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Confidential: Airport to Botany Rapid Transit: Puhinui Station Interchange

Recommendations

That the Board:

- i. Delegates to the Chief Executive:
 - a) approval of the procurement plan; and
 - b) award the design and construction contracts to deliver the preferred Puhinui Station Interchange option within the approved Regional Land Transport Plan budget allocation.
- ii. Notes the project will commence communication of preferred option design and next steps with property owners around the station and public in latter half of 2018, following Councillor and Local Board briefings.

Executive summary

1. The Regional Land Transport Plan (RLTP, June 2018) allocates \$68M towards improving airport access over its first three years. Of this:
 - \$52M is allocated to the first phase of the Puhinui Station Interchange, which is to be completed by end of 2020 / early 2021 in advance of AC36 and APEC. The Regional Fuel Tax (RFT) funds \$26M of this; and
 - \$16M is allocated to a range of other improvement measures including localised bus priority and walking/cycling improvements - minor to moderate measures that can be implemented within the 2020/21 timeframe.
2. The RLTP also allocates \$10M to progress the medium to longer-term work (implemented post 2021). This encompasses completing the business case and route protection for Airport to Botany Rapid Transit via Manukau, of which Puhinui is a key station. The second phase for the Puhinui Station upgrade encompasses providing a direct rapid transit overbridge across the railway lines. This forms part of the medium to longer term scope as it requires securing additional land via the route protection process.
3. Earlier this year, professional advisors were procured to develop two business cases for improving airport access: a business case to confirm the short-term airport access improvements, including a preferred bus/rail interchange option at Puhinui Station to be delivered by 2020/21; and a business case to confirm the Airport to Botany Rapid Transit line.

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4. The Short-Term Airport Access Business Case is now near completion. Through this process, a preferred concept design option for the Puhinui Station Interchange identified and endorsed by all relevant internal AT key stakeholders.
5. The option provides for an interchange facility between existing train services and an at-grade bus station as an early deliverable (first quarter 2021) that accommodates the ultimate Airport to Botany rapid transit station in due course with limited need to retrofit.
6. Preliminary Design has commenced and is expected to be completed by December 2018.
7. The project intends to tender for an Early Contractor Involvement (ECI) contract in fourth quarter of 2018 and expects to award this in early 2019. This will allow the Detailed Design phase of the project to commence and be completed by mid-2019.
8. The construction contract award is anticipated for third quarter 2019 and has an estimated value of approximately \$40.1M (50th percentile).
9. A bus/rail interchange at Puhinui Station acts as a catalyst for wider bus network changes. The existing airport bus service will be modified to provide a direct and frequent service (every 10 minutes in the peak) between the airport and Manukau Bus Station via Puhinui Station. This proposed route includes variations of the existing 380 (Airporter) route, with the existing fleet used to operate the new route. Priority lanes will be provided along most of this route.

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Previous deliberations

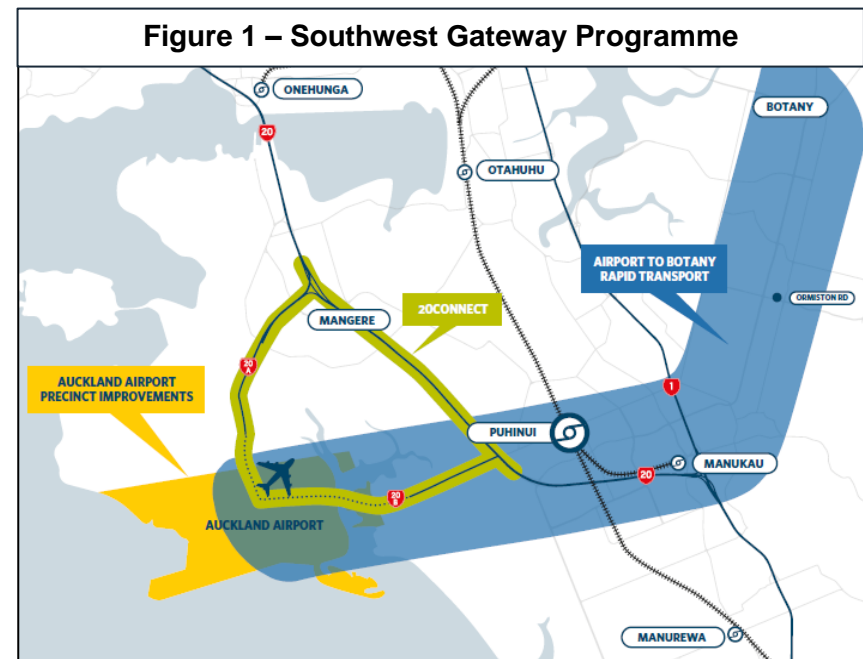
10. In May 2017, the Board received the *Airport Access Programme Business Case* and approved progressing the programme of activities it recommended. This included developing business cases for the Airport to Botany rapid transit line and for a range of more immediate (short-term) airport access improvements, including a new bus/rail interchange at Puhinui Station as an early deliverable component of the ultimate Airport to Botany rapid transit project.
11. In June 2018, the Capital Review Committee received an update on the Airport to Botany Rapid Transit and Airport Access Improvements project. This included noting that professional advisors have been procured to develop the two business cases and that the Airport to Botany Rapid Transit project forms part of the Southwest Gateway Programme, which covers three transport projects being progressed in the area by Auckland Transport (AT), the NZ Transport Agency and Auckland Airport (Figure 1).
12. That update also noted that the Puhinui Station Interchange would be delivered in two phases (Figure 2):

- The first phase is an early deliverable component of the Airport to Botany rapid transit line, to be operational by end of 2020 /early 2021. This encompasses a new at-grade bus/rail interchange and enhanced station. Buses will still use the existing local road (Bridge Street) to cross the railway line to/from Manukau, along with local traffic.

This Board report outlines the preferred option and next steps for this first phase of the Puhinui Station Interchange.

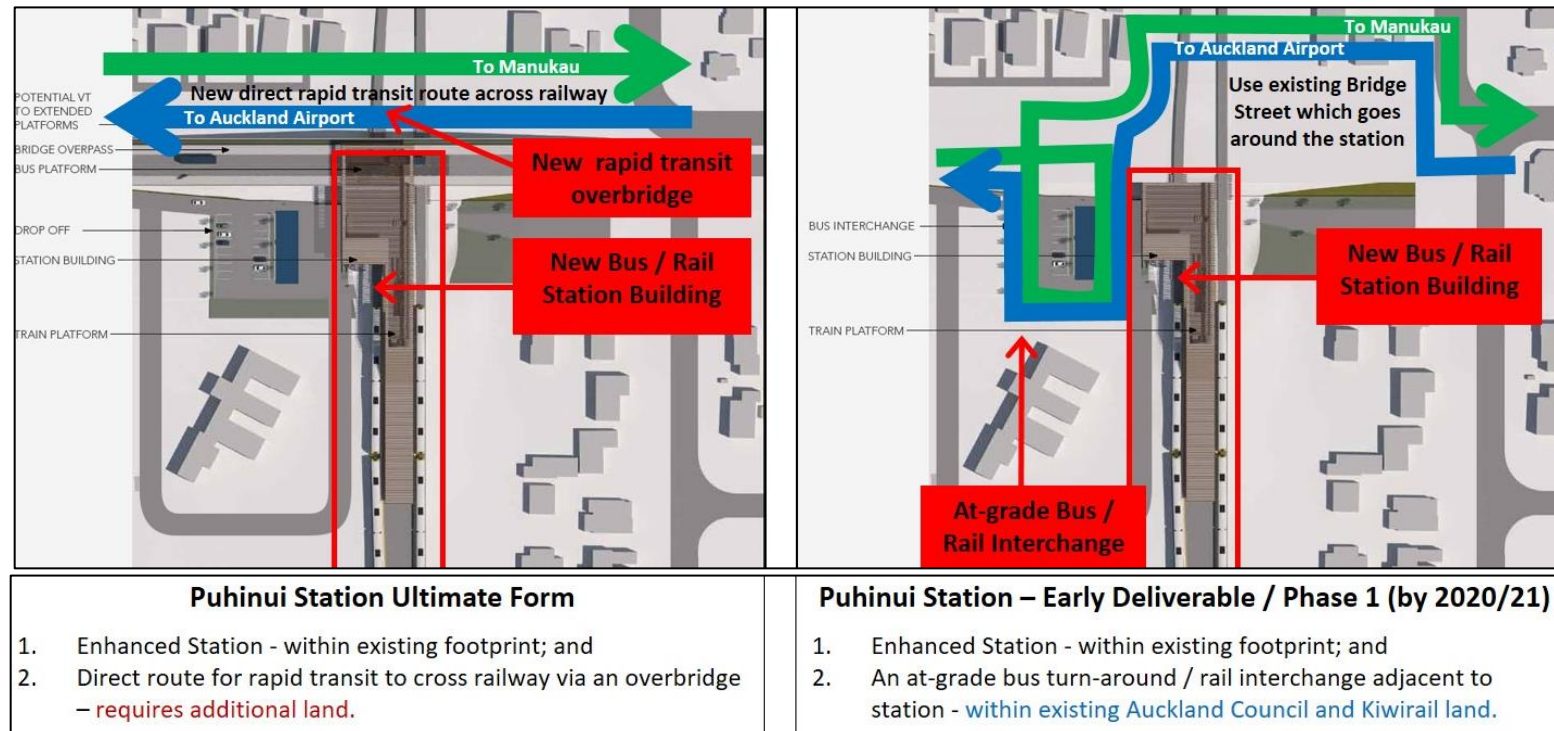
- The second phase provides a rapid transit overbridge across the railway line to provide a more direct and bespoke rapid transit connection. The new rapid transit link will integrate with the new interchange station on the overbridge.

The overbridge requires additional land; and its footprint and likely delivery timeframe will be determined through the Airport to Botany rapid transit business case currently being progressed.



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Figure 2 – Two phases to delivering Puhinui Station as part of Airport to Botany Rapid Transit Project



13. The Regional Land Transport Plan (RLTP, June 2018) allocates \$68M towards improving airport access over its first three years. Of this:
- \$52M is allocated to the first phase of the Puhinui Station Interchange, which is to be completed by end of 2020 / early 2021. The Regional Fuel Tax (RFT) funds \$26M of this; and
 - \$16M is allocated to a range of other improvement measures including localised bus priority and walking/cycling improvements - minor to moderate measures that can be implemented within the 2020/21 timeframe.
14. The RLTP also allocates \$10M to progress the medium to longer-term work (implemented post 2021). This encompasses completing the business case and route protection for Airport to Botany Rapid Transit via Manukau, of which Puhinui is a key station. The second phase for the Puhinui Station upgrade encompasses providing a direct rapid transit overbridge across the railway lines. This forms part of the medium to longer term scope as it requires securing additional land via the route protection process.

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Strategic Context

15. Auckland Airport is the international gateway to New Zealand and key to the tourism economy. It is also a major and growing regional employment hub and key freight destination. Auckland Airport and businesses in the surrounding area currently employ 30,000 people and employment is projected to grow to approximately 90,000 by 2044. The airport area has been suffering from deteriorating accessibility for some time and this will get significantly worse with forecast and planned growth.
16. Delivery of the Puhinui Station Interchange forms part of a programme to improve the areas accessibility, particularly by public transport, and is in line with priority outcomes identified in the Government Policy Statement on Land Transport (June 2018), the Auckland Transport Alignment Project (ATAP, April 2018), the RLTP (June 2018) and Auckland Transport's Statement of Intent (2018).

Background

17. Puhinui Station is located in a strategic position on a direct route between the Airport and Manukau. It also has frequent connections to the City Centre and other parts of the region as both the southern and eastern train lines traverse through it.
18. The station exists in an area with low levels of amenity and is perceived to be unsafe by current and potential customers. Its current form also does not allow for bus/rail interchange, requiring the airport bus service managed by AT to divert significantly from its Airport – Manukau route to interchange with the rail network at Papatoetoe Station - north of Puhinui Station.
19. The *Airport Access Programme Business Case* identified providing a new bus/rail interchange at Puhinui Station as an immediate way to improve airport access by public transport (along with other supportive measures). It also makes use of recent investment in the rail network.
20. The Airport to Botany rapid transit project and Puhinui Station Interchange was introduced to other Project Partners and key stakeholders in June and July 2018 as part of the Southwest Gateway Programme. This included meeting directly affected Local Boards (Howick, Otara-Papatoetoe, Mangere-Otahuhu and Manurewa); councillors (Cllr Newman; Cllr Filipaina; Cllr Stewart and Cllr Collins) and Deputy Mayor; and providing an update note to the Mayor. A presentation was also provided to the July 2018 Southern Initiative Joint Steering Group meeting.
21. There was strong support for the project and its early implementation from these key stakeholders. Another strong message was an expectation that the delivery of the project and its sub-components – such as the Puhinui Station Interchange - will adopt a social procurement approach.
22. Multiple Mana Whenua groups are recognised as having a significant connection and relationship with the project area. Te Akitai Waiohua in particular hold associations and relationships with the land and sea at the Airport and surrounding area, including Puhinui. Given the sensitivity around multiple areas, early dialogue with Mana Whenua including Te Akitai Waiohua has been established and is on-going.

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23. The Mana Whenua groups that have confirmed interest in the Puhinui Station Interchange have indicated they are comfortable with on-going and early involvement in station design as per previous successful approaches by AT - the most recent examples being the new Manukau Bus Station and Otahuhu bus/rail interchanges. Te Akitai Waiohuria are being engaged by the project separately in recognition of their particular strong connection to the area.
24. In addition to the NZ Transport Agency, Auckland Airport and Mana Whenua, the project is working closely with many other key project partners and stakeholders including: Auckland Council (and the many teams within it, including Plans and Places and Southern Initiative Team); Panuku; KiwiRail, Ministry of Business, Innovation and Employment (MBIE) and Auckland Tourism, Events & Economic Development (ATEED)
25. The project has not commenced engagement with adjacent property owners of the station or the general public.

Preferred Puhinui Station Interchange for delivery by 2020 / 2021

Preferred concept design option

26. The Puhinui Station Interchange has been progressed as part of the Short-Term Airport Access Single Stage Business Case. A preferred indicative layout was identified with stakeholders in July 2018. This informed the Concept Design process which was completed in September 2018. The preferred concept option is shown in plans in Attachment 1 and has been endorsed by all relevant internal AT key stakeholders.
27. The option provides an interchange facility between train services and an at-grade bus station as an early deliverable (first quarter 2021) that accommodates the ultimate rapid transit station in due course with limited need to retrofit. It consists of providing a pedestrian concourse over the railway line similar to Otahuhu Station, and includes escalators similar to Panmure Station.
28. Preliminary Design has commenced and is expected to be completed by December 2018. A key outcome sought is for the interchange to project a “City Gateway” or “Airport” feel. A key part of this will be to ensure the rich and strong cultural history and significance of the area to Mana Whenua is reflected and embraced within the interchange design in accordance with Te Aranga design principles and in collaboration with Mana Whenua.

Use of customer insights to inform interchange design

29. The interchange design has been influenced by customer insight findings collected as part of the *Airport Access Programme Business Case*. When discussing the proposed Puhinui Station upgrade, key messages from customers were safety, “hassle free”, seamless, easy to navigate and quality. The design has aimed to achieve this by ensuring seamless and direct connectivity between modes to reduce the “hassle factor” of interchanging and by imbedding passive safety measures such as visual clarity, quality retail activity and visibility of staffed locations.

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Future proofing for future rail functions

30. The interchange for delivery in 2020/21 allows for proposed third and fourth rail line alignments (as provided by KiwiRail at the time of design) and is future proofed to allow for proposed inter-regional rail services between Auckland and Hamilton to stop (but not terminate) at the station.

Land use and transport integration and opportunities for urban regeneration

31. The proposed investment is expected to uplift the area and act as a catalyst for urban renewal within and around the interchange precinct. The timing and success of this will be dependent on many factors yet to be explored. This will be investigated further as part of the Airport to Botany rapid transit project; the immediate interchange design has taken future land development potential into account within its design philosophy and is cognisant of positively contributing towards local placemaking.

Cost estimates at this stage

32. The latest cost estimates indicates expected estimate for the first phase of the Puhinui Station Interchange being \$60M (Table 1 and Attachment 2) – which is \$8M (~15%) above the RLTP budget of \$52M. This is an early estimate and a revised estimate based on the recently completed concept design is currently underway. If the estimate remains above the RLTP budget, opportunities for efficiencies to keep the project within budget will be explored.

Table 1 – Project cost estimates (based on business case phase, August 2018)

Item & Description		Base Estimate (\$M)	Expected Estimate (\$M)	Funding Estimate (\$M)
		Estimate excluding any contingency to manage project risks)	Base estimate plus '50 th percentile' contingency, i.e. 50% probability of the outturn cost being within this amount. This is the amount typically approved by NZTA and AT approved project budgets.	Base estimate plus '95 th percentile' contingency, i.e. 95% probability of the outturn cost being within this amount. This figure is used by NZTA and AT as a maximum statistically likely outturn cost for the project
1	Property	4.3	5.4	6
2	Design	8.2	10.2	11.4
3	Construction	34.7	43.4	48.6
	Total	47.2	59.0 (60)	66.1

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Note that the estimate figures above are preliminary only. An estimate is currently being prepared based on the recently completed concept design and identified risks specific to the Puhinui Interchange project.

Bus service network plan and wider network improvements

33. A bus/rail interchange at Puhinui Station acts as a catalyst for wider bus network changes and optimisation. The existing airport bus service network will be modified to provide a direct and frequent service (every 10 minutes in the peak) between the airport and Manukau Bus Station via Puhinui Station (route via SH20B, Puhinui Road and Lambie Drive). This proposed route includes variations of the existing 380 (Airporter) route, with the existing fleet utilised to operate the new route.
34. The current draft Regional Public Transport Plan (RPTP) has allowed for this proposed new route and frequency - subject to receiving 75% as opposed to 50% NZ Transport Agency Funding Assistance Ratio (FAR). It also allows for several other new local bus route connections / modifications required to cover the network gaps created by this new option on the existing network.
35. The Puhinui Station upgrade sits within a wider programme of improvements to enhance airport accessibility. Priority lanes will be provided along most of the route between the Airport and Manukau Bus Station, with the Airport delivering segments within their area, the Transport Agency delivering segments along SH20B and AT delivering the remainder. Some walking and cycling improvements will also be provided to improve active mode access to the station and along the Airport to Manukau corridor. These elements form part of the \$16M RLTP budget allocation for improving airport access.

Procurement approach for next steps and upcoming project milestones

36. A key challenge but critical factor for the project is the requirement to be operational by 2020 / early 2021 in advance of AC36 and APEC. In light of this, a range of procurement options to progress the projects next steps (detailed design and construction) has been considered and an Early Contractor Involvement (ECI) Procurement approach identified as the best way forward. This presents the best timelines to achieving programme milestones; obtaining early Contractor engagement, innovation and buildability input to design; and presents an efficient model for early works and managing long lead supply items. This procurement model has been used successfully on the City Rail Link (CRL) Project and on the Downtown Infrastructure Programme.
37. Informal market sounding has indicated strong interest from suitable contractors for the project. It is anticipated to commence formal market sounding and issue tender for ECI contract in fourth quarter 2018 and award contract in early 2019. Detailed design phase will occur over the first half of 2019 and expected to be complete by mid-2019.
38. The construction contract is anticipated to be awarded in third quarter 2019 and has a (current) estimated value of approximately \$40.1M (50th percentile, or \$43.4M inclusive of Implementation Fees).

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39. The project will incorporate social procurement into its approach. Following the recent issue of the Eastern Busway construction tender, the Puhinui Station Interchange is the next large project in the South Auckland area and AT's procurement team is already planning a social procurement programme for this project. AT liaises with The Southern Initiative (TSI) to deliver social procurement. This relationship is well established.

Risks

Funding Approval Timescales

40. The project needs the NZ Transport Agency Board to approve funding for the next stages of the project in December 2018. Delay in obtaining this will negate benefits of an ECI contract approach and risk delay to project design programme. The risk is that the business case documentation and peer review requirements need to be completed in parallel to the funding decision-making process. The project team have initiated early dialogue with the NZTA and AT funding teams to agree on a way forward to reduce or negate this risk.

Cost Risk

41. Cost risk is being mitigated by preparing updated 95th percentile estimates at key milestones of the project design process and using quantitative risk analysis on the project risk register to determine contingency levels required for the 50th percentile 'expected estimate' and 95th percentile 'funding estimate'. Currently, an updated 95th percentile estimate is being prepared based on the Concept Design (rather than high-level business case design) and latest risk workshop (August 2018). In addition, a parallel 95th percentile cost estimate is being prepared. The two will be reconciled to obtain a robust cost estimate of the Concept Design option, including the likelihood and impact of project risks.

Property, KiwiRail and Mana Whenua Liaison

42. The property risk of the project is considered low as the proposed Puhinui Station Interchange for delivery by 2020/21 can be accommodated on land holdings currently owned by AT, Auckland Council and KiwiRail. A land parcel that was previously owned by KiwiRail was transferred to Land Information New Zealand (LINZ / the Crown) many years ago (Attachment 3). KiwiRail has recalled back the need for this land to provide the planned third and fourth rail lines. A small portion of this is also required for the Puhinui Station Interchange.
43. Whilst this land was with LINZ, it formed part of Treaty settlement negotiations between the Crown and Te Akitai Waiohua, which is still on-going. The land parcel has now been removed from the Treaty settlement process by LINZ. Whilst the land will be available for the interchange via KiwiRail, there is a potential reputation and relationship risk between AT, KiwiRail and Te Akitai due to this occurrence. The risk is currently considered low as the project team have an established relationship with Te Akitai Waiohua and KiwiRail, and will continue to maintain a constructive working relationship with them.

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Consents

44. The consenting risk of the project is currently considered low as the project will be delivered within Auckland Transport owned land (the Auckland Council land holdings are in the process of being acquired by AT) - and within KiwiRail owned land. The scope and scale of the project is also subject to Auckland Unitary Plan non-notification provisions which significantly reduces consenting risks to the project. This will ultimately depend on the final scale of adverse effects on adjacent properties and whether these can be appropriately mitigated. The preferred Consenting Strategy will be finalised as part of the Detailed Design phase of the project in first half of 2019.

Communication and Engagement

45. The project will commence next round of engagement with Local Boards in September / October 2018 to signal the preferred concept design and outline key next steps. This will be progressed alongside the Airport to Botany project and in the context of the Southwest Gateway Programme.
46. The project will also start engagement with the general public in latter half of 2018. Current engagement with Mana Whenua, and Te Akitai Waiohua, will continue to inform station design.

Next steps

47. Subject to the Board approving the recommendation of this report, the expected next steps for the project are to:
- Commence engagement with adjacent property owners around station and public in latter half of 2018, following update and engagement with Local Boards (September / October 2018).
 - Seek NZ Transport Agency Board funding approval for pre-implementation phase tasks of the project by December 2018 (this will cover detailed design and consenting).
 - Initiate market sounding and tender for Early Contractor Involvement contract in fourth quarter 2018 and award contract in early 2019.
 - Commence detailed design phase in first half of 2019 and complete by mid-2019.
 - Seek NZ Transport Agency Board funding for construction phase in mid-2019 (based on detailed design outputs).
 - Commence construction programme from third quarter 2019.

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Attachments


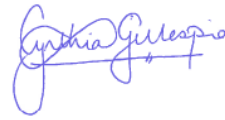

Attachment Number	Description
1	Preferred Concept Design Option for Puhinui Station Early Deliverable (operational by 2020/21)
2	Draft Cost Schedule Estimate (based on business case phase, August 2018).
3	Land holdings and requirements for Puhinui Station Interchange

Glossary

Acronym	Description
AT	Auckland Transport
ECI	Early Contractor Involvement
LINZ	Land Information New Zealand
RFT	Regional Fuel Tax
RLTP	Regional Land Transport Plan

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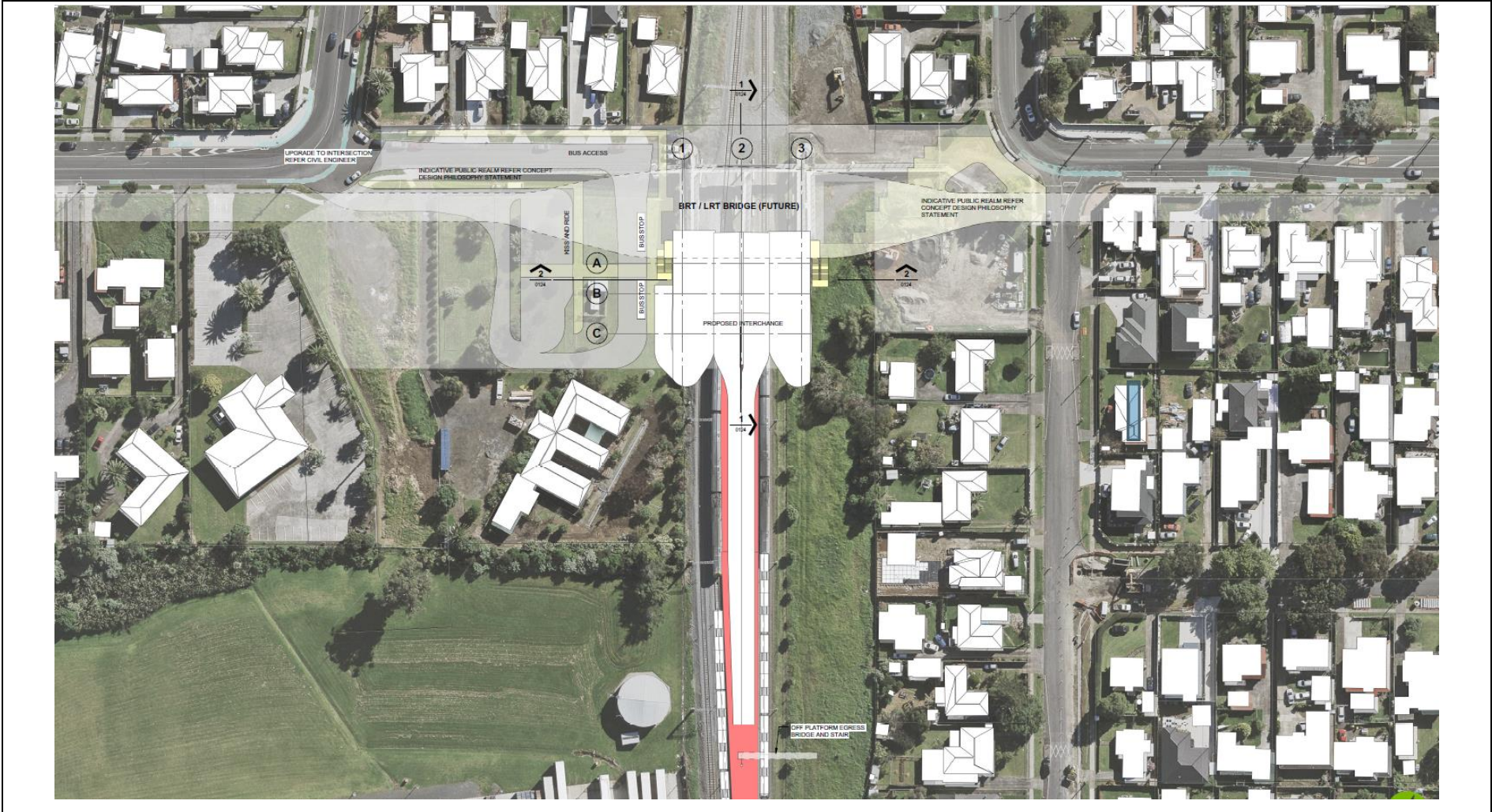
Document ownership

Submitted by	Renata Smit Manager Airport Access Programme, Planning and Investment	
Recommended by	Cynthia Gillespie Executive General Manager Planning and Investment	
Approved for submission	Shane Ellison Chief Executive	

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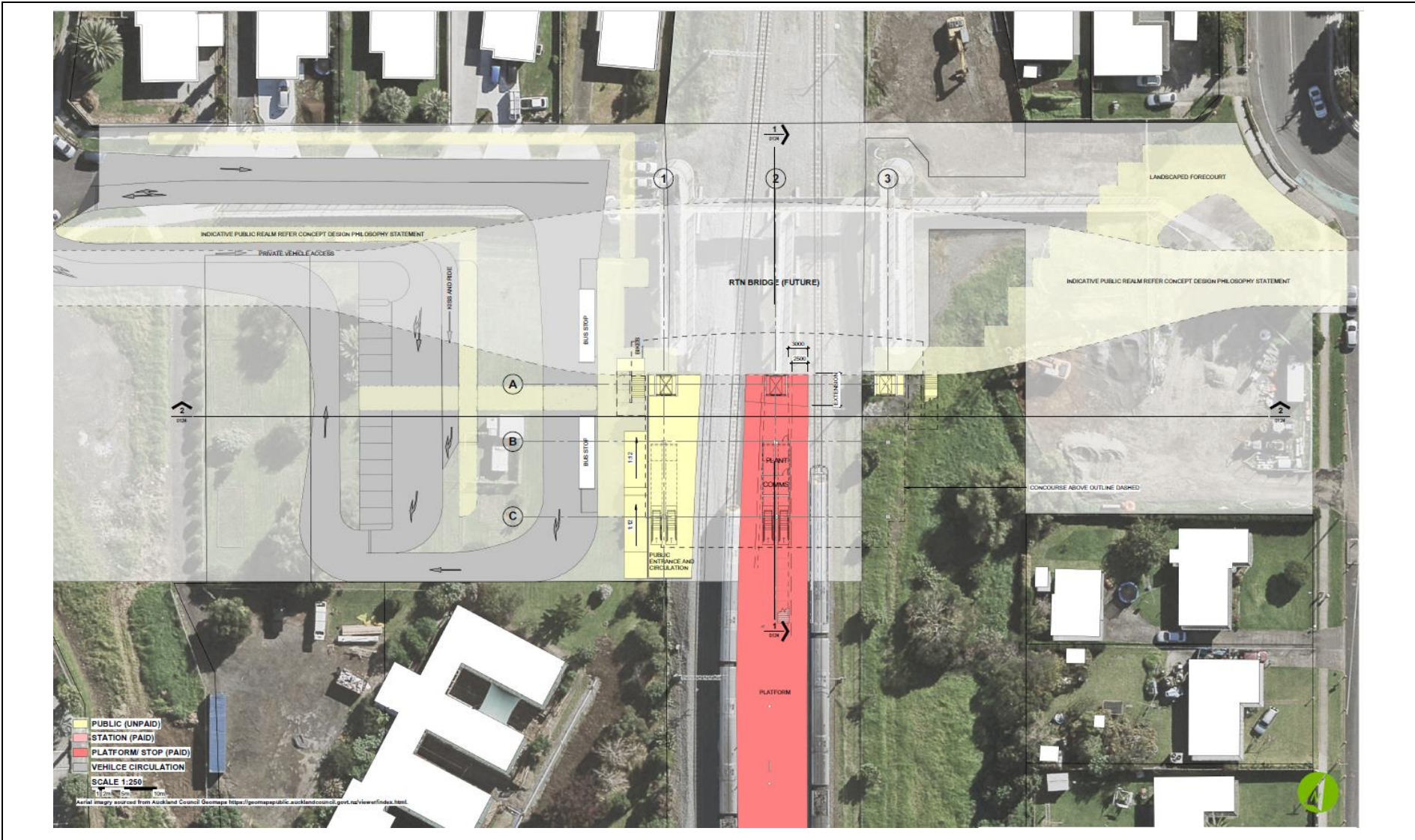
Attachment 1 – Preferred Concept Design Option for Puhinui Station Early Deliverable

Figure A1.1 - Puhinui Station Early Deliverable – Site Plan



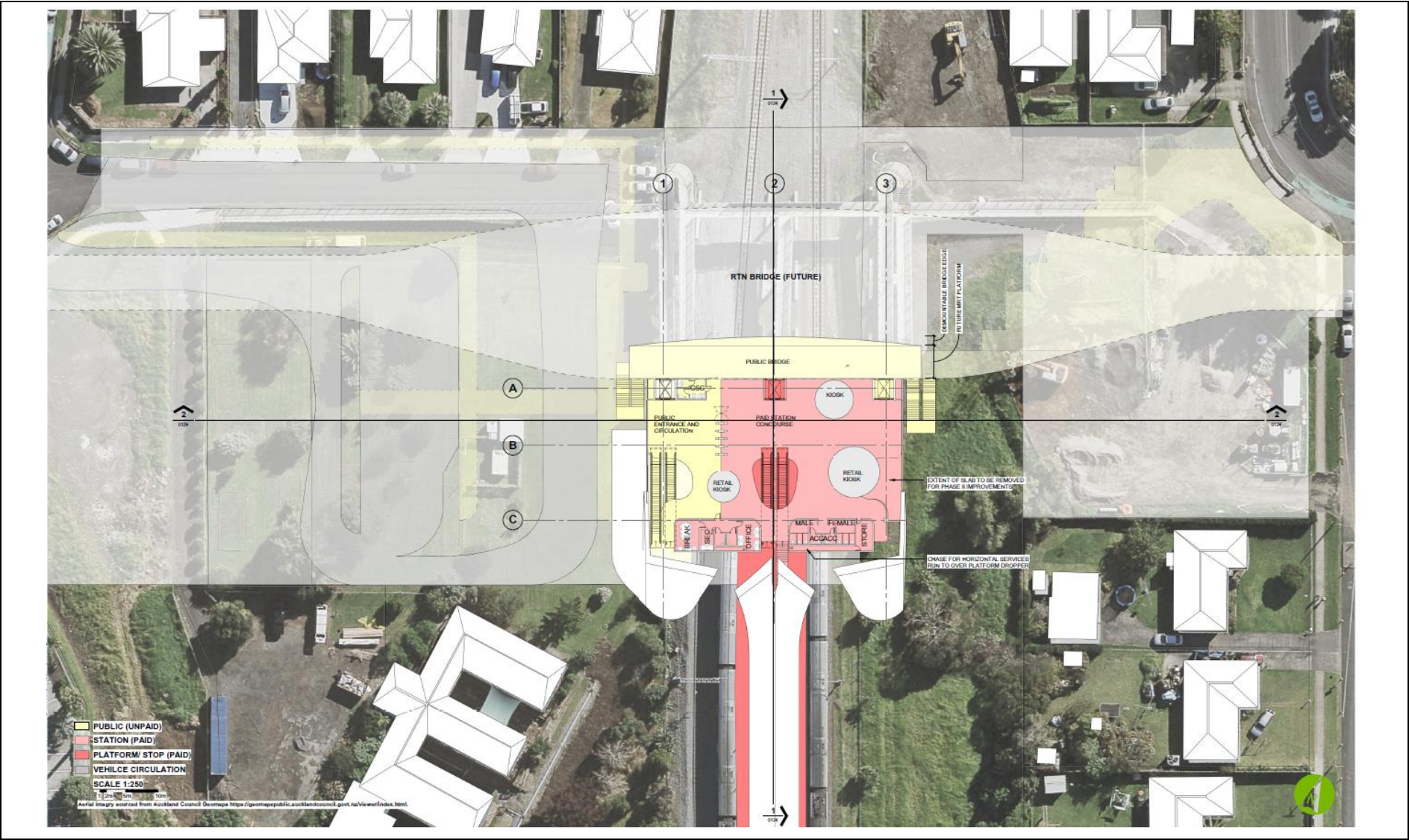
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Figure A1.2 - Puhinui Station Early Deliverable – Ground Level



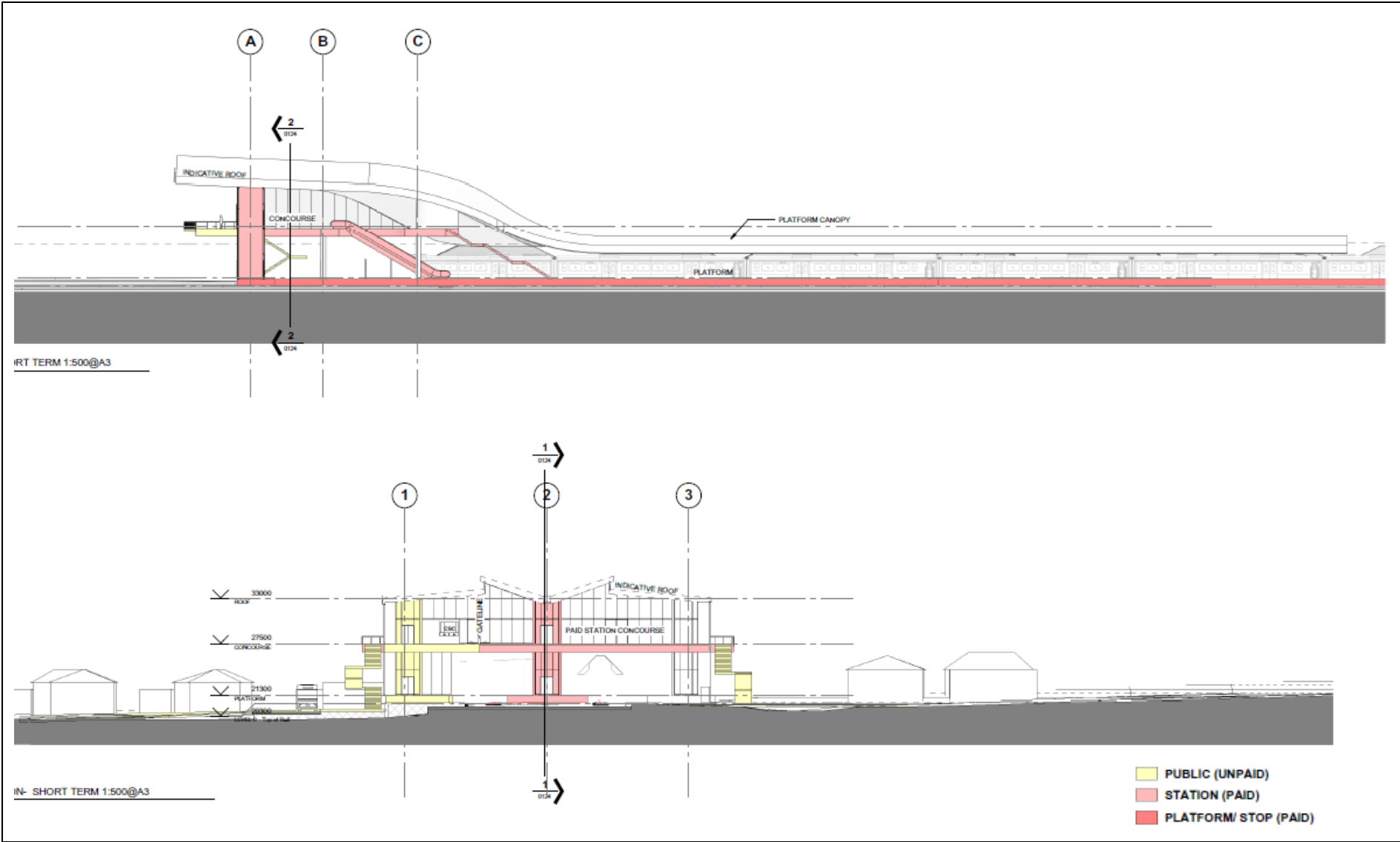
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Figure A1.3 - Puhinui Station Early Deliverable – Upper Level



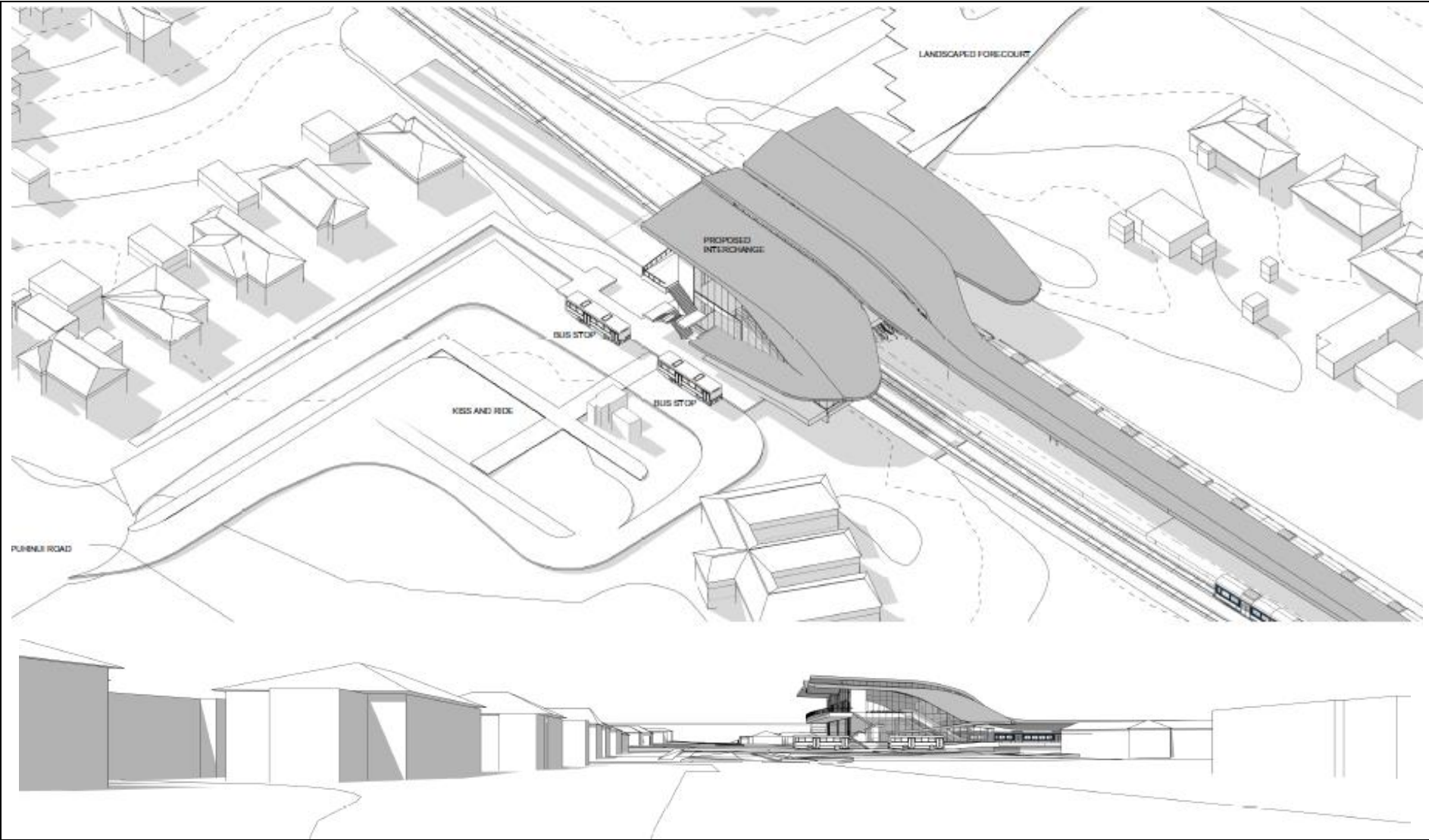
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Figure A1.4 - Puhinui Station Early Deliverable – Sections



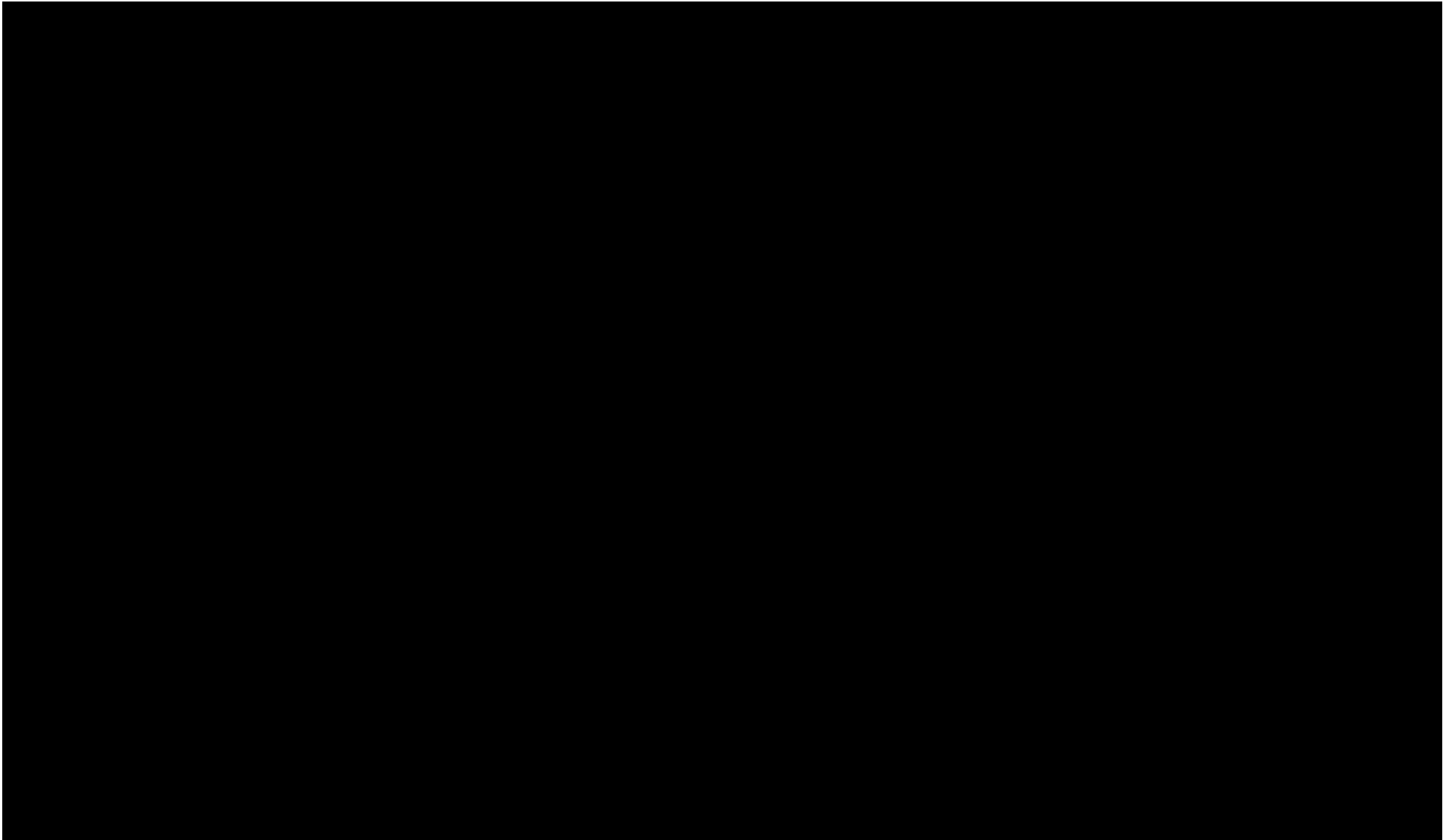
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Figure A1.5 - Puhinui Station Early Deliverable – 3D Views



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Attachment 2 – Preliminary Project Estimate Summary (produced at business case stage)



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Attachment 3 – Land holdings and requirements for Puhinui Station Interchange

