

TO: Infrastructure Services Committee

FROM: Asset Planning Manager 3 Waters

MEETING DATE: 14 June 2010

SUBJECT: **OUT OF ZONE WATER CONNECTIONS**

SUMMARY

A review has been undertaken of the current policy of not allowing 'out of zone' connections to water schemes. The report identifies that there are a number of technical, environmental and planning considerations that support the retention of the current policy.

The issue of existing irregular water connections is dealt with in a separate report.

IMPLICATIONS FOR:

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| (i) Policy: | Yes – the report recommends that the New Reticulated Services Policy should be amended |
| (ii) Approved Annual Budget: | No |
| (iii) LTCCP/ Funding Policy: | No |
| (iv) Activity Management Plans: | No |
| (v) Community Boards: | Yes – Several community boards are likely to have an interest in the report |
| (vi) Sustainability: | No |

RECOMMENDATIONS

That the Committee

- 1) Receive the report on out of zone water connections.
- 2) Re-confirm the intent of the bylaw in not allowing new connections outside of existing water supply zones.
- 3) Confirm that new requests for connections outside of the supply zones should be considered via the New Reticulated Services Policy and a Special Consultative Procedure.
- 4) Amend the New Reticulated Services Policy to cover requests for water connections from individual single properties.

1 INTRODUCTION

During the consultation for the New Reticulated Utility Services (Water, Wastewater and Stormwater) Policy, a submission was received suggesting that properties outside of existing water scheme boundaries should be allowed to connect to water schemes where the water network infrastructure is immediately adjacent to the property in question. Consequently, the Infrastructure Services Committee requested a report on the 'current policy relating to out of district supply connections in situations where new infrastructure of significantly upgraded infrastructure is or had been installed' (2 Feb 2009).

On 19 April 2010 the Infrastructure Services Committee received a report on 'Out of Zone' connections to water supply infrastructure. This report provides some supplementary information.

2 BACKGROUND

2.1 Current Policy

The boundaries of Dunedin's water supply areas are defined in the 'Dunedin City Council Water Bylaw 2008' (Attachment 1). The Bylaw states that 'no new connections will be permitted to properties lying outside these water scheme boundaries'. Furthermore, it states that 'any further adjustment to the water scheme boundaries and rules or the addition of any new water scheme areas shall be made by way of the Special Consultative Procedure'.

Legal advice has confirmed that under the current Bylaw, a new connection outside of an existing water scheme can only be granted after a Special Consultative Procedure has been undertaken, and that neither the Council nor any Council Officer has the authority to approve a new connection without such a procedure having been undertaken.

The New Reticulated Services (Water, Wastewater or Stormwater) Policy provides for an existing community to apply for a reticulated water supply, and provides guidance for consideration of such a request. In the event that the Council intended to provide new reticulated services under this policy, it would be necessary to go through the special consultative procedure to define a new or altered water scheme boundary.

The New Reticulated Services (Water, Wastewater or Stormwater) Policy does not however provide a mechanism for considering individual applications to connect to water supply infrastructure from properties outside of the water supply zones.

2.2 Previous Policy

Prior to the adoption of the Water Supply Bylaw, the provision of water supply was guided by the relevant operational standards in the Council's strategic plan, which was adopted in 1992. The standards were:

Operational Standard (a)

'Basic and efficient supply of water is provided in areas where there is existing reticulated drainage; and in areas within rural water scheme boundaries. In urban areas, water customers must also have reticulated drainage services. However exceptions may exist where soil conditions permit the unusual combination of a water reticulation system and septic tank effluent and other on-site disposal. Water can also be provided to those customers located within the boundaries of a rural water scheme area. Water cannot be supplied outside these areas.'

Operational Standard (d)

'Where a public wastewater system is provided, foul drainage from properties will be connected. Connection to a public wastewater system is mandatory for appropriately zoned properties. Properties zoned rural will not be permitted to connect to the wastewater system, although exceptions may exist.'

During this period, the Executive Management Team had the delegated authority to grant exceptions on a case by case basis, and a small number of such exemptions were granted.

2.3 Current Situation

The Council provides water to approximately 49,000 properties, including approximately 800 properties lying in rural areas, outside of designated water schemes.

There are approximately 1100 unconnected properties lying within 50m of the water network but outside of a water supply zone. This represents the potential number of requests for connection to the water supply if the Council were to consider exceptions to the policy for existing properties. Of these, only 12 have connections to reticulated sewerage.

3 RISKS AND ISSUES

Out of zone connections to the water supply network present a number of legal, technical, planning and environmental issues.

3.1 Planning Considerations

One of the purposes of the zonings in the District Plan is to enable clear distinction between areas of rural character and areas of urban character, and to avoid unintentional urbanisation of the City's rural hinterland. As such, it is generally recognised that the provision of services should be appropriate to an area's rural or urban nature. Allowing rural properties to connect to water services gives these properties a stronger case for subdividing to smaller sizes than provided for under planning requirements. The increasing density puts greater demand on other infrastructure leading to requirements or expectations of upgrades. Under the district plan Dunedin has plenty of capacity within appropriately zoned areas to meet the demands of growth. In order to maintain affordability of infrastructure, it is highly desirable to constrain development outside of the appropriately zoned areas.

3.2 Design Capacity, Reduction in Asset Life and Impact on depreciation

During the design phase of network extensions (such as the northern pipeline) considerations are given to the required design capacity of the system. The design capacity is usually taken as the theoretical demand for the maximum allowable density of the serviced area as defined under the district plan. Where the limits of supply zones are clearly identified, this is a relatively straightforward calculation. However, the potential need to service adjacent properties that are 'out of zone' adds considerable uncertainty and/or the potential for future capacity to be used for areas where it was not intended. Furthermore, it can lead to reduced service levels for areas that are zoned, and who have an expectation of receiving the service to an agreed standard. Where connections are isolated from main reticulated areas, the cost of service per property tends to be higher, as demonstrated in the examples below.

Case Study 1 – Northern Schemes

There are approximately 45 residential properties on land parcels that cross or are adjacent to the new northern pipeline. The actual distance from the pipeline to the residential buildings varies from under 20m to over 200m. However, 34 lie within 100m of the pipeline.

The design capacity for the Northern Pipeline was based on the population projections for the serviced area to 2050, which is approximately 1,800 properties. If all 45 adjacent properties were to be allowed to connect, this would use up approximately 2.5% of the design capacity of the scheme.

The cost of the northern schemes was approximately \$9.4m. Using 2.5% of the design capacity of the scheme for 'out of zone' connections would increase the annual cost of depreciation by \$6k due to the reduced life of the scheme. This would equate to an additional cost of \$133 per 'out of zone' property, and demonstrates that the cost burden of allowing these properties to connect is disproportionate to the revenue generated.

Case Study 2 – Rotary Park Water Main

Along the length of the Rotary Park to Grassy Point watermain there are 54 'out of zone' properties connected to the water supply. This represents an equivalent to approximately 10 years for growth within the water supply area supplied by the water main.

The watermain is currently part of an upgrade programme costing \$3.5m. Despite having a design life of 100 years, the existing pipeline was only constructed in 1968. One of the main drivers for the project is insufficient capacity to service properties at the far end of the supply during periods of peak demand.

Based on a reduction in the service life of 10 years, this is creating an additional annual depreciation cost of \$3.5k or \$64 per 'out of zone' property.

3.3 Constraints of future supply arrangements

Case Study – Northern Schemes

The northern water scheme was recently commissioned, providing water from the metropolitan area to the communities of Waikouaiti, Warrington, Seacliff and Merton. This included decommissioning parts of the existing water supply infrastructure. However, there were a small number of properties that were outside of the main supply zones and were receiving water. As the Council is not legally able to discontinue supplying water to these properties, additional infrastructure had to be laid to ensure continued supply. The additional infrastructure to service one of these properties was \$30k, in addition to the ongoing maintenance costs to maintain some existing infrastructure that might otherwise have been decommissioned. This demonstrates the high ongoing costs that can be incurred by servicing isolated properties outside of the main supply areas.

3.4 Impacts on Levels of Service and Performance Measures

In the vast majority of cases, network infrastructure lying outside of the water scheme boundary is designated as 'distribution mains' rather than 'reticulation'. These pipes are typically large diameter and operate at high pressure. Connecting properties directly to the distribution network has a number of risks. There would be significant pressure changes between the distribution pipe and the customers' connection, which would need to have pressure reducing valves or similar to prevent damage to customers' pipes and fittings. Connections to a high pressure main provide weak spots which are more prone to damage. Any burst on the distribution main would cause disruption to a significant number of consumers. The Council has designated levels of service and performance targets that are appropriate for customers serviced from the reticulation network. However, where customers are fed directly from the supply network, it may not be possible to provide the same levels of service, which may impact on the achievement of performance targets.

3.5 Environmental Considerations

In many cases, properties lying outside of the water scheme boundaries are not connected to reticulated wastewater systems and rely on septic tanks or similar systems for wastewater disposal. Connection of such properties to reticulated water supplies is likely to increase the water consumption of the households in question and may overwhelm wastewater disposal systems. This is likely to create either environmental problems, increased demand to extend reticulated wastewater systems, or both.

There are over 550 rural properties that have a water supply and do not have reticulated sewerage. There have been cases where the provision of water supply has created an environmental nuisance from inadequate wastewater disposal and consequently pressure has been put on the Council to provide reticulated wastewater systems. Whilst this is a significant legacy, it is important that the potential problem is not made worse by continuing to allow water connections in areas with inappropriate wastewater disposal.

3.6 Funding and Financial Considerations

Any additional connection to the reticulated network would result in collection of a one-off connection fee which is charged 'at cost'. In addition, each property would pay for their water

use either through the uniform annual charge (currently \$383) or based on metered water charges.

The Council is currently reviewing the approach to collection of development contributions, to ensure that future developers pay their appropriate share of capacity for growth provided during infrastructure upgrades, extensions or renewals. In the scenario that design capacity is used by 'out of zone' connections, as opposed to being reserved for future growth within the service boundary, the Council may over recover development contributions and may be required to undertake additional upgrades to service growth that had originally been provided for.

Out of zone connections may present a disproportionate financial burden compared to 'in zone' properties, either through the impact on annual depreciation due to reduced service life, or through higher future maintenance or upgrade costs as identified in section 3.2 above.

3.7 Cumulative Effects

Whilst it might be possible to overcome the specific issues with any individual application, the impact of allowing out of zone connections to water supply systems is likely to be incremental and to manifest itself over the long term.

The Infrastructure Services Committee raised the possibility of allowing connection only to properties that were in existence at the time of a significant asset upgrade. Whilst it may be possible to make that distinction in principle, it is anticipated that it would be extremely difficult to enforce in practice. For example, where a new 'out of zone' property is developed between two existing properties that are connected to the network, in time it would become increasingly difficult to maintain a stance of not allowing that property to connect.

4 OPTIONS

The options for dealing with new requests to connect are dealt with separately from the options for dealing with 'out of zone' properties that already have connections to the water network.

4.1 Requests for New Connections

As noted above, under the provisions of the Council's current Water Bylaw, any request for an additional connection would need to go through a Special Consultative Procedure. The reasons for having designated water supply areas, and not allowing connections outside of these areas are discussed above. It is considered good practice to maintain the same general position as is currently in existence. However, the Council has expressed a desire to have some flexibility in this regard. The options for achieving this are outlined below.

Option 1 – Status Quo - Reconfirm the water Bylaw

In practice, this would mean that any request for a new connection either from an individual or a community would need to be treated as a potential change to the water supply zone. The boundaries for the potential new zone would be established and considered subject to the Special Consultative Procedure. Once a new zone is designated, all properties within the zone boundary would have the right to connect. There would not be a possibility to restrict connections only to existing properties. Furthermore, any property within the designated water supply zone (including vacant sections) would be charged a half water rate.

The New Reticulated Services Policy already provides clear guidance for considering connection of existing communities to water infrastructure. It is recommended that the New Reticulated Services Policy is amended to include the consideration of requests from individual households. This would therefore allow all requests to be considered under a consistent set of principles prior to a Council decision whether to progress the request via the Special Consultative Procedure.

Option 2 – Amend the Bylaw to reinstate the ability for the Executive Management Team to grant ‘exceptions’ to the restriction on new connections

Having a provision to grant exemptions makes an implicit assumption that there are situations in which a waiver might be granted. For the reasons outlined above, it is likely that there would be few, if any, situations where approval to connect could be granted.

This option is considered to be subject to a high risk that over time there will be an increasing number of requests for exemptions and it will become increasingly difficult for the Council to decline the requests. Consequently the cumulative effects of out of zone connections will be realised.

5 CONCLUSION

This report has discussed the reasons why connections outside of the water supply zones are undesirable. The recommendations arising from the discussion are as follows.

1. Confirm the intent of the bylaw in not allowing new connections outside of existing water supply zones.
2. Confirm that new requests for connections outside of the supply zones should be considered via the New Reticulated Services Policy and a Special Consultative Procedure.
3. Amend the New Reticulated Services Policy to cover requests for water connections from individual single properties

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Attachments:

Attachment 1 : Water Supply Scheme Boundaries, as defined in the Dunedin City Council Water Supply Bylaw 2008.