

Client – Department for Regional Development – Water Service
 Project manager – MPM Capita
 Management contractor – Farrans
 Designer – McAdam

Valley Distribution Improvements Scheme Northern Ireland

Movement for Innovation
 M⁴I



18 water schemes in one management contract

Northern Ireland's Water Service has delegated tactical management of 18 water schemes valued at £10m+ over five years to a management contractor. This bold shift in procurement strategy unlocks spending on schemes that would otherwise have been delayed by traditional procurement methods. Water Service also formed the Valley Partnership with management contractor Farrans, project manager MPM Capita and designer McAdam to break the mould of defective work and poor client satisfaction.

"18 schemes would have been very difficult for Water Service to manage, what with 18 tenders, progress meetings, etc." says project sponsor Rick Lyons. Under standard procedures it takes three to six months from advertisement to contract.

Quality of construction is well up on what Water Service engineers have been used to. It is a small economy with minor works contractors competing very hard on price. Project manager Michael Anderson explains: "Historically we'd have maybe 20 contractors competing for each scheme. Consequently everything was cut to the bone. We'd notice the problems on site maintaining quality."

This project confirms Water Service's move away from the ICE form of contract to the NEC family of contracts that embrace the concept of partnership and encourage everyone to work together to achieve the client's objectives.

Management contracting has delivered:

Shortened procurement time – Plotting the estimated start and completion dates for all 18 schemes using Water Service's traditional procurement method (within human resource constraints) and comparing this with the completed and forecast programme under the management contractor, it is apparent that the whole procurement time has been cut by 30-50%.

Better cost control – Final accounts for completed schemes are averaging about 5% above the tendered sum. Historically, this figure has been about 30%. This improvement is attributed to the more effective engagement of the client's designer with the management contractor in preparing tender packages and also to the incentive for contractors to control costs and remain on the bidding list for further schemes.

Quality – Water Service operators are impressed with the reduction in defects when compared with previous schemes. The diagram opposite shows this as well as the gain in client satisfaction. Anderson observes: "The time from first flagging up a problem to when it is rectified has been radically cut."

Flexible approach to change – Farrans' management fee is based on final scheme cost, so no 'claim' situation arises when the scope of work changes. In fact the project has worked so well that the initial £6m budget has grown to £10m and all professionally managed by Farrans, with continuity of work for subcontractors.

- ▶ Utilities clients
- ▶ Estates managers
- ▶ Contractors
- ▶ Project managers

Do you have problems with:

- Handling a large number of similar schemes?
- Maintaining predictability?
- Accommodating changes in the scope of work?



Valley project KPIs compared to industry average and 'traditional' scores

Lessons learned

- You can confidently engage a management contractor while the brief is still evolving
- Think about how you can use the management contractor's skills to plug gaps in your own organisation
- Engaging a management contractor can free the client to think strategically, leaving the tactical problem solving to the management contractor.



The Rethinking Construction Strategy Model applied to this innovation

5 Drivers

Leadership
Focus on the customer
Product Team Integration
Quality driven agenda
Commitment to people

6 Processes

Product development	Production of components
Partnering the supply chain	Respect for people
Project implementation	Sustainability

10 Targets for improvement

Client satisfaction – product	Profitability
Client satisfaction – service	Productivity
Defects	Safety
Cost predictability	Cost
Time predictability	Time

18 water schemes in one management contract

The challenge

Under previous procurement policy, Water Service projects used the ICE form of contract and suffered from a culture of confrontation and claims. It could take up to six months from advertising to awarding a contract, only to get deliverables of indifferent quality that cost typically 30% more than the tender sum. This was a drain on Water Service resources and was hindering its ability to spend its growing capital works budget. Partnering with a contractor under NEC Option C (Target Cost) had been successfully trialled in the £32m Aquarius Mournie trunk main. Procuring many smaller schemes required a new approach.

The solution

The Valley concept – Concept designs to upgrade the service reservoirs and distribution mains in County Down dated back to the 1992 Watnet study proposals. For programming reasons, it was decided to schedule the schemes in six bundles, with an estimated value of £6m to be constructed over five years. Water Service opted for another variation of NEC Option F (Management Contract) to gain the management skills of a large contractor while retaining the efficiency of the smaller firms more suited to the scale of each scheme. Works contracts for each scheme (subcontracted by the management contractor) would be under NEC Option A (Activity Schedule).

Selecting the management contractor – Combining the 18 schemes into one management contract meant the project was large enough to be tendered under EC procurement rules. Four tenderers were short-listed from quite a long list of interested contractors who had submitted a prospectus and brief project submission. Detailed tenders were assessed on a 65% quality - 35% price basis and Farrans, an Antrim company, was successful. Under their contract, they would be paid a % of the activity-based payments to the works subcontractors.

Selecting works subcontractors – Farrans and Water Service decided on the works contractors together, although Farrans ran the whole selection process as part of their management role. These subcontracts were not affected by EC rules and could be more informally bid. Initially there were seven contractors. The winning contractor for each scheme dropped out of the running for the next scheme. Three have subsequently been eliminated for quality-related reasons, leaving four now bidding for every scheme. The client's engineer, McAdam, designs the work in detail, and contractors are paid when a scheduled activity is completed and tested.

Technical innovations – Engaging subcontractors in the team has fostered their enthusiasm for innovation. Various ideas for 'trenchless' installation and trenching in confined spaces have emerged and contractors have invested in these technologies. This immediately benefits the Valley project as well as making these technologies available for exploitation in other utilities projects in Ireland.

How problems were addressed

The Aquarius project increased the water pressure above the figures assumed from the 1992 Watnet analysis. This affected some bundles to such an extent that McAdam had to revise the concept before starting the detailed design. Although Farrans had tendered on the original schemes, this change was dealt with fairly mechanically because payment to Farrans is based on what is actually constructed. The potential issue of compensation for a reduced scope of work has never arisen because the whole project has grown.

Next steps

Farrans suggest that Health and Safety would be managed better if each scheme contractor was Principal Contractor (presently done by Farrans) and the management contractor was Planning Supervisor (presently done by consultant Atkins).

Project contact

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Related topics

Partnering in the public sector, European Construction Institute, 1997

Procurement routes for partnering – a practical guide, Dr Jon Broome, Thomas Telford, 2002

See how Water Service's integrated team works in M4I demonstration project No. 152 case history: *Aquarius: the new age construction team*.

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