

RESTRUCTURING A RENEWALS PROGRAMME

TO DELIVER LONG TERM VALUE

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**What is the
goal?**

WHAT ARE WE COVERING?

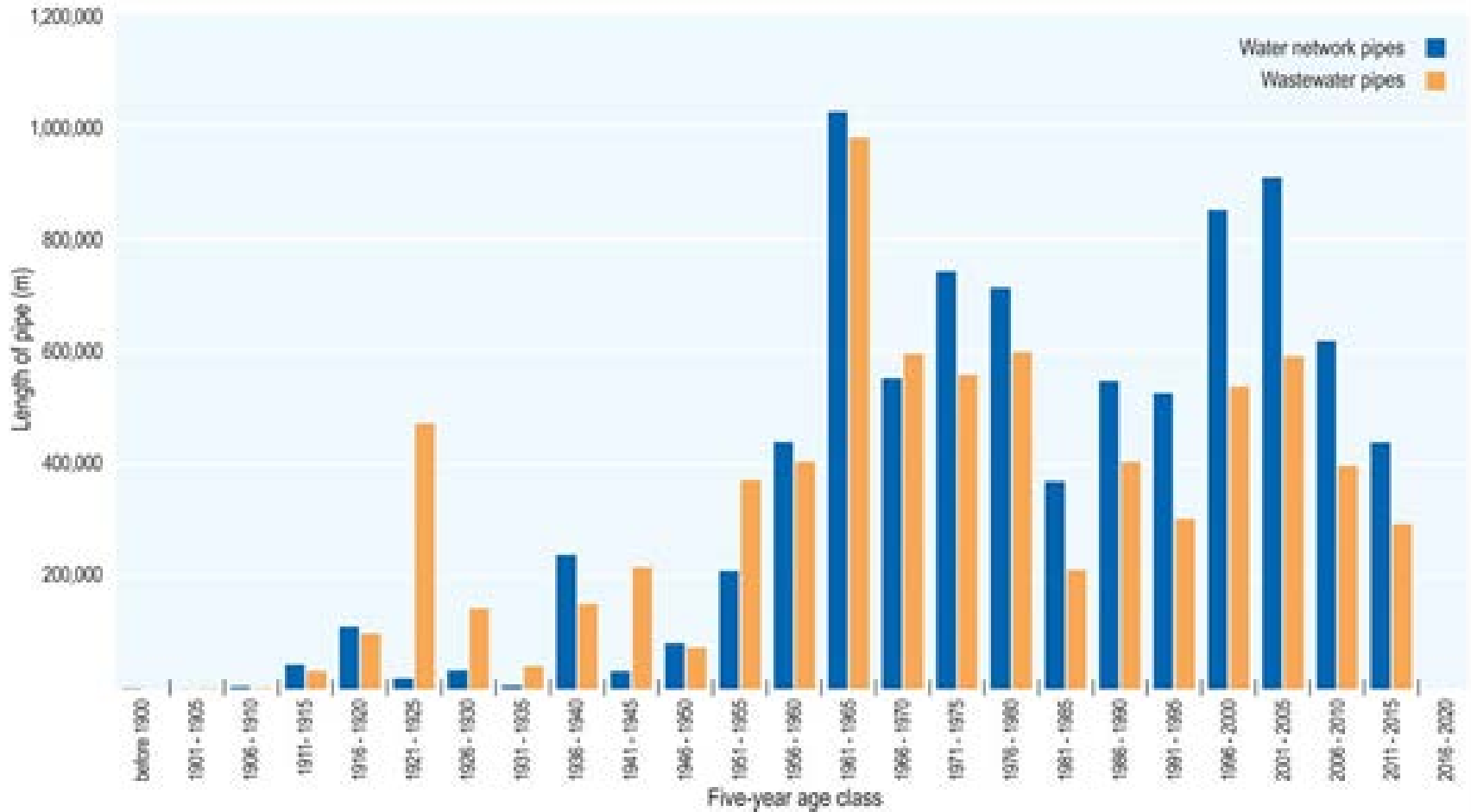


- ▣ The problem
- ▣ The question of when to intervene
- ▣ The standard approach
- ▣ Issues with the standard approach
- ▣ A new approach
- ▣ Benefits of a new approach
- ▣ Issues with a new approach
- ▣ Conclusions

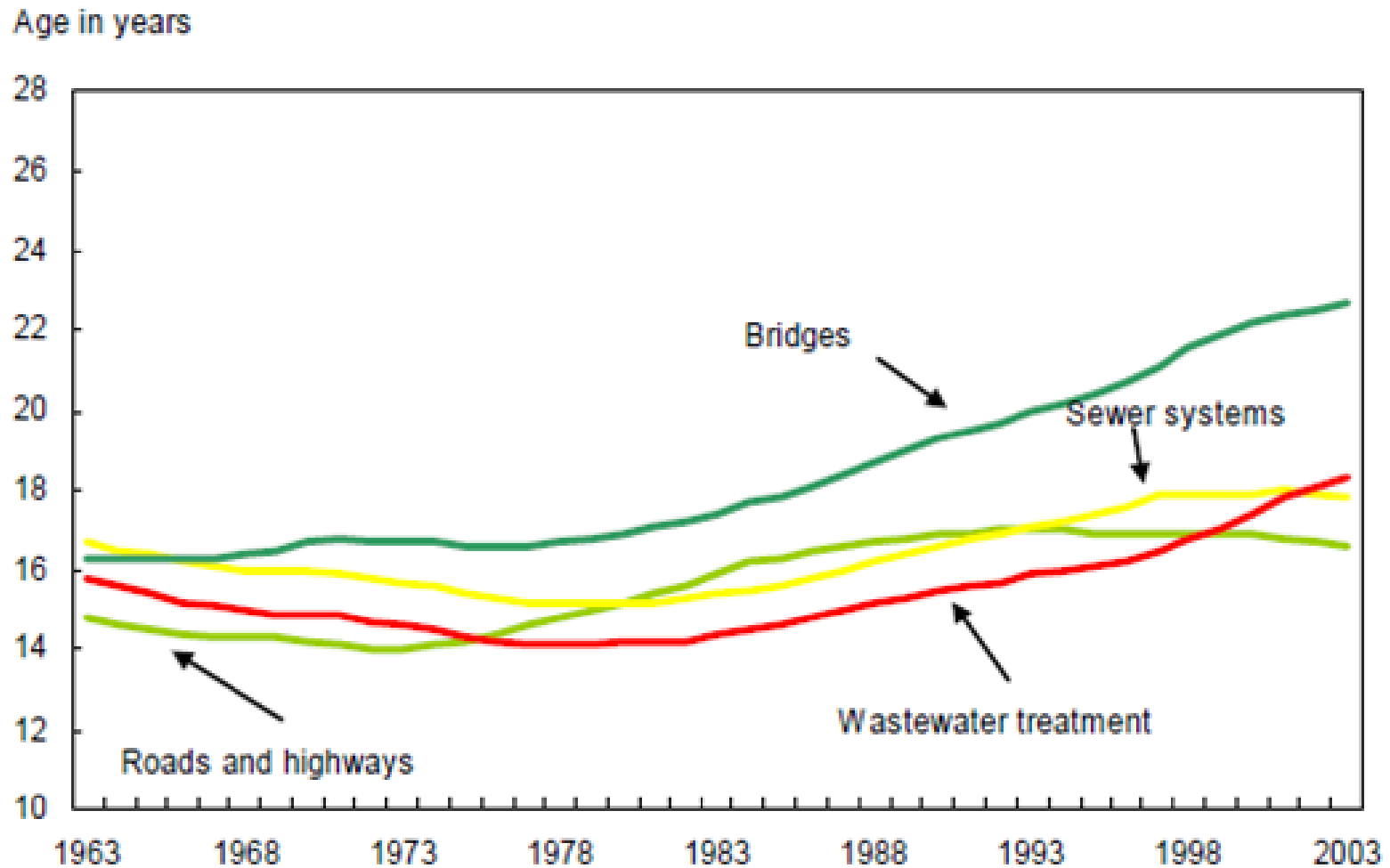


- New Zealand has an aging pool of assets and renewal activity is increasing
- The structure of a renewal project is crucial to its success
- Knowledge of a broad range of solutions and methodologies is required
- We will compare a traditional renewals contract structure and a modified version.

WATER AND WASTEWATER ASSET AGES IN AUCKLAND



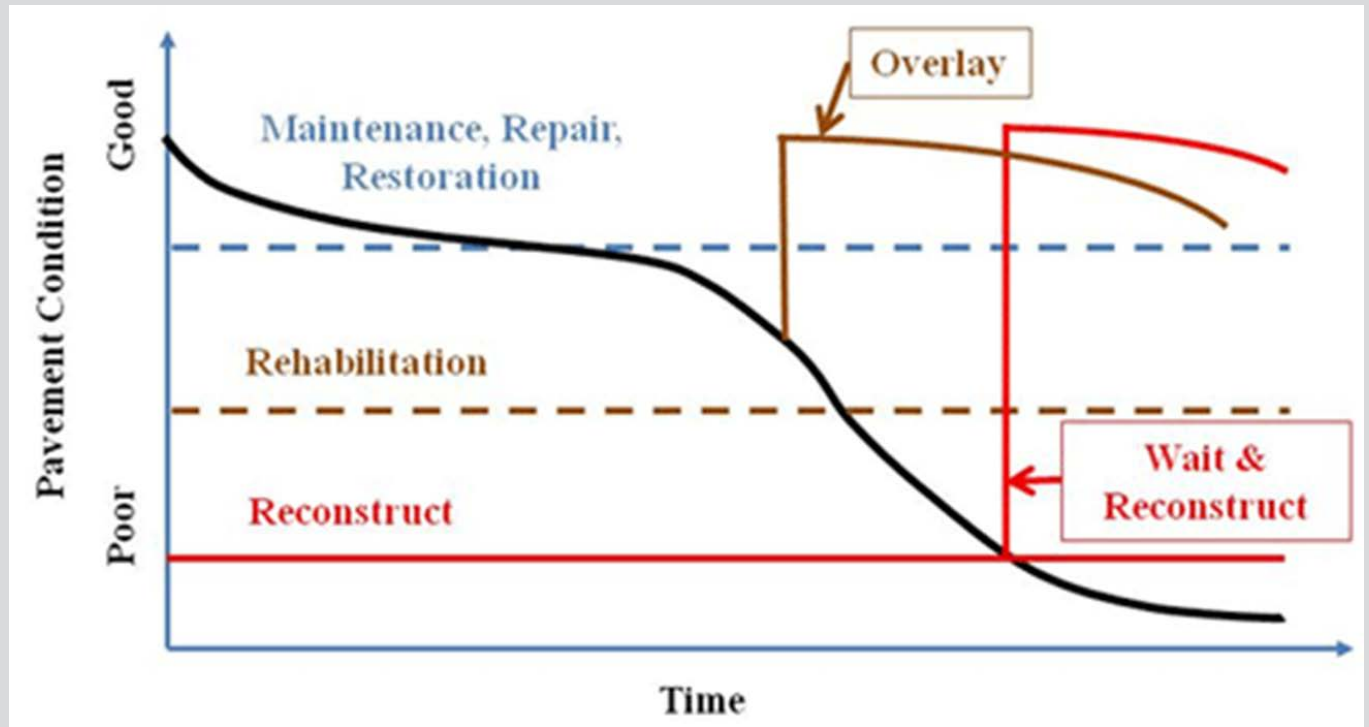
AGING ASSETS IS A WORLDWIDE PROBLEM



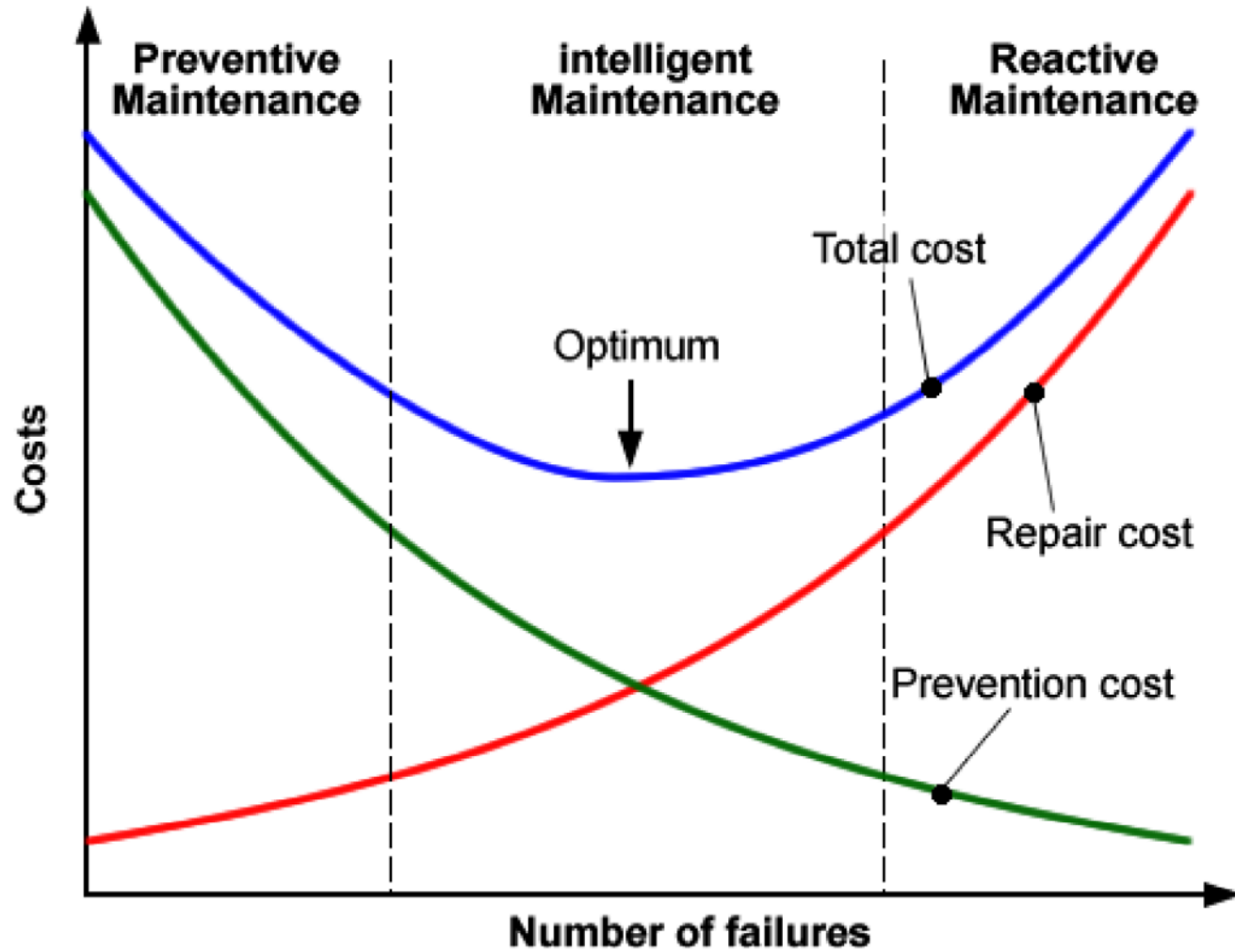
WHEN TO INTERVENE?



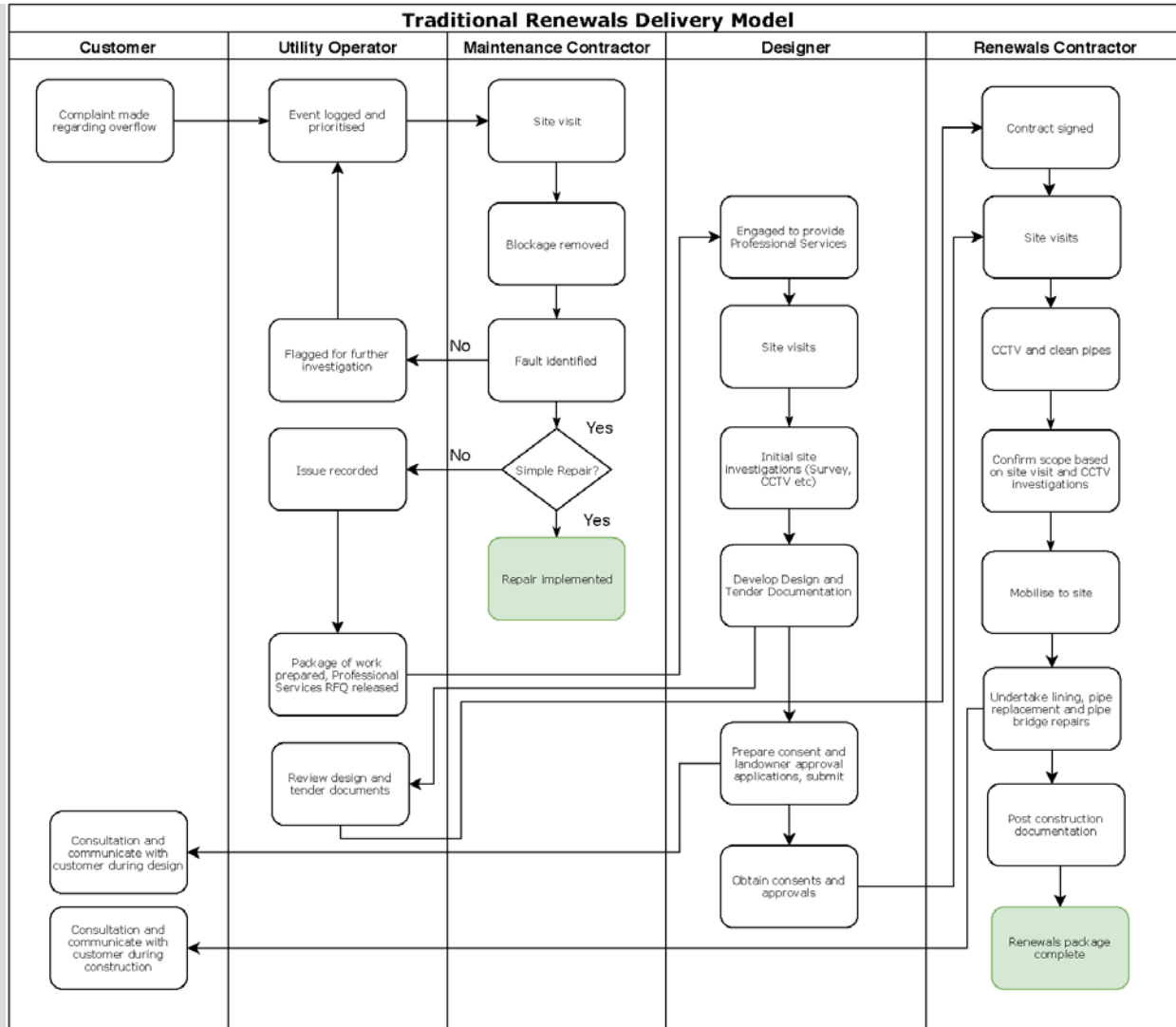
- Regular and scheduled maintenance and inspections
- Renewal/rehabilitation
- Replacement



OPTIMISING MAINTENANCE COSTS



THE STANDARD APPROACH





Issues

- ❑ Incorrect scope identification
- ❑ Poor CCTV information
- ❑ Limited information
(diameters/depths missing from GIS)
- ❑ Incorrect asset identification
- ❑ Incorrect measurement
- ❑ Limited tendering timeframes prevent thorough site inspections

Outcomes

- ❑ Uncertain budgets
- ❑ Risk provisions and tender tags
- ❑ Scope changes
- ❑ Methodology changes
- ❑ Approvals and consents delay site works
- ❑ Lack of flexibility for new tech

CASE STUDY - 3 STENCIL PLACE



Original Scope (from utility owner)

- Line pipeline from MH to pipebridge abutment.
- Rehabilitate 2 x MH.
- Identified as causing overflows



Final Scope

- Pipebridge replacement 13m of 150NB CLS.



Original Scope (from the utility owner)

- Lining of 192m.
- Relay short section to remove dip.
- Material EW.



Final Scope

- Open cut repair - 32m relaid.
- Lining scope removed.
- Material combination of EW, PVC and existing patch.



The new approach combines elements of

- Early Contractor Involvement (ECI)
- Design and Construct (D&C).

The process is split into two stages:

- Stage 1: Investigation, Scoping, Concept Design and Pricing
- Stage 2: Detailed Design, Consenting and Construction



A Modified Design and Construct Contract

Based on NZS3916:2013 contract conditions with amendments to cater for:

- Payment for investigation and scoping work
- Independent cost evaluation (or other mechanism for agreeing the cost)
- The fair assignment of risk



An Integrated System

- The maintenance contractor's identify recurring problems in the network that cannot be easily fixed with routine maintenance.
- These problems are escalated to the renewals contract.
- A rolling programme of work provides flexibility and the ability to prioritise



Original Scope (from utility owner)

- Existing 225NB concrete sewer circa 1921.
- Pipe shallow in places, adjacent to a stream – high ecological values
- History of overflows/root intrusion
- 3 sections partially obstructed by grout.
- Suggest pipe bursting



Agreed Scope (priced following investigation and concept design)

- Spiral PVC lining of 130m.
- Use of robotic cutter
- 5 x MH repair



The Overall Benefits

This collaborative approach can result in:

- ▣ Improved price and programme certainty
- ▣ An even distribution of expenditure and resourcing avoiding sharp peaks and troughs
- ▣ Maintaining knowledge and skills in the workforce
- ▣ Shorter timeframes for consents
- ▣ Access to effective technical solutions



Cost Certainty

- ▣ Reduced cost variance through accurate scoping
- ▣ Fixed lump sum pricing

Value for Money

- ▣ Just fixing the problem
- ▣ Using the most efficient technology
- ▣ Leveraging off the scale of the contract
- ▣ Minimising internal and consulting costs



The Issues

- ❑ Relies on the parties having a high level of trust
- ❑ Needs a fair and transparent mechanism for pricing and risk allocation.
- ❑ Establishing value for money can be difficult.
- ❑ Both parties require certainty and the contract must address this.
- ❑ Ideally margins and rates should still be established by competitive tender.



Conclusions

- Timely escalation of problems into the renewals programme can save money
- Early Contractor Involvement can deliver better project outcomes
- Fair and transparent pricing and risk allocation is critical
- Access to a broad range of technology is important
- A rolling programme of works can deliver additional benefits