

Entered by Board Secretary

Rapid Transit Network - Auckland Light Rail update

For decision: For noting:

Reason for inclusion in closed board meeting session	
1. Please state why this report is being considered in the closed board meeting as opposed to the open board meeting. Please refer to the 'reasons for confidentiality' and provide a direct reference to one of these reasons.	To protect information that will soon be publicly available.
2. Please provide an estimated date for release of this report.	August 2023.

Te tūtohunga / Recommendation

That the Auckland Transport Board (board):

- a) Note that, as rapid transit network operator, Auckland Transport (AT) has a key role in informing the Sponsors of Auckland Light Rail Ltd (ALR Ltd) of the network implications of the proposed Auckland Light Rail (ALR) mode and form (tunnelled light metro), ahead of their August meeting to endorse the lodgement of Notices of Requirement for the City Centre to Mangere line.
- b) Note that if the City Centre to Mangere line was delivered as tunnelled light metro mode, according to the Auckland Rapid Transit Network Plan (ARTP) principles that state that the three corridors should form a network and be operated as the same mode, this would also require the Waitemata Harbour Connections (WHC) and Northwest Rapid Transit (NW) projects to be segregated and operate light metro services, which has significant implications for overall network costs, timing, benefits, and outcomes. Alternatively, the ARTP principle of single mode and network operation for the three corridors may need to be changed.
- c) Note that urgent technical work is underway by AT, with contributions from each of the three projects, to assess pros and cons of various modal types for the network and this will be presented to the board. Timing may require a special meeting if the board agrees in July.
- d) Note that the outcome of the work will need to be communicated to ALR Sponsors ahead of their August meeting.

Te whakarāpopototanga matua / Executive Summary

1. The draft ARTP provides a high-level rapid transit network plan for the region, showing that the ALR, WHC and NW lines integrate and operate the same mode. The ARTP also notes that each project will undertake its own business case investigations and this may result in

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updates to the plan. The starting assumption for the ARTP, used as a common reference point for business cases, is that the three corridors each operate surface (and potentially in-part segregated) light rail.

2. ALR Ltd has been investigating moving to a higher capacity, grade-separated mode and is now pursuing light metro, through an isthmus tunnel, use of the motorway corridor and elevated structures elsewhere. In early August, ALR Ltd will seek endorsement from Sponsors (Auckland Council through the Mayor and Councillor Darby, the Crown through the Ministries of Transport, Finance and Housing, and mana whenua through Paul Majurey, Karen Wilson and Ngarimu Blair) for the lodgement of Notices of Requirement for the preferred route for the City Centre to Mangere line and indicative stations.
3. This decision implicitly endorses grade-separated light metro as the mode for the line and, according to ARTP principles which calls for same mode and three corridor integration, also for the WHC and NW lines. At a meeting in late May, the ALR Sponsors sought information on the implications of light metro for the overall rapid transit network and to have an understanding of this prior to their August meeting.
4. Due to the short time available, the investigations will be high-level and make use of previous ARTP work, as well as the latest material from each of the three projects. This will look to summarise an estimate of total network capital and whole-of-life costs, line-by-line patronage projections, urban uplift responses expected, carbon implications, customer experience factors, staging/timing options, resilience and other relevant matters.
5. As network operator, AT is leading this work, with contributions from each of the three projects, and will present the pros and cons of various modal types for the three-corridor sub-network to the board. Due to timing, if the board agree, this may require a request for a special meeting in July 2023.

Ngā tuinga ō mua / Previous deliberations

Date	Report Title	Key Outcomes
July 2021 Board	ALR – Progress Report	Noted the Establishment Unit's progress on ALR and AT's involvement.
August 2022 Board	AT's role and input to ALR project	Endorsed AT's role as proxy operator, embedding staff in the project and seeking a technical control group.
May 2023 Board	ALR update	Noted the emerging route and station.

Entered by Board Secretary

Te horopaki me te tīaroaro rautaki / Context and strategic alignment

6. A new rapid transit connection between the Auckland city centre and Auckland Airport is being led by ALR Ltd, established as a company by the Crown in October 2022.
7. Although originally a transport project, it is now an urban and housing development project with a transport system at its core to enable the delivery of better urban outcomes for Auckland, with urban benefits now accounting for most expected project benefits.
8. Under the Project Planning and Funding Agreement (PPFA), AT has the role of proxy owner and operator for the transport infrastructure elements of the project during the current detailed planning phase, until the Sponsors determine the ultimate ownership and operating arrangements for the project. AT is not part of the project delivery governance or decision-making.
9. The project is one of three interconnected rapid transit lines which the draft ARTP shows as surface light rail (ahead of business cases being undertaken on each line to determine appropriate mode, alignment and form). Although each project is being led by bespoke governance groups, as network operator AT has the key role to ensure the efficient and effective operation and integration of the overall network, including seeking the desired network performance outcomes, key transport and customer service outcomes, and reasonable whole-of-life costs.
10. Each of the projects has potential for significant land use change and uplift, if delivered alongside various policy and monetary tools, and high growth projections are driving key ALR project decisions. The feasibility, costs and benefits of land use changes are of most concern to Auckland Council but ultimately affect the demand and timing for cores parts of the rapid transit network that AT will operate, so will be analysed as part of the upcoming work.

Ngā matapakinga me ngā tātaritanga / Discussion and analysis

11. The proposed ALR route is broadly consistent with the previous Cabinet decision and is also consistent with the draft ARTP. The draft ARTP identifies the mode for the Auckland city centre and Auckland Airport line as surface light rail, and given its focus on transport outcomes and benefits, includes the principle that this plus the WHC and NW rapid transit lines would be interconnected and comprise the same operational mode.
12. However, ALR Ltd has recommended a fully segregated light metro system, primarily due to it providing a greater capacity, frequency and faster travel time than an at-grade light rail system and thus enabling the project to deliver better urban and housing outcomes. This will require the service to be in a tunnel, trench or viaduct, or physically fenced off for surface-running sections such as along the motorway.
13. This has implications for the principle of consistent mode and integrated lines across the three corridors in the draft ARTP of the city centre and Auckland Airport line, WHC and NW. Higher capacity of light metro may not be justified on the WHC or NW lines and therefore the higher costs of light metro across three lines may not be justified.

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14. Prior to their August meeting, where they will be asked to endorse the lodgement of Notices of Requirement for the route and station, the ALR Sponsors have requested information on the overall network, in terms of the implications of the move to light metro instead of the previously assumed surface light rail mode. In particular, the Sponsors sought information to understand the whole-of-life costs, benefits, and outcomes for the overall network, so that this is understood before committing to the form and mode of the first line. Consideration of these network issues best led and co-ordinated by AT in its role as network operator.
15. This work is underway and the pros and cons of various modal types for the network will be presented to the board, potentially at a special meeting in July, so that the board can consider and form a view on the situation, ahead of communicating this view to ALR Sponsors prior to their August meeting. The investigations will necessarily be high-level and make use of previous ARTP work, as well as the latest material from each of the three projects. This will look to summarise total network capital and whole-of-life costs, line-by-line patronage projections, urban uplift responses expected, carbon implications, customer experience factors, staging/timing options, resilience and other relevant matters.
16. This work has in part come about as the projects are not being viewed as a programme with shared costs, benefits and assumptions (although there is co-ordination between the project teams), nor are they being run under a consistent governance group. The WHC and NW route projects are being delivered by Waka Kotahi New Zealand Transport Agency through separate projects with the city centre to Auckland Airport project being delivered by ALR Ltd.
17. Ahead of completing the work, it is known that there could be several broad risks for AT as network operator would need reassurance on if light metro was selected as the mode for the three lines, including:
 - That the higher than anticipated cost may put the overall delivery of the network at risk, especially due to a constrained financial environment.
 - That the services may ‘over-supply’ capacity based on the patronage demands (especially if projections of high urban uplift are not realised) resulting in an under-utilised system which is expensive to operate.
 - That the time to deliver the entire network may significantly extend, due to funding availability, reducing AT’s ability to provide transport services where and at the time they are needed.
 - That the ARTP network may need to be revisited in terms of testing the decoupling of the other two lines, so that they can proceed with a lower cost, lower capacity mode.
 - That the higher costs require greater urban uplift and land use outcomes, which may cause additional challenges and undermine project benefits if they do not occur as expected.
18. The work may well determine that light metro is the correct mode for the network, especially with a 30-year-plus horizon, in which case this work would reassure AT as network operator and allow for continued support for each project, noting that the business cases across the three projects will need to be aligned to the wider network considerations – whether a single integrated mode across the three lines or otherwise.

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Ngā tūraru matua / Key risks and mitigations

Key Risks	Proposed mitigations
The rapidly progressing project challenges the ability for AT to function as the proxy operator.	AT to continue to seek active involvement in project development, across multiple workstreams.
AT’s absence from inter-project governance and the network outcome implications.	AT are actively seeking to be part of the planned inter-project governance.

Ngā ritenga-ā-pūtea me ngā rauemi / Financial and resource impacts

19. Although expected to be primarily funded by Central Government, there are expected to be significant capital cost differences between a surface light rail and a grade-separated light metro network. There will also be significant whole-of-life cost differences, of interest to AT as network operator into the future. As part of consideration of these costs in July, the board may wish to consider where the accountability for these ongoing costs lies.
20. Due to the magnitude of investment, there are also risks to the funding available to other rapid transit projects, such as the programme identified in the emerging Rail Programme Business Case.

Ngā whaiwhakaaro ō te taiao me te panonitanga o te āhuarangi / Environment and climate change considerations

21. The ALR project and the overall network is being assessed on criteria including influencing of land use development and altering of trip patterns, influencing of regional transport emissions and the level of embodied carbon.

Ngā whakaaweawe me ngā whakaaro / Impacts and perspectives

Mana whenua

22. Mana whenua are partners within the ALR project and have been involved in many of the project aspects. Mana whenua views are being included in the assessment of project options.

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Ngā mema pōti / Elected members

23. Auckland Council (through the Mayor and Cr Darby) is a project Sponsor, alongside the Crown. The ALR project continues to engage with local elected representatives on an ongoing basis.

Ngā rōpū kei raro i te Kaunihera / Council Controlled Organisations

24. The ALR project team have been engaging with both AT and Eke Panuku as part of project development.

Ngā kiritaki / Customers

25. Part of AT's role as proxy operator includes consideration of how the ALR project will achieve desired customer service outcomes.

Ngā whaiwhakaaro haumarū me ngā whaiwhakaaro hauora / Health, safety and wellbeing considerations






26. There are no health and safety considerations with this matter.

Ā muri ake nei / Next steps

27. AT staff will continue to work with the three project teams to prepare material on the pros and cons of various modal types for the network to be presented to the board at a special meeting in July 2023 (to be confirmed in agreement with the board chair) so that the board can consider and form a view on the situation, ahead of communicating this view to ALR Sponsors prior to their August meeting. On the basis that the work reassures AT that the correct approach is being taken, AT will also be able to provide a letter of support to ALR Ltd ahead of the lodgement of Notices of Requirement.

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Te pou whenua tuinga / Document ownership

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