

CHANGES TO THE WAY STORMWATER MAINTENANCE IS BEING DELIVERED IN AUCKLAND

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ABSTRACT

Since the amalgamation of the Auckland Councils' in 2010 and the separation of stormwater management from potable water and wastewater, much has changed in the way stormwater maintenance is now being delivered across the region.

While some may have questioned the loss of the obvious synergies with wastewater it has created a range of new opportunities. Removing the artificial interface between the catchpit and downstream network has meant that the ownership and response to flood events couldn't be any more straightforward.

For a multi-disciplined service provider like Downer, who commenced in the Central Auckland area (formerly Metrowater) on 1st July 2013 it inspired the creation of a virtual delivery team under a dedicated Contract Manager. The approach has already proved to be very successful and resulted in higher productivity and resource utilisation than one could expect from a more traditional approach.

Other benefits have included greater access to a higher level of expertise across the business which has resulted in some very innovative thinking. For example, traditional work methodologies are being challenged and activities such as confined space entry eliminated. In another example watercourse maintenance has been minimised through rehabilitation solutions.

Ultimately Council and the ratepayers benefit from the improved customer service, service delivery and cost efficiencies.

KEYWORDS

Amalgamation, Customer Service, Efficiencies, Collaboration

PRESENTER PROFILE

Iain Peffers is a chartered civil engineer with almost 30 years work experience in the UK and NZ water industries. During the late 1990's Iain was responsible for establishing the Wellington Wastewater Treatment Plant Operations as part of a 25 year design build and operate contract and then went on to successfully manage the 3 water networks on behalf of Auckland City Council prior to amalgamation and before joining Downer to support and enhance their water operations and maintenance business.

1 INTRODUCTION

This paper provides an outline of the changes made to the delivery of stormwater services in the Auckland region following the amalgamation of the previous Auckland Councils'.

It describes Council's approach and how Downer responded to the changes and how it successfully secured the maximum number of contracts allowable under the Council's new procurement strategy, reinforcing a theory that change really is a stimulus for innovation.

In particular it looks at the delivery model and the creation of a virtual delivery team, job management, the importance of organisational alignment and collaborative working with the aim of enhancing customer service, maximizing efficiencies through some innovative thinking.

2 BACKGROUND

In November 2010 the eight Auckland based Council's (Rodney District Council, North Shore City Council, Waitakere City Council, Auckland City Council, Manukau, City Council, Papakura & Franklin District Council's and the Auckland Regional Council) were amalgamated to form a single Auckland Council.

Prior to the amalgamation, water services across the Auckland region were delivered through a single bulk provider (Watercare) and seven Local Network Operators (LNO's) represented by the various Council's. Without exception each of the LNO's engaged contractors to deliver all field based operations and maintenance activities. While considerable bundling had already taken place some activities such as planned CCTV surveys, watercourse maintenance continued to be managed under separate contract arrangements.

Following amalgamation all water and wastewater services were transferred to Watercare with Auckland Council retaining responsibility for delivering stormwater services. During 2011 Auckland Council developed a procurement strategy that essentially divided the region into four main sectors, South, West, Central and North as highlighted in the adjacent map.

In addition to creating the four sectors the Council also set about bundling and aligning contracts which had historically been delivered across their transportation and water service departments. Previously transportation was responsible for maintaining road drainage assets such as catchpits, catchpit leads, culverts and stormwater detention areas whereas the water services department was responsible for maintaining the downstream piped networks and water quality devices.



Figure 1: Auckland Stormwater sectors (North, West, Central, South)

The first of the new contracts (South) was competitively tendered and awarded in 2012 with the Central and West contracts awarded in 2013 and Northern awarded in early 2014. Downer was successful in securing both the Central and Northern contracts, the maximum number of contracts allowed.

3 PROCUREMENT

For large value contracts procurement methods typically include an expression of interest, interactive workshops followed by a tendering stage based on lowest price conforming or a selection of weighted attributes. At the conclusion of the process a preferred tenderer emerges and goes on to negotiate the final contract with the Client.

For the Stormwater contracts Auckland Council sought expressions of interest and shortlisted four submitters to submit a tender proposal for each of the four sectors.

Proposals were then evaluated using the NZTA price quality method with a non price weighting of 12.5% carried forward from the expressions of interest stage, with 22.5% based on a detailed methodology and list of resources and the balance of 60% based on price.

During the negotiation stage Auckland Council elected to negotiate with all tenderers in parallel in the knowledge that all were capable of delivering to the required levels of service at the conclusion of the expressions of interest stage. The focus during this final stage was therefore one of seeking value for money, minimizing risks and finalizing the commercial arrangements.

The negotiation stage included feedback on the pricing of individual activities that were considered to be significantly more or less than the Engineer's estimate. This presented an opportunity to review and moderate costs to ensure that prices were reflective of the methodology and the required technical specification.

As a Contractor this was a refreshing experience and we welcomed the opportunity to continue the dialogue and truly negotiate with Council which is not often the case under a more traditional approach. By negotiating with all tenderers the Council not only maintained but enhanced its buying leverage. Certainly the approach was in keeping with the Council motto of "Make Every Interaction Count".

Other key aspects of the contract were the inclusion of a 'target efficiency saving' as well as a range of key result areas (KRA's) and key performance indicators (KPI's) with a link to contract longevity rather than a financial penalty which is often punitive and draconian in nature.

The contract structure allows for up to two extensions of two years each in addition to the initial term of four years.

4 DELIVERY MODEL

A good delivery model aims to achieve the following outcomes:

- Provide excellent customer service
- Seamless delivery of services with clear lines of communication
- Sound technical capability with access to a range of resources
- Ability to manage a variety of risks
- Cost optimisation and value to the customer
- No deterioration to and/or improvement to the services or products
- Compliance with quality and all legislative requirement

A traditional approach might look to establish a single delivery team geared to meet the base workload and augmented with a select number of subcontractors and specialist service providers as appropriate.

However, given that the scope of work under the new stormwater contracts included a reasonably diverse range of activities such as cesspit cleaning, water quality device maintenance, pump station maintenance, treatment plant operations and maintenance, vegetation control, soakhole drilling, pipelaying, manhole construction, minor civil construction as well as road reinstatements for most tenderers a large number of subcontracts was inevitable.

While some delivery models can be entirely based on subcontractors it is not desirable for a service based contract where response times are critical and communication lines need to be effective. It also creates a situation where margin is applied to margin making any offering potentially unattractive and uncompetitive.

In addition to the above and as the incumbent provider of stormwater network services, road drainage maintenance, facility management and open space management services to the previous Councils', Downer needed to consolidate its position and develop a single delivery model across its business.

Given the circumstances our approach has been to recognize the discrete and diverse work types involved rather than simply viewing as a stormwater contract. By drawing on our internal expertise within each field we have been able to refine methodologies and think outside the box on how we approach maintenance. It also gives the Council access to a much larger pool of resources.

In developing the delivery model and associated organisational chart it became obvious that transferring part time equivalents into a new contract delivery team was not going to be practical and that each resource needed to stay within their respective business units if they were to be fully utilized and deliver the optimal cost and value to the client.

The idea of a virtual team began to emerge as an obvious solution that was clearly going to meet three of the four requirements for a good delivery model as described above.

The approach was also well received by the various department heads that would have been reluctant to release resources to form part of a new contract specific team for which they would have had no further involvement or financial return from.

5 VIRTUAL DELIVERY TEAM

The term virtual delivery reflects the variety of resources and expertise that Downer has drawn upon across its business in order to provide a complete stormwater maintenance solution. With the exception of a relatively small team dedicated to routine network maintenance and customer service requests the balance of resources sits within their core business units such as transportation, open space management, facility management and water.

The virtual team recognizes individual expertise, the ability to self-perform while encouraging the creation of centre's of excellence with less emphasis on cost centre's, geographical and other potential barriers.

The figure below outlines how the various parts of the Downer business are tied into a central planning function which is directly accountable to the operational management team. The structure allows the management team to focus on service delivery rather than having to deal with the day to day people and performance issues which the respective departments are responsible for.

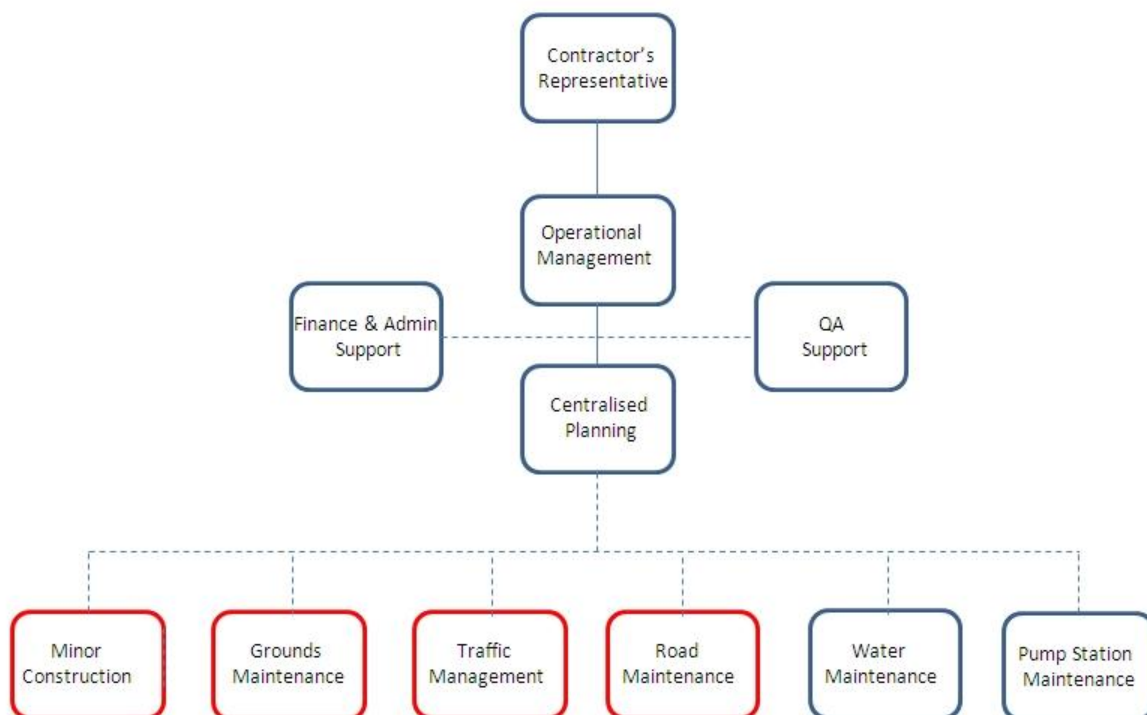


Figure 2: Delivery Team Structure

The boxes highlighted in red indicate functions managed by Downer (transport) with the blue boxes managed by the Downer (water) business.

Through an internal teaming arrangement (similar to a service level agreement or sub contract) the requirements and expectations under the contract are transferred. However, unlike an external agreement all direct costs are covered with the financial risks

and rewards calculated across the entire contract and pro-rated accordingly. This ensures that all business units remain focused on service delivery rather than on the financial outcomes.

Through combining workloads and creating economies of scale a much greater level of utilization is possible. Obviously the approach does rely on a critical mass within each of the various functions and is therefore a delivery option that will be limited to a larger and multi-disciplined organisation that has the appropriate leadership and systems in place to ensure success.

6 JOB MANAGEMENT

Central to our delivery model is the planning and shared administration function which is supported by a reliable and integrated job management system. This allows for jobs to be scheduled in an efficient and effective manner, ensuring field crews are fully utilized. This also allows managers and supervisors to focus on work quality and other business activities rather than spending long periods on job planning.

In our national Telco business Downer operates a single 24 x 7 call centre and dispatch function with job scheduling carried out using Clicksoftware. A case study carried out by Clicksoftware on a similar application in Anglian Water lists some impressive benefits which provides a good indication as to what could be achieved if service based contracts were to be amalgamated in the future.



Figure 3: Benefits of Job Scheduling

While the Downer callcentre and dispatch function is currently limited to supporting the Telco business it is only a matter of time that this service is extended to all its 24 x 7 maintenance contracts with the delivery of even greater efficiencies and savings to clients going forward.

7 COLLABORATIVE WORKING

Collaboration is about working together to achieve shared goals and outcomes. The contract ethos is described as follows.



THE WAY WE WORK “Make Every Interaction Count”

The key goals for the collaborative style of working include.

- Quality and value for money
- Effective and efficient delivery of the works
- Levels of service that reflect best practice in maintenance and customer service
- Accommodate changes in strategic direction
- Safety and sustainability
- Continuous improvement

The strategic approach to meeting these goals is through strong leadership, a collaborative working charter and series of collaborative workshops.

The contract leadership team comprises of senior managers made up from the Council and contractor. They are collectively responsible for setting objectives, managing long term capability and capacity requirements, agreeing high level performance targets and resolving issues that are escalated by the operations management team. The leadership team meets quarterly.

The collaborative working charter defines the expected actions and behaviours of the Council and Contractor. It is also seen as an evolving document that will continue to generate initiatives as time goes on. The decision to submit this paper is an example of a collaborative working initiative that promotes the relationship beyond the contract.

An initial collaborative workshop was held during the contract commencement period to ensure that there was a common understanding around the contract requirements and expectations. It was also aimed at developing key stakeholder relationships as well as covering off health and safety issues and has provided a framework for future workshops. The key outcomes of the workshop included.

- Financial- ensuring each party achieves it’s spend, revenue, and strives to achieve year on year savings.
- Customer Response- ensuring the correct prioritisation of jobs by call centre and that response times are achieved by the Contractor, for example, all safety issues being a priority 1 and responded to within the hour.

- Planned Works- ensuring all jobs are assigned a completion time that is mutually agreed.
- Zero Harm- ensuring that a minimum of four joint field audits are undertaken each month by the respective management teams to ensure consistency and fairness and that expectations are met by both parties. Using feedback from these audits to feed into the continuous improvement of work procedures.

For consistency and in the spirit of true collaboration these workshops have been attended by all of Council's stormwater contractors.

Collaborative working is also a listed KPI which is measured against the above goals.

An example of how collaboration can work to the benefit of all parties is in the collection of asset data. This information is collected by the Contractor and used by the Council to development the annual renewal programme. In turn the Contractor tenders or negotiates with Council over the capital delivery whereby adding further scale to the contract. By helping the Council create a robust work bank the Contractor can influence the continuity of forward work and therefore be in a better position to make savings that can be delivered back to the Council.

If the workbank can be maintained it may be possible to lock in the efficiency gains through a term renewal contract or variation to the contract.

Similarly meeting KPI's adds longevity to the contract which is a significant incentive for the Contractor.

8 BUSINESS ALIGNMENT

In addition to good collaboration another key factor in maintaining a long term and successful business relationship is how well aligned the respective organizations are in terms of their strategic objectives, drivers, culture and values.

Under the contract, Council established the following key drivers.

- Customer Satisfaction
- Service and Incident Response
- Staff and Stakeholder Health and Safety
- Financial Management – Value for Money
- Environmental Protection

Without exception all of the above directly align with Downer's strong commitment to Zero Harm, Operational Excellence, Client and Customer satisfaction as well as achieving a good financial result. Contracts that are not making a financial return are unlikely to achieve the non-financial goals and simply become unsustainable. The ability to address such issues during the negotiation stage as described under section 3 is therefore very important to the overall success.

Downer values are also very strongly aligned to that of the contract and Council. These values help to establish the culture and drive behaviours within the team and provide

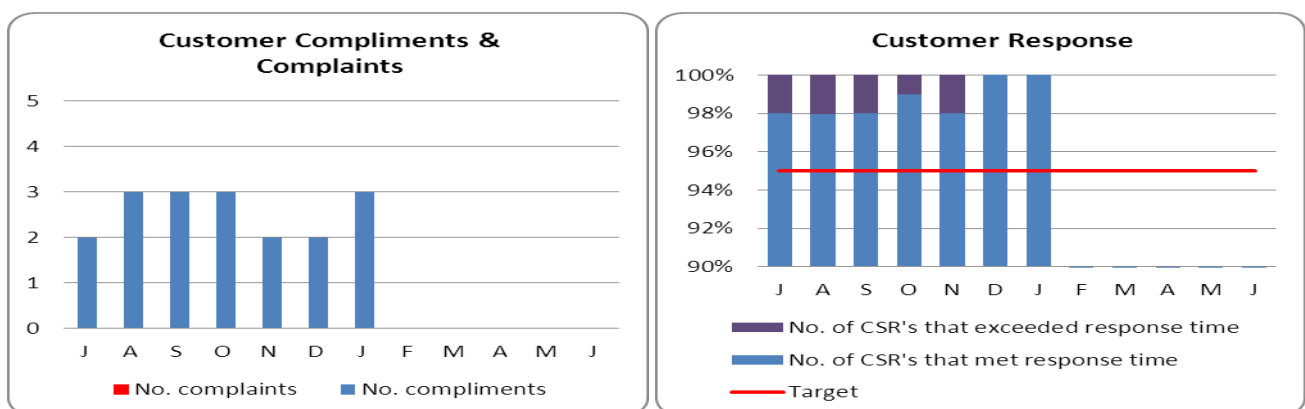
common ground when dealing with the difficult issues to ensure they are resolved in a timely and professional manner.



Figure 4: Downer Values

9 IMPROVED CUSTOMER SERVICE

Customer Service has a 40% KRA weighting which is split into response and completion of customer service requests and stakeholder confidence. Since commencement of the Central contract on 1 July 2013 we have yet to receive a single complaint compared to two to three regular compliments per month. We have also achieved a very high response to customer service requests as indicated in the following graphs.



Stakeholder confidence (which has a weighting of 35%) is measured through monthly customer surveys carried out by the Council.

Notwithstanding the above results the bundling of road drainage maintenance such as cesspit cleaning with the downstream network maintenance activities has eliminated any uncertainty as to which asset owner and associated service provider is responsible for flood events. This ensures that immediate action is taken to alleviate or make the situation safe.

We have also established close working relationships with community groups such as Friends of Oakley Creek and Friends of Meola. These groups have an intimate knowledge and vested interest in the maintenance and care of these environments, by working closely with them and obtaining their feedback on our maintenance schedules we can coordinate our weed control and removal of noxious weeds to fit with their planting and beautification activities. By sharing information in this way and working with the community we can not only work more efficiently but achieve a high level of customer and stakeholder satisfaction.

10 INNOVATIVE THINKING

Innovative thinking is to go beyond the obvious and create something new. Having created a virtual team and introduced a range of experts from across the business not all things were obvious to all people.

The interactions between our transport and water experts in particular resulted in a number of activities being viewed with a fresh pair of eyes and one that challenged traditional methodologies.

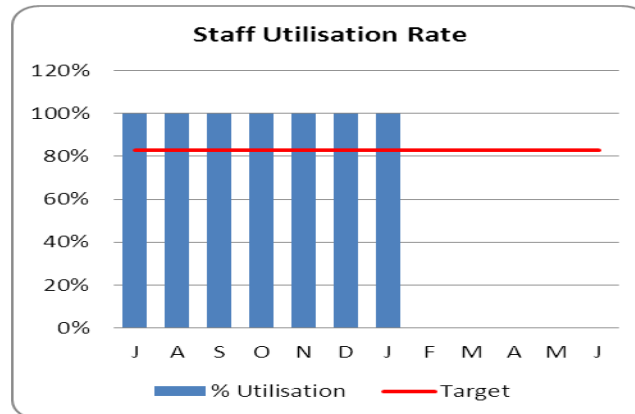
The following two examples highlight the results of having those fresh pair of eyes take a look at some routine activities.

1. Since the commencement of the contract we have been working methodically clearing noxious plants, documenting sites and understanding the individual specifications of these water bodies. The clearance of these sites has identified a number of opportunities for a more proactive approach to the maintenance and the suitability for planting. Strategic planting and beautification of watercourses and ponds allows Council to minimise operational expenditure over the duration of the contract term in addition to reducing health and safety hazards such as accessing areas with limited access and steep embankments and boggy waterways. Some of the sites that we have identified include Meola Creek, Motat, Haileys Place, and Oakley Creek.
2. Maintenance of the various stormwater treatment devices such as Ecosols, Storm 360 Filters, Sand Filters and Hynds Downstream defenders have in the past been maintained by different contractors over the years but are all part of a single contract. Since commencing the Central contract last July we have been reviewing the various supplier methodologies that we have been working too. A common issue with many of these devices is that they require a confined space entry which adds a significant amount of risk and cost to the job. By saying 'no' to confined space entries for all routine maintenance activities our supervisors and field staff were faced with developing alternative ways of working. To date this approach has eliminated 90% of confined space entries resulting in a significant reduction in risk to staff as well as time spent onsite.

We are confident that by continually challenging the way we do things and applying innovative thinking further efficiencies can be achieved.

11 EFFICIENCY GAINS

The contract allows for an annual rolling cost reduction target of 1.5% which provides a realistic and achievable target for the contractor to strive toward without it completely eliminating profit should sufficient reductions not be achieved. From Council's perspective it provides some cost certainty and counters the potential effects of inflation.



To date the Central contract has achieved a 100% staff utilization rate. This is largely due to the fact that resources engaged under the virtual delivery model cannot allocate any non-productive time under the contract.

While the majority of the financial gains were realized through the competitive tendering process when expectations are set around productivity and utilization rates we believe that moderate improvements can still be achieved. This is based on our experience in long term service contracts which become more efficient as time progresses as staff identify better ways of doing things. Where there is good collaboration with the Client this process can be accelerated.

In addition to better utilization under the virtual team approach further reductions in overhead and margin can be achieved with the minimisation and elimination of sub contractor involvement.

Having first secured the Central contract further savings were built into the Northern contract by proposing a single Contractors Representative for both contracts. The concept of using centre's of excellence with less emphasis on multi skilling also enables training requirements to be reduced as well as reducing the risk of poor quality work and rework.

Further economies of scale have been realized through the ability and opportunity to carry out minor capital works which have led to more competitive rates as a result of better work continuity and use of permanent rather than contract staff.

12 CONCLUSIONS

We have drawn the following conclusions from our involvement in the stormwater maintenance contracts to date.

- Bundling contracts and increasing scope by whatever means (i.e. capital works) provides economies of scale and the opportunity to make efficiency gains.
- Achieving a critical mass allows for better job planning and optimization.
- There are strong synergies between road drainage and stormwater network maintenance activities.
- Negotiating with all tenderers during the procurement process is likely to result in a better outcome.
- Virtual teams improve staff utilization, reduce overheads, promote centre's of excellence and allow contract managers and supervisors to focus on service delivery and customer service rather. The maximum benefits can be achieved if the virtual team exists within the same organization rather than as a series of sub contracts.
- Collaborative working, good working relationships and organisational alignment are all key success factors.
- Making changes without a solution in mind can stimulate new thinking, new ideas and alternative ways of working.

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Marcel de Leur – Contract Manager, Stormwater, Downer

REFERENCES

RFP For the provision of Stormwater Maintenance Services

Case Study – Anglian Water Creates a Platform for Business Growth with ClickSoftware