

Methodology review: Beneficiary analysis for Auckland Council's Contribution Policy 2022

To: Andrew Duncan

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Subject: Review of Auckland Council's methodology for assessing beneficiaries for development contributions

1. *Introduction & scope*

- 1.1.1. This review considers Auckland Council's approach for assessing beneficiaries under its Contribution Policy 2022 (the 'Policy'), as well as the proposed approach for assessing beneficiaries in Drury.
- 1.1.2. The scope of this report is to document the key findings from the review, including:
 - considering whether the methodology is logical, consistent, and robust
 - identifying the strengths of the methodology and where further iteration or refinement may be required
 - whether the methodology is appropriately documented.
- 1.1.3. This review separately considers each of the different infrastructure types (transport, open space acquisition and development, community facilities, stormwater), focusing on five key dimensions:
 - how benefit / use is measured
 - how the areas of benefit are determined for each project
 - how the project level beneficiary analysis is aggregated into local, sub-regional, and regional funding areas
 - how the share of infrastructure investment attributable to growth (as opposed to renewal or level of service) is determined
 - how the share of growth attributable to different development types is determined.
- 1.1.4. This review does not include a detailed review of the unit of demand factors, as this is being covered by a separate and specific review. However, given the overlap with the beneficiary analysis, where relevant, this report notes some high-level considerations.
- 1.1.5. This review is not a legal review and should not be considered as such.
- 1.1.6. The findings from this review are based on the documentation that has been provided by Auckland Council¹, which is summarised in **Appendix 1**. Workshops with subject matter experts were held to inform our understanding of the approach and relevant context, which is identified throughout the report. However, the findings in this report relate solely to the documentation that was reviewed.

¹ References to Auckland Council in this document are intended to reflect the Auckland Council Family Group, including Auckland Transport.

2. Background & context

2.1. Overview of the development contribution methodology

- 2.1.1. Development contributions (DCs) recover a share of the costs of investment that can be attributed to growth. Mathematically, this can be described as:

$$\text{Development Contribution Charge} = \frac{\text{sum of capital expenditure for growth}}{\text{estimated growth}}$$

- 2.1.2. Auckland Council's generic methodology for setting DCs is to:

- identify the total cost of capital expenditure that Auckland Council expects to incur through the Long-Term Plan (LTP) and in later years to meet the demand caused by growth, by:
 - forecasting the growth expected in Auckland
 - identifying the degree of performance required of a particular activity, or level of service
 - identifying the total cost of capital expenditure the Auckland Council expects to incur
 - identifying the proportion of the capital expenditure that can be attributed to growth.
- identify the share of expenditure attributable to developments:
 - within a district as a whole or parts of it, referred to as funding areas
 - based on demand generated by a typical residential dwelling, referred to as units of demand
 - categorised by development types as described in Schedule 2 of the Contributions Policy²
- consider the overall impact and make adjustments as required.

- 2.1.3. Detail on the methodology for each of the specific infrastructures is provided in the following sections.

2.2. Purpose of the development contribution methodology

- 2.2.1. The purpose of a development contribution is 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”³.

- 2.2.2. The purpose of Auckland Council's Development Contribution Policy is to:

- provide predictability and certainty to stakeholders on how infrastructure for growth, including major transformational infrastructure, is to be funded and to provide transparency of what is to be funded and what has been already delivered
- provide for those involved in development a basis for making fair payments to Auckland Council to reflect the expected demand their development will have on Auckland Council's infrastructure and the expected benefits residents and businesses occupying these developments will derive from Auckland Council's infrastructure
- set contribution charges at a level that help achieve the scale, type, quality, and location of development that the Auckland Plan 2050 vision aspires to

² How we set development contributions charges: Auckland Council's cost allocation methodology, December 2021, Version 6.0.

³ Local Government Act (LGA) 2002 s 197AA.

- to support the principles set out in the preamble of the Te Ture Whenua Māori Act 1993⁴.

2.2.3. This review considers the methodology for beneficiary analysis in light of this purpose.

3. High-level findings and overarching considerations

3.1. Balancing project level analysis against simplicity, predictability, and certainty

- 3.1.1. Simplicity is one of the principles the Department of Internal Affairs (DIA) recommends for a DC policy in its 2021 guidance⁵. However, it also notes that the level of simplicity that is appropriate for each council will depend on the size of the council and district, and the extent of growth within it⁶. The size of Auckland Council and extent of growth forecast across the region is sufficiently large to warrant a higher degree of complexity than other smaller councils. For example, growth in Drury is estimated to deliver an additional 22,000 households⁷.
- 3.1.2. As discussed in the following sections, the approach to beneficiary identification and allocation for investment in Drury relies on specific project level analysis. While the methodology is considered to be generally reasonable and robust, its application should be balanced against the objectives of simplicity, predictability, certainty, and transparency.
- 3.1.3. The beneficiary methodology used for investment in Drury is considered to be consistent with any legislative requirements and associated policy or guidance, including the use of professional judgement from technical experts at a project-by-project level. However, as explored below, a greater level of transparency and consistency is likely to be achieved through identifying a common set of criteria, characteristics, assumptions, model outputs, and relative weightings that could be used to inform the professional judgement for projects with similar characteristics.
- 3.1.4. Auckland Council should develop and document a guide that clearly sets out the detailed methodology for applying professional judgement, including any common criteria, characteristics, assumptions, key model outputs, and weightings. In some cases, the level of individuality and complexity of projects may make this very challenging. In these situations, Council should either:
- apply a high-level general assumption (i.e. not a project specific assumption); or
 - clearly document that professional judgement was used and the key factors that influenced the judgement.

3.2. Consistency between Drury and other areas

- 3.2.1. Commensurate with the principles of fairness and equity, which underpin DCs, there is a general expectation that there will be a degree of consistency between projects of a similar nature, including between geographical areas. For example, there is a presumption that developers will be charged in the same way for the delivery of an arterial road in Drury that they would be charged for the delivery of an arterial road in another growth area with similar characteristics.

⁴ Auckland Council Contributions Policy 2022, Section 1: Overview and purpose.

⁵ Guide to developing and operating development contributions policies under the Local Government Act 2002, DIA, 2021, Section 3.1.

⁶ Guide to developing and operating development contributions policies under the Local Government Act 2002, DIA, 2021, Section 4, p71.

⁷ Drury-Ōpaheke Structure Plan (August 2019).

3.2.2. Auckland Council has indicated that the methodology and approach for Drury represents an evolving approach to DCs in greenfield areas that is intended to be rolled out more broadly across future greenfield growth areas, including:

- taking a long term view of demand based on improved project/programme information
- more accurate renewal estimates
- proportional allocation of benefits between funding areas.

3.2.3. Completing similar work for the other greenfield growth areas and applying the Drury methodology more broadly, will be a key next step in the development of Auckland Council's Policy, driving greater consistency in approach over the long-term.

3.2.4. There are elements of the Drury approach that could also be implemented in brownfield areas over time to improve the overall consistency in approach and the quality of the underlying methodology and assumptions.

3.3. *General alignment between the different infrastructures*

3.3.1. The beneficiary methodology used to inform the cost allocations for each of the different infrastructures is generally aligned. This should drive consistency in the application of DCs between the infrastructures, which is consistent with the purpose of the Policy.

3.3.2. There are some differences between the infrastructures (e.g. the use of hydrological catchments for stormwater funding areas). However, where there are these differences they can be justified by specific differences between the infrastructures. For example, using hydrological catchments for stormwater funding areas is consistent with the likely area of benefit for stormwater infrastructure.

3.4. *Better documentation of the methodology would improve transparency*

3.4.1. Discussions with Auckland Council staff demonstrated that there was generally a robust and well considered rationale for all of the determinations. However, our observation is that there are some gaps between what is currently outlined in the documentation that was reviewed and the methodology and analysis that was used.

3.4.2. The documentation reviewed does not clearly articulate:

- the benefits considered for each project and the specific infrastructure that actually informed the beneficiary analysis
- the 'area of benefit' associated with each benefit and how it was determined
- the methodology and process used to determine the funding areas, including how these mapped back to the area of benefit
- how benefits have been allocated between funding areas, including underlying inputs and assumptions

3.4.3. The DIA also recommends that all deviations from the standard processes, assumptions, and methodology should be clearly documented.⁸

3.4.4. As discussed in Paragraph 3.14, this should be addressed through the development of additional documentation on the Council's approach and methodology for determining DCs. This applies to both the approach used for investment in Drury as well as the general approach. However, it is noted that the documentation reviewed in relation to investment in Drury was more comprehensive than the documentation that relates to the general approach, and therefore, will require less additional documentation.

⁸ Guide to developing and operating development contributions policies under the Local Government Act 2002, DIA, 2021, Section 3.8. At p 60.

3.5. Timing of benefits and beneficiary analysis

- 3.5.1. Auckland Council is required under the LGA to consider the “period over which benefits are expected to occur”⁹ when completing its beneficiary analysis and determining cost allocations. The beneficiary analysis for Drury is completed based upon the allocation of benefits at ‘full build out’. Our assessment of appropriateness of this as an approach is based upon the following considerations:
- whether beneficiaries derive the same benefits over time
 - whether the distribution of benefits changes over time
 - whether there are any adjustments to the beneficiary analysis/cost allocations required.

Do beneficiaries over time derive the same benefits?

- 3.5.2. The primary benefit considered for developers is the additional capacity provided by the infrastructure, which enables the development. Other benefits, such as ongoing use, are derived by the current population, and therefore, typically, funded through general rates. On this basis, the relative benefits between developers are likely to be similar over time. For example, an early developer that consumes the first 500 HUEs of capacity from a new road providing for 10,000 HUE of additional capacity, is likely to derive a similar benefit to a later developer that consumes 500 units. The fact that the capacity is consumed later, does not, prima facie, materially impact the benefit received. Further, early developers cannot consume the additional capacity, and therefore do not receive an additional benefit.
- 3.5.3. The benefit of the additional capacity can be observed through land markets, which, typically, appreciate following the delivery of infrastructure. Economic evidence indicates that the land value uplift is largely consumed by the end of construction. While the Policy does not focus on, or recover for, land value uplift, the fact the land value uplift is consumed upfront (rather than over time) implies that the benefit to the developer is likely to be similarly consistent over time.

Does the distribution of benefits over time change?

- 3.5.4. There are two dimensions to consider when assessing the distribution over time:
- the geographic distribution (i.e. does the area of benefit change)
 - the timing distribution (i.e. does the growth population to the total population change).
- 3.5.5. When assessing the distribution of benefits between the current and future population, it is the total size of the growth population being addressed through the infrastructure project(s) that is relevant, rather than the pace or timing of the growth. This is reflected by the fact the infrastructure capacity is ultimately sized for the total final population¹⁰.
- 3.5.6. In some instances an interim infrastructure solution is delivered, which is upgraded to the ultimate solution over time. Generally, this approach is used to optimise the balance between the competing demands of growth and Auckland Council’s resources. For example, a collector road may be used to enable short-term growth, where Auckland Council cannot finance (and the demand does not justify) the delivery of an arterial road, which is ultimately required to service the long-term demand.
- 3.5.7. The way Auckland Council approaches interim solutions, means that 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 less the cost of upgrading the interim solution to the ultimate solution, rather than delivering the ultimate solution in one stage). Accordingly, beneficiaries of the ultimate

⁹ Local Government Act (LGA) 2002 s 106(2) and 101(3).

¹⁰ We note that for calculation purposes, the lower of the estimated capacity life (i.e. period until the additional capacity is exceeded) and 30 years should be used when assessing the size of the growth population to align to the DIA’s development contribution guidance.

solution can also be argued to benefit from the interim investment (i.e. through the reduced cost).

- 3.5.8. As the staging of a project(s) reflects the optimisation of the delivery programme within Auckland Council constraints, the likelihood of there being an additional cost to staging does not need to be addressed through the methodology (i.e. the sum of the interim solution and the upgrade to the ultimate solution is likely to exceed the cost of delivering the ultimate solution in a single stage). Auckland Council makes these trade-offs across its whole investment portfolio.
- 3.5.9. From a geographic perspective, the area of benefit may change between an interim and ultimate 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. However, as discussed above, beneficiaries of the upgrade to the ultimate solution, benefit from a reduced cost due to initial investment. Accordingly, a clear nexus can be established between the interim solution and the ultimate area of benefit.

Should the beneficiary analysis account for a change in the distribution of benefits?

- 3.5.10. Completing the beneficiary analysis based on the assumed full build for Drury is considered to be a reasonable and pragmatic approach for the following reasons:
- the benefit of additional capacity is likely to be derived equally by developers, irrespective of timing
 - the allocation between growth and non-growth beneficiaries should focus on the difference between the current population and future population once the capacity is exhausted, rather than the pace or timing of growth
 - the Auckland Council approach means that costs associated with the ultimate solution are reduced to reflect the interim solution where staging is required
 - a clear nexus between the ultimate area of benefit and interim solution costs can be identified
 - differentiation between the areas of benefit for the interim and ultimate solutions can lead to inequitable outcomes, where the DC is significantly different between developers in the same area for the same capacity
 - a different approach would require Auckland Council to undertake beneficiary analysis at multiple different times for the same investment, introducing additional complexity to the methodology and increasing the potential risks associated with forecasting the pace of growth.

4. Transport infrastructure

4.1. Summary of key findings

- 4.1.1. The key findings and recommendations in relation to the beneficiary methodology for transport investment is summarised below, with further detail on each finding included in the following sections.
- the documentation provided by Auckland Council does not clearly outline how the different benefits translate into areas of benefit and, ultimately, funding areas under either the general approach or the approach used for Drury
 - the underlying methodology and approaches used for Drury should be incorporated into the general methodology (where relevant) to drive greater consistency over the long-term

- geographically larger local funding areas may be preferred where there is a high degree of complexity and uncertainty to reduce sensitivity to the underlying assumptions and uncertainties
- the current general approach to estimating renewals should be updated to be more aligned to the approach used for Drury
- a weighted average ratio of the growth population to total population should be used when allocating between multiple funding areas
- a more considered approach to assessing the level of service improvement would improve the methodology
- the application of the rule of half does not make sense in the context of estimating the growth proportion of projects
- the points in time used to estimate the growth population under the current methodology do not appropriately capture the additional demand from development.

4.2. Overview of the general approach to beneficiary analysis

- 4.2.1. The current approach to calculating DCs for transport investment is outlined in Auckland Transport's 'Methodology to identify proportion of transport capital expenditure relating to growth'¹¹. However, Auckland Council has advised that a refresh of this document is currently underway. This review is focused on the existing approach that is currently documented.
- 4.2.2. The general approach to calculating development contributions is to:
- identify of the total capital expenditure
 - identify and remove the renewal costs
 - establish the appropriate timeframe for assessment
 - identify the geographic areas primarily benefiting from the project
 - estimate the capital expenditure that can be attributed to growth
 - apply the growth proportion to the capital expenditure for each project
 - aggregate the costs by area

4.3. Overview of the approach used for Drury

- 4.3.1. The approach Auckland Council is using to calculate DCs for transport investment in Drury differs from the general approach:
- define the sequenced programme of transport projects required for Drury
 - assign a project type and likely delivery agency for each project
 - estimate the total capital cost
 - estimate and remove the potential renewal costs
 - estimate the growth component of the infrastructure costs
 - assess the beneficiaries of each project and attribute these to sub-areas
 - apply sub-area costs shares to project capital expenditure estimates
 - aggregate the costs by area, delivery agency, project type, and decade

¹¹ Methodology to identify proportion of transport capital expenditure relating to growth: Development Contributions - transport capital investment, Auckland Transport, June 2020, v0.2a.

4.4. How is benefit/use measured under the methodology?

Explanation of benefit/use

- 4.4.1. It is clear from conversations with Auckland Council staff that there are a number of benefits considered and specific transport modelling outputs that are used to determine the benefits of infrastructure.
- 4.4.2. However, there is limited discussion, in the documentation reviewed, of these benefits and how they are used to determine the allocation of costs between funding areas, or the funding areas themselves.
- 4.4.3. There is more discussion in Supporting Growth Alliance's (SGA) Transport Assessment Report, which describes some of the benefits that were considered as part of the beneficiary analysis and the complexity associated with estimating the allocation of these benefits¹². However, there is still no articulation of:
- the benefits that are considered through the beneficiary analysis
 - the nature of the benefits (e.g. direct and indirect benefits)
 - how the benefits are assessed
 - the underlying assumptions and model outputs relied upon
 - the relative weighting and importance of each of the benefits
 - the factors that may influence the judgement
- 4.4.4. Where this cannot be appropriately articulated, it indicates that the methodology may be overly complex or too subjective. In these situations, the use of higher level assumptions, rules of thumb, or greater use of 'averaging' is recommended to reduce the complexity.
- 4.4.5. It is also worth noting that some of the benefits referred to in Table 4-1¹³ of the SGA report are not discussed elsewhere in that document.

Focus on access rather than use

- 4.4.6. One of the key assumptions underpinning the beneficiary analysis is that the benefits are assumed to be accrued by the "population resident in the areas where the primary users of the assets exist, regardless of whether they use the asset or not"¹⁴. The same assumption is used for the Drury beneficiary analysis¹⁵.
- 4.4.7. This approach is considered to be both pragmatic and robust, given the challenges associated with attempting to identify, estimate, and account for residents that did not use the asset. Further, there is a strong argument that simply having access to the transport asset is of significant benefit. While land value uplift is not used as a specific justification for the beneficiary analysis by Auckland Council, the fact that land markets adjust to reflect the access of a transport asset, rather than use, further supports the use of this assumption.

4.5. How are the areas of benefit determined for projects?

- 4.5.1. Determining the area of benefit for projects is, typically, highly complex. This is because projects deliver a range of different benefits, each of which may have a different area of benefit. For example, access benefits are typically more localised (i.e. people that live near a road

¹² Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1.

¹³ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 33.

¹⁴ Methodology to identify proportion of transport capital expenditure relating to growth: Development Contributions - transport capital investment, Auckland Transport, June 2020, v0.2a.

¹⁵ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 27.

generally use the road more regularly than those that live further away), whereas, environmental and safety benefits, are, arguably, derived more broadly across the region. Further, the highly integrated nature of the transport network means that infrastructure in one part of the network may also deliver benefits to other parts of the network. This is acknowledged in the relevant documentation and informs the methodology for determining the area of benefit for projects.

- 4.5.2. The current approach to determining areas of benefit is not well documented. A reference to the use of “transport modelling or an assessment of the project’s scale and interconnectivity”¹⁶ is included in ‘How we set DC charges’. However, no further explanation is provided as to what the modelling outputs are or what the assessment of interconnectivity includes. The more detailed ‘Methodology to identify proportion of transport capital expenditure relating to growth’ does not provide any further information on how the area of benefit for a project is assessed.
- 4.5.3. Discussions with Auckland Council staff indicate that there is underlying modelling and some common considerations that are used to determine the proportional allocations. This should be reflected in the documentation.
- 4.5.4. The SGA report discusses the complexities associated with identifying the area of benefit for projects, including reference to the use of analytical methods such as traffic model predictions of likely usage or accessibility improvements for specific projects¹⁷ and also notes that other methods need to be used for benefits such as improved travel choices and network resilience¹⁸.
- 4.5.5. To mitigate this complexity, a simpler, ‘judgement based’ approach is used, which is explored further in the following section. However, there is no explanation within the document of how the area of benefit informs this judgement based approach.
- 4.5.6. Greater transparency over how areas of benefit are used for this approach is recommended, which may entail documenting:
 - the analytical methods that may be used for each benefit
 - the underlying factors and assumptions that are used where there are no analytical methods available
 - common examples and rules of thumb (where appropriate).

4.6. How has the project level beneficiary analysis been aggregated into local, sub-regional, and regional funding areas?

Determination of the local, sub-regional, and regional funding areas

- 4.6.1. The methodology and approach used to determine the local, sub-regional, and regional funding areas is not well documented in any of the material that was provided for this review. The majority of the discussion on the methodology and approach is set out in the ‘How we set DCs’ document, which states the following:

“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... 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

¹⁶ How we set development contributions charges: Auckland Council’s cost allocation methodology, December 2021, Version 6.0. At p 16.

¹⁷ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 27.

¹⁸ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 27.

*of benefit using either transport modelling or an assessment of the project's scale and interconnectivity.*¹⁹

- 4.6.2. From this passage, it is possible to infer that the intention is to define funding areas where the beneficiaries are likely to derive a similar proportion of benefits and costs, which is consistent with discussions with Auckland Council staff. However, there is no specific information on how Auckland Council approaches identifying these funding areas, whether there are any differences between the considerations for sub-regional and local funding areas (i.e. scale of benefit, size of area of benefit, etc.) or how the actual funding areas were considered.
- 4.6.3. The high-level approach described during the discussions with Auckland Council staff as part of this review is summarised below:
- Auckland Council staff consider the investment in transport infrastructure and develop high-level funding areas
 - local funding areas are used for projects that have predominantly local benefits, with sub-regional funding areas used for projects that have predominantly sub-regional benefits
 - Auckland Council provides these funding areas to Auckland Transport (or the relevant agency (e.g. SGA))
 - Auckland Transport allocates the projects between the different funding areas
 - the funding areas are iterated and optimised to better reflect an equitable allocation of costs and benefits.
- 4.6.4. This approach is considered to be logical and robust. It balances pragmatism with the overall objective of developing funding areas that equitably allocate costs and benefits between beneficiaries. It is worth noting that where a proportional allocation approach is used, as with Drury, the impact of the funding area determinations is lessened. However, as discussed in **Paragraph 4.6.1.** the approach that Auckland Council uses to determine funding areas is not well documented, which should be resolved.

Size of local funding areas

- 4.6.5. The size of the local funding areas will have a direct impact on the allocation of cost and benefits between developers, which is noted in the SGA report.

*"The size and number of sub-areas used will alter the beneficiary/causation assessments. Larger funding areas will provide more consistent results and be less sensitive to local assumptions, but will be less responsive to specific local development outcomes."*²⁰

- 4.6.6. There is a high degree of uncertainty associated with estimating the benefits and areas of benefit associated with transport projects, both within Drury and more generally across Auckland. This is acknowledged in the SGA report and forms the basis for the simplifying methods that are used. Given this uncertainty and the sensitivity of costs to assumptions, there is an elevated risk of inequitable and unfair allocations (e.g. a small developer having to pay a large DC as a result of undertaking their development in a small local funding area that happens to include the delivery of an expensive road) where smaller local funding areas are used.
- 4.6.7. Accordingly, the use of larger local funding areas is recommended.

Allocation of benefits between local, sub-regional, and regional funding areas

- 4.6.8. The general approach to allocating benefits between the different funding areas is as follows:

¹⁹ How we set development contributions charges: Auckland Council's cost allocation methodology, December 2021, Version 6.0. At p 16.

²⁰ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 44.

- identify whether the project has a regional or sub-regional benefit area of benefit
 - if the project has a regional area of benefit, allocate 100% of the benefit to the regional funding area
 - if the project has a sub-regional area of benefit, allocate 100% of the benefit to the sub-regional funding area
 - if the project has a local area of benefit, allocate the benefits to the relevant local funding area
 - if there are multiple relevant local funding areas, aggregate the local funding areas for the analysis for that project.
- 4.6.9. However, a different approach is used for Drury. Under the Drury approach, a proportional allocation approach is used, where the benefits are allocated between local and/or sub-regional funding areas based upon the proportion of the estimated benefits expected to be derived in each funding area. Critically, under this approach, a project could be allocated to both a sub-regional and local funding area, which it cannot under the general methodology. We believe a proportional approach is more appropriate than the general approach, as it more accurately reflects the distribution of benefits that are likely to be delivered from a project.
- 4.6.10. This is also consistent with Justice Gault's finding in the recent judicial review of Hamilton City Council's (HCC) Development Contribution Policy. One of the issues considered in that case was whether allocating benefits on a proportional basis between funding areas, including between local and sub-regional funding areas²¹, was appropriate. On this issue, Gault J found in favour of HCC.
- "The LGA does not preclude this kind of allocation. The particular allocation appropriate in the circumstances is a matter for HCC provided it takes into account the statutory considerations including the purpose and mandatory principles and its decision is one that a reasonable decision-maker could make"*²².
- 4.6.11. Auckland Council uses a judgement based approach to estimate the proportion of benefits derived from each of the different funding areas. The justification for this approach is that there is a high degree of complexity associated with assessing the benefits and areas of benefit for a project, which is better dealt with through a simplifying methodology²³.
- 4.6.12. The use of a judgement based approach is allowed under the legislation and may achieve an allocation that is more closely aligned to the actual allocation of project benefits. However, it can make it challenging to ensure that the methodology is applied consistently and transparently between projects.
- 4.6.13. To improve consistency and transparency, Auckland Council should consider developing some higher level assumptions and guidance that can be used to inform the professional judgement. This may include considering the underlying modelling outputs that are available, establishing rules of thumb or typical splits (where appropriate), agreeing some principles that can be applied. Given that a project's scale and its interconnectivity with other projects are already considerations used under Auckland Council's general methodology, these should form part of this guidance.
- 4.6.14. The guidance may enable other project specific factors to be used where there is sufficient available information, however, the expectation is that any project level analysis would be specifically documented in sufficient detail for stakeholders to understand what factors were

²¹ Hamilton City Council's DC policy allocated between 'Area' and 'City wide' funding areas, however these are conceptually similar to the local, sub-regional, and regional funding areas used by Auckland Council.

²² AGPAC Limited v Hamilton City Council [2021] NZHC 2222 at [126].

²³ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 27.

used and how this impacted the allocations. The level of detail outlined in Table 4-1²⁴ of the SGA document, which provides a short summary of the benefits and reasoning used to determine the allocation for each of the projects, is not considered to be sufficiently detailed to meet this standard.

- 4.6.15. If the current detailed project level assessment continues to be used for Drury, greater documentation of the underlying rationale for the allocations is recommended.

Treatment of arterial roads

- 4.6.16. The definitions of arterial roads under both the Waka Kotahi One Network Road Classification (ONRC) and Auckland Transport 'Code of Practice: Road Classification' infers that the area of benefit will be greater than a local area, but less than a regional area, which would align with the concept of a sub-regional funding area. Accordingly, it is reasonable to presume that any road that was classified as an arterial road would deliver benefits that were derived across a sub-regional area of benefit.
- 4.6.17. However, the interpretation of those two definitions does not infer that all of the benefits would be necessarily derived at sub-regional level. When considering the total benefits of an arterial road, there is a strong argument that there will be benefits specifically derived at a local level that are not derived at the sub-regional level, or that the scale of benefits may dissipate over larger geographic areas.
- 4.6.18. HCC received specific expert transport advice on this issue to inform the development of its 2019/20 DC policy. That advice demonstrated that there were local benefits that could be identified for certain arterial roads, including, for example, those that provided a higher-level land use to specific growth cells. This modelling was used by HCC to justify a proportional allocation for certain classifications of arterial roads. HCC successfully defended a judicial review on this issue in 2021, where it was accepted that the approach was proportional to the distribution of benefits and ultimately justifiable²⁵.
- 4.6.19. This supports the treatment of arterial roads in Drury, which appears to have been completed on a similar basis.
- 4.6.20. For the purposes of the general approach (i.e. where benefits are a proportional approach is not used), it is recommended that arterial roads are treated as having a sub-regional area of benefit, and therefore attributed to a sub-regional funding area, which is consistent with the 'How we set DCs' document.

4.7. How has the share of infrastructure investment attributable to growth been determined?

Determining the renewals proportion

- 4.7.1. The general approach to estimating the renewal proportion for a project is to apply a fixed percentage based upon the type of project, unless there is project specific information that is available (refer Table 1 below)²⁶.

Table 1 - Renewals proportion assumptions

Classification	Assumption
On-road assets	29.5%

²⁴ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 23.

²⁵ AGPAC Limited v Hamilton City Council [2021] NZHC 2222 at [121-127].

²⁶ Methodology to identify proportion of transport capital expenditure relating to growth: Development Contributions - transport capital investment, Auckland Transport, June 2020, v0.2a. At p4.

PT assets	0%
New link roads	0%
Non-road nor PT assets	0%
Greenfields	Case by case

- 4.7.2. Our opinion is that these assumptions are out of date and not considered to be robust for the following reasons.
- The renewal assumption applied to on-road assets is based upon a study carried out in 2017, where the replacement cost for on-road assets in the LTP was divided by the estimated construction costs for those assets in the LTP²⁷. This approach is not considered to be an appropriate proxy for the cost of maintaining and continuing the provision of services or increasing the physical integrity and remaining life of assets with no change to the asset base, which is the definition from the LGA²⁸.
 - The delivery of new assets could still have a renewal component associated with them.
 - The high-level categories do not provide for a sufficient level of differentiation to appropriately reflect the factors that determine the renewal proportion.
- 4.7.3. In contrast, the approach to estimating the renewal proportion for the Drury projects is based upon an assumed per/km rate (\$500,000 per/km per lane). This approach is considered to be more robust, given that it is grounded in the actual likely renewal cost.
- 4.7.4. However, there are some minor issues with this approach that should be addressed. This approach:
- only covers rural roads in the Drury context, and therefore may not easily be rolled out more broadly or assessed from a consistency perspective
 - may not reflect the additional cost associated with infrastructure with a higher per/km rate and smaller area (e.g. an intersection).
- 4.7.5. A possible approach to mitigate these issues is to develop a more substantive list of project types, classifications (e.g. brownfield, greenfield, etc.), assets, and to develop a high-level estimate of the potential renewal cost for each. The number of different classifications should balance the practicalities of having a larger number of projects against the considerations of fairness and equity. The methodology may still provide flexibility for project level determinations where that information is available.
- 4.7.6. This approach should replace the current general approach to estimating the renewal proportion to provide consistency across the Policy. If the general approach is not updated, the current assumptions should, at a minimum, be updated.

Determining the growth proportion

- 4.7.7. The ratio between the growth population (i.e. the difference between the future population and the current population) and the total population for a project is used to estimate the proportion of investment that can be attributed to growth for both Drury and the wider region. However, there is a fundamental difference between the relevant timings used to calculate the growth population. For Drury, the growth population is assessed as the difference between the 2021 population (from the i11 growth scenario) and the estimated population at 'full build out'. For the rest of the projects, the growth population is assessed as the difference between the population

²⁷ Methodology to identify proportion of transport capital expenditure relating to growth: Development Contributions - transport capital investment, Auckland Transport, June 2020, v0.2a. At p4.

²⁸ Local Government Act (LGA) 2002, Schedule 10(3).

at the end of construction and the population at the end of the asset's life. However, the end of the asset's life is capped at the latest available population estimate.

- 4.7.8. The growth population to total population ratio is well established and accepted by the sector, and is considered to be a robust approach. However, the current timings that are used to establish the growth population are considered to be inappropriate, which the DIA notes is one of "the most important assumptions used in the development of the DC Policy"²⁹.
- 4.7.9. 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. Accordingly, the current approach is likely to place a greater cost burden on the existing community. Auckland Council may consider adopting an earlier time for defining the current population, such when the decision to invest is made. These milestones represent a more accurate estimate of where growth is likely to start to occur as a result of the project.
- 4.7.10. Defining the future population as the end of the asset's life is similarly not considered to be robust. This is because the future population should reflect the time at which the additional capacity is reached, which may occur prior to the end of the asset's life.
- 4.7.11. The DIA notes that there are inherent uncertainties in estimating long-term populations used for assessing the growth proportion for an investment. To reflect this uncertainty, it recommends councils consider limiting the capacity life and cost recovery period used for calculating the growth proportion to 30 years³⁰.
- 4.7.12. Commensurate with this recommendation, Auckland Council should consider whether using a 30 year practical limit is appropriate in the circumstances of each of its investments. A practical limit makes sense where the investment is not specifically sized for a growth or capacity target (i.e. most network infrastructure in brownfield areas).
- 4.7.13. However, in the context of the investment in Drury, a practical limit is not justified. This is because the investment in Drury is being specifically designed and sized for the estimated quantum of growth planned in the Structure Plan at full build out, rather than the estimated growth within an arbitrary time period. Accordingly, it is justified to use the full build out estimates, rather than the growth estimated within the 30 year period. Similar logic would apply to future development in other greenfield areas, where all of the infrastructure is being sized, designed, and delivered based on a full-build out growth figure.
- 4.7.14. Auckland Council should adopt the practical 30 year limit as a standard baseline assumption for its investment, but maintain the flexibility to override the practical limit where there is an investment that has sufficient justification to use another assumption, as with the Drury investment programme.
- 4.7.15. The approach used for Drury is considered to be in alignment with the recommendations in relation to the timings for estimating the growth population. However, a weighted average growth population, based on the proportion of benefits between the relevant funding areas, is recommended. This will provide a better estimate of the growth population than the current 92% assumption, which is based on the growth population across Drury (i.e. within multiple local funding areas).

Rule of half

- 4.7.16. The rule of half is a simplifying assumption used to calculate the benefits that accrue to transport system users who change their travel behaviour, such as by switching their mode of

²⁹ Guide to developing and operating development contributions policies under the Local Government Act 2002, DIA, 2021, Section 3.3, p33.

³⁰ Guide to developing and operating development contributions policies under the Local Government Act 2002, DIA, 2021, Section 3.8, p59.

travel, as a result of changes to the cost or quality of travel³¹. The rule of half assumes that, on average, transport users will receive half of the incremental benefits after changing their travel behaviour, which is in essence the calculation of the consumer surplus³².

- 4.7.17. The rule of half assumes a fixed demand curve with a 45 degree slope. However, the actual impact of growth would be represented by a shift (to the right) of the demand curve. Accordingly, its application in the context of estimating the proportion of benefits that can be attributed to growth does not make sense. For example, when a road is sized to cater for growth, that size is determined by the 'end-state' demand, irrespective of the exact timing of the uptake of that capacity. The benefit to developers is the provision of the additional capacity to enable development, while causation can be attributed to cumulative impacts of the collective additional growth.
- 4.7.18. The rule of half is also applied only for transport infrastructure, which results in misalignment to the other infrastructures. This misalignment cannot be justified on the basis of transport specific characteristics, given similar conceptions of consumer surplus and the uptake of demand could be made for the other infrastructures.
- 4.7.19. Continuing to apply the rule of half when determining the growth proportion for transport is likely to place a greater burden on existing communities.
- 4.7.20. We do not believe that this concept is appropriate when considering the proportion of benefits that can be attributed to growth, especially when relying on the growth population to total population ratio.

Level of service considerations

- 4.7.21. Level of service improvements are defined in Schedule 10(3) of the LGA as investment that results in "improved standards of quality, reliability, responsiveness, safety, comfort, flexibility, regulatory requirements, or similar"³³.
- 4.7.22. Currently, rather than estimating the level of service component of a project, it is treated as the balancing item between the three types of investment (renewal, level of service, growth). This is justified on the basis that estimating the level of service before and after the proposed works isn't "feasible"³⁴.
- 4.7.23. In the current environment, there is an increasing focus on improving safety and environmental outcomes across the transport network, which means that these will inevitably be a key factor in the design and specifications of the infrastructure. Accordingly, simply using level of service as a balancing item, may understate the proportion that should be attributed to level of service.
- 4.7.24. Auckland Council should validate the proportion allocated to growth to test whether it is reasonable when considered from a level of service perspective (i.e. evidence of mode-shift, significant improvement in safety, access, etc.). This will be particularly important if the rule of half is not applied to ensure that the Council is not over recovering from growth.

5. Reserve acquisition and development

5.1. Summary of key findings

- 5.1.1. The focus of the open space methodology is on greenfield areas (i.e. those outside the existing rural urban boundary), with some provisions for significant intensification within brownfield

³¹ Monetised benefits and costs manual, Waka Kotahi, August 2021, v1.5. At p22.

³² Monetised benefits and costs manual, Waka Kotahi, August 2021, v1.5. At p22.

³³ Local Government Act (LGA) 2002, Schedule 10(3).

³⁴ Drury Developer Contributions Policy: Transport assessment, Supporting Growth Alliance, February 2022, version 0.1. At p 24.

areas. This is because Auckland Council considers open space provision within the rural urban boundary to be sufficient.

- 5.1.2. The Open Space Acquisition Cost Model methodology should specifically reference the link between the FULSS and Council's growth scenario and ensure the two growth scenarios remain aligned.
- 5.1.3. Triggers for open space acquisition within brownfield areas (i.e. in the existing urban area) are not well documented. Where Auckland Council identifies and signposts an area of significant intensification within a brownfield area, they could be established as its own funding area to ensure the use of an averaging approach does not inadvertently lead to a provision that is inequitable.
- 5.1.4. The inclusion of a suburb park in a sub-regional funding area appears to be inconsistent with its area of benefit and provision requirements outlined in the Open Space Provision Policy.
- 5.1.5. Accurately identifying beneficiaries early may provide an opportunity to optimise reserve acquisition timing.

5.2. Overview of approach

- 5.2.1. Auckland Council's methodology to determine reserve acquisition and development DCs is based on the Open Space Acquisition Cost Modelling Method and Auckland Council's cost allocation methodology.

5.3. How is benefit/use measured under the methodology?

- 5.3.1. Open space benefit is based on the provision metrics in Auckland Council's Open Space Provision Policy³⁵ which uses proximity (walking distance) for a given housing density for neighbourhood and suburban parks. Each of the walking distances are based upon the estimated walk times for the average person (e.g. a 600m walking catchment relates to an approximately five minute walk). Provision of Civic spaces are based on the scale of the urban centre they support.
- 5.3.2. As with the transport methodology, all residential population in the relevant areas is assumed to benefit from the open space, irrespective of whether they actually use it.
- 5.3.3. The policy applies to "new greenfield development areas and large brownfield sites" and notes that "the council does not have a target for the provision of open space in general, such as a ratio of open space to population". The policy also notes that open space contributes to a range of health, social, environmental and economic benefits for Auckland.
- 5.3.4. The use of a proximity based approach to estimating benefit is considered to be reasonable, noting that this formulation infers that the focus is on having access to the open space, rather than actual use.

5.4. How are the areas of benefit determined for projects?

- 5.4.1. The area of benefit for reserve acquisition is based on the park's typology and reflects whether users are most likely to access via walking or driving as shown in the table below.

Table 2 - Open space area of benefit by type

Open Space Type		Area of benefit / provision metric
Neighbourhood park	Low density	600m walking distance
	Medium/high density	400m walking distance

³⁵ Open Space Provision Policy, Auckland Council, 2016.

Suburban park	Low density	1500m walking distance
	Medium/high density	1000m walking distance
Destination park (includes Regional parks)		Regional area of benefit (assumes users will access via driving/public transport). Sports fields are described as having a regional area of benefit and are primarily accommodated within suburb and destination parks.
Connection and linkage open space		No provision metric - depends on characteristics of area, primarily along watercourses or the coast.
Civic space		Local centre - one small civic space Town centre - one or more small civic spaces and one medium civic space Metropolitan centre - one more more civic spaces, one or more medium civic spaces, and one large civic space

- 5.4.2. The area of benefit assumptions are considered to be reasonable, given the linkage back to the provision policy. Auckland Council also confirmed it had considered a suite of underlying modelling when identifying the areas of catchment.
- 5.4.3. An example of the area of benefit for a 600m neighbourhood park is provided in the figure below. As evident from this figure, the areas of benefit are based on walkable catchments, which is a better estimation of access than the use of a concentric circle.

Figure 1 - Example of a neighbourhood park area of benefit



5.5. How has the project level beneficiary analysis been aggregated into local, sub-regional, and regional funding areas?

Mapping investment to funding areas

- 5.5.1. An overview of the allocation of different reserve types to local, sub-regional, and regional funding areas is outlined in the table below.

Table 3 - Typical allocation of reserve types to funding areas

Funding area allocation	Reserve types
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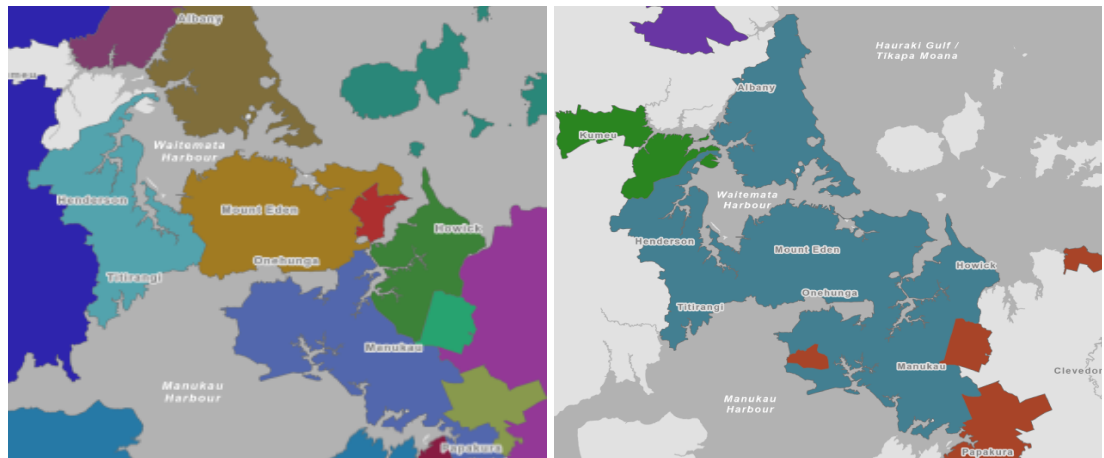
Local funding areas	Neighbourhood parks
Sub-regional funding areas	Suburb parks
Regional funding area	Regional parks, sports fields and civic spaces

- 5.5.2. These allocations are generally considered to be robust and logical on the basis of the areas of benefit identified in Section 5.3 above. Further, it is clear from conversations with Auckland Council staff that there is underlying modelling around the use of the parks to justify the allocations.
- 5.5.3. However, the area of benefit outlined for a suburb park (i.e. 1,000m to 1,500m walking distance) is considered to be more consistent with a local funding area, especially given the size of the local funding areas, which generally exceed 1,500m.

Determination of funding areas

- 5.5.4. Auckland Council utilises the principle of ‘averaging’, which enables it to define larger funding areas, where there is likely to be a similar incidence of costs and benefits between the areas. The use of averaging is specifically enabled under the LGA and confirmed in DIA’s guide to development contributions. Typically, averaging is used to balance the practicalities of having larger funding areas against the considerations of fairness and equity associated with having more targeted funding areas.
- 5.5.5. In the context of open space, Auckland Council utilises averaging to navigate the high degree of complexity associated with forecasting where development will occur in greenfield developments, and therefore the potential location of future parks. The use of averaging is appropriate in these circumstances. However, to meet the requirements of fairness and equity, the population within the funding area must be likely to receive similar costs and benefits.
- 5.5.6. As shown in Figure 2 below, the local and sub-regional funding areas are relatively large and in some instances include brownfield areas that are not expected to benefit from any further open space, given the area is already serviced to the current provision policy standards. This is particularly so for the ‘Urban’ sub-regional funding area, which includes a couple of areas with significant forecast intensification (e.g. Massey University, Unitec, Northcote) where future open space acquisition is expected, as well as areas where Auckland Council has confirmed there is no expectation of further acquisition. Accordingly, there are likely to be developers charged DCs for open space acquisition, despite not developing in an area that will derive benefit from the open space. Auckland Council should update its funding areas to resolve this issue, which may involve either:
- defining smaller funding areas in brownfield areas where there is significant intensification, and therefore, open space acquisition forecast
 - removing areas from the relevant funding areas where there is no identified need for open space acquisition.

Figure 2 - Current local (left) and sub-regional (right) funding areas



- 5.5.7. Auckland Council should also consider clarifying the triggers and thresholds for new open space, such as increasing population, population density, existing park utilisation or plans for large scale urban redevelopment. This should enable beneficiaries to be identified earlier and with a greater level of accuracy, which will improve the methodology.
- 5.5.8. Documentation of the methodology in the Open Space Acquisition Cost Modelling Method is relatively comprehensive, however further documentation of the application of the methodology to the actual funding areas over time is recommended.

5.6. How has the share of infrastructure investment attributable to growth been determined?

Estimating the proportion attributable to renewals

- 5.6.1. The open space methodology assumes that there is no renewal component associated with open space acquisition on the basis that the purchase of land is a one-off event. This is a logical and robust assumption.

Estimating the proportion attributable to growth

- 5.6.2. The ratio of the growth population to the total population is used to estimate the proportion of investment that can be attributed to growth. As discussed in the Transport Section above, this approach is well accepted by the sector and considered to be logical and robust.
- 5.6.3. The methodology also notes that because reserve acquisition is targeted towards growth areas, the cause of acquisition will primarily be driven by growth. This is consistent with Auckland Council's provision policy, which focuses on greenfield and brownfield areas where there is expected to be significant intensification (i.e. areas expected to experience significant growth).
- 5.6.4. Auckland Council applies the growth to total population ratio at the narrower area of benefit, rather than at the local or sub-regional funding area. This often means that the growth proportion that is attributed is significantly higher than the actual estimated growth in the funding area. For example, an 85% assumption is used for the Urban Sub-regional Funding Area, despite the growth over that sub-region being significantly lower.
- 5.6.5. Utilising project level analysis is considered to be valid, even where this may be inconsistent with the growth proportion assessed within the funding area. This is because the focus for the growth population to total population proxy is used to estimate the proportion of the benefits for that specific asset, which should be based on the determined area of benefit for that project, rather than the funding area as a whole. This is consistent with the approach to determining

funding areas for open space acquisition, given it is based on averaging across areas of benefit, rather than trying to size a funding area to align to the actual areas of benefit.

- 5.6.6. However, where there is a large discrepancy between the two proportions it may indicate that within the funding area there are certain areas with significantly different characteristics (i.e. areas expecting significant intensification and those with relatively low levels of growth). Given these differences, a narrower funding area is likely to deliver a more equitable allocation of benefits.
- 5.6.7. The approach to translating open space modelling outputs to the Policy is not clearly articulated. The documentation provides a comprehensive summary of the various considerations and factors, however, it is not immediately clear from the documentation how the growth proportion is assessed in certain greenfield areas. Further, based on the information that is available on the methodology, it is not clear how the 97% estimation for the growth population in Drury was calculated.

Growth forecasts

- 5.6.8. The Open Space Acquisition Cost Modelling Method uses the Future Urban Land Supply Strategy 2017 (FULSS 2017) as an input to forecast growth and costs related to reserve acquisition and development. Auckland Council confirmed in discussions that the growth forecasts from the FULSS 2017 are aligned to the i11 scenario used consistently across the other infrastructures. Auckland Council should ensure that growth assumptions continue to be consistent, given the infrequent updates made to the FULSS, compared to the more regular i11 growth model updates.

5.7. *How has the share of growth attributable to different development types been determined?*

- 5.7.1. The open space methodology ascribes 100% of the benefits of open space to residential development types, to reflect that it is generally residents using the space, rather than businesses. Further, Auckland Council does not provide new open space in areas that are purely commercial in nature.

6. *Community infrastructure*

6.1. *Summary of findings*

- 6.1.1. The approach to estimating the growth population is generally robust, and uses a similar methodology to what is used for the other infrastructures.
- 6.1.2. Where there is insufficient detailed information to estimate the proportion of the investment that can be attributed to growth, a 75%/25% (between growth and non-growth) split is used. There is insufficient information available to review the robustness of this assumption. Given the potential for asset types and projects to have quite different renewal costs, developing a broader set of assumptions that can be applied to specific asset classifications/projects is recommended.
- 6.1.3. The Determining Years 11-30 Greenfield Provision Requirements document sets out a logical framework for forecasting future community infrastructure provision in greenfield areas. Although brownfield areas may not require as much new investment in community infrastructure, Auckland Council should consider extending this analysis to brownfield areas to ensure the beneficiaries of growth in brownfields pay a fair share of growth costs. Modelling future provision in brownfield areas to identify future beneficiaries could be a first step in this process.
- 6.1.4. Community infrastructure is generally a 'lag' infrastructure, which means it often occurs after development has occurred. Accordingly, there is an even greater risk that development

proceeds without paying for a share of community infrastructure. Extending the term over which provision is measured and modelled to 30 years should help to mitigate these risks. Auckland Council should consider how this longer term view can be rolled out in brownfield areas.

6.2. Overview of approach

- 6.2.1. Auckland Council's approach to beneficiary analysis for community infrastructure is outlined in its 'How we set DCs and 'Determining Year 11 to 30+ greenfield provision requirements documents. These are aligned to the Community Facility Network Plan.

6.3. How is benefit/use measured under the methodology?

- 6.3.1. The benefits provided by community infrastructure are described in the Community Facility Network Plan (CFNP), which outlines a holistic approach to the provision of community facilities. The CFNP describes benefits stemming from "spaces where Aucklanders can connect, socialise, learn and participate in a wide range of social, cultural, art and recreational activities".
- 6.3.2. The CFNP notes that "most facilities serve local catchments where users travel to their closest facility" and on that basis provision metrics are generally based on proximity to facilities and the size of the population served. The CFNP provides statistics on the user profile for each type of community facility, which were used to establish the areas of benefit (refer following sub-section).

6.4. How are the areas of benefit determined for projects?

- 6.4.1. The CFNP outlines provision metrics to guide development of new facilities, identifying gaps in the existing network, and optimising and repurposing existing facilities. A summary of the provision metrics is shown below in Table 4 below.

Table 4 - Area of benefit for community infrastructure

Community infrastructure type	Area of benefit
Arts and culture space	Area of benefit aligned with local community facilities for local arts and culture space and have a regional area of benefit for destination spaces.
Community centres	Local small - walking catchment of up to 15 minutes or 30 minute drive of rural and coastal villages. Target population threshold of 5,000 to 10,000. Local large - serves a catchment of up to 15 minute driving time. Target population of 20,000+.
Venues for hire	Access to bookable space within 15 minute walk from local or town centres (30 minutes drive from rural centres).
Libraries space	Maintain a level of 41m ² /1000 population.
Pools and leisure space	Local - Network to serve local catchments of up to 5 km (within 30 minute drive for rural). Pools target population thresholds of 35,000 to 50,000. Leisure target population thresholds of 18,000 to 40,000 (9,000 for rural). Destination - Limited number of facilities to serve catchments 10km plus. Regional - One to three facilities to serve the region.

- 6.4.2. The area of benefit for each facility type is well defined and reasonable.

6.5. *How has the project level beneficiary analysis been aggregated into local, sub-regional, and regional funding areas?*

- 6.5.1. From discussions with Auckland Council staff, we understand that the attribution of projects between funding areas is based upon the provision policies outlined in its CFNP, available information on the users of the different types of community facilities, and the characteristics of the underlying facilities. For example, the usage data for swimming pools and leisure centres showed that people travelled relatively broadly to use those assets, indicating a wider sub-regional area of benefit. For libraries, the ability to order books from any other library within the regional network and access to the digital material is used to justify the treatment of libraries as having a regional area of benefit.
- 6.5.2. The approach and methodology used is robust, logical, and founded on underlying modelling outputs. However, Auckland Council should clearly document the underlying assumptions, approach, and rationale for these decisions.

6.6. *How has the share of infrastructure investment attributable to growth been determined?*

- 6.6.1. As with the other infrastructures, Auckland Council utilises the ratio of the growth population to the total population to estimate the proportion of investment that can be attributed to growth. In the absence of detailed information, a 75% growth proportion estimate is used, with the remaining 25% attributed to level of service improvements and renewals. Causation is also considered as a factor.
- 6.6.2. As discussed for each of the infrastructures, this ratio is considered to be an appropriate proxy to use. However, it is noted that there is no documentation available that explains how the 75% base assumption was developed.

6.7. *How has the share of growth attributable to different development types been determined?*

- 6.7.1. Auckland Council attributes 100% of the growth cost of community infrastructure to residential development. No benefit is assigned to non-residential development. This is considered to be a reasonable approach, given there are unlikely to be any benefits derived by non-residential beneficiaries.

7. *Stormwater*

7.1. *Summary of key findings*

- 7.1.1. This review is based solely upon the stormwater section of the 'How we set DCs' document and one workshop session with the relevant subject matter expert from Auckland Council. No further documentation was provided.
- 7.1.2. The current impervious area assumptions are out-of-date and should be updated as part of the unit of demand review.
- 7.1.3. The beneficiary analysis methodology as described by the relevant subject matter expert was logical and robust. However, additional supporting documentation should be developed to ensure the methodology is clearly articulated.
- 7.1.4. Where there are clear downstream beneficiaries (e.g. upstream infrastructure that avoids or reduces the risk of flooding in a floodplain enabling growth on the floodplain) these should be identified and charged DCs.

7.2. *How is benefit/use measured under the methodology?*

- 7.2.1. The primary benefit for the provision of stormwater infrastructure that the methodology considers is the management of stormwater flows and the reduction in flooding provided by the infrastructure. Use of stormwater infrastructure is generally measured by impervious surface area (paved areas) of residential and non-residential development.
- 7.2.2. These benefits are well established and align with community expectations around Auckland Council's management of stormwater and flooding risk.
- 7.2.3. Stormwater infrastructure is different from other infrastructures as the benefits provided are associated with hydrologic catchment areas. To forecast infrastructure requirements in a catchment, and therefore beneficiaries, Auckland Council assumes that land will be developed to its maximum potential, with development timing being informed by Auckland Council's growth scenario.
- 7.2.4. Stormwater infrastructure requirements in high growth areas remain uncertain until the point that developers provide their specific plans and road layouts. To deal with this uncertainty, assumptions are applied to estimate the level of investment that the Auckland Council will make. This is a reasonable approach given the level of information that is available.
- 7.2.5. Some explanation of the process and weighting of factors that are used for stormwater infrastructure are provided in the "How we set the development contributions charges" document, however providing further detail in this document (or in a separate stormwater methodology document) would improve transparency of how assumptions are being applied in practice. For example, how the level of land aggregation in a catchment impacts cost estimates.
- 7.2.6. Auckland Council's existing impervious surface area unit assumptions for single and duplex residential development are based on pre-amalgamation studies from Waitakere and North Shore City Councils. Given Auckland's intensification and change in housing density over the past decade, it is important that these assumptions are updated. Auckland Council should complete periodic reviews of these assumptions. Auckland Council has confirmed that these assumptions are currently being addressed through a separate unit of measurement review.

7.3. *How are the areas of benefit determined for projects?*

- 7.3.1. The area of benefit for stormwater is primarily determined using hydrological catchment areas, where the causes and benefits of stormwater infrastructure can accrue to land both upstream and downstream of the infrastructure. Benefit to upstream land is from management of stormwater run-off, which enables development to proceed without impacting downstream land. Downstream land benefits from a reduction in flooding (compared to the infrastructure not being in place) which enables development to proceed. Using hydrological catchments as a basis for areas of benefit is a logical and robust approach.
- 7.3.2. For equitability, it is important that the portion of growth benefits attributable to downstream impervious surface area is recovered from the relevant beneficiaries. This is not clear from the documentation that is available, however Auckland Council has confirmed that this is captured by the Policy, following some revisions to the wording.

7.4. *How has the project level beneficiary analysis been aggregated into local, sub-regional, and regional funding areas?*

- 7.4.1. Auckland Council aggregates stormwater programmes and projects into funding areas as follows:
 - regional programmes such as regional catchment planning to a regional funding area
 - a sub-regional existing urban area primarily for catchment planning activities (which do not apply in rural areas)

- local funding areas where most project based costs are aggregated on the basis of hydrological catchments

7.4.2. Targeting local stormwater funding areas to specific hydrological catchments is a robust approach and means there is likely to be similar incidence of costs and benefits. The examples provided by Auckland Council of where a project would be allocated to a sub-regional or regional funding area (eg stormwater infrastructure relating to a motorway) are well justified.

7.4.3. Because the local funding areas are based on hydrological catchments they do not always align with MSM zones meaning growth estimates need to be prorated between catchments. This is appropriate and likely to result in a more equitable overall allocation of costs than if funding areas were forced to align with MSM zones.

7.5. *How has the share of infrastructure investment attributable to growth been determined?*

7.5.1. Auckland Council attributes costs on a project basis where information is available:

- Cost associated with replacement is allocated to renewal and any benefits to existing properties, such as flooding reduction is attributed to current residents (level of service).
- Where project level information is not available, particularly for projects further in the future, costs are allocated at a programme level based on historic projects.

7.5.2. This is a reasonable and well established approach to apportioning infrastructure costs to growth. Where assumptions around historic projects are used, it is recommended that Auckland Council document these in methodology documents and provide a basis for the assumption. Periodic reviews of these assumptions should also be completed.

7.6. *How has the share of growth attributable to different development types been determined?*

7.6.1. For single and duplex residential developments impervious area factors are used to estimate impervious area. For triplex and higher density development the actual impervious area is assessed at consenting stage. This is a reasonable approach to attributing costs between development typologies, noting that Auckland Council monitors the actual DCs received from development against the growth portion of stormwater projects.

8. *Summary of recommendations*

8.1. *High-level recommendations*

It is recommended that the Auckland Council group:

- 8.1.1. Develops a guide that outlines a clear methodology for applying professional judgement and documents any high-level assumptions that are used when information to support analysis or professional judgement are not available.
- 8.1.2. Implements the elements of the Drury approach in other greenfield and brownfield areas to improve the overall consistency in approach and the quality of the underlying methodology and assumptions:
 - utilising a long term view of demand based on improved project/programme information
 - ensuring more accurate renewal estimates
 - determining the proportional allocation of benefits between funding areas.

- 8.1.3. Improve documentation for the overall DC process and each of the infrastructures, and consistent with the DIA's guidance, ensure that any deviation from the standard processes, assumptions, and methodology is clearly documented.

8.2. Transport

It is recommended that Auckland Council and Auckland Transport:

- 8.2.1. Align the standard approach to allocation of transport benefits to the approach used for Drury.
- 8.2.2. Consider defining larger local funding areas where there is a high degree of complexity and uncertainty
- 8.2.3. Align the standard approach to estimating a project's renewal component to the approach used for Drury
- 8.2.4. Use a weighted average ratio of the growth population to total population when allocating between multiple funding areas
- 8.2.5. Validate the project level of service component against identified service level improvements.
- 8.2.6. No longer apply the rule of half when assessing the growth proportion of projects
- 8.2.7. Consider adopting an earlier time for defining the current population when calculating the ratio of current to future population, such as when the decision to invest is made.
- 8.2.8. Consider adopting a general limit of 30 years for estimating the capacity life when calculating the growth population, which can 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.

8.3. Reserve acquisition & development

It is recommended that Auckland Council:

- 8.3.1. Note the link between the FULSS and Council's growth scenario in the Open Space Acquisition Cost Model methodology to ensure readers understand these are aligned.
- 8.3.2. Document the triggers for open space acquisition within brownfield areas (i.e. in the existing urban area). Where brownfield areas are forecast to require new open space, consider establishing a separate funding area to ensure the use of an averaging approach does not inadvertently lead to a provision that is inequitable.
- 8.3.3. Review whether the inclusion of a suburb park in a sub-regional funding area is consistent with its area of benefit and provision requirements outlined in the Open Space Provision Policy and update if appropriate.

8.4. Community infrastructure

It is recommended that Auckland Council:

- 8.4.1. Review and document that basis for the 75%/25% (growth and non-growth) split that is applied where insufficient project information is available. Develop a broader set of assumptions that can be applied to specific asset classifications/projects where appropriate.
- 8.4.2. Continue to develop the 11-30 year provision / growth requirements for brownfield areas building on the recent 'Determining Years 11-30 Greenfield Provision Requirements' document. Modelling future provision in brownfield areas to identify future beneficiaries could be a first step in this process.

8.5. Stormwater

It is recommended that Auckland Council:

- 8.5.1. Periodically review the impervious area assumptions for single and duplex developments and update if required.
- 8.5.2. Where necessary, update policy to ensure downstream beneficiaries within a catchment are charged an equitable share of infrastructure costs within the catchment / funding area.

Appendix 1 - Documentation relied upon for this review

Table 5: Documentation received from Auckland Council

Documents received from Auckland Council	Author	Topic
Determining Years 11 to 30+ greenfield provision requirements. Community services and facilities guidance note (March 2022)	Auckland Council	Overview of Auckland Council's process for the future planning of community facilities in greenfield areas
Methodology to identify proportion of transport capital expenditure relating to growth	Auckland Transport	This paper explains the methodology to identify the proportion of new transport capital expenditure attributed to growth
Independent Peer Review Auckland Transport Development Contributions Methodology	John Williamson, Ascari	This peer review considers the new Auckland Transport development contributions methodology
Drury Developer Contributions Policy Transport Assessment	Waka Kotahi	This report documents the transport assessment undertaken by the Te Tupu Ngatahi Supporting Growth Alliance in regard to the preparing transport inputs to Auckland Council's proposed developer contribution policy for Drury
Open Space Acquisition Cost Modelling Method	Auckland Council	This document describes the Open Space Acquisition Cost Model and production of associated costs for developer of yet-to-be acquired open space
How we set development contributions chargers	Auckland Council	Auckland Council's cost allocation methodology December 2021, Version 6.0
Draft Contributions Policy 2021 - Analysis of feedback received	Auckland Council	Overview of feedback received from consultation on the draft Contributions Policy 2021
Community Facilities Network Plan	Auckland Council	Overview of the network plan to guide council's investment in the provision of community facilities for the next 20 years
Open Space Provision Policy 2016	Auckland Council	Overview of Auckland Council's open space provision policy
Parks and Open Space Acquisition Policy June 2013	Auckland Council	Overview of Auckland Council's policy for acquiring land for parks and open space
AT DC Methodology - Method to calculate project cost components for Auckland Council Development Contributions. Draft version (May 2022)	Auckland Transport	Methodology calculate project cost components for Auckland Council Development Contributions

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We have not independently verified the accuracy of information provided to us, and have not conducted any form of audit in respect of Auckland Council. Accordingly, we express no opinion on the reliability, accuracy, or completeness of the information provided to us and upon which we have relied. The statements and opinions expressed herein have been made in good faith, and on the basis that all information relied upon is true and accurate in all material respects, and not misleading by reason of omission or otherwise. The statements and opinions expressed in this report are based on information available as at the date of the report.

We reserve the right, but will be under no obligation, to review or amend our Report, if any additional information, which was in existence on the date of this report was not brought to our attention, or subsequently comes to light.

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