Methodology for Calculating DCs

Auckland Council's cost allocation methodology

April 2023, Version 1.0

Contents

Document One: Methodology for Calculating DCs for Drury

Draft Contributions Policy 2022 Variation A

April 2023, Version 1.0

About this document

This document provides:

- an overview of the investment in parks, community spaces, and transport infrastructure the council is planning to support growth in Drury.
- describes how we have estimated the cost of those investments, the share attributable to growth within Drury and the consequent development contributions charges that will apply in the area
- sets out our approach to calculating contributions for Drury and how that differs from the approach used in the Contributions Policy 2022.
- sets out the methodology for all projects planned for delivery in Drury.

Within this document:

- all prices are stated excluding GST unless otherwise noted
- all expenditure includes the impact of inflation

For information on how the council calculates development contributions (for infrastructure planned in other areas of Auckland refer to Attachment A: How we set development contributions"

In accordance with Section 106(3) of the Act, the full cost methodology is kept available for public inspection on the council website at: www.aucklandcouncil.govt.nz.

The methodology for infrastructure planned in areas of Auckland other from Drury is contained in the document *How we set development contributions*. The methodology for infrastructure planned in Drury is contained in the document *Methodology for calculating DCs for Drury*.

Contents

1.0 Introduction

1. This document sets out the steps taken to establish the share of the cost of the investments required over the next 30 years to support growth in Drury to be recovered from developers. The methodology used for Drury differs in some respects to that used for the wider region. You can find our methodology for setting contribution charges outside of Drury for the Contributions Policy 2022 in Attachment A to this document.
2. Over time, we will be updating our contributions policy to include longer-term investment projects (beyond the period of our 10-year Long-term Plan) for our other Investment Priority Areas (IPAs): Auckland Housing Programme (Mt Roskill, Oranga, Māngere, and Northcote and Tamaki), the Northwest (including Redhills, Whenuapai and Westgate), Drury, and the CRL Stations at Mt Eden and Karangahape. The methodology for assessing contribution charges set out below will be used as the basis for future contributions policy updates for greenfield areas like the North-West. For brownfield areas, the methodology set out here will be reviewed and adjusted as appropriate, to reflect the differences between development in greenfield and brownfield areas.

1.1 Review of Methodology

3. The methodology contained within this section has been developed by Auckland Council working in conjunction with Auckland Transport, the Te Tupu Ngātahi Supporting Growth Alliance[1] and consultant agency Beca. The development of this methodology reflects feedback from formal external reviews of the council's contributions methodology undertaken as part of the development of the amendment to Contributions Policy 2022 to add projects beyond 2031 to support growth in Drury. These reviews were as follows:
    - Business and Economic Research Limited - Review of growth model assumptions
    - Deloitte - Auckland Council Cost Estimation Review
    - PricewaterhouseCoopers - Methodology review Beneficiary analysis for Auckland Council's Contribution Policy 2022
    - The Property Group – Public Words Act review for Development Contributions.

[1] Te Tupu Ngātahi Supporting Growth is a collaboration between Auckland Transport and Waka Kotahi NZ Transport Agency.

2.0 Forecasting Growth for Drury

4. Auckland Council uses a number of inputs to assess the expected timing and quantum of growth across the region, including:
   a. Auckland Future Urban Land Supply Strategy (FULSS) – an appendix to the Auckland Plan that provides intended sequencing, timing and detail about future urban areas identified for further investigation in the Auckland Plan's Spatial Strategy.
   b. Structure Plans - as required by the FULSS, a council and community developed land use plan with indicative full buildout yields to guide future plan change processes.
   c. Auckland Council Macro Strategic Model (MSM) that reflect/translate the above and other information into numerical values (population, households and employment) for nearly 600 'zones' across the region, over the next 30 years[2].

2.0.1 Drury Growth Forecast

5. Over the next 40 years the Drury growth area is forecast to grow to a city the size of Napier. The population is predicted to increase by 58,000, with 23,000 new households, and 9,000 new jobs. The pace of growth and where it occurs within Drury will impact on the type, size and timing of the infrastructure investment required, its cost, and ultimately the development contributions price.
6. To forecast growth in Drury we updated our current region wide growth modelling to reflect the latest information on the circumstances in Drury, the 'i11 Drury DC Revised Version'. The key changes are:
   - identification of a date for when full buildout is anticipated to be achieved (by year 2060). This full build out date is not included in our wider regional plans as they only extend to around 2050
   - revision of the 'development ready' dates in the Future Urban Land Supply Strategy (FULSS) and Drury-Ōpaheke Structure Plan. These dates indicate when growth may begin progressing across Drury. These have been revised to reflect the council's budget availability to provide the bulk infrastructure required to enable growth. Some key transport and wastewater investments are required to enable initial growth, while other investments can be made at a later stage.
   - adjusting growth forecasts in Drury East to occur earlier than previously expected due to the impact of recent private plan changes 48, 49 and 50 which are now operative. Although the forecast population to 2060 remains the same, earlier increases to population and employment projections are now forecasted.
   - slightly delaying growth in Drury West reflecting wastewater supply constraints limiting growth in the short term, while accounting for private plan changes 51 and 61 which are now operative.

2. Three versions of the Auckland Council Macro Strategic Model currently exist:
   - i11v5 released December 2019, which models growth projections from 2018-2048
   - i11v5 2048+, a model prepared by the Supporting Growth Alliance (SGA), which extends the i11v5 model beyond 2048 until full build out is complete, which for Drury, is expected to be 2060.
   - i11v6 (updated version of i11v5 released August 2020

- growth in the Drury (excluding the Drury East area) is likely to be slower than previously forecast in the short to medium term due to increased competition for new development opportunities from higher densities enabled through Plan Change 78 across urban areas.

7. The i11 Drury DC Revised Version growth forecast has been used as the basis for all contributions modelling for Drury, including assessing:
   - timing of Auckland Council, Auckland Transport and central government investment transport infrastructure
   - timing of Parks, and Community Spaces investment
   - beneficiary and growth share analysis.
8. The i11 Drury DC Revised Version has been prepared only for the Drury growth area (a map of this area has been published alongside the policy) and will not be used to forecast growth for other areas. Instead, future DC growth forecasts for other Investment Priority Areas and for the next full policy review, will be developed using a similar methodology. Future forecasts will incorporate the latest information from the Future Development Strategy as well as location and timing specific information for the relevant growth areas.
9. The following table shows the development ready dates by area that were in the previous FULSS document, and the amended dates that have been utilised for the i11 Drury DC growth forecast.

Table 2.1 Development ready dates for Drury

Area (see FULSS for maps)	Previous FULSS development ready date	Amended FULSS development ready date for i11 Drury DC
Drury-**Ōpaheke** (*Drury East*-***Ōpaheke***)	2028-2032	From 2026 (in stages)
Live zoned Auranga	2012-2017	No amendment
Drury West Stage 1	2022	From 2028 (in stages)
Drury West Stage 2	2028-2032	From 2032 (in stages)
Drury South	2012-2017	No amendment

10. The chart below shows the impact of later delivery of enabling infrastructure has on population growth projections in Drury.

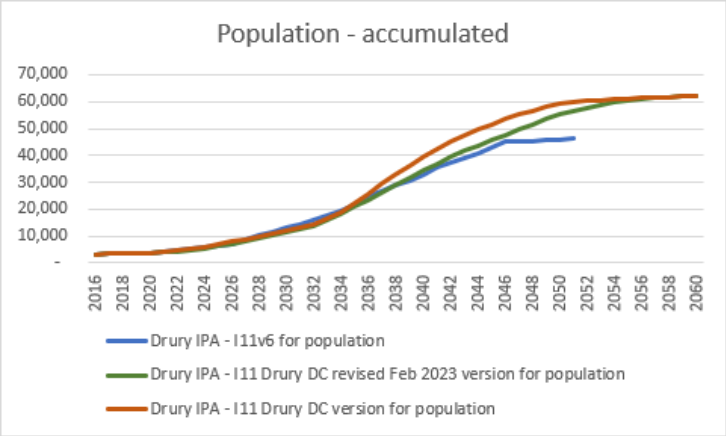
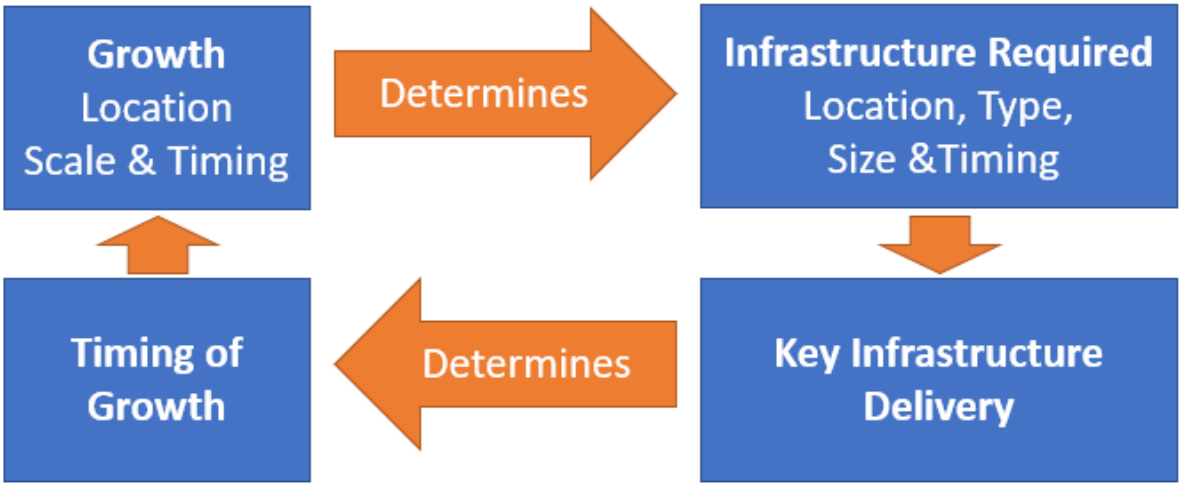


Figure 1 Drury Population 2016 to 2060

2.0.2 Impact of growth on type, size, and timing of investment

11. This forecast forms the basis for the type, size and timing of the infrastructure investment required for Drury.
12. Population densities and proximity metrics are used to assess requirements for open spaces. Population growth projections are used to assess requirements for community spaces infrastructure. Population is also used to assess improvements to existing on-road assets and public transport projects. Household and employment projections are used to assess requirements for new roads, pathways or other transport infrastructure where there is no existing asset. This is considered more effective than using the population growth data as it helps to determine where new transport links are required.
13. While growth is accumulating across the time period, the phasing of growth in some parts of Drury will depend on the delivery of the key enabling infrastructure:



2.1 Projects to be delivered in Drury beyond 2031

14. For Drury, we have assessed the requirement for infrastructure based on the anticipated population growth from now until full build out of Drury is achieved in 2060. The timing of the investments is based on the revised growth forecasts above. To serve this growth the council is planning to deliver the additional investments beyond 2031 shown in table 2.1 below (escalated costs shown):

Table 2.1 Investment in Drury (to be funded through a mix of DCs, rates and grants)

Investment Type	Already committed (To be delivered by 2031)	Additional investment (To be delivered beyond 2031)
Fully integrated bus and road transport network	$246 million	$1,376million [1]
32 hectares of new parks and civic spaces	$171 million	$352 million
Community centre, pool, leisure and library		$183 million

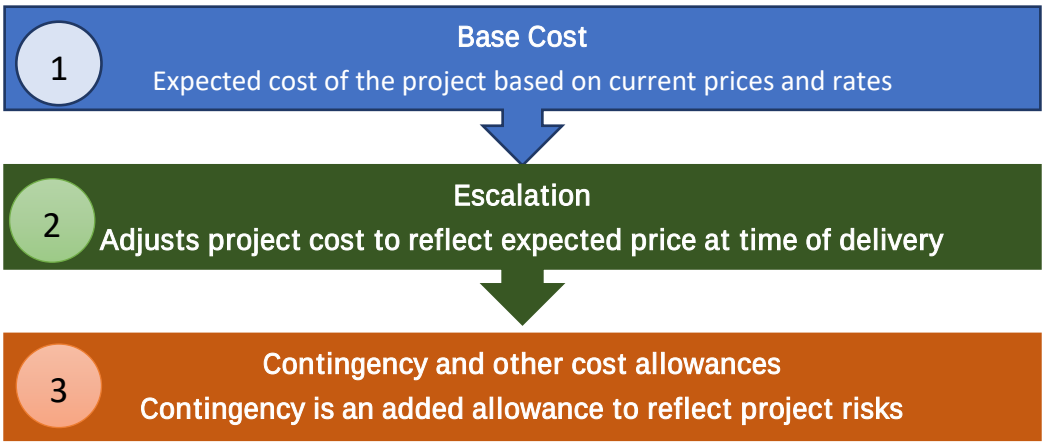
15. The costs shown above are the full costs to deliver these infrastructure projects and will be funded through a mix of rates, development contributions and third-party funding such as National Land Transport Funding (NLTF) administered by Waka Kotahi. The following section of this document sets out how we allocate a share of the costs for these projects to be funded by growth, from which we then assess the contribution charge for developers.
16. A full list of programmes to be delivered in the Drury area beyond 2031 can be found in Schedule 8 to the Contributions Policy 2022 Variation A. The list of projects that make up these programmes will be available on our website. The projects listed in this document are in addition to any provision for Drury already included in the Contributions Policy 2022.

3.0 General approach

17. This section sets out the general approach used to estimate projects costs, assess beneficiaries and identify funding areas for transport, parks and community spaces in Drury. It also provides the escalation(inflation) and interest rates used for all asset groups. The specific methodology used for each asset type can be found in sections five to seven.

3.1 Cost Estimation

18. Estimating the cost of delivering infrastructure projects both now and in the future is a key step in calculating contribution charges. Our Drury contribution charges have been calculated using updated cost estimates based on the latest available data. This section sets out the general approach to project costing, and the price escalation factors used by all our asset groups. It also describes the land development stage model that has been developed by council to price greenfield land in Drury. The specific methodology used by each of asset groups to assess contributions charges, including project costing and analysis of beneficiaries and growth share, can be found in sections five to seven.
19. There are three key stages to establish a project cost estimate: Base Cost, Escalation and Contingency, as shown in the diagram below:



3.2 Cost Escalation

3.2.1 General price movements over time

20. Prices for land, labour and materials will change over time. We adjust our base cost estimates assessed for current project costs for the expected prices at the time the project is to be delivered. The basis for these forecasts is set out in the memorandum from Auckland Council's Chief Economist Unit, Appendix 4: G3 Cost escalation factors and interest rates :document. Price escalation rates for land and construction are shown in table 3.2.1 below:

Table 3.2.1 Construction and Land escalation rates used for Drury cost

Measures (percent)	2022/23	2023/24	2024/25	2025/26 onwards (Long-run projection)
Construction cost escalation	8.90%	6.20%	4.30%	3.10%

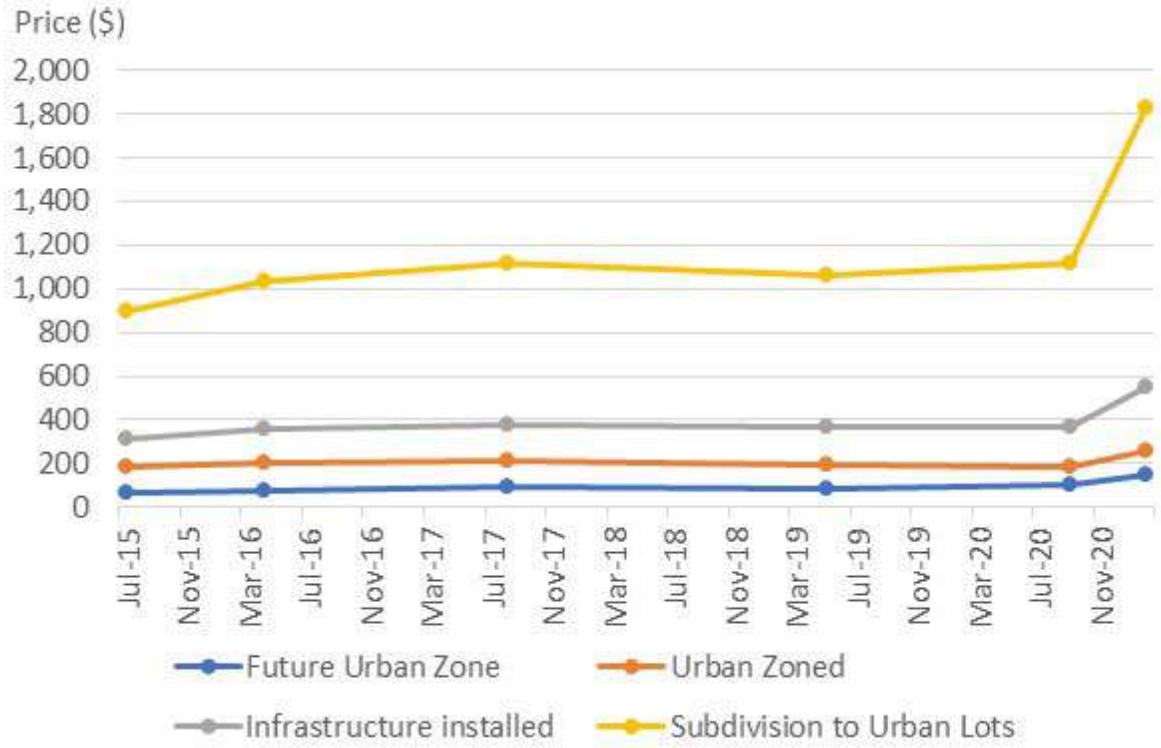
Land cost escalation *	-12.8%	-1.7%	4.9%	7.1%

21. For construction, the long-run cost escalation factor is 3.1 per cent per year. It is based on changes in prices for the supply of goods and services (outputs) in the construction industry over 1994 to 2022. In the near term, the construction industry is facing higher than average cost pressures.
22. For land acquisition, the long-run cost escalation factor is 7.1 per cent per year, based on the compounding average growth rate for the median house price between 1992 and 2022. In the near term, land prices are forecast to be lower than the long-run average increases. In developing our thirty-year projection, consideration was given to the rate at which median house price had moved over the last five years, 5.7 per cent. However, it was determined that it was more robust to use the longer time frame when modelling for the next three decades. This is because the thirty-year view covers multiple economic cycles, compared to the five year view during which there have been unprecedented events such as COVID. In addition, it is probable that median house prices understate the long-term movement in land prices.

3.2.2 Land Urbanisation and the Land Development Stage Price Model

23. The majority of land within Drury is currently zoned Future Urban under the Auckland Unitary Plan. Future Urban zone applies to rural greenfield areas that council has identified for development to urban use over the next thirty years. Land within the future urban zone is subject to rural development controls; urban development can only occur once the land has:
    - been rezoned for urban development, either by council, as part of its planned re-zoning process for the general area, or by landowners, through private plan changes
    - the infrastructure (roads, water/wastewater, stormwater) required to enable the development.
24. In moving from greenfield to urban development, land passes through several key stages of urbanisation:
    - Future Urban Zoned
    - Live Zoned: Land is rezoned for urban development
    - Infrastructure Installed: Bulk infrastructure is provided – this is the major road, water/wastewater, and stormwater infrastructure that serves and/or connects suburbs/catchments
    - Sub-division to urban lots: Developers provide the local infrastructure and subdivide the land into urban sized land. These lots are ready for the construction of housing or business units.
25. The movement in the value of land as it changes from Future Urban zoned to urban sub-division is significant. Accordingly, land that has reached a higher stage of urbanisation attracts a higher price than land at an earlier stage. Figure 3.2.2 following shows the average price per square metre for land in each of the four urbanisation stages across Auckland, between July 2015 and February 2021.

Figure 3.2.2 Price per square meter for land in development pipeline, July 2015 and February 2021



26. The delivery of growth-related infrastructure for Drury is planned over thirty years, is set out in Schedule 8 to the Contributions Policy 2022 Variation A. The land required for these projects will be acquired over time, in accordance with the requirements and timing of each project. Land that is currently future urban zoned may well be at a higher stage of urbanisation at the time it is to be acquired by council. Such land would be expected to attract a higher price than its current rateable valuation would indicate. This means that to fairly estimate the cost of acquiring land in greenfield areas like Drury, council needs to consider:
    - the current value of the land
    - the likely stage of development of the land at the time of acquisition
    - the expected overall movement in land prices (as set out in section 3.2.0 above).
    - .
27. Council and Auckland Transport use the Land Development Stage Price Model to estimate how the average land price of land at different development stages inst the Drury development area will change over time. This model splits the sub-division into urban lots above into two stages super lot and compact lot. The five stages of land development. are shown in table 3.2.2 following:

Table 3.2.2 Urbanisation Stages	
Urbanisation stages:	**Description**
1. Future urban zone	Land is zoned future urban zone. Rural development controls remain in place
2. Live Zoned	Land is rezoned for urban development
3. Infrastructure Installed	Bulk infrastructure enabling development is installed
4. Super-Lot	Land is subdivided into super-lots of 1,000 to 4,000 square metres. (This size lot is generally acquired for medium to high density housing developments)
5. Compact Lot	Land is subdivided into compact-lots of around 300 sqm

28. The model applies these inputs:

- the average cost (as at Feb 2023) of land in each development stage (Future Urban Zone, Live zoned, Infrastructure Installed, super lot, compact lot) in sub-areas of Drury. These prices have been obtained from external and internal valuation advice. The model applies $125 per square metre for Future Urban Zone land
- the current assumed development stage for each sub-area of Drury (a combination of one or more MSMs - MSM sub-areas are the sub-areas identified in the council's Macro-Strategic Model, which forecasts Auckland's growth over time)
- the expected timing each MSM sub-area will change from one development stage price to the next. This timing has been developed by council based on current planning rules, expected growth over time, and timing of the key infrastructure that will enable growth to occur
- the Chief Economist Unit's general land price escalation (as per section 3.2.1).

29. For each MSM sub-area in the Drury development area, the Land Development Stage Model:
    a. starts with the average per square metre cost of land for the current development stage of the MSM sub-area
    b. increases this price in a step-wise fashion to the next development stage land price, based on the projected phasing of development overall in that sub-area, to project land prices for each sub-area for each year from 2022/2023 to 2050/2051
    c. escalates prices in point 2 for the CEU's average land price escalation.

30. The Land Development Stage Model provides an average forecast price within each Drury sub-areas for each year.

31. For some projects, the specific property/properties to be acquired is not yet known. This is either because the land will be selected from properties available on the market at the time of acquisition (such as for reserves and community facilities), or because the location/route of the project has not yet been finalised (some transport projects which are still in their early stage of planning). For these projects, land acquisition costs are estimated using the Land Development Stage Model. The model's average price for the Drury funding area/MSM sub-area the project is located in, for the year of acquisition is applied to the total land area required for the project.

32. Where specific property information is available, the land cost acquisition is estimated based on a comparison of the property's rateable land valuation with the average land cost for the property's sub-area determined by the Land Development Stage Model This is done by assessing:

- **Future rateable land value price:** the 2021 rateable land value divided by the total land area, escalated for the for the year of acquisition using the average land price movement (as set out in section 3.2.1). No adjustment for change in urbanisation development stage is applied
- **Land Development Stage Model price:** This is the average land price for expected urbanisation development stage of the property's sub-area in the year of acquisition, adjusted for the average land price movement (as set out in section 3.2.1)

33. If the estimated **future rateable land value price** is higher than the **Land Development Stage Model price**, then this indicates the land is already at higher stage of development than is forecast in the Land Development Stage Model. In this case, we use **future rateable land value price** to estimate the cost of acquiring the property.
34. If the **Land Development Stage Model price** is higher than estimated **future rateable land value price,** then this indicates the property is expected to be further developed before council's acquires it. This means that the **future rateable land value price** is likely to underestimate the cost of acquisition. In this case, the **Land Development Stage Model price** is used to estimate the cost of acquiring the property.

35. Information on how this methodology has been applied and the approach to estimating the other costs associated with property acquisitions for Drury transport, community spaces and parks can be found in sections four to six.

3.2.3 Updating land acquisition costs over time

36. When the actual land is acquired in the future, some properties may be more developed and attract a higher price than has been currently forecast, while others will be less developed and attract a lower price. The impact of land cost variation on the DC prices is mitigated through the three-yearly reviews of the contributions policy.
37. Overtime, as the land acquisition date nears, more accurate information about the cost of properties to be acquired will become available. This includes detailed project designs, which will refine land requirements, and updated and more specific property information, including development stage and level of improvements. As council moves into negotiating and acquiring land, formal land valuations will be undertaken, and finally an acquisition price agreed. This refined land cost information will be incorporated into the triennial contributions policy update.
38. The impact of any future changes to estimated land acquisition costs will be considered in terms of the overall impact to the DC price, including the impact of all other revisions to growth programmes/projects within the contributions policy, as part of the three-yearly policy review process.

3.3 Assessing the benefit period

39. We asked PricewaterhouseCoopers (PWC) to review our assumptions on the benefit period as part of their review of our benefit assessment methodology. PWC supported our approach, stating that "the relative benefits between developers are likely to be similar over time" and that Auckland Council's methodology of sizing infrastructure for total final population means that "the benefit of additional capacity is likely to be derived equally by developers, irrespective of timing."
40. PWC noted that in instances where an interim solution is provided, that solution may result in a smaller area of benefit than the final solution. For example, a collector road delivered

as an interim solution is likely to have a narrower area of benefit than the arterial road that is ultimately delivered. Under Auckland Council's methodology, the cost of the ultimate solution is reduced to reflect the investment that has already been made (i.e. the cost of the ultimate solution is the cost of upgrading the interim solution.) This means that those developers that are not direct beneficiaries of the collector road still benefit from its delivery as an interim solution, through reduced costs to deliver the arterial road. PWC also considered that differentiating between the areas of benefit for the interim and ultimate solutions would add complexity and potentially "lead to inequitable outcomes."

41. Our approach to assessing the benefit period for Drury differs in the assessments used for our wider Contributions Policy 2022. In this earlier analysis the benefit period for some projects was defined as starting once construction of the infrastructure was complete. PWC considered such an approach would not be appropriate for greenfield areas like Drury, as "Defining the current population as the population as at the point at which construction ends is likely to underestimate the actual growth population. This is because growth often occurs prior to, but in anticipation of, the completion of an infrastructure project." PWC recommendation was that the council should use the lower value of the estimated capacity life (the point at which the infrastructure use reaches full capacity) and a general limit of 30 years when determining the end point for the future population calculation. It was also recommended that the general limit of 30 years for estimating the capacity life when calculating the growth population, could be overridden with another assumption where there is sufficient justification. For clarity, the Drury investment programme would be an example of an investment where it is appropriate to adopt a different approach
42. Assessing the benefit period for Drury as being from the current year until full build out in 2060 is consistent with PricewaterhouseCoopers's recommendation. We will review the benefit period for infrastructure projects outside Drury to ensure they are appropriate for the specific circumstances of each project. This will be done as part of the next review of the Contributions Policy 2022.

3.4 Interest Costs

43. The timing of a project relative to when we receive revenue that will pay for that project impacts on interest the council receives or incurs. Interest gained (on revenue received prior to investment) or incurred (on investment costs incurred prior to revenue being received) flows through to the amount of debt that the council takes on.
44. The council has used its effective interest rate for debt in the near term and long term, as forecast by the Auckland Council's Treasury team, to model the contributions price. This is consistent with the approach used in the 10-year Budget 2021-2031. Interest rates are forecast ahead ten years from the start of the last 10-year Budget. It is assumed rates will remain at the ten-year level for the remainder of the forecast period.
45. Interest rates over time can have a material impact on contributions prices. Our contributions policy is updated at least every three years and the interest rate forecasts will be revised at that time.
46. The table 3.4 below sets out the interest rate forecasts.

Table 3.4 Interest Rates										
Measure (%)	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31 onwards
Interest rate	4.26%	4.55%	4.56%	4.57%	4.59%	4.63%	4.69%	4.72%	4.79%	4.84%

3.5 Funding areas

47. Funding areas are set to allocate the costs of growth to the developing properties that will benefit from or cause the need for the investments in infrastructure. The area over which the benefits of a project delivered to support growth extends varies depending on the nature and scale of the project.
48. It is impractical to create and administer funding areas for each project. Individual projects are aggregated into broader funding areas by asset type. Projects are allocated to a funding area, or areas, along with the share of the cost of growth of that project attributable to that funding area.
49. In determining funding areas into which projects are aggregated the council exercises judgement balancing the difference between pricing in smaller sub-areas relative to the average for a larger funding area. The process of averaging charges into fewer larger funding areas will result in some charges being lower and others higher than would be the case if smaller funding areas were used. We weigh variations in the level of benefit received and associated charge within a larger funding area against the administrative cost of having many smaller funding areas.
50. This process is undertaken in two steps:
    - establishing the area of benefit for each project
    - balancing exercise to determine appropriate funding area aggregation.
51. The council applies three tiers of funding area as shown in table 3.5 below:

Table 3.5 Funding Area Tiers	
Tier	**Description**
Regional	used for infrastructure that provides equivalent benefit to all growth across the region. Infrastructure included in this tier level is usually an integral part of the regional network such as strategic transport infrastructure, or our network facilities such as libraries and sports fields. The infrastructure enables growth to occur across the regional and are available to the whole community without barriers to access or use.
Sub-regional	used for major programmes of work that are integral to a sub-regional network such as east-west link connections and destination facilities like pools. The infrastructure enables growth to occur across a smaller but substantial geographical area and will provide benefit to the same or similar extent within that area.
Local	used for infrastructure which serves a smaller geographical location such as stormwater ponds or neighbourhood parks. The infrastructure provides benefit to multiple developments although they are primarily for the use of residents with proximity to the infrastructure.

Drury Transport Contributions Methodology

4.0 Transport Investment in Drury

52. The transport investment required by the council to support growth in Drury is based on the Drury/Ōpaheke Structure Plan and transport planning work carried out with the central government's New Zealand Upgrade Programme. This provides for an integrated public, private, and active transport network to connect Drury to the wider city. The total cost of the investments is $1.622 billion. Of this, the council is planning to deliver $246 million before 2031, and an additional $1.376 million beyond 2031. A full list of transport programmes to be delivered in the Drury area beyond 2031 can be found in Schedule 8 to the Contributions Policy 2022 Variation A. The list of projects that make up these programmes will be available on our website.
53. The integrated nature of transport infrastructure means that we need to consider the timing and delivery of all the projects for Drury over the 30-year period identified in the T1 **Drury Developer Contributions Policy Transport Assessment** document **and addendum**, and not just those to be delivered after 2031. Based on growth forecasts, it would be desirable for some of the projects to be delivered before 2028. However, the council's budgets do not make capital available for these investments until after that time.
54. Accordingly, we have adjusted the delivery dates to align with the availability of capital in the Regional Land Transport Plan. You can find a link to how we have phased the spending for transport projects for Drury contribution charges on the contributions policy page of the council's website.

4.1 Project Requirements

55. For Drury, the requirement for infrastructure is based on the anticipated population growth from now until the forecast full build out of Drury is achieved in 2060. Planning for Drury infrastructure is at an early stage, and so relies on preliminary information as follows. Information on how the Drury transport requirements were developed can be found in the T1 Drury Developer Contributions Policy Transport Assessment and T2 Drury Infrastructure Funding and Financing (DIFF) - Cost Allowances report available as a link on the contributions policy page of the council's website.
56. Detailed Business Cases (DBC) were prepared for Drury arterial roads in 2019, to support the application of Notice of Requirement route designations now in place. For non DBC projects, costs were assessed based on the level of design information required to support a business case. Each project identifies the land required and the size of this land (square meters, sqm) and produces a Land Requirement Plan (LRP). The LRP is a prerequisite for AT for advancing all land acquisitions and identifies whether full properties or partial land areas (and temporary occupations) are required. The amount of land required was determined from current road infrastructure design standards, informed by the experience of recent transport projects.
57. In a few instances, the route of the road to provide is not yet known. In these cases, the amount of land is determined from the length and width of road corridor required, and the number of properties likely to be impacted, estimated. This was then costed on a general allocation basis (as set out in the Land price methodology below).
58. The approach to estimating for transport projects requirements and costs align with the Waka Kotahi Cost Estimation Manual (SM014). For more information on the scoping and

requirements of Drury Transport projects, see T1 -Drury Infrastructure Funding and Financing Study (DIFF) Transport Assessment and T2 Drury Infrastructure Funding and Financing (DIFF) - Cost Allowances documents.

59. Final project designs will be completed over time as each project's construction date nears. The council contribution policy, and the project costing it relies on, will be revised every three years, utilising the latest available information on project requirements and costs. Changes in underlying projects costs from current forecasts will then be considered in terms of their overall impact on DC price at the funding area level.

4.2 Land Acquisition Costs for Transport Investment in Drury

60. Transport projects (new roads, widening roads, etc) typically require contiguous land through multiple properties with limited flexibility on the location of the land required. Land requirements for each transport project are unique and may require full or partial purchase and temporary leases for construction. This usually requires land to be purchased under the Public Works Act (PWA) resulting in higher transaction costs.
61. Under the principle set out in Part 5 of the PWA is that the landowner is entitled to full compensation for their land to ensure that that the financial position is no better or worse than before any public work acquisition took place.
62. Accordingly, all land transactions for transport projects in Drury have been priced based on the expected highest and best use of the land at the time of acquisition[3].

4.2.1 Timing of acquisition

63. From experience of recent transport projects, land is usually acquired in the three years leading up to project construction. For modelling purposes, we have applied the average of this period, and assumed all properties will be acquired two years before construction. In the case where multiple projects require land from a single property, it is assumed that all the land required will be purchased two years before the earliest project construction date. This acquisition date is then used to determine the cost of land based on the expected development stage of the land at that time and the level of compounded land price escalation to apply.

4.2.2 Land Pricing Methodology

Standard transport land acquisition pricing (excluding land within the Slippery Creek flood plain)

64. How land acquisitions are priced for transport projects is set out in section 3.2 above.

Slippery Creek Flood Plain pricing methodology:

65. The methodology in section 3.2 is not applied to land within the Slippery Creek flood plain. Over the last few years considerable work has been undertaken by council to ensure our planning approach accurately reflect the risks to development on such sites. This work has now provided a reasonable level of confidence that land within the

[3] This includes compensation for things over and above the land itself, including disruption to services, relocation of services, compensation for / reinstatement of assets lost to another location (e.g. sportsfields). For this reason, our standard pricing methodology, including adjustment for future development stage for the local area, is applied to acquisitions of reserve land with open space zoning. This enables council to acquire comparable land within the area to replace the land taken.

Slippery Creek flood plain will not be able to be developed. Accordingly, the land prices for land within this flood plain have now been assessed to exclude future development potential as follows:

- properties fully within the flood plain are priced based on the rateable land value per square meter rate as above ie (council's 2021 rateable land valuation)/(total land area) escalated for the year of acquisition using the CEU land price escalation
- properties partially within the flood plain are apportioned between developable land area (which is priced on the standard model) and the flood plain area (priced on the rateable land value per square meter rate as above).

66. Rateable land valuations reflect the impact of flood risk on property land price to the extent that this risk has been recognised by the market (as at June 2021). Significantly lower rateable land value prices for these properties compared to adjacent non flood plain land suggests that the rateable land values do reflect this risk.
67. There are other smaller, flood plain areas outside of Slippery Creek within Drury. The council's current view is that these other sites are, on balance, more likely to be developable with appropriate stormwater engineering. Accordingly, prices for these sites continue to reflect future development potential.

General Allocation transport land acquisition pricing

68. If the location of the corridor is unknown, specific property information is unable to be used. Instead, we cost using the required land area multiplied by the Land Development Stage Model price for the project's MSM sub-area for the year of acquisition. If the project crosses two MSM sub-areas, then we use an average of the two prices for these zones.

Temporary lease pricing

69. Where land is required on a temporary lease basis, this has been priced at seven per cent of the land cost, calculated on the basis set out above. Lease land is assumed to have no improvements, as only bare land is leased.

Surplus land:

70. In some cases, council will need to acquire a full property, when only part of the property will be required for the completed road corridor. This can be in situations such as where the:

- amount and nature of land required from the property is such that a partial acquisition is impractical
- land is required beyond the standard road corridor cross sections to form embankments (ie to raise flood prone land)

71. The Drury transport cost model does not currently make any allowance for the potential for surplus land to generate future income through its later disposal. In most cases, the surplus land beyond the road corridor will not be developable and will ultimately form additional road reserve. It is also the case that some of the acquisitions that we have currently assumed to be partial acquisitions based on the preliminary design principles, may require full acquisitions once final designs are developed.
72. Assumptions about whether additional full property acquisitions will be required, and whether any land will be able to be disposed of (and any potential for profit from such disposal), will be considered in future updates of the contributions policy, as more information about final road design requirements become available.

4.2.3 Public Works Act Land Transaction cost assumptions

73. Land acquisitions under the PWA attract higher transaction costs than land sales between a willing seller and willing buyer. Auckland Transport is required to compensate the landowner for their costs, such as fees for legal representation and valuation advice. Partial acquisitions will attract additional costs to survey the land, and the issuing of new property titles. Based on the experience of recent transport projects, Auckland Transport has developed an estimate for these transactions costs, based on the type of transaction (Full, Partial or Temporary.) The values used for pricing in the Drury transport cost model are set out in the table on the following page.
74. To apply these PWA transaction charges, we have assumed that where land is required from the same property for multiple transport projects, the land will be acquired in a single transaction, for the earliest project. This means that:
    a. If full acquisitions occur, no subsequent partial/temporary acquisitions will apply
    b. If multiple partial acquisitions are required from the same property, they will be transacted together, with a single transaction/PWA charge.
    c. A property with partial acquisitions can attract a subsequent lease transaction charge if additional land is required on a temporary basis
    d. Property transaction/PWA charges will be split between the projects that require land, based on the share of land each project requires. (Acquisitions are reviewed to ensure no duplication of requirements between projects)
    e. Compensation under Section 72 of the PWA only applies where a dwelling on the property is the primary residence of the owner of the land. Council does not hold information on the occupancy of the land, so Section 72 PWA are applied to all full and partial acquisitions where there is a dwelling on the land

General Allocation PWA costs

75. All general allocation cost transactions are assumed to be partial acquisitions. The total general allocation land area for a project will be split into multiple transactions based on experience of the average land transaction size per property, reflecting that the project is likely to require land from multiple properties. PWA transaction costs are then applied to each of these general allocation transactions.

Escalation of PWA costs

76. Transport cost modelling uses two escalation series prepared by the council's Chief Economist's unit: one to reflect land price growth and one for construction price growth. For PWA cost allowances, the construction price escalation is applied as identified in the following table 4.2.3. While these costs are primarily professional labour costs, representing construction industry goods and services, we have used the construction cost index for consistency with the remainder of the model. The escalation factor is slightly higher than current short-term labour cost forecasts for the economy as a whole. There is the potential for a very small proportional impact on overall costs. This provides a conservative estimate for the purposes of cost estimation. It effectively allows for some contingency given earlier assumptions about multiple purchases from a single land owner being executed in a single transaction and that professional labour costs have tended to rise faster over time than general labour costs.

Table 4.2.3 Public Works Act (PWA)Assumptions for Drury Transport cost modelling				
Date Data Sourced:	2020		**Source:**	AT Property team, July 2020, based on experience from many projects
Acquisition Type:	**Full**	**Partial**	**Temporary**	**Description**
Legal Costs s66 PWA	$50,000	$50,000	$15,000	The PWA entitles owners of land "reasonable" compensation for costs incurred for legal representation, valuations and moving. Escalated at Construction rate reflecting that this cost will rise over time.
Residence s72 PWA (max limit for Partial costs)	$45,000	10% of land value, up to maximum of $25,000	0	Section 72 of the PWA provides additional compensation where the property is used as the primary residence for the owner of the land. The council's valuation information identifies where dwellings exist on properties, but the not nature of occupancy (eg owner-occupier, residential tenancy or vacant). For modelling purposes, Section 72 costs are applied to all properties with a dwelling on the land. Section 72 allows compensation of up to $50,000 for full property acquisitions. Based on experience of recent PWA acquisitions, a flat $45,000 allowance has been applied to all such acquisitions. For partial acquisitions, section 72 compensation is assessed as 10% of the land value, up to a maximum of $25,000. This has been costed as the lower of either $25,000; or 10% of the escalated land price (escalated as at time of acquisition). Section 72 compensation limits are not subject to automatic inflation adjustments, though they are reviewed periodically by central government. No escalation to section 72 costs are applied.
Ancillary Costs	$30,000	$60,000	$7,000	Other costs associated with transacting land under the PWA. Estimate average cost based on experience Escalated at Construction rate reflecting that this cost will rise over time.
Total PWA Transaction Cost:	**$125,000**	**$135,000**	**$22,000**	

4.2.4 Injurious Affection (IA)

77. In some cases, primarily where we are acquiring part of a property, we may need to pay an additional amount to compensate an owner for negative effects the project will have on their remaining land. This is known as injurious affection.
78. The PWA requires compensation for injurious affection to be considered for all partial acquisitions of land. Accordingly, we apply an allowance for injurious affection to all partial land acquisitions, as a percentage of land cost. An IA risk level (None=0%, Low=10%, Medium=20% and High=30%) has been assessed on a property-by-property basis for the Drury DBCs. This assessment was based on the AT property team's experience of recent PWA acquisitions and any available data that can be assessed about each specific property.
79. For modelling, where a detailed business case is available, the assessed IA risk for the property has been used. Otherwise, the medium 20% risk is applied as the default. Our model also enables a fixed additional allowance to be applied where such as cost has been assessed based on the specific circumstances of the property. In the case of Drury, this has only been applied to a single property, a petrol station, where the requirement to move the tanks will result in significant business disruption.

4.2.5 Improvement Values (IV)

80. For full property acquisitions we must pay the value of the land including any improvements on the land. We assess the cost of improvements as being the current rateable capital value minus the current rateable land value. (Note that this Improvement Value (IV) is not a measure of the actual cost of the improvements (how much it would cost to build them) but is a reasonable measure of the difference between the land value, and the full market value for the property.) Price escalations are applied to the land component only, no escalation applied to the improvements. This is on the basis that once the road designation is in place, no further development/improvement will occur, and as such the value of any improvements as a proportion of the value of the land will decline over time.
81. We assume there are no improvements on temporary lease land, as only bare land is leased.

4.3 Construction/Physical Works Costs for Transport Investment in Drury

82. Construction and development costs include both planning and construction costs associated with an infrastructure project. These costs will depend on the nature of the infrastructure and facilities to be delivered, and the specific characteristics of the land to be developed.
83. Estimates for transport project construction costs used recent cost estimates for similar projects at the time of assessment. Where cost estimates were not available, generic linear unit rates have been applied. Cost allowances have been prepared in accordance with the requirements of the Cost Estimation Manual (CEM which can be found at https://www.nzta.govt.nz/resources/cost-estimation-manual/) for preparation of a Programme Business Case Estimate (PBE).

84. Costs for physical works beyond 2031 included in the Drury transport programme were assessed as at July 2020. A price escalation of 3.1 per cent has been applied to these costs for the 2021/2022 year.

4.3.1 Cost allowances for transport physical works

85. The following table 4.3.1a sets out the costs allowances that have been applied to the transport physical works cost estimates.

Table 4.3.1a Cost allowances for transport physical works

Allowance	Allowance (%)	What Allowance provides for:
Traffic Management & Temporary Works	0% - 13%	Implementation of traffic management plans, public notification, lane changeovers, road diversions, temporary roads, plant, and equipment hire costs, temporary construction. Note that Traffic management rates used are as per the Traffic Management Column on the Project Input tab, rather than derived from this table
Environmental Compliance allowance	3%	Management of environmental compliance requirements, preparation and management of compliance management plans, construction of permanent erosion and sediment control measures, maintenance and monitoring, noise attenuation and earthworks bunds.
Preliminary and general (P&G) allowance	22%	Site establishment, operation, disestablishment, and clean-up; site management, bonds, and insurances, preparing and maintaining quality, health & safety, security, temporary erosion and sediment control, temporary traffic management plans, programming, and reporting.

Client managed cost allowances

86. Client managed costs are incurred throughout the project lifecycle and would vary depending on each project. Basic elements that make up Client Managed Costs include:

- Reviews: Economics Peer Review, Cost Estimate Peer Review / Parallel Estimate, Technical Peer Reviews, Constructability Review, O&M Review, Road Safety Audit
- Investigations: Geotechnical Investigations, Utility Location, Pavement Investigations
- Third Party Physical Works: Enabling Works such as utilities
- Communications and Engagement: Open Days, Production of Engagement Collateral, Iwi Engagement, Communications Consultant
- Third Party Professional Services: Procurement Support, Property acquisition support, Investigation and Design, Specialist Advisors, Legal Review, Engineer to Contract, etc
- Consenting: Council lodgement and hearing fees, Environment Court / EPA Costs, Legal Advice, Consent Monitoring by Council, Building Consent
- Post Construction Monitoring: Noise Monitoring, Traffic counts, speed surveys, consent conditions
- Miscellaneous Costs: Insurances, Procurement Disbursements, Statutory Compliance, Revocation costs

87. The following table 4.3.1b sets out the Client managed costs allowances included in our transport physical works costs. Pre-implementation is assumed to occur one year prior to construction.

Table 4.3.1b Client managed costs allowances			
Allowance	**Phase Incurred:**	**Allowance (%)**	**What Allowance provides for:**
Project Development allowance	Pre-implementation	2%	Preliminary design, Implementation Business case, Investigations, Engagement
Pre-Implementation allowance	Pre-implementation	9%	Specimens/Details Design/Investigations, Statutory Applications
Implementation allowance	Construction	6%	Procurement, Construction Monitoring & Supervision

Escalation of Transport Physical Works costs

88. Physical works costs, excluding those for pre-implementation, are escalated for the year of project construction, using the compounded CEU's Construction price escalation. Pre-implementation work costs are escalated for the year prior to construction.

4.4 Contingency for Transport projects

89. All project cost estimates for transport project DCs are completed at a point in time (current date) and escalated to a future date. As time progresses many changes can occur in the environment, including plan changes, technical/design assumptions and project cost assumption changes.
90. To manage this risk, each of our asset groups considers an allowance for contingency. The level of contingency applied differs between the asset types, based on the relative risks and options for non-cost contingency of their projects.
91. Transport property cost allowances for Drury include a 15 per cent contingency for the property valuation and an additional 15 per cent for the uncertainty in project scope. This gives a total contingency of 30 per cent, and is applied to the total property costs, inclusive of PWA, IA and/or IV.
92. Physical works cost allowances for the Drury transport projects include a 40 per cent contingency, reflecting the uncertainty in the final form of the projects.
93. These contingency rates have been developed by AT's Property team, based on their experience of many transport projects, and in accordance with the Waka Kotahi's Cost Estimation Manual guidance for assessing the Expected Estimate for a programme level Business Case. More information on how we developed these contingency allowances can be found in the T2 Drury Infrastructure Funding and Financing (DIFF) - Cost Allowances report linked on the contributions policy page of the council's website.
94. As identified in later in document, we do not apply contingency to community spaces or reserve acquisitions or development. This is because any discrepancy between amount of funds collected and final project costs can be managed by adjusting the scope of the final project design, and through choices of regarding the size and location of the asset. Transport projects do not have this flexibility to revise scope to meet costs – transport works must meet the required design standards of the day; and must acquire land along the designated route.

4.5 Assessing Growth Share of Transport Costs

95. DCs can only be charged for the share of project costs attributable to growth. To determine this share, council must first exclude any project costs attributable to renewals, developer mitigation or which will be funded by third parties external to council.

4.5.1 Renewals

96. Our Drury transport investment includes a renewal component that must be excluded from the share of costs to be allocated. The existing local transport network in Drury generally comprises rural roads which will need to be converted to urban roads. The CAPEX estimates for transport projects typically assume full re-construction of the existing road to provide the appropriate urban streets.
97. Auckland Transport has applied an average renewal cost of $500,000/lane-km of road, based on typical transport project costs at the time of this assessment. As the existing rural roads in Drury are all 2-lane roads, an equivalent renewal cost was therefore applied at a rate of $1million/km. Given the rural nature of the existing roads, these rates were assumed to include renewal costs at intersections as well as along existing roads. These renewals estimates have been removed from the transport physical works cost estimates prior to the application of price escalation and calculation of the growth share of costs.

4.5.2 Developer mitigation

98. The council sets its contribution charges to recover the growth share of the cost of infrastructure delivered or financed by the council. The council does not finance all the transport investment required in an area. This is because developers are usually required to deliver some transport infrastructure to mitigate the effects of their developments, as a condition of gaining resource consent, and may also do so as part of a separate Infrastructure Funding Agreement. Typically, we expect developers to deliver local roads, as well as the majority of collector roads and a share of the frontages (the footpaths, cycle paths, verges and some of the carriageway) on arterial roads.
99. The level of mitigation works to be provided by developers has been assessed on a project-by-project basis for transport DC cost modelling.
100. A developer providing mitigation works on part of a road will also pay DCs for any share of the road that is financed by the council. This occurs where some properties along the road won't be developed (such as reserves) or will only be developed after the final road upgrade is required. While the early developer may pay more via mitigation and DCs for their road, they also benefit from the mitigation works provided by other developers on other roads within the funding area. To reflect the network benefits between developers within a funding area from the mitigation each will provide, the transport investments are presented at a programme level in Schedule 8 of the policy rather than as individual projects. The individuation project information will be publicly available on our website.

4.5.3 Third Party Funding

101. Any external funding Auckland Council receives for infrastructure projects, such as grants from the National Land Transport Fund administered by Waka Kotahi, must be deducted from the costs to be funded by contributions. This requires us to make assumptions on how much funding will be received in the outer years of our investment programme. For Drury we have assumed that:
    - arterial roads will receive Waka Kotahi Funding Assistance Rate (FAR) of 51 per cent. This means that developer contributions are assumed to only fund 49 per cent of the growth share of arterial road costs
    - collector roads will receive 0 per cent FAR as these are not normally funded by Waka Kotahi.

102. These are the same assumptions used in the Contributions Policy 2022 and the 10-year Budget 2021-2031.

103. We expect central government to clarify details of the infrastructure grants for Drury through its New Zealand Upgrade Programme (NZUP) in the coming months. Our Contributions Policy will be adjusted for any future Central Government funding announcements at the next policy review.

4.5.4 Drury Transport Catchments

104. Establishing transport funding areas and allocating transport projects to them is more complex than for other infrastructure projects. While the transport projects to be delivered in Drury are primarily for the benefit of the local area, they will connect to and form part of the regional transport network. The benefits from a transport project may accrue:

- Locally: properties within the local area of the project are provided with new or improved connections within the local area and/or to and from the wider region
- Sub-regionally: neighbouring areas may benefit through the creation of alternative routes reducing traffic movements in another neighbourhood
- Regionally e.g., by creating a new route allowing for more efficient trips through the area to another destination.

105. This means that in order to identify the share of transport investment that benefits growth, we need to consider how the benefit of this investment is shared between:
    - Local, sub-regional and regional areas
    - Growth and existing development.

106. For Drury, these factors have been assessed against seven local funding areas, as well as at the subregional and regional areas, as shown in the table 4.5.4 below. You can find maps for these areas in document G1 – Funding Area Maps, available as a link on the contributions policy page of the council's website.

Table 4.5.4: Funding Areas for Drury transport investment	
Catchment Tier	Funding Area
Local	Drury East
	Drury West 1
	Drury West 2
	Opaheke
	Southern Growth Area 3 (Drury South)
	Southern Growth Area 1 (Papakura/Takanini)
	Southern Growth Area 2 (Paerata/Pukekohe)
Sub-regional	Drury / Opaheke
Regional	Auckland Wide

4.5.5 Allocating project costs to funding area catchments

107. Transport project costs are allocated to funding area catchments based on the share of benefits each area receives from those projects. Assessing how the benefits of a future project will be shared between local, sub-regional and regional areas is complex, as the scale and timing of benefits for some project elements will be dependent on the timing of other elements in the network.

108. A simplified approach has been adopted to allocate the share of benefits for Drury transport projects as set out in the following sections. This approach uses judgement of the proportional benefit of each project to the sub-areas being connected by the project, and to the wider network. This judgement-based allocation is informed by previous business case studies as well as the detailed investigation undertaken for the Drury transport assessment (see the Drury Infrastructure Funding and Financing Study (DIFF) Transport Assessment attached to the T1 Drury Developer Contributions Policy: Transport Assessment document). Such studies provide insights into the intended purpose and effect of each element, from which the likely beneficiaries can be estimated.

4.5.6 Allocation to wider area beyond Drury

109. We have determined a 'default" share of projects costs to be allocated to the wider network, based on the type of project, for both causation and benefits. These default shares are shown in the following tables 4.56a and 4.56b .

Tables 4.5.6a and 4.5.6b Default Causation and Benefit Shares of Project Costs

Share of Causation attributable to wider network			
	The project is being delivered to mostly serve:		
Project Type:	The wider network outside Drury	Both	The area inside Drury
Strategic	80%	40%	20%
Arterial	10%	5%	0%
Key Collector	n/a	0%	0%

Share of Benefits attributable to wider network			
	The project mostly benefits:		
Project Type:	The wider network outside Drury	Both	The area inside Drury
Strategic	80%	50%	40%
Arterial	20%	10%	5%
Key Collector	n/a	5%	5%

110. Under these default shares, a strategic transport project that is being delivered to primarily serve Drury, with most of the benefit accruing to Drury, would produce a 20 per cent share of causation and 40 per cent share of benefit to the wider network. The total share of benefits for the wider network is therefore 30 per cent i.e., the average of the causation share and the benefit share. In this case, 70 per cent of the total costs of the project will be funded from contributions in the Drury area.

111. The default shares have been adjusted for individual projects, where the scale or type of project did not suit these simplifying assumptions. Typically, such exceptions involved:

- an increased external share where the project was on the edge of the potential funding area and on a major (strategic) route connecting to adjacent communities
- reduced external share for connections onto strategic or arterial corridors which were primarily to support local development.

4.5.7 Allocation to local areas within Drury

112. Allocation between the smaller, internal sub-areas was more project and context specific, but again based on similar considerations such as:

- which growth areas are primarily causing the need for the upgrade, with higher weighting for those areas directly supported by the project and lower weighting for adjacent areas that contribute to the cumulative travel on the network
- projects with interim stages were allocated more to directly adjacent areas, while longer-term upgrades applied higher weighting to adjacent growth to address cumulative effects. The interim stages also considered the relative amount of

growth that would have occurred at the particular time of implementation in the relevant sub-areas

- although the area will be developed incrementally via a series of independent Plan Changes and developments, many of the projects are required to facilitate a cohesive, connected future community across the whole growth area

113. You can find out more about how sub-areas have been identified and costs allocated between them in the **T1 Drury Developer Contributions Policy Transport Assessment** document included in the available as a link on the contributions policy page of the council's website.

4.5.8 Assessing Causation, Beneficiaries and Growth Share

114. Existing residents contribute to the need for the project if:

- under our provision metrics, there is service gap for those residents, that will be addressed by the project; and.
- we would deliver some or all of the project even if there was no growth occurring.

115. Our provision metrics differ between rural and CEurban areas. Depending on the type of infrastructure, low or no provision of services in rural areas does not constitute a service gap. For greenfield areas this means that the need for investment is primarily driven by growth.

116. It is not feasible to precisely assess the extent to which existing residents benefit from or cause the need for individual transport projects. This is because our planned transport investment in Drury will form part of the network that responds to a number of drivers and delivers a range of benefits.

117. We therefore use a simplified approach to assessing causation and benefit for transport investment in Drury. Under this approach, we have treated the existing population and growth population as creating the need for transport investment in the same proportions [or to the same degree] as these groups benefit from that infrastructure..

118. Demand for transport services is driven by a mix of residential and business development. We have assessed the relative transport benefits using a weighted measure of growth based on the expected households over the growth period plus a 0.5 weighting on future employment over the same period. As we have assumed causation equals benefits, the growth share of transport project costs is the growth share of this weighted Household-Employment assessment.

119. The growth share will differ between catchments, based on the size of the existing population, and the expected growth over the period. We use these growth shares to allocate the share of project costs attributable to growth in the catchment. Table 4.5.8 shows the weighted Household-Employment assessment for each of the funding area catchments used for Drury.

Table 4.5.8 Growth share of weighted Household-Employment estimate							
Catchment	2023 Household forecast	2023 Employment Forecast	2023 Weighted household employment estimate	2060 Household forecast	2060 Employment Forecast	2060 Weighted household employment estimate	Growth share of 2060 estimate
Drury East IPA	294	197	392	7,187	3,840	9,107	95.7%
Drury West 1 IPA	576	313	732	7,809	1,828	8,724	91.6%
Drury West 2 IPA	226	397	424	5,371	2,494	6,618	93.6%
Opaheke IPA	696	1,437	1,415	4,262	3,109	5,817	75.7%
Southern Growth Area 1	20,363	11,082	25,904	32,163	17,070	40,697	36.3%
Southern Growth Area 2	9,566	6,557	12,845	26,514	12,923	32,976	61.0%
Southern Growth Area 3	380	616	688	1,000	6,296	4,148	83.4%
Auckland Wide	582,640	724,705	944,993	926,525	962,446	1,407,748	32.9%

4.5.9 Total transport costs for growth in funding areas

120. As set above, the growth share of transport project costs attributable to each funding area is assessed on a project-by-project basis as follows:

$$Growth\ share\ of\ project\ cost\ in\ funding\ area\ catchment =$$
$$(Project\ cost, less\ any\ share\ of\ cost\ atributable\ to\ renewals, mitigation\ or\ third\ party\ funding)$$
$$\times Share\ of\ project\ benefit\ within\ catchment$$
$$\times Growth\ share\ \ of\ weighted\ HouseholdEmployment\ within\ catchment$$

121. The total growth share of transport in each funding area is therefore the sum of the growth share of costs for all the projects allocated to that funding area catchment.

122. The Drury local charges for transport have been reduced by the amount of the increase to the Auckland-wide funding area charge, to ensure that there is no duplication of payment between the areas.

Drury Parks Contributions Methodology

5.0 Parks Investment in Drury

5.1 Project Requirements

123. impending acquisitions where specific land price information may be inferred.

124. The requirement for parks in Drury has been assessed in accordance with the provision metrics set out in the council's Open Space Provision Policy[4]. These provision metrics identify the:

- amount of land required for different park types
- area to be served for each park type based on a walking distance catchment, with reference to the density of housing to be provided. For greenfield areas such as Drury, a radial distance is used as a proxy for the walking distance catchment.

125. The open space provision metrics used for Drury are shown in Table 5.1 below. This assessment has identified that anticipated population growth out to 2060 in Drury will generate a requirement for 43 new parks, with a total land requirement of 32.4 hectares at a cost, including land acquisition and development. The total cost of the investment will be $524 million. We have already budgeted for $171 million within the next ten years, so require an additional $352 million.

Table 5.1 Provision metrics and assessed open space requirements for Drury

PARK TYPE	Park size (sqm)	Housing Typology	Walking distance	Radial distance proxy	Number required	Total Land Area required **('000 sqm)**
Neighbourhood Parks	4,000	High and medium density	400m	300m	35	180
		Low density	600m	450m		
Suburb Parks	30,000	High and medium density	1000m	750m	6	138
		Low density	1500m	1,125m		
Local centre	2,000	One per centre			1	2
Town centre	4,000				1	4
Total				450m	43	324

126. Civic parks are provided in town centres and smaller centres called local centres. Aside from civic parks in commercial areas, only suburb, sport and neighbourhood parks provided by the council and funded by Development Contributions in residential urban areas.

127. The above assessment does not include land for a specialised sports park as there is already sufficient sport field capacity in Drury and Ōpaheke. Our assessment is that these parks provide sufficient capacity for growth in Drury. The growth share of the costs incurred for these sports parks is already included in the Contributions Policy 2022.

[4] https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-policies/Pages/open-space-provision-policy.aspx

5.2 Parks Cost Estimation

5.3.1 Reserve land Acquisition Costs for Parks in Drury

128. For parks we assume that suburban parks will be acquired earlier in the development cycle than neighbourhood parks, as the former require large land blocks. We apply the relevant dollars per square metre rates for Super-lots from the Land Development Stage Price model to the phased requirements for park land to be purchased at each stage.

5.3.2 Reserve Development Costs for Parks in Drury

129. The cost of developing new parks is modelled based on a standard provision of amenities required for each park type. Our modelling is informed by the cost of recent park developments and advice from experienced quantity surveyors, to develop a cost per square meter rate based on the level of amenity to be delivered for each park type. These rates are then multiplied by the total area of each park type to be delivered and phased over time dependent on the type of park and the assumed acquisition timeframe.

5.3.3 Contingency for Parks projects

130. No contingency allowance is applied to reserves acquisition or reserves development costs for parks projects as the costs are projected on an average basis. Any discrepancy between amount of funds collected and final project costs for the network of parks can be managed by adjusting the scope of the final project design, and through choices of regarding the size and location of parks within the network.

5.3 Assessing Growth Share of Parks Costs

131. DCs can only be charged for the share of project costs attributable to growth. To determine this share, council must first exclude any project costs attributable to renewals, developer mitigation works or third-party funding.

132. The parks projects included in the contributions policy for Drury area are new acquisitions and not replacing existing facilities. As such there is no renewal component associated with the provision of these parks.

133. The council does not permit the gifting of land for reserves by developers in lieu of reserve contributions. This ensures that council is able to select land that meets our policy standards for park land in appropriate locations. Council also does not have any expectation of third-party funding for reserve acquisition or development in Drury. As such, no allowance is made for developer mitigation works or third-party funding for Drury parks project costs.

5.3.1 Assessing Causation

134. Existing residents contribute to the need for the project if:

- under our provision metrics[5], there is service gap for those residents, that will be addressed by the project; and.
- we would deliver some or all of the project even if there was no growth occurring.

135. Our provision metrics differ between rural and urban areas. Depending on the type of infrastructure, low or no provision of services in rural areas does not constitute a service

[5] See for example our Open Space Provision Policy

gap. For greenfield areas this means that the need for investment is primarily driven by growth.

136. In Drury, we will be delivering new parks solely in response to growth, as the existing population does not meet the threshold for additional services. This means we assign 100 per cent of causation for these assets to growth.

5.3.2 Assessing Beneficiaries

137. The parks growth share of benefit is assessed based on the catchments used for determining the requirements for parks (see Table 5.1 above.) From this, the share of benefit for parks attributable to growth in Drury has been assessed based on the growth population forecast of 93.6 per cent.

5.3.3 Assessing total growth share of benefit for parks

138. We assess the total share of benefit attributable to growth ("the growth share") by adding together the growth shares causation and benefit and dividing by two producing a growth share of 97 per cent.

139.

5.3.4 Parks costs allocation to Funding Areas

Land acquisition and reserve development costs for the Drury civic parks has been allocated to a single funding area:

Drury Community Spaces Contributions Methodology

How we set Development Contribution charges 2021

Chief Economist Unit | Auckland Council
Te Kaunihera o Tāmaki Makaurau

6.0 Community Spaces Investment in Drury

6.1 Project Requirements

140. The future requirement for community facility provision in Drury has been assessed in accordance with the provision metrics identified in the council's Community Facility Network Plan[6]. The provision metrics indicate that for the expected population growth in Drury council has costed a single multi-purpose facility including a community centre, leisure centre, library, and pool facilities should be provided.

141. How the projected demand and final configuration of space will be met has not been determined (i.e. location and/or co location of services, delivery mechanism etc) but for the purpose of estimating costs, it is assumed a large multi-purpose facility incorporating all four space types is the most likely service delivery model. Table 6.1 below shows floor area requirements and targeted population thresholds for each facility type. This facility is estimated to cost $183 million.

Table 6.1 Provision metrics and assessed community spaces requirements for Drury

Facility Type	Floor Area (sqm)	Target Population threshold	Indicative Floor Area requirement for Drury (sqm)
Community Centre	600+	20,000+	600
Library	42 sqm per 1000 people		1,934
Leisure	2,700	18,000-40,000	2,700
Pool	3,500	35000-50,000	3,500
Total			9,630

142. The Community Facility Network Plan identifies the need for the different kinds of community facilities based on population thresholds within a specific catchment area being met. The Community Facility Network Plan identifies the need for provisions for different community spaces based on walking and driving distances. For Drury, we have assessed the need and benefit for all four community spaces based on the catchments being applied to a single funding area. This funding area has an approximately five-kilometre radius, centred on the Drury-East town centre. The funding area excludes the northern part of Ōpaheke, which are served by community spaces in Papakura and assumes that population in Paerata will use the Franklin pool and leisure spaces. The funding area includes part of the Southern Growth Area that will benefit from services in Drury. The assumptions that residents will access the closest facility means the catchment used to assess need and benefit for a pool/leisure centre is smaller than that specified in the Community Facility Network Plan, the growth expected

[6] https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/community-social-development-plans/docscommunityfacilities/community-facilities-network-plan.pdf

within this area is still sufficient to trigger the requirement for these facilities (see table 6.1 above).

143. The requirement for library space is determined by floor area required per 1,000 people within the catchment. The portion of the library cost for the contribution charge is determined by the population in the funding area.

144. The library floor area for contribution charges will be smaller than the size of library indicated by the broader catchment population. The exercise only defines the library floor area allocated to the funding area that will be charged. This is based on the expected total population within a five-kilometre driving catchment centred on Drury. The expected total population for this funding area in 2060 is 58,900. This produces a required library floor area of 2,416 sqm, less existing level of service of 482 sqm for the rural library.

145. The land area required for these community facilities has been estimated by doubling the total floor area for the multi-purpose facility, giving a land requirement of 17,469 sqm.

6.2 Community Spaces Cost Estimation

6.2.1 Land Acquisition Costs for Community Spaces in Drury

146. For our community spaces we have followed a similar approach as for a suburban park, using the assumption of a single multi-purpose community facility. We apply the relevant dollars per square metre rates for Super-lots from the Land Development Stage Price model to the requirements for park land to be purchased at each stage. As the size of land required and strategic positioning of the facility is similar to a suburb park the land acquisition phasing profile adopted is as for a suburb park.

6.2.2 Construction Costs for Community Spaces in Drury

147. Similar to Parks, construction costs for community spaces are estimated based on standard construction cost per square metre rate for facility type multiplied by the floor area for the facility type to be delivered. The construction rates we use include building works, infrastructure services, and hard and soft landscaping works, professional fees, internal client, consents, and furniture. The costs for community spaces projected for Drury have been updated for benchmark rates prepared by AECOM in June of 2022.

6.2.3 Contingency for Community Spaces projects

148. No contingency allowance is applied to community spaces costs. Any discrepancy between amount of funds collected and final project costs can be managed by adjusting the scope of the final project design, and through choices of regarding the size and location of the facility.

6.3 Assessing Growth Share of Community Spaces Costs

149. DCs can only be charged for the share of project costs attributable to growth. To determine this share, council must first exclude any project costs attributable to renewals, developer mitigation works or third-party funding.

150. The swimming pool and leisure centre spaces included in the contributions charges for Drury are new facilities and not replacing existing facilities. As such there is no renewal component associated with the provision of these facilities.

151. There is an existing 482 sqm rural library and community hall facility in Drury which would be replaced by the new facility. We have treated the replacement of this existing facility with the new library as a renewal cost, which isn't charged to growth. We have therefore excluded the

share of project costs associated with replacing this facility. We have done this by subtracted its 482 sqm floor area from the space required for the new library, to give an adjusted library space requirement of 1,934 sqm.). [7]

152. We have taken a similar approach to adjusting the requirement for land. While not strictly a renewal, we have still deducted a share of the land costs to adjust for this existing level of service. This existing land share has been assessed as double the floor area of the existing library and hall, so 964 square metres. This gives an adjusted land requirement of 17,469 square metres.
153. There is no mechanism for any share of community space costs to be delivered though developer mitigations Council also does not have any expectation of third-party funding for these facilities in Drury. As such, no allowance is made for developer mitigation works or third-party funding for Drury parks project costs.

6.3.1 Assessing Causation

154. Existing residents contribute to the need for the project if:
    - under our provision metrics[8], there is service gap for those residents, that will be addressed by the project; and.
    - we would deliver some or all of the project even if there was no growth occurring.
155. Our provision metrics differ between rural and urban areas. Depending on the type of infrastructure, low or no provision of services in rural areas does not constitute a service gap. For greenfield areas this means that the need for investment is primarily driven by growth.
156. In Drury, we will be delivering the new community facility solely in response to growth, as the existing population does not meet the threshold for additional services. This means we assign 100 per cent of causation for these assets to growth.

6.3.2 Assessing Beneficiaries

157. Even if the existing population does not contribute to the need for the project, they receive the benefit of any increased level of service the project provides to them. We assess the share of benefits attributable to existing residents as the proportion of the population within the catchment for the project at the start of the benefit period compared to the population in the same catchment at the end of the benefit period. Conversely, the share of benefit attributable to growth is the proportion of the growth population to the population at the end of the benefit period.
158. The metric we use to assess benefit depends on the nature of the infrastructure, and the level of information available at the time the assessment is made. For our community spaces projects we use resident population, as the benefits of these facilities are considered to accrue to residents and not businesses. However, for the pool and leisure centre there is some existing development and future growth expected to benefit from the pool that lies outside the proposed funding area. The population figure used to assess the share of benefit attributable to growth is adjusted to reflect this.

7 Applying the existing renewal share to the library facility results in a larger deduction for the renewal than if we applied it to the community facility. This is because the cost of developing a library is assessed as being more expensive than a community space. Applying the renewal to the community facility would result in a deduction of $4.7 million.

8 See our Community Facility Network Plan

159. . The share of benefits of the new community spaces between the existing population and growth is assessed based on the share of existing population and growth population at the end of the growth period.

6.3.3 Assessing total growth share of benefit

160. We assess the total share of benefit attributable to growth ("the growth share") by adding together the growth shares causation and benefit and dividing by two. Table 6.3.3 provides the average growth share of benefit by funding area for community spaces.

Table 6.3.3 Total Growth Share Drury Community spaces

Funding area type	Facility type	Growth Share of Costs
Sub-regional	community venue	97%
Sub-regional	pool and leisure	92.6%

161. Once we have the total growth share by catchment, we can apply the applicable percentage to projects within that catchment.

6.3.4 Community Spaces allocation to funding areas

162. The library forms part of our regional library network. As such, the growth share of cost for this facility is allocated to the regional funding area and is based on the regional growth share in the Contributions Policy 2022 of 31.6 per cent. This means that developers across the region (not just those in Drury) will help fund the new Drury library. Equally, developers in Drury will be helping to fund libraries in other parts of the region. Changes to regional charges are not included in the Variation A amendment to the Contributions Policy 2022. Instead these changes will be incorporated into the policy when it reviewed in 2023/2024.

163. Costs for the pool, leisure and community centre have been allocated to the sub-regional Drury IPA (community spaces) funding area. This funding area matches the catchment used for the need/ beneficiary analysis set above.

Attachment A: Cost escalation factors and interest rates

Memo: Cost escalation factors and interest rates
To: Andrew Duncan, Manager Financial Policy
From: Gary Blick, Chief Economist; Shyamal Maharaj, Economist
Date: 18/04/2023

A.1 Summary

- You have asked for advice on the values to be used over the next 30 years for: (1) inflation for land acquisition costs; (2) inflation for construction costs; (3) interest rates. These values will inform the setting of Development Contribution charges. This memo documents work updated in December 2022.
- The recommended approach is to differentiate between a near-term forecast, which accounts for the current economic cycle, and a long-run projection based on historic trends over the past three decades.
- A key finding is that using the Consumer Price Index (CPI) to inflate the modelled cost of acquiring land and or construction is likely to be insufficient to account for cost pressures over the long term.
- For land acquisition, the recommended long-run cost escalation factor is 7.1% per year, derived from the average growth rate for the median house price between 1992 and 2022, as a reasonable proxy. In the near term, house prices are forecast to fall, as shown in Table 1. The latest near-term forecast can be used at the time that the contributions are being calculated.
- For construction, the recommended long-run cost escalation factor is 3.1% per year, derived from the Producer Price Index (PPI) for outputs, measuring average annual changes in prices received by producers in the construction industry from 1994 to 2022. In the near term, the construction cost pressures are expected to be higher than the long-run average. Table 1 includes a forecast. The latest near-term forecast can be used at the time that the contributions are being calculated.
- For interest rates, it is recommended that the rates provided by the Auckland Council's Treasury team, for use in financial planning, be used. Table 2 shows the forecast to 2030/31, as of February 2023, as an example only. The latest forecast can be used at the time that the contributions are being calculated.

Table 1: Recommended values for cost escalation

Measures (percent)	2021/22	2022/23	2023/24	2024/25	2025/26 onwards (long-run projection)
Land cost escalation	4.2	-12.8	-1.7	4.9	7.1
Construction cost escalation	12.7	8.9	6.2	4.3	3.1

Table 2: Recommended interest rates

Interest rate (%)	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31 onwards
Feb 2023	4.26%	4.55%	4.56%	4.57%	4.59%	4.63%	4.69%	4.72%	4.79%	4.84%

A2 Purpose

You have asked for advice on the values to be used over the next 30 years for: (1) inflation for land acquisition costs; (2) inflation for construction costs; (3) interest rates. These values will inform the setting of Development Contribution charges.

The objective is to ensure that the estimated costs of Auckland Council infrastructure investments over the next 30 years contain a reasonable allowance for future inflation, with respect to land and construction.

The calculation of charges also needs to allow for: interest gained on development contribution payments received before investments are made; and the interest incurred on costs incurred before the development contributions are fully recovered. As such, a view on future interest rates is needed.

This work was undertaken in August 2022 and updated in December 2022. This memo should be read in conjunction with Auckland Council development contributions policy.

A3 Approach

The following principles have guided this analysis.

- *Differentiate between a near term forecast and a long-run projection.*

Investments scheduled to occur in the near term can be costed with relatively more certainty by using information about current market conditions and how those conditions are expected to evolve in the near term. Further out, uncertainty rises and so rather than aiming for year-to-year precision, the approach is to use a projection based on historic trends. The policy timeframe is a period of 30 years and so it is proposed that the near-term be defined as Years 1-3 from the point of cost estimation, with the long term

being from Year 4 onwards. This approach recognises that any certainty about the near term quickly diminishes.

- *Business units best placed to determine near term costs.*

Business units responsible for planning and funding infrastructure may be best placed to determine near-term costs, drawing on detailed business cases, contracts for delivery, recent experience, or market soundings. In cases where guidance is required, a near-term forecast has been provided.

- *Identify a long-run average by looking at past performance.*

Projections into the long term need to look through future economic cycles, which are unknown and likely to vary considerably in duration and fluctuation. A starting point is to examine past patterns to identify any trends and relationships that can inform a view about the future. It is also reasonable to consider whether any structural or policy shifts may mean the future could look different from the past.

- *Actual variance from the projected average will likely net out over time.*

A long-run average for cost inflation abstracts away from economic cycles by averaging out year-to year fluctuations over the long term. This means that in any given year, the projected average will vary from the actual values, which will be either higher or lower than projected. Over time, these cumulative variances can be expected to net out around the projected trend value.

As with all forecasts and projections, the principle is to use best information and judgment at a point in time, recognising that the future may evolve differently.

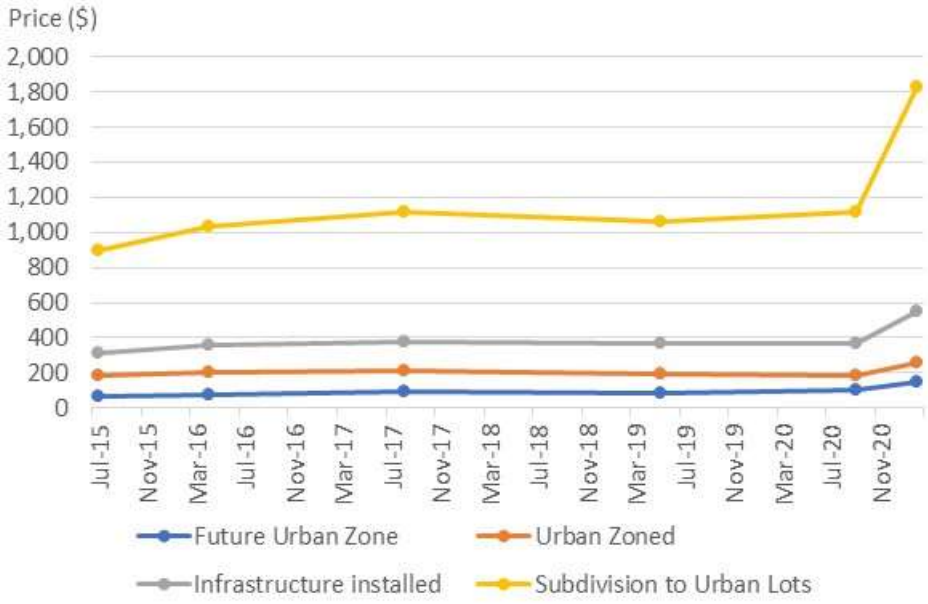
A4 Inflation for land acquisition costs

Land – long term

Auckland Council has commissioned independent analysis of price movements of land in the residential development pipeline, using sales data at six points between July 2015 and February 2022. The land sales are categorised into four stages of the pipeline: (1) Future Urban Zone; (2) Urban Zoned; (3) Infrastructure installed; and (4) Subdivision to Urban Lots. The sales cover five areas of Auckland (north, north-west, west, east, and south) and the approach here is to average sales across these areas to obtain an Auckland view.

The chart below shows price changes on a per square metre basis. It is apparent that the value of land increases through the development pipeline, reflecting the increasing certainty that the land will be brought to market and the value added by infrastructure. Prices for Urban Zoned land have been consistently higher than those for Future Urban Zone land. In turn, prices for infrastructure installed land have been consistently higher than those for Urban Zoned land. In turn, subdivided urban land prices have been consistently higher than those for Urban Zoned land.

Figure 1: Price per square metre for land in the development pipeline, July 2015 – February 2021

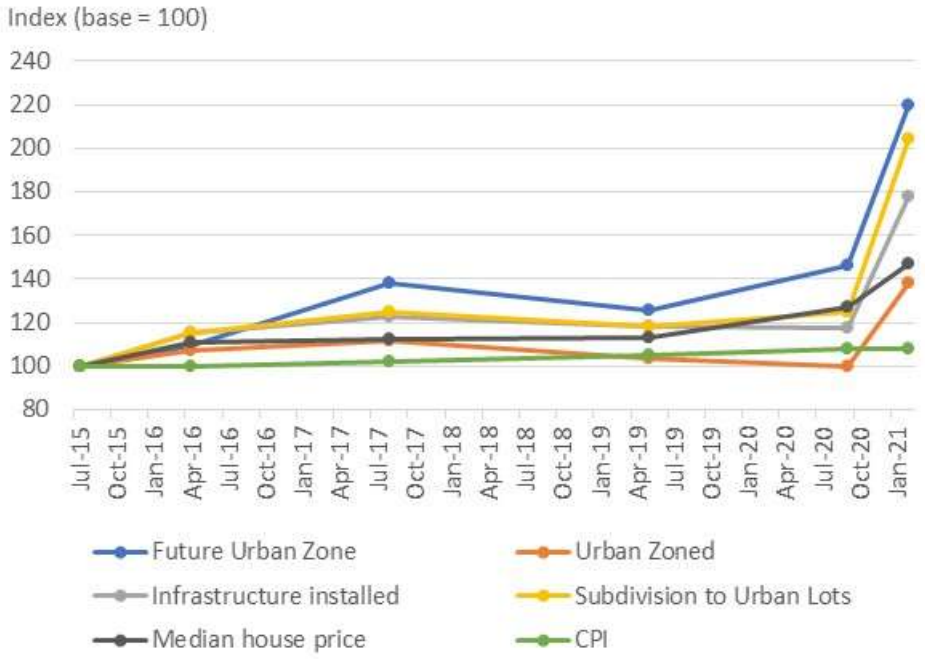


The progression of land in the development pipeline is influenced by conditions in the wider housing market. The Auckland Unitary Plan came into effect in November 2016 and added significant development capacity, including within the existing urban area. Land prices in sampled in May 2019 were similar to those in April 2016. Land prices increased materially between the samples of September 2020 and February 2021, reflecting high demand supported by lower interest rates from the onset of the pandemic in March 2020. The chart below indexes the changes in sampled land prices from July 2015 and adds the indexed change in the median house price.

A simple cost escalation factor can be derived from observed median house price growth, given that land is the dominant component in house prices. Analysis of Auckland house sales for the year to June 2022

shows that land value accounted for the majority of the Council Valuation of those properties (mean = 74%; median = 76%, N = 11,420).

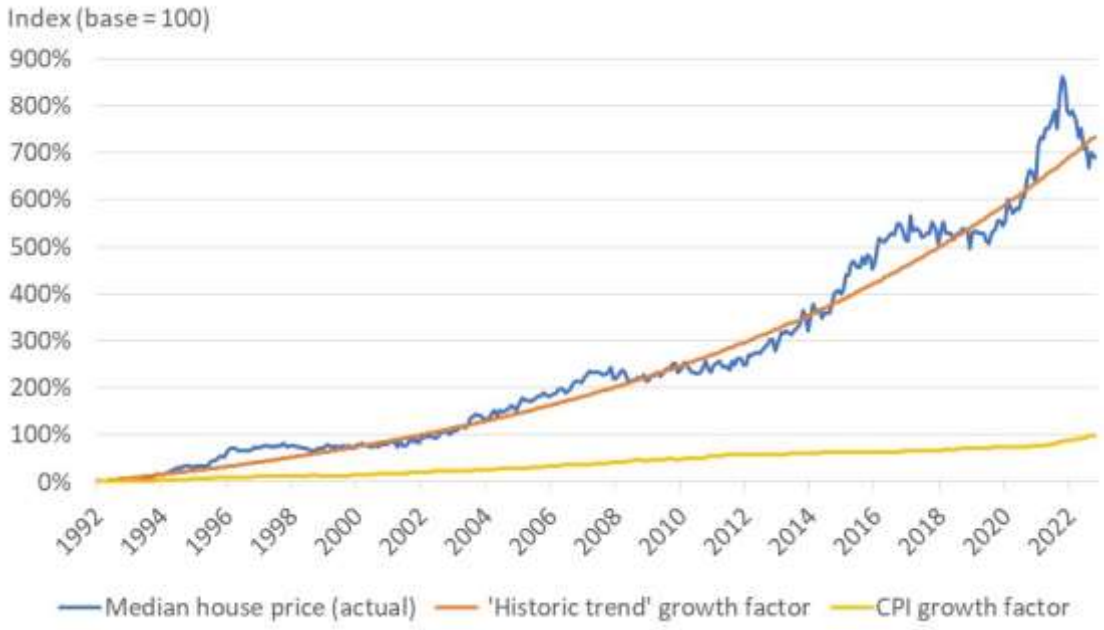
Figure 2: Indexed changes in land values and median house price, July 2015 – February 2021



Using available data on the monthly median house price for the period 1992 to 2022, the change in price is identified over a series of periods equivalent in length to the required projection period (i.e., 27 years). The analysis identified 47 overlapping 27-year periods, spanning from January 1992 to January 2019, to November 1995 to November 2022. In each case, a compounding average growth rate between year 1 and year 27 of each period was derived. The average across these "historic growth factors" is 7.1% per year. This result is relatively stable (median = 7.1%, std dev = 0.3%) and within a range of 6.3% to 7.6%.

The chart below shows the cumulative change in the monthly median house price over a 30-year period from 1992 to 2022 alongside the historic growth factor trend (7.1%) and the annual average change in the Consumer Price Index (CPI) over the equivalent period (2.1%). This points to the use of CPI as being insufficient to account for cost escalation in land acquisition.

Figure 3: Indexed change median house price with growth factor scenarios, 1992-2022



As a check on the reasonableness of this approach, an econometric method was used to estimate the land price component as a residual of the net sales price less the value of capital improvements, while controlling for location, distance from the city centre, and site-specific factors that influence sale prices. The analysis used data from the District Valuation Roll (DVR) for the period 2011q4 to 2022q2, to estimate a hedonic function and derive a hedonic index of land prices for each quarter. The finding is that the price of land (estimated median land value per quarter) increased faster, on average, over this ten-year period than the headline sales price (median price per quarter). This suggests that the approach of using an historic growth factor derived from median sales prices over 30 years, as a proxy for land price growth, may potentially be an under-estimate.

Conversely, it is also possible that the future price path for land acquisition will be more moderate than in the past, given that the recently enabled opportunities for intensification will allow for more efficient use of existing urban land.

Weighing up these considerations and the information available at this point, the conclusion is that it is reasonable to use the historic growth factor for the projection period. The preliminary work on the hedonic index of land values will be developed further and the findings may inform future updates.

Land – near term

The near-term outlook remains one of a cooling housing market after two years of price growth that had been fuelled by historically low interest rates. Factors contributing to this cooling include: a higher cost of finance, with commercial banks raising mortgage rates following increases to the Official Cash Rate; reduced access to finance for some buyers; and the strong pipeline of additional housing supply coming onto the market in response to demand.

Economic forecasts are generally showing further house price falls in 2023, with some stabilisation thereafter. The Reserve Bank forecasts a house price index, using data from CoreLogic. This can be used as a reasonable proxy for the near-term movement in land prices and to inform the near-term cost escalation factors for land acquisition.

The table below shows the Reserve Bank's forecast changes in the house price index, in the *Monetary Policy Statement* of November 2022. The derived annual percentage change can be applied to future land prices at each step of the development pipeline. The assumption here is that land price growth then reverts back to long-run trend from 2025/26 onwards. The latest forecast can be used at the time that the contributions are being calculated.

Table 3: House price index from Monetary Policy Statement of November 2022

House prices (nominal)	2021/22	2022/23	2023/24	2024/25
Index (as at June quarter)	3690.3	3219.2	3166.0	3319.8
Annual percent change (%)	4.2	-12.8	-1.7	4.9

Source: RBNZ, MPS November 2022

A5 Inflation for construction costs

Construction – long term

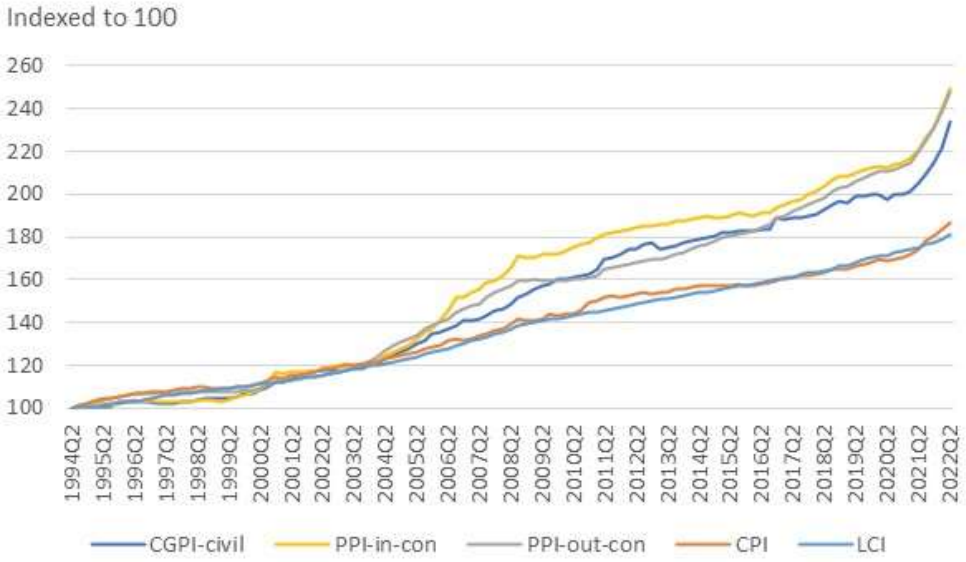
Stats NZ produces several indices that offer insight into how construction costs have evolved over time. The Producer Price Index (PPI) for outputs measures changes in prices received by producers, for goods and services produced, revenue from renting and leasing, capital work undertaken by own employees, and margins on goods purchased for re-sale.[9] [10] As such, the PPI outputs series for the construction industry can be seen to represent the bundle of construction services being purchased by Auckland Council.

The chart below plots the PPI outputs and inputs series alongside the Consumer Price Index (CPI) from 1994 to 2022, a 28-year period for which data is available across these indices. Indices for input factors are also included for comparison.

- Capital Goods Price Index (CGPI) – estimates the overall price change in physical assets purchased by the productive sector – including the purchase of machinery, equipment, and plant. There is a sub-index for civil construction (referred to here as CGPI-civil).
- Labour cost index (LCI) – for general movements in private sector wages and salaries.

It is apparent that inflating future construction costs by a figure based on CPI would likely be insufficient to recognise the price pressures in the construction industry, which have tended to increase at a faster rate.

Figure 4: Selected indices, 1994-2022



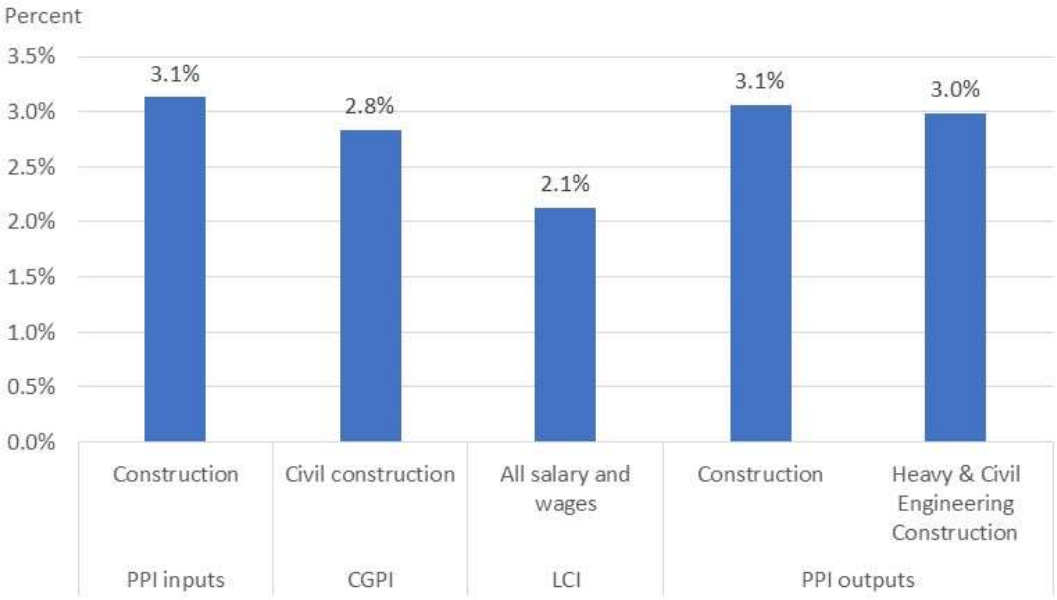
Source: Stats NZ, CEU analysis.

[9] Stats NZ (2015) *Producers price index: concepts, sources, and methods*
[10] Stats NZ (2009) *Contract Indexation Guide for Businesses*

The chart below shows the average annual growth rate for the PPI outputs series for construction (NZSIOC level 2) over the period 1992 to 2022. Also included, as comparators, are the PPI inputs series for construction and an outputs sub-series of heavy and civil engineering construction, which includes road and bridge construction (NZSIOC level 3). This perspective suggests a long-run cost escalation factor of approximately 3.1% per year.

These results can be compared with the cost adjusters prepared for local government authorities by the consultancy BERL. The primary focus of five cost adjustors (Planning & Regulation, Roading, Transport, Community, Water & Environment) is on operating expenditure, and so, as BERL has noted, they may understate (or overstate) the change in the prices of capital expenditure items (i.e., built infrastructure or land acquisition). Instead, BERL has created a general capital expenditure adjuster, which has a 20-year average of 2.3% per year over the period 2020-2040.[11] This general capital adjuster covers all of those areas, and so is broader than construction.

Figure 5: Average annual growth rates of selected price indices, 1992-2022



Source: Stats NZ, CEU analysis.

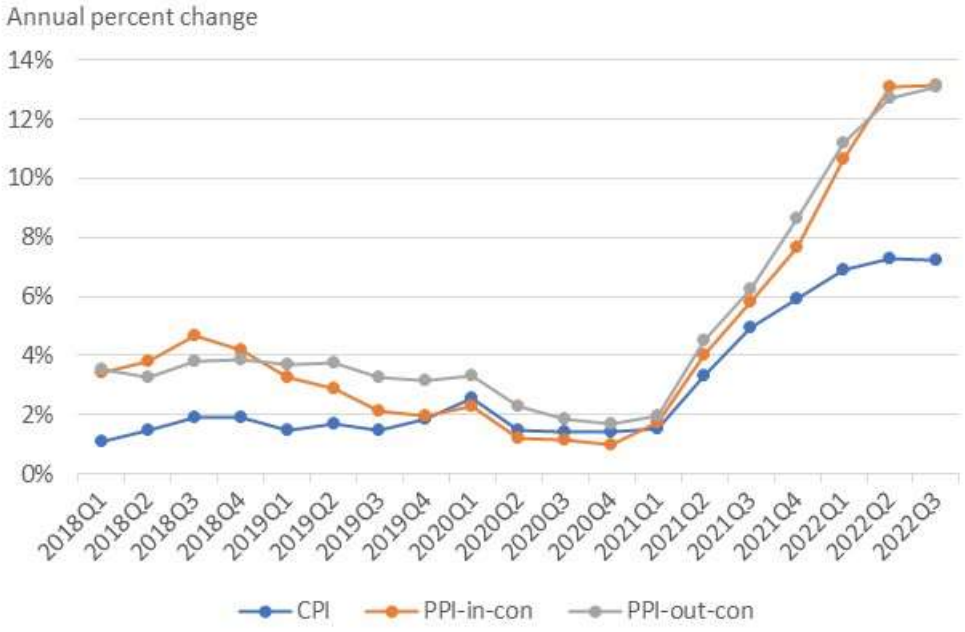
Notes: PPI output indices relate to ANZSIC: Construction (Division E); Heavy and civil engineering construction including road and bridge construction (Subdivision 31).

[11] BERL (2021) *Taituarā Cost Adjusters*. Economic context and adjusters for local practitioners, October 2021

Construction – near term

Construction costs pressures in the near term are likely to be above their long-run average. Core inflation increased from mid-2021 and these pressures are observable in the construction industry. Drivers include strong demand, supported by relatively low interest rates, and supply constraints arising from pandemic-related interruptions to the flows of goods, input materials and labour. Border restrictions had limited the opportunities to fill labour shortages, with reported capacity utilisation for builders and manufacturers being at an all-time high. The chart below shows how the Producer Price Indexes (inputs and outputs) for the construction industry have been materially higher than CPI during this stage of the economic cycle.

Figure 6: Annual percent change in selected indices, 2018-2022



Source: Stats NZ, CEU analysis

The Reserve Bank has signalled further increases to the Official Cash Rate and expects interest rises to dampen activity. Annual CPI inflation is forecast eases back to the mid-point (2%) of the target band from early 2025, as at the *Monetary Policy Statement* of August 2022.

The following forecast covers the next three years, using the output perspective outlined above. The overall assumption is that the series will trend back towards the long run average. The forecast was prepared in the final quarter of 2022 and so reflects available information at that time. The latest forecast can be used at the time that the contributions are being calculated.

Table 4: Near-term outlook for construction

Annual percent change (%)	2021/22	2022/23	2023/24	2024/25
To June quarter	12.7	8.9	6.2	4.3

Sources: Chief Economist Unit

A6 Interest rates

The calculation of charges also needs to allow for interest gained on development contribution payments received before investments are made, and the interest incurred on costs incurred before the development contributions are fully recovered. As such, a view on future interest rates is needed.

Interest gained or incurred conceptually flows through to the amount of debt that Auckland Council needs to take on. Therefore, the interest rate should reflect the cost of debt that Auckland Council faces and is likely to face. This means using the effective interest rates for debt in the near term and long term, as estimated and forecast by the Auckland Council Treasury team.

The modelled cost of borrowing is essentially a function of the economic context (the forward interest rate curve), Auckland Council's policy position regarding the proportion and duration of hedging, and the debt margin faced by Auckland Council (i.e., the borrowing margin, which reflects credit worthiness and risk at a point in time).

This approach is consistent with that used in the 10-year Budget 2021-2031. The cost of borrowing is set to increase over the 10-year LTP forecast period. The forecast is not modelled beyond ten years, and so the recommendation is to use the final year value thereafter.

The forecast cost of borrowing has been increasing through 2022, as would be expected. The table below shows how the cost of borrowing has been upgraded in successive forecasts from the Treasury team, from 16 May 2022 to 7 February 2023.

Table 5: Forecast of interest rates (example only)

Interest rate (%)	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31 onwards
Update of May 2022	4.26	4.41	4.44	4.45	4.46	4.49	4.52	4.51	4.49	4.46
Update of June 2022	-	4.35	4.41	4.45	4.50	4.57	4.66	4.72	4.82	4.89
Update of Feb 2023	4.26%	4.55%	4.56%	4.57%	4.59%	4.63%	4.69%	4.72%	4.79%	4.84%

Source: Auckland Council Treasury

Document Two: Methodology for Calculating Contributions charges for Auckland excluding Drury

Auckland Council's cost allocation methodology

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Table of Contents

Purpose

This document shows how the council calculates development contributions (DCs) in accordance with the Local Government Act 2002 (LGA 2002) for infrastructure planned in Auckland. Information on Drury infrastructure can be found in the M*ethodology for Calculating DCs for Drury* document.

This is a separate document and should be read in conjunction with Auckland Council's Contribution Policy 2021. This document provides a plain English explanation of how development contributions are calculated along with a detailed description of how we meet our legislative obligations.

In accordance with Section 106(3) of the Act, the full cost methodology is kept available for public inspection on the council website at: www.aucklandcouncil.govt.nz.

The methodology for infrastructure planned in areas of Auckland other from Drury is contained in the document *How we set development contributions*. The methodology for infrastructure planned in Drury is contained in the document *Methodology for calculating DCs for Drury*.

Please note that this is not a summary required in accordance with Section 201(1)(a) of the LGA 2002 that explains and justifies the way in which each development contribution is calculated. This has been included in paragraphs 101 to 105 of the Contributions Policy 2021, which sets out the steps used to calculate each contribution specified in Schedule 3 of the same policy.

Auckland's approach to meeting the statutory requirements

The development contribution principles set out in the LGA 2002 are considered when preparing a development contributions policy. The legislative requirements the council must comply with when calculating development contributions are illustrated in Appendix 1 and shown in Appendix 3. These are factors used in the council's Excel based model for calculating development contributions, the Auckland Council Development Contributions Cost Allocation Model (ACDCCAM). Appendix 3 also includes references to the paragraphs in this document where application of the statutory requirements is described.

The methodology adopted for the Contributions Policy 2021 has been refined and improved over time. Projects that were delivered under previous policies and legacy councils keep the methodology that was applicable at the time of delivery.

The legislation requires our methodology to be shown and for a schedule of contributions to be provided. This document and the schedule of assets to be funded by development contributions provides the full methodology for the calculation of development contributions for public inspection. The documents found in Section 6, Schedule 8, and Attachments B and C of the Contributions Policy 2021 describe in summary form the way in which contributions are calculated.

There are two parts to this document:

Part One: Council's approach to setting development contributions.

Schedule 13 of the LGA, 2002 sets out the methodology which councils are required to use to calculate development contributions. This section details the key steps that the council follows in applying this methodology:

a) Identify the total cost of capital expenditure that the council expects to incur through the long-term plan (LTP) (also known as council's 10-year budget) and in later years to meet the demand caused by growth:

LGA Schedule 13 (1)

- 1.1 Forecast the growth expected to occur in Auckland
- 1.2 Identify the degree of performance required of a particular activity, or level of service
- 1.3 Identify the total cost of capital expenditure the council expects to incur
- 1.4 Identify the proportion of the capital expenditure that can be attributed to growth

b) Identify the share of expenditure attributable to developments

- 1.5 Within a district as a whole or parts of it, referred to as funding areas
- 1.6 Based on demand generated by a typical residential dwelling, referred to as units of demand
- 1.7 Categorised by development types as described in Schedule 2 of the Contributions Policy 2021.

When the steps above have been completed, the council stands back and considers the overall impact. Allocation of the cost of growth and the level of DCs may impact on landowners and developers, future buyers, ratepayers and the council's wider growth objectives. After considering the fairness and affordability of the impacts, the council may adjust the outputs before adopting a final contributions policy.

Please note that this document does not provide the outputs undertaken at each step mentioned above.

Part Two: Applying development contributions methodology to groups of activities

Part Two describes how the methodology for setting development contributions is applied to each of the activity areas reflecting the specific characteristics of demand for their services. The activities are:

Part One: The council's approach to setting development contributions

1.1 Forecasting Growth

LGA s197AA

1. The council forecasts the scale, location and timing of population growth and related development to inform capital expenditure decisions. This information is also used to set DC prices.

2. The forecast number of dwellings is calculated from a combination of historical consenting patterns and population data based on expected occupancy (3.1 falling to 2.7 persons per dwelling by 2051). Population is only directly related to dwelling construction in new areas where additional dwellings will result in additional population in the area. However, in partly developed or infill areas it could mean a mix of new residents and reduced occupation of existing dwellings. Forecasts of non-residential floor space are derived from employment growth forecasts.

3. Forecasts of where growth will occur in the city by funding area are based on the Auckland Forecasting Centre i11 Growth Model, which forecasts housing and population growth in Auckland to 2051, and is based on Statistics New Zealand population projections. The locations for growth are based on the Auckland Unitary Plan which identifies areas for new development and intensification. It also outlines the nature of development allowed i.e. residential or non-residential. The timing of development in growth areas is informed by the Future Urban Land Supply Strategy (2017), the Development Strategy, the National Policy Statement on Urban Development 2020 (NPS-UD) and timing of capital expenditure investments set out in the 10-year budget. Given recent developments, the timing is adjusted by an expectation of when borders may open, and forecasts of future house price growth.

1.2 Level of Service

4. The council uses service levels to establish the nature of investment required to meet the needs of growth. Level of service standards are also used to identify areas of Auckland that are currently underserved by infrastructure. Combined, this information helps inform the council's priorities for investment in our capital expenditure programme.

5. Level of service statements for each activity are set out in Section 2.0 of volume 2 of the 10-year budget. These statements provide the key service level indicators for the activities. Detailed information on levels of service can be found in policies on service provisions which are separate to the 10-year budget. These documents provide the technical detail that is the basis for the council's service levels for each asset class. These policies and documents are:

   - Asset Management Plans
   - Open Space Provision Policy 2016
   - Parks and Open Space Acquisition Policy 2013
   - Community Facilities Network Plan.

1.3 Identify the total cost of capital expenditure

LGA s106 (2)

Allowance for costs to be included

Legislation requires the total cost of the capital expenditure the council expects to incur to meet increased demand resulting from growth to be included in development contribution calculations.
The legislation also imposes limitations requiring the exclusion of certain sources or types of funding such as operating and maintenance costs, subsidies, grants, developer funded works or rates funding.

6. The council establishes its capital expenditure (capex) programme by prioritising demands for infrastructure through the 10-year budget decision making process. The 10-year budget sets out the capital expenditure programme for each activity in Section 2 of Volume 2.

LGA Schedule 10

7. The capital expenditure in the 10-year budget identified as specific projects and programmes of investment. The Unitary Plan, Future Urban Land Supply Strategy and the Development Strategy inform the location and types of growth and where and when the council will invest in infrastructure. The exact timing and scale of growth infrastructure delivery is prioritised within the constraints of our overall budget position after considering the other demands for investment in the city.

LGA Schedule 10

8. The council's capex programme lists specific projects where these have been planned. Until consent applications are received, the council cannot determine exactly where and when landowners will seek to develop. Therefore, the council generally uses detailed projects for the first few years of the 10-year budget. Broader capital investment programmes are utilised for later years.

9. This ensures that the council can direct its capital investment to where it is most confident growth will occur. The council will also be including projects or programmes in growth areas beyond the timeframe of the 10-year budget when sufficient details about the infrastructure requirements becomes available. In addition, the council also uses programmes that operate over the life of the 10-year budget where the investment is commercially sensitive (such as for reserve acquisitions); and for ongoing programmes that support all of Auckland (such as transport safety).

LGA s 197AB(1)(g))

10. The legislation specifically requires any operating or maintenance costs to be excluded from the calculation of development contributions. It also requires any funding from subsidies, third parties, developers, financial contributions, or other funding source for the project/programme to be declared. These costs and alternative funding sources are deducted from the project or programme costs to arrive at the net cost used in the contribution calculation.

LGA Schedule 10 (3) (1)

LGA s 200(1)

1.4 Identify the share of expenditure attributable to growth

11. In allocating growth costs to DCs, the council considers the factors set out in the following table:

LGA Schedule 10 (3)

Type	Definition
Renewal	Maintains and continues the provision of services. Increases the physical integrity and remaining life of assets with no change to the asset base. A renewal project/programme may include a growth component
Level of service	Results in improved standards of quality, reliability, responsiveness, safety, comfort, flexibility, regulatory requirements or similar. May or may not result in new or additional assets. A service level improvement project/programme may include a growth component
Growth	Increased availability and capacity to cater for increased people, water, traffic or similar. Associated with an increase in the asset base – the number of assets, total area or length – as distinct from expenditure that is related to the existing community. A growth project/programme may include renewal or level of service components and may include demand generated by the existing community.

LGA s 200 (1)

LGA s 197AB(1)(c)

12. Projects and programmes may include elements of renewal, service level improvement and growth. In this case, the council apportions the cost between these outcomes based on the cause of the expenditure being incurred and the distribution of benefits between existing residents (renewal and level of service) and new development (growth).

13. The approach to apportioning capital expenditure between renewal, level of service and growth is based on the best information available on a project or programme basis. This varies between and within activities. The approach taken within each activity is set out in Part Two of this document.

14. Some projects and programmes are only delivering benefits to growth areas or only being delivered because of the need to manage the impact of growth. In these cases, the costs will be allocated to growth.

LGA s 197AB(1)(b)

15. For programme budgets encompassing a wide range of related projects being undertaken across the region, the costs may be split based on evidence from similar historical projects or using population growth as a proxy for the share to be attributable to growth. Where population growth is used, the share of the project attributable to growth is based on the expected population growth as a proportion of population at the end of the period.

LGA s 101 (3)

16. Legislation requires the council to consider the period over which the benefits of growth-related capital spending will accrue and to attribute costs between this community over time.

LGA s 197AB(1)(b)

Cost allocation – intergenerational equity

Legislation requires costs to be attributed between different parts of the community after consideration of (amongst other matters) the community outcomes to which the activity contributes, and who causes and benefits from the expenditure being incurred. The legislation requires consideration of the period over which the benefits of growth-related capital spending will accrue and attribution of costs between the growth community over time, including "new" growth occurring during the long-term plan period and "future" growth occurring after year ten.

17. Section 101(3) of the LGA, 2002, one of the principal pieces of legislation used in allocating costs, requires analysis at an activity level[12]. While some contribution calculations work at an activity level, common practice is to work to project level. Wherever possible, cost allocation is carried out at least at a programme level and preferably at the more detailed project level, to enable more refined analysis and transparency.

LGA s101(3)

Screening provisions

Legislation imposes limitations requiring the exclusion of certain sources or types of funding, such as operating and maintenance costs, subsidies, grants, developer funded works, financial contributions, and rates funding.

18. In allocating growth costs to DCs, the council also considers the factors set out in the following table:

Factor	Considerations for growth cost allocation to DCs
Activity that can be funded from DCs LGA s202	The LGA 2002 sets out what activities and types of infrastructure can be recovered through development contributions. Any growth-related capital expenditure that is not able to be funded by development contributions is excluded.
Other funding sources LGA s200 (1)	Development contributions cannot be used for any project or part of a project that is funded from another source. Any growth-related capital expenditure to be funded by third parties such as Waka Kotahi New Zealand Transport Agency (WKNZTA) is excluded from the allocation to DCs. Funding from other third-party sources such as grants, developer funded works and any funding from financial contributions and targeted rates is excluded.
Capacity absorbed by existing development LGA s197AB(1)(a) LGA s197AB(1)(b)	Some of the increased capacity delivered by a project or programme may be absorbed by existing residential and commercial development. This factor is considered in determining the share of growth investment to be paid for through DCs, and the share to be paid for through rates (because it is funding "backlog" or level of service improvements to existing residents and businesses).

[12] Activities are a grouping of council functions required for development contributions as listed in Schedule 1 of the Contributions Policy

Factor	Considerations for growth cost allocation to DCs
Growth capacity over time	The growth capacity of capital projects differs. Some projects will provide capacity for the level of growth forecast over the next ten years. After that time additional investment will be required to support further development. Other projects will provide sufficient capacity to accommodate the growth expected to occur over a longer time frame than ten years. DCs only recover the proportion of costs of the project expected to be consumed by growth within the period of the 10-year budget. If a project will provide additional capacity for 10,000 Household Equivalent Units (HUEs) in the first ten years and a further 10,000 HUEs in the following ten years then only half the project cost is included in calculating the cost attributable to DCs in the period to be covered by this policy. The same principle applies for growth expenditure included in the DC policy for infrastructure delivered after the next ten years.

1.5 Determining funding areas

LGA s 197AB(1)(d)

LGA s 197AB(1)(g)

19. Legislation requires us to total all capital expenditure (at an activity or group of activities level) within the whole or part of a district (or funding area) and to share that expenditure by assessing the unit of demand, (the demand generated by a typical residential dwelling) on the impact of growth.

20. The council allocates infrastructure projects and programmes to funding areas based on:

- the nature of the infrastructure (transport, stormwater, reserves and community infrastructure) and the population that it serves, which may be at a regional, sub-regional or local level.

21. Regional funding areas are used for infrastructure such as the City Rail Link or regional parks that:
- are an integral part of a regional network
- enable growth to occur across the region
- benefit all development across the region to a similar degree
- are available to the whole community without barriers for access and use.

22. Sub-regional funding areas are used for infrastructure such as arterial roads and suburban parks that:

- are an integral part of a sub-regional network
- enable growth to occur across the sub-region
- benefit all development across the sub-region to the same extent
- are primarily for the use of developments within the sub-region
- are available to the whole community without barriers for access and use.

23. Local funding areas are used for infrastructure such as stormwater ponds, neighbourhood parks and transport projects that enable local development that:

- benefit multiple developments

- are primarily for the use of residents within the local area.

24. Some programmes deliver a range of smaller projects across multiple areas. When the nature of the benefits or the drivers of demand are similar across the region, and the costs of providing the infrastructure are likely to be the same irrespective of location, then they will be grouped together at the regional or sub-regional level.

1.6 Unit of demand factors

25. The council categorises developments into development types based on the typical demand for infrastructure generated by these kinds of developments. Differing units of demand are assigned to each development type so that the level of contributions charged reflect the demand these developments place on the need to invest in infrastructure. A small ancillary dwelling, such as a minor residential unit (sometimes referred to as a "granny flat"), will be charged less for transport and reserves than a standard residential dwelling. This reflects the fact that small ancillary dwellings generally have lower occupancy than standard residential dwellings and place less demand on these council services.

LGA Schedule 13 (1) (b)

26. Units of demand for a development type may vary based on the infrastructure activity. For example, a retail development will be charged the same for stormwater as an attached residential unit with the same amount of impervious surface area. However, a retail development will be charged more for transport.

27. Unit of demand factors are based on the Household Unit Equivalent (HUE) which is the demand generated by a typical residential dwelling. Depending on the nature of the activity, unit of demand factors may be applied as per the table below.

Factor HUE applied to:	When factor is used
Per Unit	Used for some types of residential development where there is a relationship between number of units and demand for an activity (e.g. between units in retirement village and transport demand).
Per room	Used for residential care homes and student accommodation.
Per set area of Gross Floor Area (GFA)	For residential development, where demand for the activity relates to number of occupants (e.g. transport and reserves). Larger dwellings will be charged more than smaller dwellings, reflecting the fact that larger dwellings tend to have more occupants than smaller ones.
Per set area of Gross Development Area (GDA)	For non-residential development for transport contributions. This reflects the relationship between development size and demand for transport e.g. a mall will generate significantly more traffic movements than a small office unit.
Per set area of Impervious Surface Area (ISA).	For stormwater contributions excluding detached dwelling units. Stormwater demand is directly related to the amount of ISA. Developments with large areas of impervious surface will pay more than those with small amounts of impervious surface.
Per allotment	For subdivisions (residential and non-residential).

1.7 Development types

28. The council sets its development types to attribute units of demand to developments or types of development on a consistent and equitable basis. In setting the development types, the council considers the:

LGA Schedule 13 clause 2

LGA s 197AB (1) (g))

a) need to separate residential and non-residential activities because of the different demands they place on activities of the council
b) range of residential development types and scales
c) range of non-residential development types and scales
d) complexity of trying to make the policy account for every different development type
e) availability of data to support differential unit of demand factors for various types of development.

29. The demand on council services varies widely across different forms of non-residential activity. Non-residential developments, particularly Retail and Production/Distribution, can be used for a range of non-residential activity that have differing demands on infrastructure. The nature of the activity undertaken in these developments can vary over time. The council has therefore grouped non-residential development types into broad categories based on average demand.

30. Residential dwelling types are set reflecting the generally lower demand more intense development places on the need to invest in infrastructure. In addition, sub-categories of detached and attached dwelling units based on size are used. These reflect the higher average occupancy levels of larger dwellings and hence the demand they place on the need to invest in infrastructure. This analysis was informed by dwelling size and occupancy rates obtained from Statistics New Zealand.

Part Two: Applying development contributions methodology to groups of activities

2.0 Introduction

31. This colour coded section sets out for the transport, stormwater, reserve acquisition, reserve development and community infrastructure activities[13], the approach taken to:

- planning
- allocating the cost of projects and programmes between renewal, level of service and growth
- allocating projects to funding areas
- determining demand factors for development types.

[13] Exclude contributions for water and wastewater which is collected by Watercare Services Limited

2.1 Transport

2.1.1 Transport planning

32. Auckland has seen rapid growth in recent years, which has a significant impact on travel demand and Auckland's transport system. Auckland is home to almost 1.7 million people. This growth has been reflected in population, but also in increased new car registrations, annual vehicle kilometres travelled, and regrettably, in deaths and serious injuries on our roads.

33. Auckland's population is expected to increase by at least 260,000 over the next ten years and a further 400,000 by 2051. Population growth and increase in travel demand have placed significant pressure on Auckland's transport system, leading to congestion, increased travel times, and reduced accessibility to employment, education and other activities.

34. The Auckland Regional Land Transport Plan 2021-31 (RLTP) has been updated to enable Auckland to address its transport challenges and take advantage of future growth, while at the same time enabling the creation of an accessible, well-connected, safe and sustainable region. The challenges outlined in the RLTP include:

- climate change and the environment
- safety
- access
- travel choices.

35. The RLTP includes Auckland Transport's funded capital programme (appendix 1 of the RLTP), and Auckland Council's contribution to the City Rail Link. These are consistent with the capital programme in the 10-year Budget 2021-2031. The RLTP also includes the transport programme for Waka Kotahi the NZ Transport Agency (appendix 2), the KiwiRail Infrastructure Capital Programme (appendix 3) and Department of Conservation programme (appendix 4), although these are not subject to development contributions.

LGA Schedule 10

36. The RLTP includes significant investment to improve the capacity and functionality of the Auckland transport system. Funded improvements include:

- public transport (e.g. new bus lanes and electric trains),
- active transport (e.g. new/extended cycleways and footpaths),
- network capacity and performance (e.g. dynamic lanes and traffic light synchronisation),
- safety (e.g. upgrades to high-risk intersections and routes), and
- corridor improvements.

37. Improvements are designed to work together to deliver a transport system that facilitates Auckland's growth. While some projects provide additional transport capacity specifically targeted to new development (e.g. new and upgraded corridors in growth areas), others provide improved transport choices (e.g. public and active transport) or improved corridors (e.g. safety improvements and upgrades to existing corridors such as Lake Road in Devonport) for the benefit of new and existing Aucklanders.

LGA s197AA

38. Given these considerations, the following sections set out, for the transport activity, the approach

taken to:

- allocate the cost of transport projects between renewals, level of service and growth
- allocate projects to funding areas
- determine demand factors for development types.

2.1.2 *Cost allocation between renewals, level of service and growth*

39. Due to the nature of the transport network, and the availability of the network to all Aucklanders, a significant portion of the capital expenditure programme included in the RLTP has been deemed to benefit all Aucklanders, existing and new, to the same extent. This recognises that growth is a key investment driver, but the cost of projects may not be fully attributed to new development. For example, public transport capacity improvements provide benefits to new Aucklanders, as well as allowing existing Aucklanders to shift travel modes. In addition, growth is just one of several factors contributing to Auckland's worsening safety record since 2014. The costs allocated to development for much of the RLTP transport programme are split based on the population growth as a share of future population.

LGA Schedule 10 (3)

40. However, for some projects, infrastructure can be linked to development in a specific area. In these circumstances, the methodology aims to allocate the cost to growth in that area.

41. For 10-year budget projects and programmes where growth is one of the investment drivers, the allocation of costs between growth and renewals and level of service uses one of the following approaches:

- Projects that have cost allocations from previous policies or legacy councils have had their cost allocations carried forward.
- As part of their development, some new projects included in the 10-year budget have been the subject of project-specific transport modelling, studies and/or calculations. Where available, the results of this analysis are used to arrive at a project-specific cost allocation.
- For all other projects and programmes that don't have legacy cost allocations or detailed project-specific information available, costs are split based on the population growth as a share of future population within the relevant funding area.

2.1.3 *Allocation of projects to funding areas*

42. The following types of projects and programmes are considered to have equitable benefits across the region and are therefore allocated to the regional funding area:

LGA s 197AB(1)(g)

- Extensions of the rapid transit network. These provide network capacity and access improvements for the benefit of all Aucklanders. Examples include the purchase of new electric trains and Airport to Botany Rapid Transit Network (including Puhinui bus-rail interchange).
- Projects that increase the capacity of the wider network with equitable benefits across the region. Examples include city centre bus and ferry improvements which provide capacity and access improvements to users across the region.

- Programmes that add capacity or improve the existing network across the region (i.e. infrastructure improvements that are spread geographically across Auckland). An example is the road safety programme.
- In some cases, several related programmes/projects have been grouped together to form a regionally funded programme. An example is park and ride improvements where the RLTP identifies detailed projects for the first few years, with a broader capital investment programme funded in later years.

43. While a significant portion of the infrastructure included in the 10-year budget, and which the council intends to deliver beyond this period, serves the region as a whole, there are a number of infrastructure works that can be attributed to a more localised area. Several transport projects benefit a sub-regional part of Auckland (i.e. North, West, Central or South Auckland) while others provide benefit to a smaller more localised area. These decisions are informed by an assessment of the area of benefit using either transport modelling or an assessment of the projects scale and interconnectivity.

2.1.4 Unit of demand factors

44. Transport demand factors are calculated using data on the daily volume of trips generated from each development type. Development types generating more trips are charged a higher demand factor.

LGA Schedule 13 (1)

45. Research is available in New Zealand and overseas for a range of trip generations by different land use types. Information available for the New Zealand environment, which is still relatively current, has been given a higher weighting than overseas data.

46. Adjustments are made to raw trip generation data for non-residential development types for the following reasons:

- weighting to reflect that residential development has the strongest link to population growth
- type of trip
- transport scale economies.

Residential development weighting

47. The primary driver of the requirement to provide additional transport infrastructure, is population growth. DCs are charged to development and the strongest connection to population growth is through residential development. Non-residential development creates demand on infrastructure and these developments benefit from regional and sub-regional transport investment. However, given the population growth driver the unit of demand factors for non-residential development are adjusted to reflect the residential origin of the trips. Therefore, a 50 per cent reduction in primary trips is made to non-residential development types.

Trip Type

48. Non-residential development types generate different types of trips, each of which have differing impacts on the transport network.

49. Trip generation data identifies different types of trip:

- non-pass-by trips – direct from one location to the final destination without stopping
- pass-by trips – has one or more stops before reaching the final destination.

50. Each of the trip generation types places different demand on the need to invest in transport. Pass-by trips to a location are not the principal drivers of demand for transport services but do measure benefit. Raw trip generation data is adjusted proportionately to the share of non pass-by and pass-by trips made.

Transport Scale Economies

51. Non-residential development is generally much less dispersed than residential development and usually more closely aligned to public transport hubs. Economies of scale are made when providing transport infrastructure for non-residential development. Therefore, a further reduction of 33 per cent is made to non-residential development types for efficient use of the network.

2.2 Stormwater

2.2.1 Stormwater planning

52. Growth planning for effective stormwater management in the Auckland region requires integrated planning between Auckland Council, its CCOs and other agencies involved in land development to support anticipated population and economic growth.

53. Forecasting is used to analyse the cost of infrastructure requirements for the future years of the LTP. This forecast is developed using the following inputs:

LGA s197AA

- projected growth based on the Auckland Forecasting Centre i11 growth model
- where growth will occur based on the Future Urban Land Supply Strategy 2017, Development Strategy, 30-Year Infrastructure Strategy and the National Policy Statement on Urban Development 2020 (NPS-UD)
- assumptions on future infrastructure prices based on historic trends, and the topographical and environmental (i.e. flooding and geology) nature of growth areas
- how much land will cost based on a projection of future land prices
- levels of service based on several factors including the number of flood events, number of properties affected and water quality standards for our beaches and coastal environments.

54. The future demand on the stormwater network is mainly driven by increased imperviousness or paved areas. Impervious surfaces are increased when new dwellings are built to accommodate the increase in population. The increase in impervious surfaces is dependent on whether the new dwellings are built vertically or spread out.

55. Comprehensive stormwater modelling is used in catchment management and asset management planning. The plans outline available capacity on the existing networks and the location and magnitude of future critical investments to meet the needs of the growing region. Planning includes developing network models and preparing baseline stream survey reports for catchments that discharge into Consolidated Receiving Environments. The plans and models help identify existing and future issues in these catchments and provide a consistent baseline for development proposals to be assessed.

56. The specific nature of stormwater investment in high growth areas is largely unknown until later in the development cycle (plan changes or resource consent stage). Stormwater investment will depend on developers' exact plans and road layouts.

57. As a result, assumptions are made when determining the level of infrastructure provision that may be required. For example, it is assumed that land will be developed to its maximum potential. Standard cost assumptions are used to set the level of infrastructure provision, for example $150,000 per hectare for greenfield land for networks. These standard cost assumptions are used as the separation between council-provided trunk infrastructure and developer-provided local infrastructure cannot be determined until late in the development cycle.

LGA s197AA

58. The standard cost assumptions are adjusted to reflect the variances in the cost of stormwater provision in different funding areas. The key factors that influence costs are:

- the geotechnical nature of the area
- susceptibility to flooding
- land prices and the fragmentation of land ownership.

59. Adjustments are made to the overall cost assumptions for projects to reflect how much should be funded by the council versus by developers. Programme cost estimation assumes that some of the works required to serve the catchment, will be undertaken by developers.

60. An estimate is made for each funding area based on the degree of land aggregation. Where there are a few large landowners within a catchment, these landowners are assumed to undertake some of the works. In these cases, council will not need to make these investments and will not charge these landowners development contributions for those works. Where land is more disaggregated, council will need to make the investment and recover the cost from benefiting landowners. Growth-related programme costs are allocated to funding areas using a weighted attribute matrix based on these factors.

61. As Auckland moves to being a water sensitive city, we are changing the way we value and manage stormwater by placing a greater emphasis on at-source and onsite management and the retention of streams and channels to provide a resilient network. This may require works within and along streams and channels to manage quicker runoff timings, higher peak flows and longer duration flows. These works, where required, are included as part of a stormwater management plan or integrated catchment analysis and reflected in the cost of infrastructure to be provided.

62. The cost of growth in areas where structure planning takes place is refined based on more detailed information about the nature of development. If the cost of growth is significantly higher or lower than the broader funding area(s) of the structure plan within, then we will consider the benefits of applying a specific funding cost to this area to fairly apportion and recover the cost of this growth.

63. Developers may benefit from stormwater works in two ways. Stormwater investment by the developer and/or council may manage the increased stormwater flows resulting from development. Developers may also benefit from stormwater investment upstream that reduce flooding thereby enabling land to be developed.

64. In some instances, the developer may be asked to construct infrastructure that benefits a wider catchment than just their own. This may be due to the stormwater management or catchment management plan for the area already signalling the need for a stormwater management device or pipe upgrade at that location. In these cases, the developer should discuss this with the council to agree a fair and equitable methodology to apportion the costs to reflect the wider benefit provided.

2.2.2 Cost allocation between renewal, level of service and growth

65. The asset management plan outlines the infrastructure required to support growth including activities such as managing urban flooding and the development of catchment management plans and flood modelling. For the activities that are not solely attributable to growth, costs are allocated between renewal, levels of service and growth as follows:

LGA Schedule 10 (3)

- growth, level of service and renewal allocations are assessed on a project-by-project basis. Consideration is given to the number of factors including the area being serviced, the number of assets being renewed, the proportion of environmental works between treated and untreated and the number of houses that are removed from the flood plain.
- if part of a growth project includes an existing asset being replaced, the cost is separated between renewal and growth by excluding the component of that cost that relates to replacement.
- if a project generates benefits to existing properties such as a reduction in flooding, costs are apportioned between level of service and growth based on the relative areas of impervious surface.

66. Programme cost allocation is based on the average split of renewal, growth and service level for historic projects.

2.2.3 Allocation of projects to funding areas

67. Stormwater projects that provide a regional benefit for both existing and new residents are allocated to the regional funding area. An example of a regional programme is regional catchment planning.

LGA s 197AB(1)(g)

68. The sub-regional stormwater areas fall within urban Auckland area. Urban Auckland programmes are mainly catchment planning activities used to support decisions on investment in the stormwater network or to fund Infrastructure Funding Agreements and Parallel Funding Agreements with developers and other agencies that may deliver these works on the council's behalf.

69. Local funding areas are based around stormwater hydrological catchments that link areas that generate stormwater with the areas that receive the run-off. This ensures that the costs can be equitably shared between those that generate the demand, and those that receive the benefit of the infrastructure through reductions in flooding.

2.2.4 Unit of demand factors

70. Demand for stormwater is based on the impervious surface area of a development.

71. For residential development an average approach is used. An average dwelling of between 100m^2 and 249m^2 is assumed to, on average, create 292m^2 of impervious surface area (ISA), based on legacy council average values.

LGA Schedule 13 (1) (b)

72. All other developments are charged based on the actual ISA to be created. Any increase in impervious surface area will generate the same/ or similar water flows irrespective of the development type. The charge is converted to HUEs for the funding area based on how many HUEs of ISA will be created.

2.3 Reserve acquisition

2.3.1 Reserve Acquisition Planning

73. Planning for reserve acquisition starts by forecasting demand for future open space. This forecast is developed using the following inputs:

LGA s197AA

- projected growth based on the Auckland Forecasting Centre i11 model,
- where growth will occur based on the Future Urban Land Supply Strategy 2017, Development Strategy, 30-Year Infrastructure Strategy and the National Policy Statement on Urban Development 2020 (NPS-UD) as well as plan changes, area plans and structure plans.
- the Open Space Provision Policy 2016, which sets provision metrics which guide the type, size and location of reserves required to support growth.
- the requirements of the Parks and Open Space Acquisition Policy 2013, which sets out the process by which the council prioritises and acquires land for parks and open space.
- structure plans that identify the nature of development within growth areas.
- how much land will cost based on previous expenditure and a projection of future land prices.

74. Programme budgets are committed to specific projects over time. The council does not publicly announce its purchasing intentions in advance to preserve its negotiating position. At the end of each financial year, a list of purchases completed within that year are outlined in a report to the Environment and Community Committee, which is available on the council's website.

2.3.2 Cost allocation between level of service and growth

76 The purchase of land is a one-off event and as such there is no renewal component for land acquisition.

77 Costs are apportioned between level of service and growth based on an assessment of the cause and benefit of the investment. As the council has prioritised reserve acquisition in growth areas, the cause of the acquisition will be primarily to meet the needs of new or future residents. Where a reserve acquisition will benefit both an existing developed area and new development, the proportion of costs allocated will reflect the relative proportion of existing and forecast new population that will fall within the catchment area of the park being acquired.

LGA Schedule 10

2.4.2 Allocation of projects to funding areas

78. Projects and programmes are allocated to funding areas based on the area that will benefit from the investment. The council uses the catchment areas identified in the Open Space Provision Policy to determine area of benefit. Catchments will vary depending on the type of park.

LGA s 197AB(1)(g)

79. Reserves are broadly allocated to funding areas as follows:

- Regional funding areas: Regional Parks, Sports Fields and Civic Spaces
- Sub-regional funding areas: Suburban Parks
- Local funding areas: Neighbourhood parks

2.4.3 Unit of demand factors

80 The council's level of service for open space is based on providing Auckland residents with easy access to parks. Residential developments differ in terms of their occupancy and hence potential demand for and benefit from parks. Residential development types have been determined based on average occupancy for different types and size of development e.g. detached dwelling or apartment.

LGA Schedule 13 (1) (b)

81 Residential development types are charged for reserves based on their occupancy relative to the occupancy of a detached residential dwelling of between 100m^2 and 249m^2. The average occupancy of a detached residential dwelling unit of between 100m^2 and 249m^2 is 3.1 falling to 2.7 by 2050. Other development types have lower average occupancies and have unit of demand factors set at lower levels e.g. apartments of between 100m^2 and 249m^2 have a unit of demand set at 0.75 of the charge for detached residential dwelling of the same size. This analysis was informed by dwelling size and occupancy rates obtained from Statistics New Zealand.

82 New parks and open space are not provided by the council in areas that are purely commercial in nature e.g. industrial parks.

2.4 Reserve development

2.4.1 Reserve Development Planning

83 Reserve development is of two broad types:

- development of new open space, generally on land acquired for that purpose in greenfield or large-scale brownfield development areas
- redevelopment of existing open space to support more intensive use that arises from population growth within the relevant catchment.

84 Reserve development planning starts by forecasting the future demand for the range of community services provided by open space. This forecast is developed using the following inputs:

LGA s197AA

- projected growth based on the Auckland Forecasting Centre i11 model
- where growth will occur based on the Future Urban Land Supply Strategy 2017, Development Strategy and 30-Year Infrastructure Strategy
- structure plans that identify the nature of development within growth areas
- local area service plans and/or open space network plans
- how much infrastructure will cost based on a projection of future prices
- local board priorities as set out in individual local board plans.

2.4.2 Cost allocation between renewal, level of service and growth

85 The split between renewal, level of service and growth for reserve development is undertaken at both a programme and project level.

86. Costs are apportioned between level of service, growth and renewal, based on an assessment of the cause and benefit of the investment. Where the investment relates to the redevelopment of an existing open space, the cost apportionment also includes consideration of any existing assets that are being renewed or replaced through the investment.

LGA Schedule 10

87. The catchment area for the relevant open space typology is used to determine the areas of benefit on a project-by-project basis. The share of benefit attributable to existing properties and projected growth within the area of benefit is then assessed. For example:

LGA Schedule 10

- neighbourhood park development will be assessed against current/projected growth within catchment of neighbourhood park (e.g. 400 metre walking distance)
- sports park investment is assessed against current/projected growth in demand based on a wider network assessment.

2.4.3 Allocation of projects to funding areas

88 Projects and programmes are allocated to funding areas based on the area that will benefit from the investment. For reserve development, the council uses the catchment areas identified in the Open Space Provision Policy 2016.

LGA s 197AB(1)(g)

89 The appropriate growth proportion of overall programmes and projects costs are broadly allocated to funding areas as follows:

- Regional funding area: sports field development and regional park development
- Local funding areas: neighbourhood playgrounds.

2.4.4 Unit of demand factors

LGA Schedule 13 (1) (b)

90 Units of demand for reserve development and community infrastructure are set on the same bases as reserves acquisition, see section 2.3.4.

91 Non-residential developments are not charged for reserves or community infrastructure.

2.5 Community infrastructure

2.5.1 *Community Infrastructure Planning*

92 Community infrastructure planning starts by forecasting the future demand for community infrastructure. This forecast is developed using the following inputs:

LGA s197AA

- projected growth based on the Auckland Forecasting Centre i11 model
- where growth will occur based on the Future Urban Land Supply Strategy 2017, Development Strategy and 30-Year Infrastructure Strategy
- structure plans that identify the nature of development within growth areas.
- the requirements of the Community Facilities Network Plan, which provides a road map for how the council will invest in community facilities over the next 20 years
- how much infrastructure will cost based on a projection of future prices
- Local board priorities as set out in individual local board plans.

2.5.2 *Cost allocation between renewal, level of service and growth*

93 The split between renewal, level of service and growth for community infrastructure is undertaken at both a programme and project level.

94 Costs are apportioned between level of service, growth and renewal, based on an assessment of the cause and benefit from the investment. Where the investment relates to the redevelopment of existing community infrastructure, the cost apportionment also includes consideration of any existing assets that are being renewed or replaced through the investment.

95 The catchment area for asset types is used to determine the areas of benefit on a project-by-project basis, based on the catchment areas for different services within the Community Facilities Network Plan.

96 The share of benefit attributable to existing properties and projected growth within the area of benefit is then assessed.

2.5.3 *Allocation of projects to funding areas*

97 Projects and programmes are allocated to funding areas based on the area that will benefit from the investment. The council uses the catchment areas identified in the Community Facilities Network Plan.

LGA s 197AB(1)(g)

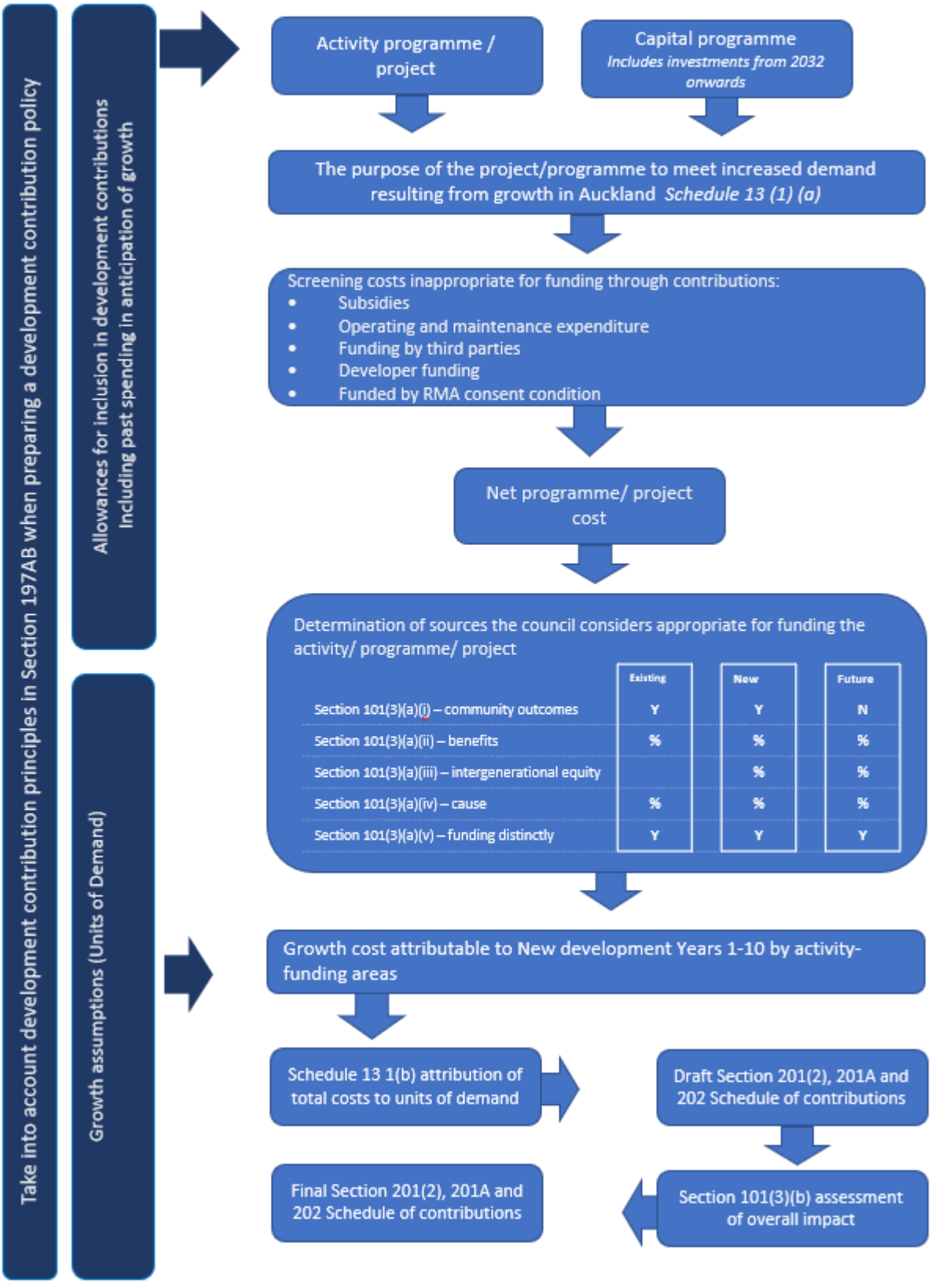
2.5.4 *Unit of demand factors*

98 Units of demand for community infrastructure are set on the same basis as reserves acquisition, see section 2.3.4.

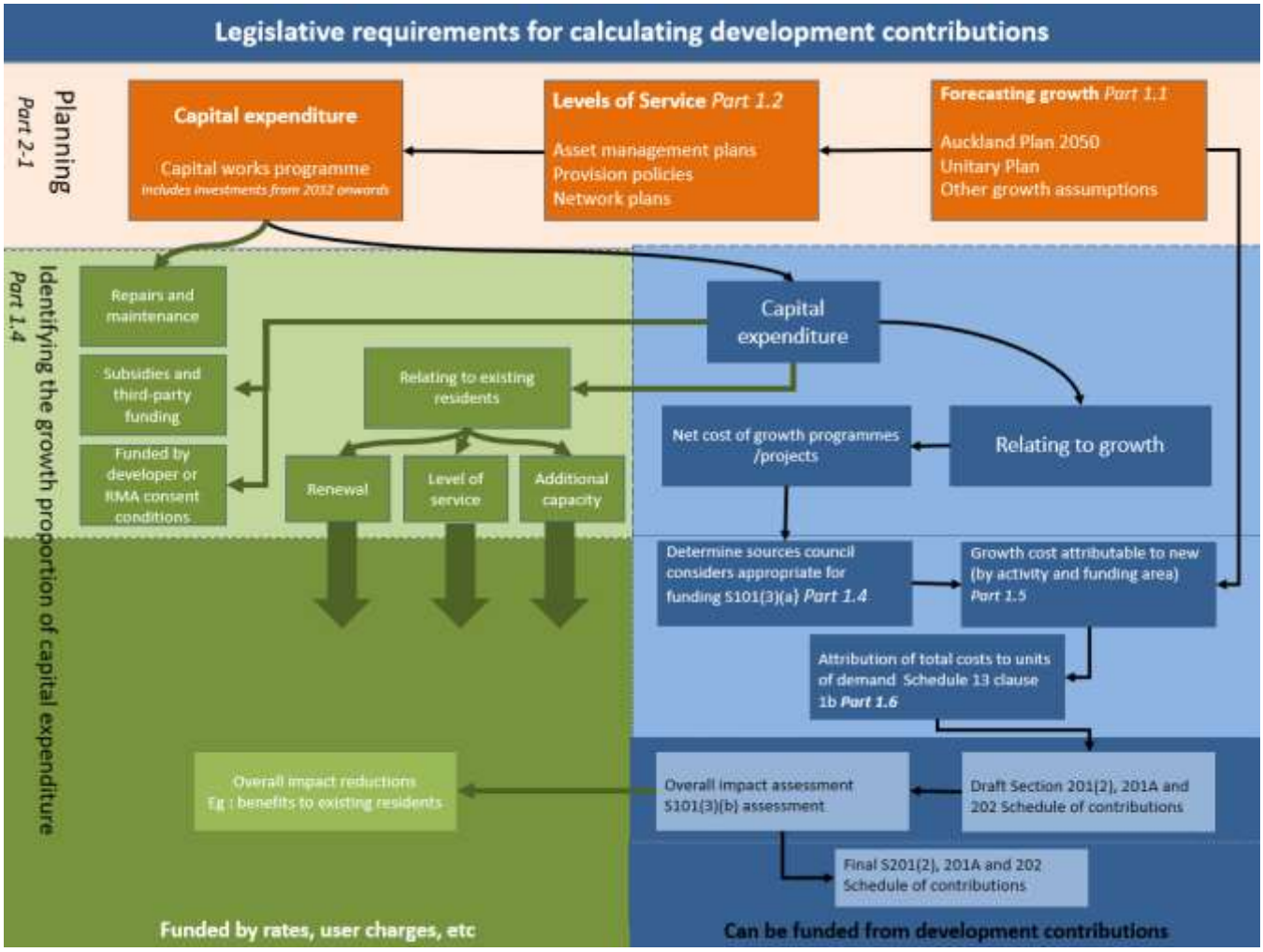
LGA Schedule 13 (1) (b)

99 Non-residential developments are not charged for community infrastructure.

Appendix 1: Legislative requirements for calculating development contributions



Appendix 2: Growth Components – Funding Tools



Appendix 3: Statutory requirements for calculating development contributions

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
Section 101(3)	***S 101 Financial management*** *(3) 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.*	Sets out five considerations to be used when determining whether development contributions are an appropriate source of funding for each activity: • community outcomes • distribution of benefit • period over which benefits occur • cause • costs and benefits of funding distinctly Consideration of 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 when determining whether development contributions are an appropriate source of funding for each activity. These considerations assist in determining activities which can be funded by development contributions and the funding areas that will apply to each activity. After making its cost allocation considerations under *Section 101(3)(a)* the council may deem it appropriate to shift the resulting cost allocation burden to address wider impacts on the community.	16, 17	Schedule 5

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
Section 102(3A)	102 Funding and financial policies *(3A) The following policies must also support the principles set out in the Preamble to Te Ture Whenua Maori Act 1993:* *(a) The revenue and financing policy, the policy on development contributions or financial contributions, and the policy on the remission and postponement of rates on Maori freehold land adopted under subsection (1).* *(b) Any rates remissions policy or rates postponement policy adopted under subsection (3).*	The council must consider how its contributions policy, along with its other funding and financial policies, supports the principles set out in the Preamble to Te Ture Whenua Māori Act 1993.		20, 90, 91, 92 F, Attachment A
Section 106(2)	***S106 Policy on development contributions or financial contributions*** *(2) A policy adopted under section 102(1) must, in relation to the purposes for which development contributions or financial contributions may be required, -* *(a) summarise and explain the total cost of capital expenditure identified in the long-term plan, or identified under clause 1(2) of Schedule 13 that the local authority expects to incur to meet the increased demand for community facilities resulting from growth; and* *(b) state the proportion of that total cost of capital expenditure that will be funded by—* *(i) development contributions:* *(ii) financial contributions:* *(iii) other sources of funding; and* *(c) explain, in terms of the matters required to be considered under section 101(3), why the local authority has determined to use these funding sources to meet the expected total cost of capital expenditure referred to in paragraph (a); and* *(d) identify separately each activity or group of activities for which a development contribution or a financial contribution will be required and, in relation to each activity or group of activities, specify the total amount of funding to be sought by development contributions or financial contributions; and*	The calculation methodology must produce summary tables that show the different sources for funding capital expenditure on an activity. Must be included in the policy: • Summary and explanation • Proportion of total cost of capital • Total funding by source Financial contributions are no longer used as a funding tool by the council.	Section 1.3	*Schedule 4* *Schedule 5*

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
	(e) if development contributions will be required, comply with the requirements set out in sections 201 to 202A; *(f) if financial contributions will be required, summarise the provisions that relate to financial contributions in the district plan or regional plan prepared under the Resource Management Act 1991.*			
Section 106(3)	*If development contributions are required, the local authority must keep available for public inspection the full methodology that demonstrates how the calculations for those contributions were made.*	This is a reporting requirement enabling any person to see in detail the way in which development contributions are calculated. The detailed methodology need not be contained in the contributions policy, however, the council's cost allocation model is made available for inspection.		
Section 197AA	Purpose of development contributions *The purpose of the development contribution provisions in this Act is to enable territorial authorities to recover from those persons undertaking development a fair, equitable, and proportionate portion of the total cost of capital expenditure necessary to service growth over the long term.*	The council must take into account the purpose and principles of development contributions when preparing and applying the contributions policy under section 106 or requiring a development contribution under section 198.	Section 1.1 37, 53, 57, 73, 84, 92	Section 1 Overview and purpose
Section 197AB(1)(a)	***Principles of Development Contributions*** Development contributions should only be required if the effects or cumulative effects of developments will create or have created a requirement for the territorial authority to provide or to have provided new or additional assets or assets of increased capacity.	There must be a genuine causative link between growth and the need for the expenditure which will be funded via development contributions. When operating the contributions policy, there must also be a link between an individual development and the works. This link forms part of a fundamental test that should be assessed for each development council intends to require development contribution from (the causal nexus). Development contributions have to be justifiable, fair and transparent.	18	Para 17, 21
Section 197AB(1)(b)	**Principles of Development Contributions** *Development contributions should be determined in a manner that is generally consistent with the capacity life of the assets for which they are intended to be*	A contributions policy should identify the capacity life of each asset or programme in terms of the unit of demand. This should be supported by information at a project level held outside of the policy that shows how this was	16, 18	

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
	used and in a way that avoids over-recovery of costs allocated to development contribution funding.	determined. The council must also keep records of revenue collected to ensure it does not continue to charge for projects once their capacity life is taken up.		
Section 197AB(1)(c)	*cost allocations used to establish development contributions should be determined according to, and be proportional to, the persons who will benefit from the assets to be provided (including the community as a whole) as well as those who create the need for those assets:*	The council should have a clear and documented cost attribution system to apply to each project to meet this requirement. This methodology must take account of causation, as well as beneficiaries of the work and should work without modification for 90% of projects.	12	Attachment B
Section 197AB(1)(d)	*development contributions must be used—* *(i) for or towards the purpose of the activity or the group of activities for which the contributions were required; and* *(ii) for the benefit of the district or the part of the district that is identified in the development contributions policy in which the development contributions were required:*	The council must use the development contributions revenue collected for a particular activity in a particular catchment, only towards that activity and only in that catchment.	Section 1.5	Para 29, 30, 31,32 Schedule 1
Section 197AB(1)(e)	*territorial authorities should make sufficient information available to demonstrate what development contributions are being used for and why they are being used:*	Accounting records should keep track of how development contribution funds are expended. Where projects are undertaken ahead of development, the policy should include a schedule that clearly outlines the projects that development contribution are funding.		Schedule 8
Section 197AB(1)(f)	*development contributions should be predictable and be consistent with the methodology and schedules of the territorial authority's development contributions policy under sections 106, 201, and 202:*	Development contributions must be administered in compliance with the contributions policy.		Attachment B
Section 197AB(1)(g)	*When calculating and requiring development contributions, territorial authorities may group together certain developments by geographic area or categories of land use, provided that—* *(i) the grouping is done in a manner that balances practical and administrative efficiencies with considerations of fairness and equity; and* *(ii) grouping by geographic area avoids grouping across an entire district wherever practical.*	A council may group certain types/forms of development together for the purposes of operating the contributions policy. A council may group or combine growth costs for a particular infrastructure activity between areas within a wider catchment	9, Section 1.5, 28, 42, 67, 78, 88, 97	Para 29

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
Section 199	***Basis on which development contributions may be required*** *(1) Development contributions may be required in relation to developments if the effect of the developments is to require new or additional assets or assets of increased capacity and, as a consequence, the territorial authority incurs capital expenditure to provide appropriately for—* *(a) reserves:* *(b) network infrastructure:* *(c) community infrastructure.* *(2) This section does not prevent a territorial authority from requiring a development contribution that is to be used to pay, in full or in part, for capital expenditure already incurred by the territorial authority in anticipation of development.* *(3) In subsection (1), effect includes the cumulative effects that a development may have in combination with other developments.*	Subsections (1) and (3) are similar to s.197AB(1)(a). See commentary above. Subsection (2) clarifies that development contributions can be used to recover the costs of future projects, as well as past projects. The contribution calculation methodology can include capital expenditure the council has incurred already but it must have been incurred in anticipation of a/the development. Subsection (3) provides that a development alone does not need to trigger the need for works. Rather, the individual development, together with other developments must create the need (i.e. cumulative demand).		Para 24
Section 200(1)	*(1) A territorial authority must not require a development contribution for a reserve, network infrastructure, or community infrastructure if, and to the extent that -* *(a) it has, under section 108(2)(a) of the Resource Management Act 1991, imposed a condition on a resource consent in relation to the same development for the same purpose; or* *(b) The developer will fund or otherwise provide for the same reserve, network infrastructure, or community infrastructure; or* *(ba) the territorial authority has already required a development contribution for the same purpose in respect of the same building work, whether on the granting of a building consent or a certificate of acceptance; or* *(c) a third party has funded or provided, or undertaken to fund or provide, the same reserve, network infrastructure, or community infrastructure.*	Prohibits the council from requiring development contributions when infrastructure is funded in some other way.	10, 12, 18	

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
Section 201(1)	Contents of development contributions policy *(1) If a territorial authority has determined to seek funding for community facilities under this subpart, the policy required by section 102(1) must include, in summary form, in addition to the matters set out in section 106,—* *(a) an explanation of, and justification for, the way each development contribution in the schedule required by subsection (2) is calculated; and* *(b) the significant assumptions underlying the calculation of the schedule of development contributions, including an estimate of the potential effects, if there is a significant level of uncertainty as to the scope and nature of the effects; and* *(c) the conditions and criteria (if any) that will apply in relation to the remission, postponement, or refund of development contributions, or the return of land; and* *(d) the basis on which the value of additional allotments or land is assessed for the purposes of section 203(1).*	This is a requirement for the contributions policy to hold sufficient information for a person to gain a reasonable understanding of the way in which development contributions are calculated.	Throughout this document	Schedule 3 Schedule 7 Para 104 - 108
Section 201(2)	*(2) A development contributions policy must contain a schedule in accordance with section 202.*	The calculation methodology must produce a schedule showing contribution amounts for different activities in different areas.		104-108 Attachment B

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
Section 201A	***Schedule of assets for which development contributions will be used*** Requires the development contribution policy to provide a schedule detailing the assets or programmes that development contributions will fund, including: • Each new asset or programme of works • the estimated capital cost • percentage funded by development contributions • percentage funded from other sources Assets can be grouped together in logical format that reflect complete programme of works. The schedule(s) must include past and future assets, and separately for each activity for each catchment.	This is a reporting requirement enabling any person to see in detail which assets and groups of assets are to be funded by development contributions. The policy must produce a schedule showing assets and groups of assets grouped by activity and funding areas and the proportion to be funded by development contributions and other funding sources.		Schedule 8
Section 202	Reporting requirement to show in the schedule of development contributions req*uired by Section 201(2) — the development contributions payable in each funding area, calculated in accorda*nce with the methodology in respect of— a. reserves; and b. network infrastructure; and c. community infrastructure. The requirements are to report separately in relation to each activity or group of activities for which separate development contributions are required.	The calculation methodology must produce a schedule showing contribution amounts for different activities in different areas.	18	Schedule 3
Section 204(1) and S197AB (d)	A development contribution must be used for, or towards, the *capital expenditure* of the reserve, network infrastructure, or community infrastructure for which the contribution was required, which may also include the development of the reserve, network infrastructure, or community infrastructure; but must not be used for the maintenance of the reserve, network infrastructure, or community infrastructure.	Only growth-related capital costs can be entered into the calculation methodology and they must be attributed to the activity and funding area for which they were required.	Section 1.4	Para 25, 29
Schedule 10 clause 3(1)	*A long-term plan must, in relation to each group of activities of the local authority and for each financial year covered by the plan, include a statement of the amount of capital expenditure that the authority has budgeted to—* *a) meet additional demand for an activity; and* *b) improve the level of service; and* c) *replace existing assets.*	This requires the council to distinguish between three different types of capital expenditure. It is only capital expenditure that meets additional demand for an activity that can be considered for funding through development contributions.	6, 7, 11 35, 39, 65, 77, 86, 87	Para 22

Section reference LGA 2002	Content *Text from LGA is in italics*	Consideration required/ Result	Reference -this document *(Paragraph)*	Reference – Policy
Schedule 13 clause (1)(1)	*In order to calculate the maximum development contribution in respect of a community facility or an activity or group of activities for which a separate development contribution is to be required, a requirement to first—* *a) identify the total cost of the capital expenditure that the local authority expects to incur in respect of the community facility, or activity or group of activities, to meet increased demand resulting from growth within the district, or part of the district, as the case may be; and* b) *identify the share of that expenditure attributable to each unit of demand, using the units of demand for the community facility or for separate activities or groups of activities, as the case may be, by which the impact of growth has been assessed.*	Total growth-related costs of capital expenditure (including borrowing costs) for an activity in each funding area must be shared fairly among all the growth units expected to take it up.	25, 44, 71, 80, 90, 98	
Schedule 13 clause (1)(2)	*A territorial authority may identify capital expenditure for the purposes of calculating development contributions in respect of assets or groups of assets that will be built after the period covered by the long-term plan and that are identified in the development contributions policy.*		28	
Schedule 13 clause (1)(3)	*The total cost of capital identified in subclause (1) may in part relate to assets intended to be delivered beyond the period covered by a territorial authority's long-term plan if—* *(a) the assets concerned are identified in the development contributions policy; and* *(b) the total cost of capital expenditure does not exceed that which relates to the period over which development has been assessed for the purpose of setting development contributions.*			Schedule 8
Schedule 13 clause (2)	*Attribution of units of demand to developments* *For the purpose of determining in accordance with section 203(2) the maximum development contribution that may be required for a particular development or type of development, a territorial authority must demonstrate in its methodology that it has attributed units of demand to particular developments or types of development on a consistent and equitable basis.*			Schedule 2