



From Strategy to Delivery: What New Zealand Can Learn from the UK Infrastructure System

2025

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Introduction

New Zealand has many well-canvassed challenges in the approach we take to planning, funding, and building infrastructure. Too often we believe that solutions must be home-grown and we often lack a system-wide approach to improve decision making, delivery and pace.

Infrastructure New Zealand seeks to find solutions to our nation's challenges and is constantly on the hunt for better ways to guide our system and improve our collective mindset, so infrastructure delivery happens sooner, faster, and better.

We have been fortunate in the support we have received from the UK Department for Business and Trade, who offered a small but diverse group of infrastructure practitioners the chance to “take a look under the bonnet” of what has happened in the water sector – and consider the ongoing improvements made to large project planning, design and delivery. Yes, the United Kingdom is a larger nation, but it also carries a better sense of what it needs to build to underpin growth and industry progress.

New Zealand is moving toward a UK-style water system, and our visit underscored a critical lesson: regulation must never be left on autopilot. We will need constant vigilance to ensure the system delivers the right level of investment, genuine value for money, safe drinking water and wastewater services, and much improved environmental outcomes. A regulated market can work, but only if it is watched, tested, and held to account. Our new water delivery model is a step forward, not a magic wand.

The excellent programme developed and delivered by British Expertise International is summarised in this document, as are the learnings and suggestions we have brought home.

I would like to thank UK Department for Business and Trade's team, Mike Collins, Sharron Drew and Jeremy Hall. British Expertise International Sasha Barnes facilitated an interesting and varied programme for us.

Finally, I would like to acknowledge the people who took time out of their respective organisations at a busy period of the year.

Thank you to Sarah Sinclair (MinterEllisonRuddWatts), Jamie Sinclair (Watercare), Stacey Miller (Waters and Farr), Gillian Blythe (Water NZ), Raphael Hilbron (Agite), Charles Barker (Wellington Water Agite) and Ian Purdy (ACC). This group has directly contributed to this report.

Nick Leggett

– Chief Executive, Infrastructure New Zealand



Aerial View of the Iconic Tower Bridge Connecting London with Southwark on the Thames River in London.



Message from UKDBT

The UK and New Zealand share a strong commitment to tackling infrastructure challenges through innovation, collaboration, and strategic investment. The UK Department for Business and Trade (DBT) was delighted to host Infrastructure New Zealand on its recent programme, which underscored the value of sharing best practice and delivery models.

The programme showcased the UK's approach to long-term infrastructure planning, governance, and delivery - highlighting major projects such as Tideway and the Elizabeth Line, alongside advances in digital innovation and nature-based solutions. With sectoral focus on water and nature-based approaches, and policy and governance insights from NISTA, the programme enabled broad engagement across government, academia, and the private sector. By connecting leaders from both nations, we aim to foster enduring partnerships that support resilient, sustainable infrastructure and unlock opportunities for mutual growth.



Welcome from British Expertise International

The UK has a complex infrastructure landscape, where the convergence of historical assets and modern requirements can pose significant delivery challenges. These hurdles have, in turn, driven a strong culture of innovation that can be felt throughout the sector. Across the country, organisations are trialling new technologies, nature-based approaches and user-focused design to improve resilience and service outcomes. The UK's political system means that infrastructure planning must sit outside the election cycle, requiring bipartisan engagement and a long-term strategy to ensure continuity and confidence in delivery.

Many British challenges and approaches resonate with New Zealand's own infrastructure system, where climate pressures and long-term planning needs continue to shape national priorities. Amid the country's ongoing water sector reform and launch of its 30-year infrastructure strategy, British Expertise International (BEI) were pleased to create a week-long programme in partnership with Infrastructure New Zealand and the UK Department for Business and Trade, designed to give industry leaders first-hand insights into UK infrastructure practices and lessons learned.

This mission provided the INZ delegation with direct access to UK organisations working across key areas such as transport, water, urban regeneration and digital infrastructure. Over the course of the week, participants engaged in a combination of workshops, site visits and roundtable discussions.

With both the UK and New Zealand facing shared challenges and opportunities within their water, transport and construction sectors, our joint mission demonstrated the value of hands-on engagement in understanding infrastructure delivery, policy frameworks and innovative approaches.

BEI remains committed to facilitating such exchanges, supporting both UK organisations seeking international opportunities and partner countries looking to strengthen capability and knowledge in infrastructure planning and delivery.

We would like to extend our sincere thanks to all the partners, speakers and hosts who made this mission possible - your insights, expertise and generosity of time were invaluable in shaping a meaningful and engaging programme. We look forward with enthusiasm to continuing the conversation and supporting New Zealand's ambitious infrastructure reform agenda.

Thank you to our hosts and sponsors:

- UKDBT
- BEI

The delegation met with:

- British Water
- UCL's MegaProject Delivery Centre
- Turner & Townsend
- National Infrastructure And Service Transformation Authority (NISTA)
- Connected Places Catapult
- Arup
- Morgan Sindall
- British Tunnelling Society
- Future Water Association
- WilkinsonEyre
- Buro Happold
- Beckett Rankine
- Icosa Water
- Last Mile Asset Management



The Palace of Westminster (Houses of Parliament) with Big Ben in London at Sunset.

Key Recommendations for New Zealand to Follow Water Actions

01. Create the position of Water Ombudsman

As New Zealand centralises or aggregates water services, we will need simple, visible customer redress that sits independently outside the system. The UK Water Ombudsman is an independent body that handles disputes between customers and water companies. It's part of rebuilding trust in the sector and making sure customers are properly represented and protected.

02. Thames Tideway – Consider adoption of a Regulated Asset Base style model

RAB/project company structure backed by Government to deliver very large, long-lived wastewater projects. The UK Government is actively exploring how this could be adapted more broadly. Could be used as a template for NZ for major harbour clean-up or large inter-regional bulk water/wastewater projects where scale and risk deter councils.

03. Adopt a Quarterly Independent Milestone Assurance

For big capex programmes, some UK companies have six key milestones reported quarterly and independently to the regulator. This drives pace and transparency, gives supply chains confidence about continuity of work.

04. Create a centralised Innovation/water efficiency fund

This would be a modest national water innovation and efficiency fund could help bring new tools, NBS and digital solutions to market faster. A dedicated, ring-fenced fund for innovation and water efficiency that suppliers can bid into.

05. Drive the faster introduction of Smart Meters nationally

Pilot large-scale smart metering in one metro area as part of reform. Data programmes also used across billing, leak detection, demand management, planning and transparency dashboards.



View of Lyttelton Harbour from Summit of Christchurch Gondola, Heathcote Valley, Christchurch.

Infrastructure Recommendations for New Zealand

01. Create an Infrastructure and Delivery Authority

Begin work on a New Zealand Infrastructure and Delivery Authority (“NZIDA”). Bring strategy, delivery capability, assurance and pipeline under one roof.

02. Develop a 10 Year Pipeline

Develop a 10-year national pipeline using the UK model. This will include three “mega-projects” under construction at any one time, followed by up to 20 large projects that underpin growth and improved productivity in different regions of the country. Tiered pipeline → supply chain certainty → lower costs.

03. Create a New Zealand Modern Industrial Strategy

Create a Modern Industrial Strategy – the New Zealand version. The Industrial Strategy is a 10-year plan to increase business investment and grow the industries of the future in the UK. The Strategy will make it quicker and easier for business to invest and will provide the certainty and stability needed for long-term investment decisions. New Zealand should develop its own, highlighting unique Kiwi opportunities and advantages that focuses all parts of Government, including infrastructure delivery, planning and priorities.

04. Build a Major Projects Capability System

Build a major projects capability system. National curriculum; accreditation; training; secondments. This will help develop a strong workforce pipeline to deal with the ebbs and flows of the industry.

05. Introduce Alternative Funding and Finance Models

The UK uses Regulated Asset Bases (RAB), Direct Procurement for Customers (DPC), user-pays for large road/bridge/tunnel assets. Allow private capital into energy, water and digital infrastructure with clear rules. Move beyond Crown-only funding for megaprojects.

Aerialview of Auckland Harbour and Marina.



Session Summaries

Day One

British Water

The first day in the UK saw delegates head to Coventry to participate in the British Water Annual Conference, titled 'Better Together: Delivering For Success'.

Minister for Water and Flooding Emma Harding opened by stressing the urgent need to rebuild public trust in the UK water sector. She cited pollution incidents, perceptions of excessive profit-taking, under-investment, rising customer bills, and a fragmented regulatory landscape.

She highlighted the July 2025 report of the Independent Water Commission, chaired by Sir Jon Cunliffe, as a pivotal moment. The government will issue a full White Paper in response. A key forthcoming reform is the creation of a single, unified water regulator, bringing together Ofwat, the Environment Agency, Natural England, and the Drinking Water Inspectorate to streamline oversight.

Harding emphasised the scale of investment required to deliver the PR24 framework and meet targets for Asset Management Period 8 (AMP8). The British Government has allocated £6 billion for AMP8 - five times the £1.2 billion allocated for AMP7- while the sector has already raised £2 billion in private capital. She signalled attracting further private investment will be essential.

She ended by urging the sector to show greater ambition. The British water sector is in a "trust rebuild" phase.

There was a clear message that bills will have to rise to fund the necessary upgrades and new projects, but with that the recognition bills must be fair and seen as value for money. And there must be better service and a cleaner environment in return.

Radical transparency is coming with live data on discharges, asset performance and delivery will be visible to customers and communities.

KEY LESSONS FOR NEW ZEALAND:

- Build trust with communities and consumers from Day 1 of our reformed entities. Paint the real picture early to avoid controversy over bills, leaks and other issues and be transparent, rather than have it forced through scandal.
- New Zealand needs to have an honest conversation about the real cost of fixing water – investment needed in our nation will cost more than consumers are paying currently.
- Implement a multi-decade price path, not just three-year political cycles.
- In the UK a new Water Ombudsman is on the way to resolve disputes and strengthen customer rights. New Zealand must ensure there is a clear, visible, consumer voice in decision making.



Day Two

Research Findings from UCL's Megaproject Delivery Centre

Speaker: Professor Juliano Denicol – Megaproject Performance: Causes and Cures

Professor Juliano Denicol directs UCL's global research programme on megaproject management. His work is widely regarded as the most comprehensive and evidence-based analysis of why major infrastructure projects fail, and what can be done about it.

Juliano's "Megaprojects: A Review of Reviews" paper identified 18 core causes of megaproject failure. It highlights that much popular commentary on megaproject failure (e.g., "9 out of 10 megaprojects over budget") lacks scope control, data verification and methodological rigour.

Juliano's research is particularly relevant to NZ because it corrects common misconceptions, shows where failure originates, and suggests systemic reforms needed for better project delivery.

THE KEY LESSONS:

- The data behind "major projects fail" is often wrong or incomplete: Much global commentary assumes universal cost overruns or optimism bias. But UCL demonstrates that many datasets do not control for scope changes, political interventions or additions such as stations, hospitals, or urban upgrades. These interventions are often the real reason for cost "blow-outs."
- Early-stage decisions account for most of the megaproject failures: Juliano's analysis shows that most project failure is "baked in" before procurement begins. Poorly defined governance, unclear roles between sponsor vs client vs delivery partner, and unstable political direction create systemic instability that no contractor or alliance can overcome. New Zealand must prioritise sponsor capability, governance clarity, and stable structures at the very start of programmes. Constant "rescopes", political resets, or governance churn are structural failure points.
- Megaprojects are dynamic production systems and must adapt over time: UCL stresses the need for adaptive governance, periodically redesigned client-partner structures and organisational flexibility.
- Stakeholder and political dynamics are "structurally underestimated": UCL shows that external forces such as media, NGOs, councils, interest groups can delay or derail progress as much as technical challenges. Megaproject organisations often cannot counter misinformation because their own data is locked, slow or politically constrained.



Shaping Multi-AMP Water Programmes: Lessons from Turner & Townsend and Anglian Water

Over the past decade, Anglian Water has undergone an extraordinary increase in capital expenditure. Where earlier Asset Management Plan (AMP) periods saw £1–3 billion programmes, the company has now committed to a £7–8 billion investment portfolio, its largest ever.

This surge in investment is driven by a convergence of pressures: relentless media scrutiny over pollution, a national growth agenda including major housing targets, the ageing state of water assets, climate-driven scarcity in one of the UK's driest regions, and the political imperative to drastically reduce storm overflows.

Anglian's response has required reframing its role, not just as a water utility, but as an integrated infrastructure, environmental, and climate resilience organisation.

Anchoring multi-year investment plans with funding certainty enables suppliers to invest in people, plant and innovation. This changes behaviour dramatically. In one example, a trenchless subcontractor reduced their unit rates by 60% once they were guaranteed visibility of work across a five-year period.

Anglian operates multiple long-term alliances, spanning major capital schemes to smaller, repetitive programmes. These alliances are built on collaboration, open-book relationships, and a culture where partners and the client appear indistinguishable – literally “everyone wears the same badge”.

Turner & Townsend's role as Programme Delivery Partner provides Anglian with global expertise and additional client-side capacity. This partnership goes beyond AMP8 delivery; it deliberately strengthens the organisation's capability for AMP8, AMP9 and beyond.

Critical skill shortages persist. But a promising response is the shared apprenticeship and graduate model pioneered by Northumbrian Water, Turner & Townsend and contractor partners. In this model, trainees rotate between client, consultant and contractor roles, gaining a holistic understanding of the industry. This approach is now expanding to apprentices and site engineers, though it remains a long-term pipeline rather than a rapid capacity fix.

UK water has moved decisively away from competitive tendering for each job toward alliances, integration partners and NEC4 contracting. These arrangements embed open-book transparency, shared risk, and collective problem-solving. A key insight: the greatest delivery risk often sits with the smallest supplier. Procurement, therefore, must recognise niche capability and avoid driving unsustainable pricing. The goal is to progressively reduce unit costs across AMPs - “if it costs 10 today, aim for 8 next time” - without hollowing out the supply chain.

Turner & Townsend has established a cross-sector benchmarking platform with over one million data points. The data is anonymous but comparable, enabling water companies, boards, and regulators to understand their performance against peers. Participation is expanding, with interest from Australia and other markets seeking consistent, trusted cost baselines.

Anglian's region resembles a scaled-up version of New Zealand's rural and provincial water landscape with dispersed communities with high service expectations, water scarcity and climate pressures and growth hotspots needing serviced land. There's also intense public scrutiny over pollution, a thin domestic supply chain and volatile investment pipelines.

The UK experience shows that water infrastructure is not merely a regulatory challenge - it is a national industrial strategy issue.

LESSONS FOR NEW ZEALAND:

- Establish a national water skills plan.
- Create an industrial strategy for water infrastructure.
- Build a water cost and performance benchmarking platform.
- Align regulators around catchment outcomes.
- Invest in client-side capability and supply chain management.

National Infrastructure Strategy and Treasury Authority (NISTA)

The delegation was welcomed to HM Treasury by Matthew Vickerstaff, Deputy CEO of NISTA the National Infrastructure Strategy and Treasury Authority. Over the past several decades, the United Kingdom has steadily constructed one of the most integrated and disciplined infrastructure delivery systems in the world.

Established in 2023–24, NISTA represents the culmination of this reform journey. Created by merging the IPA, the National Infrastructure Strategy Unit, and selected capability groups within the Treasury, NISTA brings together strategic planning, portfolio governance and project assurance under one roof.

By sitting inside HM Treasury, NISTA has direct proximity to decision-making. That means day-to-day access to budget processes, capital allocation decisions, financial and regulatory rules and cross-government investment programmes. This solves the long-standing problem of strategic advice being disconnected from real fiscal decision-making.

A single 10-year national infrastructure strategy exists. It is jointly developed with Treasury, periodically updated, embedded in capital decisions and supported by a national project portfolio view. Rather than a stand-alone document, the strategy now drives actual investment choices.

There is a unified portfolio of major government projects NISTA oversees around 215 projects valued at ~£850 billion, structured into tiers:

- 3 megaprojects (High Speed 2 A new high-speed rail line project, Sizewell C: A proposed new nuclear power plant facility, and the Ministry of Defence's nuclear programme for the next generation of nuclear submarine).
- 60–80 critically important government projects receiving intensive central attention.
- The remainder managed by departments with structured oversight.

A major emphasis is placed on early-stage quality to ensure projects are well-defined and credible from Day One.

Major programmes require mega-business cases, gateway reviews, re-baselining and deep-dive assessments. Crucially, the assurance system generates rich project data, allowing the centre to identify patterns, predict risks and improve delivery across the full portfolio.

The UK has more than 600 legacy PFI (equivalent to our PPP) projects. According to Mr Vickerstaff, several lessons have become clear:

- Hospitals are poor PPP candidates and are “the most expensive way to finance a public service.
- Revenue risk transfer often did not work.
- Information imbalances undermined value for money.
- The Carillion collapse showed the dangers of poor risk allocation and weak oversight.
- There is some evidence held to suggest that the asset condition of PFI procured assets is superior to that of regular procurement.

As a result, the UK now uses PPP-type models only where risk transfer is meaningful.

The UK is actively encouraging investment from pension funds, sovereign wealth funds and global infrastructure investors. Meanwhile, rapid growth in data centres from firms like AWS and Google is placing new demands on energy, water, and land, spurring the development of “regulated flexibility” frameworks to enable private participation in complex sectors.

The UK's approach shows the value of aligning strategy, delivery, assurance and capability within a unified centre close to fiscal decision-making. NISTA embodies this model: a single institutional home for long-term planning, project oversight, capability development and system data.

LESSONS FOR NEW ZEALAND:

- Integrate strategy and delivery instead of separating them.
- Build a unified national project portfolio.
- Strengthen professional capability and early-stage project definition.
- Embed assurance as a tool for continuous improvement.
- All that gives investors and industry the long-term visibility they need.

Day Three

Digital by Design: UK Leadership in Infrastructure Innovation

Connected Places Catapult

Catapult receives core funding from Innovate UK's £8.8b total budget allocation to fulfil the role of innovation accelerator across transport, the built environment, cities and local growth. They exist in part, to take risks the market would not or are otherwise unable to take and then connect back to those who can scale up successfully incubated initiatives. Digital solutions and capability are a critical part of the toolkit for Catapult.

Importantly, digital innovation in the UK's Infrastructure sector has a tangible and direct link to the UK's Modern Industrial Strategy, bringing long-term certainty of funding alongside prioritisation and alignment to digital and technology investment linked to the UK's economic growth objectives. This allows Catapult to commit to overcoming substantial barriers to digital innovation over multi-year periods and therefore effectively bridging the gaps and unlocking efficiencies between independent stakeholders. This includes those in highly regulated policy environments with significant technical complexities, such as in the utilities space with water, power and telecommunications.

Connecting stakeholders with shared drivers in a centralised, but data secured platform is paying dividends with CReDo, a Digital Twin initiative championed by Catapult.

CReDo – Case Study: The Climate Resilience Demonstrator (CReDo) is a pioneering digital twin platform for climate change adaptation that helps infrastructure owners and operators understand their asset interdependencies. The solution is a distributed model that can support optimisation across otherwise siloed assets and networks by overcoming data, data security and decision-making gaps.

Construction and infrastructure are enabling sectors for economic growth but come at a high cost and the struggle of declining productivity, affecting many developed economies.

Major projects such as Thames Tideways and HS2 are providing leadership through the Infrastructure Industry Innovation Partnership (i3P) to publish and share learnings, benefitting the wider industry.

Kings Cross Walking Tour and Urban Regeneration in Action – Led by Arup

At the site of what was an underused industrial site, a child laughs as he sways on a giant swing. Christmas market stalls, food trucks and busy commuters add to the vibrancy of Kings' Cross square.

“ The perfect mix of grittiness and shininess, simultaneously a symbol of London's industrial and engineering past and the creative present”

- Edwin Heathcote, The Financial Times

Over the last 20 years, that rundown site has been transformed into one of the largest and most successful redevelopments in London. For much of the late 20th century, King's Cross was one of the UK's most deprived and neglected districts. Three major train stations – King's Cross, St Pancras and Euston - all sit within 500 metres of each other. But the previously bustling rain freight site slumped into disused land, crime and social disadvantage.

Today, the heritage values and serene canal-side setting shine, featuring new streets, squares, parks, homes, shops, offices, bars, restaurants and the heart of creativity – an Arts University.

But that was slow to develop. In the 1980s and 1990s plans for a new high-speed rail connection to Europe emerged. Arup proposed an alternative route that terminated at St Pancras rather than cutting through central London. The city's successful bid for 2012 Olympics helped with the political push for redevelopment. By the mid-1990s, a partnership was established for the 27 hectares of developable land and a masterplan built. This included new streets and squares, adaptive reuse of historic buildings, and a mix of commercial, residential, educational and cultural uses.

King's Cross drew on global best practice, but the work was grounded in strong Camden leadership and local identity.

During development, parcels of land were used for pop up activities and shops, providing attractions to locals and visitors. This made the area attractive even while construction was ongoing and buildings were being developed. The mix of shops, residential living and creativity make it a vibrant, appealing space to work, live and play.

Today, King's Cross is widely regarded as one of the UK's most successful regeneration schemes. It was delivered through clear master planning, unified land ownership, strong public-private partnership, and transport investment.

LESSONS FOR NEW ZEALAND:

- Unified land ownership unlocks scale: Bringing fragmented public land into a single vehicle enabled coordinated planning and delivery. NZ equivalents such as KiwiRail, councils, Crown agencies and NZTA often hold adjoining parcels but act separately.
- A clear masterplan that delivers: The King's Cross masterplan was built almost exactly as was intended. Stability and consistency matter more than constant innovation or “resetting” of plans based on political whims.
- Transport investment can be the catalyst, not the outcome: High Speed 1 and the Olympics bid provided the spark that lit regeneration. NZ often does the reverse, retrofits development around transport.
- Use public-private partnerships for regeneration work: The partnership between government-owned London and Continental Railways and private developer Argent aligned risk, ambition and long-term value. NZ could use similar regeneration partnerships for rail precincts, ports, brownfields and town centres.
- Stable governance trumps endless consultation: Once the partnership was established, decisions were made quickly and implemented consistently. NZ's processes—RMA, design review panels, political changeovers—add years and uncertainty.
- Long-term value capture is essential: Land uplift and ongoing development revenue paid for infrastructure and placemaking. NZ rarely captures the value created by public investment.



Road to Resilience Roundtable with Arup

A roundtable hosted by Arup speakers – John Fagan, Phil Brunson, Juliet Mian, Gary Davies, Brooke Dubose, Matthew Free, Jack Hogan and Mike Ford

A good discussion about building resilience into transport and energy infrastructure with case studies from various jurisdictions. The speakers covered optimisation of assets that are often tired and stressed and the impact of climate change on infrastructure.

A key focus of Arup's work is better outcomes for users by taking a whole of life cycle approach to infrastructure projects.

Resilience and Adaptation Lead Juliet Mian shared media stories about climate impacts on infrastructure from the UK, New Zealand, UAE and India. She discussed the broader costs of resilience problems with roading infrastructure, e.g., disruption to supply chains, travel to work and school, access to healthcare and disruption to business operations. Transport disruptions from weather events in 2022 led to an all-time high in global food prices.

Juliet covered Arup's resilience journey, including understanding multi-hazard risks, quantifying risk and find risk drivers (with hazard and exposure modelling), strategies to mitigate risks (physical and operational options and resources requirements), cost benefit analysis, and multi-decision framework analysis and priorities investments.

Associate Principal Brooke Dubose dialled in from California to share international case studies, noting the similar climate hazards between California and New Zealand.

Arup conducted a risk and resilience assessment for the California Department of Transportation which has 80,000 roadway lane kilometres, 213,000 culverts, 13,200 bridges and 57 tunnels.

The Department is subject to various legislative obligations regarding climate change risks, including plans for coastal resilience.

The law standardises the approach to shoreline adaptation plans through guidelines, mandate to use best science, and financial incentives.

Associate Mike Ford provided a summary of Arup's work on ageing structures, which can sometimes contain hidden defects. Problems can stem from novel historic construction techniques, variability in construction quality, low or no maintenance, change in loading, and climate change.

Arup is using AI to conduct complex structural analysis and testing, innovative methods of monitoring, inspection and refurbishment, and review of design and assessment standards.

The discussion after the roundtable included a question about how to allocate limited resources, e.g., in water infrastructure where there are multiple risks such as earthquakes and climate change.

LESSONS FOR NEW ZEALAND:

- Arup recommended using systems and network thinking rather than single-asset focus when making such decisions. The sector needs to move from risk to resilience thinking.



Day Four

Thames Tideway

Speaker: John Corcoran,
Chair – British Tunnelling Society

Thames Tideway is one of the UK's largest and most complex infrastructure projects. A 32km “super sewer”, up to 75 metres deep, which intercepts 21 Combined Sewer Overflows (CSOs) from discharging into the River Thames. Built to complete the original system conceived after The Great Stink of 1858, it captures around 95% of storm overflows and directs them to Beckton Sewage Treatment Works, which itself has undergone major upgrades.

The tunnel (constructed using a Tunnel Boring Machine with an in situ secondary liner) mimics the Thames through the heart of London and intercepts 95% of discharges from the 21 CSOs. Under an emergency overflows can use the original discharge points.

The project was split into three contracts – West, Central and East. NEC Option C was used for the main works contract, and NEC Option E for the system integrator contract. While Thames Tideway is operational Thames Water has not yet accepted it, the tunnel must operate at 90% capacity before the completion certificate can be issued.

A central part of the session was the emphasis on leadership and culture. The project's CEO, Andy Mitchell, set a clear, visible leadership tone from day one—supportive, transparent, and focused on learning, not blame. His credibility with politicians, financiers, insurers, regulators and communities was a cornerstone of the project's stability and confidence.

Financiers and regulators were deeply involved from the beginning. Investors frequently visited sites to reassure themselves about cost certainty, risk management and delivery progress. The funding model created long-term investor confidence, with regulator oversight ensuring fair returns and protections for billpayers.

The session also described the project's community and urban realm legacy. It reopened riverfront spaces, created new public areas, and mitigated construction impacts in tight urban conditions.

LESSONS FOR NEW ZEALAND:

- Leadership culture: Clear, visible, credible leadership from day one shaped safety, behaviour, morale and trust. Strong leadership also provided confidence to financiers, politicians and regulators.
- Funding model de-risked the project: A Regulated Asset Base (RAB) model created early certainty and while private capital funded construction, the regulator guaranteed a fair, stable return. A long-term investment horizon (multi-decade) meant it wasn't dependent on political cycles and gave confidence it wouldn't be cancelled, delayed or re-scoped.
- Strong regulatory environment: Oversight kept the project on track and protected consumers, The Tideway Act and development consents provided legislative certainty.



Investment Opportunities in New Zealand

Flipping the script, the New Zealand delegation had its chances to sell the benefits of investing in infrastructure and projects in Aotearoa. The delegation spoke with BEI members from over 40 UK organisations to explore infrastructure and water-sector opportunities in New Zealand, with a focus on asset management, digital solutions, engineering consultancy, and sustainable construction. Attendees heard about current projects, procurement processes and future needs, as well as the government's Local Water Done Well initiative, which is transforming water services and creating significant opportunities for UK consultants, engineers and technology providers. We were honoured to have the Deputy High Commissioner of New Zealand to the UK open proceedings – a reminder of the strong ties underpinning these discussions.

Future Water Association

The New Zealand delegation was privileged to take part in the Future Water Association's discussion "Can the future of water be grown not built?".

They outlined Local Water Done Well and talked about it as a sector reset opportunity, giving Aotearoa a blank sheet to re-imagine the water sector, set a coherent national vision and embed nature-based and place-based thinking from the start, rather than retrofitting it.

There's a growing realisation that nature-based solutions and broader environmental performance can improve access to sustainability-linked lending. Panellists stressed the central role of Māori as tangata whenua in water governance and environmental decisions.

While the cultural framing is specific, panellists argued the underlying idea is universal: if the river is healthy, the people and economy are healthier, and legal personhood is one tool to reflect that.



Urban Regeneration

Presentations from WilkinsonEyre and Buro Happold discussed various large-scale infrastructure, urban regeneration, and land development projects in London. The speakers highlighted how major infrastructure projects such as railway stations, bridges, and tube line extensions act as catalysts for urban renewal, creating new city districts and enhancing public spaces.

Key examples include the HS2 Old Oak Common station, the Brent Cross regeneration, the Battersea Power Station redevelopment, and the transformation of areas around Wembley Stadium and the Queen Elizabeth Olympic Park.

The presentations emphasised the integration of architecture and engineering to create functional, iconic, and economically impactful developments. They also address the complexities of these projects, including historical preservation, stakeholder management, evolving master plans due to changing market demands (e.g., post-COVID shift from office to residential), and innovative approaches to infrastructure and sustainability, such as net-zero carbon commitments and public-private partnerships.

The Battersea Power Station Redevelopment was of particular interest. The iconic power station was decommissioned in the late 1970s and the area around it was derelict and unused.

But an investment by a Malaysian Consortium in 2012, and an extension to the Northern Line, kicked off redevelopment. That transformed the surrounding industrial wasteland into a major mixed-use destination with 25,000 new jobs and residents. The 50-50 commercial-residential split features three levels of retail, 500,000 sq ft of office space for Apple, cinemas and event spaces.

Urban regeneration projects scatter across London. The 2012 Olympics were a major driver.

THE KEY LESSON FOR NEW ZEALAND:

- Get transport infrastructure right. Regeneration follows transport links. Strategic planning for infrastructure can lag economic growth.



Aerial view of the Limehouse, a regenerated former dockland area at the River Thames in London.

Day Five

Visit to Woodlands Water Recycling Centre, Canterbury

Icosa Water and Last Mile Asset Management

The delegation ended with a visit to the Woodlands Water Recycling Centre (WRC), located in Broad Oak, Sturry near Canterbury. It is the UK's first purpose-built wastewater treatment plant designed for a housing development to meet Nutrient Neutrality requirements under the Habitats Regulations.

Serving 456 residential units the facility ensures that additional wastewater does not increase nutrient loads (nitrogen and phosphorus) beyond pre-development levels, protecting sensitive ecosystems such as Stodmarsh Wetlands, a protected site. The plant uses advanced treatment processes, including Moving Bed Biofilm Reactor technology, combined with Sustainable Drainage Systems (SuDS) and wetlands for polishing treatment. With the nitrogen and phosphorus removed, the resulting wet sludge is then transported to the municipal wastewater treatment plant for final treatment.

The project adopted a collaborative delivery approach, integrating design, construction, and operation through a joint venture between the developer, design and build contractor and the long-term operator.

Compliance was achieved through strict adherence to UK Habitats Regulations and Nutrient Neutrality standards mandated by Natural England.

The Woodlands WRC sets a benchmark for sustainable housing infrastructure by combining innovative treatment technology, collaborative delivery, and robust regulatory compliance. It demonstrates how integrated partnerships can unlock housing development in sensitive catchments while safeguarding biodiversity and the environment.

THE KEY LESSON FOR NEW ZEALAND:

- Innovative compliance solutions can unlock housing growth without harming biodiversity. In NZ, integrated recycling systems could enable development in areas constrained by freshwater systems and unconnectable to municipal systems.
- The collaborative deliverable model meant success came from a developer-contractor-regulator partnership, ensuring design, build and operation were aligned. This model could be used for PPPs to fund water infrastructure.



Final Reflection

UK Infrastructure: Impetus for Transformation

The week's activities highlighted how in the UK, infrastructure has been a powerful lever for regional regeneration, economic growth, and social inclusion. The programme offered a window into how the UK navigates complexity – through coordinated systems planning, outcome-based regulation, and public-private partnerships that deliver real impact.

A shattered government side infrastructure system, as we have in Aotearoa, will not drive value for money or optimise benefits for New Zealanders, until different agencies are brought together and focussed work as one system.



The Shard Towering Over the London Skyline, United Kingdom.



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