat's consultation on the required licence modifications.

3.5 Discounting non-viable options

3.5.1 The unconstrained and constrained optioneering process considered a wider range of technically plausible interventions than those ultimately taken forward in the preferred AMP8 programme. A number of options were discounted because, although they may offer longer-term potential in principle, they do not represent a proportionate, deliverable or customer-appropriate response to the confirmed requirement now arising in Greater Manchester from September 2027 onwards

3.5.2 The principal reasons for discounting options at this stage were:

- they could not credibly be delivered within AMP8, due to long abstraction licensing, permitting, land, planning or construction lead times;
- they depended on regulatory or legislative change, particularly in relation to reuse or alternative supply arrangements that are not yet sufficiently mature to support implementation at the required pace;
- they were not proportionate to the confirmed demand profile, either because they required larger-scale system development than is justified by current need or because they would create unnecessary cost and delivery risk;
- they relied on high levels of third-party dependency or external coordination, creating uncertainty over timing, consent or practical implementation; or,
- they did not align well with customer views on fairness and funding, where the benefits were seen as primarily accruing to industrial customers rather than the household bill payer.

3.5.3 This means that the options discounted at this stage are not necessarily non-viable in the long term. Some may become more appropriate in future planning periods if demand grows further, regulatory frameworks evolve, or customer and stakeholder conditions change. However, they do not represent the best response to the current AMP8 requirement.

3.5.4 The preferred programme was therefore limited to the options that are technically proven, deliverable within the required timescales, aligned to confirmed demand in East Manchester and North

Manchester, and consistent with customer and stakeholder expectations. This is why Stage 1A, Stage 1B and Stage 2 were progressed, while the remaining long-list options were discounted from the AMP8 package.

3.6 Delivering the investment alongside existing AMP8 programme

3.6.1 The preferred package has been intentionally scoped to focus only on the infrastructure required to support confirmed and high-confidence data centre demand in Greater Manchester from September 2027 onwards. This targeted approach limits unnecessary programme expansion and allows delivery to be sequenced in a way that is compatible with the wider AMP8 portfolio.

3.6.2 The programme also builds on development activity that has already taken place. Scope definition has been completed, route development has been undertaken where required for the East Manchester pipeline connections, and concept design and supporting modelling have already progressed for the most immediate interventions. This means the preferred package is not starting from a standing start and can move into detailed design, approvals and delivery through established processes.

3.6.3 Deliverability is further supported by the nature of the selected interventions. Stage 1A, Stage 1B and Stage 2 all comprise asset types that UUW is familiar with delivering, including treatment upgrades, strategic pipelines, pumping, water resource interventions and related network reinforcement. While the package is specific in combination, the underlying interventions are established and can be progressed through UUW's normal capital delivery, procurement and governance frameworks.

3.6.4 Table 12 summarises the indicative delivery profile for the preferred AMP8 programme.

Table 12: Overview of AMP8 Delivery Phase

Year	Stage 1A – Godley WTW (Treatment capacity)	Stage 1B – Pipelines to Data Centre Sites	Stage 2 – Northern Gateway Rochdale Enabling Works
2026-27	Planning, environmental approvals and early mobilisation	Finalise routing, land access and permitting for priority sites	Early option confirmation, mobilisation and enabling works planning
2027-28	Detailed design and procurement	Begin phased delivery of priority pipeline connections	Commence delivery of enabling works, including early resource and treatment activities
2027-28	Construction of clarification process	Continue phased construction of pipeline routes	Peak construction period for water resources, treatment upgrades and network reinforcement
2028-29	Commissioning and increased treatment throughput into Manchester Ring Main	Final commissioning and connection of later-phase sites	Completion and commissioning of Stage 2 assets, including pipelines and pumping stations
2029-30	System operation, monitoring and optimisation	Monitoring and optimisation where required	Operational stabilisation, performance monitoring and integration into business-as-usual operations

Source: UUW analysis

3.6.5 The delivery profile demonstrates that the preferred programme can be sequenced within AMP8 to align infrastructure delivery with confirmed demand and remain compatible with the wider AMP8 portfolio. The targeted scope, maturity of early development work and use of established delivery routes provide confidence that the programme can be delivered without the need to reprioritise existing AMP8 commitments; further detail is set out in *UUW26-04 Growth in Water Resources – Enabling data centre growth annex*, Appendix D.

3.7 Supporting growth in data centres

3.7.1 The demand underpinning this enhancement case is closely linked to Government priorities for digital infrastructure, regional innovation and long-term productivity. Data centres support artificial

intelligence, cloud computing, secure data hosting and wider digital services, all of which are increasingly important to the UK economy and to Greater Manchester's growth ambitions. The developments supported by this case are concentrated in East Manchester and North Manchester, where water infrastructure is now a critical enabling dependency.

3.7.2 Recent Government confirmation of the Manchester Digital Campus[10] further strengthens this position. It provides tangible evidence of continuing central Government commitment to Manchester as a nationally significant location for digital and AI capability, which in turn supports the case that enabling infrastructure in this area is aligned with a live and credible growth agenda.

3.7.3 In Greater Manchester, data centre developments in East Manchester and North Manchester are progressing with increasing certainty. These developments are expected to deliver a range of economic and strategic benefits, including:

- Direct job creation during construction and operation;
- Increased demand for local utilities, logistics, and supply chain services;
- Improved digital resilience, supporting wider business and innovation growth; and,
- Significant inward investment driven by infrastructure readiness and delivery confidence.

3.7.4 Based on industry benchmarks and developer information, individual large-scale data centre developments are expected to support around 300 on-site jobs and over 2,000 indirect jobs through construction, operations and associated supply chains. Once operational, a single facility may contribute up to £391 million per year in Gross Value Added[11]. Where multiple confirmed and advanced developments progress in Greater Manchester, the cumulative economic impact of committed growth is expected to be material.

3.7.5 The proposed enhancement investment is essential to enable growth, as committed developments in East and North Manchester cannot proceed without timely water infrastructure. By delivering treatment, transfer and local supply assets in line with confirmed demand from September 2027, the programme supports committed development and strengthens Greater Manchester's appeal for nationally significant digital infrastructure investment.

3.7.6 The programme delivers benefits beyond water supply by unlocking strategically important digital infrastructure, supporting place-based growth in Greater Manchester, and ensuring water capacity does not constrain private investment, site activation or wider economic development.

3.8 Benefits from the investment

3.8.1 Bringing this investment forward enables data centre developers to proceed with greater certainty by aligning water infrastructure delivery with committed build-out timelines in Greater Manchester. This is essential to:

- Secure early-stage private investment;
- Unlock planning permissions and site activation;
- De-risk infrastructure dependencies for large-scale data centre development; and,
- Maintain momentum in committed development programmes in East Manchester and North Manchester.

3.8.2 The benefits of early delivery are both economic, strategic and environmental.

[10] Northern Growth Strategy: Next Steps - GOV.UK

[11] Gross value added (GVA) measures the contribution made to an economy by one individual producer, industry, sector or region.

Economic benefits

3.8.3 Enabling just three confirmed data centre developments in Greater Manchester is expected to support over 900 direct jobs, around 7,000 jobs across supply chains and supporting sectors, and up to £1.17 billion in annual GVA by the early 2030s.

3.8.4 These benefits are contingent on water infrastructure being available in line with committed commissioning dates from September 2027. Without timely delivery, there is a material risk that investment is delayed, site activation is slowed, and the wider economic benefits of committed development are not realised in line with the programme.

Strategic planning benefits

3.8.5 Early investment enables coordinated delivery of treatment, transfer and place-specific supply infrastructure, rather than relying on reactive or piecemeal reinforcement once demand materialises. This supports better integration between Stage 1 investment in East Manchester and Stage 2 investment in North Manchester, reduces whole-life cost risk, and provides stronger value for customers by ensuring infrastructure is planned, sized and delivered in a coordinated way**.**

Environmental and system benefits

3.8.6 Bringing forward the proposed infrastructure enables more efficient operation of the potable water system by meeting new industrial demand through dedicated assets rather than placing pressure on existing networks. While primarily intended to support confirmed data centre growth, the programme also increases treatment and transfer capacity, improves operational flexibility, and enhances resilience in East and North Manchester.

Table 13: Strategic Benefits of the Proposed Solution

Benefit	Description
Supports national growth priorities	Delivers critical water infrastructure to enable Government-backed data centre growth across Greater Manchester, supporting national priorities for digital infrastructure, artificial intelligence and economic growth.
Enables delivery of confirmed data centre demand	Provides additional treatment capacity within the existing system and dedicated network infrastructure within AMP8 to meet confirmed data centre commissioning requirements from September 2027 onwards, ensuring water availability does not constrain committed development.
Strengthens regional water system resilience	Introduces new and enhanced treatment capacity, network reinforcement, water resources and supporting infrastructure to meet concentrated industrial demand while maintaining performance across the wider system.
Enables place-based growth at Northern Gateway Rochdale	Supports committed development in East Manchester through [✂], and delivers a coordinated package of water resource, treatment and network infrastructure for Northern Gateway Rochdale in North Manchester.
Protects existing customers and investors	Ensures bespoke infrastructure is appropriately scoped, funded and delivered to serve specific developments, protecting existing customers from undue cost or risk and providing confidence to investors through clear delivery commitments.
Provides secondary system resilience benefits	Although the programme is primarily driven by confirmed data centre demand, the potable water interventions also increase treatment and transfer capability, improve operational flexibility, and provide additional resilience within the parts of the system serving East Manchester and North Manchester.

Source: UUW analysis

3.9 Why invest now

3.9.1 The majority of confirmed and high-confidence demand underpinning this enhancement case is expected to materialise during AMP8. UUW has already received formal applications and advanced enquiries from multiple data centre developers in Greater Manchester, with initial water connection requirements beginning from September 2027. Without timely investment, water infrastructure would

risk becoming a constraint on the delivery of committed development in East Manchester and North Manchester.

3.9.2 In East Manchester, Stage 1 is required to provide additional treatment throughput at [✂]and dedicated pipeline connections from the Manchester Ring Main to confirmed data centre sites. These interventions are needed to accommodate concentrated peak cooling demand and to ensure that committed developments can proceed in line with the programme. In North Manchester, Stage 2 provides a dedicated package of water resource, treatment and network interventions at Northern Gateway Rochdale, where a confirmed data centre demand of 6.5 Ml/d requires a place-specific supply solution.

3.9.3 The need to invest within AMP8 is driven by delivery lead times as well as demand, as treatment upgrades, strategic pipelines and coordinated supply works cannot be delivered reactively. Early design, approvals, procurement and construction are required to ensure infrastructure is available in line with confirmed demand from September 2027 onwards, consistent with the demand profile and certainty evidence set out in Table 4.

3.9.4 UUW recognises that cooling technology choices, such as closed-loop systems, may affect water demand and will continue to promote water-efficient solutions through developer engagement. Sensitivity analysis has been undertaken to reflect alternative approaches (UUW26-04, Appendix F). While more efficient technologies could reduce overall demand, they would not remove the need for this investment, as ongoing water supply is still required and the proposed programme remains necessary to deliver treatment, transfer and site-specific capacity within AMP8.

3.9.5 If investment were deferred, UUW would be unable to provide the required treatment, transfer and place-specific supply capability within the timescales now associated with committed developments. This would create a risk of delayed site activation, slower private investment and reduced confidence in infrastructure readiness across Greater Manchester. Investing in AMP8 is therefore necessary both to meet near-term demand and to ensure that water does not become a barrier to delivery of strategically important digital infrastructure in line with local and national government policy objectives.

3.10 Longer term benefits

3.10.1 The benefits associated with this enhancement will begin to be realised during AMP8 as infrastructure is delivered and commissioned in line with confirmed data centre development programmes in Greater Manchester. These benefits will continue beyond initial delivery as the assets operate over their full life, supporting ongoing system performance, customer protection and place-based growth**.**

AMP8 (2027–2030):

- Economic benefits will begin during the construction phase, with jobs and local supply chain spend associated with treatment upgrades, pipeline works and supporting delivery activity across East Manchester and North Manchester.
- System benefits will be delivered by strengthening supply capability within the Strategic Resource Zone, reducing reliance on reactive transfers and protecting performance for existing customers. By increasing potable system capacity, the interventions also provide wider resilience benefits for household and non-household customers, including where industrial demand grows more slowly than forecast.

Enduring benefits:

3.10.2 The assets delivered through this programme will continue to provide value beyond AMP8 by meeting industrial demand in Greater Manchester through dedicated, appropriately sized infrastructure. This supports efficient system operation, protects customer outcomes, strengthens confidence in Greater Manchester's ability to accommodate nationally significant digital infrastructure investment, and provides a resilient platform to manage future growth should additional demand emerge.

4. Demonstrating cost efficiency

The section demonstrates that the £178.9m programme costs are efficient, well-benchmarked and appropriate for the bespoke mix of treatment, resources and sole-use network assets required. It also sets out a cost recovery approach that protects the generality of customers by aligning long-term recovery with data centre beneficiaries through Special Agreements.

4.1 Definition of the Enhancement Programme and Costs

4.1.1 This enhancement case supports a targeted, two-stage infrastructure programme to enable confirmed and high-confidence data centre development in Greater Manchester during AMP8. The programme includes additional treatment capacity within the existing system, dedicated pipeline connections to data centre sites in East Manchester, and a defined package of water resource, treatment and network infrastructure to enable the Northern Gateway Rochdale development in North Manchester.

4.1.2 The proposed investment has been developed to make efficient use of existing assets where possible, while delivering only the infrastructure required to meet confirmed demand from September 2027 onwards within the necessary timescales. It does not include speculative capacity or preparatory works for unknown future growth.

4.1.3 All activities are distinct from PR24 base-funded programmes and respond to new demand confirmed through direct engagement with data centre developers following submission of the PR24 business plan. The programme is aligned with national and regional growth priorities and is focused on efficient, deliverable solutions that protect existing customers.

4.1.4 The tables below set out the proposed investment drivers, the cost build-up, and the proposed cost recovery.

Table 14: How we allocated the costs of our intervention to Ofwat's enhancement drivers

Project	Breakdown	Supply-side improvements delivering benefits in 2025-2030 (SDB)
[✂]	Stage 1 – New clarification treatment process	100%
Stage 1A – Godley WTW clarification	New clarification treatment process to increase treatment capacity within the existing system and support peak demand in the Manchester Ring Main	100%
Stage 1B – Manchester Ring Main connections	Dedicated pipeline connections from the Manchester Ring Main to confirmed data centre sites	100%
Stage 2C – Whiteholme Reservoir	Storage enhancement at Whiteholme Reservoir through restoration of previous top water level and associated structural works to support Northern Gateway Rochdale	100%
Stage 2D – Swineshaw Boreholes	Development of new groundwater resources within the Strategic Resource Zone	100%
Stage 2B – Damas Ghyll	Bringing an unused catchment into operational use to support Northern Gateway Rochdale	100%
Stage 2A – Lancaster process losses	Washwater recovery to release additional deployable output	100%
Stage 2E – Production capacity upgrades	Targeted treatment works upgrades to enable effective treatment of new water resources	100%
Stage 2F – Network reinforcement (pipes)	Dedicated pipeline conveying water to Northern Gateway Rochdale	100%

Project	Breakdown	Supply-side improvements delivering benefits in 2025-2030 (SDB)
Stage 2G – Network reinforcement (BPS)	Booster pumping stations to meet peak demand at Northern Gateway Rochdale	100%

Source: UUW analysis

4.1.5 The allocation set out in Table 14 reflects the nature of the proposed investment as a wholly supply-side intervention, delivering additional water resources, storage, treatment capacity and network infrastructure in response to confirmed non-household demand.

4.1.6 All elements of the programme have been classified as supply-side improvements delivering benefits within the 2025-2030 period. This reflects the fact that each intervention either increases deployable output, enhances treatment capacity, or provides dedicated network infrastructure required to convey water to confirmed data centre developments.

4.1.7 Stage 1A and Stage 1B address system-wide supply and transfer constraints within the Manchester Ring Main, delivering additional treatment capacity within the existing system and dedicated pipeline connections required to meet confirmed commissioning requirements. These interventions provide benefits at Strategic Resource Zone level and are therefore appropriately classified as supply-side enhancements.

4.1.8 Stage 2 interventions comprise a coordinated package of water resource, treatment and network infrastructure dedicated to the Northern Gateway Rochdale development. Although geographically focused, these assets deliver additional supply capacity and system reinforcement that are essential to meeting a confirmed 6.5 Ml/d industrial demand without placing undue pressure on the wider network. As such, they are also appropriately treated as supply-side improvements delivering benefits within AMP8.

4.1.9 All costs have been allocated on a 100 per cent basis to supply-side delivery, reflecting that the proposed assets are required solely to enable new demand and do not relate to routine maintenance activity. The programme has been scoped to deliver the minimum infrastructure required to meet confirmed demand and does not include speculative capacity or preparatory works for unknown future growth.

4.1.10 Table 15 summarises how the costs within this case relate to Ofwat's enhancement models and outlines the current cost build-up for each principal element of the programme.

Table 15: Cost breakdown by enhancement model (total expenditure in £m, 2022-23 CPIH prices)

Stage / Activity	Enhancement Model	Benchmark Available	Total Value
Stage 1A – [✂]	New clarification treatment process	Internally benchmarked against recent WTW process upgrades	53.5
Stage 1B – Manchester Ring Main connections	Bespoke trunk mains (sole-use assets)	Internally benchmarked using recent large-diameter strategic mains	67.9
Stage 2C – Whiteholme Reservoir	Storage enhancement and associated reservoir modification works	Internally benchmarked against reservoir refurbishment schemes	7.5
Stage 2D – Swineshaw Boreholes	New groundwater abstraction infrastructure	Internally benchmarked against recent borehole delivery	5.4
Stage 2B – Damas Ghyll	New surface water intake and transfer	Engineering cost estimates informed by comparable catchment connections	4.7
Stage 2A – Lancaster process losses	Washwater recovery and treatment efficiency	Internally benchmarked against treatment efficiency upgrades	5.9
Stage 2E – Production capacity upgrades	Targeted WTW treatment enhancements	Internally benchmarked against recent AMP8 treatment schemes	14.4

Stage / Activity	Enhancement Model	Benchmark Available	Total Value
Stage 2F – Network reinforcement (pipes)	Dedicated transfer main (sole-use)	Internally benchmarked against strategic pipeline delivery	17.3
Stage 2G – Network reinforcement (BPS)	Booster pumping stations	Internally benchmarked against pumping station upgrades	2.2
Total			**178.9**

Source: UUW analysis

4.1.11 The cost profile reflects the specific mix of treatment, pipeline, water resource and network interventions required to support confirmed demand in East Manchester and North Manchester. While the overall programme is specific to this pattern of industrial demand, the underlying asset types are familiar and comparable to infrastructure that UUW has developed and delivered previously. This means efficient cost can be demonstrated through the normal UUW approach to engineering scope development, estimating and benchmarking, alongside consideration of the local and programme-specific factors that affect delivery cost.

4.2 Cost recovery

4.2.1 Our proposals for cost recovery for this investment reflect the bespoke (and unusually substantial) nature of the infrastructure and the need to protect existing customers while enabling strategically important development. Many aspects of the significant infrastructure requirements for these developments are more in line with water trading than with meeting the needs of a “normal” housing development. The proposed approach aligns funding responsibility with those who benefit from the assets, while ensuring efficient delivery and value for money.

4.2.2 The investment covers both third party ‘rechargeable works’ (which would normally be directly recoverable from the specific third party) and investments on ‘strategic assets’ (which would normally be added to the RCV and recovered from customer wholesale charges). The elements that would normally be directly recoverable from the third party (i.e. the data centre developer) are:

- For the Manchester Ring Main connections (Stage 1B), UUW considers it appropriate for costs to be recovered directly from the data centre developer; and,
- The same principle applies to those Stage 2 network assets that are dedicated to serving the Northern Gateway Rochdale development (Stages 2F and 2G). Where assets are effectively sole-use or development-specific, UUW proposes that recovery should reflect the fact that these investments are being brought forward to meet a defined industrial requirement rather than general background growth,

4.2.3 Given the scale of investment involved – and in particular the possibility that a very high payment could be required up-front from the developer, which itself could be a barrier to delivery of this regional growth - we propose to recover all costs from the end user data centre customer, over time, thought its wholesale water supply price (i.e. through a ‘Special Agreement’ price mechanism).

4.2.4 To enable this, we would require all related costs (including the costs that would normally be third party rechargeable works) to be added to the RCV. Whilst this would be the normal cost recovery route for the ‘strategic assets’, this would require a deviation in normal methodology for costs that would normally be classified as the third party rechargeable works.

4.2.5 We will notify Ofwat of any new Special Agreements in accordance with section 142(6A) of the Water Industry Act 1991 and would welcome early engagement to provide assurance that the proposed arrangements deliver fair cost recovery and appropriate customer protection.

4.2.6 The rest of this section sets out our proposals in detail, in respect of the cost components that would normally be classified as third party rechargeable works. We provided Ofwat with a more detailed note on our proposals on 13 February 2026.

Recovery of third party costs in Price Reviews

4.2.7 Unlike other costs for supplying non-household customers, companies recover these types of costs directly from the third party in the form of 'third party revenue'. Importantly, these revenues are not classified as grants and contributions and from a net totex perspective, they represent a positive value. For this reason, Ofwat includes third party expenditure within the total expenditure allowances used to derive company 'building block' revenues at Price Reviews through PAYG (for opex) or non-PAYG (for capex) that is added to the RCV and recovered over time. Therefore, while these revenues are ultimately borne entirely by the respective third parties, they form part of the calculated total allowed revenue[12] alongside all the other revenue borne by the generality of household and non-household customers.

4.2.8 At Price Reviews, all anticipated third party revenues are included within the '*income governed by the price control*'[13] (often referred to as the 'single till') allowed revenue for Appointees. Typically, if there is an increase in third party revenues during the period, *ceteris paribus,* companies need to reduce other revenues (households or non-households) to remain within the total allowed revenue of the Final Determination. At the end of the regulatory period, these additional revenues are then reconciled through the 'Third party services reconciliation mechanism'[14] which ensures that companies can recover all costs incurred.

4.2.9 For example, if a company recovers 10 additional units of revenue from third parties it would need to reduce household revenues by 10 units during AMP8. In AMP9 it would then be permitted to recover the additional 10 units of revenue from households to bring the revenue back in line with the original allowances, after accounting for the additional third-party income. Whilst this can introduce bill volatility for a timing difference it ensures that companies are not disincentivised from providing the service to the third party as they can (eventually) recover the additional revenues.

4.2.10 Within its cost assessment approach, Ofwat typically assesses these as 'unmodelled' costs simply reflecting the on-going costs of existing arrangements or small-scale new activities. It is worth noting that third party expenditure is not subject to any form of cost sharing, and the generality of customers (household and the other non-household customers) is not exposed to any *ex-post* cost variations. Any variance between actual expenditure and *ex-ante* cost allowances is recovered directly from the third party. This means that there is no risk of any additional costs being passed onto other customers once the allowance is set, but also that the company bears all the risk of cost variance, if it does not recover the costs from the third party.

4.2.11 Crucially, the current 'third party services reconciliation mechanism' only remunerates companies for the lesser of the additional cost or revenue incurred. Therefore, the existing reconciliation mechanism can only operate as an effective cost recovery mechanism where the profiling of costs and revenues align throughout the AMP, and the company charges the third party upfront for all costs incurred in the period.

4.2.12 In conclusion, the current cost recovery arrangements would not allow companies to recover all costs incurred through the 'third party services reconciliation mechanism' if a proportion of the costs are recovered after AMP8, through a special agreement. This is because the reconciliation process only includes revenues recovered during the period and if these are less than the incurred costs in AMP8, there would be a funding shortfall.

Adopting a more effective cost recovery approach

4.2.13 Ordinarily, water companies require third parties to pay for the entirety of the investment upfront and, as such, the profiling of costs and revenues align. This is usually a reasonable expectation given the small scale of the investment involved. However, requiring third parties to pay upfront for the full investment

[12] See the 'Allowed revenues' calculations of 'PRE wholesale revenues' within PR24 Financial model, rows 267-272.

[13] RAG-4_Appendix-1_DraftForConsultation.pdf, page 3

[14] PR24 reconciliations - Ofwat

can represent a significant startup cost and act as a material barrier to entry, reducing the prospect of growth in the region.

4.2.14 In developing a practical and implementable solution, we have sought to ensure that:

- The cost recovery mechanism can support the Government's growth objectives;
- Barriers to growth are reduced;
- Full cost recovery from the third parties can be achieved; and,
- The approach follows regulatory precedent and existing cost recovery mechanisms.

4.2.15 In light of the significant investment required to support industrial growth, it would be more effective to recover costs over a longer-term horizon via the water supply price (i.e. through a 'special agreement' price). Such an approach is common practice within the water industry, particularly for bulk supplies – notably costs for strategic water resources schemes are recovered from customers over the long term and not as a 'one-off' upfront payment. This is also how customers pay for other wholesale capital investments, whereby the initial capital outlay is recovered gradually over time, via the RCV (through the run-off and allowed return). This approach would therefore allow companies to invest in AMP8 whilst enabling for a more gradual recovery of costs over time as per contractual arrangements (say over a 15 to 25 year period).

4.2.16 In future AMPs, the allowed revenues generated by the RCV additions (allowed return and run-off) would be equal to the revenues recovered annually through the Special Agreements. These revenues are deducted from the total allowed revenues before customer revenues are derived. This way, water companies would still recover the full cost of the investment from the third party but over the lifetime of the assets. The generality of customers would also not be impacted as the RCV addition is recovered from the third party.

4.2.17 Table 16 summarises the approach companies would ordinarily take to recovering costs and our proposed approach across the various elements of the case.

Table 16: UUW's proposed approach to cost recovery (total expenditure in £m, 2022-23 CPIH prices)

Element of case	Total Value	'BAU' cost recovery approach	UUW's proposed cost recovery approach
[✂]	53.5	Recovered over time	Recovered over time
Stage 1B – pipelines to data centre sites	67.9	Payment up front	Recovered over time
Stage 2A – Lancaster process losses	5.9	Recovered over time	Recovered over time
Stage 2B – Damas Ghyll	4.7	Recovered over time	Recovered over time
Stage 2C – Whiteholme reservoir	7.5	Recovered over time	Recovered over time
Stage 2D – [✂]	5.4	Recovered over time	Recovered over time
Stage 2E – production capacity upgrades	14.4	Recovered over time	Recovered over time
Stage 2F – network reinforcement (pipes)	17.3	Payment up front	Recovered over time
Stage 2G – network reinforcement (pumping stations)	2.2	Payment up front	Recovered over time
Total:	**178.9**		

Source: UUW analysis

Implementation considerations

4.2.18 We believe that the proposed approach could be easily implemented through the Cost Change Process as set out below.

4.2.19 Given that future third party revenues will eventually form part of the future 'single till', Ofwat could simply record the value of these future revenues within the building blocks for AMP9 as per any other 'normal' investment. As companies would be incurring capital expenditure in AMP8 (and not in the

future) this expenditure cannot be included within AMP9 totex. We therefore propose that Ofwat considers taking the following implementation steps through the existing Cost Change Process:

- Include an additional AMP8 cost allowance for the forecast net value (to equal total third party forecast cost minus total forecast revenue recovered in AMP8) that would not be recovered through the current third party reconciliation model;
- Add non-PAYG costs to the RCV as an end of period adjustment in line with the approach adopted at Price Reviews. This will ensure that future revenues recovered from the third party are aligned to the future revenues generated by the RCV run-off and allowed return. Crucially, this will mean that the generality of customers is not required to cover the costs whilst supporting growth in the region;
- Introduce an appropriate bespoke Price Control Deliverable (PCD) to ensure that the correct residual value is reconciled at the end of the period. This would act as a further protection mechanism and help ensure that customers are not impacted by this investment;
- The bespoke PCD would not be output-based but rather expenditure-based; the PCD would reflect the variance between forecast and actual net expenditure (i.e. net of any revenue already recovered from the third party). Through this PCD, for every pound not spent (or any additional pound recovered) in AMP8, the end of period reconciliation would correspondingly reduce in value; and,
- Retain the 'third party services reconciliation mechanism' so that if companies do recover some revenue from third parties in AMP8, then that amount would be automatically netted off the end of period adjustment that would be made through the cost change process through the mechanism described above. This would also ensure that companies remain incentivised to invest in third party infrastructure and recover costs upfront wherever possible and appropriate.

4.2.20 This approach would be more supportive of the Government's growth objectives and would be consistent with the principles outlined in the previous paragraph, as shown in the table below.

Table 17: The principles that have guided our proposed approach

Principles	Our proposed approach	'Standard' approach
Supporting the Government's growth objective Does the approach enable companies to support the Governments growth objective by facilitating additional investment over AMP8?	✓	The approach may limit growth opportunities by requiring the third party to pay for all rechargeable investment up front, before operating or being in situ
Reducing barriers to entry Does the approach seek to support new entrants to invest into the region by minimising the impact of start-up and/or sunk costs?	Spreads the cost to third parties out over a longer period	
Ensuring full cost recovery (from the right party) Does the approach ensure that UUW can recover the correct amount from the right party?	✓	✓
Minimising household bill volatility Does the approach seek to minimise the impact on household bills caused by the impacts of the 'single till' over AMP8 and reconciling adjustment in AMP9?	Reduces the amount recovered during AMP8, and therefore the amount that is rebalanced through the single till and 'third party services reconciliation'	Large AMP9 reconciliation adjustments would be required. This will lead to volatile household bills.

Principles	Our proposed approach	'Standard' approach
Use of existing regulatory mechanisms Does the approach make use of existing regulatory mechanisms or require Ofwat to adjust its process?	It requires some additions to the Cost change process, but it adopts existing regulatory mechanisms (e.g. for bulk supplies).	Standard charging approaches would require the company to recover all revenues up front and use the existing reconciliation mechanism.

Source: UUW analysis

4.3 Specific costs

4.3.1 The investment proposed in this enhancement case does not align perfectly with standard PR24 Final Determination cost assessment models when considered as a single programme. Ofwat's models are designed primarily to assess typical household and commercial growth, routine network reinforcement, and asset renewal delivered at scale across water companies.

4.3.2 The proposed programme responds to a different pattern of demand. It is driven by concentrated, high peak industrial water use associated with large-scale data centre developments in Greater Manchester, delivered to accelerated timescales and requiring a coordinated combination of treatment, transfer, water resource and network interventions. In particular, the programme includes:

- delivery of a new clarification treatment process at an existing water treatment works to provide a step-change in potable supply capacity for industrial demand;
- construction of large-diameter, sole-use pipeline infrastructure designed to meet sustained peak cooling loads; and,
- delivery of a coordinated package of water resource, treatment and network infrastructure to enable a defined, place-based development at Northern Gateway Rochdale.

4.3.3 However, while the programme is bespoke in combination, the underlying asset types are not novel. UUW has previous experience of developing and delivering comparable clarification upgrades, strategic pipelines, boreholes, pumping stations, treatment upgrades, reservoir-related works and other supporting infrastructure of the types proposed in this case.

4.3.4 Cost efficiency has been demonstrated through standard cost development processes and asset-specific benchmarking. Requirements were defined by UUW Engineering to support confirmed and high-confidence demand, with Stage 1B pipeline routes scoped by a specialist third party prior to estimating. Cost estimates were prepared by UUW Estimating, contracted through Mott MacDonald, using historical unit rates and recent delivery data in line with UUW's established estimating practices.

4.3.5 The resulting cost base is therefore grounded in defined engineering scope, relevant comparators and established estimating methods. This provides a more reliable basis for assessing efficient cost than relying only on standard PR24 models, which do not fully reflect the delivery environment, phasing and infrastructure mix required in this case.

4.4 We have developed costs alongside internal benchmarks

4.4.1 For each element of the programme, cost estimates have been cross-checked against relevant recent comparators and unit rate evidence, including internal UUW delivery experience and targeted external inputs where appropriate.

4.4.2 This includes:

- treatment unit rates from comparable water treatment works process upgrades delivered by UUW;
- pipeline delivery costs based on recent large-diameter strategic mains and off-site requisition projects;
- benchmark costs for reservoir-related works, borehole development, pumping stations and treatment capacity upgrades drawn from recent AMP delivery experience; and,

- route-specific development input where required to define efficient pipeline corridors and delivery assumptions.

4.4.3 This approach is consistent with the way UUW typically develops and tests efficient capital costs. It combines defined engineering scope with standard estimating practice and relevant comparator evidence at asset level. It is therefore appropriate for a programme where the individual interventions are familiar, even though the overall package is specific to a particular pattern of industrial growth.

4.4.4 Several site-specific and programme-specific factors may result in efficient costs being higher than simple historical averages. These factors do not indicate inefficiency. Rather, they reflect the real delivery conditions associated with serving concentrated data centre demand in East Manchester and North Manchester.

4.5 Third party evidence demonstrates our cost estimates are efficient

4.5.1 We have engaged a third-party specialist, Mott MacDonald (Motts), to assess our costs against the costs incurred by similar companies when carrying out this type of work.

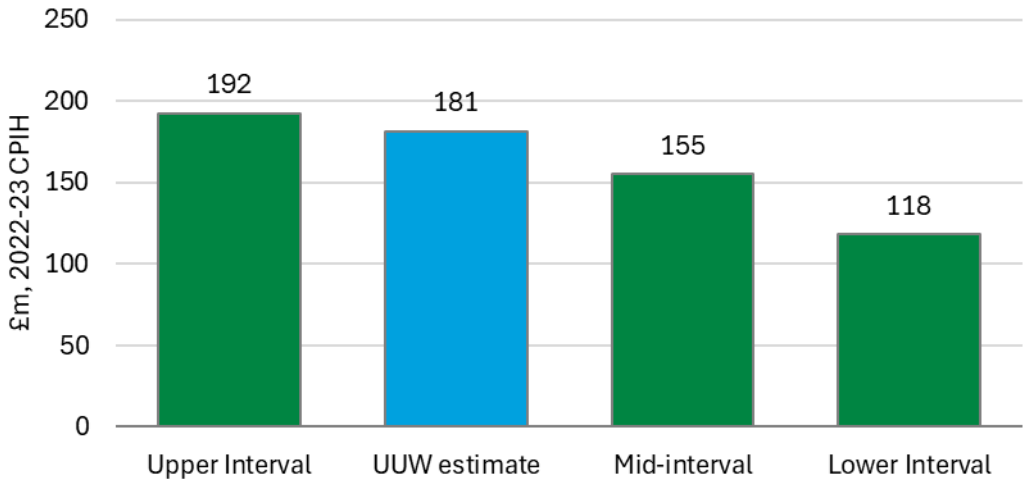
"The objective was to develop a robust benchmark using a hybrid estimation approach. For most scope items a benchmarking approach was implemented based on top-down industry models. In instances where a top-down approach could not be applied, such as complex elements and custom/bespoke assets, a bottom-up cost estimating approach was implemented where possible. In instances where neither a top-down nor bottom-up approach were appropriate, costs were substituted from the UU scope using a 'like-for-like' approach to develop a full direct works estimate.

Each benchmark incorporates Direct Works Costs, Contractor and Client Indirect Costs, as well as a provision for Biodiversity Net Gain, Risk and Estimating Uncertainty and Corporate Overheads. A benchmark of each was incorporated to allow comparison between the UU scope costs and industry averages across different cost attributes."

Source: Mott MacDonald: United Utilities Data Centres Benchmarking Report (UUW26-28 Benchmarking reports)

4.5.2 Motts identified a benchmark cost range for the proposed works, as set out in Figure 3. While UU's estimate is above the central benchmark, it remains within the upper confidence interval and is supported by high benchmark coverage. Mott MacDonald's assessment concludes that UU's costs are higher but broadly aligned with industry expectations at this stage of design maturity, and we therefore consider the proposed costs to be efficient.

Figure 3: UUW's proposed data centres expenditure is within the range expected by comparator organisations



Source: UUW estimates and Mott McDonald

4.6 Specific regional and site factors that impact cost

4.6.1 There are several regional and site-level factors that increase the complexity and cost of delivering the proposed enhancement programme. These factors reflect the concentrated nature of demand, the urban environment in which assets must be delivered, and the specific requirements of large-scale data centre developments.

4.6.2 **[✂]**

- **Operational and spatial constraints:** [✂]is a fully operational and spatially constrained site. Integrating a new clarification process within the existing footprint requires careful sequencing of works and increases design and construction complexity.
- **Sizing to meet peak demand:** Infrastructure must be designed to accommodate sustained peak loads associated with data centre cooling, rather than average daily flows. This drives higher treatment and transfer capacity requirements and increases capital cost.
- **Existing system integration:** The intervention must be integrated safely and effectively into an operational treatment works with strong network connectivity. This is a benefit in strategic terms, but it also increases the complexity of design, phasing and commissioning.

4.6.3 **Manchester Ring Main connections (Stage 1B)**

- **Urban delivery environment:** Many of the Stage 1B routes pass through dense urban areas in Manchester. This introduces restrictions relating to highways working, traffic management, utilities coordination and third-party interfaces.
- **Infrastructure crossings**: Several routes intersect with railways, major roads, canals or other constrained corridors. These crossings require specialist engineering methods, permits and coordination with external authorities, increasing cost and programme risk.
- **Sole-use industrial assets:** The pipelines are designed to meet high and sustained peak demand for specific industrial users. This limits opportunities for standardisation and economies of scale relative to more conventional reinforcement or shared-use network schemes.
- **Accelerated timing requirements:** Delivery must align with site-specific commissioning windows from September 2027 onwards, reducing flexibility in sequencing and increasing the need for early mobilisation.

4.6.4 **Northern Gateway Rochdale enabling works (Stage 2)**

- **Coordinated multi-asset package:** Stage 2 is not a single scheme but a coordinated package of water resource, treatment and network interventions that must operate together to provide a complete supply solution for Northern Gateway Rochdale.
- **Place-specific supply requirements:** The package has been sized to meet a defined 6.5 Ml/d requirement in North Manchester without placing undue pressure on the wider system. This requires a targeted combination of storage, water resources, treatment upgrades and network infrastructure.
- **Interdependency between assets:** The Stage 2 interventions are linked, meaning scope, timing and design assumptions must be coordinated across several workstreams. This increases development complexity compared with a standalone asset.
- **Strategic Resource Zone interfaces:** Several Stage 2 interventions affect wider supply and treatment arrangements within the Strategic Resource Zone. This requires careful integration with existing operational systems and planning assumptions.

5. Customer Protection

This section explains how bespoke Price Control Deliverables and existing regulatory mechanisms will ensure customers are protected against non-delivery, underspend, or inappropriate cost recovery. It confirms that costs are recovered from data centre customers rather than households, while maintaining transparency, accountability and regulatory oversight.

5.1 Price Control Deliverables (PCDs)

5.1.1 We propose customer protection for this investment in two distinct parts. This is driven by how cost recovery will be made (see "Cost recovery" in section 4.2) and therefore how any claw back should be made. This is detailed in Table 18 below.

Table 18: UUW's proposed approach to cost recovery (total expenditure in £m, 2022-23 CPIH prices)

Element of case	Total Value	'BAU' cost recovery approach	UUW's proposed cost recovery approach
Stage 1A – [✂]	53.5	Added to RCV	Added to RCV
Stage 1B – pipelines to data centre sites	67.9	Third party reconciliation at PR29	Added to RCV
Stage 2C – Whiteholme Reservoir	7.5	Added to RCV	Added to RCV
Stage 2D – [✂]	5.4	Added to RCV	Added to RCV
Stage 2B – Damas Ghyll	4.7	Added to RCV	Added to RCV
Stage 2A – Lancaster process losses	5.9	Added to RCV	Added to RCV
Stage 2E – production capacity upgrades	14.4	Added to RCV	Added to RCV
Stage 2F – network reinforcement (pipes)	17.3	Third party reconciliation at PR29	Added to RCV
Stage 2G – network reinforcement (pumping stations)	2.2	Third party reconciliation at PR29	Added to RCV

Source: UUW analysis

5.1.2 Stages 1A and 2A to 2E relate to the delivery of new water resource, storage and treatment assets, including new treatment capacity at [✂] and additional source and storage interventions within Stage 2. This is regulated appointed activity, in line with cost allowances, cost recovery and cost sharing in Final Determination PCDs. We therefore propose a vanilla PCD, unlike our proposal for Stages 1B and 2F to 2G, providing customer protection related to the proposed post-efficiency totex allowance for these facilities.

5.1.3 The Stage 1A PCD will measure the delivery of the new clarification treatment facility at [✂], with the cost of such a facility being invariant to location.

5.1.4 However, we cannot identify any similar schemes within the industry's PR24 Final Determinations which have an associated PCD. There is currently no suitable PCD in the water price controls for AMP8, similar to this scheme – all other new WTWs included in PR24 FDs appear to be included in companies' large gated schemes and therefore do not have an accompanying PCD. Having reviewed the range of PCDs included in PR24 FDs we consider that there are a number of suitable elements which could be employed for this PCD. For example, a PCD focused on final delivery of the new facilities or a milestone PCD building up to the final delivery of the facilities. Given Ofwat's post-FD development of Delivery Plan reporting and guidelines, with in-built milestone reporting, we consider that this customer protection and regulation is already in place. We therefore do not propose to duplicate it in our PCD proposals. Instead, we propose a PCD based on final delivery of the new sources and facilities.

5.1.5 The proposed PCD would measure the final delivery of the new sources and facilities, with a deliverable metric of "1" in the financial year of delivery. This is similar to UUW's net zero PCDWW34. The non-

delivery penalty would be to the value of the post-efficiency totex allowance for the source or facility only (i.e. not including any element of Stage 1B which would be covered by a separate PCD, outlined below). UUW would then report to Ofwat on its delivery progress and milestones twice a year in UUW's delivery plans.

5.1.6 Stages 1B and 2F to 2G would be a separate PCD and relates to the creation of dedicated networks (pipelines) and pumping stations to connect the new sources and facilities to key data centre developments. These networks are for the purposes of the data centre customers and the costs will be recovered directly from these developers as third party revenue (see section 4.2). Under RAG 4.10 the revenues will be managed through a single till adjustment with the totex added only to the RCV.

5.1.7 For this we therefore propose a PCD which follows the form of our proposals for the PCD in the 'New water infrastructure to enable clean energy growth in Ellesmere Port' case (UUW006).

5.1.8 This expenditure estimate will be the measurable deliverable for this PCD. Measuring the PCD deliverable on £ spend is in line with the approach of existing PCDs in the Final Determination such as PCDB3 Network Reinforcement and PCDWW32 and PCDW32 Climate Change Resilience Uplift Wastewater and Water.

5.1.9 The deliverables in the PCD will be:

- £ spend – this is what any claw back will be based on
- Network length created (km) and pumping stations delivered – under- or over-delivery will not impact any PCD claw back.

5.1.10 If UUW spends less than the growth cost allowance, then any underspend will be clawed back from the RCV through an RCV downward adjustment to reflect this variance. In this respect, the PCD will operate as other FD PCDs do, with the claw back value deducted from the company value. However, because the third party revenues are added only to the RCV, the claw back will only be made to the RCV and not to in-year revenues.

5.1.11 If UUW spends more than the growth cost allowance, then the overspend would be recovered directly from the third party through the established third party model.

5.1.12 The spend in Stages 1B and 2F to 2G is the element with the greatest uncertainty in terms of cost. It will be driven by third parties in terms of location of data centres and therefore location, complexity and cost of pipework and pumping stations. We therefore need to provide suitable customer protection against non- or under-delivery in the form of an RCV-focused PCD.

5.1.13 This approach adheres to Ofwat's PCD design in that it is asymmetric: non- and under-delivery (no spend or underspend) would be clawed back but overspend would not be automatically recouped through the PCD mechanism. It would go through the third party model and mechanisms instead and recouped directly from the developer / third party.

5.1.14 As the cost of the project will not pass through onto the general customer bill, Ofwat is not required to regulate the final cost allowance and should therefore be indifferent in the event of any overspend. Any overspend will be financially settled between UUW shareholders and the third party. It will not impact cost sharing or the regulatory contract.

5.1.15 We consider this approach to be a proportionate solution working with the existing regulatory mechanisms, i.e. both PCD and third party model mechanisms.

5.1.16 Given that the timing of the installation will be driven by third party demand, and not UUW, we do not consider that a timing incentive is suitable for this new PCD. The timing of the new data centres is out of management control, resting with the developers of the data centres, and applying a late delivery penalty would be inconsistent with existing PCD methodology. We therefore propose a deliverable profile for this PCD with no timing incentive, with delivery against the profile reported twice a year in UUW's PCD Delivery Plan progress report.

5.1.17 What is more certain is the proposed cost for Stages 1B and 2F to 2G. We therefore propose that this element of the PCD is measured based £ spend rather than length of the new network, absolute locations or network length per location. This will allow for development flexibility, which is outside of UUW's management control, driven by data centre customers.

5.1.18 We would be pleased to discuss the development of the final form of these PCDs with Ofwat.

5.2 Performance Commitments

5.2.1 The strategic capital investment aims to unlock the water infrastructure needed to serve the North West's AI Growth Zone. The targeted developments in Rochdale, Bury, Manchester and Liverpool are expected to drive significant and necessary water demand. In meeting this demand, we expect performance against two performance commitments will be impacted: the Business Demand PC and the Operational GHG (W) PC.

5.2.2 The activities involved in meeting this demand will have a negative impact on operational greenhouse gas emissions, despite our continued efforts and interventions to reduce them. Increased water demand requires increased water treatment, meaning more power and chemicals and therefore increasing operational GHG emissions. Unlike the Business Demand PC, there is no ex-post adjustment mechanism to true-up significant changes. We therefore propose that a revision should be made to the Operational GHG (W) FD PCL to take account of this but note that OUT1 data table is not part of the Growth submission requirements. We would be pleased to discuss the suitable adjustment to the PCL with Ofwat, to take account of the final decision on this case.

5.2.3 We do not propose a revised PCL for Business Demand. We expect non-household potable usage to increase as a result of new data centres in the North West. Each data centre that opens will use a significant amount of water. However, given the uncertainty of location and scale of the development of these data centres at this present time, we cannot forecast the impact of this with the certainty required under the definition of the performance commitment. Unlike PCC, the Business Demand PC is measured in absolute terms (ML) rather than on a normalised basis. Any variance to business demand will therefore be recorded by the PC and impact out-/under-performance against the FD targets.

5.2.4 The FD provides for significant uncertainty of demand through the PCL adjustment mechanism. This is an ex-post mechanism which should true-up at the end of AMP8. The end of period adjustment mechanism is designed to take account of material differences in business demand due to increased consumption at new or existing premises due to growth in commercial productivity. However, because the Business Demand PC is measured in absolute terms, UUW would still be exposed to in-period underperformance against the FD PCL (and associated financial and reputational impacts) while facilitating this growth. Given the uncertainty over the timing and scale of data centre commissioning, we therefore consider it appropriate to rely on ex-post reconciliation once impacts are evidenced, rather than attempt to reset the PCL now.

5.2.5 We therefore propose that Ofwat confirms and applies the sound principle that UUW should face no net financial or reputational detriment for facilitating growth in its region. Specifically, we propose that the Business Demand FD PCL is adjusted ex-post (at the end of AMP8) through the existing PCL adjustment mechanism (and associated ODI reconciliation) to offset the measured impact of this increase in consumption, once the timing and impact are evidenced.

5.2.6 We therefore do not propose a revision to the Business Demand FD PCL.

6. Investment Delivery Plan

The delivery plan sets out how UUW will mobilise, sequence and manage the programme within AMP8 using established delivery runways and supply-chain capacity. It demonstrates that risks are identified, mitigated and governed so infrastructure can be delivered in line with confirmed commissioning windows.

6.1 Deliverability

6.1.1 Our strategy is to deliver the projects within this enhancement case via the most appropriate delivery "runway" in our newly established AMP8 runway-based delivery model which is described in more detail in *UUW26-02 Growth Unlocked: Water for the New Economy*, section 7 “Our capability to deliver”.

6.1.2 Assessment of supply chain capacity and deliverability risk has been undertaken across all Growth and Asset Health submissions in aggregate, rather than in isolation, and tested against the baseline AMP8 programme. Engagement with supply chain partners and a programme-level capacity assessment of the new AMP8 supply chain confirm that sufficient headroom exists across design, construction, the wider supply chain and internal programme management to deliver the additional investment.

6.1.3 Please refer section 7 of *UUW26-02 Growth Unlocked: Water for the New Economy* for the programmatic assessment which considers all projects proposed for investment across all cases within our Growth and Asset Health submissions, with the supporting evidence that all such investments are deliverable. Supplementary narrative on programme integration, sequencing and compatibility with existing AMP8 commitments is provided in *UUW26-04 Growth in Water Resources – Enabling data centre growth annex,* Appendix D.

6.2 Managing design and delivery risks

6.2.1 Risk and opportunities have been captured throughout the optioneering and design phase along with site specific constructability and deliverability risks. We have sought to mitigate risks either during the optioneering phase or by having a mitigation plan in place to monitor and manage any residual risk**.**

6.2.2 We understand the overlap with the existing AMP8 programme and have undertaken project by project assessment to establish any change to the current risk profile or impact to in AMP delivery.

6.2.3 A constructability and deliverability scoring system has been established, reflecting factors such as upgrade scale, interface complexity with existing assets, land requirements, and potential planning, ecological or third-party constraints. Further detail is provided in the programme-level deliverability risk register *UUW26-27 Deliverability risk register.*

6.2.4 Risk and opportunities have been scored based on analysis of likelihood and impact. The Probability Impact Diagram (PID), shown below for risks and opportunities illustrates the categorisation for both Risk and Opportunities.

Figure 4: Probability Impact Diagram (PID)

Risks						Opportunities				
VL(1)	L(2)	M(3)	H(4)	VH(5)	Likelihood	VH(5)	H(4)	M(3)	L(2)	VL(1)
5	10	15	20	25	>80%	25	20	15	10	5
4	8	12	16	20	50-79%	12	16	12	8	4
3	6	9	12	15	26-49%	15	12	9	6	3
2	4	6	8	10	11-25%	10	8	6	4	2
1	2	3	4	5	<10%	5	4	3	2	1
<£25k	£25k - £100k	£100k-£200k	£250k-£500k	>£500k	Cost Impact	>£500k	£250k-£500k	£100k-£200k	£25k - £100k	<£25k
Insignificant		Moderate		Severe	Schedule Impact	Severe	Moderate		Insignificant	

Source: UUW analysis

6.3 Risks with mitigation plans

6.3.1 In addition to scheme level risks, consideration has also been given to wider programmatic risk and considerations. As detailed in later sections a thorough overview of AMP8 supply chain performance and projected capacity has been undertaken.

6.3.2 Risks captured during optioneering and design have either been mitigated early or now have active mitigation plans. Programme-level considerations, including supply-chain capacity and long-lead dependencies, have been incorporated into integrated schedule development.

Supply chain constraints

6.3.3 A robust assessment of AMP8 supply-chain capability has been undertaken, confirming capacity to accommodate the additional growth-related scope. This assessment included partner capacity modelling, specialist resource availability, and logistics capability.

Materials, Long-Lead Items & Advanced Procurement

6.3.4 Advanced procurement strategies for critical components (pumps, MCC panels, packaged treatment units, controls and telemetry) are in place.

6.3.5 Long-lead profiling includes:

- Imported equipment;
- Electrical connections or temporary power; and,
- Specialist fabrication and assembly slots.

6.3.6 Our procurement forecasts and supplier commitments will be incorporated into an integrated delivery schedule.

Third-Party Approvals and Enabling Requirements

6.3.7 Growth-driven infrastructure requires extensive external engagement. Early engagement with third parties has begun; however, further approvals are required (planning, highways, landowners, utilities). Programme timescales include mandatory lead-in periods and iterative design development.

Design and Ground Investigation (GI) Risks

6.3.8 Detailed route assessments require early commencement of ground investigation to remove uncertainty around geotechnical conditions. Early GI mobilisation is planned to reduce design risk and compress downstream approval and construction phases. Further contextual narrative on phased delivery and the rationale for bringing forward the programme within AMP8 is provided in *UUW26-04 Growth in Water Resources – Enabling data centre growth annex*, Appendix D.

Table 19: Example of programme level risks related to delivery:

Risk Description	Mitigation	Opportunity / Threat	Risk Score
Unknown Ground Conditions - Ground conditions for new assets are currently unknown and therefore could require further work to overcome	Early ground investigation to commence to identify ground conditions and design to progress from this basis.	Threat	15
Existing Assets - Interface with existing assets - There is a risk that the condition of assets that the projects interface with are worse that expected or not properly understood - predominantly relating to MEICA assets - this could increase the cost of undertaking the works and increase durations	Sites with significant interface with existing assets i.e. repurposing of distribution chambers, pipework etc have been flagged and have allowances built in to the programme to deal with any unexpected issues	Threat	15

Risk Description	Mitigation	Opportunity / Threat	Risk Score
Third party approvals – There is a risk that new infrastructure may require further approvals which could impact the programme timescales for delivery	As some of these are unknown and dependant on infrastructure routes early engagement to develop these routes through detailed design will support the best route for delivery incorporating approval processes	Threat	15
Interface with existing assets - There is a risk that a number of the projects will require significant modifications to existing live assets - this could result in additional cost and programme impacts relating to temporary treatment or over pumping to enable any modifications or upgrades	Sites where the interface with existing assets has been identified as a high risk have additional allowances in place to cover temporary treatment and over pumping to mitigate. Initial discussions have commenced with operational teams to ascertain likely requirements and timescales	Threat	9

Source: UUW analysis

Delivery timeline

6.3.9 The delivery programme is set out against each stage of the preferred solution, with clear dates assigned to the start of delivery activity and the expected point at which each element becomes operational. This will provide a clearer line of sight between the phased investment strategy and the dates by which capacity is expected to come online in support of forecast demand.

6.3.10 [✂

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Table 20: Table showing the delivery timeline for each investment stage

Stage	Site name	Start date	PIU date
Stage 1A	[✂]	1/4/2027	31/12/2029
Stage 2C	[✂]	1/6/2027	23/7/2030
Stage 2D	[✂]	1/6/2027	23/7/2030
Stage 2B	[✂]	1/6/2027	23/7/2030
Stage 2A	[✂]	1/6/2027	23/7/2030
Stage 2E	[✂]	1/6/2027	23/7/2030
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 1B	[✂]	1/6/2027	13/11/2029
Stage 2F	[✂]	1/6/2027	23/7/2030
Stage 2G	[✂]	1/6/2027	23/7/2030

Source: UUW analysis

6.3.11 Projects have been categorised to provide greater granularity in terms of likely supply chain, interface with existing assets and likely programme durations.

Table 21: Projects categorisation

Category	Description
Category 1	Offline Build - Small # new assets
Category 2	Offline Build - Significant # new assets
Category 3	Significant interface with existing assets - High risk of temporary treatment
Category 4	Moderate-Minor # new assets - manageable interface with existing assets
Category 5	Refurbishment only – High risk of temporary treatment
Category 6	Refurbishment only – Low risk of temporary treatment

Source: UUW analysis

6.3.12 These standard programmes are based on current AMP8 delivery performance and have been adjusted based on individual project complexity or constraints identified during the optioneering and constructability assessments.

6.3.13 Projects have also been scored against a constructability and deliverability matrix that assesses each project based on a number of criteria that have a material impact on project delivery.

Table 22: Project's assessment

Category	Assessment	Scoring
Access	Constructability	Range 1-5
Topography	Constructability	Range 1-5
Services	Constructability	Range 1-5
Land Purchase	Constructability	No 0 / Yes 5
Land Rental	Constructability	No 0 / Yes 5
Environmental	Constructability	Range 1-5
Flood Zone	Constructability	Range 1-5
Existing live AMP8 scheme	Deliverability	No 0 / Yes 5
Impact on regulatory commitment	Deliverability	Range 1-5
Complexity of solution	Deliverability	Range 1-5
Likely runway & capacity	Deliverability	Range 1-5
Operational interface	Deliverability	Range 1-5
Programme risk based on above	Deliverability	Range 1-5
Total		**Out of 65**

Source: UUW analysis

6.3.14 These key criteria drive differing project durations in order to allow sufficient time for project delivery i.e. extended programmes for land purchase and planning.

6.3.15 Time risk allowance (TRA) has been built into riskier activities, such as modifications or tie into existing structures to ensure that programmes have sufficient contingency included in the baseline and are deliverable.

6.3.16 High level project programmes have been developed to provide a full programme view, allowing an overall deliverability assessment to be completed.

6.3.17 Resource levelling has been applied to the programme to reduce the impact and workload on our design supply chain, this staggering of work ensures that the supply chain is kept productive in year 4 and 5 ready for AMP9 mobilisation.

7. Assurance

This final section summarises the technical and commercial assurance undertaken to confirm that the case meets Ofwat's requirements on need, option selection, cost efficiency, deliverability and customer protection. It provides independent confidence that the submission is robust, proportionate and ready for regulatory decision-making.

7.1.1 This section summarises UUW's approach to assuring this submission and the outcomes of the third party assurance. It is supported by *UUW26-09 Growth Submission – Commercial assurance report* and *UUW26-10 Growth Submission – Technical assurance report*.

7.1.2 Ofwat requires cost changes submissions to include a third-party assurance report in line with the requirements set out in "PR24 final determinations: Expenditure allowances - assurance requirements for delivery of enhancement schemes appendix"[15]. This includes technical and commercial assurance across the content of the submission.

7.1.3 The Technical Assurance confirms that the proposed investment meets the requirements set out in Ofwat's guidance for the following areas:

- Need for a step change in investment;
- Best option for customers; and,
- Investment delivery plan.

7.1.4 The Commercial Assurance provides a view on the robustness of the costs proposed by the company and whether they are efficient and represent industry best practice, this includes an assessment of cost estimation approach.

7.1.5 The Commercial assurance also confirms that the proposed investment meets the requirements set out in this document for the following areas:

- Robust and efficient costs; and,
- Customer protection.

[15] PR24-final-determinations-Expenditure-allowances-Assurance-requirements-for-delivery-of-enhancement-schemes-appendix.pdf

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