

## Appendix 18: Financial Contributions

### 18-1 Financial Contributions: Calculation methodology and worked examples

The financial contribution charge is calculated by first identifying the total projected cost of relevant capital spending over 10 years. Financial contributions are divided into three general purposes. Both residential and non-residential developments will be required to pay financial contributions for Te Ture Whaimana and local network renewals, however the streetscape amenity contribution is only required by residential developments.

#### Bedrooms and GFA

The basis for a financial contribution charge is the number of bedrooms for residential developments and GFA (per 100m<sup>2</sup>) for non-residential developments. This ensures that larger developments creating a higher demand for services will pay a larger contribution. A critical assumption is that 100m<sup>2</sup> of GFA is equivalent to one standard residential development (one three-bedroom dwelling).

#### Multiplier

The multiplier is based on the values in Table 1. These represent the differences in relative demand for levels of service between residential, commercial, retail and industrial developments. The multiplier acknowledges that the nature of a given development impacts the demand on council services.

The multiplier is necessary for the calculation because while the initial rate for each purpose is the same across residential and non-residential development, they are calculated at different units of measure (per-bedroom for residential development and per-100m<sup>2</sup> GFA for non-residential development). The measure adopts a standard three-bedroom dwelling as the standard single unit of measure (1 Projected Unit of Demand or PUD). However non-residential developments generate different levels of demand for services than residential developments.

In order to ensure that higher demand-generating uses pay an equitable contribution, a conversion factor is applied. This conversion factor is based on the number of vehicle trips that a given type of development attracts. Travel demand is a reliable proxy for relative demand. Each land use sector has a distinct conversion factor.

The conversion factor for commercial retail developments varies depending on the scale of the development. Development between 4,001m<sup>2</sup> and 10,000m<sup>2</sup> GFA is calculated by multiplying the total GFA (in m<sup>2</sup>) using the formula below. This was derived to ensure a gradual decrease in charge as GFA increases, between the ranges of 1.1 and 2.5.

$$\text{Retail conversion} = 2.5 - ((\text{GFA} - 4000) \times 0.000233333)$$

**Table 1: Conversion Factors**

Type of Development	Equity Conversion factor
Single Bedroom	0.33
Commercial (non-retail) (per 100m <sup>2</sup> of GFA)	1.74
Commercial (retail) ≤ 4,000m <sup>2</sup> GFA	2.5
Commercial (retail) 4,001 to 10,000m <sup>2</sup> GFA	2.5 to 1.1
Commercial (retail) > 10,000m <sup>2</sup> GFA	1.1

Industrial (per 100m <sup>2</sup> of GFA)	0.62
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**Table 1** shows the conversion factors for each development. Two examples of interpreting these values are as follows:

- On average, a single bedroom would be expected to generate a third of the demand of a standard residential (3 bedroom), giving it a weighting of 0.33.
- A commercial (non-retail) development would be expected to generate 1.74 times as much demand as a standard residential per 100m<sup>2</sup>.

### Projected Unit of Demand Cost

The projected unit of demand (PUD) is a standard of unit used in a very similar way to the household unit equivalents (HUEs) adopted in the DC Policy. PUD's have been developed specifically for financial contributions so that they are distinguishable from development contributions. It is necessary to combine the residential and non-residential demand referred to above into a single value for calculation so that the sum of the 10-year costs of activities identified under each contribution can be distributed across all types of development. The PUD is this combined unit, where a standard residential dwelling is considered a residential unit of demand, and a non-residential 100m<sup>2</sup> GFA development is a non-residential unit of demand.

Dwellings and non-residential GFA projections for the next 10 years are derived from the NIDEA 10-year projections (high) and the 2018 Waikato Integrated Scenario Explorer (WISE) forecasts. Current modelling projects 26,801.71 units of demand over the next 10 years, as broken down in Table 2

**Table 2:** Dwelling projections for the next 10 years.

Demand Type	Projected Units of Demand (PUD)
Residential (Dwellings)	12011.00
Commercial (100m <sup>2</sup> GFA)	4869.19
Retail (100m <sup>2</sup> GFA)	1213.73
Industrial (100m <sup>2</sup> GFA)	8707.79
<b>Total</b>	<b>26801.71</b>

The total capital spending over 10 years for the three identified purposes of financial contributions is split equally amongst the PUDs over the same period to calculate the PUD Cost. The calculations for the three general purposes are as follows.

Preliminary costings for streetscape amenity enhancements sum to a total of \$36,005,500 over 10 years and are only required by residential developments (12011 PUDs). The cost per PUD is given by:

$$\frac{36,005,500}{12011} = 2997.71$$

This means that the streetscape amenity enhancement contribution is \$2997.71 per PUD. Preliminary costings in order to give effect to Te Ture Whaimana objectives sum to a total of \$44,685,390 required by both residential and non-residential developments. The cost per unit of demand is given by:

$$\frac{47,247,288.74}{26801.71} = 1,762.85$$

This means that the Te Ture Whaimana contribution is **\$1,762.85 per PUD**.

Preliminary costings for local network infrastructure renewals sum to a total of \$5,700,000 required by both residential and non-residential developments. Based on a 50% allocation to FCs the cost per unit of demand is given by:

$$\frac{2,850,000}{26801.71} = 106.34$$

This means that the local network infrastructure renewals contribution is **\$106.34 per PUD**.

To calculate the total PUD cost for a residential development, all three contributions are added together to **total \$4,849.72** and multiplied by the number of bedrooms. To calculate the total PUD cost for a non-residential development, the Te Ture Whaimana and renewals contributions are added together to **total \$1,852.01**.

### **Inflation Factor**

The inflation factor adjusts the financial contribution on an annual basis to account for inflation of project costs. In 2022 it is 1 (or 100%), which will be adjusted on a yearly basis in alignment with the development contributions capital inflation rates.

The use of an inflation factor means that the PUD costs (reported in the previous section) will stay static for the period of the policy.

### **The Calculation Methodology**

The contribution any development might be required to pay is calculated based on the following four components. Each will be explained in further detail.

- The number of bedrooms for residential developments and/or GFA for non-residential developments.
- The multiplier
- The Projected Unit of Demand (PUD) Cost
- The inflation Factor

The formula to be used to calculate a financial contribution can be described as:

$$\left[ \text{Number of bedrooms or } \frac{\text{GFA (m2)}}{100} \right] \times [\text{Multiplier}] \times [\text{PUD Cost}] \times [\text{Inflation Factor}]$$

### **Simple Examples**

In application the financial contribution for a 3 bedroom dwelling in 2022 would be calculated as:

$$3 \times 0.33 \times \$4,849.72 \times 1 = \$4,801.23$$

The financial contribution for a 400m<sup>2</sup> retail development in 2022 would be calculated as:

$$\left(\frac{400}{100}\right) \times 2.5 \times 1,852.01 \times 1 = 18,520.12$$

**Further Worked Examples**

This section uses the financial contribution formula to calculate the financial contributions for six example developments in Table 3. The calculations are broken into five steps labelled above their respective columns.

**Table 3**

			<b>Step 1</b>	<b>Step 2</b>	<b>Step 3</b>	<b>Step 4</b>	<b>Step 5</b>
<b>Description</b>	<b>Consent Year</b>	<b>Development Type</b>	<b>Bedroom or GFA/100</b>	<b>Equity Multiplier</b>	<b>Total PUD Cost</b>	<b>Inflation factor</b>	<b>Total Financial Contribution</b>
Two bedroom residential	2022	Residential	2	0.33	\$2997.71 + \$1745.68 + \$106.34 = \$4849.73	1	2 x 0.33 x \$4849.73 = \$3,200.82
Six four-bedroom duplex residential	2022	Residential	6 x 4 = 24	0.33	\$2997.71 + \$1745.68 + \$106.34 = \$4849.73	1	24 x 0.33 x \$4849.73 x 1 = \$38,409.80
Commercial (Non-retail) 250m <sup>2</sup>	2022	Commercial	250/100 = 2.5	1.74	\$1745.68 + \$106.34 = \$1852.02	1	2.5 x 1.74 x \$1852.02 x 1 = \$8,056.25
Commercial (Retail) 60m <sup>2</sup>	2022	Retail	60/100 = 0.6	2.5	\$1745.68 + \$106.34 = \$1852.02	1	0.6 x 2.5 x \$1852.02 x 1 = \$2,778.02
Commercial (Retail) 5000m <sup>2</sup>	2022	Retail	5,000/100 = 50	2.5 - ((5000 - 4000) x 0.000227) 2.27	\$1745.68 + \$106.34 = \$1852.02	1	50 x 2.27 x \$1852.02 x 1 = \$209,894.73
Industrial 3500m <sup>2</sup>	2022	Industrial	3500/100 = 35	0.62	\$1745.68 + \$106.34 = \$1852.02	1	35 x 0.62 x \$1852.02 = \$40,188.66

**Step 1**

Developments are measured by bedroom count (for residential) or GFA divided by 100m<sup>2</sup> (for non-

residential)

### Step 2

Multiplier calculated. This is according to Table 1, and is defined by the type of development.

Commercial retail developments between 4001 and 10,000 m<sup>2</sup> GFA multiplier is calculated using the equation below, which ensures a gradual decrease in charge as GFA increases

$$\text{Retail conversion} = 2.5 - ((\text{GFA} - 4000) \times 0.000233333)$$

### Step 3

Total PUD cost for the development is calculated. For residential developments this is the sum of all three (Te Ture Whaimana, Renewals, Streetscape) project types. For non-residential developments, this is only two (Te Ture Whaimana, Renewals) project types.

### Step 4

Inflation factor is calculated. As these examples were consented in 2022, the inflation factor is 1.

### Step 5

The final financial contribution is calculated using the formula:

$$\left[ \text{Number of bedrooms or } \frac{\text{GFA (m2)}}{100} \right] \times [\text{Multiplier}] \times [\text{PUD Cost}] \times [\text{Inflation Factor}]$$