

**7. CHRISTCHURCH WASTEWATER TREATMENT PLANT  
CAPACITY UPGRADE CHARGE**

RR 9321

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Corporate Plan Output: Liquid Waste Capital Asset Improvements	

The purpose of this report is to clearly explain the basis for the Wastewater Treatment Plant Capacity Upgrade Charge, and to recommend the implementation of this new charge.

**BACKGROUND**

In August 1998 this Committee considered a report that proposed the introduction of a charge on each new lot or dwelling created in the City. The Committee resolved as follows:

- 1. That a Wastewater Treatment Plant Capacity Upgrade Charge be established as soon as possible at \$560.00 + GST per lot created.*
- 2. That the charge be indexed to the Council's actual costs of borrowing and adjusted each year accordingly.*
- 3. That this charge be applied to all new lots created that will connect to the Christchurch Wastewater Treatment Plant and to any new dwellings that a building consent is applied for in the situation where it is on an existing lot.*
- 4. That in due course when further information is known that the Waste Management Unit reports back to City Services Committee concerning the provision of a similar charge to recover the costs of the capacity upgrade of the Southern Relief System.*

The concept of a Wastewater Treatment Plant Upgrade Charge is simply to apportion the identifiable costs of the new capacity required to meet city growth to the development of the new properties that are producing the need for the extra treatment capacity. A significant portion of the \$33.2m (February 1999) upgrade of the plant is related directly to capacity, for a known population increase and this charge can therefore be clearly calculated.

The charge would be applied to each new lot created at the time of subdivision, or at the time of building consent for any existing lots or cross lease situations where a new dwelling is to be built. The charge would only apply to lots or dwellings discharging to the Christchurch Wastewater Treatment Plant, not to those in the catchment of Belfast or Templeton Plants. As Belfast and Templeton are completely separate systems the charge for the

Christchurch Wastewater Treatment Plant does not apply to those areas (see attached plan).

#### **LEGAL REQUIREMENTS**

Legal opinion from Buddle Findlay is clear that Upgrade Charges are expressly permitted under Section 283 of the Local Government Act, and that a city-wide cost sharing basis is permitted.

The overriding requirement is that the charges be “fair and reasonable”. The basis of the charge must therefore be clear and directly related to the requirement for increased capacity. The charge cannot relate to increased capacity already provided but can only be based on increased capacity to be provided.

#### **APPORTIONING UPGRADE COSTS TO THE NEED FOR CAPACITY INCREASE**

The need for capacity increase was covered in the Beca Steven report of August 1996 “Capacity of the Christchurch Wastewater Treatment Plant and Options for Upgrading 1996 – 2026”. As well as addressing the need for increased capacity at the plant to accommodate further city growth, this report also addressed the likely needs associated with gaining resource consent. The existing consent expires in October 2001. The Capacity Upgrade Charge will only include costs associated with required capacity increases (both in terms of flow and biological load to the plant) that are yet to be built, and will **not** include any costs associated with obtaining resource consents, for discharges of effluent to the environment or discharges to air or any costs associated with capacity works already completed.

#### **TOTAL PROJECT COST**

The August 1996 Beca Report provided some detail of the elements of the proposed \$30m upgrade so that it is relatively easy to differentiate between those elements that are associated with capacity increase and those elements that are associated with consent issues.

By far the largest part of the capacity increase expenditure is the construction of new secondary clarifiers and the associated conversion of the existing secondary sedimentation tanks to solids contact-aeration basins.

The final tender prices for the first two of the four proposed clarifiers has necessitated a review of the costs of the overall upgrade project. The schedule of expected costs developed in August 1996 as part of the original report has been reviewed and updated to reflect the new information and inflation etc. In 1999 dollar value the total cost is now expected to be \$33.2m.

The attached table and notes show the apportioning of the costs of the entire \$33.2m upgrade to the parts of the upgrade relating only to capacity. The total cost relating to capacity only totals \$23.02m.

#### **CALCULATION OF CAPACITY UPGRADE CHARGE**

The August 1996 Beca Capacity Report considered the required treatment plant capacity for a thirty year period from 1996 to 2026. The expected population increase predicted in the report is 112,000 people. The works programmed for connection over the next seven years will accommodate that population increase although the time taken to achieve such a population increase can not be predicted with great accuracy. In other words this level of increase may occur before or after 2026.

From the 1998 Christchurch City Council Handbook, the 1996 census gave the usual resident population of Christchurch as 309,028 people and 116,621 occupied dwellings. This gives an occupancy rate of 2.65 people per household, (309,028/116,621) so the 112,000 increase in population gives expansion capacity for 42,264 households or new connections (112,000/2.65).

The cost per new dwelling unit for providing the increased capacity is therefore \$544.67 (plus GST) (\$23,020,000/42,264) per connection.

#### **POSSIBLE INDEXING OF CHARGE**

The previous report to the City Services Committee, 13 August 1998, discussed the possibility of indexing the Capacity Upgrade Charge to either the CPI or to the Council's actual costs of borrowing. The CPI is not considered to be an appropriate index as with the passage of time it does not closely relate to the change in the cost of construction. Whilst the concept of indexing the charge to the cost of the Council's borrowing might appear to be valid because all asset improvement and new asset works are funded from loans, the cost of all loan servicing is met from operational budgets which are met not only by new ratepayers but also by existing ratepayers. Also the level of Council borrowing also fluctuates widely depending on Council-wide commitments at any point in time and capital sums from its Trading Enterprises. Therefore in the interests of simplicity of applying the capacity upgrade charge and for the charge to be seen as fair and reasonable it is considered that the Council should resolve to not attempt to index the charge at all, but to maintain the charge at the flat rate. The charge would of course be reviewed when actual costs of capacity improvements are known following completion of major stages of works over the next few years.

#### **NEW INDUSTRIAL PREMISES**

In the interest of fairness it is proposed that any new industrial connections be treated in the same way as domestic connections, ie they too should pay the

Capacity Upgrade Charge. Where industries discharge more than the equivalent of a domestic connection they pay trade waste charges on the basis of flow volume and waste strength. It would therefore seem fair that industry pays a Capacity Upgrade Charge at time of subdivision or building consent, and any normal trade waste charges that are applicable.

#### **DURATION OF CAPACITY UPGRADE CHARGE**

It is proposed that the Capacity Upgrade Charge remain in place until either the 42,264 new connections/dwelling/units have been made or until the treatment plant **reaches full capacity** following the currently programmed upgrade work, whichever occurs first.

#### **EXPENDITURE OF MONEY COLLECTED**

The Act requires that any money collected as part of a cost share area must be spent on the works within a five year period.

This requirement is easily satisfied as the major part of the expenditure occurs in the first few years of the project, while the capacity upgrade charge will be levied over a 30 year period, so that all charges collected will be spent within the five year limit and in most cases will have been spent before the charges are collected.

#### **WATER SERVICES HEADWORKS CHARGE**

Precedent for a Wastewater Treatment Plant Capacity Upgrade Charge already exists by the existence of a Water Supply Headworks Charge of \$550.00 (including GST) per new lot created (note also there are already approximately 40 Cost Share Schemes in the City Plan covering both sewer and stormwater). The Water Services Unit has applied a Headworks Upgrading Charge since 1992 to new lots created in new subdivisions. Due to legal uncertainty this charge has not been applied in the case of new dwellings on existing lots where building has preceded subdivision. The legal situation in respect of when charges can be applied has been clarified and it is now clear that that charge can in fact be made when a new dwelling is erected. To be consistent it is recommended that the Water Supply Headworks Upgrading Charge be applied in the same manner as the Wastewater Treatment Plant Capacity Upgrade Charge, ie either at subdivision stage for each new lot created, or at building consent stage for new dwellings on existing lots or additional dwellings on existing lots. That is, the Headworks Charge and the Capacity Upgrade Charge to both apply to any new dwelling.

#### **FAIRNESS AND REASONABLENESS OF CHARGE**

Every effort has been made to clearly identify just those costs associated with capacity increase. Some of the costs associated with capacity improvements have not been included as these works are now complete. A large part of the costs, those associated with clarifier construction are accurately known as tenders for the first stage of these works closed in January 1999.

Design and construction monitoring fees are considered to be very reasonable at 9.4% of the actual cost of works, ie 8.4% of total costs, when fees for upgrade works are often of the order of 12% of total costs.

The population projections used in the Beca 1996 Report used the high population growth rate prediction rather than the medium or low prediction rate. The calculated upgrade charge of \$544.67 (plus GST) is therefore lower than it would otherwise be if a medium population growth rate prediction was used.

In order that adequate time is available to advise stakeholders that a Christchurch Wastewater Treatment Plant Upgrade Charge is to be applied and to adequately notify the introduction of the charge it is suggested that the charge not be implemented until 1 May 1999.

#### **SUMMARY**

The Council has already approved in principle the establishment of a Wastewater Treatment Plant Capacity Upgrade charge. Legal advice has clarified the appropriate basis of the charge, and the quantum of the proposed charge is now more accurately defined following receipt of tenders for a major part of the upgrade work.

Every effort has been made to ensure the charge is fair and reasonable as required under the Act. The Capacity Upgrade Charge apportions the cost of providing the extra capacity required to those producing the need for that extra capacity (note that precedent already exists for a Wastewater Treatment Plant Capacity Upgrade Charge through the existence of a similar charge for water).

For the sake of simplicity and public perceptions it is suggested that the charge not be indexed to CPI on the cost of borrowing, but be reviewed as construction costs become available. Known costings and current estimates for future works indicate a charge of \$544.67 (plus GST) per new lot or new dwelling. It is suggested the level of the charge be rounded down to \$540.00 (\$607.50 including GST). It is suggested that the charge be applied to industrial connections at the same rate because industries already pay additional trade waste charges for high flows and loads. A separate report from the Water Services Unit recommends that the Water Supply Headworks Upgrade Charge be applied in the same way as the Wastewater Treatment Plant Capacity Upgrade Charge, ie, either on a per lot basis at the time of

subdivision **or** at time of building consent application for each new dwelling unit on an existing lot.

Note the attached plan shows that the Christchurch Wastewater Treatment Plant Upgrade Charge would apply over the whole of the city area where dwellings are to be connected to the sewer system discharging to the Christchurch Wastewater Treatment Plant. The catchments of the Templeton and Belfast Treatments Plants are excluded.

- Recommendation:**
1. That under Section 283 of the Local Government Act the Council declare a Christchurch Wastewater Treatment Plant Capacity Upgrade Charge Cost Share area as shown on the attached plan.
  2. That the Capacity Upgrade Charge of \$607.50 (\$540.00 plus GST) be applied to all new connections to the Christchurch Wastewater Treatment Plant either at subdivision or at time of building consent for each new dwelling unit or connection.
  3. That the Capacity Upgrade Charge be applied from 1 May 1999.

**Chairman's**

**Recommendation:** That the above recommendation be adopted.