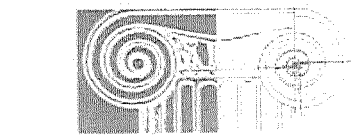

Policy on Development Contributions and Financial Contributions

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Detailed Supporting Document

Version of 1/07/2009

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PART 1 Policy on Development Contributions and Financial Contributions

Introduction

This Policy on Development Contributions and Financial Contributions ("The Policy") is the result of the 2009 Policy Review process and replaces the 2006 Policy. It is proposed that these changes will apply to applications for resource consent, building consent or service connection as follows:

- For any application lodged after 13 March 2009 and granted on or after 1 July 2009, Council will apply the provisions of the 2009 Policy.
- For applications received prior to 13 March 2009, which are granted on or after 1 July 2009, Council will apply the provisions of the 2006 Policy.
- For applications which are granted prior to 1 July 2009, Council will apply the provisions of the 2006 Policy.

Key Changes

This Policy is an entire review of the 2006 Policy. Key changes to the Policy are described below.

- The contributing areas used to assess the Water Supply Development contributions have been modified. The Coastal and Valley regions have been replaced with a scheme by scheme network approach. This is a fairer way of apportioning the capital programme to each scheme.
- The split of the water supply contributions by reticulation and headworks network approach.
- The model used to calculate the contributions has been enhanced and allocates the demand for infrastructure based on a developments impact on the network.
- The roading development contribution is calculated in the same manner as the water and wastewater. A District wide network approach is used for roading.
- The development contributions are based on the land use and the size of a development. Thus removing the need for case by case assessments based on the estimated water flow or the wastewater flow and biological oxygen demand.

Overview

Growth in the population (permanent and seasonal) and economic activity of the District will ultimately lead to major additions to the existing urban areas, new greenfields development in the rural environment and in-fill development of existing urban areas. Greater demand for water and improvements in roading will place a significant strain on existing reticulation and roading networks as well as on community infrastructure such as reserves.

The Development Contributions Policy provides a transparent and consistent basis for requiring contributions from developers towards capital expenditure for this infrastructure.

Council is required to have a Development Contributions Policy as a component of its Funding and Financial Policies in the Waitaki Community Plan.

The Policy is intended to set the baseline for financial and development contributions from developers and is likely to be amended and updated over time as assumptions are developed, and as the growth predictions are refined. These growth predictions will also alter as scenarios change the expected effect on our community, e.g. the cancellation of Project Aqua.

This policy contributes to community outcomes by ensuring the provision of appropriate infrastructure to meet the needs of growth.

Historically, Council has sought a contribution towards the expansion of the District's reserves, community facilities and infrastructure from those developments which place additional demand on these services. In order to levy these contributions Council may employ either of the following:

- Financial Contributions imposed as a condition of a resource consent pursuant to Section 108 of the Resource Management Act (RMA) 1991. Chapter 14 of the District Plan and any subsequent variations shall be considered in this policy.
- Development Contributions as defined by the provisions of Part 8 Subpart 5 and Schedule 13 of the Local Government Act 2002 (LGA 2002). To make use of these provisions Council must adopt a Policy on Development Contributions as part of the Council's Long Term Council Community Plan ("CCP"). Development Contributions are based on the fiscal implications of growth.

Development contributions may be sought in respect of any development that generates a demand for reserves, network or community infrastructure. Council will assess whether development contributions are payable in relation to the development when an application for one of the following is made:

(i) Resource Consent

(ii) Building Consent

(iii) Authorisation for a Service Connection

Council can require a contribution at any of these trigger points.

This policy has been prepared to meet the requirements of Section 106(2) of the LGA 2002. The full methodology that demonstrates how the calculations for development contributions were made is contained in a separate document which is available to the public as per section 106 (3) of the Act.

Reasons for using Development and Financial Contributions

Council intends to entirely fund the portion of capital expenditure (CAPEX) that is attributable to growth by either Financial or Development Contributions wherever it is legally, fairly, reasonably and practically possible to do so.

Council considers that Development and Financial Contributions are the best mechanism available to ensure the cost of growth sits with those who have created the need for that cost. Council considers it inappropriate to burden the community as a whole, by way of rating or other payment means, to meet the cost of new growth.

Section 101(3) of the LGA 2002 requires that the following be considered:

The funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of:

a) in relation to each activity to be funded,-

(i) the community outcomes to which the activity primarily contributes; and

(ii) the distribution of benefits between the community as a whole, any identifiable part of the community, and individuals; and

(iii) the period in or over which those benefits are expected to occur; and

(iv) the extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity; and

(v) the costs and benefits, including consequences for transparency and accountability, of funding the activity distinctly from other activities; and

b) the overall impact of any allocation of liability for revenue needs on the current and future social, economic, environmental, and cultural well-being of the community.

Responses to these requirements in relation to the Development Contributions and Financial Contributions Policy are:

Community outcomes

This policy contributes to:

- Our infrastructure enables and responds to economic growth.
- We have affordable, reliable and accessible transport services that meet the needs of the community.
- Our local and central governments demonstrate efficient and effective use of resources.

Distribution of benefits

Council apportions all capital expenditure into the classifications of growth, renewal, level of service and statutory obligations, by the geographic areas of benefit. This apportionment represents the distribution of benefit to the community as a whole, to identifiable parts of the community and to individuals.

Period over which the benefits are expected to occur

Once a Development or Financial contribution has been paid in relation to a subdivision or development, the benefits of the asset, service, or environmental enhancement shall occur indefinitely (at a set level of service for that asset, service, or environmental enhancement as defined at any one time).

Action or inaction that contributes to the need for this activity

The provision of assets, services, or environmental standards that promote the community outcomes may not be willingly provided by the development community. In addition Council is often the only viable supplier (often legally required to provide services) of these services and therefore Council has a moral and legal obligation to supply additional assets, services to meet the new community needs.

Costs and benefits of funding this activity (Development and Financial Contributions)

The benefits to the existing community are significantly greater than the cost of policymaking, calculations, collection, accounting and distribution of funding for development and financial contributions.

Allocation of liability for revenue needs

The liability for revenue falls directly with the development community. At the effective date of this Policy, Council does not perceive any impact on the social, economic, environmental and cultural well-being of this particular sector of the community. At any stage in the future where there may be impacts of this nature, Council may revisit this Policy.

Assets Included in the Development Contributions and Financial Contributions Policy

Assets included in this policy are:

Development Contributions: Pursuant to the provisions of Part 8, Subpart 5 LGA 2002.

- Network infrastructure for water supplies, wastewater and roading – Development Contributions.

Financial Contributions: Pursuant to S108 of the RMA 1991.

- Open Space and Recreation – Financial Contributions
- Services – Financial Contributions for any of the following
    - Water supply system,

- Stormwater collection and disposal system,
- Wastewater collection, treatment and disposal system,
- Trade waste collection and disposal system,
- Energy supply system,
- Telecommunications system,
- Works to avoid, remedy or mediate natural hazards,
- Landscaping, including planting of vegetation,
- Provision of access to land in the subdivision (including roads, cycleways, accessways, service ways, private access, street lighting and associated works).

- Esplanade Strips – Financial Contributions
- Other Assets. Financial Contributions can be required to avoid remedy or mitigate adverse effects of development that are of a non-fiscal nature. These may include contributions that avoid, remedy or mitigate the effects of development on biodiversity, landscape, amenity values or the provision of specific assets by the developer/subdivider (i.e. access easements in gross). Development Contributions provisions of the LGA 2002 specifically relate to fiscal impacts or effects of growth, Financial Contributions for non-fiscal impacts of effects of development will need to be assessed through the RMA and District Plan processes. Chapter 14 of the District Plan and any subsequent variations shall be considered in this policy.

Community Infrastructure development contributions have been excluded from the Policy at this time.

Which Contributions Will Apply

The Financial Contributions rules, policies and objectives under the provisions of Part 14 of the Waitaki District Plan are operative. These will be used for open space and recreation, and services where appropriate development contributions are not available.

The Council cannot require a Development Contribution for a reserve; network infrastructure or community infrastructure if and to the extent that it has under Section 108, 407 or 409 of the RMA imposed a condition on a resource consent in relation to the same development for the same purpose.

Council will retain the right to use all, some or none of the provisions in this Policy notwithstanding that the rules, policies and objectives of the Financial Contributions provisions of Part 14 on the District Plan. Council shall in requiring contributions, clearly identify under what circumstances and upon which legislation (RMA 1991, LGA 2002) a contribution is required.

The following tables indicate:

- Where Financial and Development Contributions are to be sought such that no duplication of levy for the same effect/benefit will occur.
- The development contributions per household equivalent unit for each asset type within each area. The water supply contributions for rural restricted schemes are shown per cubic meter (m^3 or 1,000L) of water.

Table 1: Development Contributions Required By Geographic Area - Within All District Plan Zones (Ex GST)

Water Supply	Wastewater	Stormwater	Roading	Open Space and Recreation	Other Services/ Miscellaneous
Development Contributions **Urban - Unrestricted** **Per HEU** Kurow $2,249 Oamaru $4,331 Omarama $5,174 Otematata $6,022 Palmerston $2,720 **Rural - Restricted** **Per 1m³ of Water** Awamoko $966 Dunback $2,724 Dunrobin $1,724 Duntroon $595 Enfield $3,122 Goodwood $1,634 Hampden/Moeraki $1,606 Herbert/Waianakarua $1,733 Kakanui $1,449 Kauru $1,180 Lower Waitaki $767 Ohau $7,458 Otekaieke $1,050 Stoneburn $991 Tokarahi $1,553 Weston $2,866 Windsor $1,049 Assess and Collect development contributions as provided by Part 8, Subpart 5 and Schedule 13 of LGA 2002 from 1 July 2009. Scheme charge to apply and any network extension costs.	Development Contributions Kakanui $756 Kurow $341 Moeraki $5,001 Oamaru $2,922 Ohau $158 Omarama $583 Otematata $3,641 Palmerston $1,896 Assess and Collect development contributions as provided by Part 8, Subpart 5 and Schedule 13 of LGA 2002 from 1 July 2009. Scheme charge to apply and any network extension costs.	No Development Contributions Council has no capital expenditure programme.	Development Contributions District Wide $1,446 / HEU Assess and collect development contributions as provided by Part 8, Subpart 5 and Schedule 13 of LGA 2002 from 1 July 2009.	No Development Contributions	No Development Contributions

Notes:

1. Development Contributions are contributions defined by the provisions of Part 8 Subpart 5 and Schedule 13 of LGA 2002. Contributions are assessed based on the fiscal implications of growth.
2. As the sequence of development is not always consistent, development contributions shall be required at the first available opportunity. At each and every subsequent opportunity the development will be reviewed and additional contributions required if the units of demand assessed for the development exceed those previously paid for.
3. Development contributions are triggered on the granting of:
    a. A Resource Consent
    b. A Building Consent

c. An authorisation for a service connection for sewer or stormwater
d. An authorization for a service connection for water, including additional units of water by volume supplied to existing consumers

Table 2: Financial Contributions Required By Geographic Area - Within All District Plan Zones (Ex GST)

Water Supply	Wastewater	Stormwater	Roading	Open Space and Recreation	Other Services/ Miscellaneous
Financial Contributions where appropriate. Environmental Effects – Chapter 14 District Plan. Environmental Considerations.	Financial Contributions where appropriate. Environmental Effects – Chapter 14 District Plan. Environmental Considerations.	Financial Contributions where appropriate. Environmental Effects – Chapter 14 District Plan. Environmental Considerations.	Financial Contributions where appropriate. Environmental Effects – Chapter 14 District Plan. Environmental Considerations.	Financial Contributions where appropriate. Environmental Effects – Chapter 14 District Plan. Environmental Considerations. <u>Subdivision</u>: 1) Residential and Township Zones - 7.5% of Land Value - Land, Money, Works or Combination of all 2) Business Zones - 10% of Land Value - Land, Money, Works or Combination of all <u>Developments</u> 1) Residential (In all zones) - 7.5% of Land Value <u>Other Developments</u> 0.5% of value of development exceeding $200,000. (Refer 14.5.4 and 14.5.5 of the Waitaki District Plan) Land, Money, Works or Combination of all.	Other Services as described by 14.1 of the District Plan. Financial Contributions where appropriate. Environmental Effects – Chapter 14 District Plan. Environmental Considerations. o Trade waste collection and disposal system, o Energy supply system, o Telecommunications system, o Works to avoid, remedy or mediate natural hazards, o Landscaping, including planting of vegetation, o Provision of access to land in the subdivision (including roads, cycleways, accessways, service ways, private access, street lighting and associated works). o Esplanade Strips

Notes:
1. Financial Contributions are defined by Section 108 of the Resource Management Act (RMA) 1991 and collected using the provisions of the District Plan. Contributions are assessed based on the environmental effects of growth. These are defined in Chapter 14 of the Waitaki District Plan. Chapter 14 of the District Plan is particularly relevant for contributions of a non-fiscal nature. These will generally be of an environmental nature, including public access, provision of parking and protection of environmentally sensitive sites.

Overview of Calculation Methodology

A brief introduction to the development contributions calculation method is presented herein. A full disclosure of the methodology and calculations is in the detailed supporting document and is available from Council for public inspection at:

- Waitaki District Council, Thames Street, Oamaru.
- Palmerston Service Centre.
- Website - http://www.waitaki.govt.nz

The Development Contributions model applies to Water Supply, Wastewater, and Roading.

The key concept of the approach is to define the total capital expenditure (CAPEX) for growth consumed by the growth population over a period of time. This consumption of CAPEX for growth is then apportioned among the increased number of units of demand (household equivalent units) over the same time period. This defines the long run average cost of growth per unit of demand, defined as the household equivalent unit contribution. This can be represented by the following formula.

$$\text{Household Equivalent Units Contribution} = \frac{\text{Sum of CAPEX for Growth Consumed In Analysis Period}}{\text{Sum of New Household Equivalent Units in Analysis Period}}$$

Step 1: Assess capital expenditure for growth on an asset by asset basis using financial reports (past expenditure) and projected expenditure

Step 2: Apportion capital expenditure for growth by the growth population (household equivalent units) over the design life of the asset, to assess the $/unit of demand.

Step 3: For each year in the analysis period determine the total consumption of asset capacity for each asset identified, namely – $/unit of demand x the number units of demand.

Step 4: Sum for all assets in each year in the analysis period, namely total capacity consumed in that year, measured in $.

Step 5: Sum each year in the ten year analysis period and divide by the growth population (new household equivalent units) projected over the analysis period to determine the household equivalent unit contribution.

Capital Expenditure

Only capital expenditure (CAPEX) is considered in the model. All Operational Expenditure is excluded, including internal overheads.

Capital expenditure is identified from two sources, namely.

a) Activity Management Plans (formally Asset Management plans) and

b) Financial Reports.

The Activity Management Plans are used for assessing projected CAPEX. The AMPs are formal planning documents that include long term expenditure forecasts.

CAPEX for Growth Apportionments

The CAPEX identified above has been apportioned into five cost drivers. These being Growth, Renewal, Level of Service, Statutory and Deferred Works/Other. The growth apportionment is the significant driver for assessing development contributions. The cost drivers have been assessed using several methods.

These are:

- Asset Capacity.
- Using Design Life of New Assets to Approximate Growth Percentage.
- Assessed using professional judgement.

Land Use Differentials

Land use differentials are an important part of the calculations. They enable all development and subdivision types (residential and non-residential) to be considered. Non-residential subdivisions or developments can be described using a common unit of demand, which in this case is the Household Equivalent Unit (HEU).

The following table summarises the differentials for each activity. These can be used to calculate the number of HEU's for non-residential subdivisions or developments based on a standard measure of size.

Table 3: Land Use Differentials

Land Use Category	Household Equivalent Units per Measure of Size Shown		
	Water Supply [1]	Wastewater [2]	Roading
Residential	1 HEU / dwelling	1 HEU / dwelling	1 HEU / dwelling
Rural Residential	1 HEU / dwelling	1 HEU / dwelling	2.09 HEU / dwelling
Commercial	0.28 HEU / 100m^2	0.43 HEU / 100m^2	1.93 HEU / 100m^2 GFA
Industrial	0.23 HEU / 100m^2	0.34 HEU / 100m^2	1.71 HEU / 100m^2 GFA
Accommodation	0.49 HEU / 100m^2	0.49 HEU / 100m^2	0.54 HEU / accomm unit
Primary Industry	N/A - Assumed to be rural schemes only.[1]	N/A - Assumed to be rural schemes only.[1]	0.90 HEU /100 Ha
Primary Industry - Dairy			3.24 HEU / 100 Ha

[1] These water supply differentials are only required to assess urban unrestricted schemes. Rural restricted water supply schemes are based on a development contribution per cubic meter of water.

[2] These differentials are to be used to assess the demand on wastewater infrastructure for wastewater that does not fall within the definition of trade waste contained in the operative Waitaki District Trade Waste Bylaw applying at the time consent is granted. Development contributions payable for discharge of trade wastes will be the subject of an individual assessment.

Assessment of Unknown Size

If the Gross Floor Area (GFA) is unknown, which may be the case at the subdivision or land use consent stage, than the following table will be used to estimate the GFA.

Table 4: Estimation of Gross Floor Area

Category	Building Coverage	No. of Floors
Residential	1 dwelling / lot	
Rural Residential	1 dwelling / lot	
Accommodation	45%	2
Commercial	75%	1
Industrial	75%	1

Note: When an estimate of the GFA is used in the development contribution assessment then Council will only charge 75% of the calculated contribution at this stage.

Residential Units

A residential unit is defined as a residential activity which consists of a single self contained household unit, whether of one or more persons, and includes accessory buildings and a family flat.

Development contributions payable for residential units are as follows:

Gross Floor Area (GFA) equal or less than 60m^2 = ½ x HEU

Gross Floor Area (GFA) greater than 60m^2 = 1 x HEU

Assumptions Used in the Calculation of Development Contributions

All information used in the calculations of either development or financial contributions is the best available at the time. Council is proceeding with numerous strategic studies which will aid in delivering improved information. Council is committed to updating its contribution calculations as the results of these studies become available. Council considers it fiscally prudent to have contributions in place now to ensure the recovery of growth costs. Further delays in the

implementation of these contributions are considered unacceptable and would unfairly burden the existing population with extra costs.

Financial Considerations

The following are key financial considerations applied in the model:

- All figures are in current New Zealand dollars – effective 1 July 2009.
- Inflation is applied to past capital projects only.
- Interest costs have been assessed based on the weighted average cost of capital (WACC) over the first 10 year period from 1 July 2009. The cumulative net deficit between the contributions anticipated to be collected and the growth costs over the 10 year period are used to determine the proportion of the growth cost that will be funded by debt. A 7.5% interest rate has been applied.
- Capital expenditure projections are those that have been applied in the CCP effective at 1 July 2009. The public nature and auditability of these capital projections provides additional confidence to the process. Schedule 10 of the LGA 2002 prescribes a number of disclosures including growth, renewal and level of service apportionments.

Risks

The risks relating to the Policy are listed below. The steps required to mitigate these risks are also shown. This ensures that the correct contributions are collected by Council.

Subsidies: The future portion of the development contributions are based on Council's 10 year LTCCP Capital budget. There are a number of projects in the budget that may be fully or partial subsidised by non Council entities. Examples of these are roading projects and water treatment projects which may have significant levels of Central Government funding. The actual capital expenditure will to be input to the calculation model on an annual basis as soon as it is available. This will ensure the contributions are based on Council's most up to date information and reflect the actual growth related expenditure.

Legislative Improvements: The Policy and calculation model needs to be updated to incorporate any legislation changes.

Growth lower or higher than anticipated: If the growth in the District is more or less than projected, Council risk under or over collecting contributions. The growth projections need to be reviewed regularly to ensure they are as accurate as possible.

Growth Apportionment: Any changes in the growth rates may affect the apportionment of some capital projects and hence the growth CAPEX to be recovered via contributions.

Inflation: If actual inflation is significantly different to the figures used in the calculation model. The figures used to model inflation are taken from the most up to date BERL data and can be updated regularly.

The above variables can be reviewed every year via the annual plan update process or via the 3 yearly LTCCP review process. This ensures that the contributions are based on the most up to date information possible.

Growth Projections – Source Data

WDC Growth Projections Study May 2008 – Rationale Ltd. This study has been adopted by Council to ensure consistent projections. These have been applied for projecting residential and non- residential growth with the exception of the sources below.

Rural Water Schemes – Analysis Completed Internally in conjunction with WDC Growth Projections Study May 2008.

Growth projections are converted into units of demand which are used to apportion the growth cost to define a household equivalent unit (HEU's) development contribution. Assessing total HEU's involves converting non-residential land uses

into HEU's and adding this to the number of dwellings. This is completed using land use conversion factors or land use differentials.

Note: The unit of demand for restricted rural water schemes is a cubic meter of water. The contribution per point, half point or crib point can be calculated based on the applicable volume for each scheme.

Monitoring and Review of Development Contributions Policy

Council will monitor and review the following:

- Annual Calculation Updates:
    - Identify capital expenditure actually undertaken and whether the projections remain reasonable. This may include adding or deleting capital projects.
    - Update capital costs to reflect a year of inflation. This will be based on SNZ Labour cost index and Producer Price Index.
    - Review population projections.
    - Any asset planning initiatives including changing levels of service, updated capital projections.
    - Update any new information that has become available. This may include updated population projections, additional zoning and scheme boundary changes.
    - Correction of any errors or omissions.
- Annual Policy Reviews:
    - Any changes to the policy direction of Council that affects this policy. This may include changes to the LTCCP, Revenue and Financing Policy and strategic studies.
    - New information affecting the land use differential analysis.
    - Amendments to the District Plan.

Refund Policy

Council may allow for refund of contributions in the following circumstances:

a) Where Council required a development/financial contribution as part of subdivision or development activities and where the documentation (resource consent, building consent or connection authorisation) permitting that subdivision or development has lapsed, Council will refund the contribution. This does not prevent Council from requiring development/financial contributions in the future. Council may retain a portion of the contribution of a value equivalent to the costs incurred by the Council in processing/assessing the contribution required by the subdivision or development.

All applications for Refunds must be made in writing to the Chief Executive Officer of the Council.

Developer Provision of Assets - Liability

Council may accept or require a contribution to the equivalent value in the form of land or infrastructure. It may be appropriate, for example, to allow water supply assets to vest in Council through the subdivision consent process, where they meet Council's requirements, and credit them against the contributions required. Any such proposals will need to be the subject of an agreement with Council before the consent is issued, and will be dealt with on a case by case basis.

Unusual Developments

Council reserves the right to individually assess contributions on any development or activity that it deems to create a significantly different demand on infrastructure than could usually be expected under their relevant land use category (an unusual development).

When Will Payment be Required?

Development contributions will be notified on granting of consent with a due date for payment as follows:

- Resource consent (subdivision) – prior to the issue of S224c certificate;
- Resource consent (other) – prior to commencement of the consent except where a building consent is required then payment shall be prior to the issue of the code of compliance certificate or prior to the connection to Council services, whichever comes first;
- Building consent – prior to the issue of the code of compliance certificate or prior to the connection to Council services, whichever comes first;
- Service connection – prior to connection.

If payment is not received the Council may (under section 208 of the LGA):

- Withhold S224c Certificate on a subdivision;
- Prevent the commencement of a resource consent for a development
- Withhold a code of compliance certificate under the Building Act
- Withhold a service connection to a development.

Council may agree to enter into a deferred payment arrangement at the time of issuing a s224c Certificate. Such arrangement would defer payment on terms and conditions approved by Council or approved by officers under delegated authority in accordance with policy approved by Council

In each case the Council may register the Development Contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land for which the contribution was required.

Credits

There are two types of credits anticipated:

1. Actual Credits will apply to those subdivisions or developments where contributions have been paid under this, or the 2006 Policy on Development and Financial Contributions.
2. Deemed credits will apply for the redevelopment of an existing site. Existing activities will be given deemed credits based on the HEU's assessed in terms of the relevant unit (i.e. GFA, dwelling) prior to redevelopment. A development contribution will only be levied if the redevelopment creates additional demand.

Where the Chief Executive considers there is a special case to be considered for granting of a credit or credits, this matter will be referred to Council's Hearings Committee for decision.

Delegations

The Elected Members of Council shall determine where a development or financial contribution will be sought. They have the authority to set the quantum of those contributions.

The Chief Executive Officer will ensure the Policy is implemented.

Capital Expenditure Attributed to Growth

The following tables show a summary of each contributing area for the 10 year period between 2009 and 2018. The tables demonstrate the nature and level of expected capital expenditure required by Council and the portion that is attributable to growth. A table is produced for each activity (asset type) which shows the CAPEX for each geographic area where a contribution has been assessed. The CAPEX attributable to growth is apportioned equitably among the growth population to define a set charge for each unit of demand. The unit of demand is expressed in terms of a household equivalent unit or cubic meter of water.

The following tables also detail the growth related debt levels by development contribution account. These define the interest component of the contributions. The tables show the growth CAPEX consumed by each contributing area and the growth, in HEU's or cubic meters, used to calculate the development contributions.

The tables included in the following section are summarised. The full tables can be found in the appendices of the detailed supporting document.

Capital Expenditure and Debt Funding Disclosures

Table 5: Restricted Rural Schemes - Water Supply Capital Expenditure for Development Contributions (Excluding GST)

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of m^3 of Water Apportioning Growth Cost 2009-2018	Development Contribution Per Cubic Meter of Water ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
Awamoko	310,039	354,720	80,212	229,827	26%	22,466	25,273	47,739	49	966
Dunback	371,216	393,059	145,515	225,701	39%	9,150	76,659	85,809	32	2,724
Duntroon	271,629	301,370	81,489	190,140	30%	2,643	28,092	30,735	52	595
Enfield	674,692	722,449	222,696	451,996	33%	135,521	89,717	225,238	72	3,122
Goodwood	328,552	351,521	96,205	232,347	29%	10,193	48,899	59,092	36	1,634
Hampden/Moeraki	653,164	710,321	223,040	430,123	34%	18,561	99,973	118,534	74	1,606
Herbert/Waianakarua	705,800	771,758	150,919	554,882	21%	28,729	65,596	94,325	54	1,733
Kakanui	682,998	742,460	204,899	478,099	30%	35,402	89,799	125,201	86	1,449
Kauru	417,335	479,058	124,104	293,231	30%	21,678	38,637	60,316	51	1,180
Lower Waitaki	95,922	111,959	28,777	67,146	30%	30,708	7,511	38,219	50	767
Ohau	346,063	382,878	86,519	259,544	25%	1,456	34,574	36,029	5	7,458
Otekaieke	277,736	317,017	57,721	220,015	21%	4,678	19,221	23,899	23	1,050
Stoneburn	413,305	474,355	159,612	253,693	39%	9,557	50,072	59,630	60	991
Tokarahi	1,347,403	1,477,135	526,121	821,282	39%	78,262	318,505	396,767	255	1,553
Weston	2,274,574	2,445,460	876,985	1,397,590	39%	629,041	330,654	959,695	335	2,866
Windsor	406,910	466,512	102,964	303,947	25%	5,663	33,445	39,108	37	1,049
TOTAL	**9,577,339**	**10,502,033**	**3,167,776**	**6,409,563**	**33%**	**1,043,709**	**1,356,626**	**2,400,335**	**1,272**	
Dunrobin	335,000	373,207	82,280	252,720	25%	-	33,945	33,945	20	1,724

Table 6: Unrestricted Urban Schemes - Water Supply Capital Expenditure for Development Contributions (Excluding GST)

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
Kurow	432,083	477,363	159,928	272,154	37%	8,316	70,305	78,621	35	2,249
Oamaru	4,177,317	4,908,275	1,433,662	2,743,655	34%	2,040,209	419,452	2,459,661	506	4,331
Omarama	591,957	637,407	233,059	358,899	39%	59,396	105,323	164,719	32	5,174
Otematata	570,818	632,044	228,145	342,673	40%	9,409	96,864	106,273	18	6,022
Palmerston	467,007	490,771	116,852	350,155	25%	32,267	63,248	95,515	35	2,720
TOTAL	**6,239,181**	**7,145,860**	**2,171,646**	**4,067,535**	**35%**	**2,149,598**	**755,192**	**2,904,790**	**625**	
TOTAL(excl.Dunrobin)	**15,816,520**	**17,647,893**	**5,339,422**	**10,477,098**	**34%**	**3,193,307**	**2,111,818**	**5,305,125**		

Table 7: Restricted Rural Schemes - Water Supply – Debt Funding Ratio – 2009 - 2018 Net Growth Cost vs. Revenue Assessment

Water Supply Contributing Area	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	New Cubic Meters of Water 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Awamoko	310,039	354,720	80,212	49	47,739	55,801	32,472	27%
Dunback	371,216	393,059	145,515	32	85,809	100,437	59,706	56%
Duntroon	271,629	301,370	81,489	52	30,735	36,160	50,754	50%
Enfield	674,692	722,449	222,696	72	225,238	263,583	-2,542	24%
Goodwood	328,552	351,521	96,205	36	59,092	69,078	37,113	51%
Hampden/Moeraki	653,164	710,321	223,040	74	118,534	138,655	104,506	48%
Herbert/Waianakarua	705,800	771,758	150,919	54	94,325	110,089	56,594	39%
Kakanui	682,998	742,460	204,899	86	125,201	146,393	79,698	43%
Kauru	417,335	479,058	124,104	51	60,316	70,563	63,788	32%
Lower Waitaki	95,922	111,959	28,777	50	38,219	44,615	-9,442	0%
Ohau	346,063	382,878	86,519	5	36,029	42,172	50,490	48%
Otekaieke	277,736	317,017	57,721	23	23,899	27,938	33,822	37%
Stoneburn	413,305	474,355	159,612	60	59,630	69,825	99,982	39%
Tokarahi	1,347,403	1,477,135	526,121	255	396,767	465,180	129,354	34%
Weston	2,274,574	2,445,460	876,985	335	959,695	1,123,894	-82,710	18%
Windsor	406,910	466,512	102,964	37	39,108	45,734	63,856	38%
TOTAL	**9,577,339**	**10,502,033**	**3,167,776**	**1,272**	**2,400,335**	**2,810,116**	**767,441**	
Dunrobin	335,000	373,207	82,280	20	33,945	39,643	48,335	46%

Table 8: Unrestricted Urban Schemes - Water Supply – Debt Funding Ratio – 2009 - 2018 Net Growth Cost vs. Revenue Assessment

Water Supply Contributing Area	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Kurow	432,083	477,363	159,928	35	78,621	91,933	81,307	48%
Oamaru	4,177,317	4,908,275	1,433,662	506	2,190,993	2,559,157	-757,331	0%
Omarama	591,957	637,407	233,059	32	164,719	192,629	68,339	41%
Otematata	570,818	632,044	228,145	18	106,273	124,018	121,872	45%
Palmerston	467,007	490,771	116,852	35	95,515	111,525	21,337	45%
TOTAL	**6,239,181**	**7,145,860**	**2,171,646**	**625**	**2,636,122**	**3,079,262**	**-464,476**	
TOTAL (excl.Dunrobin)	**15,816,520**	**17,647,893**	**5,339,422**		**5,036,457**	**5,889,378**	**302,965**	

Table 9: Wastewater Capital Expenditure for Development Contributions (Excluding GST)

Wastewater Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
Kakanui	90,000	100,034	15,869	74,131	18%	21,867	6,448	28,315	37	756
Kurow	50,000	54,961	6,483	43,517	13%	6,739	3,661	10,399	30	341
Moeraki	140,000	158,365	46,359	93,641	33%	146,643	12,615	159,258	32	5,001
Oamaru	2,427,000	2,888,489	641,222	1,785,778	26%	1,542,104	218,809	1,760,913	549	2,922
Ohau	10,000	11,654	806	9,194	8%	673	642	1,315	8	158
Omarama	105,000	120,388	20,425	84,575	19%	11,428	6,782	18,209	31	583
Otematata	35,000	40,788	711	34,289	2%	64,008	567	64,575	18	3,641
Palmerston	110,000	126,709	9,907	100,093	9%	59,892	3,737	63,629	34	1,896
TOTAL	**2,967,000**	**3,501,388**	**741,781**	**2,225,219**	**25%**	**1,853,353**	**253,260**	**2,106,613**	**740**	

Table 10: Wastewater – Debt Funding Ratio - 2009 - 2018 Net Growth Cost vs. Revenue Assessment

Wastewater Contributing Area	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Kakanui	90,000	100,034	15,869	37	28,315	33,111	-12,446	0%
Kurow	50,000	54,961	6,483	30	10,399	12,160	-3,916	0%
Moeraki	140,000	158,365	46,359	32	159,258	186,568	-112,899	0%
Oamaru	2,427,000	2,888,489	641,222	549	1,604,908	1,874,780	-963,687	0%
Ohau	10,000	11,654	806	8	1,315	1,539	-509	0%
Omarama	105,000	120,388	20,425	31	18,209	21,295	2,216	12%
Otematata	35,000	40,788	711	18	64,575	75,357	-63,864	0%
Palmerston	110,000	126,709	9,907	34	63,629	74,294	-53,722	0%
TOTAL	**2,967,000**	**3,501,388**	**741,781**	**740**	**1,950,608**	**2,279,103**	**-1,208,827**	

Table 11: Roading - Capital Expenditure for Development Contributions (Excluding GST)

Roading	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed (2009-2018)	*Future Expenditure* Growth Cost (Capacity) Consumed (2009-2018)	*TOTAL Expenditure* Growth Cost (Capacity) Consumed (2009-2018)	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
District Wide	67,144,363	76,101,429	32,242,435	2,819,430	29,423,004	8.74%	1,180,028	1,243,358	2,423,386	1,676	1,446

Table 12: Roading – Debt Funding Ratio: 2009 - 2018 Net Growth Cost vs. Revenue Assessment

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	2009-2018 Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
2009	8,817,298	8,817,298	478,065	478,065	151	217,892	217,892	217,892	260,172	9%
2010	7,728,994	8,076,799	390,656	868,721	219	316,711	316,711	534,603	334,118	12%
2011	6,199,204	6,646,601	283,160	1,151,881	222	320,580	329,406	855,183	296,698	11%
2012	6,833,227	7,531,519	471,196	1,623,077	224	324,497	341,500	1,179,680	443,397	16%
2013	6,135,549	6,924,847	390,915	2,013,992	227	328,462	353,840	1,508,142	505,850	18%
2014	6,032,706	6,972,184	139,531	2,153,524	230	332,476	366,432	1,840,618	312,906	11%
2015	6,561,937	7,758,261	181,798	2,335,322	100	144,000	162,544	1,984,618	350,704	12%
2016	6,121,504	7,411,232	140,455	2,475,777	100	145,122	167,806	2,129,740	346,037	12%
2017	6,240,159	7,736,204	156,239	2,632,016	101	146,253	173,270	2,275,993	356,023	13%
2018	6,473,783	8,226,484	187,414	2,819,430	102	147,393	178,416	2,423,386	396,044	14%
TOTAL	**67,144,363**	**76,101,429**	**2,819,430**		**1,676**	**2,423,386**	**2,607,817**	**Debt Funding Ratio**		**13%**

PART 2 Calculation Methodology

Definitions

Analysis Period

The period of time over which the assessment of development contributions is undertaken.

Activity Management Plans (AMP)

A plan for the management of one or more asset types that combines multidisciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service. A significant component of the plan is a long term cashflow projection for the activities. *(Source: International Asset Management Manual – Australia/New Zealand Edition (NAMs Manual)).*

Capital Expenditure (CAPEX)

Expenditure used to create new assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of asset stock. *(Source: NAMs Manual)*

Contributing Area

A defined geographic area where development contributions are to be calculated by the method described herein and delivering a standard development contribution in terms of $/Household Equivalent Unit. Contributing areas take an integrated approach to the effects of land subdivision/development and associated physical resources and assesses the overall requirements of an identified geographic area. Contributing areas should enable standard development contributions to be determined efficiently and equitably.

Deferred Works

CAPEX that should have been undertaken at the appropriate time, however has been delayed to a later date.

Design Life

The number of years from the construction date of an asset to the date at which capacity is reached. The design life of an asset may take other variables into account such as the growth rate, expected life of an asset, financing costs and engineering considerations.

Development

Any subdivision or other development that generates a demand for Council services, such as Roading, Wastewater, Water Supply, Reserves, Community Facility and Storm Water, but does not include the pipes and lines of a network utility operator.

Development Contributions

Development contributions are contributions defined by the provisions of Part 8 Subpart 5 and Schedule 13 of LGA 2002. Contributions are assessed based on the fiscal implications of growth.

Household Equivalent Unit (HEU)

A typical residential dwelling, however representing a unit of demand for which non-residential land uses can be described by. Non-residential activities, such as accommodation and commercial, can be converted into household equivalent units using land use differentials. Household equivalent units enables the demand of different land uses to be considered collectively.

Household Equivalent Unit Development Contribution

The household equivalent unit contribution required to be met by a unit of demand to reflect the cost of growth imposed by that unit of demand.

Effective Date

Date at which the development contributions are assessed.

Expected Life

Also known as useful life. The period over which a depreciable asset is expected to be used.

Financial Contribution

Defined by Section 108 of the Resource Management Act 1991 and collected using the provisions of the District Plan. Financial Contributions are assessed based on the environmental effects of growth.

Financial Reports

Annual reports prepared by Council and externally audited, detailing achievement from the previous financial year, at both a financial and community outcome basis.

Gross Floor Area (GFA)

The sum of the gross area of all floors and all buildings on a site, measured from the exterior faces of the exterior walls, or from the centre lines of walls separating two buildings. For the purpose of this policy this definition of GFA, excluding car parking areas, will be used.

Growth Capital Expenditure (CAPEX for Growth)

The proportion of capital expenditure required to meet the demands of growth.

Growth - Population

A growth statistic used to measure growth. In this case a household equivalent unit.

Land Use Categories

The land use activities are defined below.

Residential – means the use of land and buildings by people for the purpose of permanent living accommodation, including all associated accessory buildings, recreational activities and the keeping of domestic livestock. For the purposes of this definition, residential activity shall include emergency and refuge accommodation, and residential care facilities for up to six persons and support staff but excludes visitor accommodation and the non-commercial use of holiday homes.

Rural Residential - The Rural Residential Zone covers areas adjoining the towns of Oamaru, Weston, Otematata, Omarama and Kurow. The zone provides for very low density residential opportunities in association with these towns as an alternative to the suburban living areas typical of the District. The zones are concentrated in close proximity to the towns in order to encourage energy conservation and to enable convenient access to the employment, services and facilities in those towns. The purpose of the zone is to maintain very low density residential areas with ample open space, tree and garden plantings and with minimal adverse environmental effects experienced by residents. However, farming is likely to remain a widespread use of land in the zone and an integral part of the rural residential environment.

Accommodation – means the use of land and/or buildings for short-term, fee paying, living accommodation where the length of stay for any one visitor is not greater than 3 months at any one time, provided that this definition does not exclude the letting of individually-owned residential units. Visitor accommodation may include some centralised services or facilities, such as food preparation, dining and sanitary facilities, conference, bar and recreation facilities. Visitor accommodation includes such accommodation as camping grounds, hotels, motels, boarding houses, guesthouses, backpackers accommodation, bunkhouses, tourist houses and lodges.

Primary Industry – means any activity within the Rural general or Rural Scenic Zone that involves Arable Farming, Forestry, market Gardens/Orchards, Mineral Extraction, Specialist Livestock, Stock Fattening, Store Sheep or a multiple use of any of the above.

Primary Industry Diary – means any activity within the Rural General or Rural Scenic Zone that involves Dairying, Grazing of Dairy Livestock, Milking Sheds for Town or Factory Supply or a multiple use of any of the above.

Commercial - means the use of land and buildings for the display, offering, provision, sale or hire of goods, equipment, or services, and includes shops, markets, showrooms, restaurants, takeaway food bars, professional, commercial and administrative offices, postal services, service stations, motor vehicle sales, the sale of liquor and associated parking areas; but excludes recreational, community and service activities, home occupations or visitor accommodation.

Industrial - means the use of land and buildings for the primary purpose of manufacturing, fabricating, processing, packing, or associated storage of goods.

Land Use Differentials

Factors which are used to convert non-residential properties into household equivalent units. Impact on, benefit from and consumption of assets by different land uses can be converted into and described as household equivalent units. Land use differentials have three functions:

1) To determine the total growth in terms of household equivalent units.
2) To apportion asset capacity and growth related capital expenditure.
3) To enable a new subdivision or development to be converted into household equivalent units, such that the development contributions can be calculated.

Level of Service

The defined service for a particular activity (i.e. roading) or service area (i.e. street lighting) against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental acceptability and cost. *(Source: NAMs Manual).*

Long Run Average

Average taken over a number of years, typically 10 or more for infrastructure assets.

Network Infrastructure

The provision of roads and other transport, water, wastewater, stormwater collection and management.

Renewal

Works to refurbish or replace existing facilities with facilities of equivalent capacity or performance capability.

Service Connection

A physical connection to a service provided by, or on behalf of, Waitaki District Council.

Standard Contribution

The amount of a development contribution payable for the addition of one household equivalent unit.

Statutory Obligation

Typically relating to CAPEX required to meet the demands of a statute, guideline or standard.

Surplus Capacity

Additional capacity of an asset whereby uptake of that additional capacity is not to the detriment of existing users.

Units of Demand

A measurable unit that creates demand for additional capacity or consumes surplus capacity. Often measured in terms of household equivalent units.

Weighted Average Cost of Capital (WACC)

Cost of loan funding capital works. Interest charges for the growth proportion of any capital expenditure. Do not include principal repayments.

Basic Model Description

A high level description of the model used for assessing development contributions is detailed below. The model used defines a standard development contribution for a specific unit of demand. The unit of demand is a household equivalent unit. The model calculates a **household equivalent unit contribution**.

The key concept of the approach is to define the total capital expenditure **(CAPEX) for growth** consumed by the **growth population** over a period of time. This consumption of CAPEX for growth is then apportioned among the increased number of units of demand (household equivalent units) over the same time period. This defines the long run average cost of growth per unit of demand. The result of which is defined as the **household equivalent unit (HEU) contribution**. This can be represented by the following formula.

$$\text{HEU Contribution} = \frac{\text{Sum of CAPEX for Growth Consumed In Analysis Period}}{\text{Sum of New HEU's in Analysis Period}}$$

The method can be described simplistically by the following steps.

Step 1: Assess capital expenditure for growth on an asset by asset basis using financial reports (past expenditure) and projected expenditure.

Step 2: Apportion capital expenditure for growth by the growth population (household equivalents) over the **design life** of the asset, to assess the $/unit of demand for each asset described above.

Step 3: For each year in the **analysis period** determine the total consumption of asset capacity for each asset identified, namely the $/unit of demand x the number units of demand.

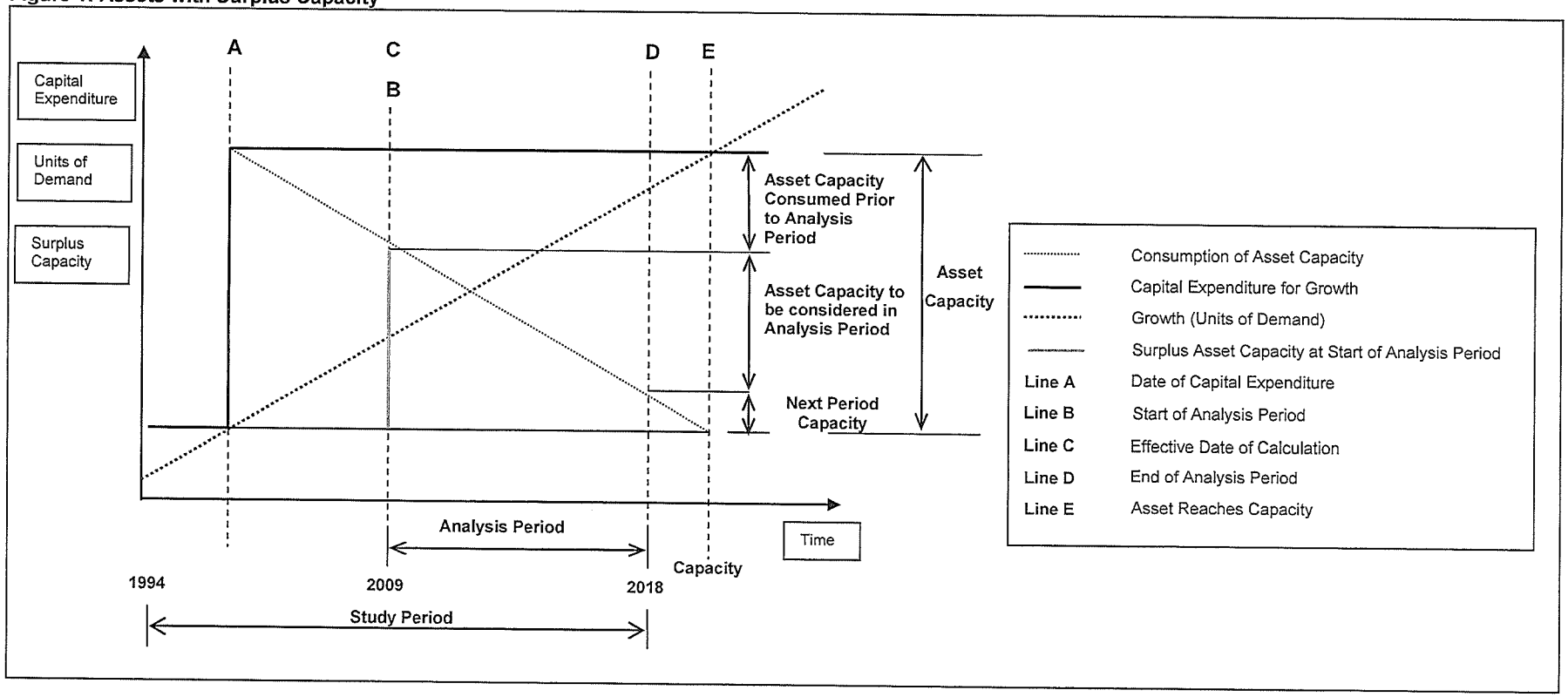
Step 4: Sum for all assets in each year in the analysis period, namely total capacity consumed in that year, measured in $.

Step 5: Sum each year in the ten year analysis period and divide by the growth population (new household equivalents) projected over the analysis period to determine the household equivalent contribution.

Generalised Model Description

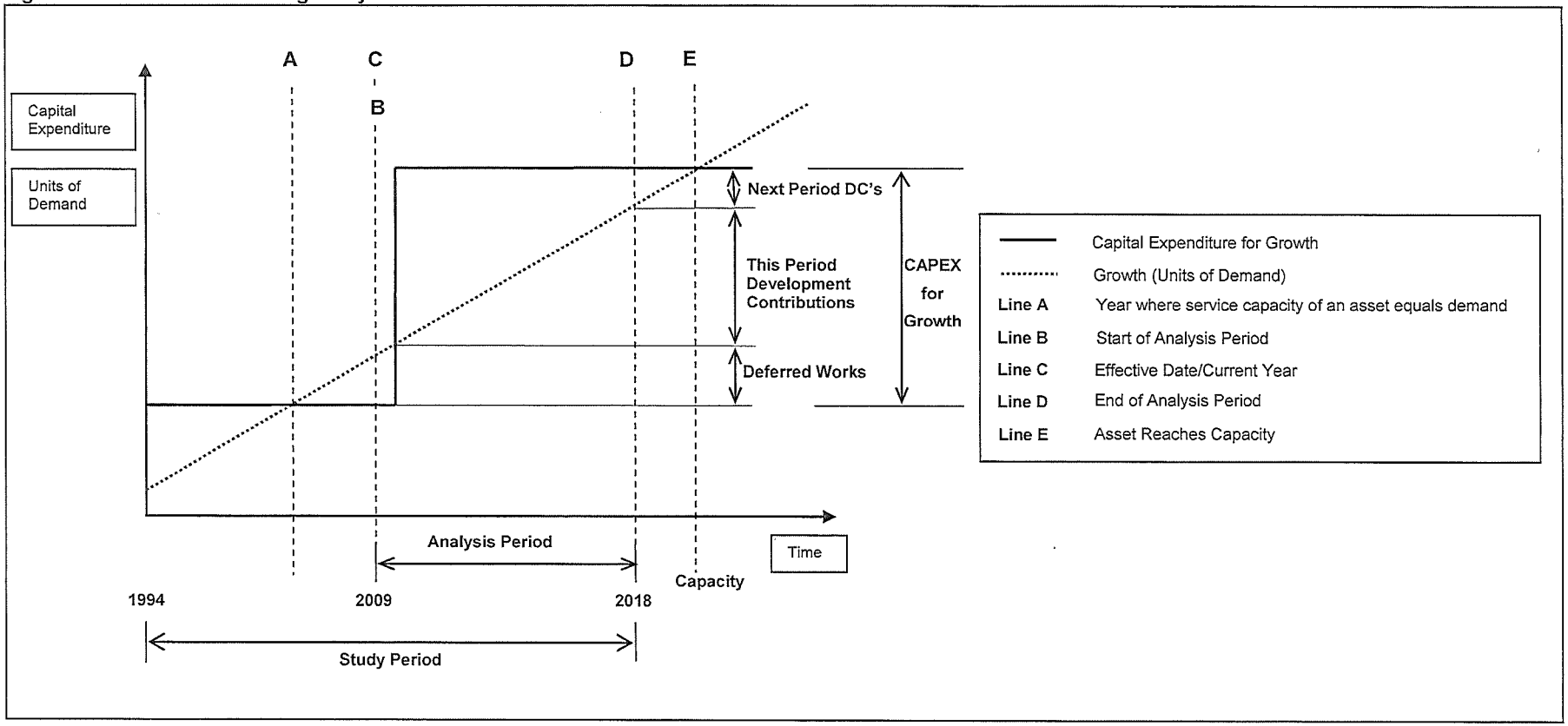
A graphical representation of the generalised model is shown below using three figures. Figure 1 describes how assets with **surplus capacity** are treated and Figure 2 how assets **constructed during** the analysis period are treated. Figure 3 demonstrates how the combination of Figure 1 and 2 are combined to assess development contributions.

Figure 1: Assets with Surplus Capacity



Asset capacity acquired during the study period, but before the analysis period (2009 to 2018), can be considered in the calculations. These are assets with **surplus capacity** at the effective date. The surplus capacity is assessed at the start of the analysis period. The surplus capacity consumed during the analysis period is assessed and apportioned amongst the growth population. Surplus capacity at the end of the analysis period is removed from the calculation and considered in subsequent calculations. Capital projects back as far as 1994 have been considered if the assets still have surplus capacity to be consumed in the analysis period.

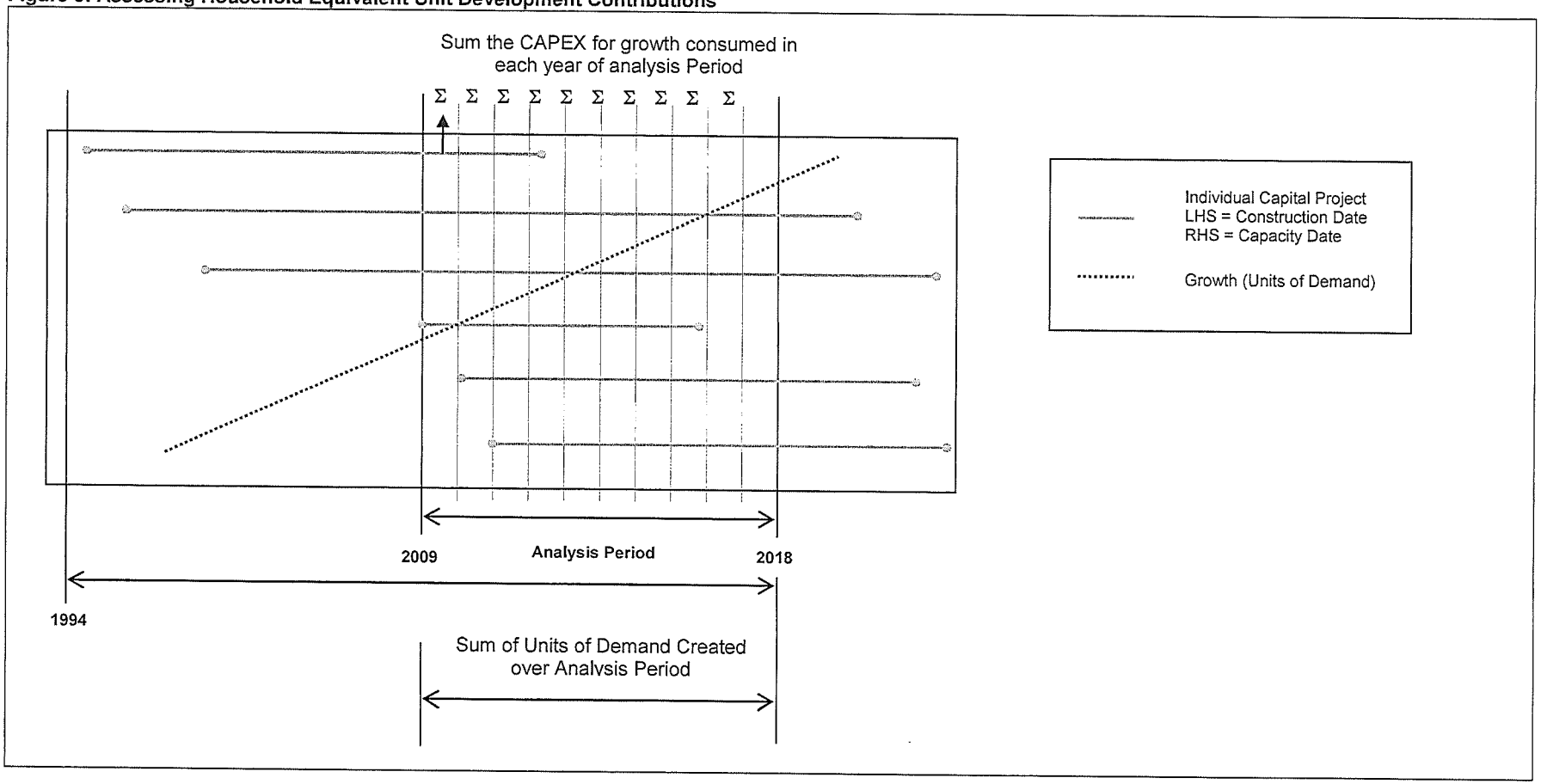
Figure 2: Assets Created During Analysis Period



Asset capacity **acquired during** the analysis period is also considered. The consumption of asset capacity during the analysis period is apportioned to the growth population. Surplus capacity at the end of the analysis period is removed from the calculation and considered in subsequent calculations.

The key objective of the model is to recover the cost of growth for every capital project over a period of time, namely the date until capacity is reached. The model descriptions in Figures 1 and 2 above both use one capital project as an example. To assess the household equivalent unit development contribution, the effect of these two diagrams on every capital project providing additional capacity for growth are considered. Figure 3 below demonstrates how each capital project is considered, where each horizontal line represents a CAPEX for growth project.

Figure 3: Assessing Household Equivalent Unit Development Contributions



Where units of demand = household equivalent units then:

$$\text{HEU Contribution} = \frac{\text{Sum of CAPEX for Growth Consumed In Analysis Period}}{\text{Sum of New Household Equivalent Units in Analysis Period}}$$

PART 3 Detailed Model Elements

The more detailed aspects of the development contribution calculations are identified below. These are relevant to water, wastewater and roading at this stage.

Cost Components

- **Capital Expenditure**;
- **CAPEX for growth apportionments**;
- **Weighted Average Cost of Capital (WACC)**;
- **Inflation**;

Growth Assessments

- **Growth Projections**
- **Land Use Differentials -** Household Equivalent Unit(unit of demand) Conversion for Non-Residential Activities;

Specific Assessment Matters

Capital Expenditure

Only capital expenditure (CAPEX) is considered in the model. All Operational Expenditure is excluded, including internal overheads. Capital expenditure is identified from two sources, namely:

1. **Activity Management Plans (AMPs) –** projected expenditure
2. **Financial Reports –** historic expenditure

The Activity Management Plans are used for assessing projected CAPEX. The AMPs are formal planning documents that include long term expenditure forecasts. Council has a statutory obligation to ensure these documents are as accurate as possible, namely:

1. An implicit requirement under Local Government Amendment Act 1996 and Local Government Act (LGA) 2002 to have activity management plans.
2. Council has a statutory requirement under LGA 2002 to prepare a Long Term Council Community Plan (LTCCP). The LTCCP must project all expenditure, revenue, asset value, depreciation, debt levels and other liabilities for no less than 10 years. The LTCCP populates the annual plan for first 3 years following adoption, with exception reporting required where variations occur.
3. LGA 2002 requires CAPEX to be defined into three categories, namely i) Growth, (ii) Renewal and (iii) Level of Service Shifts/Other.
4. Audit – Office of the Auditor General – The LTCCP will be subject to audit.

CAPEX for Growth Apportionments

The CAPEX identified can be apportioned into five cost drivers. These being:

- Growth,
- Renewal,
- Level of Service,
- Statutory,
- Deferred Works/Other (see definitions).

The growth apportionment is the only cost driver used for assessing development contributions, however determining the others can aid in this process. The cost drivers have been assessed using several methods. These are:

- Asset Capacity
- Using Asset Design Life to Approximate Growth Percentage
- Assessed using Professional Judgement.

(i) **Asset Capacity** – Where the existing asset capacity is known and the capacity of the new capital assets is known, a basic percentage of new capacity vs. existing capacity has been used to determine the growth percentage.

(ii) **Use Design Life as an Approximate –** Where the specific asset capacity increases are unknown (i.e. capacity characteristics such as pipe diameter, pump characteristics) the design life can be used to assess the growth percentage. Typically this percentage relates to projects of a generic nature to the scheme, such as non specific pumping projects and reticulation upgrades.

Assets in the calculation are often designed to meet the ultimate dwelling capacity within a certain geographic area. In these cases the design life is the date at which the ultimate capacity is expected to be reached.

Where this approach is applied the number of household equivalent units (HEU) at capacity is compared to the household equivalent units at construction, namely

Growth Percentage = (HEU_{cap} – HEU_{con}) / HEU_{cap}

Where: HEU_{con} = Household Equivalent Units at Construction

HEU_{cap} = Household Equivalent Units at capacity date

This approach provides for a systematic allocation of the growth component. This approach provides for a very good approximation of the CAPEX for growth. Assume that a longer design life is assigned, then the percentage attributable to growth may be greater, however the consumption of growth cost is consumed over a greater number of years. The converse of this can be said for applying a shorter design life, namely a low growth percentage, with consumption of growth cost being consumed over a shorter period.

(iii) **Professional Judgement** – There are some projects where professional judgement is the only tool available to make an assessment of growth. Professional judgment may consider other components of the activity first, namely renewal and level of service.

As new information becomes available the Monitoring and Review process identified in the Policy (Part 1) will make adjustments to the calculation where appropriate.

Weighted Average Cost of Capital (WACC)

The weighted average cost of capital (WACC) is used to estimate the cost of loan funding capital works. Depending on the funds available in the development contributions reserve for each contributing area new CAPEX for growth may need to be loan funded. The council intends to recover the interest costs associated with these loans using development contributions and the weighted average cost of capital methodology.

The growth cost (including interest) is determined using the following formula:

Growth Cost (including Interest) = CAPEX for Growth + (CAPEX for Growth x Interest Factor x Debt Funding Ratio)

With the following interest factors:

Table 13 : Interest Factor

Term of Loan (Yrs)	Interest Factor
1	0.07
2	0.10
3	0.14
4	0.17
5	0.20
6	0.23
7	0.26
8	0.29
9	0.32
10	0.34
11	0.37
12	0.39
13	0.42
14	0.44
15	0.47
16	0.49
17	0.51
18	0.53
19	0.55
20	0.57
21	0.59
22	0.61
23	0.62
24	0.64
25	0.66

Interest Rate Used = 7.5%
Repayment Period = Design Life / Payback Period (yrs)
Debt Funding Ratio = Calculated percentage of every capital project requiring debt funding.

Not all projects will require debt funding and this ratio is an attempt to estimate the percentage that will. This percentage is then used to calculate the interest costs on the CAPEX for growth and hence, the amount to be recovered through development contributions.

The calculation of the debt funding ratio is outlined in the Tables in Part 1. These have been prepared for each activity type in each contributing area. These tables demonstrate the relationship between existing debt, future growth costs (10 yrs) and the anticipated future income (10 yrs) from development contributions. A weighting of the debt position against the 10 year growth cost determines the debt percentage. Calculating a weighted average of these debt percentages gives the debt funding ratio.

Inflation

Inflation is applied to all projects prior to the effective date of the analysis (retrospective CAPEX), namely those with surplus capacity.

As we are assessing long run incremental average cost of growth (i.e. including past projects) it is important to have all projects in today's dollars, namely 1 July 2009.

Inflation is applied using the following formula and Statistics NZ indices:

Escalation = 0.5 x (L-L')/L' + 0.5 x (C-C')/C'

Where:

L = Labour Cost Index: Private Sector: Industry Group – Construction: All Salary and Wage Rates. Published by Statistics New Zealand: (Series ref LC1Q: SA49P1)

C = Producers Price Index: Inputs: Industry Group – Construction: Published by Statistics New Zealand: (Series ref PP1Q: SNE)

' = represents the base year index.

Growth Projections

These have been estimated using the best information available. Source data can be broken down into three groups, namely:

- WDC Growth Projections Study May 2008 – Rationale Ltd. This study has been adopted by Council to provide consistent projections. These have

been applied for projecting residential and non-residential growth with the exception of the sources below.

- Rural water schemes analysis completed internally by Council Asset Managers.
- Historic Statistics New Zealand data.
- Site Specific Projections – One off studies completed by Council for specific projects.

Growth projections are converted into **units of demand** or household equivalent units. These are used to apportion the growth cost to define a **household equivalent unit contribution**. Assessing total household equivalent units involves converting non-residential land uses i.e. accommodation, into household equivalent units and adding this to the number of dwellings. This is completed using land use differentials (conversion factors). These differentials are described in the following section.

Land Use Differentials

Land use differentials enable all development and subdivision types (residential and non-residential) to be considered in the calculations. Non-residential activities can be described using a common unit of demand, which in this case is the household equivalent unit. Conversion factors or land use differentials are used to convert non-residential activities into household equivalent units.

The land use differentials are used in several different ways in the calculation of development contributions, these being:

1. **Describe growth in terms of units of demand (household equivalent units)** – Apply *factors* (land use differentials) to the existing or past property mix (i.e. residential, accommodation, industrial) to define all property activities as household equivalent units. These *factors* represent the average impact of a non-residential land use in terms of household equivalent units and will vary for different activities. Once the property mix (i.e. commercial, accommodation etc) is defined in terms of household equivalent units, growth percentages can be applied to assess the total units of demand in future years.
2. **Apportioning asset capacity** – the model apportions asset capacity using the units of demand (household equivalent units) defined in point 1. above. These apportionments include surplus capacity at the start of the analysis period, capacity consumed during the analysis period and surplus capacity remaining at the end of the analysis period.
3. **Determining the number of** household equivalent unit contributions payable at the time of subdivision or development - a non-residential subdivision or development can be converted into household equivalent units to enable a total development contribution payable to be calculated. See Part 4 for the detailed method of application.

The detailed methodologies and formulas used to develop the above land use differentials are explained for water supply, wastewater and roading.

Water Supply Land Use Differential

The water supply differential is designed to assess the growth impact on the water supply network for both the type (land use) and the size of a development.

The methodology calculates the household equivalent units for a typical property and then converts this to a differential for each land use. The water supply differential can be used to assess any subdivision or development. The methodology used to calculate the water supply land use differentials consists of two components. These are:

1 The working charge factor (WCF).
2 The gross floor area (GFA) of the typical property for each land use.

The methodology and the steps in the working charge factor calculation process are explained below.

Step 1: The WCF represents the relative water consumption of non-residential activities compared to residential activities with the same GFA. The assumptions used to calculate the working charge factor for each land use are shown in Table 14.

The total consumption figures by water use type (toilets, showering, food preparation, irrigation etc.) were provided by the Metcalf and Eddy textbook, Wastewater Engineering Treatment and Reuse, 2000.

Each water use type is apportioned across the land use categories based on their estimated consumption for the same GFA. For example a commercial area will use around 20% of the toilet water compared to a residential area of equal size using 47%.

Summing the factor of the portion of total water use and the percentage apportioned to a land use gives the percentage impact for each land use category. The impact of each land use category relative to the residential impact is the working charge factor.

Step 2: The median GFA represents a typical sized property for each land use and accounts for the size of each land use property type. The median GFA was calculated from the WDC Rates Database. The median was considered the best representation of a typical property as it reduces the impact of outlying data.

Step 3: The typical WCF is based on the size of a typical property relative to a residential dwelling. This reflects the number of household equivalent units for the typical property. The formula is shown below in Equation 1.

Equation 1: Water Supply Working Charge Factor for a Typical Property

$$\text{WS WCF}_{\text{Typical}} = \text{WS WCF} \times \frac{\text{GFA}_{\text{Typical}}}{\text{Residential GFA}}$$

Where:

WS WCF $_{\text{Typical}}$ = Water Supply Working Charge Factor for a typical property.

WS WCF = Water Supply Working Charge Factor of each land use.

Residential GFA = Gross Floor Area of a typical residential dwelling, 120m^2.

GFA $_{\text{Typical}}$ = GFA of a typical property for each land use.

Step 4: The final step converts the HEU's of a typical property to a differential (HEU's / 100m^2) based on the typical property size for each land use.

The four steps are shown in Table 14.

Table 14: Water Supply Working Charge Factor Calculation Matrix

Water Use Type	Portion of Total Water Consumption	Relative Water Consumption for a GFA			
		Residential	Commercial	Industrial	Accommodation
Toilets	12%	47%	20%	5%	28%
Shower/Bathroom	10%	63%	0%	0%	37%
Food Preparation	5%	44%	25%	5%	26%
Cleaning	5%	41%	25%	10%	24%
Laundry	8%	47%	18%	8%	27%
Irrigation	20%	63%	0%	0%	37%
Industrial	5%	0%	0%	100%	0%
Others	14%	25%	40%	20%	15%
Public Service	6%	0%	0%	0%	0%
Leakages	15%	0%	0%	0%	0%
	100%				
Percentage Impact by Land Use		36%	12%	10%	21%
Step 1. Water Supply Working Charge Factor (WS WCF)		1	0.33	0.27	0.59
Step 2. Typical Sized Property		120m^2	260m^2	220m^2	530m^2
Step 3. Water Supply WCF $_{Typical}$ (HEU's for a Typical Property)		1 per dwelling	0.72	0.50	2.60
Step 4. Water Supply Differential (HEU / 100m^2)		1.0 HEU / dwelling	0.28 HEU / 100m^2	0.23 HEU / 100m^2	0.49 HEU / 100m^2

The above apportionment of the total consumption ensures there is no double dipping. An example of double dipping is where a visitor uses local accommodation. Their total water consumption is unlikely to be fully undertaken at their place of accommodation. They are likely to also use commercial businesses and perhaps other residential properties. Therefore the impact of an additional visitor should not be entirely reflected in the accommodation differential. Similarly permanent residents go to work for a large portion of their day. Therefore an individual's total water consumption cannot be attributed to one land use category.

The above differential methodology was validated using data obtained from the WDC Water Usage Database for Oamaru. A sample of metered households and business were analysed over a two year period to calculate the estimated daily usage for each land use. The total usage over a period of time was converted to a daily usage per square meter of GFA. This figure was then used to estimate the daily usage of a median sized property.

The estimated working charge factors using this method are shown below. The estimated figures represent the usage relative to that of a residential dwelling. The estimated WCF from the water usage data compare well with the figures calculated using the working charge factor methodology.

Table 15: Water Supply Estimated Working Charge Factor

Land Use	L / m^2 / day	Median Gross Floor Area	Daily Usage (L/day)	Estimated WCF of a Typical Property
Residential	8.1	120m^2	967	1.0
Commercial	2.6	260m^2	687	0.71
Industrial	2.2	220m^2	483	0.50
Accommodation	5.1	530m^2	2,680	2.77

Part 4 shows how the water supply differentials can be used to assess the total household equivalent units for a non-residential subdivision or development.

The differentials are also used to assess the impact of future growth for each land use. The projected growth of non-residential properties can be converted to household equivalent units using the differentials.

Wastewater Land Use Differential

The same working charge factor conversion method used for water supply is applied for wastewater. The wastewater working charge factor conversion is shown below in Equation 2. The working charge factor of a typical property represents the impact on the wastewater network in household equivalent units. This can be converted to a differential for each land use (HEU's per 100m^2 of GFA).

Equation 2: Wastewater Working Charge Factor for a Typical Property

$$\text{WW WCF}_{\text{Typical}} = \text{WW WCF} \times \frac{\text{GFA}_{\text{Typical}}}{\text{Residential GFA}}$$

Where:

WW WCF $_{\text{Typical}}$ = Wastewater Working Charge Factor for a typical property.

WW WCF = Wastewater Working Charge Factor of each land use.

Residential GFA = Gross Floor Area of a typical residential dwelling, 120m^2.

GFA $_{\text{Typical}}$ = GFA of a typical property for each land use.

The assumptions used to calculate the wastewater work charge factor for each land use are shown below. Part 4 shows how the differentials can be used to assess the total HEU's for a non-residential subdivision of development.

Table 16: Wastewater Working Charge Factor Calculation Matrix

Wastewater Use Type	Portion of Wastewater Generated	Wastewater Use Type Apportionments to each Land Use			
		Residential	Commercial	Industrial	Accommodation
Toilets	16%	47%	20%	5%	28%
Shower/Bathroom	13%	63%	0%	0%	37%
Food Preparation	6%	44%	25%	5%	26%
Cleaning	6%	41%	25%	10%	24%
Laundry	9%	47%	18%	8%	27%
Irrigation	0%	63%	0%	0%	37%
Industrial	6%	0%	0%	100%	0%
Others	18%	25%	40%	20%	15%
Public Service	8%	0%	0%	0%	0%
Leakages	18%	0%	0%	0%	0%
	100%				
Percentage Impact by Land Use		30%	15%	12%	17%
1. Wastewater Working Charge Factor		1	0.51	0.41	0.59
2. Typical Sized Property		120m^2	260m^2	220m^2	530m^2
3. Wastewater WCF $_{\text{Typical}}$ (HEU's for a Typical Property)		1.0	1.10	0.75	2.60
4. Wastewater Differential (HEU per 100m^2)		1.0 per dwelling	0.43 per 100m^2	0.34 per 100m^2	0.49 per 100m^2

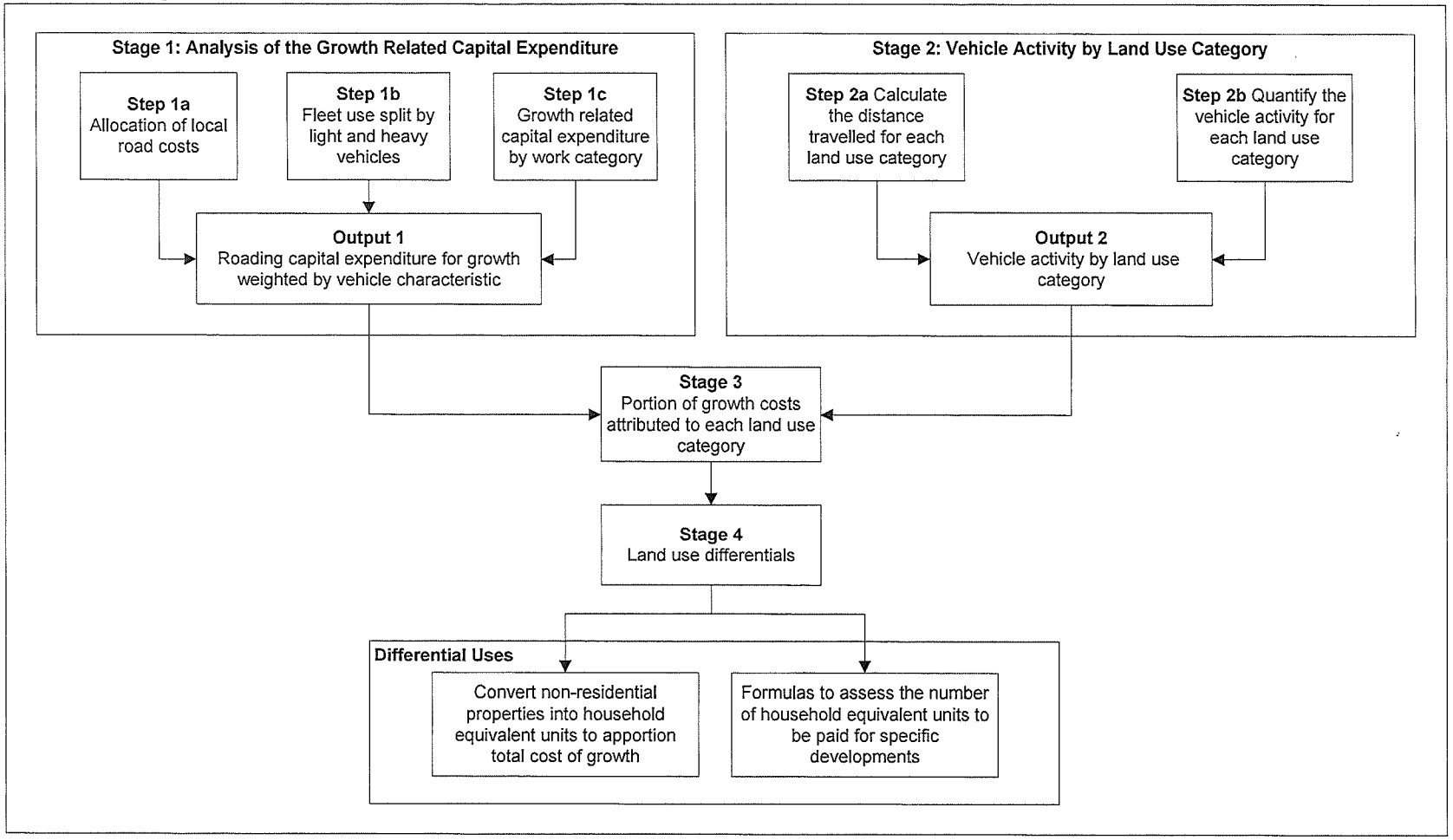
Roading Land Use Differential

The differential model was prepared with assistance from Abley Transportation Engineers Ltd. The model is based on trip generation and therefore asset utilisation by each land use category. The land use categories considered for roading development contributions are:

- Rural Residential
- Commercial
- Industrial
- Accommodation
- Primary Industry
- Primary Industry – Dairy

The model uses the findings of a study carried out by a working group in 2001. The group was chaired by the Ministry of Transport and included members from Transfund, Transit and the Treasury. The group reviewed the Cost Allocation Model used to determine road user charges. The results from the study are referred to as the Review of the Cost Allocation Model (RCAM). The methodology and the use of the differentials are shown in the diagram over leaf. A detailed explanation of the steps within each stage of the process is provided in the following section.

Figure 4: Roading Differential Calculation Process



Stage 1: Analysis of the Growth Related Capital Expenditure

The aim of the first stage is to identify and quantify the drivers of the growth related capital expenditure for roading.

Step 1a – Allocation of Local Road Costs

All projects within the roading capital programme can be allocated to one of the 18 RCAM work categories shown below. Each category of work is then split across specific drivers indentified by RCAM, namely vehicle characteristics. The vehicle characteristics define the key drivers requiring roading capital expenditure, they are described below:

1. Power Vehicle (PV): measures the drivers imposed costs resulting from the need to provide resources for motorists themselves. These include signs, road markings and landscaping;
2. Equivalent Standard Axles (ESA): measures vehicle road wear costs resulting from the fourth power of the axle weights of vehicles;
3. Gross Vehicle Weight (GVW): measures vehicle strength imposed road costs, such as bridge strength;
4. Passenger Car Equivalent (PCE): measures the vehicles space related road costs, such as the additional road space (i.e. construction of additional traffic lanes) required to alleviate traffic congestion;
5. Residual: not all road expenditure is directly caused by a vehicle characteristic so in some cases a portion is allocated to Residual, e.g. environmental damage.

A portion of each work category can be attributed to one, some or all of the vehicle characteristics. RCAM has defined the specific proportions in each work category related to each vehicle characteristic. These are shown below.

Table 17 Allocation of Local Road Costs

RCAM Work Category	Allocation of Local Road Costs					
	PV.km	ESA.km	GVW.km	PCE.km	Residual	TOTAL
Amenity/Safety Maintenance	37%	0%	0%	0%	63%	100%
Bridge Renewals	51%	3%	27%	0%	19%	100%
Carriageway Lighting	0%	0%	0%	0%	100%	100%
Cycleway Construction	0%	0%	0%	0%	100%	100%
Maintenance Chip Seals	2%	31%	28%	0%	39%	100%
Major Drainage Control	0%	20%	0%	0%	80%	100%
Minor Safety Projects	70%	0%	0%	30%	0%	100%
New Roads and Bridges (roads)	15%	15%	0%	70%	0%	100%
Pavement Maintenance	11%	22%	2%	0%	65%	100%
Pavement Smoothing	10%	80%	0%	0%	10%	100%
Preventative Maintenance	0%	0%	0%	0%	100%	100%
Professional Services	12%	20%	7%	0%	61%	100%
Property Purchase	70%	0%	0%	30%	0%	100%

RCAM Work Category	Allocation of Local Road Costs					
	PV.km	ESA.km	GVW.km	PCE.km	Residual	TOTAL
Road Reconstruction	76%	24%	0%	0%	0%	100%
Seal Extension	28%	72%	0%	0%	0%	100%
Strategy Studies	36%	43%	1%	16%	4%	100%
Traffic Services	63%	0%	0%	0%	37%	100%
Transportation Studies	36%	43%	1%	16%	4%	100%

Step 1b – Fleet Use Split by Light and Heavy Vehicles

RCAM also considers the type of vehicle for each vehicle characteristic. The fleet can be split into light and heavy vehicles, heavy being any vehicle over 3.5 tonnes. These percentages are shown below.

Table 18: Split of Fleet by Light and Heavy Vehicles

Vehicle Characteristics	PV.km		ESA.km		GVW.km		PCE.km	
Light/Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
Fleet Use	91.5%	8.5%	12.2%	87.8%	47.3%	52.7%	47.3%	52.7%

Step 1c –Growth Related Capital Expenditure by Work Category

All growth related projects in the 2009 LTCCP capital program are attributed to a RCAM work category. The 10 year expenditure is used as a weighting to define the portion attributed to each RCAM work category. The 10 year total of the growth CAPEX for each of the work categories is shown below. All non growth CAPEX and third party funding (FAR – Financial Assistance Ratio) has been excluded from the calculation.

Table 19: Growth Related Capital Expenditure by Work Category

RCAM Work Category	2009-2018 Growth CAPEX ($)	Portion of Growth CAPEX by Work Category
Amenity/Safety Maintenance	114,307	4.1%
Bridge Renewals	436,141	15.5%
Carriageway Lighting	0	0.0%
Cycleway Construction	51,613	1.8%
Maintenance Chip Seals	393,432	14.0%
Major Drainage Control	43,108	1.5%
Minor Safety Projects	5,151	0.2%
New Roads and Bridges (roads)	798,718	28.3%
Pavement Maintenance	99,224	3.5%

RCAM Work Category	2009-2018 Growth CAPEX ($)	Portion of Growth CAPEX by Work Category
Pavement Smoothing	559,262	19.8%
Preventative Maintenance	0	0.0%
Professional Services	50,649	1.8%
Property Purchase	0	0.0%
Road Reconstruction	199,585	7.1%
Seal Extension	59,316	2.1%
Strategy Studies	3,750	0.1%
Traffic Services	5,173	0.2%
Transportation Studies	0	0.0%
TOTAL	**2,819,430**	**100%**

Output 1 –Roading Capital Expenditure for Growth Weighted by Vehicle Characteristic

The above three tables can be combined to apportion the growth CAPEX to each vehicle characteristic. The percentage for each work category is then summed to provide a total for each vehicle characteristic. This total represents the portion of the growth CAPEX related to each vehicle characteristic. The result of combining steps 1a, 1b and 1c is shown in the table below.

Table 20: Growth CAPEX Attributed to Vehicle Characteristics

Vehicle Characteristics	PV.km		ESA.km		GVW.km		PCE.km		Residual	Total
RCAM Work Category / Fleet Use	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy		
Amenity/Safety Maintenance	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	4.1%
Bridge Renewals	7.2%	0.7%	0.1%	0.4%	2.0%	2.2%	0.0%	0.0%	2.9%	15.5%
Carriageway Lighting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cycleway Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	1.8%
Maintenance Chip Seals	0.3%	0.0%	0.5%	3.8%	1.8%	2.1%	0.0%	0.0%	5.4%	14.0%
Major Drainage Control	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	1.2%	1.5%
Minor Safety Projects	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
New Roads and Bridges (roads)	3.9%	0.4%	0.5%	3.7%	0.0%	0.0%	9.4%	10.4%	0.0%	28.3%
Pavement Maintenance	0.4%	0.0%	0.1%	0.7%	0.0%	0.0%	0.0%	0.0%	2.3%	3.5%
Pavement Smoothing	1.8%	0.2%	1.9%	13.9%	0.0%	0.0%	0.0%	0.0%	2.0%	19.8%
Preventative Maintenance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Professional Services	0.2%	0.0%	0.0%	0.3%	0.1%	0.1%	0.0%	0.0%	1.1%	1.8%
Property Purchase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road Reconstruction	4.9%	0.5%	0.2%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%

Vehicle Characteristics	PV.km		ESA.km		GVW.km		PCE.km		Residual	Total
RCAM Work Category / Fleet Use	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy		
Seal Extension	0.5%	0.1%	0.2%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%
Strategy Studies	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Traffic Services	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%
Transportation Studies	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Portion of 2009-18 Growth CAPEX	**20.8%**	**1.9%**	**3.6%**	**26.0%**	**3.9%**	**4.4%**	**9.4%**	**10.5%**	**19.4%**	**100.0%**

For example 20.8% of the future growth related expenditure is caused by the impact from the increase in light powered vehicles.

Stage 2: Vehicle Activity by Land Use Category

The aim of the second stage is to quantify the vehicle activity generated by each land use.

Step 2a – Calculate the Distance Travelled for each Land Use Category

Using daily vehicle trip generation rates and an average vehicle trip length the total vehicle kilometres travelled by each land use can be calculated. The average trip length and daily trip generation rates were provided by Abley Transportation Engineers. The number of properties and the median size property for each land use were determined using the WDC Rates Database and the Commercial Accommodation Monitor.

Table 21: Estimation of Total Distance Travelled by Land Use

Land use	Unit of Measure	Number of Properties in WDC	Daily Vehicle Trip Generation (trips /day/unit)	Typical Property	Average Trip Length (km)	Total Daily Distance by Land Use (km)	Total Annual Distance by Land Use (km)
Residential	Dwelling	7,275	7.5 trips per dwelling.	1 dwelling	5	272,818	99,578,479
Accommodation	Unit or GFA m^2	64	5.3 trips per unit.	11 units	5	18,747	6,842,490
Commercial	GFA m^2	348	0.30 trips per m^2 GFA.	260m^2	5	135,595	49,492,155
Industrial	GFA m^2	200	0.05 trips per m^2 GFA.	220m^2	5	10,778	3,934,028
Primary Industry	Hectares	1,671	0.1 trips/100ha + 7.5 vpd.	400ha	25	330,037	120,463,369
Primary Industry - Dairy	Hectares	155	1.4 trips/200ha + 7.5 vpd.	200ha	25	34,431	12,567,428
Rural Residential	Dwelling	853	6.0 trips per dwelling.	1 dwelling	10	51,187	18,683,343

Step 2b – Quantify the Vehicle Activity for each Land Use Category

The weighting factors used to convert the daily distance travelled into vehicle characteristics are shown below. The split of the fleet into light and heavy vehicles for each land use is also shown. These factors were provided by Abley Transportation Engineers.

Table 22: Weighting Factors and Fleet Use Portions

Land use	Fleet Use		ESA factor per trip		GVW factor per trip (t)	
	% Light	% Heavy	Light	Heavy	Light	Heavy
Residential	99.75%	0.25%	0.02	1.0	1.4	25
Accommodation	88.0%	12.0%	0.02	1.0	1.4	25
Commercial	95.0%	5.0%	0.02	1.0	1.4	25
Industrial	70.0%	30.0%	0.02	1.0	1.4	25
Primary Industry	97.0%	3.0%	0.02	1.0	1.6	25
Primary Industry - Dairy	89.0%	11.0%	0.02	1.6	1.6	34
Rural Residential	99.75%	0.25%	0.02	1.0	1.4	25

The combination of Table 21 and Table 22 is shown below. The percentages represent the portion of each vehicle characteristic that can be attributed to each land use. The formulas used to convert the daily distance travelled into vehicle activity are shown below:

PV = annual kilometres x fleet use %

ESA = annual kilometres x ESA factor x fleet use %

GVW = annual kilometres x GVW factor x fleet use %

PCE = 7/8 x PV.km + 1/8 x GVW.km

Table 23: Annual Vehicle Activity by Land Use

Land Use	Annual PV.km		Annual ESA.km		Annual GVW(t).km		Annual PCE.km	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
Residential	99,329,533	248,946	1,986,591	248,946	139,061,346	6,223,655	104,296,010	995,785
Accommodation	6,021,391	821,099	120,428	821,099	8,429,948	20,527,471	6,322,461	3,284,395
Commercial	47,017,547	2,474,608	940,351	2,474,608	65,824,566	61,865,193	49,368,424	9,898,431
Industrial	2,772,204	1,188,088	55,444	1,188,088	3,881,086	29,702,190	2,910,815	4,752,350
Primary Industry	117,416,797	3,631,447	2,348,336	3,631,447	187,866,875	90,786,183	126,223,056	14,525,789
Primary Industry - Dairy	11,215,999	1,386,247	224,320	2,217,995	17,945,598	47,132,399	12,057,199	7,104,516
Rural Residential	18,636,635	46,708	372,733	46,708	26,091,289	1,167,709	19,568,467	186,833
TOTAL	**302,410,106**	**9,797,143**	**6,048,202**	**10,628,891**	**449,100,708**	**257,404,800**	**320,746,432**	**40,748,100**

Output 2: Vehicle Activity by Land Use

Converting

Table 23 to percentages provides the second output from the model. This represents the vehicle activity that can be attributed to each land use. For example, 32.8% of the light powered vehicle activity is created by the residential sector.

Table 24: Vehicle Activity by Land Use

Land Use	% PV.km		% ESA.km		% GVW(t).km		% PCE.km	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
Residential	32.8%	2.5%	32.8%	2.3%	31.0%	2.4%	32.5%	2.4%
Accommodation	2.0%	8.4%	2.0%	7.7%	1.9%	8.0%	2.0%	8.1%
Commercial	15.5%	25.3%	15.5%	23.3%	14.7%	24.0%	15.4%	24.3%
Industrial	0.9%	12.1%	0.9%	11.2%	0.9%	11.5%	0.9%	11.7%
Primary Industry	38.8%	37.1%	38.8%	34.2%	41.8%	35.3%	39.4%	35.6%
Primary Industry - Dairy	3.7%	14.1%	3.7%	20.9%	4.0%	18.3%	3.8%	17.4%
Rural Residential	6.2%	0.5%	6.2%	0.4%	5.8%	0.5%	6.1%	0.5%
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The total percentage by vehicle characteristic from Output 1 (Table 20) is shown below.

Output 1: Roading Growth Expenditure Weighted by Vehicle Characteristic

Table 20: Growth CAPEX Attributed to Vehicle Characteristics

Vehicle Characteristics	PV.km		ESA.km		GVW.km		PCE.km		Residual	Total
RCAM Work Category / Fleet Use	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy		
Portion of 2009-18 Growth CAPEX	20.8%	1.9%	3.6%	26.0%	3.9%	4.4%	9.4%	10.5%	19.4%	100.0%

The combination of the two outputs is shown over leaf in Table 25.

Stage 3: Cost of Growth by Land Use

The result of combining the output tables from stage 1 and 2 provides the portion of growth costs attributed to each land use.

Table 25: Portion of Growth Cost Attributed to each Land Use

Land Use	% PV.km		% ESA.km		% GVW.km		% PCE.km		Residual	Portion of Growth Costs
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy		
Residential	6.84%	0.05%	1.18%	0.61%	1.21%	0.11%	3.06%	0.26%	3.21%	16.53%
Accommodation	0.41%	0.16%	0.07%	2.01%	0.07%	0.35%	0.19%	0.85%	0.99%	5.10%
Commercial	3.24%	0.49%	0.56%	6.06%	0.57%	1.05%	1.45%	2.55%	3.85%	19.81%
Industrial	0.19%	0.23%	0.03%	2.91%	0.03%	0.50%	0.09%	1.22%	1.26%	6.47%
Primary Industry	8.09%	0.72%	1.40%	8.89%	1.64%	1.54%	3.71%	3.74%	7.17%	36.88%
Primary Industry - Dairy	0.77%	0.27%	0.13%	5.43%	0.16%	0.80%	0.35%	1.83%	2.35%	12.10%
Rural Residential	1.28%	0.01%	0.22%	0.11%	0.23%	0.02%	0.57%	0.05%	0.60%	3.10%
TOTAL	**20.83%**	**1.93%**	**3.60%**	**26.02%**	**3.92%**	**4.36%**	**9.42%**	**10.48%**	**19.43%**	**100.00%**

For example, 16.53% of the future growth related capital expenditure is required to support the roading activity generated by residential growth.

Stage 4: Land Use Differentials

The cost of growth for each land use category is shared over all future properties within each land use based on the projected 10 year growth in household equivalent units. The non-residential land use categories are then normalised relative to residential, this assumes a residential dwelling equals 1 HEU. The normalised figures represent the impact of a typical property in household equivalent units for each land use. This can then be converted to a land use differential based on the median sized property.

Table 26: Land Use Roading Differentials

Land Use	Portion of Growth Costs	HEU Growth (2009 – 2018)	Cost of Growth per HEU	HEU's of a Typical Property	Median Size Property	Differential per Unit of Measure	Unit of Measure
Residential	16.53%	756	0.02%	1.0	1 dwelling	1	per dwelling
Accommodation	5.10%	39	0.13%	5.91	11 accomm units	0.54	per accomm unit
Commercial	19.81%	181	0.11%	5.01	260m^2	1.93	per 100m^2
Industrial	6.47%	78	0.08%	3.77	220m^2	1.71	per 100m^2
Primary Industry	36.88%	468	0.08%	3.60	400ha	0.90	per 100 Ha
Primary Industry - Dairy	12.10%	85	0.14%	6.49	200ha	3.24	per 100 Ha
Rural Residential	3.10%	68	0.05%	2.09	1 dwelling	2.09	per dwelling

PART 4 Assessing Contributions for Subdivisions and Developments

Introduction

The primary objective of this section is to provide a means for calculating a fair development contribution for a non-residential development of any type and size. This section describes the methodology used to assess the number of household equivalent units for development or subdivision. Part 3.0 describes in detail how the differentials were derived.

Land Use Differentials Table

The following table summarises the differentials for each activity used to calculate the number of HEU's for a non-residential subdivision or development based on a standard measure of size.

Table 27: Land Use Differentials

Land Use Category	Household Equivalent Units per Measure of Size Shown		
	Water Supply [1]	Wastewater [2]	Roading
Residential	1 HEU / dwelling	1 HEU / dwelling	1 HEU / dwelling
Rural Residential	1 HEU / dwelling	1 HEU / dwelling	2.09 HEU / dwelling
Commercial	0.28 HEU / 100m^2	0.43 HEU / 100m^2	1.93 HEU / 100m^2 GFA
Industrial	0.23 HEU / 100m^2	0.34 HEU / 100m^2	1.71 HEU / 100m^2 GFA
Accommodation	0.49 HEU / 100m^2	0.49 HEU / 100m^2	0.54 HEU / accomm unit
Primary Industry	N/A - Assumed to be rural schemes only.[1]	N/A - Assumed to be rural schemes only.[1]	0.90 HEU /100 Ha
Primary Industry - Dairy			3.24 HEU / 100 Ha

[1] These water supply differentials are only required to assess urban unrestricted schemes. Rural restricted water supply schemes are based on a development contribution per cubic meter of water.

[2] These differentials are to be used to assess the demand on wastewater infrastructure for wastewater that does not fall within the definition of trade waste contained in the operative Waitaki District Trade Waste Bylaw applying at the time consent is granted. Development contributions payable for discharge of trade wastes will be the subject of an individual assessment.

Additional Notes:

a) A residential dwelling is always 1 Household Equivalent Unit.

b) Gross Floor Area (GFA) is defined, as 'the sum of the gross area of the several floors of all buildings on a site, measured from the exterior faces of the exterior walls, or form the centre lines of walls separating two buildings'. For the purpose of this policy this definition of GFA, excluding car parking areas, will be used.

Development Contributions

The development contributions payable per household equivalent unit or per cubic metre (1,000L) of water are summarised overleaf.

Table 28 : Summary of Development Contributions

Water Supply		Wastewater		Roading
Contributing Area		**Contributing Area**		**Contributing Area**
Urban - Unrestricted	**Per HEU**		**Per HEU**	**District Wide**
Kurow	$2,249	Kakanui	$756	
Oamaru	$4,331	Kurow	$341	$1,446
Omarama	$5,174	Moeraki	$5,001	per HEU
Otematata	$6,022	Oamaru	$2,922	
Palmerston	$2,720	Ohau	$158	
		Omarama	$583	
Rural - Restricted	**Per 1m³ of Water**	Otematata	$3,641	
		Palmerston	$1,896	
Awamoko	$966			
Dunback	$2,724			
Dunrobin	$1,724			
Duntroon	$595			
Enfield	$3,122			
Goodwood	$1,634			
Hampden/Moeraki	$1,606			
Herbert/Waianakarua	$1,733			
Kakanui	$1,449			
Kauru	$1,180			
Lower Waitaki	$767			
Ohau	$7,458			
Otekaike	$1,050			
Stoneburn	$991			
Tokarahi	$1,553			
Weston	$2,866			
Windsor	$1,049			

Calculation of Household Equivalent Units

The proposed differential equation for calculating the number of household equivalent units for non-residential development or subdivision is shown below. The equation can be applied for water supply, wastewater and roading development contributions. The non-residential land use categories to be assessed using differentials are shown above in Table 27.

The calculations for water supply are required solely for the non restricted urban schemes. For the restricted schemes the water supply development contributions are based on the number of cubic meters of water required by any development, subdivision or additional connection.

The differential equation is designed to assess the growth impact on the network for both the land use type and the size of a development. The equation returns the number of household equivalent units. This can then be multiplied by the HEU development contribution as shown in Table 28.

Equation 3: HEU Calculation for a Non-Residential Development

$$\text{Number of HEU's} = \text{Differential} \times \frac{\text{Size of the Development}}{\text{Unit of Measure}}$$

Where:

Differential	= Land Use Differential as per Table 27.
Size of the Development	= Measured in the units shown in Table 28.
Unit of Measure	= Unit of measure for the development, i.e. $100m^2$, 100 Ha, accommodation unit, dwelling.

Assessment of Unknown Size

If the Gross Floor Area (GFA) is unknown, which may be the case at the subdivision and land use consent stage, then the following table should be used to estimate the GFA.

Table 29: Gross Floor Area (GFA) Estimates

Category	Building Coverage	No. of Floors
Residential	Assume one dwelling per lot	
Rural Residential	Assume one dwelling per lot	
Accommodation	45%	2
Commercial	75%	1
Industrial	75%	1

When an estimate of the GFA is used in the development contribution assessment (usually at subdivision consent) then Council will only charge 75% of the calculated contribution at this stage.

Residential Units

A residential unit is defined as a residential activity which consists of a single self contained household unit, whether of one or more persons, and includes accessory buildings and a family flat.

Development contributions payable for residential units are as follows:

Gross Floor Area equal or less than $60m^2$ = ½ x HEU

Gross Floor Area greater than $60m^2$ = 1 x HEU

Examples

Fictional example calculations are shown overleaf. These demonstrate how the differential equation can be applied to calculate the development contributions for a subdivision or development. They also show how water supply contributions are calculated for the restricted water schemes.

Example 1. A residential subdivision - Creation of a new residential section in Kurow.

	Unit of Measure	Differential Equation	No. of HEU's	Kurow DC per HEU	Development Contribution
Water HEU's	per dwelling	= 1 x 1 =	1.00	$2,249	$2,249
Wastewater HEU's	per dwelling	= 1 x 1 =	1.00	$341	$341
Roading HEU's	per dwelling	= 1 x 1 =	1.00	$1,446	$1,446
Total Development Contributions					**$4,036**

Example 2. A commercial development - Creation of a commercial building in Oamaru with a gross floor area of 200m^2.

	Unit of Measure	Differential Equation	No. of HEU's	Oamaru DC per HEU	Development Contribution
Water HEU's	per 100m^2 GFA	= 0.28 x 200m^2 / 100m^2 =	0.56	$4,331	$2,425
Wastewater HEU's	per 100m^2 GFA	= 0.43 x 200m^2 / 100m^2 =	0.86	$2,922	$2,513
Roading HEU's	per 100m^2 GFA	= 1.93 x 200m^2 / 100m^2 =	3.86	$1,446	$5,582
Total Development Contributions					**$10,520**

Example 3. Increased volume of water to an existing consumer - A property in Stoneburn requires an additional 10 points of water per day. A point of water in Stoneburn equals 1,000L or 1.0m^3.

	Unit of Measure	No. of Points	No. of m^3	Stoneburn DC per m^3	Development Contribution
Water HEU's	per m^3 of water	10	10	$991	$9,910
Wastewater HEU's	n/a				n/a
Roading HEU's	n/a				n/a
Total Development Contributions					**$9,910**

Example 4. A dairy farm development - A vacant piece of land in Tokarahi is being converted to a 150 hectare dairy farm. The farm requires 15 points of water per day. A point of water in Tokarahi equals 1,818L or 1.818m^3.

	Unit of Measure	No. of Points	No. of m^3	Tokarahi DC per m^3	Development Contribution
Water HEU's	per m^3 of water	15	27	$1,553	$42,350
Wastewater HEU's	n/a				n/a
		Differential Equation	**No. of HEU's**	**Tokarahi DC per HEU**	**Development Contribution**
Roading HEU's	per 100 Hectares	= 3.24 x 150 Ha / 100 Ha =	4.86	$1,446	$7,028
Total Development Contributions					**$49,378**

APPENDICES

Water Supply

Table 30: Water Supply Capital Expenditure for Development Contributions (Excluding GST) by Work Type

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Awamoko										
Reticulation	-	-	-	-	0%	-	-	-	49	-
Pump Stations	-	-	-	-	0%	9,486	-	9,486	49	192
Intakes	-	-	-	-	0%	-	-	-	49	-
Storage	-	-	-	-	0%	-	-	-	49	-
Consents	-	-	-	-	0%	-	-	-	49	-
Conveyance	-	-	-	-	0%	-	-	-	49	-
Treatment Facilities	256,000	291,647	64,000	192,000	25%	705	20,552	21,257	49	430
Forward Design	-	-	-	-	0%	-	-	-	49	-
Flow Metering	-	-	-	-	0%	-	-	-	49	-
Asset Management Systems	-	-	-	-	0%	6,842	-	6,842	49	138
New Scheme	-	-	-	-	0%	-	-	-	49	-
Renewals/Upgrades	54,039	63,073	16,212	37,827	30%	5,035	4,721	9,756	49	197
Unspecified Expenditure	-	-	-	-	0%	397	-	397	49	8
TOTAL - Awamoko	**310,039**	**354,720**	**80,212**	**229,827**	**26%**	**22,466**	**25,273**	**47,739**	**49**	**$ 966**
WATER SUPPLY - Dunback										
Reticulation	150,000	157,500	60,000	90,000	40%	1,860	32,369	34,229	32	1,086
Pump Stations	-	-	-	-	0%	846	-	846	32	27
Intakes	-	-	-	-	0%	-	-	-	32	-
Storage	-	-	-	-	0%	-	-	-	32	-
Consents	-	-	-	-	0%	840	-	840	32	27
Conveyance	-	-	-	-	0%	-	-	-	32	-
Treatment Facilities	191,500	200,875	76,600	114,900	40%	-	41,428	41,428	32	1,315
Forward Design	-	-	-	-	0%	-	-	-	32	-
Flow Metering	-	-	-	-	0%	-	-	-	32	-
Asset Management Systems	-	-	-	-	0%	3,993	-	3,993	32	127
New Scheme	-	-	-	-	0%	-	-	-	32	-
Renewals/Upgrades	29,716	34,684	8,915	20,801	30%	1,583	2,862	4,444	32	141
Unspecified Expenditure	-	-	-	-	0%	28	-	28	32	1
TOTAL - Dunback	**371,216**	**393,059**	**145,515**	**225,701**	**39%**	**9,150**	**76,659**	**85,809**	**32**	**$ 2,724**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Duntroon										
Reticulation	-	-	-	-	0%	11	-	11	52	0
Pump Stations	-	-	-	-	0%	-	-	-	52	-
Intakes	-	-	-	-	0%	-	-	-	52	-
Storage	-	-	-	-	0%	-	-	-	52	-
Consents	-	-	-	-	0%	-	-	-	52	-
Conveyance	-	-	-	-	0%	-	-	-	52	-
Treatment Facilities	256,000	283,128	76,800	179,200	30%	-	26,825	26,825	52	520
Forward Design	-	-	-	-	0%	-	-	-	52	-
Flow Metering	-	-	-	-	0%	-	-	-	52	-
Asset Management Systems	-	-	-	-	0%	1,336	-	1,336	52	26
New Scheme	-	-	-	-	0%	-	-	-	52	-
Renewals/Upgrades	15,629	18,242	4,689	10,940	30%	1,297	1,267	2,564	52	50
Unspecified Expenditure	-	-	-	-	0%	-	-	-	52	-
TOTAL - Duntroon	**271,629**	**301,370**	**81,489**	**190,140**	**30%**	**2,643**	**28,092**	**30,735**	**52**	**$ 595**
WATER SUPPLY - Enfield										
Reticulation	-	-	-	-	0%	5,017	-	5,017	72	70
Pump Stations	-	-	-	-	0%	-	-	-	72	-
Intakes	-	-	-	-	0%	-	-	-	72	-
Storage	-	-	-	-	0%	-	-	-	72	-
Consents	-	-	-	-	0%	-	-	-	72	-
Conveyance	-	-	-	-	0%	-	-	-	72	-
Treatment Facilities	613,403	650,914	204,309	409,094	33%	119,505	84,615	204,120	72	2,829
Forward Design	-	-	-	-	0%	-	-	-	72	-
Flow Metering	-	-	-	-	0%	-	-	-	72	-
Asset Management Systems	-	-	-	-	0%	8,028	-	8,028	72	111
New Scheme	-	-	-	-	0%	-	-	-	72	-
Renewals/Upgrades	61,289	71,535	18,387	42,902	30%	2,916	5,102	8,018	72	111
Unspecified Expenditure	-	-	-	-	0%	54	-	54	72	1
TOTAL - Enfield	**674,692**	**722,449**	**222,696**	**451,996**	**33%**	**135,521**	**89,717**	**225,238**	**72**	**$ 3,122**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Goodwood										
Reticulation	75,000	78,750	22,500	52,500	30%	3,911	12,222	16,133	36	446
Pump Stations	-	-	-	-	0%	-	-	-	36	-
Intakes	-	-	-	-	0%	-	-	-	36	-
Storage	-	-	-	-	0%	-	-	-	36	-
Consents	20,000	22,813	3,639	16,361	18%	693	1,294	1,987	36	55
Conveyance	-	-	-	-	0%	-	-	-	36	-
Treatment Facilities	191,500	200,875	57,450	134,050	30%	-	31,284	31,284	36	865
Forward Design	-	-	-	-	0%	-	-	-	36	-
Flow Metering	-	-	-	-	0%	-	-	-	36	-
Asset Management Systems	-	-	-	-	0%	5,556	-	5,556	36	154
New Scheme	-	-	-	-	0%	-	-	-	36	-
Renewals/Upgrades	42,052	49,083	12,616	29,436	30%	-	4,099	4,099	36	113
Unspecified Expenditure	-	-	-	-	0%	33	-	33	36	1
TOTAL - Goodwood	**328,552**	**351,521**	**96,205**	**232,347**	**29%**	**10,193**	**48,899**	**59,092**	**36**	**$ 1,634**
WATER SUPPLY - Hampden/Moeraki										
Reticulation	-	-	-	-	0%	1,007	-	1,007	74	14
Pump Stations	-	-	-	-	0%	-	-	-	74	-
Intakes	-	-	-	-	0%	-	-	-	74	-
Storage	-	-	-	-	0%	7,919	-	7,919	74	107
Consents	20,000	25,099	4,641	15,359	23%	-	782	782	74	11
Conveyance	-	-	-	-	0%	-	-	-	74	-
Treatment Facilities	569,000	610,331	199,150	369,850	35%	1,354	93,120	94,473	74	1,280
Forward Design	-	-	-	-	0%	-	-	-	74	-
Flow Metering	-	-	-	-	0%	-	-	-	74	-
Asset Management Systems	-	-	-	-	0%	8,219	-	8,219	74	111
New Scheme	-	-	-	-	0%	-	-	-	74	-
Renewals/Upgrades	64,164	74,891	19,249	44,915	30%	-	6,071	6,071	74	82
Unspecified Expenditure	-	-	-	-	0%	63	-	63	74	1
TOTAL - Hampden/Moeraki	**653,164**	**710,321**	**223,040**	**430,123**	**34%**	**18,561**	**99,973**	**118,534**	**74**	**$ 1,606**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Herbert/Waianakarua										
Reticulation	-	-	-	-	0%	-	-	-	54	-
Pump Stations	-	-	-	-	0%	-	-	-	54	-
Intakes	-	-	-	-	0%	-	-	-	54	-
Storage	-	-	-	-	0%	-	-	-	54	-
Consents	20,000	25,099	2,078	17,922	10%	-	363	363	54	7
Conveyance	-	-	-	-	0%	-	-	-	54	-
Treatment Facilities	569,000	610,331	113,800	455,200	20%	67	53,972	54,040	54	993
Forward Design	-	-	-	-	0%	-	-	-	54	-
Flow Metering	-	-	-	-	0%	-	-	-	54	-
Asset Management Systems	-	-	-	-	0%	14,828	-	14,828	54	272
New Scheme	-	-	-	-	0%	-	-	-	54	-
Renewals/Upgrades	116,800	136,328	35,040	81,760	30%	11,887	11,260	23,147	54	425
Unspecified Expenditure	-	-	-	-	0%	1,947	-	1,947	54	36
TOTAL - Herbert/Waianakarua	**705,800**	**771,758**	**150,919**	**554,882**	**21%**	**28,729**	**65,596**	**94,325**	**54**	**$ 1,733**
WATER SUPPLY - Kakanui										
Reticulation	-	-	-	-	0%	22,875	-	22,875	86	265
Pump Stations	-	-	-	-	0%	2,268	-	2,268	86	26
Intakes	-	-	-	-	0%	-	-	-	86	-
Storage	-	-	-	-	0%	-	-	-	86	-
Consents	-	-	-	-	0%	-	-	-	86	-
Conveyance	-	-	-	-	0%	-	-	-	86	-
Treatment Facilities	569,000	610,331	170,700	398,300	30%	-	78,830	78,830	86	912
Forward Design	-	-	-	-	0%	-	-	-	86	-
Flow Metering	-	-	-	-	0%	-	-	-	86	-
Asset Management Systems	-	-	-	-	0%	10,187	-	10,187	86	118
New Scheme	-	-	-	-	0%	-	-	-	86	-
Renewals/Upgrades	113,998	132,129	34,199	79,799	30%	-	10,969	10,969	86	127
Unspecified Expenditure	-	-	-	-	0%	73	-	73	86	1
TOTAL - Kakanui	**682,998**	**742,460**	**204,899**	**478,099**	**30%**	**35,402**	**89,799**	**125,201**	**86**	**$ 1,449**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Kauru										
Reticulation	-	-	-	-	0%	3,573	-	3,573	51	70
Pump Stations	-	-	-	-	0%	602	-	602	51	12
Intakes	-	-	-	-	0%	11,155	-	11,155	51	218
Storage	-	-	-	-	0%	980	-	980	51	19
Consents	20,000	25,099	4,903	15,097	25%	-	764	764	51	15
Conveyance	-	-	-	-	0%	-	-	-	51	-
Treatment Facilities	356,000	405,714	106,800	249,200	30%	-	34,252	34,252	51	670
Forward Design	-	-	-	-	0%	-	-	-	51	-
Flow Metering	-	-	-	-	0%	-	-	-	51	-
Asset Management Systems	-	-	-	-	0%	5,327	-	5,327	51	104
New Scheme	-	-	-	-	0%	-	-	-	51	-
Renewals/Upgrades	41,335	48,245	12,400	28,934	30%	-	3,621	3,621	51	71
Unspecified Expenditure	-	-	-	-	0%	40	-	40	51	1
TOTAL - Kauru	**417,335**	**479,058**	**124,104**	**293,231**	**30%**	**21,678**	**38,637**	**60,316**	**51**	**$ 1,180**
WATER SUPPLY - Kurow										
Reticulation	-	-	-	-	0%	1	-	1	35	0
Pump Stations	-	-	-	-	0%	1,271	-	1,271	35	36
Intakes	-	-	-	-	0%	-	-	-	35	-
Storage	-	-	-	-	0%	-	-	-	35	-
Consents	-	-	-	-	0%	-	-	-	35	-
Conveyance	-	-	-	-	0%	-	-	-	35	-
Treatment Facilities	356,000	381,764	142,400	213,600	40%	-	67,298	67,298	35	1,925
Forward Design	-	-	-	-	0%	-	-	-	35	-
Flow Metering	-	-	-	-	0%	-	-	-	35	-
Asset Management Systems	-	-	-	-	0%	4,716	-	4,716	35	135
New Scheme	-	-	-	-	0%	-	-	-	35	-
Renewals/Upgrades	76,083	95,599	17,528	58,554	23%	2,327	3,007	5,334	35	153
Unspecified Expenditure	-	-	-	-	0%	-	-	-	35	-
TOTAL - Kurow	**432,083**	**477,363**	**159,928**	**272,154**	**37%**	**8,316**	**70,305**	**78,621**	**35**	**$ 2,249**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Lower Waitaki										
Reticulation	-	-	-	-	0%	-	-	-	50	-
Pump Stations	-	-	-	-	0%	-	-	-	50	-
Intakes	-	-	-	-	0%	-	-	-	50	-
Storage	-	-	-	-	0%	-	-	-	50	-
Consents	-	-	-	-	0%	-	-	-	50	-
Conveyance	-	-	-	-	0%	-	-	-	50	-
Treatment Facilities	-	-	-	-	0%	19,087	-	19,087	50	383
Forward Design	-	-	-	-	0%	-	-	-	50	-
Flow Metering	-	-	-	-	0%	-	-	-	50	-
Asset Management Systems	-	-	-	-	0%	11,327	-	11,327	50	227
New Scheme	-	-	-	-	0%	-	-	-	50	-
Renewals/Upgrades	95,922	111,959	28,777	67,146	30%	-	7,511	7,511	50	151
Unspecified Expenditure	-	-	-	-	0%	295	-	295	50	6
TOTAL - Lower Waitaki	**95,922**	**111,959**	**28,777**	**67,146**	**30%**	**30,708**	**7,511**	**38,219**	**50**	**$ 767**
WATER SUPPLY - Oamaru										
Reticulation	100,000	115,835	16,076	83,924	16%	105,270	4,144	109,414	506	216
Pump Stations	-	-	-	-	0%	89,989	-	89,989	506	178
Intakes	-	-	-	-	0%	-	-	-	506	-
Storage	-	-	-	-	0%	1,950	-	1,950	506	4
Consents	-	-	-	-	0%	-	-	-	506	-
Conveyance	-	-	-	-	0%	-	-	-	506	-
Treatment Facilities	1,566,506	1,882,142	530,047	1,036,459	34%	1,665,849	77,007	1,742,855	506	3,445
Forward Design	-	-	-	-	0%	-	-	-	506	-
Flow Metering	-	-	-	-	0%	-	-	-	506	-
Asset Management Systems	-	-	-	-	0%	145,661	-	145,661	506	288
New Scheme	562,000	562,000	562,000	-	100%	-	268,668	268,668	506	Targeted Rate
Renewals/Upgrades	1,948,811	2,348,298	325,539	1,623,272	17%	23,165	69,633	92,798	506	183
Unspecified Expenditure	-	-	-	-	0%	8,325	-	8,325	506	16
TOTAL - Oamaru	**4,177,317**	**4,908,275**	**1,433,662**	**2,743,655**	**34%**	**2,040,209**	**419,452**	**2,459,661**	**506**	**$ 4,331**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Ohau										
Reticulation	-	-	-	-	0%	-	-	-	5	-
Pump Stations	-	-	-	-	0%	-	-	-	5	-
Intakes	-	-	-	-	0%	438	-	438	5	91
Storage	-	-	-	-	0%	-	-	-	5	-
Consents	-	-	-	-	0%	773	-	773	5	160
Conveyance	-	-	-	-	0%	-	-	-	5	-
Treatment Facilities	346,000	382,799	86,500	259,500	25%	-	34,570	34,570	5	7,156
Forward Design	-	-	-	-	0%	-	-	-	5	-
Flow Metering	-	-	-	-	0%	-	-	-	5	-
Asset Management Systems	-	-	-	-	0%	244	-	244	5	51
New Scheme	-	-	-	-	0%	-	-	-	5	-
Renewals/Upgrades	63	79	19	44	30%	-	3	3	5	1
Unspecified Expenditure	-	-	-	-	0%	-	-	-	5	-
TOTAL - Ohau	**346,063**	**382,878**	**86,519**	**259,544**	**25%**	**1,456**	**34,574**	**36,029**	**5**	**$ 7,458**
WATER SUPPLY - Omarama										
Reticulation	22,000	25,873	5,171	16,829	24%	15,183	1,441	16,624	32	522
Pump Stations	-	-	-	-	0%	-	-	-	32	-
Intakes	-	-	-	-	0%	-	-	-	32	-
Storage	-	-	-	-	0%	-	-	-	32	-
Consents	-	-	-	-	0%	-	-	-	32	-
Conveyance	-	-	-	-	0%	-	-	-	32	-
Treatment Facilities	569,000	610,331	227,600	341,400	40%	-	103,835	103,835	32	3,261
Forward Design	-	-	-	-	0%	-	-	-	32	-
Flow Metering	-	-	-	-	0%	-	-	-	32	-
Asset Management Systems	-	-	-	-	0%	3,819	-	3,819	32	120
New Scheme	-	-	-	-	0%	-	-	-	32	-
Renewals/Upgrades	957	1,203	287	670	30%	40,394	48	40,442	32	1,270
Unspecified Expenditure	-	-	-	-	0%	-	-	-	32	-
TOTAL - Omarama	**591,957**	**637,407**	**233,059**	**358,899**	**39%**	**59,396**	**105,323**	**164,719**	**32**	**$ 5,174**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Otekaike										
Reticulation	-	-	-	-	0%	-	-	-	23	-
Pump Stations	-	-	-	-	0%	-	-	-	23	-
Intakes	-	-	-	-	0%	-	-	-	23	-
Storage	-	-	-	-	0%	-	-	-	23	-
Consents	-	-	-	-	0%	2,877	-	2,877	23	126
Conveyance	-	-	-	-	0%	-	-	-	23	-
Treatment Facilities	256,000	291,647	51,200	204,800	20%	-	17,230	17,230	23	757
Forward Design	-	-	-	-	0%	-	-	-	23	-
Flow Metering	-	-	-	-	0%	-	-	-	23	-
Asset Management Systems	-	-	-	-	0%	1,801	-	1,801	23	79
New Scheme	-	-	-	-	0%	-	-	-	23	-
Renewals/Upgrades	21,736	25,370	6,521	15,215	30%	-	1,991	1,991	23	87
Unspecified Expenditure	-	-	-	-	0%	-	-	-	23	-
TOTAL - Otekaike	**277,736**	**317,017**	**57,721**	**220,015**	**21%**	**4,678**	**19,221**	**23,899**	**23**	**$ 1,050**
WATER SUPPLY - Otematata										
Reticulation	-	-	-	-	0%	-	-	-	18	-
Pump Stations	-	-	-	-	0%	-	-	-	18	-
Intakes	-	-	-	-	0%	1,144	-	1,144	18	65
Storage	-	-	-	-	0%	-	-	-	18	-
Consents	-	-	-	-	0%	895	-	895	18	51
Conveyance	-	-	-	-	0%	-	-	-	18	-
Treatment Facilities	569,000	629,759	227,600	341,400	40%	-	96,766	96,766	18	5,483
Forward Design	-	-	-	-	0%	-	-	-	18	-
Flow Metering	-	-	-	-	0%	-	-	-	18	-
Asset Management Systems	-	-	-	-	0%	7,370	-	7,370	18	418
New Scheme	-	-	-	-	0%	-	-	-	18	-
Renewals/Upgrades	1,818	2,284	545	1,273	30%	-	98	98	18	6
Unspecified Expenditure	-	-	-	-	0%	-	-	-	18	-
TOTAL - Otematata	**570,818**	**632,044**	**228,145**	**342,673**	**40%**	**9,409**	**96,864**	**106,273**	**18**	**$ 6,022**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Palmerston										
Reticulation	-	-	-	-	0%	14,198	-	14,198	35	404
Pump Stations	-	-	-	-	0%	-	-	-	35	-
Intakes	-	-	-	-	0%	-	-	-	35	-
Storage	-	-	-	-	0%	-	-	-	35	-
Consents	-	-	-	-	0%	1,282	-	1,282	35	37
Conveyance	-	-	-	-	0%	-	-	-	35	-
Treatment Facilities	465,000	488,250	116,250	348,750	25%	1,665	63,141	64,806	35	1,846
Forward Design	-	-	-	-	0%	-	-	-	35	-
Flow Metering	-	-	-	-	0%	-	-	-	35	-
Asset Management Systems	-	-	-	-	0%	13,470	-	13,470	35	384
New Scheme	-	-	-	-	0%	-	-	-	35	-
Renewals/Upgrades	2,007	2,521	602	1,405	30%	1,594	107	1,701	35	48
Unspecified Expenditure	-	-	-	-	0%	59	-	59	35	2
TOTAL - Palmerston	**467,007**	**490,771**	**116,852**	**350,155**	**25%**	**32,267**	**63,248**	**95,515**	**35**	**$ 2,720**
WATER SUPPLY - Stoneburn										
Reticulation	-	-	-	-	0%	3,292	-	3,292	60	55
Pump Stations	-	-	-	-	0%	1,325	-	1,325	60	22
Intakes	-	-	-	-	0%	-	-	-	60	-
Storage	-	-	-	-	0%	-	-	-	60	-
Consents	20,000	25,099	6,020	13,980	30%	-	937	937	60	16
Conveyance	-	-	-	-	0%	-	-	-	60	-
Treatment Facilities	356,000	405,714	142,400	213,600	40%	-	45,849	45,849	60	762
Forward Design	-	-	-	-	0%	-	-	-	60	-
Flow Metering	-	-	-	-	0%	-	-	-	60	-
Asset Management Systems	-	-	-	-	0%	4,895	-	4,895	60	81
New Scheme	-	-	-	-	0%	-	-	-	60	-
Renewals/Upgrades	37,305	43,542	11,191	26,113	30%	-	3,286	3,286	60	55
Unspecified Expenditure	-	-	-	-	0%	45	-	45	60	1
TOTAL - Stoneburn	**413,305**	**474,355**	**159,612**	**253,693**	**39%**	**9,557**	**50,072**	**59,630**	**60**	**$ 991**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Tokarahi										
Reticulation	-	-	-	-	0%	28,405	-	28,405	255	111
Pump Stations	-	-	-	-	0%	1,870	-	1,870	255	7
Intakes	-	-	-	-	0%	-	-	-	255	-
Storage	-	-	-	-	0%	2,159	-	2,159	255	8
Consents	-	-	-	-	0%	-	-	-	255	-
Conveyance	-	-	-	-	0%	-	-	-	255	-
Treatment Facilities	569,000	629,759	227,600	341,400	40%	-	81,246	81,246	255	318
Forward Design	-	-	-	-	0%	-	-	-	255	-
Flow Metering	-	-	-	-	0%	-	-	-	255	-
Asset Management Systems	-	-	-	-	0%	16,943	-	16,943	255	66
New Scheme	-	-	-	-	0%	-	-	-	255	-
Renewals/Upgrades	778,403	847,376	298,521	479,882	38%	28,710	237,259	265,969	255	1,041
Unspecified Expenditure	-	-	-	-	0%	175	-	175	255	1
TOTAL - Tokarahi	**1,347,403**	**1,477,135**	**526,121**	**821,282**	**39%**	**78,262**	**318,505**	**396,767**	**255**	**$ 1,553**
WATER SUPPLY - Weston										
Reticulation	-	-	-	-	0%	21,874	-	21,874	335	65
Pump Stations	-	-	-	-	0%	1,632	-	1,632	335	5
Intakes	-	-	-	-	0%	-	-	-	335	-
Storage	-	-	-	-	0%	-	-	-	335	-
Consents	-	-	-	-	0%	-	-	-	335	-
Conveyance	-	-	-	-	0%	-	-	-	335	-
Treatment Facilities	2,078,611	2,216,734	818,196	1,260,415	39%	540,475	315,108	855,583	335	2,555
Forward Design	-	-	-	-	0%	-	-	-	335	-
Flow Metering	-	-	-	-	0%	-	-	-	335	-
Asset Management Systems	-	-	-	-	0%	24,538	-	24,538	335	73
New Scheme	-	-	-	-	0%	-	-	-	335	-
Renewals/Upgrades	195,964	228,726	58,789	137,175	30%	40,300	15,546	55,846	335	167
Unspecified Expenditure	-	-	-	-	0%	223	-	223	335	1
TOTAL - Weston	**2,274,574**	**2,445,460**	**876,985**	**1,397,590**	**39%**	**629,041**	**330,654**	**959,695**	**335**	**$ 2,866**

Water Supply Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No. of $1m^3$ of Water / HEU's (2009-2018)	Development Contribution Per Cubic Meter of Water / HEU ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WATER SUPPLY - Windsor										
Reticulation	-	-	-	-	0%	-	-	-	37	-
Pump Stations	-	-	-	-	0%	844	-	844	37	23
Intakes	-	-	-	-	0%	-	-	-	37	-
Storage	-	-	-	-	0%	-	-	-	37	-
Consents	15,000	18,824	3,141	11,859	21%	-	510	510	37	14
Conveyance	-	-	-	-	0%	-	-	-	37	-
Treatment Facilities	355,000	404,607	88,750	266,250	25%	-	29,576	29,576	37	793
Forward Design	-	-	-	-	0%	-	-	-	37	-
Flow Metering	-	-	-	-	0%	-	-	-	37	-
Asset Management Systems	-	-	-	-	0%	4,786	-	4,786	37	128
New Scheme	-	-	-	-	0%	-	-	-	37	-
Renewals/Upgrades	36,910	43,081	11,073	25,837	30%	2	3,359	3,360	37	90
Unspecified Expenditure	-	-	-	-	0%	31	-	31	37	1
TOTAL - Windsor	**406,910**	**466,512**	**102,964**	**303,947**	**25%**	**5,663**	**33,445**	**39,108**	**37**	**$ 1,049**
WDC TOTAL	**15,816,520**	**17,647,893**	**5,339,422**	**10,477,098**	**34%**	**3,193,307**	**2,111,818**	**5,305,125**		
WATER SUPPLY - Dunrobin										
Reticulation	-	-	-	-	0%	-	-	-	20	-
Pump Stations	-	-	-	-	0%	-	-	-	20	-
Intakes	-	-	-	-	0%	-	-	-	20	-
Storage	-	-	-	-	0%	-	-	-	20	-
Consents	15,000	18,824	2,280	12,720	15%	-	403	403	20	20
Conveyance	-	-	-	-	0%	-	-	-	20	-
Treatment Facilities	320,000	354,383	80,000	240,000	25%	-	33,542	33,542	20	1,703
Forward Design	-	-	-	-	0%	-	-	-	20	-
Flow Metering	-	-	-	-	0%	-	-	-	20	-
Asset Management Systems	-	-	-	-	0%	-	-	-	20	-
New Scheme	-	-	-	-	0%	-	-	-	20	-
Renewals/Upgrades	-	-	-	-	0%	-	-	-	20	-
Unspecified Expenditure	-	-	-	-	0%	-	-	-	20	-
TOTAL - Dunrobin	**335,000**	**373,207**	**82,280**	**252,720**	**25%**	**-**	**33,945**	**33,945**	**20**	**$ 1,724**

Table 31: Water Supply – Debt Funding Ratio – 2009 - 2018 Net Growth Cost vs. Revenue Assessment by Year

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Awamoko Water Supply										
Existing Debt				-						
2009	5,297	5,297	1,589	1,589	4.7	4,530	4,530	4,530	-2,942	-4%
2010	5,297	5,561	1,589	3,178	4.7	4,583	4,812	9,113	-5,935	-7%
2011	5,297	5,684	1,589	4,767	4.8	4,636	4,975	13,749	-8,982	-11%
2012	16,297	18,048	4,339	9,106	4.9	4,690	5,193	18,439	-9,333	-12%
2013	250,297	285,507	62,839	71,945	4.9	4,744	5,411	23,183	48,762	61%
2014	5,511	6,481	1,653	73,598	5.0	4,799	5,643	27,981	45,617	57%
2015	5,511	6,695	1,653	75,252	5.0	4,854	5,897	32,836	42,416	53%
2016	5,511	6,916	1,653	76,905	5.1	4,911	6,163	37,746	39,159	49%
2017	5,511	7,144	1,653	78,558	5.1	4,968	6,440	42,714	35,844	45%
2018	5,511	7,387	1,653	80,212	5.2	5,025	6,736	47,739	32,472	40%
	310,039	**354,720**	**80,212**	**80,212**	**49**	**47,739**	**55,801**	**Awamoko Weighted Debt Funding Ratio**		**27%**
Dunback Water Supply										
Existing Debt				-						
2009	6,913	6,913	2,474	2,474	2.9	7,947	7,947	7,947	-5,473	-4%
2010	340,413	357,433	135,874	138,348	3.0	8,081	8,485	16,028	122,320	84%
2011	2,913	3,125	874	139,221	3.0	8,217	8,818	24,245	114,976	79%
2012	2,913	3,226	874	140,095	3.1	8,356	9,254	32,601	107,494	74%
2013	2,913	3,322	874	140,969	3.1	8,498	9,694	41,100	99,869	69%
2014	3,031	3,564	909	141,878	3.2	8,642	10,164	49,742	92,136	63%
2015	3,031	3,682	909	142,787	3.2	8,789	10,677	58,531	84,256	58%
2016	3,031	3,803	909	143,696	3.3	8,939	11,218	67,470	76,226	52%
2017	3,031	3,929	909	144,606	3.3	9,091	11,786	76,562	68,044	47%
2018	3,031	4,062	909	145,515	3.4	9,247	12,395	85,809	59,706	41%
	371,216	**393,059**	**145,515**	**145,515**	**32**	**85,809**	**100,437**	**Dunback Weighted Debt Funding Ratio**		**56%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Duntroon Water Supply										
Existing Debt				-						
2009	1,532	1,532	460	460	4.4	2,591	2,591	2,591	-2,131	-3%
2010	1,532	1,608	460	919	4.5	2,688	2,822	5,279	-4,360	-5%
2011	12,532	13,448	3,760	4,679	4.7	2,788	2,992	8,067	-3,388	-4%
2012	246,532	273,021	73,960	78,638	4.9	2,892	3,203	10,959	67,679	83%
2013	1,532	1,747	460	79,098	5.0	3,001	3,423	13,960	65,138	80%
2014	1,594	1,875	478	79,576	5.2	3,113	3,661	17,073	62,503	77%
2015	1,594	1,936	478	80,054	5.4	3,229	3,923	20,302	59,752	73%
2016	1,594	2,000	478	80,532	5.6	3,350	4,205	23,653	56,880	70%
2017	1,594	2,066	478	81,011	5.8	3,476	4,506	27,129	53,882	66%
2018	1,594	2,137	478	81,489	6.1	3,607	4,834	30,735	50,754	62%
	271,629	**301,370**	**81,489**	**81,489**	**52**	**30,735**	**36,160**	**Duntroon Weighted Debt Funding Ratio**		**50%**
Enfield Water Supply										
Existing Debt				-						
2009	12,007	12,007	3,602	3,602	6.7	20,932	20,932	20,932	-17,330	-8%
2010	584,427	613,649	175,328	178,930	6.8	21,270	22,333	42,201	136,729	61%
2011	6,007	6,446	1,802	180,732	6.9	21,613	23,193	63,815	116,918	53%
2012	6,007	6,653	1,802	182,535	7.0	21,963	24,323	85,777	96,757	43%
2013	6,007	6,852	1,802	184,337	7.1	22,318	25,458	108,096	76,241	34%
2014	6,251	7,351	1,875	186,212	7.3	22,680	26,672	130,775	55,436	25%
2015	6,251	7,593	1,875	188,087	7.4	23,048	27,999	153,823	34,264	15%
2016	6,251	7,844	1,875	189,962	7.5	23,422	29,393	177,245	12,717	6%
2017	35,234	45,676	30,859	220,821	7.6	23,803	30,857	201,048	19,773	9%
2018	6,251	8,378	1,875	222,696	7.7	24,190	32,425	225,238	-2,542	-1%
	674,692	**722,449**	**222,696**	**222,696**	**72**	**225,238**	**263,583**	**Enfield Weighted Debt Funding Ratio**		**24%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Goodwood Water Supply										
Existing Debt				-						
2009	8,122	8,122	2,437	2,437	3.4	5,598	5,598	5,598	-3,161	-3%
2010	266,622	279,953	79,987	82,423	3.5	5,665	5,948	11,262	71,161	74%
2011	4,122	4,423	1,237	83,660	3.5	5,732	6,151	16,995	66,665	69%
2012	4,122	4,565	1,237	84,896	3.5	5,801	6,424	22,795	62,101	65%
2013	24,122	27,515	4,876	89,772	3.6	5,870	6,696	28,666	61,106	64%
2014	4,289	5,044	1,287	91,059	3.6	5,941	6,987	34,607	56,452	59%
2015	4,289	5,210	1,287	92,345	3.7	6,012	7,304	40,619	51,727	54%
2016	4,289	5,382	1,287	93,632	3.7	6,084	7,635	46,703	46,929	49%
2017	4,289	5,560	1,287	94,918	3.8	6,157	7,982	52,860	42,058	44%
2018	4,289	5,749	1,287	96,205	3.8	6,232	8,353	59,092	37,113	39%
	328,552	**351,521**	**96,205**	**96,205**	**36**	**59,092**	**69,078**	**Goodwood Weighted Debt Funding Ratio**		**51%**
Hampden/Moeraki Water Supply										
Existing Debt				-						
2009	6,289	6,289	1,887	1,887	6.9	11,099	11,099	11,099	-9,212	-4%
2010	17,289	18,153	5,737	7,623	7.0	11,260	11,823	22,358	-14,735	-7%
2011	564,289	605,530	197,187	204,810	7.1	11,423	12,258	33,781	171,029	77%
2012	6,289	6,965	1,887	206,697	7.2	11,589	12,834	45,370	161,327	72%
2013	6,289	7,174	1,887	208,583	7.3	11,758	13,412	57,128	151,456	68%
2014	6,544	7,696	1,963	210,547	7.4	11,929	14,028	69,056	141,490	63%
2015	6,544	7,950	1,963	212,510	7.5	12,102	14,702	81,159	131,351	59%
2016	26,544	33,311	6,604	219,114	7.6	12,279	15,409	93,437	125,677	56%
2017	6,544	8,483	1,963	221,077	7.8	12,458	16,149	105,895	115,183	52%
2018	6,544	8,771	1,963	223,040	7.9	12,639	16,942	118,534	104,506	47%
	653,164	**710,321**	**223,040**	**223,040**	**74**	**118,534**	**138,655**	**Hampden/Moeraki Weighted Debt Funding Ratio**		**48%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Herbert/Waianakarua Water Supply										
Existing Debt				-						
2009	11,448	11,448	3,434	3,434	5.3	9,189	9,189	9,189	-5,755	-4%
2010	22,448	23,570	5,634	9,069	5.3	9,242	9,705	18,432	-9,363	-6%
2011	569,448	611,066	115,034	124,103	5.4	9,296	9,975	27,727	96,376	64%
2012	11,448	12,678	3,434	127,538	5.4	9,350	10,354	37,077	90,460	60%
2013	11,448	13,059	3,434	130,972	5.4	9,404	10,727	46,481	84,491	56%
2014	11,912	14,009	3,574	134,546	5.5	9,458	11,123	55,940	78,606	52%
2015	11,912	14,471	3,574	138,119	5.5	9,513	11,557	65,453	72,666	48%
2016	31,912	40,047	5,652	143,771	5.5	9,568	12,008	75,021	68,750	46%
2017	11,912	15,442	3,574	147,345	5.6	9,624	12,476	84,645	62,700	42%
2018	11,912	15,967	3,574	150,919	5.6	9,680	12,975	94,325	56,594	37%
	705,800	**771,758**	**150,919**	**150,919**	**54**	**94,325**	**110,089**	**Herbert/Waianakarua Weighted Debt Funding Ratio**		**39%**
Kakanui Water Supply										
Existing Debt				-						
2009	7,743	7,743	2,323	2,323	8.2	11,810	11,810	11,810	-9,488	-5%
2010	18,743	19,680	5,623	7,946	8.3	11,963	12,561	23,773	-15,827	-8%
2011	565,743	607,090	169,723	177,669	8.4	12,117	13,003	35,890	141,778	69%
2012	7,743	8,575	2,323	179,991	8.5	12,273	13,592	48,164	131,828	64%
2013	42,743	48,756	12,823	192,814	8.6	12,432	14,180	60,595	132,219	65%
2014	8,057	9,475	2,417	195,231	8.7	12,592	14,809	73,187	122,044	60%
2015	8,057	9,787	2,417	197,648	8.8	12,755	15,494	85,942	111,707	55%
2016	8,057	10,111	2,417	200,065	8.9	12,919	16,213	98,861	101,205	49%
2017	8,057	10,444	2,417	202,482	9.0	13,086	16,964	111,947	90,536	44%
2018	8,057	10,799	2,417	204,899	9.1	13,255	17,767	125,201	79,698	39%
	682,998	**742,460**	**204,899**	**204,899**	**86**	**125,201**	**146,393**	**Kakanui Weighted Debt Funding Ratio**		**43%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Kauru Water Supply										
Existing Debt				-						
2009	4,051	4,051	1,215	1,215	4.8	5,635	5,635	5,635	-4,419	-4%
2010	4,051	4,254	1,215	2,431	4.8	5,719	6,005	11,354	-8,923	-7%
2011	4,051	4,347	1,215	3,646	4.9	5,805	6,229	17,159	-13,513	-11%
2012	15,051	16,669	4,515	8,162	5.0	5,892	6,526	23,051	-14,890	-12%
2013	349,051	398,154	104,715	112,877	5.1	5,981	6,822	29,032	83,845	68%
2014	4,216	4,958	1,265	114,142	5.1	6,071	7,140	35,104	79,038	64%
2015	4,216	5,121	1,265	115,406	5.2	6,162	7,486	41,266	74,140	60%
2016	24,216	30,389	6,168	121,574	5.3	6,255	7,850	47,521	74,053	60%
2017	4,216	5,465	1,265	122,839	5.4	6,349	8,231	53,871	68,968	56%
2018	4,216	5,651	1,265	124,104	5.5	6,445	8,639	60,316	63,788	51%
	417,335	**479,058**	**124,104**	**124,104**	**51**	**60,316**	**70,563**	**Kauru Weighted Debt Funding Ratio**		**32%**
Kurow Water Supply										
Existing Debt				-						
2009	-	-	-	-	3.3	7,409	7,409	7,409	-7,409	-5%
2010	11,000	11,550	4,400	4,400	3.3	7,506	7,882	14,915	-10,515	-7%
2011	345,000	370,214	138,000	142,400	3.4	7,605	8,161	22,520	119,880	75%
2012	-	-	-	142,400	3.4	7,705	8,532	30,225	112,175	70%
2013	-	-	-	142,400	3.5	7,806	8,904	38,030	104,370	65%
2014	15,217	17,895	3,506	145,906	3.5	7,908	9,300	45,938	99,967	63%
2015	15,217	18,485	3,506	149,411	3.6	8,012	9,733	53,950	95,461	60%
2016	15,217	19,096	3,506	152,917	3.6	8,117	10,186	62,067	90,850	57%
2017	15,217	19,726	3,506	156,423	3.7	8,223	10,660	70,290	86,133	54%
2018	15,217	20,397	3,506	159,928	3.7	8,331	11,167	78,621	81,307	51%
	432,083	**477,363**	**159,928**	**159,928**	**35**	**78,621**	**91,933**	**Kurow Weighted Debt Funding Ratio**		**48%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Lower Waitaki Water Supply										
Existing Debt				-						
2009	9,402	9,402	2,821	2,821	4.8	3,711	3,711	3,711	-890	-3%
2010	9,402	9,872	2,821	5,641	4.9	3,735	3,922	7,446	-1,805	-6%
2011	9,402	10,089	2,821	8,462	4.9	3,759	4,034	11,205	-2,743	-10%
2012	9,402	10,412	2,821	11,282	4.9	3,784	4,191	14,989	-3,707	-13%
2013	9,402	10,724	2,821	14,103	5.0	3,809	4,345	18,798	-4,695	-16%
2014	9,783	11,505	2,935	17,037	5.0	3,834	4,508	22,631	-5,594	-19%
2015	9,783	11,884	2,935	19,972	5.0	3,859	4,688	26,490	-6,518	-23%
2016	9,783	12,277	2,935	22,907	5.1	3,884	4,874	30,374	-7,467	-26%
2017	9,783	12,682	2,935	25,842	5.1	3,909	5,068	34,284	-8,442	-29%
2018	9,783	13,113	2,935	28,777	5.1	3,935	5,275	38,219	-9,442	-33%
	95,922	**111,959**	**28,777**	**28,777**	**50**	**38,219**	**44,615**	**Lower Waitaki Weighted Debt Funding Ratio**		**0%**
Oamaru Water Supply										
Existing Debt				-						
2009	662,000	662,000	587,000	587,000	48.6	210,543	210,543	210,543	376,457	26%
2010	100,000	105,000	16,075	603,075	49.0	212,400	223,020	422,944	180,131	13%
2011	100,000	107,309	16,075	619,150	49.5	214,273	229,934	637,217	-18,067	-1%
2012	100,000	110,745	16,076	635,226	49.9	216,163	239,389	853,381	-218,155	-15%
2013	250,000	285,168	40,190	675,416	50.4	218,070	248,747	1,071,450	-396,035	-28%
2014	1,614,762	1,899,006	260,255	935,671	50.8	219,993	258,718	1,291,444	-355,772	-25%
2015	204,762	248,750	33,582	969,253	51.2	221,934	269,610	1,513,377	-544,124	-38%
2016	204,762	256,962	33,582	1,002,835	51.7	223,891	280,968	1,737,268	-734,433	-51%
2017	636,268	824,824	381,166	1,384,001	52.2	225,866	292,801	1,963,134	-579,134	-40%
2018	304,762	408,511	49,661	1,433,662	52.6	227,858	305,427	2,190,993	-757,331	-53%
	4,177,317	**4,908,275**	**1,433,662**	**1,433,662**	**506**	**2,190,993**	**2,559,157**	**Oamaru Weighted Debt Funding Ratio**		**0%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Ohau Water Supply										
Existing Debt				-						
2009	-	-	-	-	0.4	3,335	3,335	3,335	-3,335	-4%
2010	-	-	-	-	0.5	3,392	3,561	6,727	-6,727	-8%
2011	11,000	11,804	2,750	2,750	0.5	3,450	3,702	10,177	-7,427	-9%
2012	335,000	370,995	83,750	86,500	0.5	3,509	3,886	13,685	72,815	84%
2013	-	-	-	86,500	0.5	3,568	4,070	17,254	69,246	80%
2014	13	15	4	86,504	0.5	3,629	4,268	20,883	65,621	76%
2015	13	15	4	86,508	0.5	3,691	4,484	24,574	61,934	72%
2016	13	16	4	86,511	0.5	3,754	4,711	28,328	58,183	67%
2017	13	16	4	86,515	0.5	3,818	4,950	32,146	54,369	63%
2018	13	17	4	86,519	0.5	3,883	5,205	36,029	50,490	58%
	346,063	**382,878**	**86,519**	**86,519**	**5**	**36,029**	**42,172**	**Ohau Weighted Debt Funding Ratio**		**48%**
Omarama Water Supply										
Existing Debt				-						
2009	-	-	-	-	3.0	15,497	15,497	15,497	-15,497	-7%
2010	11,000	11,550	4,400	4,400	3.0	15,706	16,491	31,202	-26,802	-12%
2011	558,000	598,781	223,200	227,600	3.1	15,917	17,081	47,120	180,480	77%
2012	-	-	-	227,600	3.1	16,132	17,866	63,252	164,348	71%
2013	-	-	-	227,600	3.2	16,350	18,650	79,602	147,998	64%
2014	22,191	26,098	5,229	232,829	3.2	16,570	19,487	96,172	136,657	59%
2015	191	233	57	232,886	3.2	16,794	20,402	112,966	119,920	51%
2016	191	240	57	232,944	3.3	17,020	21,360	129,986	102,957	44%
2017	191	248	57	233,001	3.3	17,250	22,362	147,237	85,765	37%
2018	191	257	57	233,059	3.4	17,483	23,434	164,719	68,339	29%
	591,957	**637,407**	**233,059**	**233,059**	**32**	**164,719**	**192,629**	**Omarama Weighted Debt Funding Ratio**		**41%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Otekaike Water Supply										
Existing Debt				-						
2009	2,130	2,130	639	639	2.2	2,263	2,263	2,263	-1,624	-3%
2010	2,130	2,237	639	1,278	2.2	2,291	2,405	4,554	-3,276	-6%
2011	2,130	2,286	639	1,917	2.2	2,318	2,488	6,872	-4,955	-9%
2012	13,130	14,541	2,839	4,757	2.2	2,346	2,598	9,218	-4,462	-8%
2013	247,130	281,895	49,639	54,396	2.3	2,374	2,708	11,592	42,803	74%
2014	2,217	2,607	665	55,061	2.3	2,403	2,826	13,995	41,065	71%
2015	2,217	2,693	665	55,726	2.3	2,432	2,954	16,427	39,299	68%
2016	2,217	2,782	665	56,391	2.3	2,461	3,088	18,888	37,503	65%
2017	2,217	2,874	665	57,056	2.4	2,491	3,229	21,378	35,677	62%
2018	2,217	2,971	665	57,721	2.4	2,520	3,379	23,899	33,822	59%
	277,736	**317,017**	**57,721**	**57,721**	**23**	**23,899**	**27,938**	**Otekaike Weighted Debt Funding Ratio**		**37%**
Otematata Water Supply										
Existing Debt				-						
2009	-	-	-	-	1.7	10,378	10,378	10,378	-10,378	-5%
2010	-	-	-	-	1.7	10,432	10,954	20,811	-20,811	-9%
2011	11,000	11,804	4,400	4,400	1.7	10,487	11,254	31,298	-26,898	-12%
2012	558,000	617,955	223,200	227,600	1.8	10,542	11,675	41,840	185,760	81%
2013	-	-	-	227,600	1.8	10,598	12,088	52,438	175,162	77%
2014	364	428	109	227,709	1.8	10,653	12,529	63,091	164,618	72%
2015	364	442	109	227,818	1.8	10,710	13,011	73,801	154,017	68%
2016	364	456	109	227,927	1.8	10,767	13,511	84,568	143,360	63%
2017	364	471	109	228,036	1.8	10,824	14,032	95,392	132,645	58%
2018	364	487	109	228,145	1.8	10,882	14,586	106,273	121,872	53%
	570,818	**632,044**	**228,145**	**228,145**	**18**	**106,273**	**124,018**	**Otematata Weighted Debt Funding Ratio**		**45%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Palmerston Water Supply										
Existing Debt				-						
2009	-	-	-	-	3.4	9,237	9,237	9,237	-9,237	-8%
2010	465,000	488,250	116,250	116,250	3.4	9,306	9,771	18,542	97,708	84%
2011	-	-	-	116,250	3.4	9,375	10,060	27,917	88,333	76%
2012	-	-	-	116,250	3.5	9,444	10,459	37,361	78,889	68%
2013	-	-	-	116,250	3.5	9,514	10,853	46,875	69,375	59%
2014	401	472	120	116,370	3.5	9,585	11,272	56,460	59,910	51%
2015	401	488	120	116,491	3.5	9,656	11,730	66,116	50,375	43%
2016	401	504	120	116,611	3.6	9,727	12,207	75,843	40,768	35%
2017	401	520	120	116,732	3.6	9,800	12,704	85,643	31,089	27%
2018	401	538	120	116,852	3.6	9,872	13,233	95,515	21,337	18%
	467,007	**490,771**	**116,852**	**116,852**	**35**	**95,515**	**111,525**	**Palmerston Weighted Debt Funding Ratio**		**45%**
Stoneburn Water Supply										
Existing Debt				-						
2009	3,656	3,656	1,097	1,097	5.5	5,479	5,479	5,479	-4,383	-3%
2010	3,656	3,839	1,097	2,194	5.6	5,582	5,861	11,061	-8,867	-6%
2011	3,656	3,924	1,097	3,291	5.7	5,686	6,101	16,747	-13,456	-8%
2012	14,656	16,231	5,497	8,788	5.8	5,792	6,414	22,539	-13,751	-9%
2013	348,656	397,703	139,097	147,885	6.0	5,900	6,730	28,438	119,446	75%
2014	3,805	4,474	1,141	149,026	6.1	6,010	7,068	34,448	114,578	72%
2015	3,805	4,622	1,141	150,167	6.2	6,122	7,437	40,570	109,597	69%
2016	23,805	29,873	7,162	157,329	6.3	6,236	7,826	46,806	110,523	69%
2017	3,805	4,932	1,141	158,470	6.4	6,352	8,235	53,159	105,311	66%
2018	3,805	5,100	1,141	159,612	6.5	6,471	8,674	59,630	99,982	63%
	413,305	**474,355**	**159,612**	**159,612**	**60**	**59,630**	**69,825**	**Stoneburn Weighted Debt Funding Ratio**		**39%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Tokarahi Water Supply										
Existing Debt				-						
2009	12,585	12,585	3,776	3,776	23.0	35,654	35,654	35,654	-31,878	-6%
2010	12,585	13,215	3,776	7,551	23.5	36,492	38,316	72,146	-64,594	-12%
2011	673,585	722,814	268,176	275,727	24.0	37,349	40,079	109,495	166,232	32%
2012	570,585	631,893	226,976	502,702	24.6	38,228	42,336	147,723	354,979	67%
2013	12,585	14,356	3,776	506,478	25.2	39,128	44,632	186,851	319,627	61%
2014	13,095	15,400	3,929	510,407	25.8	40,049	47,099	226,900	283,506	54%
2015	13,095	15,908	3,929	514,335	26.4	40,993	49,799	267,894	246,442	47%
2016	13,095	16,434	3,929	518,264	27.0	41,960	52,657	309,853	208,410	40%
2017	13,095	16,976	3,929	522,192	27.7	42,950	55,678	352,803	169,389	32%
2018	13,095	17,553	3,929	526,121	28.3	43,964	58,930	396,767	129,354	25%
	1,347,403	**1,477,135**	**526,121**	**526,121**	**255**	**396,767**	**465,180**	**Tokarahi Weighted Debt Funding Ratio**		**34%**
Weston Water Supply										
Existing Debt				-						
2009	22,707	22,707	6,987	6,987	30.7	88,023	88,023	88,023	-81,036	-9%
2010	1,954,807	2,052,548	683,222	690,209	31.3	89,701	94,186	177,724	512,485	58%
2011	19,207	20,611	5,762	695,971	31.9	91,410	98,091	269,135	426,837	49%
2012	19,207	21,271	5,762	701,734	32.5	93,153	103,162	362,287	339,446	39%
2013	19,207	21,909	5,762	707,496	33.1	94,928	108,282	457,215	250,280	29%
2014	19,986	23,504	5,996	713,491	33.8	96,737	113,766	553,953	159,539	18%
2015	19,986	24,279	5,996	719,487	34.4	98,581	119,759	652,534	66,953	8%
2016	19,986	25,080	5,996	725,483	35.1	100,460	126,070	752,994	-27,511	-3%
2017	159,496	206,763	145,506	870,989	35.7	102,375	132,713	855,369	15,620	2%
2018	19,986	26,789	5,996	876,985	36.4	104,326	139,842	959,695	-82,710	-9%
	2,274,574	**2,445,460**	**876,985**	**876,985**	**335**	**959,695**	**1,123,894**	**Weston Weighted Debt Funding Ratio**		**18%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New 1m³ of Water or HEU's (2009-2018)	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Windsor Water Supply										
Existing Debt				-						
2009	3,618	3,618	1,085	1,085	3.5	3,679	3,679	3,679	-2,594	-3%
2010	3,618	3,799	1,085	2,171	3.6	3,729	3,915	7,408	-5,237	-5%
2011	3,618	3,882	1,085	3,256	3.6	3,779	4,055	11,187	-7,931	-8%
2012	13,618	15,081	3,585	6,841	3.7	3,830	4,241	15,017	-8,176	-8%
2013	348,618	397,659	87,335	94,177	3.7	3,882	4,428	18,899	75,278	73%
2014	3,764	4,427	1,129	95,306	3.7	3,934	4,626	22,832	72,473	70%
2015	3,764	4,573	1,129	96,435	3.8	3,987	4,844	26,820	69,616	68%
2016	18,764	23,548	4,270	100,705	3.9	4,041	5,071	30,861	69,845	68%
2017	3,764	4,880	1,129	101,835	3.9	4,096	5,309	34,956	66,878	65%
2018	3,764	5,046	1,129	102,964	4.0	4,151	5,564	39,108	63,856	62%
	406,910	**466,512**	**102,964**	**102,964**	**37**	**39,108**	**45,734**	**Windsor Weighted Debt Funding Ratio**		**38%**
WDC	**15,816,520**	**17,647,893**	**5,339,422**			**5,036,457**	**5,889,378**			
Dunrobin Water Supply										
Existing Debt				-						
2009	-	-	-	-	1.9	3,270	3,270	3,270	-3,270	-4%
2010	-	-	-	-	1.9	3,297	3,462	6,567	-6,567	-8%
2011	-	-	-	-	1.9	3,324	3,567	9,891	-9,891	-12%
2012	320,000	354,383	80,000	80,000	1.9	3,352	3,712	13,243	66,757	81%
2013	-	-	-	80,000	2.0	3,380	3,855	16,623	63,377	77%
2014	-	-	-	80,000	2.0	3,408	4,007	20,030	59,970	73%
2015	-	-	-	80,000	2.0	3,436	4,174	23,466	56,534	69%
2016	15,000	18,824	2,280	82,280	2.0	3,464	4,347	26,930	55,350	67%
2017	-	-	-	82,280	2.0	3,493	4,528	30,423	51,857	63%
2018	-	-	-	82,280	2.0	3,522	4,721	33,945	48,335	59%
	335,000	**373,207**	**82,280**	**82,280**	**20**	**33,945**	**39,643**	**Dunrobin Weighted Debt Funding Ratio**		**46%**

Wastewater

Table 32: Wastewater Capital Expenditure for Development Contributions (excluding GST) by Work Type

Wastewater Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WASTEWATER- Kakanui										
Reticulation	-	-	-	-	0%	-	-	-	37	-
Pump Stations	-	-	-	-	0%	14,193	-	14,193	37	379
Intakes	-	-	-	-	0%	-	-	-	37	-
Storage	-	-	-	-	0%	6,724	-	6,724	37	180
Consents	40,000	42,923	9,299	30,701	23%	-	3,427	3,427	37	92
Conveyance	-	-	-	-	0%	-	-	-	37	-
Treatment Facilities	-	-	-	-	0%	-	-	-	37	-
Forward Design	-	-	-	-	0%	-	-	-	37	-
Flow Metering	-	-	-	-	0%	-	-	-	37	-
Asset Management Systems	30,000	34,961	1,920	28,080	6%	949	1,531	2,480	37	66
New Scheme	-	-	-	-	0%	-	-	-	37	-
Renewals/Upgrades	20,000	22,149	4,650	15,350	23%	-	1,489	1,489	37	40
Unspecified Expenditure	-	-	-	-	0%	-	-	-	37	-
Total Wastewater - Kakanui	**90,000**	**100,034**	**15,869**	**74,131**	**18%**	**21,867**	**6,448**	**28,315**	**37**	**$ 756**
WASTEWATER - Kurow										
Reticulation	-	-	-	-	0%	-	-	-	30	-
Pump Stations	-	-	-	-	0%	-	-	-	30	-
Intakes	-	-	-	-	0%	-	-	-	30	-
Storage	-	-	-	-	0%	620	-	620	30	20
Consents	-	-	-	-	0%	3,105	-	3,105	30	102
Conveyance	-	-	-	-	0%	-	-	-	30	-
Treatment Facilities	20,000	20,000	4,590	15,410	23%	-	2,150	2,150	30	71
Forward Design	-	-	-	-	0%	-	-	-	30	-
Flow Metering	-	-	-	-	0%	-	-	-	30	-
Asset Management Systems	30,000	34,961	1,893	28,107	6%	773	1,511	2,283	30	75
New Scheme	-	-	-	-	0%	-	-	-	30	-
Renewals/Upgrades	-	-	-	-	0%	-	-	-	30	-
Unspecified Expenditure	-	-	-	-	0%	2,241	-	2,241	30	74
Total Wastewater - Kurow	**50,000**	**54,961**	**6,483**	**43,517**	**13%**	**6,739**	**3,661**	**10,399**	**30**	**$ 341**

Wastewater Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WASTEWATER - Moeraki										
Reticulation	100,000	114,067	33,114	66,886	33%	-	8,573	8,573	32	269
Pump Stations	-	-	-	-	0%	-	-	-	32	-
Intakes	-	-	-	-	0%	-	-	-	32	-
Storage	-	-	-	-	0%	-	-	-	32	-
Consents	40,000	44,298	13,245	26,755	33%	4,603	4,042	8,645	32	271
Conveyance	-	-	-	-	0%	-	-	-	32	-
Treatment Facilities	-	-	-	-	0%	4,310	-	4,310	32	135
Forward Design	-	-	-	-	0%	-	-	-	32	-
Flow Metering	-	-	-	-	0%	-	-	-	32	-
Asset Management Systems	-	-	-	-	0%	824	-	824	32	26
New Scheme	-	-	-	-	0%	136,905	-	136,905	32	4,299
Renewals/Upgrades	-	-	-	-	0%	-	-	-	32	-
Unspecified Expenditure	-	-	-	-	0%	-	-	-	32	-
Total Wastewater - Moeraki	**140,000**	**158,365**	**46,359**	**93,641**	**33%**	**146,643**	**12,615**	**159,258**	**32**	**$ 5,001**
WASTEWATER - Oamaru										
Reticulation	-	-	-	-	0%	105,475	-	105,475	549	192
Pump Stations	300,000	352,809	50,135	249,865	17%	358,603	11,685	370,287	549	674
Intakes	-	-	-	-	0%	-	-	-	549	-
Storage	-	-	-	-	0%	-	-	-	549	-
Consents	-	-	-	-	0%	9,234	-	9,234	549	17
Conveyance	-	-	-	-	0%	-	-	-	549	-
Treatment Facilities	-	-	-	-	0%	1,029,363	-	1,029,363	549	1,874
Forward Design	-	-	-	-	0%	-	-	-	549	-
Flow Metering	-	-	-	-	0%	-	-	-	549	-
Asset Management Systems	300,000	349,613	13,402	286,598	4%	13,727	10,697	24,423	549	44
New Scheme	327,000	327,000	327,000	-	100%	-	156,005	156,005	549	Targeted Rate
Renewals/Upgrades	1,500,000	1,859,067	250,685	1,249,315	17%	-	40,423	40,423	549	74
Unspecified Expenditure	-	-	-	-	0%	25,703	-	25,703	549	47
Total Wastewater - Oamaru	**2,427,000**	**2,888,489**	**641,222**	**1,785,778**	**26%**	**1,542,104**	**218,809**	**1,760,913**	**549**	**$ 2,922**

Wastewater Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WASTEWATER - Ohau										
Reticulation	-	-	-	-	0%	-	-	-	8	-
Pump Stations	-	-	-	-	0%	-	-	-	8	-
Intakes	-	-	-	-	0%	-	-	-	8	-
Storage	-	-	-	-	0%	-	-	-	8	-
Consents	-	-	-	-	0%	460	-	460	8	55
Conveyance	-	-	-	-	0%	-	-	-	8	-
Treatment Facilities	-	-	-	-	0%	-	-	-	8	-
Forward Design	-	-	-	-	0%	-	-	-	8	-
Flow Metering	-	-	-	-	0%	-	-	-	8	-
Asset Management Systems	10,000	11,654	806	9,194	8%	213	642	854	8	103
New Scheme	-	-	-	-	0%	-	-	-	8	-
Renewals/Upgrades	-	-	-	-	0%	-	-	-	8	-
Unspecified Expenditure	-	-	-	-	0%	-	-	-	8	-
Total Wastewater - Ohau	**10,000**	**11,654**	**806**	**9,194**	**8%**	**673**	**642**	**1,315**	**8**	**$ 158**
WASTEWATER - Omarama										
Reticulation	-	-	-	-	0%	632	-	632	31	20
Pump Stations	-	-	-	-	0%	703	-	703	31	22
Intakes	-	-	-	-	0%	-	-	-	31	-
Storage	-	-	-	-	0%	-	-	-	31	-
Consents	-	-	-	-	0%	9,282	-	9,282	31	297
Conveyance	-	-	-	-	0%	-	-	-	31	-
Treatment Facilities	80,000	91,254	18,806	61,194	24%	-	5,460	5,460	31	175
Forward Design	-	-	-	-	0%	-	-	-	31	-
Flow Metering	-	-	-	-	0%	-	-	-	31	-
Asset Management Systems	25,000	29,134	1,620	23,380	6%	811	1,321	2,132	31	68
New Scheme	-	-	-	-	0%	-	-	-	31	-
Renewals/Upgrades	-	-	-	-	0%	-	-	-	31	-
Unspecified Expenditure	-	-	-	-	0%	-	-	-	31	-
Total Wastewater - Omarama	**105,000**	**120,388**	**20,425**	**84,575**	**19%**	**11,428**	**6,782**	**18,209**	**31**	**$ 583**

Wastewater Contributing Area	Capital Cost				Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-2018	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-2018	Weighted Average No of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)						
WASTEWATER - Otematata										
Reticulation	-	-	-	-	0%	-	-	-	18	-
Pump Stations	-	-	-	-	0%	-	-	-	18	-
Intakes	-	-	-	-	0%	-	-	-	18	-
Storage	-	-	-	-	0%	-	-	-	18	-
Consents	-	-	-	-	0%	1,763	-	1,763	18	99
Conveyance	-	-	-	-	0%	-	-	-	18	-
Treatment Facilities	-	-	-	-	0%	61,812	-	61,812	18	3,485
Forward Design	-	-	-	-	0%	-	-	-	18	-
Flow Metering	-	-	-	-	0%	-	-	-	18	-
Asset Management Systems	35,000	40,788	711	34,289	2%	434	567	1,001	18	56
New Scheme	-	-	-	-	0%	-	-	-	18	-
Renewals/Upgrades	-	-	-	-	0%	-	-	-	18	-
Unspecified Expenditure	-	-	-	-	0%	-	-	-	18	-
Total Wastewater- Otematata	**35,000**	**40,788**	**711**	**34,289**	**2%**	**64,008**	**567**	**64,575**	**18**	**$ 3,641**
WASTEWATER - Palmerston										
Reticulation	-	-	-	-	0%	-	-	-	34	-
Pump Stations	60,000	68,440	8,123	51,877	14%	1,495	2,312	3,808	34	113
Intakes	-	-	-	-	0%	-	-	-	34	-
Storage	-	-	-	-	0%	2,785	-	2,785	34	83
Consents	-	-	-	-	0%	7,994	-	7,994	34	238
Conveyance	-	-	-	-	0%	-	-	-	34	-
Treatment Facilities	-	-	-	-	0%	43,909	-	43,909	34	1,308
Forward Design	-	-	-	-	0%	-	-	-	34	-
Flow Metering	-	-	-	-	0%	-	-	-	34	-
Asset Management Systems	50,000	58,269	1,784	48,216	4%	833	1,425	2,257	34	67
New Scheme	-	-	-	-	0%	-	-	-	34	-
Renewals/Upgrades	-	-	-	-	0%	-	-	-	34	-
Unspecified Expenditure	-	-	-	-	0%	2,877	-	2,877	34	86
Total Wastewater - Palmerston	**110,000**	**126,709**	**9,907**	**100,093**	**9%**	**59,892**	**3,737**	**63,629**	**34**	**$ 1,896**
WDC Total	**2,967,000**	**3,501,388**	**741,781**	**2,225,219**	**25%**	**1,853,353**	**253,260**	**2,106,613**	**740**	

Table 33: Wastewater – Debt Funding Ratio – 2009 - 2018 Net Growth Cost vs. Revenue Assessment by Year

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Kakanui Wastewater										
Existing Debt				-						
2009	3,000	3,000	192	192	4	2,666	2,666	2,666	-2,474	-16%
2010	3,000	3,150	192	384	4	2,701	2,836	5,367	-4,983	-31%
2011	43,000	46,143	9,491	9,875	4	2,737	2,937	8,105	1,771	11%
2012	23,000	25,471	4,842	14,717	4	2,774	3,072	10,878	3,838	24%
2013	3,000	3,422	192	14,909	4	2,811	3,206	13,689	1,220	8%
2014	3,000	3,528	192	15,101	4	2,848	3,350	16,537	-1,437	-9%
2015	3,000	3,644	192	15,293	4	2,886	3,506	19,424	-4,131	-26%
2016	3,000	3,765	192	15,485	4	2,925	3,670	22,348	-6,863	-43%
2017	3,000	3,889	192	15,677	4	2,964	3,842	25,312	-9,635	-61%
2018	3,000	4,021	192	15,869	4	3,003	4,025	28,315	-12,446	-78%
	90,000	**100,034**	**15,869**	**15,869**	**37**	**28,315**	**33,111**	**Kakanui Weighted Debt Funding Ratio**		**0%**
Kurow Wastewater										
Existing Debt				-						
2009	23,000	23,000	4,779	4,779	3	980	980	980	3,799	59%
2010	3,000	3,150	189	4,969	3	993	1,042	1,973	2,996	46%
2011	3,000	3,219	189	5,158	3	1,006	1,079	2,979	2,179	34%
2012	3,000	3,322	189	5,347	3	1,019	1,129	3,998	1,349	21%
2013	3,000	3,422	189	5,537	3	1,032	1,178	5,030	506	8%
2014	3,000	3,528	189	5,726	3	1,046	1,230	6,076	-350	-5%
2015	3,000	3,644	189	5,915	3	1,060	1,287	7,136	-1,221	-19%
2016	3,000	3,765	189	6,104	3	1,074	1,347	8,210	-2,105	-32%
2017	3,000	3,889	189	6,294	3	1,088	1,410	9,297	-3,004	-46%
2018	3,000	4,021	189	6,483	3	1,102	1,477	10,399	-3,916	-60%
	50,000	**54,961**	**6,483**	**6,483**	**30**	**10,399**	**12,160**	**Kurow Weighted Debt Funding Ratio**		**0%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Moeraki Wastewater										
Existing Debt				-						
2009	-	-	-	-	3	14,520	14,520	14,520	-14,520	-31%
2010	-	-	-	-	3	14,816	15,556	29,336	-29,336	-63%
2011	-	-	-	-	3	15,117	16,222	44,453	-44,453	-96%
2012	40,000	44,298	13,245	13,245	3	15,425	17,083	59,878	-46,633	-101%
2013	100,000	114,067	33,114	46,359	3	15,740	17,954	75,618	-29,259	-63%
2014	-	-	-	46,359	3	16,060	18,887	91,678	-45,319	-98%
2015	-	-	-	46,359	3	16,387	19,908	108,065	-61,706	-133%
2016	-	-	-	46,359	3	16,721	20,984	124,786	-78,427	-169%
2017	-	-	-	46,359	3	17,062	22,118	141,848	-95,489	-206%
2018	-	-	-	46,359	3	17,409	23,336	159,258	-112,899	-244%
	140,000	**158,365**	**46,359**	**46,359**	**32**	**159,258**	**186,568**	**Moeraki Weighted Debt Funding Ratio**		**0%**
Oamaru Wastewater										
Existing Debt				-						
2009	357,000	357,000	328,340	328,340	53	153,948	153,948	153,948	174,392	27%
2010	30,000	31,500	1,340	329,680	53	155,367	163,135	309,315	20,365	3%
2011	30,000	32,193	1,340	331,020	54	156,798	168,258	466,113	-135,093	-21%
2012	130,000	143,968	18,051	349,071	54	158,243	175,245	624,356	-275,285	-43%
2013	230,000	262,355	34,762	383,833	55	159,701	182,166	784,056	-400,223	-62%
2014	530,000	623,295	84,898	468,731	55	161,172	189,543	945,229	-476,498	-74%
2015	230,000	279,409	34,764	503,495	56	162,658	197,600	1,107,886	-604,391	-94%
2016	230,000	288,634	34,765	538,261	56	164,156	206,005	1,272,043	-733,782	-114%
2017	330,000	427,795	51,480	589,740	57	165,669	214,765	1,437,712	-847,972	-132%
2018	330,000	442,340	51,481	641,222	57	167,196	224,114	1,604,908	-963,687	-150%
	2,427,000	**2,888,489**	**641,222**	**641,222**	**549**	**1,604,908**	**1,874,780**	**Oamaru Weighted Debt Funding Ratio**		**0%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Ohau Wastewater										
Existing Debt				-						
2009	1,000	1,000	81	81	1	122	122	122	-41	-5%
2010	1,000	1,050	81	161	1	124	130	246	-84	-10%
2011	1,000	1,073	81	242	1	126	135	371	-130	-16%
2012	1,000	1,107	81	322	1	128	142	500	-177	-22%
2013	1,000	1,141	81	403	1	130	149	630	-227	-28%
2014	1,000	1,176	81	483	1	132	156	762	-279	-35%
2015	1,000	1,215	81	564	1	135	164	897	-333	-41%
2016	1,000	1,255	81	644	1	137	172	1,034	-389	-48%
2017	1,000	1,296	81	725	1	139	181	1,173	-448	-56%
2018	1,000	1,340	81	806	1	142	190	1,315	-509	-63%
	10,000	**11,654**	**806**	**806**	**8**	**1,315**	**1,539**	**Ohau Weighted Debt Funding Ratio**		**0%**
Omarama Wastewater										
Existing Debt				-						
2009	2,500	2,500	162	162	3	1,713	1,713	1,713	-1,551	-8%
2010	2,500	2,625	162	324	3	1,736	1,823	3,449	-3,125	-15%
2011	2,500	2,683	162	486	3	1,760	1,888	5,209	-4,723	-23%
2012	2,500	2,769	162	648	3	1,783	1,975	6,992	-6,344	-31%
2013	82,500	94,106	18,968	19,615	3	1,807	2,062	8,800	10,816	53%
2014	2,500	2,940	162	19,777	3	1,832	2,154	10,632	9,146	45%
2015	2,500	3,037	162	19,939	3	1,857	2,255	12,488	7,451	36%
2016	2,500	3,137	162	20,101	3	1,882	2,361	14,370	5,732	28%
2017	2,500	3,241	162	20,263	3	1,907	2,472	16,277	3,987	20%
2018	2,500	3,351	162	20,425	3	1,933	2,591	18,209	2,216	11%
	105,000	**120,388**	**20,425**	**20,425**	**31**	**18,209**	**21,295**	**Omarama Weighted Debt Funding Ratio**		**16%**

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost	New Household Equivalent Units 2009-2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit - = surplus	Debt Funding Ratio
Otematata Wastewater										
Existing Debt				-						
2009	3,500	3,500	71	71	2	6,307	6,307	6,307	-6,236	-877%
2010	3,500	3,675	71	142	2	6,339	6,656	12,646	-12,504	-1759%
2011	3,500	3,756	71	212	2	6,373	6,838	19,018	-18,806	-2645%
2012	3,500	3,876	71	283	2	6,406	7,094	25,424	-25,141	-3536%
2013	3,500	3,992	71	354	2	6,440	7,345	31,864	-31,509	-4432%
2014	3,500	4,116	71	426	2	6,473	7,613	38,337	-37,912	-5333%
2015	3,500	4,252	71	497	2	6,508	7,906	44,845	-44,348	-6238%
2016	3,500	4,392	71	568	2	6,542	8,210	51,387	-50,819	-7148%
2017	3,500	4,537	71	639	2	6,577	8,526	57,964	-57,324	-8064%
2018	3,500	4,691	71	711	2	6,612	8,863	64,575	-63,864	-8984%
	35,000	**40,788**	**711**	**711**	**18**	**64,575**	**75,357**	**Otematata Weighted Debt Funding Ratio**		**0%**
Palmerston Wastewater										
Existing Debt				-						
2009	5,000	5,000	178	178	3	6,153	6,153	6,153	-5,975	-60%
2010	5,000	5,250	178	357	3	6,199	6,509	12,352	-11,996	-121%
2011	5,000	5,365	178	535	3	6,245	6,701	18,597	-18,062	-182%
2012	5,000	5,537	178	713	3	6,291	6,967	24,889	-24,175	-244%
2013	65,000	74,144	8,301	9,015	3	6,338	7,230	31,227	-22,212	-224%
2014	5,000	5,880	178	9,193	3	6,385	7,509	37,612	-28,418	-287%
2015	5,000	6,074	178	9,372	3	6,432	7,814	44,044	-34,672	-350%
2016	5,000	6,275	178	9,550	3	6,480	8,132	50,524	-40,974	-414%
2017	5,000	6,482	178	9,729	3	6,528	8,463	57,052	-47,324	-478%
2018	5,000	6,702	179	9,907	3	6,577	8,815	63,629	-53,722	-542%
	110,000	**126,709**	**9,907**	**9,907**	**34**	**63,629**	**74,294**	**Palmerston Weighted Debt Funding Ratio**		**18%**
WDC Total	**2,967,000**	**3,501,388**	**741,781**		**740**	**1,950,608**	**2,279,103**			

Roading

Table 34: Roading - Capital Expenditure for Development Contributions (Excluding GST) by Project Type

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Project - AMP Roading	Professional Services	-	-	-	-	-	-	19,624	-	19,624	1,676	11.71
Capital Imp'ts - NZTA Eng Fees	Professional Services	135,694	154,852	40,824	2,073	38,750	5.1%	-	1,368	1,368	1,676	0.82
Oamaru Town Centre	Professional Services	-	-	-	-	-	-	2,649	-	2,649	1,676	1.58
Renewals - NZTA Eng Fees	Professional Services	2,241,482	2,557,940	957,337	48,575	908,762	5.1%	-	32,004	32,004	1,676	19.09
Capital - B Gray Stock Underpass	Amenity/Saf ety Maintenance	-	-	-	-	-	-	548	-	548	1,676	0.33
Capital Proj- Seal Extensions	Seal Extension	144,402	150,000	144,402	21,145	123,257	14.6%	167,845	13,358	181,203	1,676	108.10
Capital Proj - North End Business Park	New Roads and Bridges (roads)	575,017	638,140	575,017	575,017	-	100.0%	-	264,844	264,844	1,676	158.00
Capital Proj - North End Business Park	Seal Extension	-	-	-	-	-	-	169,439	-	169,439	1,676	101.09
Capital Proj - Oamaru Campervan Dump Station	Carriageway Lighting	-	-	-	-	-	-	477	-	477	1,676	0.28
Capital Proj - Oamaru Campervan Dump Station	Major Drainage Control	-	-	-	-	-	-	3,241	-	3,241	1,676	1.93
Capital Proj - Oamaru Campervan Dump Station	Strategy Studies	10,000	10,000	10,000	-	10,000	0.0%	-	-	-	1,676	-

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Cap Proj-Avon St Retaining Wall	Cycleway Construction	-	-	-	-	-	-	2,477	-	2,477	1,676	1.48
Capital Proj-Kurow Service Lane	Cycleway Construction	-	-	-	-	-	-	1,327	-	1,327	1,676	0.79
Capital Proj - Oamaru Bypass Study	Major Drainage Control	-	-	-	-	-	-	9,295	-	9,295	1,676	5.55
Cap Proj- Lake Centre Carpark Develop'mt	Carriageway Lighting	-	-	-	-	-	-	11,759	-	11,759	1,676	7.02
Capital Proj - Weston Footpath - Non-Amenity	Amenity/Safety Maintenance	-	-	-	-	-	-	12,157	-	12,157	1,676	7.25
Capital Proj-Oamaru Town Centre Upgrade	Amenity/Safety Maintenance	60,001	66,132	60,001	5,499	54,502	9.2%	12,493	2,667	15,161	1,676	9.04
Capital Proj-Oamaru Town Centre Upgrade	Major Drainage Control	500,000	570,361	500,000	43,108	456,892	8.6%	-	16,616	16,616	1,676	9.91
Capital Proj-Harbourside Development	New Roads and Bridges (roads)	2,350,034	2,544,500	2,350,034	223,701	2,126,333	9.5%	7,858	118,423	126,281	1,676	75.34
Capital Proj-Historic Precinct Roading	Major Drainage Control	-	-	-	-	-	-	13,829	-	13,829	1,676	8.25
Cap Proj-Papakaio Rd on Old Railway	New Roads and Bridges (roads)	-	-	-	-	-	-	10,363	-	10,363	1,676	6.18
Capital Proj-Duntroon Amenity Works	Amenity/Safety Maintenance	13,500	15,611	13,500	1,136	12,364	8.4%	108	394	502	1,676	0.30

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Capital Proj-Hampden Amenity Works	Amenity/Safety Maintenance	100,003	114,075	100,003	8,622	91,381	8.6%	359	3,323	3,682	1,676	2.20
Capital Proj-Herbert Amenity Works	Amenity/Safety Maintenance	13,500	15,611	13,500	1,136	12,364	8.4%	108	394	502	1,676	0.30
Capital Proj-Kakanui Amenity Works	Amenity/Safety Maintenance	50,000	57,036	50,000	4,311	45,689	8.6%	359	1,662	2,020	1,676	1.21
Capital Proj-Kurow Amenity Works	Amenity/Safety Maintenance	160,000	182,515	160,000	13,795	146,205	8.6%	1,147	5,317	6,465	1,676	3.86
Capital Proj-Maheno Amenity Works	Amenity/Safety Maintenance	13,500	15,611	13,500	1,136	12,364	8.4%	108	394	502	1,676	0.30
Capital Proj-Moeraki Amenity Works	Amenity/Safety Maintenance	50,000	57,036	50,000	4,311	45,689	8.6%	359	1,662	2,020	1,676	1.21
Cap Proj- Ou Amenity Works - Reservoir Rd	Amenity/Safety Maintenance	-	-	-	-	-	-	11,473	-	11,473	1,676	6.84
Capital Proj-Ohau Amenity Works	Amenity/Safety Maintenance	27,000	31,222	27,000	2,271	24,729	8.4%	215	789	1,004	1,676	0.60
Capital Proj-Omarama Amenity Works	Amenity/Safety Maintenance	100,000	114,072	100,000	8,622	91,378	8.6%	717	3,323	4,040	1,676	2.41
Capital Proj-Palmerston Amenity Works	Amenity/Safety Maintenance	300,000	342,217	300,000	25,865	274,135	8.6%	2,151	9,970	12,121	1,676	7.23

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Capital Proj-Shag Point Amenity Works	Amenity/Safety Maintenance	13,500	15,611	13,500	1,136	12,364	8.4%	108	394	502	1,676	0.30
Capital Proj-Weston Amenity Works	Amenity/Safety Maintenance	160,000	182,515	160,000	13,795	146,205	8.6%	1,147	5,317	6,465	1,676	3.86
Capital Proj-Otematata Amenity Works	Amenity/Safety Maintenance	100,000	114,072	100,000	8,622	91,378	8.6%	717	3,323	4,040	1,676	2.41
Renewals - Footpaths Kurow	Cycleway Construction	-	-	-	-	-	-	669	-	669	1,676	0.40
Renewals - Carparks	Amenity/Safety Maintenance	163,000	185,938	163,000	14,053	148,947	8.6%	2,463	5,417	7,880	1,676	4.70
Renewals - Footpaths District Wide	Cycleway Construction	3,775,000	4,302,707	3,775,000	-	3,775,000	0.0%	85,964	-	85,964	1,676	51.29
Renewals - Footpaths Omarama	Cycleway Construction	-	-	-	-	-	-	1,340	-	1,340	1,676	0.80
Renewals - District Promo Signage	Traffic Services	60,000	68,443	60,000	5,173	54,827	8.6%	933	1,994	2,927	1,676	1.75
Shoulder Surfacing	Road Reconstruction	-	-	-	-	-	-	-	-	-	1,676	-
Capital - Traffic Sfty Minor	Pavement Smoothing	-	-	-	-	-	-	18,897	-	18,897	1,676	11.27
Capital - Seal Widening & Seal Extensions	Road Reconstruction	1,360,000	1,465,097	448,800	42,901	405,899	9.6%	24,778	23,039	47,817	1,676	28.53
Capital - Seal Widening & Seal Extensions	Seal Extension	1,660,000	1,979,883	547,800	38,171	509,629	7.0%	-	6,874	6,874	1,676	4.10

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Capital Proj-Disaster Fund Work	Major Drainage Control	-	-	-	-	-	-	226	-	226	1,676	0.14
Capital Proj-Disaster Fund Work	Preventative Maintenance	4,500,000	5,203,609	1,935,000	-	1,935,000	0.0%	-	-	-	1,676	-
Capital Proj-Disaster Fund Work	Road Reconstruction	-	-	-	-	-	-	11,267	-	11,267	1,676	6.72
Capital Proj-Disaster Fund Work	Seal Extension	-	-	-	-	-	-	327	-	327	1,676	0.19
Capital Project - Traffic Sfty-Minor Unallocated	Minor Safety Projects	3,378,000	3,853,358	1,114,740	-	1,114,740	0.0%	-	-	-	1,676	-
Capital Project - Traffic Sfty-Minor Unallocated	Road Reconstruction	-	-	-	-	-	-	4,853	-	4,853	1,676	2.90
Cap Proj-Access to Moeraki	Road Reconstruction	630,000	630,000	207,900	21,830	186,070	10.5%	-	14,431	14,431	1,676	8.61
Capital Proj - Walking and Cycling	Cycleway Construction	2,768,197	3,242,704	913,505	42,750	870,755	4.7%	-	22,771	22,771	1,676	13.58
Capital Proj-Harbourside Development	Cycleway Construction	80,000	80,000	-	-	-	-	-	-	-	1,676	-
Capital Proj-Harbourside Development	Strategy Studies	30,000	30,000	7,500	3,750	3,750	50.0%	-	2,479	2,479	1,676	1.48
Capital Proj - Pukeuri Walk and Cycle Track	Cycleway Construction	658,000	658,000	-	-	-	-	-	-	-	1,676	-
Capital Proj - Weston Walk and Cycle Track	Cycleway Construction	325,000	325,000	-	-	-	-	-	-	-	1,676	-

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Capital Proj - Omarama Triangle Cycle Track	Cycleway Construction	411,800	430,331	135,894	8,863	127,031	6.5%	-	8,667	8,667	1,676	5.17
Capital Proj - Land Purchases	Road Reconstructi on	75,000	75,000	24,750	2,599	22,151	10.5%	-	1,718	1,718	1,676	1.02
Renewals - Pavement Rehabilitation	Pavement Smoothing	6,503,050	7,418,310	2,796,311	559,262	2,237,049	20.0%	191,500	200,685	392,185	1,676	233.97
Renewals - Drainage	Major Drainage Control	4,576,155	5,306,226	1,967,747	-	1,967,747	0.0%	37,637	-	37,637	1,676	22.45
Renewals - Resurfacing	Maintenance Chip Seals	18,001,802	20,535,211	7,740,775	393,432	7,347,343	5.1%	215,133	260,272	475,405	1,676	283.62
Renewals - Unsealed Road Metalling	Pavement Maintenance	4,540,000	5,178,877	1,952,200	99,224	1,852,976	5.1%	60,622	65,645	126,267	1,676	75.33
Renewals - Signpost/Rails	Minor Safety Projects	1,078,053	1,258,049	463,563	-	463,563	0.0%	4,002	-	4,002	1,676	2.39
Renewals - Signpost/Rails	Traffic Services	-	-	-	-	-	-	7,045	-	7,045	1,676	4.20
Renewals - Street Lighting	Carriageway Lighting	501,000	571,502	215,430	-	215,430	0.0%	12,749	-	12,749	1,676	7.61
Renewals - Bridges	Bridge Renewals	937,099	1,141,214	402,952	125,139	277,813	31.1%	25,066	4,868	29,934	1,676	17.86
Renewals- Needs Rd Bridge	Bridge Renewals	-	-	-	-	-	-	1,875	-	1,875	1,676	1.12
Renewals- Horse Flat Rd Bridge	Bridge Renewals	-	-	-	-	-	-	2,906	-	2,906	1,676	1.73
Renewals- Severn Street Retaining Wall	Minor Safety Projects	-	-	-	-	-	-	301	-	301	1,676	0.18
Renewals - Humber Street Bridge	Bridge Renewals	307,000	319,465	132,010	42,279	89,731	32.0%	51	6,666	6,716	1,676	4.01

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Renewals - Breakneck Rd Bridge	Bridge Renewals	450,000	450,000	193,500	62,101	131,399	32.1%	16	10,684	10,701	1,676	6.38
Renewals - Kakanui Bridge	Bridge Renewals	100,000	100,000	43,000	2,899	40,101	6.7%	-	3,026	3,026	1,676	1.81
Renewals - Ngapara Bridge	Bridge Renewals	242,006	259,472	104,063	33,042	71,020	31.8%	87	4,430	4,517	1,676	2.69
Renewals - Bowalley Bridge	Bridge Renewals	460,000	460,000	197,800	63,481	134,319	32.1%	1,441	10,922	12,363	1,676	7.38
Renewals - Lake Ohau Bridge	Bridge Renewals	-	-	-	-	-	-	3,424	-	3,424	1,676	2.04
Renewals - Slaughter Yard Bridge	Bridge Renewals	375,000	390,075	161,250	51,645	109,605	32.0%	-	8,150	8,150	1,676	4.86
Renewals - Nenthom Diggings Bridge	Bridge Renewals	176,010	202,872	75,684	23,420	52,264	30.9%	-	1,571	1,571	1,676	0.94
Renewals - Willowview No. 2 Bridge	Bridge Renewals	137,009	160,254	58,914	18,135	40,779	30.8%	-	959	959	1,676	0.57
Renewals - Otekaieke No. 2 Bridge	Bridge Renewals	103,002	112,095	44,291	13,999	30,291	31.6%	-	1,710	1,710	1,676	1.02
Renewals - Traffic Sfty-Minor Unallocated	Minor Safety Projects	307,102	350,318	101,344	5,151	96,193	5.1%	-	3,408	3,408	1,676	2.03
Renewals - Waianakarua Road Realignment	Road Reconstruction	674,000	674,000	222,420	23,355	199,065	10.5%	-	15,439	15,439	1,676	9.21
Renewals - Coal Pit Road Realignment	Road Reconstruction	330,000	330,000	108,900	108,900	-	100.0%	-	71,990	71,990	1,676	42.95

Project Title	Work Category	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	2009-18 Total Capital Net Cost to Council (2009 $)	Growth Funded Portion (2009 $)	Funded by Other Sources (2009 $)	Percentage Attributable to Growth	*Historic Expenditure* Growth Cost (Capacity) Consumed 2009-18	*Future Expenditure* Growth Cost (Capacity) Consumed 2009-18	*TOTAL Expenditure* Growth Cost (Capacity) Consumed 2009-18	Weighted Average No. of HEU's Apportioning Growth Cost 2009-2018	Development Contribution Per Household Equivalent Unit ($)
Renewals - State Highway Street Lighting	Carriageway Lighting	166,670	190,124	-	-	-	-	-	-	-	1,676	-
Renewals - Oamaru Litter Bins	Traffic Services	187,776	214,166	187,776	-	187,776	0.0%	-	-	-	1,676	-
Roading - District Wide		**67,144,363**	**76,101,429**	**32,242,435**	**2,819,430**	**29,423,004**	**8.74%**	**1,180,028**	**1,243,358**	**2,423,386**	**1,676**	**$ 1,446**

Table 35: Roading – Debt Funding Ratio – 10 Year Net Growth Cost versus Revenue Assessment

Year	2009-2018 Total Capital Cost (2009 $)	2009-2018 Total Capital Cost (Adj $)	Growth Funded Portion (2009 $)	Cumulative Growth Cost (2009 $)	New Household Equivalent Units 2009 - 2018	2009-2018 Contributions Received (2009 $)	2009-2018 Contributions Received (Adjusted $)	2009-2018 Cumulative Contributions Received (2009 $)	Net Debt (2009 $) + = deficit – = surplus	Debt Funding Ratio
2009	8,817,298	8,817,298	478,065	478,065	151	217,892	217,892	217,892	260,172	9%
2010	7,728,994	8,076,799	390,656	868,721	219	316,711	316,711	534,603	334,118	12%
2011	6,199,204	6,646,601	283,160	1,151,881	222	320,580	329,406	855,183	296,698	11%
2012	6,833,227	7,531,519	471,196	1,623,077	224	324,497	341,500	1,179,680	443,397	16%
2013	6,135,549	6,924,847	390,915	2,013,992	227	328,462	353,840	1,508,142	505,850	18%
2014	6,032,706	6,972,184	139,531	2,153,524	230	332,476	366,432	1,840,618	312,906	11%
2015	6,561,937	7,758,261	181,798	2,335,322	100	144,000	162,544	1,984,618	350,704	12%
2016	6,121,504	7,411,232	140,455	2,475,777	100	145,122	167,806	2,129,740	346,037	12%
2017	6,240,159	7,736,204	156,239	2,632,016	101	146,253	173,270	2,275,993	356,023	13%
2018	6,473,783	8,226,484	187,414	2,819,430	102	147,393	178,416	2,423,386	396,044	14%
WDC TOTAL	**67,144,363**	**76,101,429**	**2,819,430**		**1,676**	**2,423,386**	**2,607,817**	**Debt Funding Ratio**		**13%**