Agenda for a meeting of the Tuakau Community Board to be held at the Tuakau Memorial Hall, George Street, Tuakau on **TUESDAY, 5 SEPTEMBER 2023** commencing at **6.00pm**.

Information and recommendations are included in the reports to assist the Board in the decision-making process and may not constitute Council's decision or policy until considered by the Board.

1. APOLOGIES AND LEAVE OF ABSENCE

2. CONFIRMATION OF STATUS OF AGENDA

3. DISCLOSURES OF INTEREST

The register of interests is no longer included on agendas; however, members still have a duty to disclose any interests under this item.

4. CONFIRMATION OF MINUTES

5. PUBLIC FORUM

6. REPORTS

GJ Ion
CHIEF EXECUTIVE

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open – Information only

To	**Tuakau Community Board**
Report title	**Confirmation of Minutes**
Date:	Monday, 28 August 2023
Report Author:	Elizabeth Saunders, Senior Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

1. Purpose of the report
Te Take moo te puurongo

To confirm the minutes for a meeting of the Tuakau Community Board held on Tuesday, 25 July 2023. Noting the Democracy Manager will be in attendance at the meeting to discuss a couple of issues with the previous minutes which have been altered as per the attachment.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the minutes for a meeting of the Tuakau Community Board held on Tuesday, 25 July 2023 be confirmed as a true and correct record.

3. Attachments
Ngaa taapirihanga

Attachment 1 – TUCB Meeting Minutes, Tuesday, 25 July 2023

Minutes for a meeting of the Tuakau Community Board held in the Supper Room, Tuakau Memorial Hall, George Street, Tuakau on **TUESDAY, 25 JULY 2023** commencing at **6.10pm**.

Present:

Mrs G Tema-Liapaneke (Chairperson)
Mrs S Henderson
Mr C Morgan
Mr F Semau
Cr V Reeve *[from 6.15pm]*

Attending:

Cr K Ngataki *[from 8.04pm]*
Mrs E Edgar (Executive Manager Communications & Engagement)
Mrs L Wainwright (Democracy Advisor)

APOLOGIES AND LEAVE OF ABSENCE

Resolved: (Mr Semau/Mrs Henderson)

That the apologies for:

a. **non-attendance as absent on Council business from Cr P Matatahi-Poutapu be accepted; and**
b. **non-attendance from Ms A Frame and Mr D Henderson be accepted.**

CARRIED **TUCB2307/01**

CONFIRMATION OF STATUS OF AGENDA ITEMS

Resolved: (Mr Morgan/Mrs Henderson)

THAT the agenda for the meeting of the Tuakau Community Board held on Tuesday, 25 July 2023 be confirmed:

a. **with all items therein being considered in open meeting;**
b. **that Cr Ngataki be granted speaking rights for the meeting; and**
c. **that all reports be received.**

CARRIED **TUCB2307/02**

DISCLOSURES OF INTEREST

Mrs Tema-Liapaneke advised members of the Board that she would declare a non-financial conflict of interest in item 6.4 *[Mayor's Community Awards]*.

Mr Semau advised members of the Board that he would declare a non-financial conflict of interest in item 6.4 *[Mayor's Community Awards]*.

CONFIRMATION OF MINUTES

Resolved: (Mr Semau/Mrs Henderson)

THAT the minutes for a meeting of the Tuakau Community Board held on Tuesday, 13 June 2023 be confirmed as a true and correct record.

CARRIED **TUCB2307/03**

Cr Reeve entered the meeting at 6.15pm.

PUBLIC FORUM

No members of the public were present.

REPORTS

Works, Actions & Issues Report Status of Items July 2023
Agenda Item 6.1

The report was received *[TUCB2307/02 refers]* and the following discussion was held:

George Street/Buckland Road corner

- No further updates received. Item to remain on the schedule.

Speed Bend on Jellicoe Avenue, Tuakau – to be installed

- The Board approved the design solution for the speed bend on Jellicoe Ave, Tuakau but were concerned that Board members do not have adequate safety training and would prefer Council's engineers to give final approval on the design.

ACTION: Staff to give final approval on the design of the speed bend on Jellicoe Avenue, Tuakau.

Tuakau Youth Centre Building Project

- No further updates received. Item to remain on the schedule.

Upgrade to the Tuakau Domain Toilets

- No further updates received. Item to remain on the schedule.

Emergency Hub

- A copy of the Te Kauwhata Civil Defence plan had been received by Cr Reeve.

ACTION: Cr Reeve to email a copy of the Te Kauwhata Civil Defence plan to the chairperson for distribution to board members.

Carvings

- A maintenance plan for the carving at Central Park, Tuakau was discussed. The board felt it was best for the carvers to provide a maintenance plan to the board.

ACTION: The Board to invite the carvers to the scheduled meeting of Tuesday, 5 September 2023 to discuss a maintenance plan for the carving at Central Park, Tuakau.

Civil Defence

- No further updates received. Item to remain on the schedule.

Safety Issues – Edinburgh Street and Booth Crescent

- No further updates received. Item to remain on the schedule.

Congestion on Elizabeth Street

- No further updates received. Item to remain on the schedule.

Centennial Park and the Lightbody Reserve

- No further updates received. Item to remain on the schedule.

Screen and overhead computer system

- Contact had been made with Council on the relocation of the overhead and computer systems from the Tuakau Town Hall Boardroom to the Supper Room.

- Cushman and Wakefield would need to complete the relocation.

- Further discussion was required on who would be paying for the relocation of the equipment.

ACTION: Staff to investigate who would be paying for the relocation of the overhead and computer systems and report back to the Board.

Intersection at Tuakau and Buckland Roads

- No further updates received. Item to remain on the schedule.

Bus Shelters in Tuakau

- No further updates received. Item to remain on the schedule.

Speed Bumps on Gibson Road, Tuakau

- No further updates received. Item to remain on the schedule.

Lights at the pedestrian crossing outside Tuakau Library

- No further updates received. Item to remain on the schedule.

Buckland Playground (New Item)

- Trees had been removed from the Buckland Playground Reserve and stumps had been left in the ground. This was a safety issue.

ACTION: Cr Reeve to raise a CRM for removal of the stumps from the Buckland Playground Reserve fence line on Buckland Road, Tuakau.

- Clarification from the Community Projects Team was requested on the Buckland Road Reserve project and whether it was being designated as a playground or sports field as there was confusion in the Project Update report.

- It was noted that consultation had commenced on the Buckland Road Reserve project. Clarification was required as to when the consultation had started.

ACTION: Community Projects Team to clarify the designation of the Buckland Road Reserve project and the date consultation had commenced on this project.

Levels of Service Schedule for the Tuakau area
Agenda Item 6.2

The report was received *[TUCB2307/02 refers]*. No discussions were held as the report was for information purposes only.

Discretionary Fund Report to 30 June 2023
Agenda Item 6.3

The report was received *[TUCB2307/02 refers]* and the following discussion was held:

- No funding applications had been received.
- A quotation had been received for repairs/replacements to the CCTV cameras in Tuakau.

Resolved: (Mrs Henderson/Mr Semau)

That the Tuakau Community Board:

a. **receives the Discretionary Fund Report as at 30 June 2023;**

b. **notes that resolution OTCB2111/04 is for a commitment towards the Christmas event $1,739.13 as payment is to Tuakau Lions Club who are not GST registered therefore the amount committed is $2,000.00 and has been updated on the DF commitment TUCB2306/04; and**

c. **approves the commitment to the Tuakau Lions Club for $2,000.00 (Resolution No. OTCB2111/04) be returned to the Board's discretionary fund pool.**

CARRIED **TUCB2307/04**

Mayor's Community Awards
Agenda Item 6.4

Mrs Tema-Liapaneke and Mr Semau had advised members of the Board that they would declare a non-financial conflict of interest in this item and took no part in discussions.

The report was received *[TUCB2307/02 refers]* and it was noted that the Board had until Friday, 11 August 2023 to put forward names for the Mayoral Community Awards.

ACTION: Mrs Henderson would lead the award process and the Board would discuss nominations offline. The nomination form would be completed and forwarded to meet the Friday, 11 August 2023 deadline.

Chairperson's Report
Agenda Item 6.5

The chairperson gave a verbal report on the following matters:

- Attended "Chairing Effective Meetings" training.

- The Zumba group had asked the Board if a large speaker could be stored in the Boardroom at the Tuakau Memorial Hall. The Board felt that this was not an ideal situation.

ACTION: The Chairperson to advise the outcome of the Board's discussion to the Zumba group.

- Tuakau Business Association. The group meets monthly and it was suggested that Board members attend on a pro rata basis.

Councillor's/Councillors' Reports
Agenda Item 6.6

Verbal reports were received on the following matters:

- A newsletter/notice board was being investigated for the Tuakau area.

- Following closure due to the recent weather event, Maraetai Bay, Port Waikato would be open the week commencing Monday, 31 July 2023.

- Crs Ngataki and Reeve had been attending the community meetings at Pokeno and Mercer.

Community Board Members' Reports
Agenda Item 6.7

Verbal reports were received on the following matters:

- A project named "Connect" would be starting on Friday, 28 July 2023 and was a sporting event for young youth. NZ Police, some schools and Youth Centres had come on board for the project which would be trialled for eight (8) weeks at the Tuakau College gymnasium.

- Tuakau Rugby Clubrooms were undergoing renovations. A working bee had been held on Saturday, 22 July 2023 where the stage had been removed, walls and bar cleaned. This was stage one (1) of the renovation project.

- Following an incident in Tuakau, a member of the public would like a community meeting to be held to discuss public safety on footpaths. It was noted that the Public Places Bylaw, which covered the use of footpaths, had been adopted by Council on Monday, 24 April 2023. The Board felt that the public meeting should be facilitated through the NZ Police.

Executive Leadership Update
Agenda Item 6.8

Verbal reports were received on the following matters:

- Live Waikato District Council project updates are available for the community to access https://www.waikatodistrict.govt.nz/projects.

- The LTP process had kept elected members and staff very busy.

- Waikato District Council was completing activity management. Part of the process showed the teams and roles.

Cr Ngataki entered the meeting at 7.54pm during discussion on item 6.8.

There being no further business the meeting was declared closed at 8.04pm.

Minutes approved and confirmed this day of 2023.

G Tema-Liapaneke
CHAIRPERSON

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open – Information only

To	**Tuakau Community Board**
Report title	**Works, Actions & Issues Report: Status of Items August 2023**
Date:	5 September 2023
Report Author:	Karen Bredesen, EA to the General Manager Service Delivery
Authorised by:	Emma Edgar, Executive Manager, Communications & Engagement

1. Purpose of the report
Te Take moo te puurongo

To update the Tuakau Community Board on actions and issues arising from the previous meeting and works underway in August 2023.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Tuakau Works, Actions & Issues Report: Status of Items for August 2023 be received.

3. Attachments
Ngaa taapirihanga

Attachment 1 – Tuakau Projects-Issues-Activities and Actions August 2023 (Within report)

Tuakau Community Board Actions – August 2023

	Actions	To Action	Update/Response
1.	**Speed Bend on Jellicoe Avenue, Tuakau, to be installed.** July 2023 Staff to give final approval on the design of the speed bend on Jellicoe Avenue, Tuakau.	Service Delivery, Attinder Singh	August 2023: The design has been approved by staff and will be programmed into the 2023-2024 construction season.
2.	**Tuakau Youth Centre Building Project**	Economic Development Advisor, Jason Marconi	The Economic Development Advisor is meeting on 24 August 2023 with the Tuakau Youth Trust's Executive Committee.
3.	**Upgrade to the Tuakau Domain Toilets**	Community Connections, Mel Tarawhiti	August 2023: The project to reinstate the toilets only is still with the Projects team. A toilet which is accessed from the roadside of the building has been identified as a toilet which can be operational with minimal work. A work order has been put through to the contractors to complete this work.
4.	**Emergency Hub** July 2023: Cr Reeve to email a copy of the Te Kauwhata Civil Defence plan to the chairperson for distribution to Board members.	Cr Reeve	Completed.

	Actions	To Action	Update/Response
5.	**Carvings** July 2023: The Board to invite the carvers to the scheduled meeting of Tuesday, 5 September 2023 to discuss a maintenance plan for the carving at Central Park, Tuakau.	The Board, Grace Tema-Lipaneke	The Chair is working with Cr Kandi Ngataki and Ted Ngataki to schedule a meeting.
6.	**Buckland Playground** Trees had been removed from the Buckland Playground Reserve and stumps had been left in the ground. This was a safety issue. July 2023: Cr Reeve to raise a **service request** for removal of the stumps from the Buckland Playground Reserve fence line on Buckland Road, Tuakau.	Cr Reeve	Service Request PRK0210/24 has been raised for this item.
7.	**Buckland Road Reserve Project** Team to clarify the designation of the Buckland Road Reserve project and the date consultation had commenced on this project.	Open Spaces Projects Coordinator, Ed McVicar	August 2023: Initial stages of consultation with the community and mana whenua were completed between September/October 2022. A new project manager has been assigned to this project, and once a full hand over has occurred a further update will be available.

	Actions	To Action	Update/Response
8.	**Request for a Large Speaker to be stored in the Boardroom at the Tuakau Memorial Hall** July 2023: The Chairperson to advise the outcome of the Board's discussion to the Zumba group.	The Chair, Grace Tema-Liapaneke	The Chair to provide an update at the 5 September 2023 meeting.
9.	**Mayoral Community Awards** Mrs Henderson would lead the award process and the Board would discuss nominations offline. The nomination form would be completed and forwarded to meet the Friday, 11 August 2023 deadline.	TUCB Member, Mrs Henderson	The Board's nomination was emailed to Democracy before the deadline.

	Items to remain on the schedule		
10.	**Civil Defence**	Scott Bult, Emergency Management	August 2023: Mapping process is still in progress. A draft Community Response Plan (CPM) is in progress for Tuakau, and will be shared at the earliest opportunity to further assist in progressing ahead of the mapping process detail being shared. This draft will include generic information on district and regional hazards but allow for Tuakau's bespoke risks, vulnerabilities and facilities to be added once mapping process completed. Te Kauwhata's finished plan has been shared as an example (with permission from Te Kauwhata's CR Group Chair).
11.	**George St/Buckland Road Corner** This intersection is considered to need a safety solution as has experienced several accidents. Preliminary Design is due the week starting 24th July. We will work towards construction taking place this summer construction season, ideally during the December/January school holiday period to take advantage of the reduced traffic.	Service Delivery, Jakir Hussain	August 2023: Preliminary design is completed. Received engineer's estimate to deliver the physical works. Test pits and service locations are programmed to be completed end of August. Detailed design to start following the completion of the test pits and service locations. Review of the project budget is required post engineer estimate. Additional budget required for the project is estimated to be $580,000 and if budget available physical works planned to start in January.

12.	**Safety Issues – Edinburgh Street and Booth Crescent** Service Request **RDG00082/24** has been raised.		
13.	**Intersection at Tuakau and Bucklands Roads** Service Request **RDG00079/24** has been raised.		
14.	**Speed Bumps on Gibson Road, Tuakau** Service Request **RDG00080/24** has been raised.		
15.	**Lights at the pedestrian crossing outside Tuakau Library** Service Request **RDG00085/24** has been raised.		
16.	**Congestion on Elizabeth Street** (due to new nearby developments)	Roading, Attinder Singh	August 2023: Currently waiting on Safety Engineer's findings report. The detailed study will be presented to the Community Board once available.
17.	**Centennial Park and Lightbody Reserve – Rubbish/Litter Issues**		
18.	**Bus Shelters in Tuakau**	Roading Team	The Roading team are looking to increase funding for the provision of bus shelters through the Long-Term Plan process.

Further Information:

- If you have noticed a problem in our district that requires our attention (roading, waters, animals, litter etc.), or have questions regarding one of our services (refuse, recycling, billing etc.) you can **log a request via our online Report it tool**. Please do **NOT** contact the Contractor directly.

  Report it here →

- For more **information about Services and Facilities** provided by the Waikato District Council

  Click here →

Projects Update (As at 16 August 2023)

Car Parks

Dr John Lightbody Reserve Car Park
In response to community feedback the footpath on the southern side has been reopened to ensure public safety. Consent is due to be granted late August. After the notification period likely to be the end of August, the Contractor will re-establish onsite.

An update to Councillors and key community stakeholders will be made separately once there is a confirmed date for works to start again.

Dr John Lightbody Reserve Car Park

St Stephens Car Park
This project will be delivered this Construction Season as part of the wider LTP Car Park renewals programme, earmarked for February / March 2024.

Henderson Hall Car Park
Contractors will upgrade this car park at the end of August / start of September.

West Street Car Park
This project will be delivered this Construction Season as part of the wider LTP Car Park renewals programme, earmarked for March / April 2024.

Dr John Lightbody Reserve, Sports Courts Resurfacing.
Concept design is complete and is currently being priced for works to be undertaken.

There is currently a 20 week wait on turf material.

Tuakau Aquatic Centre

Design work is ongoing including discussions with the architect at CPRW to review options for a vertical louvre system on the front of the building to deter the public from gaining access over the roof into the pool after hours.

Harrisville Road Safety Improvements

We are addressing the safety concerns in the Harrisville Logan Road - Buckville Road area due to increasing traffic volume and numerous near misses.

Our project focuses on creating safer corridors with speed management measures, these measures aim to improve safety and create a secure environment for all road users.

Much of the work is completed including all signage. Raised Reflectorised Pavement Marker (RRPM) installation on new asphalt sections is happening over the next 2 weeks. Awaiting detailed design for the guardrail installation.

Harrisville Road Bridge Replacement (adjacent to the intersection with Dominion Road)

Stormwater assessment and ecological study is complete. The Resource Consent application is imminent. Initial discussions held have been held with local Hapu about the project, and a letter sent to the Community Board about upcoming works this summer, with a report to the community board to follow at next meeting.

Tuakau Memorial Hall

A slight delay with the roof works, awaiting better weather. Code of Compliance Certificate for the seismic works has been received. Scheduling a start date for the interior works in with the contractor for the end of this month.

Buckland Playground

Developing a new neighbourhood park in Tuakau, catering to informal sports activities.

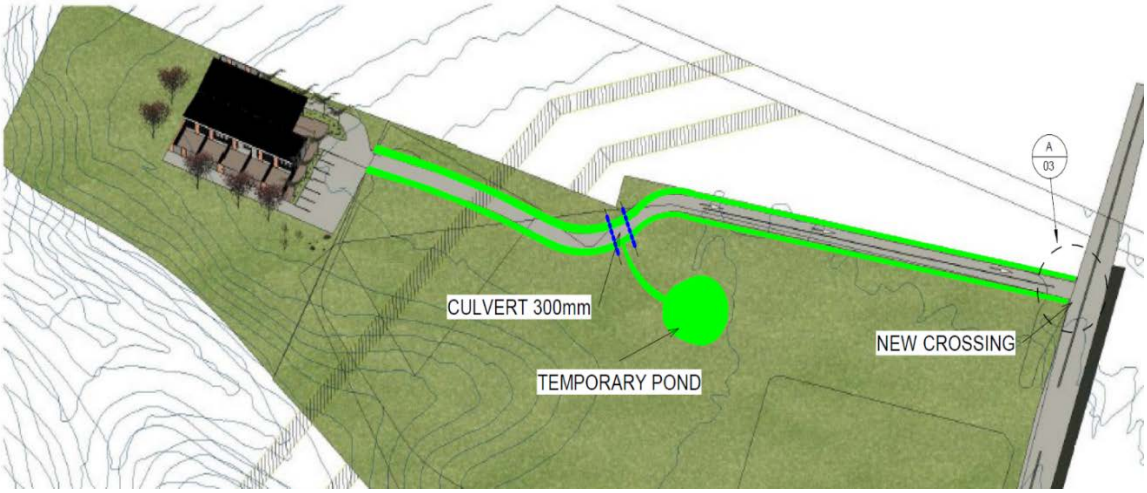
The park will feature open grass areas, a Neighbourhood Playground, lighting, and amenities. Accessible from Booker Drive.

Planning and design is in progress.

Tuakau Dog Pound (Bollard Rd)

This project is to deliver a fit for purpose satellite dog pound facility for the northern areas of the district, it is an overflow for a proposed new or an improved centralised dog pound facility.

An application for resource and building consents has been submitted to Waikato District Council and Waikato Regional Council. We expect to have a response by late August.



Open – Information only

To	**Tuakau Community Board**
Report title	**Discretionary Fund Report to 28 August 2023**
Date:	05 September 2023
Report Author:	Jen Schimanski, Support Accountant
Authorised by:	Colin Bailey, Finance Manager

1. Purpose of the report
Te Take moo te puurongo

The purpose of this report is to update the Tuakau Community Board on the Discretionary Fund spend to date, commitments and balance as at 28 August 2023.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Tuakau Community Board receives the Discretionary Fund to 28 August 2023 report.

3. Attachments
Ngaa taapirihanga

Attachment 1 – Discretionary Fund report to 28 August 2023

TUAKAU (URBAN) COMMUNITY BOARD DISCRETIONARY FUND REPORT 2023/24 (July 2023 - June 2024)
As at Date: 28-Aug-2023

				GL 10-2150-0000-00-25904
2023/24 Annual Plan				16,460.46
Carry forward from 2022/23				46,825.00
	Total Funding			**63,285.46**
Income				
Total Income				-
Expenditure				***excl GST***
Total Expenditure				**-**
Net Funding (Excluding commitments)				**63,285.46**
COMMITMENTS:				
				excl GST
04-Jun-19	Tuakau Youth Centre building project	OTCB1906/04		3,000.00
04-Nov-21	Commitment for a donation for the amount of $100.00 (excluding GST) commemorating the passing of Ms Hillary Barry to Breast Cancer Foundation by Mr Reeve online	OTCB2111/04		100.00
22-Nov-21	Commitment for the amount of $2,000.00 (including GST, if any) towards the cost of Christmas events in Tuakau this payment is to Tuakau Lions Club and they are not GST registered.	OTCB2111/04/TUCB2306/04	2,000.00	
04-Jul-23	TUCB approves the commitment to the Tuakau Lions Club for $2,000.00 (Resolution No. OTCB2111/04) be returned to the Board's discretionary fund pool	TUCB2307/04	(2,000.00)	-
14-Nov-22	Commitment to Belgravia for the amount of approximately $7,600.00 (excluding GST) towards covering the costs of a swimming pool subsidy scheme for 2022/23 season	TUCB/PRWCB2211/10 TUCB2302/06		7,600.00
27-Feb-23	Commitment from the Tuakau Community Board Discretionary Fund for the amount of $900.00 towards the costs assoicated with the 2023 Tuakau ANZAC Day Parade	TUCB2302/05	900.00	
30-May-23	*Less payment of $500.00 to G Tema Liapaneke*	TUCB2302/05	*(431.57)*	
30-May-23	*Less payment of $106.90 to C Reeves*	TUCB2302/05	*(106.90)*	361.53
02-May-23	Commitment of $16,410 (plus GST) from Tuakau Community Boards' Discretionary Fund to the Ngati Tamaoho Trust towards the repair and reinstatement of the carvings in Tuakau Park.	TUCB2305/03		16,410.00
Total Commitments				**27,471.53**
NET FUNDING REMAINING (Including commitments)				**35,813.93**

JS 29/08/2023

Open

To	**Tuakau Community Board**
Report title	**Final Upper Northern Waikato Railway Station Indicative Business Case**
Date:	11 September 2023
Report Author:	Vishal Ramduny, Strategic Initiatives and Partnerships Manager
Authorised by:	Clive Morgan, General Manager, Community Growth

1. Purpose of the report
Te Take moo te puurongo

For the Tuuaakau Community Board to receive the final Upper Northern Waikato Railway Station Indicative Business Case.

2. Executive summary
Whakaraapopototanga matua

The Upper Northern Waikato Railway Station Indicative Business Case (IBC) has been developed in partnership involving Waikato District Council (WDC), Waikato Regional Council (WRC) and Waka Kotahi. KiwiRail has provided technical input through the project team established to oversee this work.

WDC contributed $102,000 for this study (which includes 51% Waka Kotahi Financial Assistance Rate (FAR)) and the WRC contributed $50,000. The scope of this study included the main northern Waikato towns of Tūākau, Pōkeno and Te Kauwhata.

The recommended option which has emerged from the study is that a station is provided at Tūākau, in the short term (within 3-5 years). There is also a good case for also providing a station at Pōkeno within the same period. However, for this two-station solution to be provided, it would be necessary to consider some time saving measures for Te Huia which will need to be investigated further in a Detailed Business Case (DBC). The IBC has therefore recommended that the costs and benefits of serving more than one station is examined in further detail in a DBC.

The economic case for one or both station(s) is likely to improve if additional Te Huia services can be introduced in the future, and in particular train services which are timetabled to provide morning peak time travel opportunities towards Hamilton (and vice versa in the evening peak period), as opposed to the current focus on serving commuter trips towards Auckland. This potential needs to be examined in more detail in a DBC.

It is also noted that the findings of the business case do not preclude the opening of a station at Te Kauwhata in the medium term (within 6+ years of a station being constructed at Tūākau and/or Pookeno) particularly if additional Te Huia services are introduced which provide opportunities for commuter travel to/from Hamilton.

The p95[1] estimate for a railway platform at Tūākau is $6,390,000 (no park and ride facility assumed) and for Pōkeno $9,230,000 (no bus interchange facility).

On 16 August 2023 WDC's Infrastructure Committee recommended to Council the endorsement of the IBC and for it to consider progressing to the next stage (i.e., the DBC) starting in the 2024-2025 financial year and subject to a decision regarding the continuation of Te Huia after June 2024. Council subsequently endorsed the IBC on 28 August 2023.

The DBC, if funded, will analyse in more detail the implications of having a railway station at both Tuuaakau and Pookeno, implementation timing and their consequential implications for Te Huia and inter-regional rail.

In the long term it makes sense for both Tuuaakau and Pookeno to be connected to the Auckland metropolitan railway network through the extension of rail electrification from Pukekohe to Pōkeno as a precursor to full electrification down to Hamilton.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Tuakau Community Board receives the final Upper Northern Waikato Railway Station Indicative Business Case.

4. Background
Koorero whaimaarama

The Te Huia (Hamilton to Auckland) Passenger rail service was introduced on 6 April 2021 on a trial basis, serving Hamilton (Frankton) to Auckland (The Strand) stopping at the intermediate stations of the Rotokauri (The Base), Huntly, Papakura and Puhinui. Te Huia passes through the north Waikato towns of Te Kauwhata, Pookeno, and Tuuaakau, but does not stop at any of these locations.

P95 represents the estimate of costs such that there is a 95 per cent probability of the project being delivered within that cost estimate.

Waikato accounts for half of New Zealand's gross domestic product and is likely to account for more than 70% of New Zealand's population growth over the next 30 years. The population of these three towns mentioned is expected to approximately double over the next 30 to 40 years.

The Te Huia Single Stage Business Case (SSBC) proposed a station in Tuuaakau to service the Upper North Waikato during the early option selection process as part of the start-up service stations.

However, this station was later excluded as the development of station in Tuuaakau was aligned with the future metropolitan service direction of the Hamilton to Auckland Corridor Spatial Plan, and due to lack of funding. The decision to remove Tuuaakau was made at the end of the SSBC process in October 2018.

The market research work done in the 2018 SSBC evidence that the upper northern Waikato has a large proportion of residents who frequently commute to Auckland for a range of purposes and these residents would use a train connection if it was available. A station in Pookeno or Tuuaakau would provide a viable transport connection into Auckland for these people.

Furthermore, WRC consulted with the community through its 2021-2031 Long Term Plan on improvements to the Te Huia passenger rail service. WRC received a record 1,240 submissions on Te Huia.

Adding additional stations made up 16% (197) of all submissions, with many submitters asking for a station to be established in the upper north Waikato. At that time WRC wrote to WDC supporting the allocation of funding to complete a business case for a station in Pōkeno or Tuuaakau.

WDC allocated $102,000 in the 2021-2031 LTP for railway station investigation in the northern Waikato. On 17 June 2023, the Te Huia Sub-Committee approved a feasibility study for a potential railway station on the understanding that the Waikato Regional Council will also make a financial contribution (of at least $50,000) for this study, which it did.

Beca was subsequently commissioned by WRC, in partnership with WDC, to prepare the IBC to consider the case for new passenger stations in the northern Waikato and provide a clear recommendation on the preferred station location(s).

5. Discussion and analysis
Taataritanga me ngaa tohutohu

5.1. Recommended option

The recommended option which emerged from the option short listing is that a station be provided at Tūākau (Capital Costs P95 = $6,390,000).

There does however appear to be a good case for also providing a station at Pookeno (Capital Costs P95 = $9,230,000), though for this station to be provided it would probably be necessary for one or both of the following to occur:

- Te Huia would serve Pukekohe rather than Papakura
- Te Huia would serve platforms on the planned/proposed future third and fourth main (freight) lines at Puhinui.

Without these time savings, the economic benefit to cost ratio for more than one new station is unlikely to be strong enough to support additional stations until Hamilton is served by faster rail services, as envisaged in the recent (draft) IBC for Inter-city connectivity undertaken by the Ministry of Transport.

It is recommended that the costs and benefits of serving more than one station be examined in further detail in a DBC.

It is also recommended that the demand forecasts are refined further in the same DBC, and that further consideration be given to park and ride demand (such as from Te Kauwhata) at Tuuaakau and Pookeno.

It is understood that funding for implementation may be constrained, particularly if two stations are implemented. Staging of delivery will affect the overall affordability of the recommended option, and opportunities to stage delivery will be explored in the Detailed Business Case.

Key performance indicators will need to be developed to assess whether the project is achieving the desired benefits. It is estimated that the DBC could take up to 6-9 months to complete, and the cost could be in the order of $0.4-0.6m.

The economic case for one or both station(s) is likely to improve if additional Te Huia services can be introduced in the future, and in particular train services which are timetabled to provide morning peak time travel opportunities towards Hamilton (and vice versa in the evening peak period), as opposed to the current focus on serving commuter trips towards Auckland. This potential could also be examined in more detail in a DBC.

It is also noted that the findings of the business case do not preclude the opening of a station at Te Kauwhata in the medium term (within 6-10 years), particularly if additional Te Huia services are introduced which provide opportunities for commuter travel to/from Hamilton. In the meantime, there may be a case for improving bus links between Te Kauwhata and Hamilton to help build up demand for a future rail service could be explored further.

5.2. Preferred Option Cost

The preferred option (option 4) of a station at Tuuaakau is estimated to cost approximately (Capital Costs P95 = $6,390,000). This is for a side platform at the existing station location with no track realignment.

An additional station at Pookeno (Option 1: side platforms at former station location) is estimated to cost approximately $9,230,000 (P95).

A third station at Te Kauwhata (Option 4: side platforms at existing station location with no track realignment) would cost approximately $7,420,000 (P95).

Key points to note are:

- Park and ride facilities were assumed to be required at Pōkeno only, as this is the only station where significant longer distance park and ride demand is expected (i.e., on street parking were assumed to be adequate at Tuuaakau and at Te Kauwhata, and on-street bus interchange facilities were assumed to be sufficient at Pookeno – these assumptions were made in order to minimise the cost of providing a new station at each location)
- Grade separated access to the platforms was assumed to be needed at all three stations
- Side platforms were assumed to be provided at all three station locations
- No realignment of the existing track at Tuuaakau and Te Kauwhata was assumed to be necessary to minimise the cost of a new station.

These estimates exclude any land acquisition, as the two stations can be constructed entirely on KiwiRail/WDC owned land. This assumes no park and ride, or bus interchange facilities are provided at Tuuaakau, and that no bus interchange facilities are provided at Pōkeno, given the implications of this additional cost would have on the overall economic benefits of opening stations at these locations.

5.3. Funding Sources and Risks

Currently, no funding is confirmed for a DBC, or for pre-implementation or implementation phases for railway stations, in the 2023-2027 Regional Land Transport Plan (RTLP) or in Council's LTP. It is envisaged at this stage that the funding required to undertake a DBC is sought from the 2024-2027 LTP and RLTP. The funding model, funding streams, costs and programme budget will be developed as part of the DBC. A large Crown contribution is likely to be required to fund the project.

5.4. Overall Affordability

The overall affordability of the recommended station(s) will be explored in the DBC. It is noted however that funding may be constrained, particularly if two stations are implemented. Staging of delivery will affect the overall affordability of the recommended option, and opportunities to stage delivery will be explored in the DBC (for which there is no funding allocation at the time this report was written).

5.5 Infrastructure Committee resolutions from 16 August 2023

The WDC Infrastructure Committee passed the following resolutions with regards to the Indicative Business Case on 16 August 2023.

3.1. That the Infrastructure Committee:

a. Receives the report.

b. Recommends to Council the endorsement of the Upper Northern Waikato Railway Station Indicative Business Case (IBC).

c. Notes that Council endorsing the IBC does not mean making any funding commitment to the construction of a railway station or railway stations. Notes that the recommended option which has emerged from the IBC is that a railway station is provided at Tūākau in the short term (3-5 years) to serve Te Huia in the short term (within 3-5 years) but that there is also a good case for a second station at Pōkeno in the short term.

d. Notes that for a two-station solution (i.e., Tuuaakau and Pookeno) to be provided in the short term, it would be necessary to consider some time saving measures for Te Huia which will need to be investigated further in a Detailed Business Case (DBC).

e. Notes that the findings of the IBC do not preclude the opening of a station at Te Kauwhata in the medium to longer term (6 years+), particularly if additional Te Huia services are introduced which provide opportunities for commuter travel to/from Hamilton.

f. Notes that the case for funding and the confirmation of the costs and benefits of having more than one station in the northern Waikato are examined in further detail in a DBC together with their respective platform layout and the staging of delivery.

g. Notes that the preliminary P95 cost estimates for the preferred station options at Tuuaakau, Pookeno and Te Kauwhata are as follows:

- *Tuuaakau - $6,390,000*
- *Pookeno - $9,230,000*
- *Te Kauwhata - $7,420,000*

h. Note that the DBC is expected to cost $500,000 and that this figure (made up of an assumed 51% Waka Kotahi Financial Assistance Rate) be put forward for consideration in both Council's LTP 2024-2034 and the Regional Land Transport Plan.

i. Note that any funding allocation in the LTP and RLTP for the DBC and, after this, for station construction is subject to a decision on Te Huia continuing beyond June 2024.

j. That the IBC P95 cost estimates for a railway station Tuuaakau ($6,390,000) and Pōkeno ($9,230,000) be considered for inclusion post year 4 in Council's 2024-2034 Long Term Plan and the Regional Land Transport Plan subject to a decision on Te Huia continuing beyond June 2024, the completion of a DBC and a proviso of government subsidy for station construction.

k. That staff work with the Waikato Regional Council on a review of bus transport in the northern Waikato which would also include investigating a service which connects Te Kauwhata and Pookeno to the Papakura Railway Station in the short-term and the Drury Railway Station in the medium term.

l. That a communications plan be developed to clearly articulate the business case process and the key decision-making and funding dependencies so that our communities understand what still needs to be done before any railway station can be constructed.

5.6. Options
Ngaa koowhiringa

Council could choose not to endorse the IBC therefore not to proceed with a DBC. However, doing this would be counterproductive and short-sighted especially since rail is seen as a key transport mode for better connecting our communities to in the northern Waikato to Auckland and to Hamilton.

Council could also decide not to earmark any funding for the DBC or for any station construction in the latter years of the 2024-2034 LTP.

Not advancing a DBC carries its own risk as it could mean that when government announces funding opportunities for public transport or carbon emissions reduction, Council could miss out. Having a DBC for railway stations in the upper northern Waikato will prepare us for applying for government funding opportunities for station construction. A DBC will also help both WDC and WRC advocate for funding from Waka Kotahi through the National Land Transport Fund process.

5.7. Financial considerations
Whaiwhakaaro puutea

As alluded to previously, there is no funding currently for a DBC or for any station construction. The cost of the DBC is estimated to be $500,000.

The preliminary P95 cost estimates for a station at Tuuaakau, Pookeno and Te Kauwhata based on their respective preferred layout options are as follows:

- Tuuaakau - $6,390,000
- Pookeno - $9,230,000
- Te Kauwhata - $7,420,000

The cost of the stations will be further tested through the DBC.

5.8. Legal considerations
Whaiwhakaaro-aa-ture

This report complies with the Council's legal and policy requirements, and obligations under the Local Government Act.

5.9. Strategy and policy considerations
Whaiwhakaaro whakamaaherehere kaupapa here

The report and recommendations are consistent with the Council's Waikato 2070 Strategy, the Hamilton to Auckland Corridor Plan (which is now part of the Future Proof Strategy) and the Te Huia Single Stage Business Case and its addendums. Consideration of stations in the northern Waikato also aligns with the Regional Land Transport Plan.

5.10. Maaori and cultural considerations
Whaiwhakaaro Maaori me oona tikanga

Engagement with mana whenua has taken place through mana whenua representatives on the Tuuaakau and Pookeno Community Boards and Te Kauwhata Community Committee. An online community hui (with invited mana whenua representatives) took place on 3 August. A member of Ngaa Karu Atua o te Waka is on the Future Proof Public Transport Subcommittee.

5.11. Climate response and resilience considerations
Whaiwhakaaro-aa-taiao

Providing railway stations for passenger rail would help a reduction in carbon emissions through a reduction in vehicle kilometres travelled. Government is proposing to elevate emissions reduction to become an overarching focus for Government Policy Statement (GPS) on Land Transport 2024 to ensure that the implications for emissions reduction are a core consideration for all investment decisions.

5.12. Risks
Tuuraru

There is currently no funding confirmed for a DBC, or for pre-implementation or implementation phases (station construction) in the 2023-2027 Regional Land Transport Plan (RTLP) or Councils LTP. It is envisaged that the funding required to undertake a DBC is sought from the 2024-2027 RLTP and Council's LTP. The funding model, funding streams, costs and programme budget will be developed as part of the DBC. A large Crown contribution is likely to be required to implement station construction.

There is a risk that should Council not proceed with the development of a DBC, we will not be able to apply for government funding for carbon reduction activities when these are announced. Having a DBC will give weight to any public transport funding application process.

6. Significance and engagement assessment
Aromatawai paahekoheko

6.6. Significance
Te Hiranga

As defined in Section 5 of the (LGA), that the issue and decision sought in this report has a high degree of significance.

6.7. Engagement
Te Whakatuutakitaki

Highest level of engagement	Inform	Consult	Involve	Collaborate	Empower
	✓	✓	✓	✓	☐

Engagements have taken place with the Tuuaakau Community Board and Pookeno Community and Te Kauwhata Community Committee and with mana whenua representatives on these boards/committee. An online community hui with community and mana whenua representatives took place on 3 August.

Further engagements will occur through the DBC process.

WDC elected member workshop on the IBC were held on 29 May and 19 July 2023. WDC's Infrastructure Committee received, discussed, and recommended the endorsed the IBC on 16 August 2023. Council subsequently endorsed the IBC on 28 August 2023.

The Future Proof Public Transport Sub-Committee was given a progress update on 26 May and endorsed the IBC on 25 August 2023.

7. Attachments
Ngaa taapirihanga

7.1. Attachment 1: Upper Northern Waikato Railway Station Indicative Business Case

Upper North Waikato Railway Stations

Indicative Business Case

Prepared for Waikato Regional Council (WRC) in partnership with Waikato District Council (WDC)
Prepared by Beca Limited (Beca)

7 August 2023

Creative people together transforming our world

Contents

Appendices

Revision History

Revision Nº	Prepared By	Description	Date
1	Claire Jung/Andy Lightowler	Draft	16.6.23
2	Claire Jung/Andy Lightowler	Revised Draft	6.7.23
3	Claire Jung/Andy Lightowler	Final	31.7.23
4	Claire Jung/Andy Lightowler	Revised Final	7.8.23

Document Acceptance

Action	Name	Signed	Date
Prepared by	Claire Jung		4.8.23
Reviewed by	Michael Van Drogenbroek / Andrew Collings		4.8.23
Approved by	Andy Lightowler		7.8.23
on behalf of	Beca Limited		

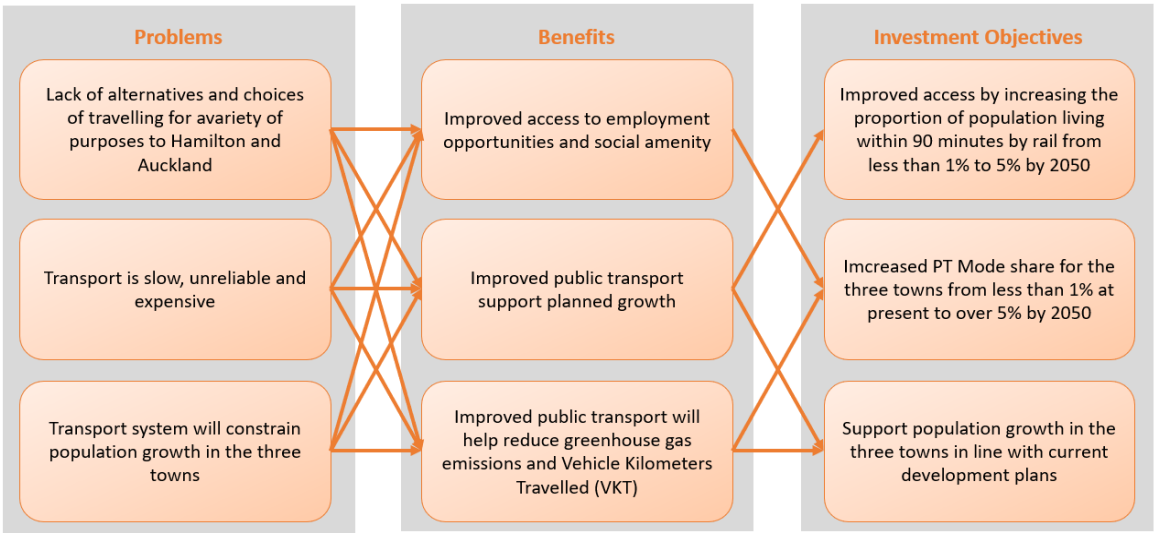
Executive Summary

Beca has been commissioned by Waikato Regional Council, in partnership with Waikato District Council, to prepare an Indicative Business Case to consider the case for new passenger stations in the Northern Waikato areas and provide a clear recommendation on the preferred station location(s).

The Te Huia (Hamilton to Auckland) Passenger rail service was introduced on 6 April 2021 on a trial basis, serving Hamilton (Frankton) to Auckland (The Strand) stopping at the intermediate stations of the Rotokauri (The Base), Huntly, Papakura and Puhinui. Te Huia passes through the north Waikato towns of Te Kauwhata, Pōkeno, and Tūākau, but does not stop at any of these locations. Waikato accounts for half of New Zealand's gross domestic product and is likely to account for more than 70% of New Zealand's population growth over the next 30 years. The population of these three towns mentioned is expected to approximately double over the next 30 to 40 years based on the latest WDC projection.

Stations at these locations could provide improved opportunities and choice for travel to Auckland and Hamilton and could also serve as a 'Park and Ride' option for a wide catchment area encompassing Northern Waikato, the Coromandel Peninsula and South Auckland. The current transport connection between these three towns and Hamilton/Auckland is limited although the Auckland Strategic Transport Model and the Waikato Regional Transport Model predicts growth in demand for public transport for the towns.

This IBC addressed the problems, benefits and investment objectives as shown in the diagram below and described in **Section 2.4**. The main problem is that growth of economic and social wellbeing in the three towns is expected to be at risk without improvements to the transport systems due to a lack of alternatives and choices in relation to accessibility. The provision of a rail service will increase public transport mode share thereby delivering benefits and opportunities though improved access to employment opportunities and social amenity. Aligned with that, investment objectives developed demonstrably relate to the specific problems and opportunities at hand.



The economic case was undertaken to consider the potential options and evaluate which station option(s) best achieve the sought after benefits. Initial options considered included new stations served by Te Huia, as well as shuttle bus options and those requiring the extension of Auckland Metro Rail Services. Using Waka Kotahi's Early Assessment Sifting Tool, an initial list of alternatives and options was screened, taking into consideration the above principles. The completed analysis is summarised **in Section 3.3**. Based on the initial screening, a long list of options was identified, as follows:

- Serve two stations only by Te Huia (Pōkeno and Tūākau/ Te Kauwhata and Tūākau/ Te Kauwhata and Pōkeno)
- Serve one station only by Te Huia (Pōkeno/Tūākau/Te Kauwhata)
- Shuttle bus (from Tūākau to Pukekohe / from Pōkeno to new Drury rail station)

These options have been assessed against each other by following additional evaluation criteria to those defined for the initial sifting of options by Multi-Criteria Analysis. In order to inform the evaluation, the capital cost, consentability and constructability of each option, together with a number of potential options for providing stations at each of the three towns, were identified.

All shuttle bus options were removed as demand for travel to Auckland and Hamilton is unlikely to be large enough to cover the incremental operating costs of new additional bus services relative to the low incremental costs of stopping an existing train service at a station. Options which provide a station at Te Kauwhata, in additional to one other location were rejected, as the time penalty for serving Te Kauwhata (in the southbound direction) is anticipated to be significantly greater than serving Pōkeno or Tūākau if a side platform configuration is adopted at the location of the existing island platform. Details are stated in **Section 3.4**.

On the basis of the above assessment, the following options were short-listed based on their overall average score:

- Serve Pōkeno and Tūākau by Te Huia – Capital Cost (P50) $12.5m – Government BCR 1.4
- Serve Pōkeno only by Te Huia – Capital Cost (P50) $7.4m – Government BCR 1.3
- Serve Tūākau only by Te Huia – Capital Cost (P50) $5.1m – Government BCR 1.5
- Serve Te Kauwhata only by Te Huia – Capital Cost (P50) $5.9m – Government BCR 1.1

Additional criteria have been considered in the evaluation of the short-listed options to identify a preferred option - Demand (patronage), Revenue, Capital cost, Operating costs, Maintenance cost, Travel time benefits, Economic benefit to cost ratio, Impact on vehicle kilometres travelled, decongestion benefits, consentability, constructability, and potential for developer contributions. The additional analysis undertaken to inform the MCA is summarised in **Section 3.7**.

The recommended option which emerged from the option short listing is that a station be provided at Tūākau with a Government BCR of 1.5 (Capital Costs P50 $5.1m). There does however appear to be a good case for also providing a station at Pōkeno (Capital Costs P50 $12.5m), though for this station to be provided it would probably be necessary for one or both of the following to occur:

- Te Huia would serve Pukekohe rather than Papakura
- Te Huia would serve platforms on the planned/proposed future third and fourth main (freight) lines at Puhinui.

Without these time savings, the economic benefit to cost ratio for more than one new station is unlikely to be strong enough to support additional stations until Hamilton is served by faster rail services, as envisaged in the recent (draft) Indicative Business Case for Inter-city connectivity undertaken by the Ministry of Transport.

It is recommended that the costs and benefits of serving more than one station be examined in further detail in a Detailed Business Case. It is also recommended that the demand forecasts are refined further in the same Detailed Business Case, and that further consideration be given to Park and Ride demand (such as from Te Kauwhata) at Tūākau and Pōkeno. It is noted than funding for implementation may be constrained, particularly if two stations are implemented. Staging of delivery will affect the overall affordability of the recommended option, and opportunities to stage delivery will be explored in the Detailed Business Case.

A number of key performance indicators will need to be developed to assess whether the project is achieving the desired benefits. It is estimated that the Detailed Business Case could take up to 6-9 months to complete, and the cost could be in the order of $0.4-0.6m.

1 Introduction

1.1 The Opportunity

The Te Huia (Hamilton to Auckland) passenger rail service was introduced on 6 April 2021 on a trial basis. It currently serves stations at Hamilton (Frankton), Rotokauri (The Base), Huntly, Papakura, Puhinui and Auckland (The Strand). Te Huia passes through the north Waikato towns of Te Kauwhata, Pōkeno, and Tūākau, but does not stop at any of these locations. There locations are shown in Figure 1-1, and in more detail in Figure 1-2, Figure 1-3 and Figure 1-4.

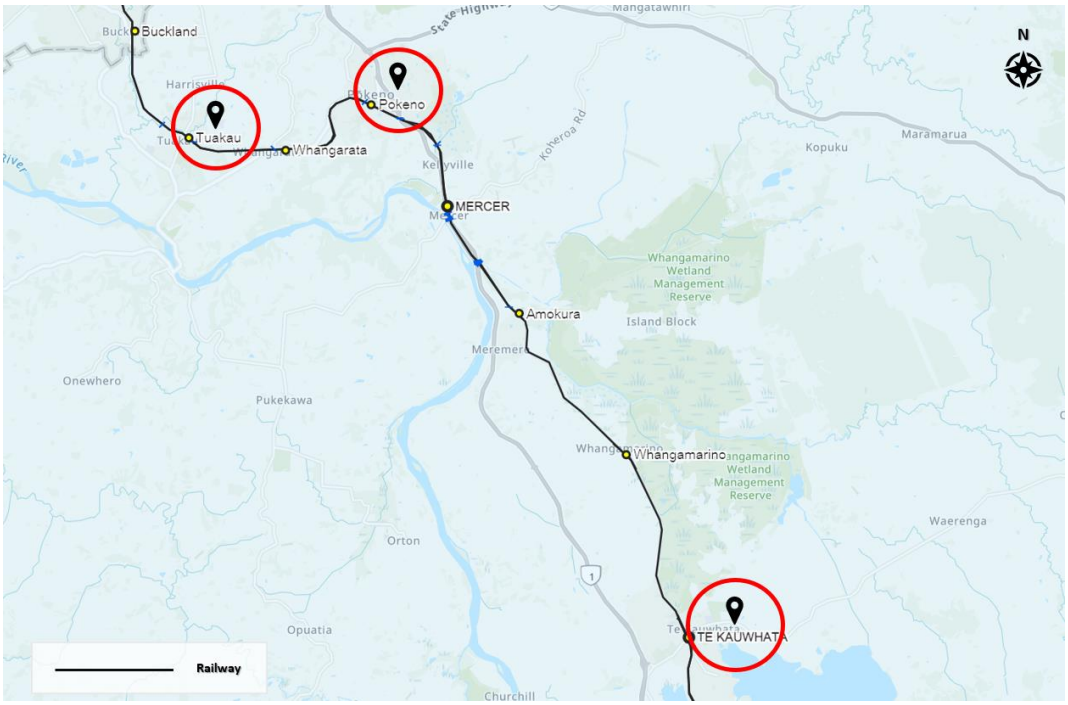


Figure 1-1. Location Plan

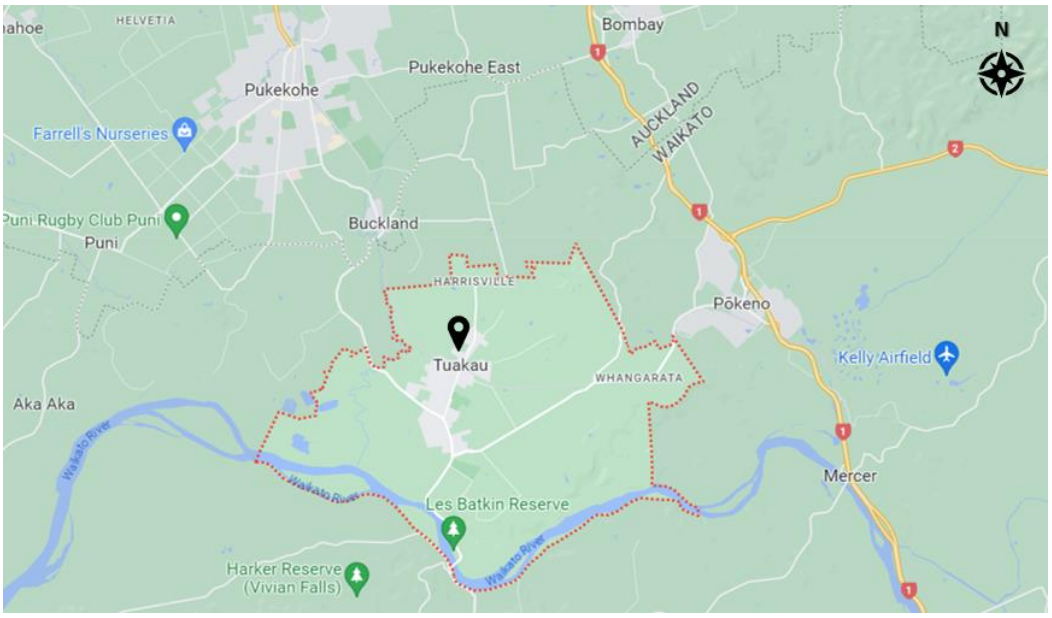


Figure 1-2. Location Plan (Tūākau)

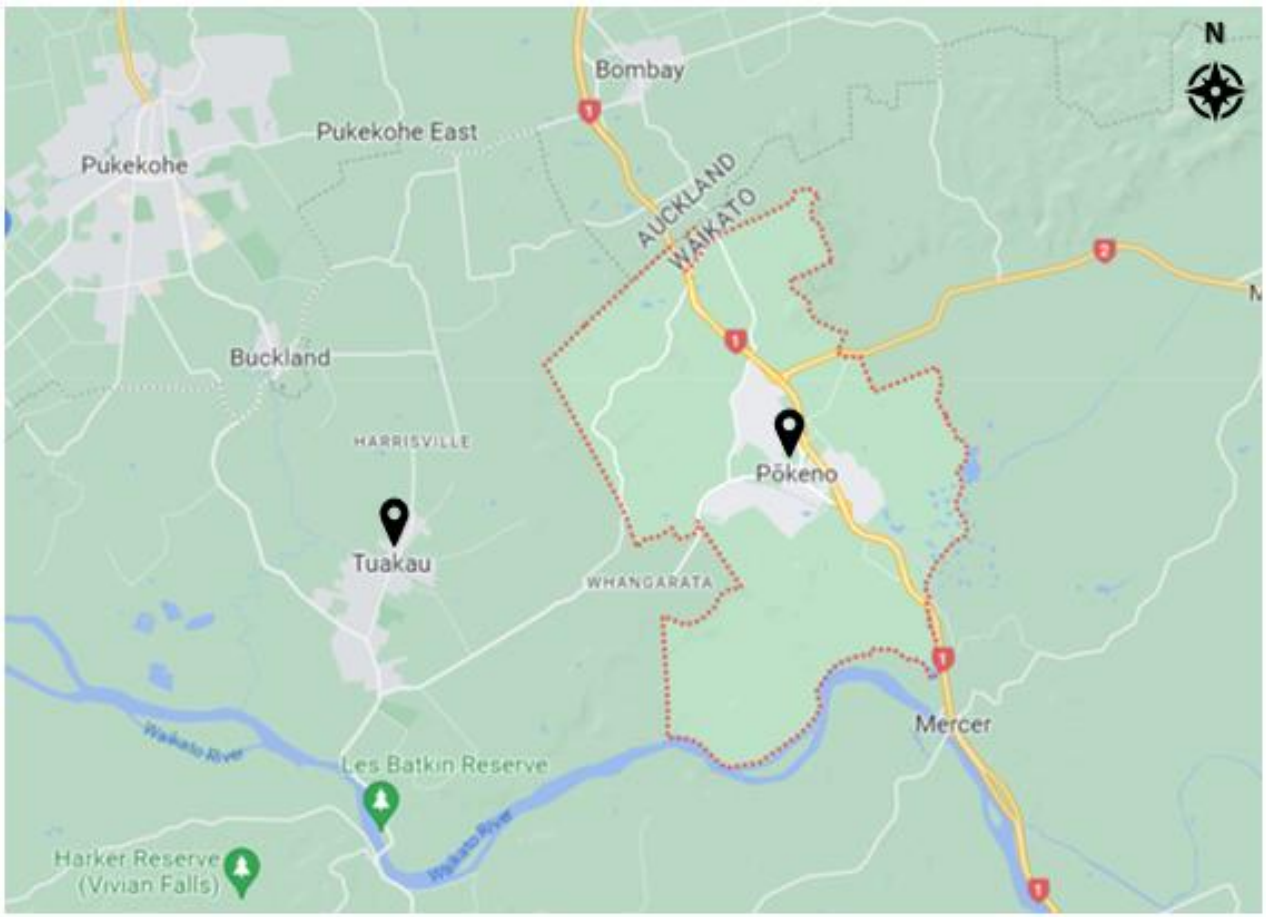


Figure 1-3. Location Plan (Pōkeno and Tūākau)

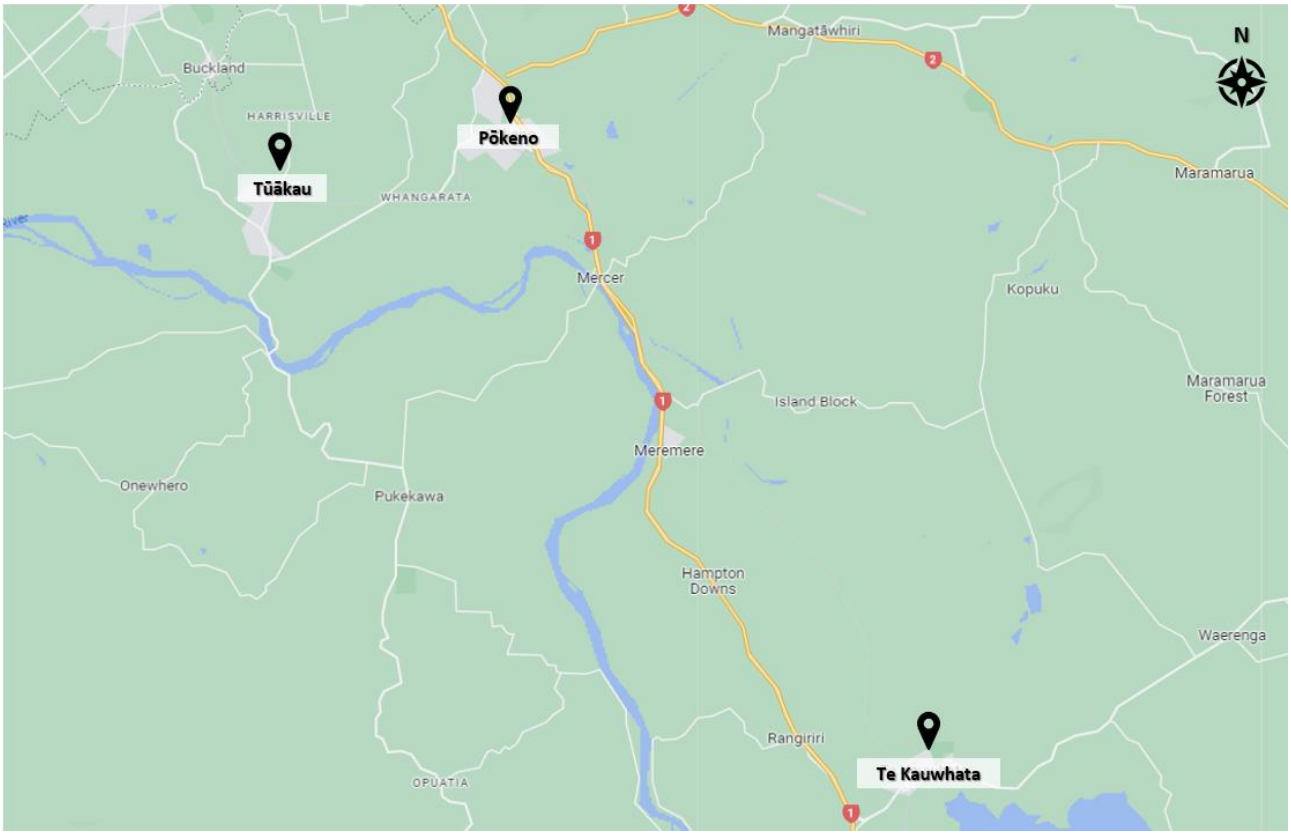


Figure 1-4. Location Plan (Te Kauwhata)

Improvements suggested by stakeholders to the Te Huia service were included in a record level of submissions to WRC's 2021-31 Long Term Plan (LTP), with requests for additional stations in the north Waikato towns making up 16% of all submissions. These stations could provide improved opportunities and choice for travel to Auckland and Hamilton, and could also serve as a 'Park and Ride' option for a wide catchment area encompassing Northern Waikato, the Coromandel Peninsula and South Auckland.

1.2 Business Case Requirements

In response to the high level of support for new rail stations, Waikato Regional Council (WRC), in partnership with Waikato District Council (WDC) commissioned an Indicative Business Case (IBC) following Waka Kotahi approval of a Point of Entry to commence the IBC. The scope of the business case is to assess the feasibility and viability of the potential stations and provides a clear recommendation on the preferred station location(s). In particular, the IBC needs to:

- Take into consideration the local aspirations of residents, including Ngāti Tamaoho and Ngaa Muka Development Trust (through its representatives on the Te Kauwhata Community Committee)
- Contribute towards and compliment other local community aspirations
- Take into account relevant studies being led by national and regional agencies, and strategic plans for the South Auckland communities.

1.3 Business Case Process

The IBC has been prepared in accordance with Waka Kotahi guidance. The scope of an IBC in the context of the overall business case process is shown overview in Figure 1-5. It should be noted that the Point of Entry for this IBC identified that proceeding to an IBC was the appropriate next stage of the business case process for the investment options being considered, rather than the usual Programme Business Case (PBC) stage.

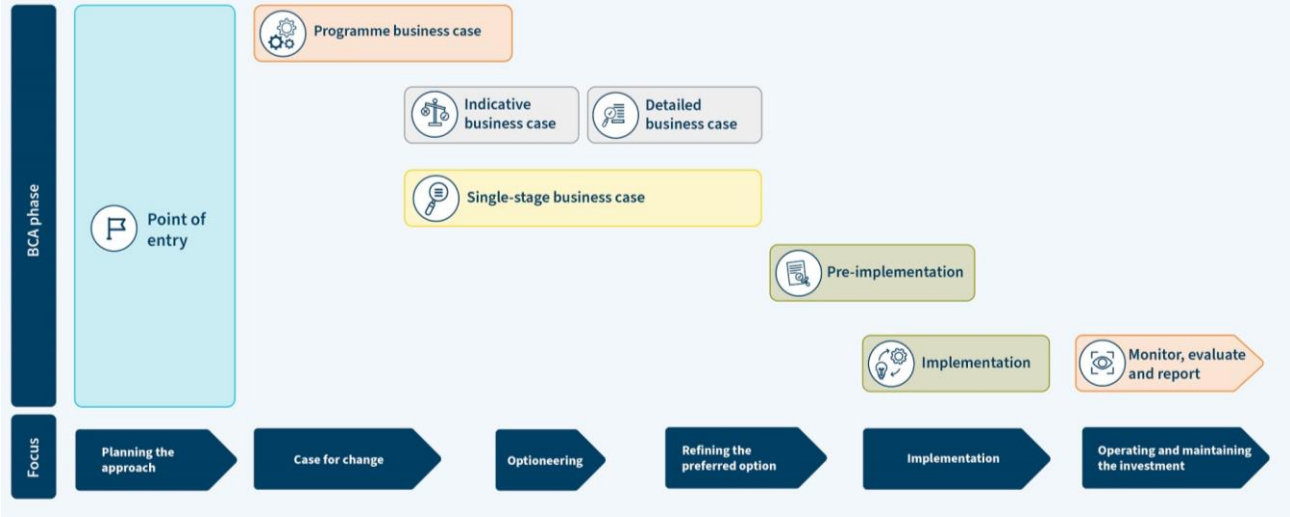


Figure 1-5. Waka Kotahi Business Case Process

The IBC identifies a recommended option to address the case for change for an individual activity. An IBC seeks to provide assurance that the recommended option is the best approach to deliver the desired outcomes and is an effective solution to the problems identified in the strategic case.

A series of workshops have been held with the project partners (WRC, WDC, Waka Kotahi and KiwiRail) at monthly intervals since the business case process commenced in February 2023.

In order to gain a better understanding of stakeholder requirements, a visit to each station location was undertaken on 16 March 2023 with representatives of Ngāti Tamaoho, Local Board members, and a number of District and Regional Councillors.

1.4 Business Case Structure

Following this brief introduction, the IBC is structured in five further sections covering each stage (or case) in the business case process, namely strategic case (section 2), economic case (section 3), financial case (section 4), commercial case (section 5) and management case (section 6).

2 Strategic Case

2.1 The Waikato Region and District

The Waikato Region of New Zealand covers nearly 24,000 km^2 from the top of the Coromandel Peninsula to the north-eastern slopes of Mt Ruapehu, spanning from the west coast of the North Island through to the east coast of the Coromandel Peninsula and the Kaimai and Mamaku ranges.

Waikato District is situated in the north of Waikato Region, covering the area from the Bombay Hills and Hunua Ranges in the north to the rural communities to the west and east of Hamilton City in the south. It covers urban and rural communities including Ngāruawāhia, Huntly (Rāhui Pōkeka), Te Kauwhata, Raglan (Whāingaroa), Pōkeno and Tūākau. The Waikato District is experiencing significant growth due to its proximity to Auckland and Hamilton, and is classed in the National Policy Statement on Urban Development (NPSUD) 2020 as a Tier 1 high-growth area.

WRC is the local government body for the Region. It works with communities, iwi and industry to sustainably manage our natural resources, enabling a strong economy and a high quality of life for all. It also works in partnership with WDC to provide a healthy environment, strong economy, and liveable, thriving and connected communities.

2.2 Land Use Context

2.2.1 Location and Existing Land Use

Tūākau was established in 1840, close to the banks of the Waikato River. Over 6,000 people live there[1]. The town serves to support local farming, and is the residence of many employees of New Zealand Steel at Glenbrook. The town is located approximately 9km from Pukekohe and 8km from Pōkeno. Auckland is approximately 56km to the north by road and Hamilton is approximately 77km to the south.

Pōkeno is the fastest growing town in Waikato District fuelled by the town's proximity to Auckland. Its population is currently around 3,300. The town is located north of the Waikato River, around 3km from the Waikato District and Auckland regional boundary. There are two large dairy factories in the town.

The interchange of State Highway 1 (SH1) and State Highway 2 (SH2) is also located in Pōkeno, a major transport connection linking Auckland, Waikato and the Bay of Plenty region. It is located approximately 67km from Hamilton and 53km from Auckland by road. Pōkeno is approximately 25km north of Te Kauwhata.

Te Kauwhata is a small rural village of approximately 2,500 residents[2]. Te Kauwhata services a large rural area, including Waikaretu, Onewhero, Maramarua, Meremere, Waerenga, Ohinewai, Rangiriri, Naike and Glen Murray. The town is located approximately 2km east of the Waikato Expressway, approximately 78km from Auckland and 49km from Hamilton by road.

2.2.2 Future Growth

Tūākau, Pōkeno and Te Kauwhata are located close to the Auckland, Waikato and the Bay of Plenty region – the regions that account for half of New Zealand's gross domestic product, and is likely to account for more than 70% of New Zealand's population growth over the next 30 years.

[1] 6,594 – Census March 2013

[2] 1,617 – Census 2018

There has been significant growth over the last 20-30 years, in particular at Pōkeno, where the population has increased from 500 in 2005 to almost 3,500 in 2021 (a growth of over 300%), due in part to the town being near the Waikato Expressway.

Around 100,000 people planned for in the Pukekohe-Paerata and Opaheke-Drury Structure Plan areas, and approximately 50,000 people are signalled for the northern Waikato in the Waikato 2070 growth strategy.

Reactivation of the former Tūākau station, which is located in the town centre, is a particular focus for WDC[3].

Te Kauwhata is expected to grow significantly over the next 50 years in response to employment opportunities in the Northern Waikato and South Auckland. Around 1,650 homes are currently being developed per year by Winto and Kāinga Ora over the next eight years.

The latest WDC projections of growth in the three towns from 2018 to 2065, at five-year intervals from 2025, are summarised in Table 2-1 and shown as a graph in Figure 2-1. These projections are the University of Waikato's 2021 High Projection of population and were supplied to Beca by WRC in May 2023.

Table 2-1. Population Projections

Town	2023	2025	2030	2035	2040	2045	2050	2055	2060	2065
Pōkeno	4,435	5,011	6,265	7,516	7,851	8,183	8,281	8,344	8,440	8,523
Te Kauwhata	3,125	3,421	4,516	5,619	6,806	7,999	8,782	9,564	10,151	10,743
Tūākau	6,192	6,482	6,615	6,733	6,797	6,852	6,872	6,890	6,862	6,839
TOTAL	**13,752**	**14,914**	**17,396**	**19,868**	**21,454**	**23,034**	**23,935**	**24,798**	**25,453**	**26,105**

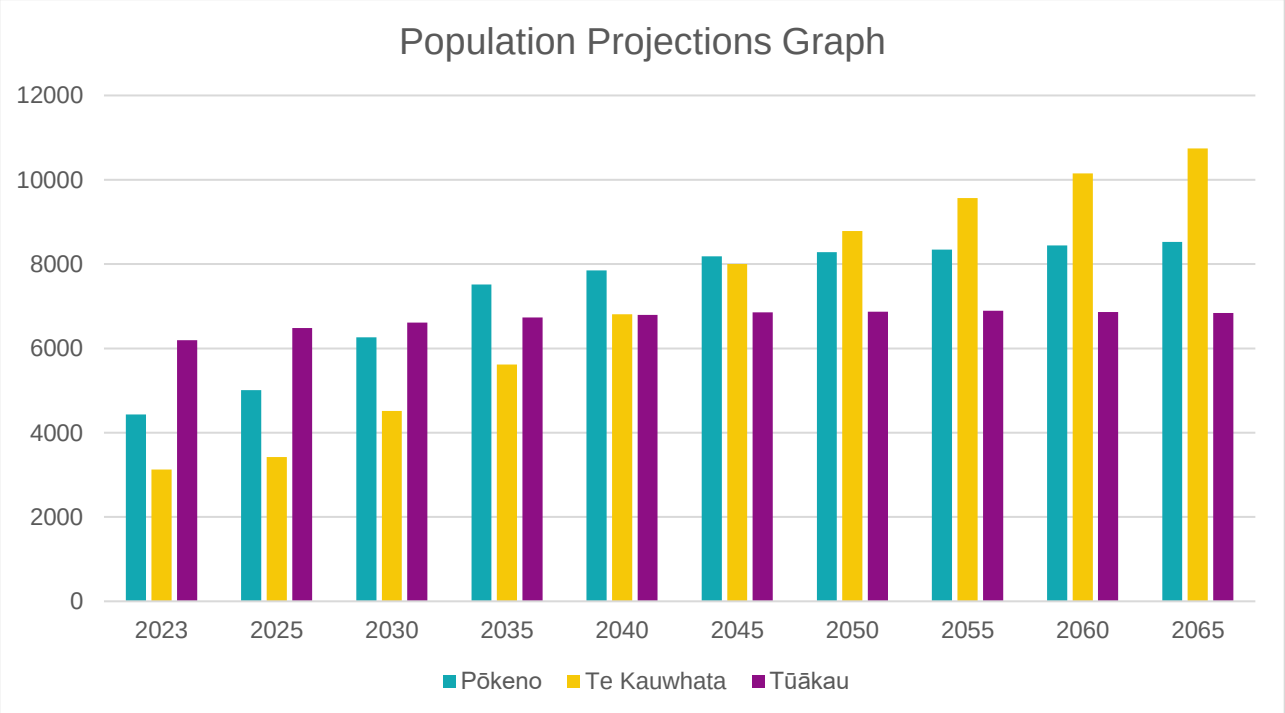


Figure 2-1. Population Projections Graph

[3] A budget allocation was made for this in WDC's 2018 LTP (and the two previous ones)

Employment opportunities in the three towns are not projected to increase by anywhere near the same amount as population. Long distance travel, particularly for commuting, is likely to increase considerably, therefore.

2.2.3 Pōkeno Public Realm Concept Plan

The Pōkeno Public Realm Concept Plan (PRCP) was completed in April 2022. The purpose of the plan is to support the rapidly growing residential community of Pōkeno by helping transform its town centre into a vibrant, people-focused community destination.

The PRCP builds a sequential plan that will take the WDC, Mana Whenua and Pōkeno community on a journey to develop a distinct and compact centre, reconnecting the existing residential community with its built and natural environments.

The upgrade of Pōkeno Town Centre and the provision of new community facilities and amenities are priorities identified in the Waikato District Long Term Plan, with funding set aside for a number of key projects within Pōkeno.

A supporting Transport Assessment included an indicative design of a transport hub located adjacent to the main rail line, between Market Street and High Street (currently a 'paper road'), which includes approximately 60 to 70 car parking spaces and four bus stops/layover spaces. This is shown in Figure 2-2.

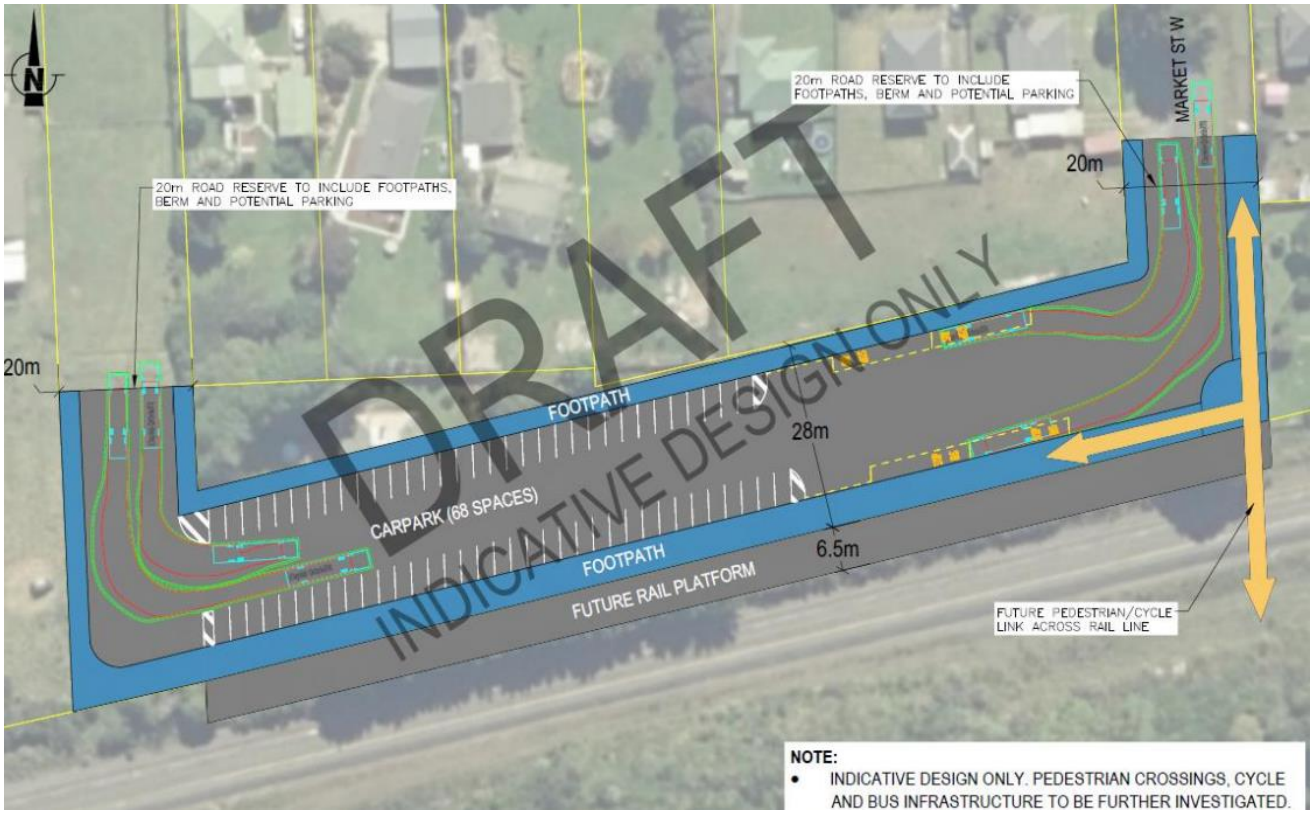


Figure 2-2. Proposed Transport Hub at Pōkeno

2.3 Transport Context

2.3.1 The Te Huia Service Business Case

A Single Stage Business Case (SSBC) for funding the introduction of the Te Huia service was developed collaboratively by WRC, WDC, Hamilton City Council (HCC), Auckland Council (AC), Auckland Transport (AT), Waka Kotahi and KiwiRail. This was finalised in 2018, and secured funding to operate the train service for a five-year trial period.

The service and its performance have been subject to strong public and media interest since it commenced operating in 2021. Much of the feedback on the quality of the service has been positive feedback, but there was early criticism of the low passenger numbers, long journey times, low service frequency and the (initial) lack of access to Auckland CBD.

In response to this, a number of areas for improvement were identified in 2021 by representatives of WRC, KiwiRail, Waka Kotahi and MOT in the short term to address this criticism. This included extending the service from Papakura to Auckland's CBD's The Strand station, and introducing trains operating between the peak periods, on 24 January 2022 (the Phase 1A and 1B improvements), as summarised in Figure 2-3.

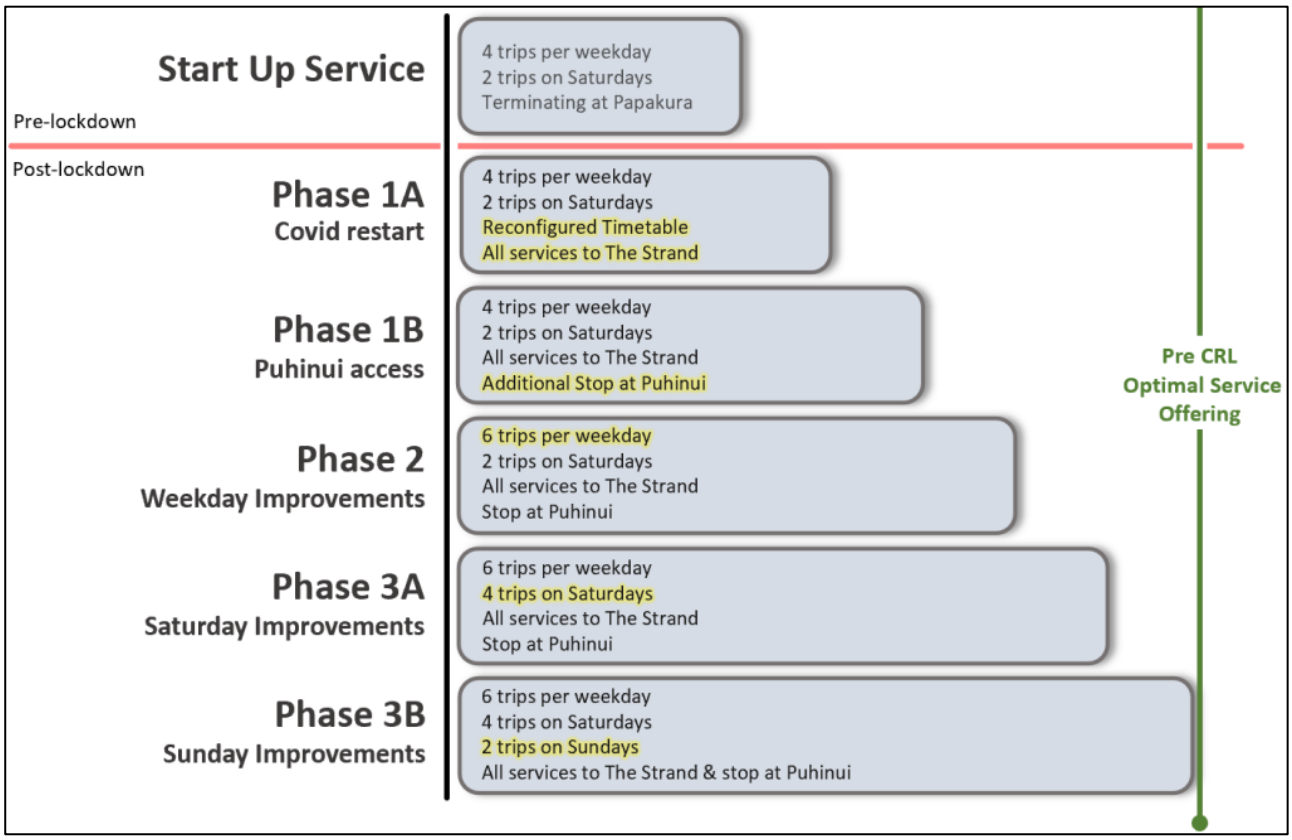


Figure 2-3. Te Huia Train Service Improvements

2.3.1.1 Stations Served by Te Huia

The SSBC considered the providing stations at a number of potential locations, including Te Kauwhata, Pokeno and Tuakau. With regard to these locations, based on the key risks, constraints and uncertainties identified at the option long list stage, and the project investment principles, the SSBC concluded that:

- Pōkeno was not applicable for the start-up service as its former station facilities cannot be reactivated
- Tuakau may not be available until after the proposed commencement date for Te Huia, as it has not been used for a significant period and substantial work is required to reactivate the station
- Te Kauwhata would be the easiest of these three stations to reactivate, primarily requiring platform height improvements, but a station at Huntly was chosen in preference.

2.3.1.2 Planned Service Level Enhancements

Further improvements planned by WRC involve the introduction of an additional weekday train each way (i.e. Phase 2 in Figure 2-3). This is subject to recently completed safety enabling work receiving regulatory approval, and to the improvements being possible within the constraints of the existing funding envelope.

Implementation of an additional two Saturday services (Phase 3A) and two new Sunday services (Phase 3B) is currently on hold due to their being a large number of engineering works taking place in the Auckland Metro area, as well as funding constraints. A service review is planned to be undertaken in 2023.

An Addendum to the existing SSBC has been prepared by WRC and recommends that Te Huia continues to access the Auckland network andstations after the Auckland City Rail Link (CRL) project opens.

A key issue the Addendum considered was whether timetable paths could be found to enable the train to operate, given the additional Auckland Metro (suburban) train services which are planned to be introduced when CRL opens. The Addendum examined how the potential network capacity constraints could be overcome, as well as considering how the existing rolling stock could be refurbished to enable the trial service to continue operating.

2.3.2 State Highway 1 (Auckland Southern Motorway/ Waikato Expressway Improvements)

State Highway 1 (SH 1) is the longest and most significant road in the New Zealand road network, running the length of both main islands.

The Auckland Southern Motorway is the section of SH1 which links central Auckland with the Bombay Hills, just short of the Auckland/Waikato boundary. It is largely a six-lane highway north of Papakura and four lanes south of Papakura. Widening from four to six lanes between Papakura and Drury South is currently underway.

The Waikato Expressway is a four-lane section of SH1 linking the Bombay Hills with Cambridge. It was built in seven sections, including a bypass of Pōkeno which was constructed in 1992-93. The final section of the Expressway (Hamilton city bypass) completed in July 2022.

SH1 is approximately 13km shorter than the Hamilton to Auckland railway line between Hamilton and Auckland Central. This is due to SH1 taking a more direct route than the railway line between Pōkeno, and Drury, bypassing both Tuakau and Pukekohe.

2.3.3 Existing Travel Patterns

Existing travel patterns for work and education purposes from the three towns are shown in Figure 2-4, Figure 2-5 and Figure 2-6. This is based on Stats NZ Tatauranga Aotearoa data from the 2018 Census.

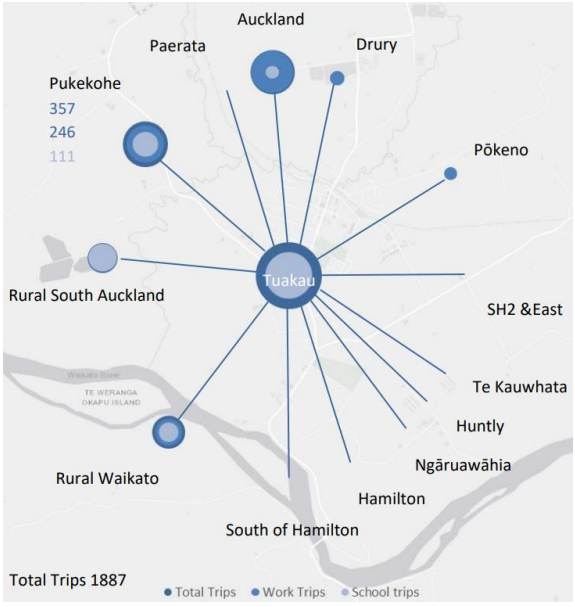


Figure 2-4. Existing Travel Patterns: Tūākau

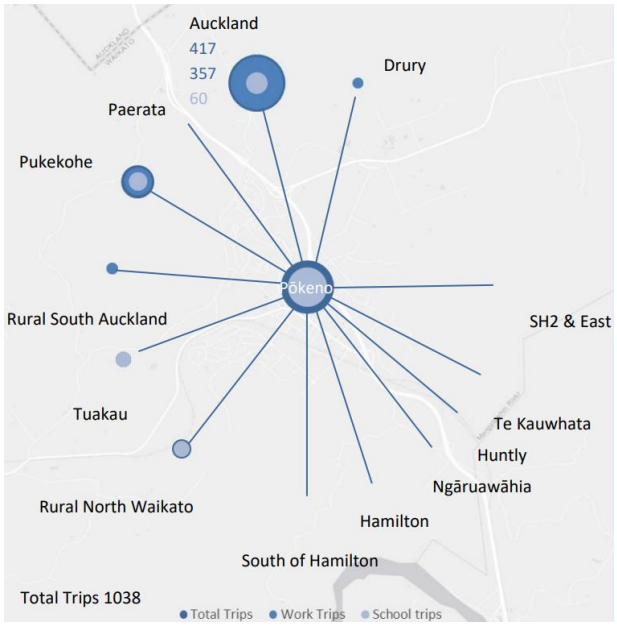


Figure 2-5. Existing Travel Patterns: Pōkeno

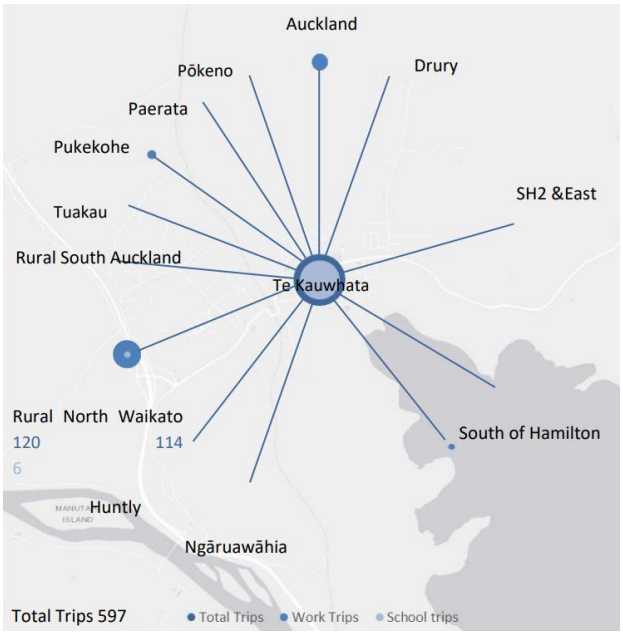


Figure 2-6. Existing Travel Patterns: Te Kauwhata

Key points to note from the travel patterns are:

- The majority of Tūākau's existing commute to school trips are internal
- Trips to employment from Tūākau are generally internal, to Auckland or to Pukekohe
- Pōkeno is less self-sufficient in terms of employment than either Pukekohe or Tūākau
- The majority of existing employment trips from Pōkeno are to jobs in Auckland (including nearby communities such as Pukekohe)
- The majority of trips to school from Pōkeno are internal
- Like Pōkeno, Te Kauwhata's trips to education are generally internal
- Almost all commute to work trips from Te Kauwhata are external and to rural areas rather than to Auckland or Hamilton
- Few trips from any of the three towns are to Huntly.

2.3.4 Existing Bus Services

The following bus services currently serve the three towns:

- Hamilton to Te Kauwhata (service 21 providing two buses per day each way on Mondays to Fridays only, one operating for the benefit of people working in Hamilton in the daytime)
- Hamilton to Pukekohe via Pōkeno and Tūākau (service 21 providing one bus per day each way Mondays to Fridays), as shown in Figure 2-7.
- Pōkeno to Pukekohe via Tūākau (service 44 operating approximately hourly Mondays to Fridays and every two hours at weekends), as shown in Figure 2-8.

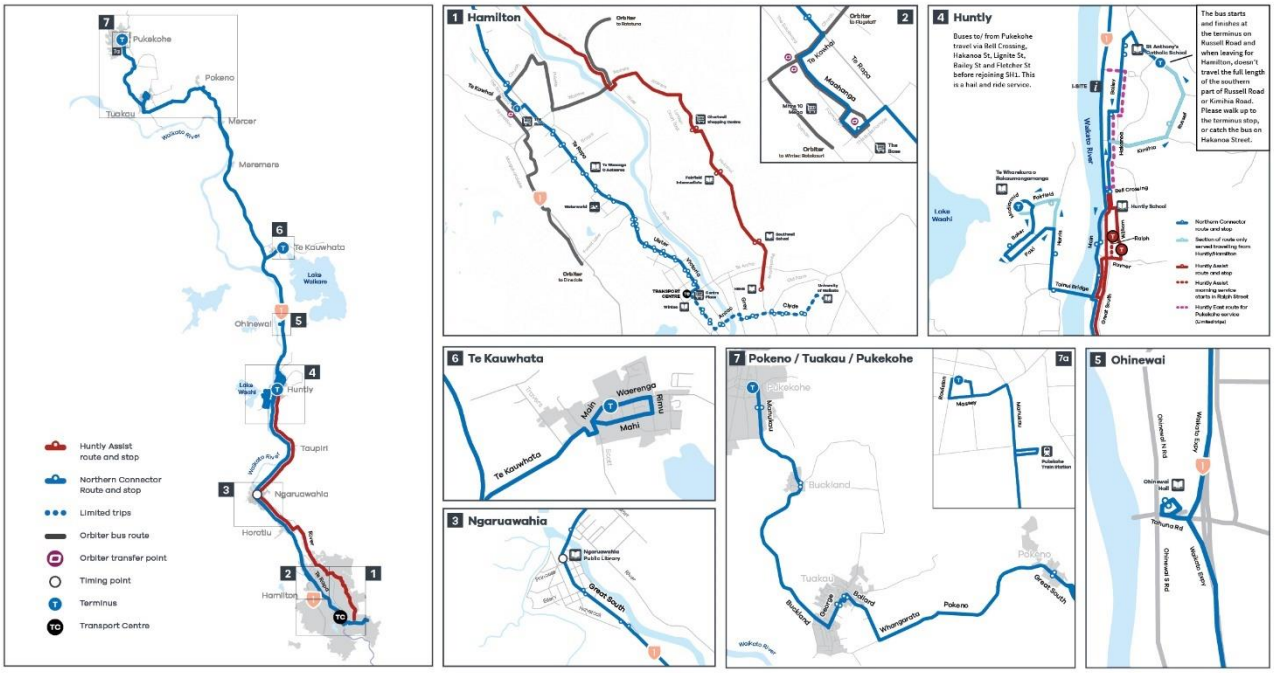


Figure 2-7. Bus Route 21 (Hamilton – Te Kauwhata – Pukekohe)

Figure 2-8. Bus Route 21 - Pōkeno to Pukekohe via Tūākau

A proposed trial bus service between Pōkeno and Papakura (seven days a week). This is expected to be contracted for two years, but the contract will permit a one-year extension to occur if required.

In addition, InterCity buses operate two inter-regional bus services between Auckland and Hamilton each way (Mondays to Sundays) that call at Pōkeno. These buses are not timed to provide a service for commuter travel to Auckland or Hamilton.

The bus service between Te Kauwhata and Hamilton is timed to permit commuting to Hamilton in the morning and return travel in the evening.

Prior to the commencement of the rail electrification extension works from Papakura to Pukekohe in August 2022, the first bus from Pōkeno left at 6.10am and, after changing to the train service at Pukekohe (and then to another one at Papakura), would not get you to Auckland's Britomart station until 8.46am. Currently these buses connect with rail replacement buses at Pukekohe to rail services at Papakura until the end of 2024 when electrification is expected to be complete.

Travel by bus between Te Kauwhata and the main towns to the north, including Pōkeno and Tūākau, is limited therefore to one bus per day during the week. It is not possible to travel from Te Kauwhata to Auckland by public transport if you need to arrive before 9am.

2.3.5 Implications of Planned Growth on Demand for Public Transport

On the basis of this information, and forecast travel demand derived from the Auckland Strategic Transport Model (ASM) and the Waikato Regional Transport Model (WRTM), the total number of trips that could be made by public transport in 2051, as predicted in the North Waikato - South Auckland Enhanced Transport Connections Programme Business Case (PBC) undertaken for Waka Kotahi in 2021, is shown in Figures Figure 2-9, Figure 2-10 and Figure 2-11. The figures also show the number and percentage of trips predicted trips from the three towns in the morning peak period.

- Tūākau – Approximately half of the trips in the morning peak period are expected to go to Pukekohe, and the trips toward Pōkeno and Auckland account for 15% each respectively.
- Pōkeno - Trips in the morning peak period are anticipated to account for approximately 30% to get to Auckalnd, and similar portion is expected to go to Pukekohe.
- Te Kauwhata – Approximately half of the trips are to Hamilton in the morning peak period, and quarter of the trips is expected to be to Huntly.

Sensitivity: General

Morning peak period trips in 2051 with potential to be by public transport

Tuakau		
Drury	94	5%
Paerata	63	4%
Pukekohe	830	48%
Pokeno	262	15%
Auckland	260	15%
Te Kauwhata	24	1%
Huntly	38	2%
Ngaruawahia	10	1%
Hamilton	138	8%
Total trip	1720	100%

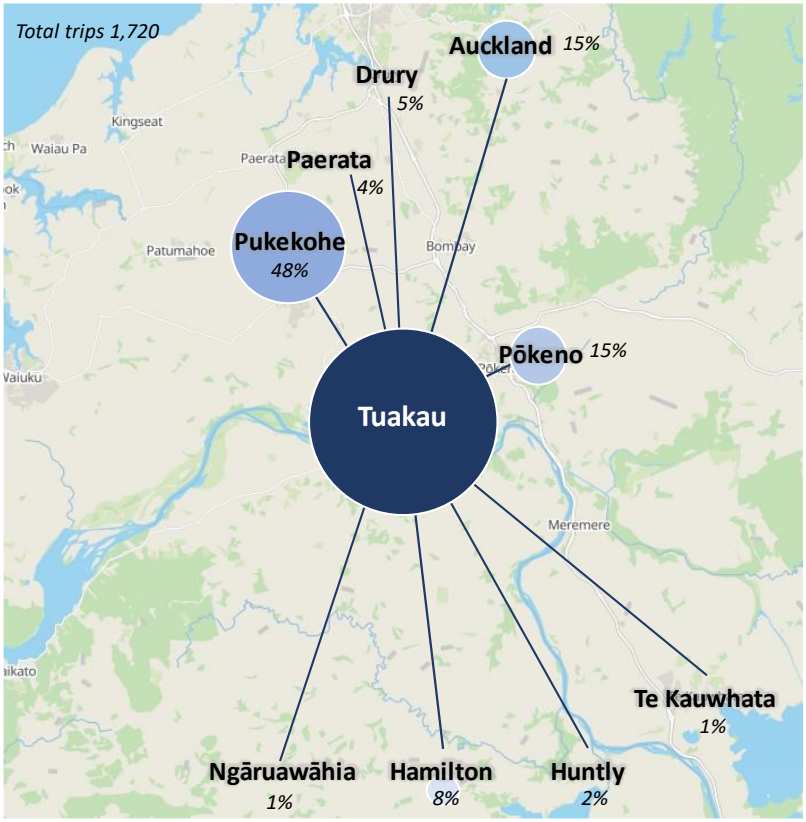


Figure 2-9. Public Transport Trips from Tūākau

Sensitivity: General

Morning peak period trips in 2051 with potential to be by public transport

Pokeno		
Drury	222	10%
Paerata	58	3%
Pukekohe	517	24%
Tuakau	272	13%
Auckland	585	28%
Te Kauwhata	58	3%
Huntly	87	4%
Ngaruawahia	22	1%
Hamilton	295	14%
Total trip	2120	100%

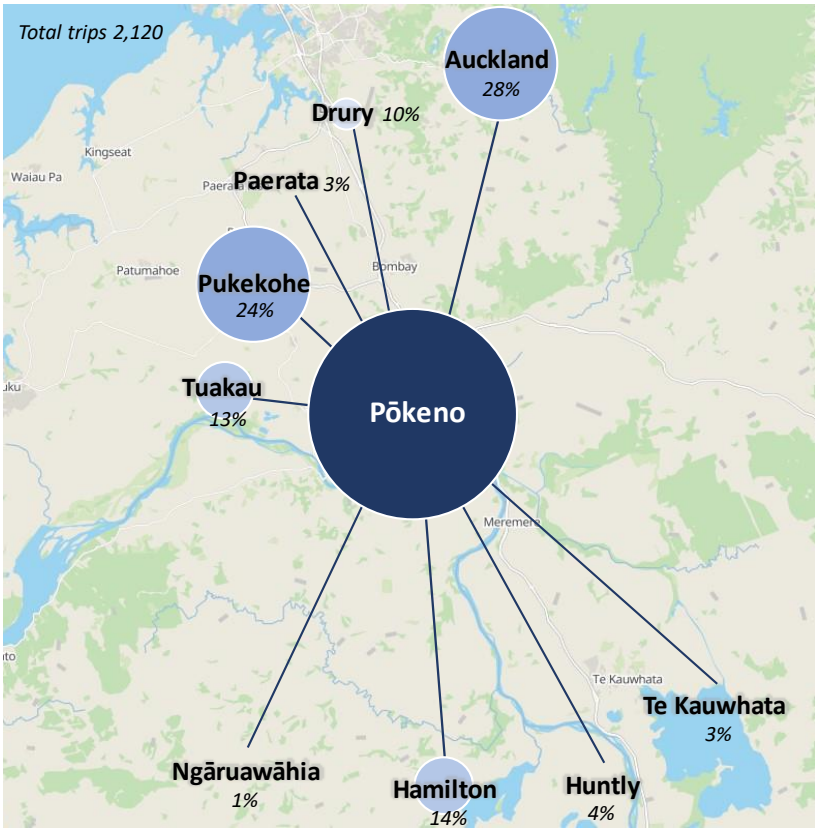


Figure 2-10. Public Transport Trips from Pōkeno

Sensitivity: General

Morning peak period trips in 2051 with potential to be by public transport

Te Kauwhata		
Drury	7	1%
Paerata	2	0%
Pukekohe	15	3%
Tuakau	7	1%
Auckland	37	6%
Pokeno	23	4%
Huntly	140	25%
Ngaruawahia	29	5%
Hamilton	311	54%
Total trip	571	100%

Figure 2-11. Public Transport Trips from Te Kauwhata

2.4 Strategic Alignment

The proposed stations in the Upper North Waikato area align well with national, regional, and local strategies, policies and plans, as summarised in Table 2-2. Overall, these highlight the need for multi-modal transport solutions to improve economic integration, supporting housing and employment opportunities, and create vibrant and affordable urban areas in Upper North Waikato and southern Auckland. A common theme is also that public transport is integral to all aspects of WRC and WDC's shared purpose.

Table 2-2. Strategic Alignment

Strategic Alignment	Details
Government Policy Statement 2021 (GPS)	Providing better travel options is a strategic priority for the GPS that directs investments in the rail system to work towards developing stronger interregional connections. New rail stations in the Upper North Waikato area are consistent with this strategic priority.
New Zealand Rail Plan (NZRP) 2021-2031	The Ministry of Transport's NZRP sets out a three-year investment programme and a ten-year investment forecast for the national rail network. It is a non-statutory document guiding investment in New Zealand's rail network through a set framework for planning/investing through the NLTP. The Plan sets out a new investment, planning and funding regime for rail, and indicates a strong intent to develop inter-regional connection in other fast-growing cities. It specifically commits to considering the potential for further strategic investments and service enhancements in the Hamilton to Auckland rail corridor through the National Land Transport Fund (NLTF). The Plan also recognises the network constraints that need to be addressed (invested in) in Auckland to support the continued operation of inter-regional trains, freight and AT Metro passenger services. New rail stations in the Upper North Waikato area could support investment in the Hamilton to Auckland rail corridor.
Rail Network Investment Programme (RNIP) 2021	KiwiRail's prepares the RNIP so that rail projects can be considered alongside road projects within the NLTF. The RNIP has a key focus on investing in metropolitan rail to support productivity and growth in New Zealand's largest cities, including through enhanced regional services, with the Hamilton to Auckland service directly referenced.
Arataki 2021-2031	Arataki is Waka Kotahi's ten-year view of what is needed to deliver on the government's current priorities and long-term objectives for the land transport system. It identified that rail links between Hamilton and Auckland is a strategic area of focus for the Upper North Island. Another priority identified is to support delivery of growth initiatives through the Hamilton to Auckland corridor with multi modal transport choices.
Waikato Regional Land Transport Plan (RLTP) 2021-2051	The RLTP identifies there is a strong case to investigate further enhancements of rail in the Hamilton to Auckland corridor. Its priorities include protecting and improving priority strategic corridors (including rail), resolving rail constraints in the Upper North Island, supporting better multi-modal transport options, enhancing passenger rail and planning for expansion in the Hamilton to Auckland corridor. The RLTP notes that Waka Kotahi, WRC and transport partners will progress work support and enhance the Te Huia Hamilton to Auckland passenger rail service and associated improvements, including business case outcomes for additional rail stations.

Waikato Long Term Plan (LTP) 2021-2031	As part of the WRC LTP consultation process, the community were presented with an opportunity to provide feedback on the Te Huia passenger rail service. Although extending the service further into Auckland was the most supported priority theme (and has now been implemented), the development of additional stations in the Waikato area was the second preferred theme. More service frequency during weekdays was the third highest priority theme.
Waikato Regional Public Transport Plan (RPTP) 2022-2032	The RPTP supports making progressive enhancements to the Te Huia service to make it more accessible, reliable and attractive. New rail stations in the Upper North Waikato area could make the Te Huia service more accessible and attractive.
Auckland 2050 Spatial Plan	This Plan, adopted in June 2018, shows how Auckland is expected to grow and change during the next 30 years. It directs investment in new infrastructure and services to work towards improving Auckland's inter-regional connections, identifying that inter-regional rail between Auckland and Hamilton would provide positive economic outcomes and support housing and employment opportunities. New rail stations in the Upper North Waikato area could support investment in the Hamilton to Auckland rail corridor.
Hamilton to Auckland Corridor Plan 2020	The Plan, completed in December 2018 and updated in November 2020, sets the vision, growth management objectives and programme for the corridor. The main objective of the 2020 plan is to improve housing affordability, underpinned by affordable urban land. It is supported by wider objectives of enabling urban intensification in areas that can be supported by rapid transit, improving public transport options and access to employment, education and services, and assisting emission reductions. The Plan recognises the importance of transport connections between North Waikato towns and South Auckland and inter-regional rail over time.
Hamilton-Waikato Metro Spatial Plan (MSP)	The Hamilton-Waikato Metropolitan Plan (Metro Spatial Plan) is being delivered through the Future Proof partnership and is one of the initiatives being delivered as part of the broader Hamilton to Auckland Corridor Plan. The Metro Spatial Plan consider how best plan to for the long-term future to maintain and improve liveability through the way the area grows and how people move around. The plan includes a 100+ year vision and spatial framework and a 30-year plan for delivery. The Hamilton to Auckland rail corridor is a key asset which is firmly part of future integrated transport and spatial planning across the metro area. As such proposals to deliver new train stations and improve access to services along the corridor are well aligned with the overall vision.
Hamilton to Auckland Intercity Connectivity IBC	An interim IBC, completed in 2020, explored how significantly reduced journey times between Hamilton and Auckland (particularly by rail) could unlock the corridor's full growth potential. It identified four possible scenarios for a rapid rail connection between Hamilton and Auckland, including extending electrification of the existing route, and building an entirely new rail line. Cabinet agreed in August 2020 that the IBC would be completed, working with the Ministry for Housing and Urban Development, the Treasury, KiwiRail, Waka Kotahi and Treaty partners in the Corridor. Desired outcomes relevant to this IBC include exploring potential incremental

	improvements to existing infrastructure and services (including considering the relationship of a faster intercity connectivity with Te Huia). Whilst the IBC has not yet been published, the emerging preferred option is understood to propose a staged approach to services and infrastructure improvements. This includes in-line track improvements through curve easing, and electrification extension south of Pukekohe to Hamilton etc.
Auckland Rail PBC	In 2016, AT and KiwiRail jointly developed the Auckland Rail Development Programme (ARDP), which is an indicative 30-year passenger/ freight infrastructure plan for Auckland Rail. In 2022, AT commenced work on a Rail PBC to reconfirm the strategic direction for rail in the region for the next 30 years. This was commissioned in response to the increased emphasis placed on rail in the GPS and the NZRP. The PBC is not yet finalised, but is anticipated to recommended additional capacity in the Auckland Metro area for passenger and freight trains. This could create further opportunities to improve Te Huia's level of service arising from the additional demand new stations (and associated improved services) could generate.
New Zealand Transport Emission Reductions Plan (TERP)	The Government released in May 2022 Aotearoa New Zealand's first TERP. It describes how New Zealand can meet emissions budgets and make progress towards meeting our 2050 target. The ERP has targets to reduce total kilometres travelled (VKT) by the light fleet by 20% by 2035 through improved urban form and providing better travel options, particularly in the largest cities. Mode shift to rail would help achieve this target and would support and encourage a reduction of CO2 to support New Zealand's commitment to the Paris Accord and the United Nations' Sustainable Development Goal on "Climate Action". Any proposal that provides better access to Te Huia should increase the passenger load factor per train and reduce emissions compared with the private car.
Proposed Business Case for Rail Electrification Extensions North Island	In the 2023 budget the Government announced $10 Million of funding for a business case to be developed to extend electrification south of Pukekohe to Hamilton on the NIMT and onwards to Tauranga as well as closing of the electrification gap on the Lower North Island. The funding will allow planning work to fully understand options, including design work, and costs so that the Government can then make informed investment decisions on the corridor.
Inquiry Into The Future of Inter-regional Passenger Rail In New Zealand	In July 2023 the report of the Parliamentary Transport and Infrastructure Committee Inquiry into the future of inter-regional passenger rail was released. One of the key recommedations was a continued focus on the Auckland to Tauranga corridor which includes the line of the Te Huia rail service. The report referenced the importance in particular of rail connectivity on the Auckland to Hamilton corridor and specifically referenced this IBC for additional rail stations in Waikato to increase patronage on Te Huia.

2.5 The Problem/Opportunity to be Addressed by this Business Case

There are a large number of problems and opportunities which this business case could potentially address, many of which are inter-related. The problems and opportunities to be addressed, the benefits of addressing the problem, and a number of Investment Objectives were discussed with representatives of WRC, WDC and KiwiRail at a workshop held on 15 February 2023. These built on the problems and benefits defined in the 2018 Te Huia SSBC and shown in Figure 2-12.

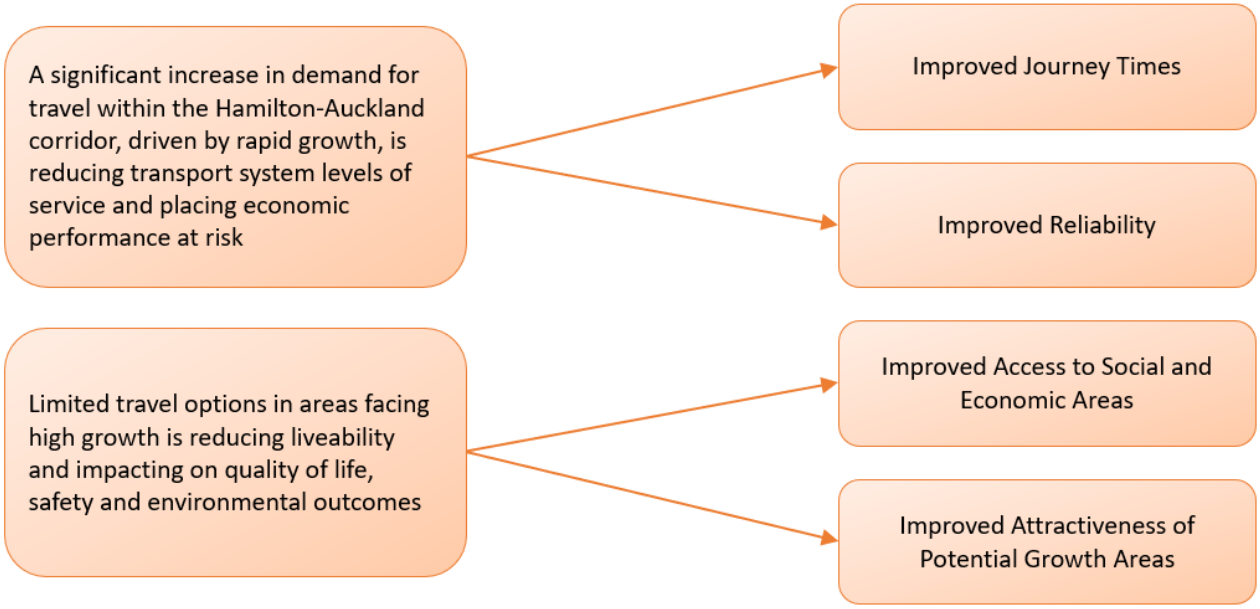


Figure 2-12. 2018 SSBC Problem and Benefit Statements

Following the workshop, the problems were articulated in three high level problem statements, and consideration given to the underlying causes, and the effects and consequences of the problem. Evidence to support the problem statements was also analysed, as appropriate.

The problem statements are summarised in Figure 2-13.

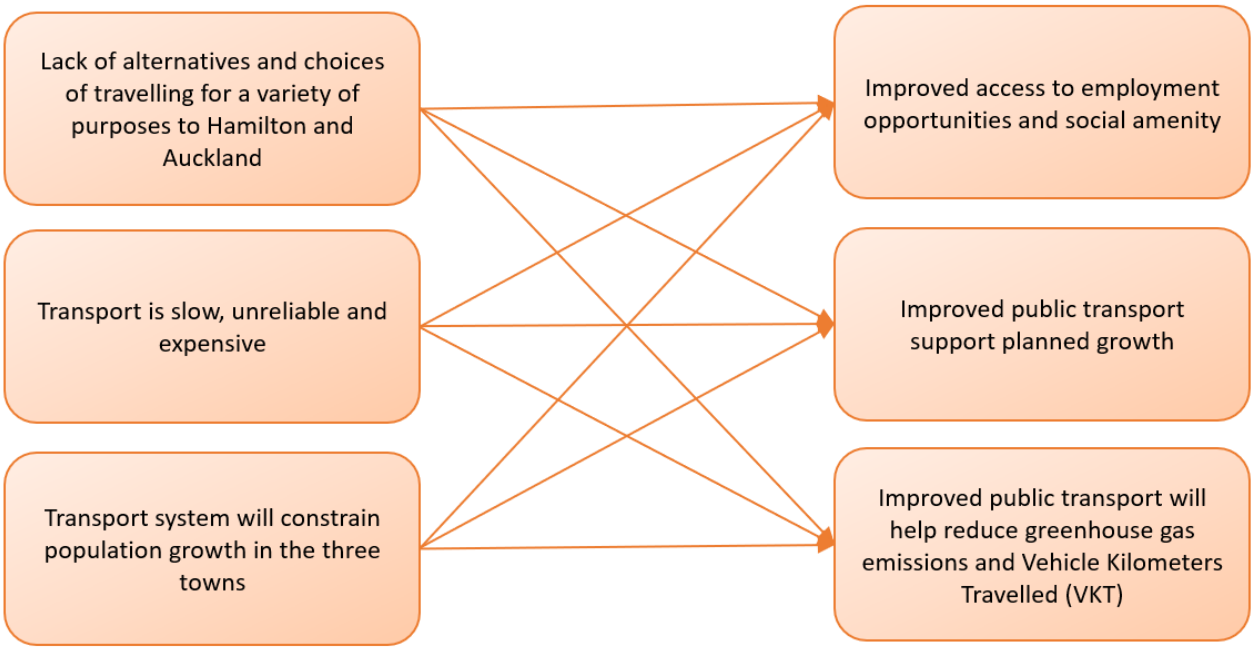


Figure 2-13. IBC Problem and Benefit Statements

2.5.1 Problem 1 – Lack of Alternatives and Choices of Travelling for a Variety of Purposes to Auckland and Hamilton

2.5.1.1 Cause

The three towns are currently heavily reliant on the travel by car to access goods and services, and employment/education opportunities in Auckland and Hamilton. This is because public transport in the three towns, particularly Te Kauwhata, is limited to a small number of infrequent bus services. The bus services that do operate from Te Kauwhata mostly operate to/from Hamilton, and the services from Pōkeno and Tūākau mainly serve Pukekohe as opposed to directly to Auckland. No weekend bus routes serve Te Kauwhata.

2.5.1.2 Effect

The effect of the lack of alternatives to car travel is that some members of the community are unable to access key employment and community facilities easily or quickly in the Auckland and Hamilton areas, such as hospitals. Even when community facilities are able to provide transport, e.g. hospitals, their availability to travel at convenient time tends to be very limited.

The lack of alternatives to car travel tends to have adverse safety and environmental outcomes.

2.5.1.3 Consequence

The main consequence of a lack of access to employment, education and social opportunities adversely impacts on liveability and quality of life.

2.5.2 Problem 2 – Transport is Slow and Unreliable

2.5.2.1 Cause

The main cause of slow and unreliable travel by road is traffic congestion on State Highway 1 (SH1), particularly at peak times for journeys to and from Auckland. This problem exists despite being subject to significant upgrades to both the Auckland Southern Motorway and Waikato Expressway over the past decade.

Between 2013-2019 traffic volumes on SH1 grew by 34% and 28% at the Bombay and Taupiri sites. This represents a constant rate of traffic change over that period of approximately 5% per annum (Bombay) and 4% per annum (at Taupiri). Annual growth rates on SH1 have outstripped population growth in both the Waikato region (2.3%) and the Auckland region (2.0%) over the same period, indicating that car use is increasing at a greater rate than population growth.

Travel time data collected by Beca from Google data for travel in the peak hour (8-9am and 5-6pm) on a Tuesday, Wednesday or Thursday in May 2023 indicated the average travel time between the three towns and Auckland / Hamilton is very variable, particularly for travel to/from Auckland. Fifteenth, average and 85th percentile travel times (in minutes) from travel between the three towns and Auckland/Hamilton is summarised in Table 2-3.

Table 2-3: Car Travel Times (Minutes)

		15th %ile (AM)	Average (AM)	85th %ile (AM)	15th %ile (PM)	Average (PM)	85th %ile (PM)
Tuākau	Tuākau to Auckland	68	73	83	44	59	68
	Auckland to Tuākau	47	49	53	53	63	81
	Tuākau to Hamilton	60	61	63	56	57	58
	Hamilton to Tuākau	57	58	58	59	61	62
Pōkeno	Pōkeno to Auckland	60	65	77	36	53	64
	Auckland to Pōkeno	38	41	44	45	60	71
	Pōkeno to Hamilton	52	53	56	48	49	50
	Hamilton to Pōkeno	48	49	49	51	52	53
Te Kauwhata	Te Kauwhata to Auckland	77	79	90	51	65	75
	Auckland to Te Kauwhata	53	56	60	59	74	86
	Te Kauwhata to Hamilton	39	41	46	37	38	38
	Hamilton to Te Kauwhata	37	37	38	39	40	42

A likely cause of the increasing traffic congestion is both population growth along the Hamilton-Auckland corridor and employment growth in Auckland, South Auckland and Hamilton. Whilst population growth has been relatively similar across the Auckland and Waikato regions since 2010, employment growth has been significantly greater in Auckland.

It is also noted that, whilst train travel is not an option at present, the Te Huia service is reliable, though not particularly competitive with car journey times other than at peak times of the day, as shown in Table 2-4.

Table 2-4: Car and Train Travel Times (15th and 85th percentile range)

Location	Train to Auckland (The Strand)	Car to Auckland CBD	Train to Hamilton	Car to Hamilton CBD
Tuākau	70-75 minutes	45-110 minutes	75 minutes	57-61 minutes
Pōkeno	80-85 minutes	36-108 minutes	65minutes	49-56 minutes
Te Kauwhata	105-110 minutes	51-116 minutes	40 minutes	37-46 minutes

2.5.2.2 Effect

The effect of the problem is that it adversely impacts on access to a wide range of activities (work in particular, but also secondary hospital services and major social activities, such as inter-regional, national and international sports and high end recreational services, which are only available in Auckland.).

2.5.2.3 Consequence

The consequence of car travel being slow is that it limits the growth potential of the three towns. It also impacts on the economic and social wellbeing of the communities.

2.5.3 Problem 3 – The Transport System Will Constrain Planned Growth

2.5.3.1 Cause

A significant increase in demand for travel by road transport from the three towns to Auckland and Hamilton is predicted to arise as a result of the planned growth in the three towns and in the wider Waikato District and Region, as well as the increased economic opportunities in Auckland and Hamilton (which will be far bigger than the increase in the smaller towns).

Future year traffic volumes predicted by the Waikato Regional Transport Model (WRTM) indicate traffic volumes north of Hamilton are expected to double to 40,000 vehicles per day, and at Bombay they are expected to increase by over 50% to over 60,000 vehicles per day.

As indicated earlier, employment opportunities are predicted to be in the wider Auckland region and in Hamilton. Recent projections of employment growth prepared by the Auckland Forecasting Centre (AFC) show that employment opportunities in the Auckland region are forecast to grow by 41% between 2018 and 2051. In the same period, employment opportunities in Hamilton City are projected to grow by 42%, based on recent Waikato Integrated Scenario Explorer (WISE) projections.

2.5.3.2 Effect

The projected growth in population in the three towns, coupled with the increase in the number of jobs in the Auckland and Hamilton urban areas, is causing considerable growth in the demand for travel to/from the three towns.

The limited capacity of the road network to accommodate additional demand is likely to result in peak time travel become increasing long and unreliable as congestion on the state highway, particularly north of Pōkeno on Auckland's Southern Motorway (SH1), increases. This is despite the widening of SH1 which is currently taking place between Papkura and Drury.

2.5.3.3 Consequence

Without improvements to the transport system, growth in the three towns is at risk. This could impact on the economic performance of the Waikato District and the wider Waikato and Auckland Regions.

2.6 The Potential Benefits of Investment

The main benefits of addressing the problems/capitalising the opportunity, are as follows:

- Reduced carbon emissions, greenhouse gas emissions and vehicle kilometres travelled (VKT).
- Improved access to employment opportunities and some social amenities (e.g. shopping, secondary hospitals, high end leisure and recreational activities, etc.)
- Enables planned growth in the three towns
- Improved safety outcomes
- Increased public transport mode share.

The link between the problems and benefits is shown in Figure 2-15.

2.6.1 Reduced Carbon Emissions, Greenhouse Gas Emissions and VKT

Te Huia's carbon emissions per train journey of 140 kms to the Strand is estimated by WRC to be 1,165 kg CO2e. This is equivalent to roughly 54 people doing the same journey in private vehicles. WRC have estimated that, by carrying 54 passengers per train (assuming all of them drive in their own vehicle), the

carbon footprint of the train is offset. During April 2023, Te Huia carried an average of 89 passenger per train, not only offsetting the carbon footprint of the train but a net negative position during that month. Therefore, any proposal that provides better access to Te Huia should increase the passenger load factor per train and reduce emissions compared with the private car.

Reductions in greenhouse gas emissions and VKT are also expected, and these benefits have been taken into account in the economic evaluation.

2.6.2 Improved Access to Employment Opportunities and Social Amenities

The provision of a rail station(s) is expected to provide improved access to employment opportunities in the Auckland region.

Improved access to social amenities in both the Auckland and Hamilton region are also expected to occur.

Improved access to employment opportunities in Hamilton would arise if improvements are made to the Te Huia service.

2.6.3 Enabling Planned Growth

Whilst the level of train service Te Huia currently provides is not anticipated to have a significant impact on planned growth, the provision of a rail service can form the basis of longer-term improvements to rail links to the Upper North Waikato area.

2.6.4 Increased Public Transport Mode Share

Public transport mode share is expected to increase as a result to improved rail links to the Upper North Waikato area.

2.7 Investment Objectives

Investment objectives have been developed to be demonstrably related to the specific problems and opportunities at hand. These are based on the investment objectives defined in the 2018 SSBC, as shown in Figure 2-14.

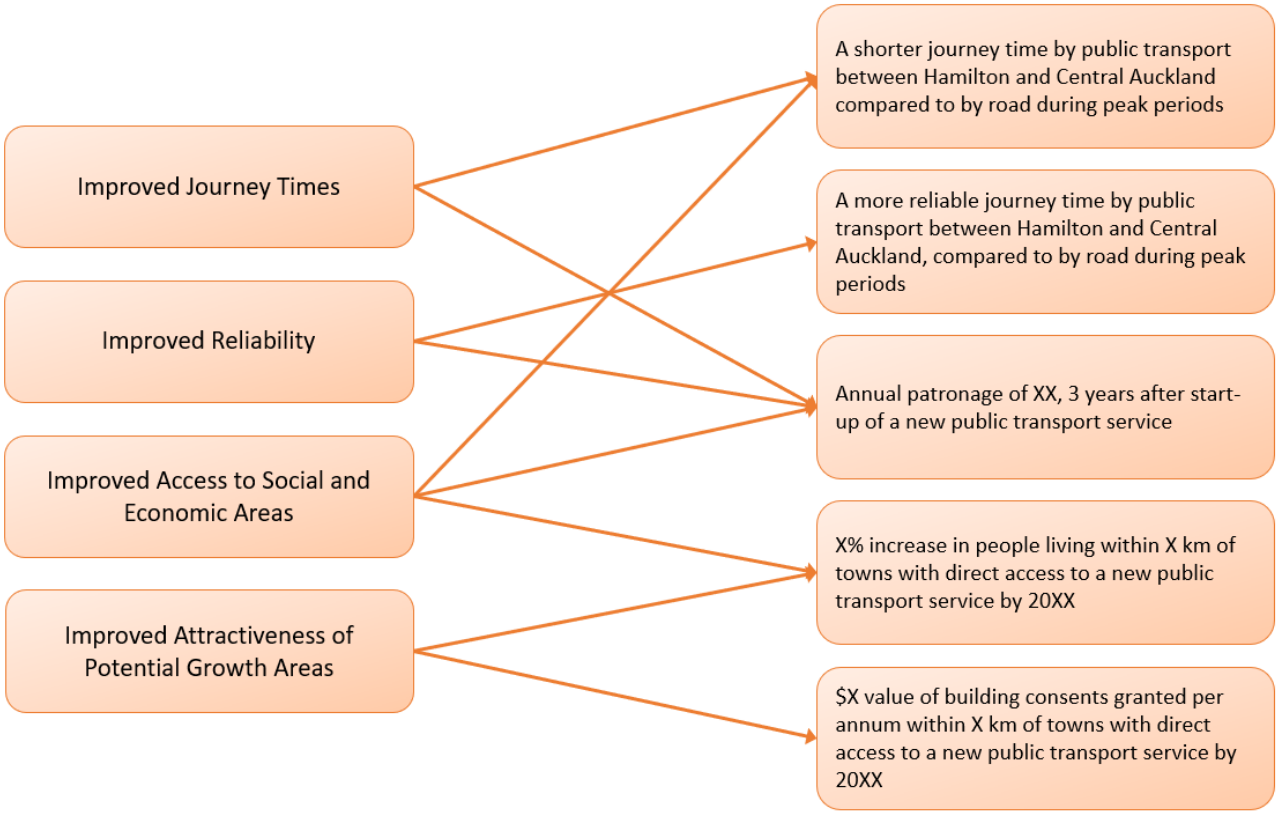


Figure 2-14. 2018 SSBC Investment Objectives

A number of KPIs have been developed to enable the objectives to be quantified. This is summarised in Figure 2-15.

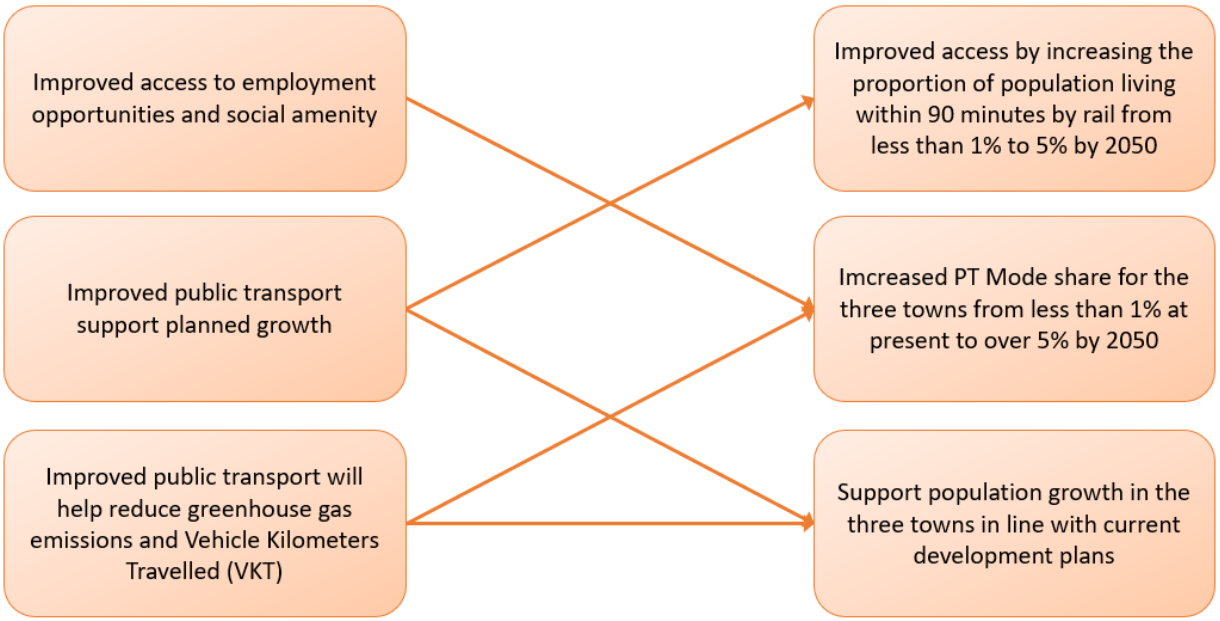


Figure 2-15. IBC Investment Objectives

3 Economic Case

The purpose of the economic case in an IBC is to confirm your answer to the questions:

- What are the options?
- What is the best option to achieve the sought benefits?

3.1 Base Case

The assessment of options involves examining different options or courses of action against a counterfactual or baseline: a do-minimum, which may include maintaining the status quo and should account for committed and funded transport activities.

The base case assumed is based on the transport infrastructure and services which currently operate or are likely to exist in the short-medium term. In summary, this is as follows:

- The Te Huia train service is assumed to continue to operate at the current level of service
- The existing local and inter-regional bus network is assumed to continue to operate.
- The trial bus service due to commence operating from Pōkeno to Papakura is assumed to operate.

3.2 Assumptions and Risks

In developing and evaluating the options, the following key assumptions and risks should be noted.

3.2.1 Assumptions

- Te Huia will continue to operate beyond the funded five-year trial period
- Train paths can be found to enable Te Huia to continue to serve Auckland's CBD
- There is sufficient track capacity for a rail service to serve the proposed additional stations
- No significant additional OPEX would arise if Te Huia stopped at up to two additional stations.

3.2.2 Risks

- There are likely to be multiple parties and interdependent activities requiring coordination if one or more stations are opened, which leads to the risk of critical path delays with potential cost and reputational issues for all parties.

3.3 Initial Options Identified

A number of options were initially identified and these have been grouped into a number of categories, as described below.

3.3.1 Options for New Stations Served by Te Huia

Te Huia could serve one or more of the proposed new stations. The following options were identified for consideration:

- New stations at Tūākau, Pōkeno and Te Kauwhata
- New stations at Tūākau and Pōkeno only
- New stations at Pōkeno and Te Kauwhata only
- New stations at Tūākau and Te Kauwhata only
- New station at Pōkeno only
- New station at Tūākau only
- New station at Te Kauwhata only.

3.3.2 Options Dependent on Improvements to Te Huia's Level of Service

Consideration was also given to whether the viability of one of more of the proposed new stations could be enhanced by improvements to the level of service currently provided by Te Huia.

3.3.3 Shuttle Bus Options

The provision of shuttle bus links has also been considered as an alternative way of improving public transport services to the three towns. These options were identified in order to help determine whether the provision of an improved bus services is a better alternative to new rail stations. The following potential shuttle bus options were identified for consideration:

- Shuttle bus from Tūākau to Pukekohe
- Shuttle bus from Pōkeno to new Drury stations(s)
- Shuttle bus from Te Kauwhata and Pōkeno to the new Drury stations(s)
- Shuttle bus from Te Kauwhata to Hamilton
- Shuttle bus from Pōkeno and Te Kauwhata to Hamilton
- Shuttle bus from Tūākau, Pōkeno and Te Kauwhata to Hamilton (or between Tūākau, Pōkeno and Te Kauwhata only).

3.3.4 Options Requiring the Extension of Auckland Metro Services

The following options exist to extending Auckland Metro services:

- Extend Auckland Metro services to Tūākau and Pōkeno
- Extend Auckland Metro services to Tūākau only.

The option of extending Auckland Metro services to Te Kauwhata was not considered, as it is considered unlikely that Metro services would ever operate beyond Pōkeno.

3.3.5 Improvements to Existing Local and Inter-Regional Bus Services

A further option identified was improvements to the existing local bus services between Te Kauwhata and Hamilton and between Pōkeno and Pukekohe via Tūākau.

3.4 Initial Screening of Options

3.4.1 Use of EAST

Using Waka Kotahi's Early Assessment Sifting Tool (EAST), an initial list of alternatives and options was screened, taking into consideration the above principles. The EAST is designed to quickly rule out options that are non-starters, allowing for a more manageable subsequent multi-criteria analysis (MCA) exercise. Key considerations when undertaking the initial screening of options included:

- Whether the options were implementable in the short term (0-5 years)
- Impact of the additional travel time on existing users of the Te Huia service
- Options which increase the overall amount of financial support needed for Te Huia
- Options which are unlikely to provide a competitive alternative to travel by car.

3.4.2 Options Results

The completed EAST analysis template is contained in Appendix A. Based on the initial screening, a long list of options was identified, as follows:

- Serve Pōkeno and Tūākau by Te Huia
- Serve Te Kauwhata and Tūākau by Te Huia
- Serve Te Kauwhata and Pōkeno

- Serve Pōkeno only by Te Huia
- Serve Tūākau only by Te Huia
- Serve Te Kauwhata only by Te Huia
- Shuttle bus from Tūākau to Pukekohe
- Shuttle bus from Pōkeno to new Drury rail station(s).

The following options were rejected in the initial screening process:

- Options which provide more than two new rail stations – This is because the time penalty that would be incurred in serving more than two new stations is likely to have an overall adverse impact on the attractiveness of the Te Huia train service to existing users (a large, and increasing, proportion of which are time sensitive business travel journeys), particularly those travelling to/from Hamilton
- Extending AT Metro services to one or more of the proposed new stations – This is because extending the Metro services is likely to take at least five years to plan and implement due to the need to procure additional rolling stock, as well as the time taken to extend electrification south of Pukekohe. It is noted that the operation of a diesel train shuttle service could be an alternative option to extending electrification, but new diesel trains would likely need to be procured to operate such a service, which is likely to have a similar timescale. An option of a hybrid 25Kv electric train (Similar to the current CAF Fleet) with battery, as proposed by AT before the electrification extension to Pukekohe was approved in 2018, could also be a option, but this could also likely take at least five years to plan and implement
- Options which are dependent on improvements to the level of service currently provided by Te Huia - because the case for enhancing Te Huia's service levels is currently being examined separately by WRC, and because it is unlikely that the provision of new stations would generate sufficient additional patronage to justify enhanced service levels alone.
- Improvements to existing local bus services between Te Kauwhata and Hamilton - because the existing bus service operates at a very low frequency and is very slow in comparison to travel by car for trips to Hamilton
- Improvements to existing local bus services between Pōkeno and Pukekohe - because the existing public transport service (by bus and train) provide a very slow journey time for trips to Auckland in comparison to travel by car.

3.5 Long List Evaluation Criteria

The long list options have been assessed against the following additional evaluation criteria to those defined for the initial sifting of options (see Appendix B):

- Performance of the option against the Investment Objectives
- Likely demand and revenues generated (qualitative)
- Operating costs (qualitative)
- Capital cost (qualitative).

3.5.1 Station Design Options

In order to inform the evaluation of options, in particular the capital cost, consentability and constructability of the options, a number of potential options for providing stations at each of the three towns were identified.

These options, together with the design assumptions that form the basis of the options, are described in more detail in the technical note contained in Appendix C. Plans of the station options are also contained in Appendix C.

Each option is summarised in Table 3-1.

Table 3-1: Summary of Station Options

Station(s)	Option	Option Description
Tūākau	1	Island platform at existing station location
	2	Side platforms at existing platform location with realigned tracks
	3	Side platforms to North of existing Station platform
	4	Side platform at existing station location with no track realignment
Pōkeno	1	Side platforms at former station location with new underpass. Park and Ride facilities provided in Council/KiwiRail land
	2	Side platforms to North of former station location with footbridge (using Hirchen Road)..
Te Kauwhata	1	Island platform at existing station location
	2	Side platforms at existing station location with realigned tracks
	3	Side platforms to North of existing Station platform
	4	Side platforms at existing station location with no track realignment

Based on these considerations, preferred options for each location were identified, as explained in the technical note in Appendix C. These are Tūākau (Option 4: side platforms at existing staitoin location with no track realignment), Pōkeno (Option 1: side platforms at former station location) and Te Kauwhata (Option 4: side platforms at existing station location with no track realignment).

Key points to note are:

- Park and Ride facilities were assumed to be required at at Pōkeno only, as this is the only station where significant loinger distance park and ride demand is expected (i.e. on street parking were assumed to be adequate at Tūākau and at Te Kauwhata, and on-streeet bus interchange facilties were assumed to be sufficient at Pōkeno – these assumptions were made in order to minimise the cost of providing a new station at each location)
- Grade separated access to the platforms was assumed to be needed at all three stations
- Side platforms were assumed to be provided at all three station locations
- No realignment of the existing track at Tūākau and and Te Kauwhata was assumed to be necessary in order to minimimise the cost of a new station.

As the lack of Park and Ride facilities at Tūākau and at Te Kauwhata, and the lack of off-street bus interchange facilities at all three stations, could potentially result in some congestion on roads near to the station, a sensitivity test of the implications of providing Park and Ride and bus interchange facilities being deemend necessary at Tūākau and and Te Kauwhata on the economic benefits was undertaken however. This is explained later this section of the IBC.

3.5.2 Scoring of Options

The long list options were scored using a Multi Criteria Assessment (MCA) in relation to the outcomes defined in the evaluation criteria.

3.6 Long List Evaluation Findings

On the basis of the above assessment, the following options were short-listed based on their overall average score:

- Serve Pōkeno and Tūākau by Te Huia
- Serve Pōkeno only by Te Huia
- Serve Tūākau only by Te Huia

- Serve Te Kauwhata only by Te Huia

The option of a shuttle buses from Tūākau and Pōkeno to Hamilton was rejected because demand for travel to Hamilton is unlikely to be large enough to cover the operating costs of a bus service.

The option of a shuttle bus services from Te Kauwhata to/from the new stations at Drury (or Auckland direct) was rejected because demand for travel to Auckland is unlikely to be large enough to cover the operating costs of a bus service in the short term.

The option of a shuttle bus from Tūākau to Pukekohe was also rejected because a frequent bus service already operates.

The option of a frequent shuttle bus from Pōkeno to Drury was rejected because of the high cost of operation compared to the likely level of demand.

It should be noted that for Te Huia to serve more than one new station without an overall adverse impact on existing users, it would probably be necessary for one or both of the following to occur:

- Te Huia would serve Pukekoe rather than Papakura in future (as the time penalty for serving Pukekohe is likely to be 2-3 minutes less than serving Papakura once the P2P project is completed)
- Te Huia would be able to serve a platforms on the third and forth main (freight) lines at Puhinui, as opposed to the existing platforms, in the future (this proposal is understood to be recommended in the Auckland Rail PBC which is due to be completed later in 2023).

Options which provide a station at Te Kauwhata in additional to one other location were rejected, as the time penaltly for serving Te Kauwhata (in the southbound direction) is anticipated to be significantly greater than serving Pōkeno or Tūākau if a side platform configuration is adopted at the location of the existing side platform).

It should also be noted that the option of serving both stations with alternate services, or removing existing stops from the te Huia service, is not considered to be practical. This is because it is likely to be confusing to train users if some trains have a different stopping pattern to other trains.

3.7 Identification of a Preferred Option

The following additional criteria have been considered in the evaluation of the short-listed options:

- Demand (patronage)
- Revenue
- Capital cost
- Operating costs
- Maintenance cost
- Travel time benefits
- Economic benefit to cost ratio
- Impact on vehicle kilometres travelled (VKT)
- Decongestion benefits
- Consentability
- Constructability
- Potential for developer contributions.

The MCA for the short-listed options is contained in Appendix D. The additional analysis undertaken to inform the MCA is summarised below.

3.7.1 Demand (Patronage) Forecasting

Patronage for each of the three station locations has been estimated based on use of the existing Capital Connection service at Shannon, Levin and Otaki stations, on the following basis:

- Boarding data was provided by KiwiRail for the one year period from May 2022 to April 2023
- The population of the Shannon, Levin and Otaki station catchment area was assumed to be approximately 5,900 (based on recent Census data)
- Analysis of boarding demand data for the Capital Connection service indicate that the monthly boardings from the three stations was approximately 9% of the station catchment area
- The monthly boarding demand was calculated for each of the three proposed new stations, based on the projectied populations for each station location at ten-year intervals from 2030 to 2060
- The monthly boarding demand was then adjusted to an average weekday on the assumption that there are 20 weekdays per month
- The average weekday boarding demand has been increased by a factor of two to reflect the fact that there are two additional off-peak Te Huia services operating, unlike the Capial Connection service. This expansion factor was derived from observed demand data for peak and off-peak Te Huia services provided by WRC
- The average weekday boarding demand has been increased further by 10% of the to reflect the fact that there are also Saturday Te Huia services operating (this factor was derived from observed demand data for Saturdays and Monday to Friday Te Huia services), unlike the Capital Connection service.
- A further 10% uplift in demand has been assumed for Pōkeno, to reflect potential additional Park and Ride demand from that station.

The resultant 2-way demand forecast (i.e. boardings and alightings) is summarised in Table 3-2. This shows that demand is forecast to be greatest at Tūākau in the short term, but at Pōkeno and Te Kauwhata in the longer term.

It should also be noted that the forecasting assumes demand for each station is independent of each other. In reality, if a station was only constucted at one or two of the three potential locations, a small amount of demand may transfer to another location.

Tale 3-2 also contains current (March 2023) demand figures for the existing stations served by Te Huia in the Waikato region, for comparison purposes. It should be noted that the patronage forecast for the new stations is lower than current use of Hamilton Frankton and Hamilton Rotokauri stations, but significantly higher than the current use of Huntly station, particulatly in the case of Tūākau and Pōkeno.

Table 3-2: Demand Estimates (2-way trips)

Station(s)	Current	2025	2035	2045	2055	2065
Tūākau	n/a	57	59	60	60	60
Pōkeno	n/a	44	66	71	73	74
Te Kauwhata	n/a	30	49	70	83	94
Tūākau and Pōkeno	n/a	101	125	131	133	134
Hamilton Frankton	**125**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
Hamilton Rotokauri	**80**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
Huntly	**15**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

3.7.2 Revenue Forecasting

Revenue for each station were estimated based on the following assumptions with regard to the one-way fare paid:

- $9 from Tūākau to Auckland and $9 from Tūākau to Hamilton

- $10 from Pōkeno to Auckland ($8 from Pōkeno to Hamilton)
- $12 from Te Kauwhata to Auckland ($6 from Te Kauwhata to Hamilton).

It was assumed that 67% of the passengers pay this fare (a proportion based on current use of the Te Huia service), but sensitivity tested with 100%. By way of context, after the 50% fare discount ended on 1 July 2023, the one-way fare from Huntly to Auckland is $12 with a Bee Card ($20 by cash), and the one-way fare from Huntly to Hamilton or Rotokauri is $4 with a Bee Card ($6 cash).

In estimating fares revenues, the following distribution of trips is assumed, based on the projected future distribution of trips

- 60% of trips from Te Kauwhata are to/from Hamilton, and 40% to/from Auckland
- 80% of trips from Pōkeno are to/from Auckland, and 20% to/from Hamilton
- 90% of trips from Tūākau are to/from Auckland, and 10% to/from Hamilton.

The revenue forecast is summarised in Table 3-3.

Table 3-3: Annual Revenue Forecasts ($)

Station(s)	2025	2035	2045	2055	2065
Tūākau	94,000	97,000	99,000	100,000	100,000
Pōkeno	77,000	116,000	126,000	129,000	132,000
Te Kauwhata	46,000	76,000	108,000	129,000	145,000
Tūākau and Pōkeno	170,000	213,000	225,000	229,000	232,000

3.7.3 Station Capital Costs

Capital costs for the proposed stations was estimated in accordance with Waka Kotahi's cost estimation manual (SM014) dated March 2023. In preparing this estimate, Beca has adopted risk based estimating principles to provide estimates with a level of confidence. The purpose of risk-based estimating is to account for varying factors that influence the final cost outcome of any project (e.g. lack of scope definition, uncertainty, complexity/difficulty, external market factors, etc). The following estimates have been prepared:

- The Expected Estimate (P50) is the likely/expected final cost (i.e. 50% level of confidence that the final out-turn cost will not exceed this value)
- The Project Estimate (P95 - also referred to as the 95th Percentile Estimate) is the upper-bound, pessimistic assessment (i.e. 95% level of confidence that the final outturn cost will not exceed this value).

These estimates are summarised in Appendix E for each station option, and in Table 3-4 for the preferred station option.

Table 3-4:Capital Cost Estimates (2023 Prices. Millions)

Station	Option	P50 Estimate ($)	P95 Estimate ($)
Tūākau	4	5.1	6.4
Pōkeno	1	7.4	9.2
Te Kauwhata	4	5.9	7.4

3.7.4 Station Operating Costs

The annual maintenance cost for the stations is assumed to be approximately $100,000. This is roughly 25% of the operating cost calculated for new stations between Papakura and Pukekohe (e.g. Drury station).

3.7.5 Economic Evaluation

An economic evaluation of the short-listed options was undertaken in accordance with Waka Kotahi's Monetarised Costs and Benefits Manual (MBCM) Version 1.6. The following main benefits were estimated:

- Public Transport Benefits (Travel Time and Reliability)
- Public Transport User Experience Benefits
- Decongestion Benefits from Public Transport
- Active Mode Benefits (Health and Safety)
- CO2 Emission Benefits.

3.7.5.1 Public Transport

Travel Time Benefits

The following assumptions have been made for the estimation of the Public Transport Benefits:

- Travel time savings have only been calculated for trips made in the peak direction of travel. This is a conservative assumption that there will be no travel time savings benefit in the off peak direction. It was assumed that 70% of the total patronage will be in the peak direction.
- The travel time savings is assumed based on the average car/bus travel time in the peak direction.
- Based on the Te Huia patronage data, the Saturday daily demand is similar to the average weekday daily demand however, it was assumed that the Saturday benefits will be 50% of the weekday benefits.
- Public Transport reliability benefits are assumed to be 30% of Public Transport user benefits.

A simple method of calculating the Public Transport travel time benefits was applied, which included:

- The travel time improvement was assumed based on the existing car/bus travel time
- Public Transport travel time savings only occur for journeys to/from Auckland rather than from Hamilton
- The distribution of trips assumed is as explaiend earlier in this section
- For simplicity it is assumed that for Pōkeno and Tuakau all trips obtain the same travel time saving as will be obtained for the journey towards Auckland.

Table 3-5 summarises the travel time for each mode and assumed (target) travel time savings.

Table 3-5:Travel Time by Mode Assumed (minutes)

Proposed Station	Train	Bus	Car	Calculated Travel Time Saving	Assumed Travel Time Saving	Comment
Tūākau	72.5	85	n/a	15%	15%	Tuakau being closer to Auckland, the travel time saving for the journey towards Auckland is expected to give the main PT benefits
Pōkeno	82.5	90	92.5	11%	11%	Pokeno being closer to Auckland, the travel time saving for the journey towards Auckland is expected to give the main PT benefits
Te Kauwahata	107.5	120	n/a	12%	2%	Te Kauwhata station is expected to have major proportion of trips to/from Hamilton and hence only 2% of travel time saving is assumed

The Public Transport demand is considered based on the methodology explained earlier. It is considered that the implementation of the new rail stations or the operation of the shuttle bus will generate this demand and there is no exiting demand. The Public Transport Benefits is the function of demand and the travel time savings.

Public Transport Reliability Benefits

Based on experience from other Public Transport improvement projects, the Public Transport reliability benefits were assessed as 30% of the Public Transport user benefits.

Public Transport User Experience Benefits

Another component of Public Transport travel time benefits is included due to the shift of passengers from bus to rail. As per the MBCM, Table 32 , two minutes of in vehicle travel time benefits is expected due to presence of CCTV cameras at the stations. The Public Transport user experience benefits is calculated in the same methodology as the aforementioned Public Transport benefits, but with a two minute travel time saving.

Decongestion Benefits Obtained from Public Transport Users

Decongestion benefits due to new public transport trips have been calculated based on the methodology defined in MBCM V1.6 (Table 41). This specifies that 72.5% of the passenger-km travelled can be assumed to divert to Public Transport from car vehicle trips.

The reduction in car VKT is valued at $1.495 per km for new Public Transport trips (50% of $ 2.99 per km to make allowance for lower decongestion outside the peak periods). This based on the urban area being Auckland-type, since the majority of these trips will be to/from Auckland. It is considered that the decongestion benefit will be mainly within the Auckland region, say from East Tamaki to the CBD (i.e. ignoring any benefit occurring south of East Tamaki).

Decongestion benefits are assumed to arise for peak direction of travel only.

3.7.5.2 Active Mode Benefits

It was assumed that there will be active mode station access trips comprising of 10% cyclists travelling at an average of 1 km for station access and 10% pedestrian walking 0.5 km at an average to access the stations.

The number of cyclists and pedestrians is assumed 10% of the daily Public Transport demand.

3.7.5.3 CO2 Benefits

It is expected to have VKT reduction due to the mode shift from cars to rail. The VKT reduction is calculated on the Public Transport diversion rate as discussed earlier. This is then multiplied with the CO2 rates from VEPM for an average speed of 50 kmph and coverted to CO2 benefits by multiplying with rates from MBCM, Table 11.

3.7.5.4 Other Assumptions

The following other assumptions were made:

- The weekday annualization factor was assumed to be 245
- The weekend annualization factor was assumed to be 60
- Base Date of 1 July 2022
- Time Zero of 1 July 2023
- Construction start date is Year 2024 with a duration of two years
- Discount rate 4% applied to all annual benefits and costs
- Analysis period 40 years.

3.7.6 Summary of Economic Benefits

A summary of each benefit's estimated value over the 40-year assessment period is provided in Table 3-6.

Table 3-6: Economic Benefits Summary

Element	Station at Pōkeno	Staiton at Te Kauwhata	Station at Tūākau	Stations at Pōkeno and Tūākau
PT Benefits, PV $m	8.2	5.9	7.1	15.4
Active Mode Benefits, Present Value (PV) $m	0.3	0.2	0.2	0.5
CO2 Benefits, PV $m	0.1	0.1	0.1	0.2
Total Benefits, PV $m	***8.6***	***6.2***	***7.4***	***16.1***
Capital Costs (PV $m) P50	6.8	5.5	4.7	11.6
O&M, PV $m	1.4	1.4	1.4	2.7
Total Costs, PV $m	***8.2***	***6.8***	***6.1***	***14.3***
National BCR	***1.1***	***0.9***	***1.2***	***1.1***
Fare Revenue	2.0	1.6	1.7	3.7
Government BCR (incl. Fare Revenue)	***1.3***	***1.1***	***1.5***	***1.4***

3.7.7 Economic Evaluation Sensitivity Testing

The following sensitivity tests were undertaken. The results of sensitivity testing are summarised in Table 3-7 (for the National BCR) and 3-8 (for the Government BCR).

Table 3-7: Summary of Sensitivity Test for the National BCR

Test	Station at Pōkeno	Station at Te Kauwhata	Station at Tūākau	Stations at Pōkeno and Tūākau
Base	1.1	0.9	1.2	1.1
Discount Rate increased from 4% to 6%	0.8	0.7	1.0	0.9
Discount Rate reduced from 4% to 3%	1.2	1.1	1.4	1.3
Daily PT passengers 50% lower than base case	0.5	0.5	0.6	0.6
Daily PT passengers 50% higher than base case	1.6	1.4	1.8	1.7
Cost being 25% higher than the P50 cost	0.9	0.8	1.0	0.9
Cost being 25% lower than the P50 cost	1.3	1.1	1.5	1.4

Table 3-8: Summary of Sensitivity Test for the Government BCR

Test	Station at Pōkeno	Station at Te Kauwhata	Station at Tūākau	Stations at Pōkeno and Tūākau
Base	*1.3*	*1.1*	*1.5*	*1.4*
Discount Rate increased from 4% to 6%	1.0	0.8	1.2	1.1
Discount Rate reduced from 4% to 3%	1.5	1.3	1.7	1.6
Daily PT passengers 50% lower than base case	0.6	0.6	0.8	0.7
Daily PT passengers 50% higher than base case	1.9	1.7	2.3	2.1
Cost being 25% higher than the P50 cost	1.1	0.9	1.3	1.2
Cost being 25% lower than the P50 cost	1.6	1.4	1.9	1.7
Passengers paying fare – 100%	1.4	1.2	1.6	1.5

Note: All Benefits and Net Costs are Present Value totals

From this sensitivity analysis, the BCR range for the options are summarised in Table 3-9.

Table 3-9: Summary of BCR Range

BCR Range	Station at Pōkeno	Station at Te Kauwhata	Station at Tūākau	Stations at Pōkeno and Tūākau
National BCR, Without Fare	0.5-1.6	0.5-1.4	0.6-1.9	0.6-1.7
Government BCR, With Fare	0.6-1.9	0.6-1.7	0.8-2.3	0.7-2.1

3.7.8 Additional Sensitivity Test on Station Costs

The following additional sensitivity tests on station costs has been undertaken, as summarised in Table 3-9:

- Assuming a Park and Ride facility/bus interchange is needed at Tūākau (on privately owned land), costing around $2million
- Assuming a Park and Ride facility/bus interchange is needed at Te Kauwhata (on privately owned land), costing around $2million
- Assuming a bus interchange is needed at Pōkeno (to be provided on Council owned land), costing around $0.5million.

Table 3-10: Results of Additional Station Costs Sensitivity Tests on National BCR

Station Cost Sensitivity Test	Station at Pōkeno	Station at Te Kauwhata	Station at Tūākau	Stations at Pōkeno and Tūākau
Base Evaluation (National BCR)	*1.1*	*0.9*	*1.2*	*1.1*
Park and Ride facility/bus interchange at Tūākau	n/a	n/a	0.9	1.0
Park and Ride facility/bus interchange at Te Kauwhata	n/a	0.7	n/a	n/a
Bus Interchange at Pōkeno	1.0	-	-	1.1
Park and Ride facility/bus interchange at Tūākau & Bus Interchange at Pokeno	n/a	n/a	n/a	1.0

This sensitivity test indicates that the BCR would drop to one if additional Park and Ride facilities and bus interchange facilities are provided at Tūākau, or if bus interchange facilties are provided at Pōkeno.

3.8 The Recommended Option

The recommended option which emerged from the option short listing is that a station is provided at Tūākau.

There does however appear to be a good case for also providing a station at Pōkeno. However for this station to be provided, it would probably be necessary for one or both of the following to occur:

- Te Huia would serve Pukekohe rather than Papakura
- Te Huia would be able to serve platforms on the planned/proposed third and fourth main (freight) lines at Puhinui.

Without these time savings, the BCR for more than one new station is unlikely to be strong enough to support additional stations until Hamilton is served by faster rail services, as envisaged in the recent (draft) IBC for Inter-city connectivity undertaken by the Ministry of Transport.

The cost of providing new platforms at Puhinui, or the impact of switching a Te Huia service calling at Pukekohe instead of Papakura has not been taken into account in the economic evaluation.

It is recommended that the costs and benefits of serving more than one station is examine in further detail in a DBC.

It is noted that this recommendation has been influenced mostly by the results of the economic evaluation (BCR), and the likely availabilituy of funding for new staitons. The BCR is primarily influenced by the projected capital costs and projected demand/revenues, particularly in the initial ten years the station could serve demand.

It is also recognised that Tūākau is already linked to the rail network by a reasonably quick and frequent bus service. However, the current population and cost projections do favour a station at this location ahead of one being provided at Pōkeno based on a range of cost and demand/revenue assumptions.

It is also recommended that the demand forecasts are refined further in a DBC, to consider Park and Ride demand (such as from Te Kauwhata) at Tūākau and Pōkeno in more detail, and to consider the implications of this on the scale of Park and Ride facilities assumed to be required at Tūākau and Pōkeno in this IBC.

The DBC should also consider the case for dedicated bus interchange facilities, and wider imnprovements to the transport network (walking and cycling access), which were not costed for in this IBC.

The economic case for one or both station(s) is likely to improve in the event that additional Te Huia services are able to be introduced in the future, and in particular train services which are timetabled to provide morning peak time travel opportunities towards Hamilton (and vice versa in the evening peak period), as opposed to the current focus on serving commuter trips towards Auckland. This potential could also be examined in more detail in a DBC.

It is also noted that the findings of the business case do not preclude the opening of a station at Te Kauwhata in the medium term, particularly if additional Te Huia services are introduced which provide opportunities for commuter travel to/from Hamilton. In the meantime there may be a case for improving bus links between Te Kauwhata and Hamilton to help build up demand for a future rail service could be explored further.

It is also recommended that the DBC should undertake wider community and mana whenua engagement, including potentially undertaking surveys of the existing communities to support the DBC recommendations.

3.9 Assessment Profile

Investment prioritisation is the basis for including an activity or combination of activities in the National Land Transport Programme (NLTP). Depending on the amount of funding available for the activity class the project falls under (in this case, it is likely to be rail network), activities with a priority order above an investment threshold in that activity class are included in the NLTP.

Improvement activities currently are assigned a priority order using each of the three prioritisation factors, according to the matrix summarised in Table 3-11.

Table 3-11: Assessment Profile Matrix

GPS Alignment	Scheduling	Efficiency				
		Very Low (VL) (BCR <1)	Low (L) (BCR 1.0-2.9)	Medium (M) (BCR 3.0-5.9)	High (H) (BCR 6.0-9.9)	Very High (VH) (BCR Over 10)
VH	H	**7**	2	1	1	1
VH	M	8	3	2	2	1
VH	L	9	4	3	3	2
H	H	9	5	4	4	3
H	M	10	6	5	5	3
M	H	10	7	6	6	4
M	M	10	9	8	6	5
H	L	11	8	8	6	5
M	L	11	10	10	9	8
L	H/M/L	12	12	12	12	12

The project has a high GPS and scheduling alignment.

With a BCR of 1.5, the recommended option is considered to have a priority of five.

It would appear that the investment proposed may be eligible for NLTP funding if it is above the investment threshold for the rail network activity class.

4 Outline Financial Case

The financial case outlines the costs and funding requirements for the preferred station(s). It provides assurance that the preferred station(s) is affordable to the organisation, taking into account all potential funding sources.

4.1 Preferred Option Cost

As indicated in the previous section, a cost estimate for the recommended option has been developed at an indicative level. This has been estimated in accordance with the guidance contained in the Waka Kotahi SM014 Cost evaluation manual.

The preferred option of a station at Tūākau is estimated to cost approximately $5 million (at P50 level). An additional staiton at Pōkeno is estimated to cost approximately $7 million (at P50 level).

These estimates excludes any land acquisition, as it would appear that the two stations can be constructed entirely on KiwiRail/WDC owned land. This assumes no Park and Ride or bus interchange facilities are provided at Tūākau, and that no bus unterchange facilities are provided at Pōkeno, given the implications of this additional cost would have on the overall economic benefits of opening stations at these locations.

The estimate has been prepared based on a number of simplifications and assumptions. The main risks and uncertainties associated with the cost estimation are as follows:

- No topographical or geotechnical surveys have been undertaken
- Designs are conceptual only
- Blocks of line needed to construct the station need to be longer than assumed
- Contractor capacity to construct the station to the required programme is constrained.

As the project is advanced, capital and operating cost estimates will also be developed in more detail in the DBC. Anticipated cash flows for the investment proposal, including maintenance and operational costs, over its intended life span will be developed in the DBC. At this stage, value engineering will be applied to identify the most cost-effective ways to deliver the identified project outcomes.

4.2 Funding Sources and Risks

Currently, funding is not confirmed for a DBC, or for pre-implementation or implementation phases, in the 2023-2027 Regional Land Transport Plan (RTLP).

It is envisaged at this stage that the funding required to undertake a DBC is sought from the 2024-2027 RLTP.

The funding model, funding streams, costs and programme budget will be developed as part of the DBC. A large Crown contribution is likely to be required to fund the Project.

4.3 Overall Affordability

The overall affordability of the recommended station(s) will be explored in the DBC. It is noted however than funding may be constrained, particularly if two stations are implemented.

Staging of delivery will affect the overall affordability of the recommended option, and opportunities to stage delivery will be explored in the DBC.

5 Outline Commercial Case

The Commercial Case outlines the proposed procurement arrangements for advancing the preferred option. It provides an initial assessment of the most commercially viable approach to procuring the preferred way forward for investment in the recommended option.

The aim is to deliver the investment on a best-value basis, which does not necessarily mean the cheapest. The Procurement Strategy should consider the trade-offs, foundations and requirements for value for money, while taking logical sequencing factors and project dependencies into account.

5.1 Commercial Objectives

Initial commercial objectives have been developed to guide overall procurement options for project implementation. These are:

- Value-for-money - The procurement strategy will need to maximise value for money, typically inviting national and/ global suppliers in order to increase competition
- Fit for purpose - The procurement strategy should ensure that the assets and outcomes delivered by the project are fit for purpose
- Innovation and incentive – the procurement strategy should incentivise the introduction of best practice and, where appropriate, innovation in delivering the desired outcomes
- Optimal risk transfer –the procurement strategy will need to allocate risks to the party(s) best placed to manage them
- Accountability – the procurement strategy will need to provide an optimal level of accountability of service providers and contractors.

These objectives should be developed in the DBC as more information is obtained, and can then inform the evaluation criteria used to quantitatively evaluate the shortlist of procurement options.

5.2 Procurement Plan

A draft procurement plan will need to be prepared in the DBC stage to provides details of how the procurement agency will approach the market, evaluate bids and decide on the preferred supplier. The purpose of the procurement plan will be to:

- Provide detailed planning for the approach to the market, evaluation of offers and identification of the preferred supplier
- Ensure the best supplier is selected for right reasons and at a price that represents value for money over the life of the contract
- Assign roles and responsibilities in the cross-functional tender team
- Set realistic timelines that ensure that suppliers have sufficient time to develop meaningful responses.

The aim of the procurement plan is to deliver the investment on a best-value basis, keeping in mind that this does not necessarily mean the cheapest. The Procurement Strategy will consider the trade-offs, foundations and requirements for value for money, while taking logical sequencing factors and project dependencies into account

The recommended approach to market is likely to be a one-step closed competitive tender. The reason for this recommendation is that the work required is specialist.

Procurement considerations need to be made within the context of:

- The role of KiwiRail, as New Zealand's only national rail infrastructure provider
- The current investment requirements of Government to procure, operate and maintain rail assets

- The current situation of rail in New Zealand including interoperability of the network, funding arrangements, safety-case, and other legal or regulatory requirements and obligations
- The potentially limited pool of suppliers and the risk of cost escalation.

Procurement of rail stations outside the Auckland and Wellingto Metro areas is typically performed by KiwiRail as the national network owner. However, to ensure that all options are considered, KiwiRail is not necessarily assumed to be the procuring body.

The nature of the project is such that variations to scope are likely. Trusted suppliers who have a proven record in being fair in variation claims, and who have the specialist ability to work with KiwiRail to accommodate ongoing operations, are best sourced through invited tender rather than via public open tender.

The approach to the market, evaluation of offers and identification of the preferred supplier is likely to be by selected tender lump sum, with supplier nominated schedule of rates for variations.

5.3 Consenting Plan

The provision of stations at Tūākau and Pōkeno are not anticipated to have any major consenting issues.

If private land is needed to implement the staitons, consenting requirements may be a factor for programme delivery, timing, and sequencing.

There may need to be the lodgement of a Notice of Requirement under the Resource Management Act. This activity, is likely to comprise a critical path activity in terms of programme. The most likely paths for this to take place would involve lodgement of the Notice of Requirement with WDC.

The proposed station(s) could affect several utilities of significance, including Transpower, Vector and Watercare. Advanced discussion with these organisations and early development of agreements at the DBC stage will help to identify and reduce risk.

All necessary consents will be applied for when the form and location of works have been determined. This will follow engagement and consultation with local communities and preliminary designs have been completed. Final designs would then reflect any consenting requirements.

5.4 Property Plan

Whilst it is not anticipated that any properties need to be partially or fully acquired to deliver the recommended station(s), the ability to acquire land is a key risk and likely to be an early activity in the successful and/or timely delivery of the project.

Early negotiation with landowners concurrently with project planning and ahead of formal lodgement of Notices of Requirement.

5.5 Required Services

A detailed technical specification of the required services will need to be developed at the DBC stage to establish the basis from which potential tenderers could bid from. At a high-level procurement will be considered across a number of areas of outcome delivery.

5.6 Contract Provisions

It is recommended that the professional consultants are contracted to undertake a DBC under the standard IPENZ ACENZ agreement.

Variations to contract will be in writing and signed by both parties. Variations involving an increase in price must only be made within the limit of the financial delegated authority. The strategy for exiting the contract at the end of its term is as per conditions of contract.

The contract procurements and key procurement milestones will be determined at the DBC stage for each procurement required.

5.7 Risk to Delivery

The most significant risk to delivery to the recommended option is likely to be capacity within the rail industry rather than capability.

5.8 Potential for Risk Sharing

An initial assessment of how the associated risks might be apportioned between the organisation and potential providers should be undertaken as part of the DBC. This will enable the optimum balance between risk and return to be identified, as well as which parties are best able and most willing to deal with the key project delivery risks.

6 Outline Management Case

The management case assesses whether a proposal is deliverable and demonstrates that an appropriate project management regime is in place for the next phases of the project. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

6.1 Governance

It is envisaged that the next stage of the business case process, and subsequent stages of project delivery, will be managed through existing governance processes, including the Te Huia sub-committee and the RLTP.

Responsibility for ongoing maintenance of the stations and associated infrastructure will also need to be determined.

6.2 Risk and Opportunity Management

Given the timeframe and complex urban environment in which the project is situated, effective and timely risk management is a critical component in ensuring the project remains on track.

An initial risk register has been established in accordance with the guidance provided in Waka Kotahi's Z/44 Risk Management Minimum Standard. This is summarised in Table 6-1.

Table 6-1: Key Risks and Mitigations

Risk Cause	Risk Consequence	Risk Owner	Controls	Risk Likelihood	Risk Consequence	Current Risk Level
Funding is unavailable / committed elsewhere	Station cannot be provided	WRC	Provide the strongest investment case possible. Identify benefits / Actively engage with Waka Kotahi	Likely	Major	Critical
Stakeholder opposition/ political backlash	Reputation for agencies involved	WRC/ WDC	Liaison and engagement with politicians and stakeholders	Possible	Moderate	Medium
Te Huia fundingd is not extended beyond current trial period	Station cannot be served by Te Huia	WRC	Liaison and engagement with Waka Kotahi	Possible	Moderate	Medium
Existing communities are not supportive of a new station	Reputation for agencies involved	WRC/ WDC	Community liaison and engagement	Possible	Moderate	Medium
Further design work identifies unexpected issues affecting cost & deliverability	The viability of the preferred option is undermined	WRC	Contingencies have been built into the cost estimates	Possible	Moderate	Low

The risk register remains a live document for the duration of the project and is compiled from risks remaining live from the IBC phase plus newly identified risks that may affect the successful outcome of this project.

We do not consider that any of these risks should stop the project proceeding to DBC stage. However, ensuring these (and any other identified) risks remain sufficiently mitigated will be a key consideration for the DBC management case.

6.3 Next Steps

The Waka Kotahi business case approval process requires a DBC to be undertaken, after this IBC, before any funding can be approved for pre-implementation (detailed design and consenting).

The DBC will need to follow a series of steps as follows

- Preliminary design and optimisation of the emerging preferred option
- More detailed demand forecasting, and identification of the wider effects, of the emerging preferred option
- Quantifying all the costs and benefits of the emerging preferred option
- Detailed development of the financial requirements, the funding, procurement and management plans, and the consenting and property strategies
- Community and mana whenua engagement, including potentially undertaking surveys of the existing communities to support the DBC recommendations
- Conside the need for improvements to other transport assets (not currently costed) in the wider transport network (e.g. walking and cycling routes) to support the new station(s)
- Consider the case for provision of park and ride facilities at Tūākau and bus interchange facilities (not currently costed) at both Tūākau and Pōkeno in the longer term.

The DBC management case will develop a detailed plan for implementing the project. In addition to the potential coordination with other projects, this plan will need to include details regarding consenting, timing, procurement, and construction/delivery.

This plan will also need to address resourcing. We recommend that a project implementation team be established. The DBC will develop the details of what that team should look like.

The following key deliverables will need to be produced in a DBC phase:

- Detailed scoping of the emerging preferred option
- A preliminary design for the emerging preferred option, informed by topographical survey and services/utilities information and geotechnical investigations
- Detailed impacts identified and assessed including any land requirements confirmed
- Detailed impacts on parking, pedestrians and road safety
- Stakeholder engagement and communications plan
- Consenting strategy confirmed, delivery strategy, next steps
- Construction sequencing.

A number of key performance indicators (KPIs) will need to be developed to assess whether the project is achieving the desired benefits.

It is estimated that a DBC phase could take up to approximately 6-9 months, and the cost could be in the order of $0.4-0.6m.

A

Appendix A - EAST

Sensitivity

Alternative or option details		Investment Objective			Practical Feasibility			Scheduling/Programming	Cost	Key Risks and Uncertainties	Climate Change		Impacts on tea o Māori	Environmental and Social Responsibility			Fatal Flaws		Summary of decision made	
		Improved access by increasing the proportion of population living within 90 min by rail from less than 1% to 5% by 2050	Increased PT Mode share for the three towns from less than 1% at present to over 5% by 2050	Support population growth in the three towns in line with current development plans	Technical	Safety and design	Consentability				Mitigation	Adaptation		Identify	Minigation (Can these be avoided, remedied or mitigated?)				Summary of decision made	Progress or discontinue this alternative/option?
Option 1	Serve all 3 proposed stations (Tūākau, Pōkeno and Te Kauwhata) by Te Huia	5. High	5. High	5. High	5. Red (difficult/complex)	3.Amber	4.Red/amber	5+ years	High	Te Huia is unlikely to able to serve more than 1 new station (medium term) without adversely impacting on existing users	Reduce	May be	Potential impact – no investigation at this stage	N/A	Yes	N/A	Yes	Inconsistent with the option development principles - see key risks and uncertainties	Discontinue	Discontinue this option
Option 2	Serve only 2 of the 3 proposed stations by Te Huia	4	4	4	3.Amber	3.Amber	4.Red/amber	2-5 years	High	Te Huia is unlikely to able to serve more than 1 new station (medium term) without adversely impacting on existing users	Reduce	May be		N/A	Yes	N/A	No		Progress	Progress this option
Option 3	Serve Pōkeno only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Medium		Reduce	May be		N/A	Yes	N/A	No		Progress	Progress this option
Option 3A	Serve Tūākau only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Medium		Reduce	May be		N/A	Yes	N/A	No		Progress	Progress this option
Option 3B	Serve Te Kauwhata only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Medium		Reduce	May be		N/A	Yes	N/A	No		Progress	Progress this option
Option 4	Serve Pōkeno only by Te Huia with an enhanced Te Huia Level of Service	3	3	3	3.Amber	2. Amber/green	3.Amber	2-5 years	High	Short term enhancement to Te Huia's level of service are unlikely to be viable as result of serving any new station, but may be viable in the medium/longer term.	Reduce	May be		N/A	Yes	N/A	Yes	Inconsistent with the option development principles - see key risks and uncertainties	Discontinue	Discontinue this option
Option 5	Serve Tūākau only by Te Huia with an enhanced Te Huia Level of Service	3	3	3	3.Amber	2. Amber/green	3.Amber	2-5 years	Medium	Short term enhancement to Te Huia's level of service are unlikely to be viable as result of serving any new station, but may be viable in the medium/longer term.	Reduce	May be		N/A	Yes	N/A	Yes	Inconsistent with the option development principles - see key risks and uncertainties	Discontinue	Discontinue this option
Option 6	Serve Te Kauwhata only by Te Huia with an enhanced Te Huia Level of Service	3	3	3	3.Amber	2. Amber/green	3.Amber	2-5 years	Medium	Short term enhancement to Te Huia's level of service are unlikely to be viable as result of serving any new station, but may be viable in the medium/longer term.	Reduce	May be		N/A	Yes	N/A	Yes	Inconsistent with the option development principles - see key risks and uncertainties	Discontinue	Discontinue this option
Option 7	Serve Tūākau by extending Auckland Metro Services	4	2	2	3.Amber	2. Amber/green	4.Red/amber	5+ years	High	Extending Auckland Metro is unlikely to arise in the next few years.	Reduce	May be		N/A	Yes	N/A	Yes	Inconsistent with the option development principles - see key risks and uncertainties	Discontinue	Discontinue this option

Sensitivity: General

Option 8	Serve Tūākau and Pōkeno by extending Auckland Metro Services	5. High	4	3	3.Amber	2. Amber/green	4.Red/amber	5+ years	High	Extending Auckland Metro is unlikely to arise in the next few years.	Reduce	Maybe		N/A	Yes	N/A	Yes	Inconsistent with the option development principles - see key risks and uncertainties	Discontinue	Discontinue this option
Option 9	Improved bus services to 1,2 or 3 stations	2	2	1. Low	1. Green	3.Amber	2. Amber/green	2-5 years	Medium	Improved bus service is unlikely to be a viable alternative to rail for travel between Te Kauwhata-Hamilton and between Pōkeno-Auckland	Reduce	Maybe		N/A	Yes	N/A	No		Progress	Progress this option but between Pōkeno-Drury (Option 9A) and between Tūākau-Pukekohe (Option 9B) only

B

Appendix B – Long List Options MCA

Sensitivity: General

Alternative or option details		Investment objective			Practical Feasibility			Scheduling/ programming	Cost		Likely Demand/ Revenue	Competitiveness of Rail versus Car	Competitiveness of Rail versus Feeder Buses	Key risks and un4certainties	Climate change		Impacts on te ao Māori	Environmental and social responsibility			Fatal flaws		VkT & Other impacts		Summary of decision made	
		Improved access by increasing the proportion of population living within 90 min by rail from less than 1% to 5% by	Increased PT Mode share for the three twons from less than 1% at present to over 5% by 2050	Support population growth in the three towns in line with current development plans	Technical	Safety and design	Consentability		Operating Costs	Capital Costs					Mitigation	Adaptation		Identify	Mitigation Can these be avoided, remedied or mitigated?						Summary of decision made	Progress or discontinue this alternative/ option?
6	Serve Pōkeno and Tūākau by Te Huia	3	3	4	3.Amber	2. Amber/green	3.Amber	2-5 years	Moderate	$5-$10m	Moderate	Good	N/A	**Station cost**	Reduce	Maybe	Potential impact- no investigation at this stage	N/A	Yes	N/A	No	N/A	Modest	Level crossing safety	Progress	Progress this option
Option 2A	Serve Te Kauwhata and Tūākau by Te Huia	3	3	4	3.Amber	2. Amber/green	3.Amber	2-5 years	High	$5-$10m	Moderate	Very poor	N/A	**Station cost**	Reduce	Maybe		N/A	Yes	N/A	Yes	N/A	Modest	Level crossing safety	Discontinue	Discontinue this option
Option 2B	Serve Te Kauwhata and Pōkeno by Te Huia	3	3	4	3.Amber	2. Amber/green	3.Amber	2-5 years	High	more than $10m	Moderate	Very poor	N/A	**Station cost**	Reduce	Maybe		N/A	Yes	N/A	Yes	N/A	Modest	Level crossing safety	Discontinue	Discontinue this option
Option 3	Serve Pōkeno only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	$5-$10m	Moderate	Good	N/A	**Station cost**	Reduce	Maybe		N/A	Yes	N/A	No	N/A	Modest	Level crossing safety	Progress	Progress this option
Option 3A	Serve Tūākau only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	less than $5m	Moderate	Good	N/A	**Station cost**	Reduce	Maybe		N/A	Yes	N/A	No	N/A	Modest	Level crossing safety	Progress	Progress this option
Option 3B	Serve Te Kauwhata only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	$5-$10m	Moderate	Neutral	N/A	**Station cost**	Reduce	Maybe		N/A	Yes	N/A	No	N/A	Modest	Level crossing safety	Progress	Progress this option

Option 9A	Shuttle bus from Pōkeno to Drury	2	2	1. Low	1. Green	3.Amber	2. Amber/green	2-5 years	Moderate	less than $5m	Moderate	N/A	Good	**Extent of motorway congestion may be an issue longer term**	Reduce	Maybe		N/A	Yes	N/A	Yes	N/A	Small	N/A	Discontinue	Discontinue this option
Option 9B	Shuttle bus from Tūākau to Pukekohe	2	2	1. Low	1. Green	3.Amber	2. Amber/green	2-5 years	Moderate	less than $5m	Low	N/A	Poor	**Willingness of people to switch from car to bus**	Reduce	Maybe		N/A	Yes	N/A	Yes	N/A	Small	N/A	Discontinue	Discontinue this option

C

Appendix C – Station Note

Technical Note: Station Options

This Technical Note describes the land use and ownership relevant to the station options for each of the three towns where stations are proposed. It the outlines the key design considerations, the station options identified for each location, and the estimated costs of each option.

1. Land Use and Ownership

The following section describes the existing land uses, and current land use zoning defined in the current Waikato District Council (WDC) District Plan, for each of the three towns.

1.1. Tūākau

The former station in Tūākau is an existing island platform located adjacent to the business area towards the south-east side of the town centre, as shown below. The town centre is less than five minutes away by foot from the former station. The business area is privately owned.

The existing land use in the vicinity of the former station comprises a museum located along Liverpool Street, retail businesses and the Waikato District Council on Dominion Road, as shown in Figure 1.

The current land ownership on the western side of Harrisville Road, shown as Business zone and land number 11, is held by NZ Railways Corporation.

The land in the vicinity of the railway line in Tūākau town centre is zoned Business and Residential under the designation. The land for the museum is designated as recreation use on the Liverpool Street.

Waikato District Council is understood to own the church site and also the corner vacant lot shown in Figure 1.

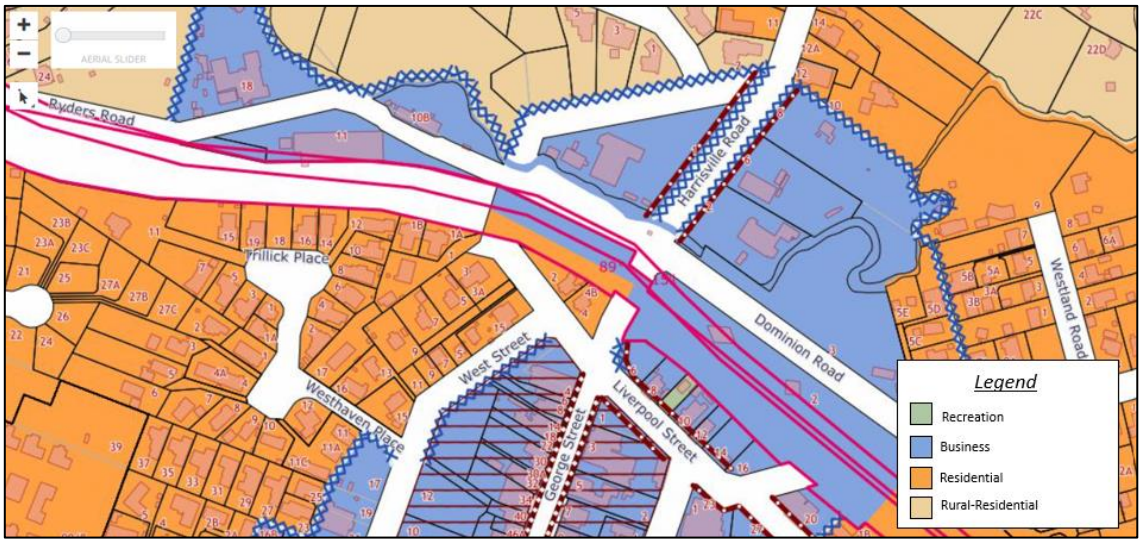


Figure 6-1. Tuakau Land Ownership

1.2. Pōkeno

A station was formerly located to the west of Pōkeno town centre, at the location shown in the photograph below. The former station platforms have been demolished.

The current land use in the vicinity of potential sites for a station in Pōkeno comprises retail shops, Countdown, Pōkeno Hall and residential areas. Land use to the south of William McRobbie Road is used for light industrial such as a warehouse and manufacturing. The Hall is publicly owned.

The land in the vicinity of the railway line is zoned Light Industrial, Business and Residential under the current designation. The land plot located to the east-north, known as the Queen's Redoubt Education Centre is specifically zoned as Heritage.

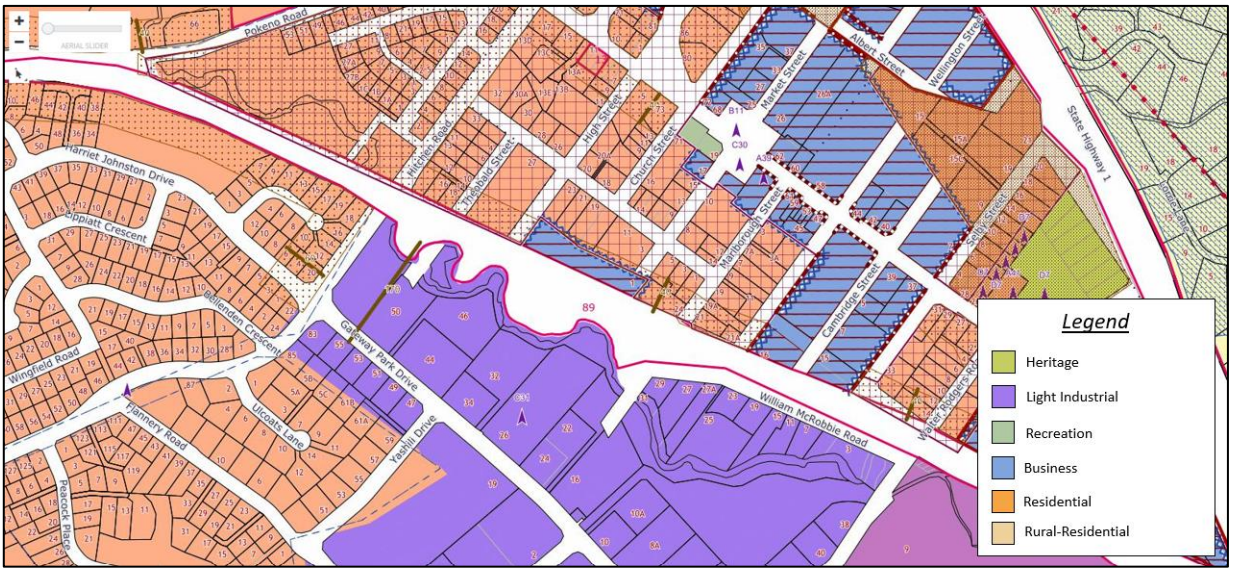


Figure 6-2. Pōkeno Land Ownership

1.3. Te Kauwhata

The former railway station is shown in the photograph below. The current land use in the vicinity of potential station sites in Te Kauwhata comprises retail shops, New World, the library, the memorial, and playground. The land use to the west of railway is residential areas. The Te Kauwhata station site has a disused island platform located between a new residential zone in the west and a recreation zone in the east.

The residential areas, retail shops, and supermarket are privately owned under the land use designations of New Residential and Business. The land plots identified as number 12 and 14, located to the south, are specifically zoned for Business purposes, and are owned by the NZ Railways Corporation.

The strip of land along the railway on the east side is also owned by the NZ Railways Corporation.

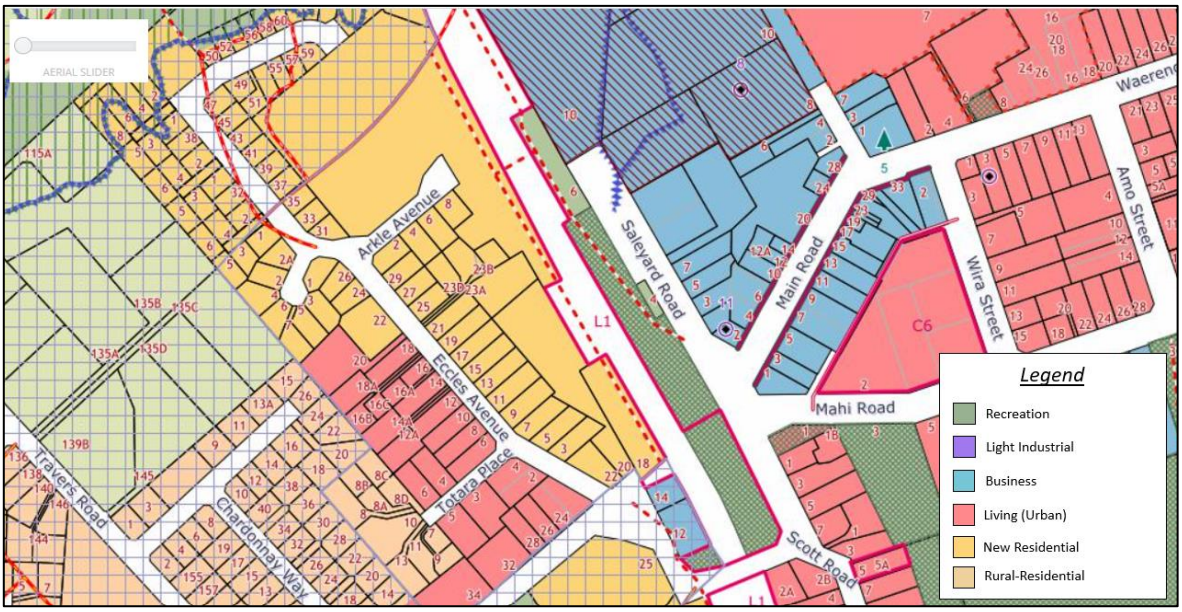


Figure 6-3. Te Kauwhata Land Ownership

2. Key Station Design Considerations

Consideration has been given to both island platform and side platform configurations at all three towns.

Based on guidance from KiwiRail on Passenger Platforms (Civil Engineering Standard dated 1 February 2018), all station platforms have been assumed to need to be a minimum of 150m in length. Side platforms have been assumed to need to be a minimum of 3m wide (with a desirable width of 5m), and island platforms have been assumed to need to be a minimum with of 5m (and a desirable width of 10m).

No guidance is given on the length of platforms required, but ATCOP standards indicate the minimum length required is 150m. This is consistent with the platform length at Huntly and The Base.

Station platforms are assumed to need to be 750mm high from the tracks.

The KiwiRail Track Designs Standards (dated 31 December 2022) specifies the inside of the minimum radius on the inside of a curve for a station platform to be located is 600m, and that the minimum radius on the outside of a curve is 1750m.

All stations have been assumed to need grade separated access at both island and side platforms due to the safety reasons. Further work, which is beyond the scope of this IBC, will be required to confirm this requirement.

Park and Ride facilities have only been assumed to be required at Pōkeno. On street parking has been assumed to be adequate at Tūākau and Te Kauwhata.

Bus interchange facililties have assumed to be provided on street at all three staiton locations.

3. Station Options

The following section describes the options identified for new stations at all three towns.

3.1. Tūākau

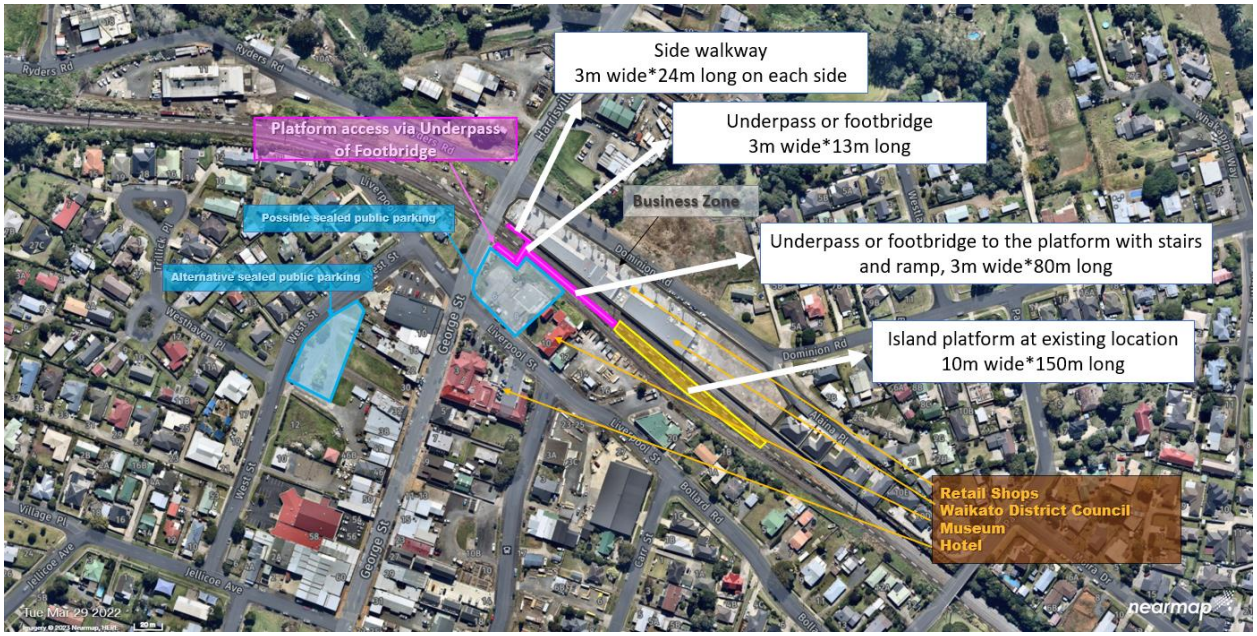
As the existing platform has not been used for a long time, is in poor condition, and is only about 150m above the rails, it would be required to be replaced.

The provision of off-street car parking and bus layover spaces would likely require land purchase and consents. As there is significant on street parking in close proximity to the town centre, the provision of off-street car parking spaces is not considered to be essential at this location. Buses can use existing bus stops located close to the station.

Safe access from the existing road crossings is a key consideration at this location.

The following options for a new station have been identified:

Option 1 (Island Platform with underpass or footbridge)



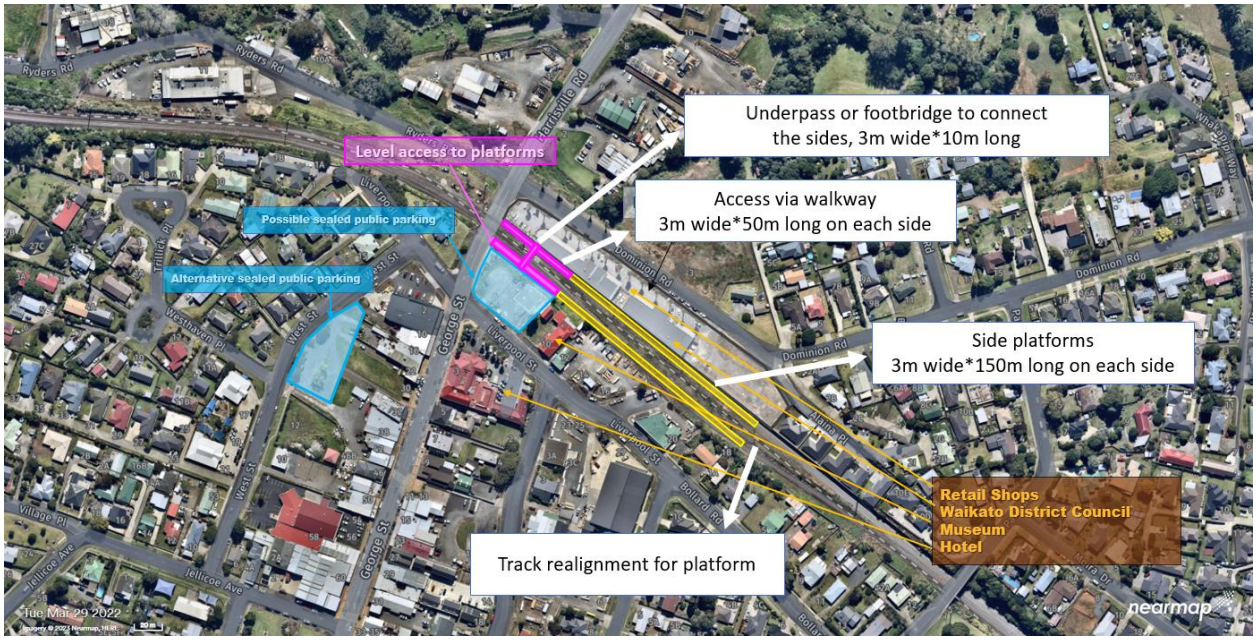
An island platform with an access via underpass or footbridge could be provided where the existing island platform is located. The key requirements assumed for costing purposes for this location are summarized in Table 1.

Table 2. Station requirements with dimension – Tūākau Option 1

	Dimension	Quantities
Side walkway	3m * 24m	2
Underpass or footbridge	3m * 13m	1
Underpass or footbridge to the platform with stairs and ramp	3m * 80m	1
Island Platform at existing location	10m*150m	1

There is possible sealed public parking to the south along Liverpool Street and St Stephens Avenue. Sealed parking could also potentially be provided to the west-north near the level crossing.

Option 2 (Side Platforms with realignment track)



In this option, side platforms are proposed to be provided at the existing station location.

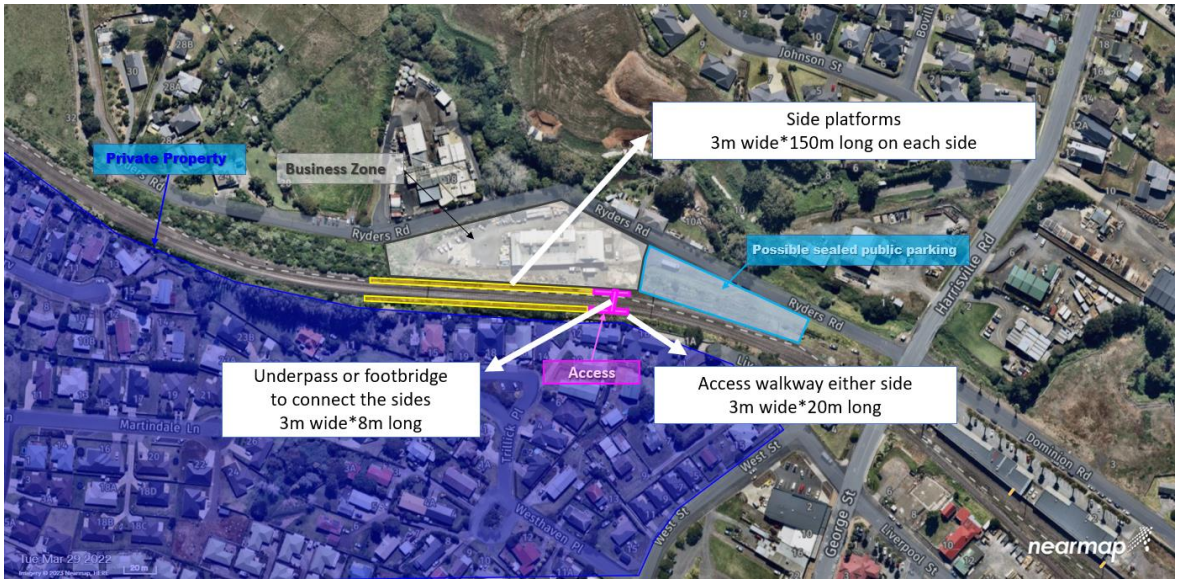
An access to the side platforms is proposed via side walkways, and the underpass or footbridge with stairs and ramp will be placed to connect both sides. The track along the side platform would be slewed in this option. The existing platform would also needs to be demolished. The key requirements assumed for costing purposes for this location are summarized in Table 2.

Table 3. Station requirements with dimension - Tūākau Option 2

	Dimension	Quantities
Access via walkway	3m * 50m	2
Underpass or footbridge to connect both sides	3m * 10m	1
Side platforms	3m * 150m	2

Sealed public parking could be provided to the south along Liverpool Street and St Stephens Avenue. Sealed parking could also be provided to the west-north near the level crossing.

Option 3 (Side platforms to the North of the Existing Station Platform Location)



Side platforms could be provided at a location further west-north, as the location shown in the photograph below.

An access to the side platforms could be provided via side walkways, and the underpass or footbridge with stairs and ramp has been assumed to be needed to be provided to connect both station accesses / platforms.

It may be possible to incorporate the old dairy factory fronting the railway line into the station, though this would add cost, risk and complexity, to this option. A land plot owned by NZ Railways Corporation could also be used for sealed public parking in adjacent to the access if required. Neither of these potential features of this option have been assumed for costing purposes.

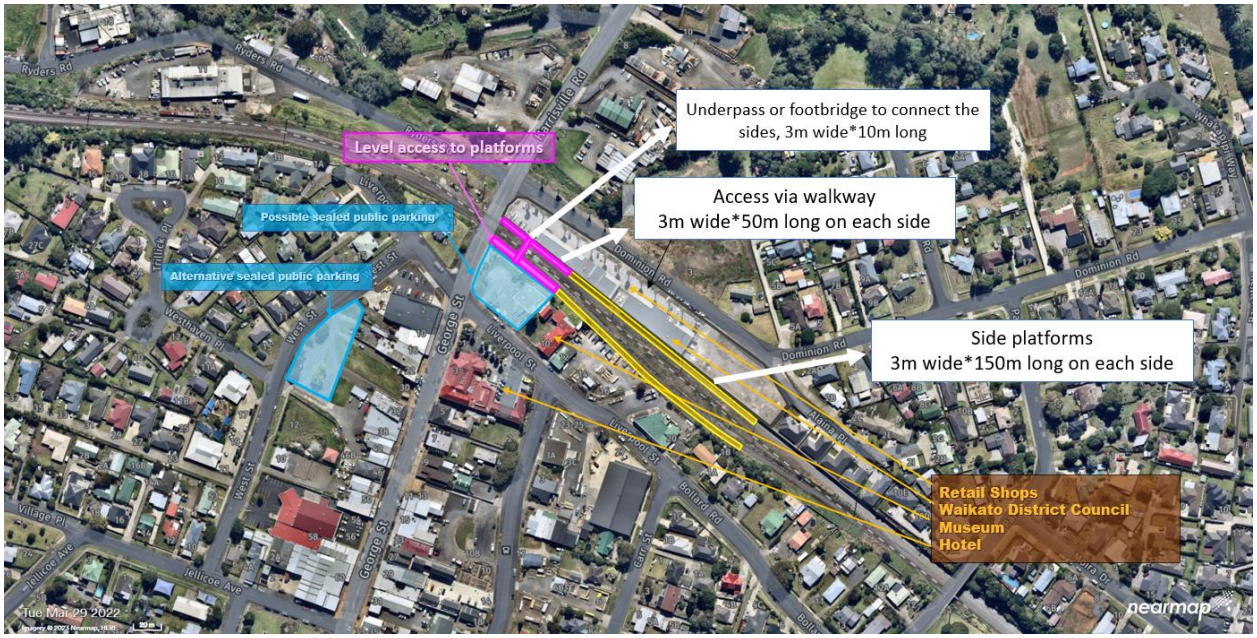
The intersection of the access road with Harrisville Road is also a constraint to this option.

The key requirements assumed for costing purposes for this location are summarized in Table 3.

Table 4. Station requirements with dimension - Tūākau Option 3

	Dimension	Quantities
Access via walkway	3m * 20m	2
Underpass or footbridge to connect both sides	3m * 8m	1
Side platforms	3m * 150m	2

Option 4 (Side platforms with no track realignment)



Side platforms are proposed to be near the existing platform without track realignment. The radius of the track along the proposed platfoms is approximately 600m. An access to the side platforms is proposed to be provided via side walkways, and an underpass or footbridge with stairs and ramp can be provided to connect both sides.

The key requirements assumed for costing purposes for this location are summarized in Table 4.

Table 5. Station requirements with dimension - Tūākau Option 4

	Dimension	Quantities
Access via walkway	3m * 20m	2
Underpass or footbridge to connect both sides	3m * 8m	1
Side platforms	3m * 150m	2

A sealed public parking area could be provided to the south along Liverpool Street and St Stephens Avenue if required. Also, the sealed parking could be provided to the west-north near the level crossing.

3.2. Pōkeno

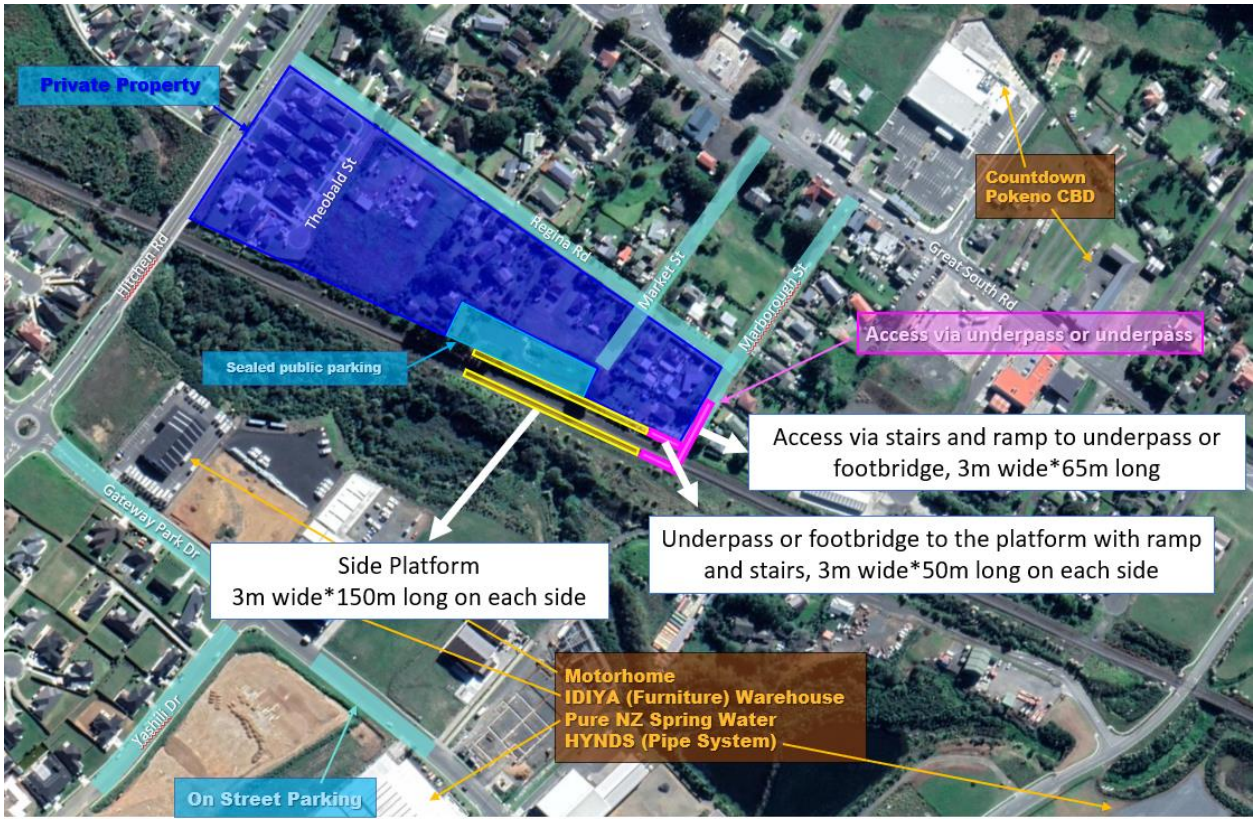
Building side platforms would be more cost-effective than an island platform station in Pōkeno, as they would avoid the cost involved in slewing the tracks.

Whilst there is significant on street parking in close proximity to the town centre, the provision of a car park for Park and Ride users on the east (town centre) side of the railway line is assumed to be required.

Safe access from the town centre for station users is a key consideration at this location.

The following options for a new station have been identified:

Option 1 (Side Platforms with Underpass or Footbridge)



The side platforms are located close to Marlborough Street with access via underpass or footbridge. Off-street parking is proposed near the site such as on Regina Road and Marlborough Street.

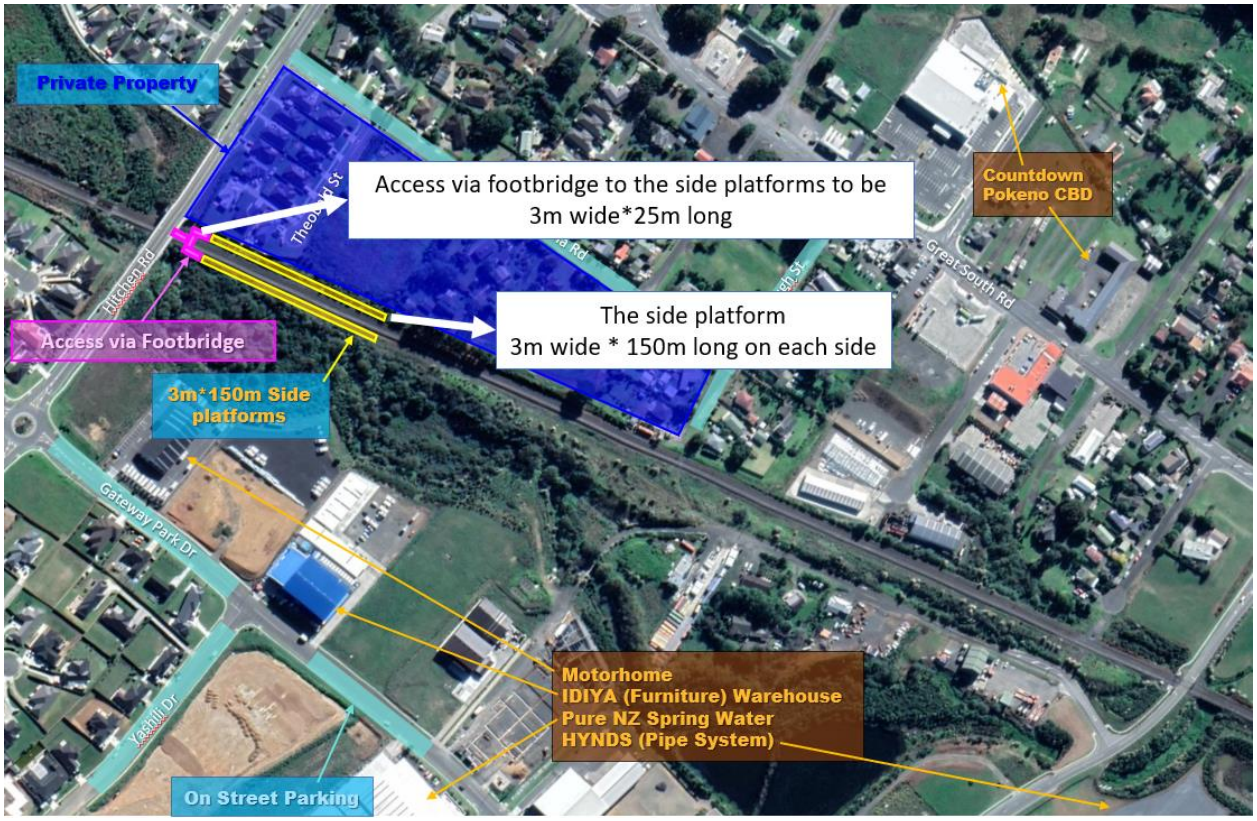
A sealed public parking area is proposed with this option at the end of Market Street.

The key requirements assumed for costing purposes for this location are summarized in Table 5.

Table 6. Station requirements with dimension – Pōkeno Option 1

	Dimension	Quantities
Access via walkway	3m * 20m	2
Underpass or footbridge to connect both sides	3m * 8m	1
Side platforms	3m * 150m	2

Option 2 (Side Platforms with Footbridge)



A side platform (150m long and 4.5m wide) station could `be provided with access via footbridge in the vicinity of Theobald Street.

Off-street parking could be provided near the site such as on Regina Road and Marlborough Street, though this would require land/property acquisition.

The key requirements assumed for costing purposes for this location are summarized in Table 6.

Table 7. Station requirements with dimension – Pōkeno Option 2

	Dimension	Quantities
Access via footbridge	3m * 25m	1
Side platforms	3m * 150m	2

3.3. Te Kauwhata

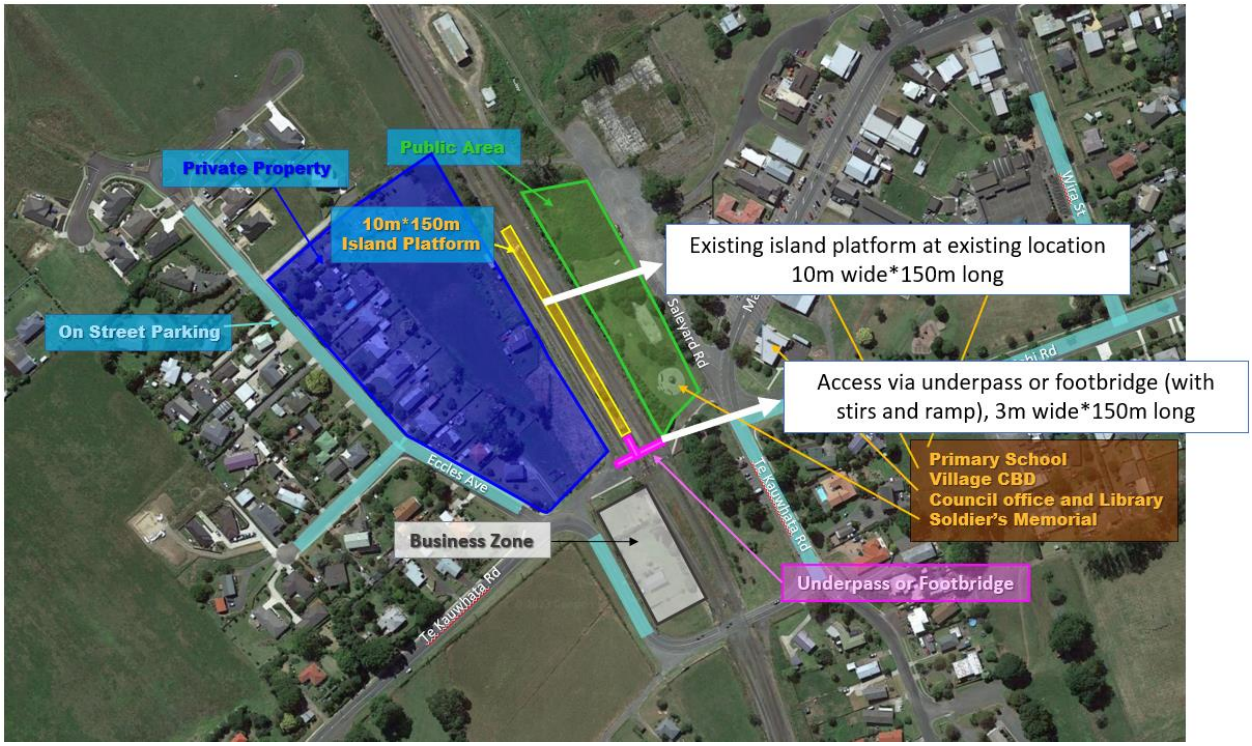
As the existing platform is in poor condition, and only about 150mm above the height of the rails, it is assumed that the existing platform will need to be replaced.

The provision of off-street car parking and bus layover facilities would likely require land purchase and consents. As there is significant on street parking in close proximity to the town centre, the provision of off-street car parking spaces is not considered to be essential at this location. Buses can use existing bus stops located close to the station.

Safe access from the existing pedestrian and road crossings is a key consideration at this location.

The following options for a new station have been identified:

Option 1 (Island Platform with Underpass or Footbridge)



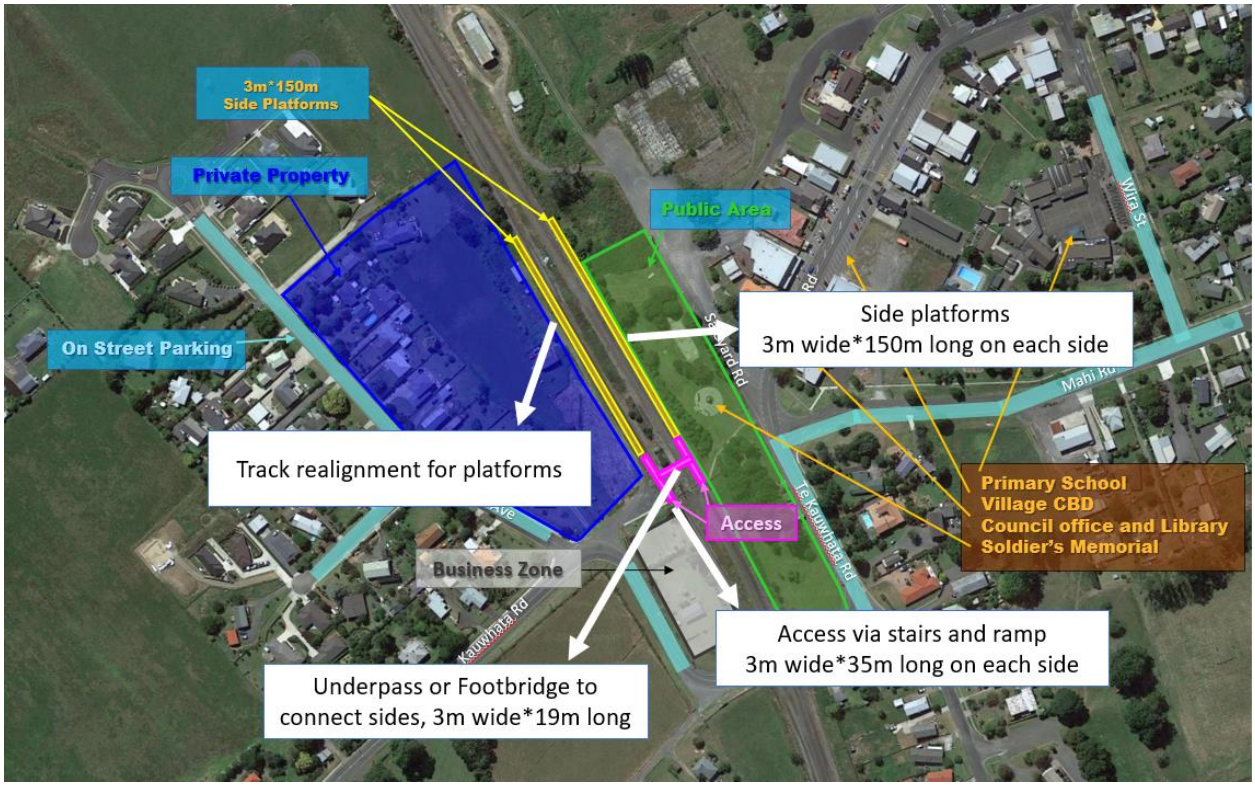
The island platform (150m long and up to 10m wide) is proposed to be in the existing platform with access via underpass or footbridge. The access will be located at the existing level crossing.

The key requirements assumed for costing purposes for this location are summarized in Table 7.

Table 8. Station requirements with dimension – Te Kauwhata Option 1

	Dimension	Quantities
Island platform	10m * 150m	1
Underpass or footbridge	3m * 150m	2

Option 2 (Side Platforms at the existing station with Realignment of Track)



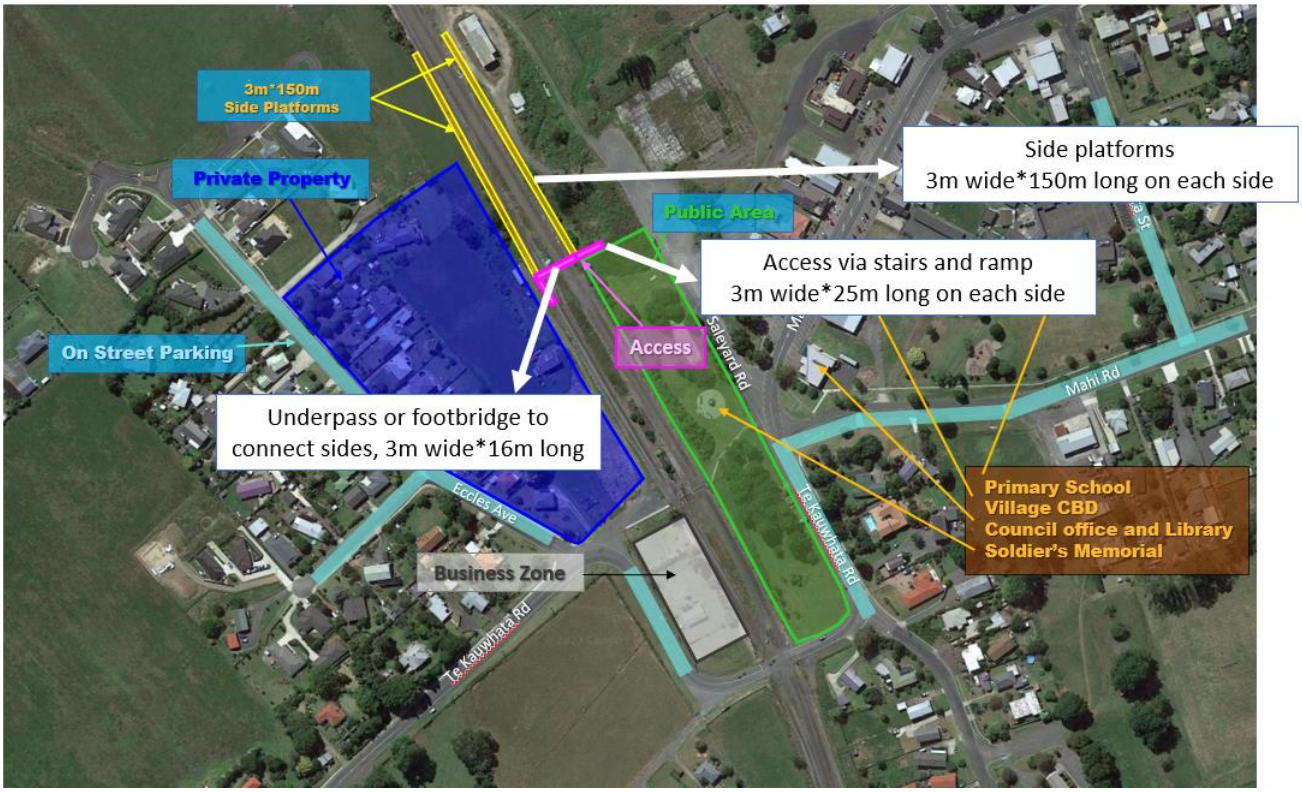
Side platforms are proposed to be located near to the existing platform. The southbound platform would need to be located on a loop track to avoid changes to the track layout. An access to the side platforms is proposed via side walkways, and the underpass or footbridge with stairs and ramp will be placed to connect both sides. The track along the side platform requires to be slewed in this option.

The key requirements assumed for costing purposes for this location are summarized in Table 8.

Table 9. Station requirements with dimension – Te Kauwhata Option 2

	Dimension	Quantities
Side platforms	3m * 150m	2
Underpass or footbridge to connect both sides	3m * 19m	1
Access via stairs and ramp	3m * 35m	2

Option 3 (Side Platforms to North)



Side platforms could be proposed at a location further to the north, near the Pumpkin shed (see photograph below).

There would be no need to realign the track at this location if the southbound platform is located on the loop line.

An access to the side platforms could be proposed via side walkways, and the underpass or footbridge with stairs and ramp will be placed to connect both sides.

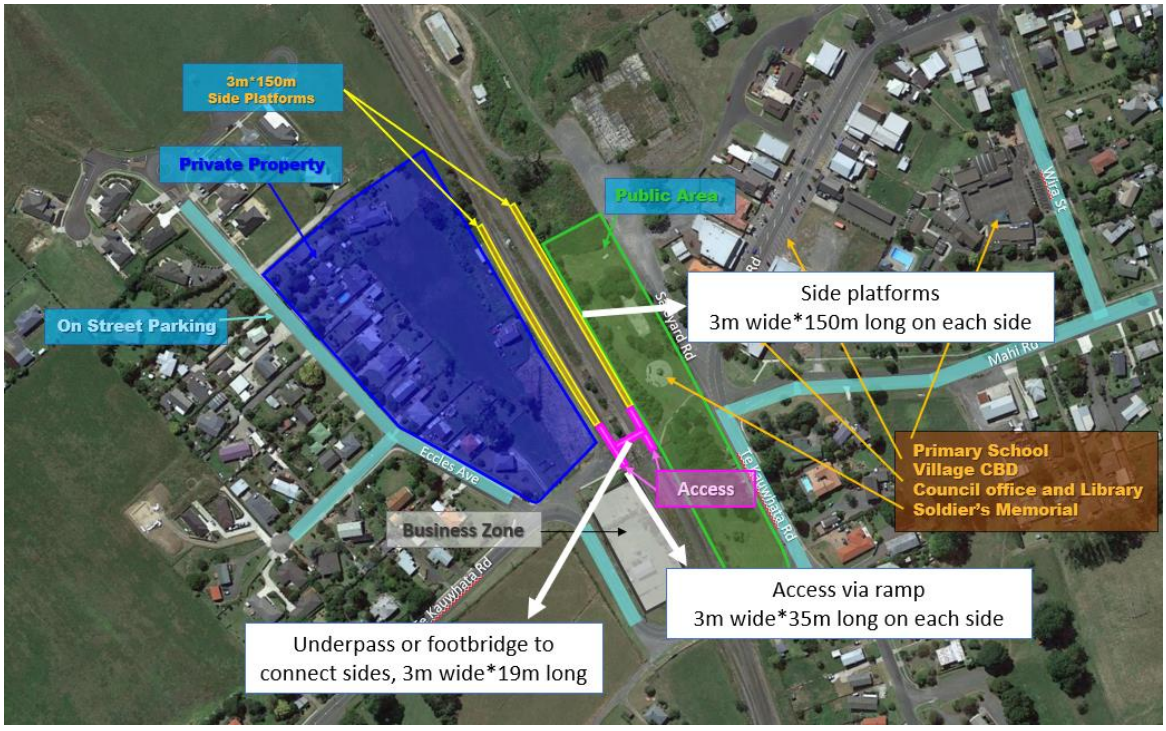
The key requirements assumed for costing purposes for this location are summarized in Table 9.

Table 10. Station requirements with dimension – Te Kauwhata Option 3

	Dimension	Quantities
Access via stairs and ramp	3m * 25m	2
Underpass or footbridge to connect both sides	3m * 16m	1
Side platforms	3m * 150m	2

There is a land plot owned by NZ Railways Corporation could potentially be used for sealed public parking in adjacent to the access, if required.

Option 4 (Side Platforms with No Track Realignment)



Side platforms are proposed to be located where the existing platform without track realignment (with the southbound platform being located on a loop line). The radius of the track along the proposed platfoms is approximately 600m.

An access to the side platforms would be provided via side walkways near the existing level crossing, and the underpass or footbridge with stairs and ramp will be placed to connect both sides.

The key requirements assumed for costing purposes for this location are summarized in Table 10.

Table 11. Station requirements with dimension – Te Kauwhata Option 4

	Dimension	Quantities
Access via walkway	3m * 35m	2
Underpass or footbridge to connect both sides	3m * 19m	1
Side platforms	3m * 150m	2

4. Costs

Cost estimates have been prepared for all options, as summarised below.

Station Location	Option	P50 Estimate ($)	P95 Estimate ($)
Tūākau	1	8,470,080	10,590,000
	2	5,460,000	6,830,000
	3	4,950,000	6,190,000
	4	5,110,000	6,390,000
Pōkeno	1	7,382,000	9,230,000
	2	4,960,000	6,200,000
Te Kauwhata	1	9,890,000	12,360,000
	2	7,840,000	9,800,000
	3	5,600,000	7,000,000
	4	5,940,000	7,420,000

D

Appendix D – Short List MCA

Sensitivity: General

Alternative/ option		Investment Objective			Practical Feasibility			Scheduling/programming	Cost			Demand	Revenue	Competitiveness of Rail versus Car (travel time benefits)	Competitiveness of Rail versus Feeder Buses (travel time benefits)	Decongestion Benefits	BCR	Potential for Developer Contributions	Key risks and uncertainties to consider	Climate change		Impacts on te ao Māori	Environmental and social responsibility		Fatal flaws		VKT & Other impacts to consider at DBC		Summary of decision made	
		Improved access by increasing the proportion of population living within 90 min by rail from less than 1% to 5% by 2050	Increased PT Mode share for the three twons from less than 1% at present to over 5% by 2050	Support population growth in the three towns in line with current development plans	Technical	Safety and design	Consentability		Operating Costs	Capital Costs	Maintenance Costs									Mitigation	Adaptation		Identify	Mitigation Can these be avoided, remedied or mitigated?						Summary of decision made	Progress or discontinue this alternative/ option to DBC?
Option 6	Serve Pōkeno and Tūākau by Te Huia	3	3	4	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	more than $10m	Moderate	Moderate	Moderate	God	N/A	Good	Neutral	Neutral	Station maintenance costs	Reduce	Maybe	Consider in DBC	N/A	Yes	N/A	No	N/A	Modest	Level crossing safety	Progress	Progress this option to DBC
Option 3	Serve Pōkeno only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	$5-$10m	Moderate	Moderate	Moderate	God	N/A	Good	Poor	Neutral		Reduce	Maybe	No significant impacts anticipated	N/A	Yes	N/A	Yes	Low BCR	Modest	Level crossing safety	Discontinue	No further consideration in DBC
Option 3A	Serve Tūākau only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	less than $5m	Moderate	Moderate	Moderate	God	N/A	Good	Neutral	Neutral	Station maintenance costs	Reduce	Maybe	Consider in DBC	N/A	Yes	N/A	No	N/A	Modest	Level crossing safety	Progress	Progress this option to DBC (preferred option)
Option 3B	Serve Te Kauwhata only by Te Huia	3	3	2	3.Amber	2. Amber/green	3.Amber	2-5 years	Low	less than $5m	Moderate	Moderate	Moderate	Neutral	N/A	Good	Poor	Neutral		Reduce	Maybe	No significant impacts anticipated	N/A	Yes	N/A	Yes	Low BCR	Modest	Level crossing safety	Discontinue	No further consideration in DBC

E

Appendix E – Option Cost Estimates

Tuakau Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE				10,590,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing island platform				
	Construct side walkway				
	Construct underpass under rail track				
	Construct underpass				
	Construct island platform				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				

Tuakau Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Tuakau Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide side walkway	144	m2	150.00	21,600
3	3m wide underpass across rail track	13	m	30,000.00	390,000
4	3m wide underpass	80	m	14,000.00	1,120,000
5	Stair	1	No	10,000.00	10,000
6	Allowance for ramp	1	LS	90,000.00	90,000
7	Demolish existing platform	1,000	m2	500.00	500,000
8	Island platform including bench seating, signage and lighting	1,200	m2	2,000.00	2,400,000
	Sub Total for Physical Works				4,531,600
	TRAFFIC MANAGEMENT				
9	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
10	Allowance for Preliminary and General	4,601,600	%	0.20	920,320
	Sub Total for Preliminary and General				920,320
11	Rounding	1	LS	-1,919.54	-1,920

Tuakau Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE (Continued)				
	Total for Physical Works				5,520,000
	FEES				
12	Allowance for Project Development Phase costs (2%)	5,520,000	%	0.02	110,400
13	Allowance for Pre-Implementation phase costs (9%)	5,520,000	%	0.09	496,800
14	Allowance for Implementation phase fees (6%)	5,520,000	%	0.06	331,200
15	Allowance for block of line and uplift protection (KiwiRail) (10%)	5,520,000	%	0.01	55,200
	Sub Total for Fees				993,600
	CONTINGENCY				
16	Allowance for construction (30%)	5,520,000	%	0.30	1,656,000
17	Allowance for Project Development Phase costs (30%)	110,400	%	0.30	33,120
18	Allowance for Pre-Implementation phase costs (30%)	496,800	%	0.30	149,040
19	Allowance for Implementation phase fees (30%)	331,200	%	0.30	99,360
20	Allowance for block of line and uplift protection (KiwiRail) (30%)	55,200	%	0.30	16,560
21	Rounding	1	LS	2,400.00	2,400
22	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				8,470,080
	FUNDING RISK				
23	Allowance for construction (25%)	7,176,000	%	0.25	1,794,000

Tuakau Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE (Continued)				
24	Allowance for Project Development Phase costs (25%)	143,520	%	0.25	35,880
25	Allowance for Pre-Implementation phase costs (25%)	645,840	%	0.25	161,460
26	Allowance for Implementation phase fees (25%)	430,560	%	0.25	107,640
27	Allowance for block of line and uplift protection (KiwiRail) (25%)	71,760	%	0.25	17,940
28	Rounding	1	LS	3,000.00	3,000
29	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				10,590,000

Tuakau Option 2 Cost Estimate

Beca Cost Advisory

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 2 - SIDE PLATFORM WITH REALIGNED TRACK COST ESTIMATE				6,830,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: July 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing side platforms				
	Construct side walkway				
	Construct underpass under rail track				
	Construct side platforms				
	Track realignment				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				

Tuakau Option 2 Cost Estimate

Beca Cost Advisory

Code	Description	Quantity	Unit	Rate	Total
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from November 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Tuakau Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 2 - SIDE PLATFORM WITH REALIGNED TRACK COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide side walkway	300	m2	150.00	45,000
3	3m wide underpass across rail track	10	m	30,000.00	300,000
4	Demolish existing platform	900	m2	500.00	450,000
5	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
6	Track realignment	150	m	1,250.00	187,500
7	Stairs	2	No	10,000.00	20,000
8	Allowance for ramp	1	LS	90,000.00	90,000
	Sub Total for Physical Works				2,892,500
	TRAFFIC MANAGEMENT				
9	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
10	Allowance for Preliminary and General	2,962,500	%	0.20	592,500
	Sub Total for Preliminary and General				592,500
11	Rounding	1	LS	5,000.00	5,000

Tuakau Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 2 - SIDE PLATFORM WITH REALIGNED TRACK COST ESTIMATE (Continued)				
	Total for Physical Works				3,560,000
	FEES				
12	Allowance for Project Development Phase costs (2%)	3,560,000	%	0.02	71,200
13	Allowance for Pre-Implementation phase costs (9%)	3,560,000	%	0.09	320,400
14	Allowance for Implementation phase fees (6%)	3,560,000	%	0.06	213,600
15	Allowance for block of line and uplift protection (KiwiRail) (10%)	3,560,000	%	0.01	35,600
	Sub Total for Fees				640,800
	CONTINGENCY				
16	Allowance for construction (30%)	3,560,000	%	0.30	1,068,000
17	Allowance for Project Development Phase costs (30%)	71,200	%	0.30	21,360
18	Allowance for Pre-Implementation phase costs (30%)	320,400	%	0.30	96,120
19	Allowance for Implementation phase fees (30%)	213,600	%	0.30	64,080
20	Allowance for block of line and uplift protection (KiwiRail) (30%)	35,600	%	0.30	10,680
21	Rounding	1	LS	-1,040.00	-1,040
22	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				5,460,000
	FUNDING RISK				
23	Allowance for construction (25%)	4,628,000	%	0.25	1,157,000

Tuakau Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 2 - SIDE PLATFORM WITH REALIGNED TRACK COST ESTIMATE (Continued)				
24	Allowance for Project Development Phase costs (25%)	92,560	%	0.25	23,140
25	Allowance for Pre-Implementation phase costs (25%)	416,520	%	0.25	104,130
26	Allowance for Implementation phase fees (25%)	277,680	%	0.25	69,420
27	Allowance for block of line and uplift protection (KiwiRail) (25%)	46,280	%	0.25	11,570
28	Rounding	1	LS	4,740.00	4,740
29	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				6,830,000

Tuakau Option 3 Cost Estimate

Beca Cost Advisory

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 3 - SIDE PLATFORM TO NORTH OF EXISTING STATION COST ESTIMATE				6,190,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: July 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing side platforms				
	Construct side walkway				
	Construct underpass under rail track				
	Construct side platforms				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				
	Funding Risk - 25%				

Tuakau Option 3 Cost Estimate

Beca Cost Advisory

Code	Description	Quantity	Unit	Rate	Total
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from November 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Tuakau Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 3 - SIDE PLATFORM TO NORTH OF EXISTING STATION COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide side walkway	120	m2	150.00	18,000
3	3m wide underpass across rail track	8	m	30,000.00	240,000
4	Demolish existing platform	900	m2	500.00	450,000
5	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
6	Stairs	2	No	10,000.00	20,000
7	Allowance for ramp	1	LS	90,000.00	90,000
	Sub Total for Physical Works				2,618,000
	TRAFFIC MANAGEMENT				
8	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
9	Allowance for Preliminary and General	2,688,000	%	0.20	537,600
	Sub Total for Preliminary and General				537,600
10	Rounding	1	LS	4,400.00	4,400
	Total for Physical Works				3,230,000

Tuakau Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 3 - SIDE PLATFORM TO NORTH OF EXISTING STATION COST ESTIMATE (Continued)				
	FEES				
11	Allowance for Project Development Phase costs (2%)	3,230,000	%	0.02	64,600
12	Allowance for Pre-Implementation phase costs (9%)	3,230,000	%	0.09	290,700
13	Allowance for Implementation phase fees (6%)	3,230,000	%	0.06	193,800
14	Allowance for block of line and uplift protection (KiwiRail) (10%)	3,230,000	%	0.01	32,300
	Sub Total for Fees				581,400
	CONTINGENCY				
15	Allowance for construction (30%)	3,230,000	%	0.30	969,000
16	Allowance for Project Development Phase costs (30%)	64,600	%	0.30	19,380
17	Allowance for Pre-Implementation phase costs (30%)	290,700	%	0.30	87,210
18	Allowance for Implementation phase fees (30%)	193,800	%	0.30	58,140
19	Allowance for block of line and uplift protection (KiwiRail) (30%)	32,300	%	0.30	9,690
20	Rounding	1	LS	-4,820.00	-4,820
21	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				4,950,000
	FUNDING RISK				
22	Allowance for construction (25%)	4,199,000	%	0.25	1,049,750
23	Allowance for Project Development Phase costs (25%)	83,980	%	0.25	20,995

Tuakau Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 3 - SIDE PLATFORM TO NORTH OF EXISTING STATION COST ESTIMATE (Continued)				
24	Allowance for Pre-Implementation phase costs (25%)	377,910	%	0.25	94,478
25	Allowance for Implementation phase fees (25%)	251,940	%	0.25	62,985
26	Allowance for block of line and uplift protection (KiwiRail) (25%)	41,990	%	0.25	10,498
27	Rounding	1	LS	1,295.00	1,295
28	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				6,190,000

Tuakau Option 4 Cost Estimate

Beca Cost Advisory

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 4 - SIDE PLATFORM WITH NO TRACK REALIGNMENT COST ESTIMATE				6,390,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: July 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing side platforms				
	Construct side walkway				
	Construct underpass under rail track				
	Construct side platforms				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				
	Funding Risk - 25%				

Tuakau Option 4 Cost Estimate

Beca Cost Advisory

Code	Description	Quantity	Unit	Rate	Total
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from November 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Tuakau Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 4 - SIDE PLATFORM WITH NO TRACK REALIGNMENT COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide side walkway	300	m2	150.00	45,000
3	3m wide underpass across rail track	10	m	30,000.00	300,000
4	Demolish existing platform	900	m2	500.00	450,000
5	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
6	Stairs	2	No	10,000.00	20,000
7	Allowance for ramp	1	LS	90,000.00	90,000
	Sub Total for Physical Works				2,705,000
	TRAFFIC MANAGEMENT				
8	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
9	Allowance for Preliminary and General	2,775,000	%	0.20	555,000
	Sub Total for Preliminary and General				555,000
10	Rounding	1	LS		0
	Total for Physical Works				3,330,000

Tuakau Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 4 - SIDE PLATFORM WITH NO TRACK REALIGNMENT COST ESTIMATE (Continued)				
	FEES				
11	Allowance for Project Development Phase costs (2%)	3,330,000	%	0.02	66,600
12	Allowance for Pre-Implementation phase costs (9%)	3,330,000	%	0.09	299,700
13	Allowance for Implementation phase fees (6%)	3,330,000	%	0.06	199,800
14	Allowance for block of line and uplift protection (KiwiRail) (10%)	3,330,000	%	0.01	33,300
	Sub Total for Fees				599,400
	CONTINGENCY				
15	Allowance for construction (30%)	3,330,000	%	0.30	999,000
16	Allowance for Project Development Phase costs (30%)	66,600	%	0.30	19,980
17	Allowance for Pre-Implementation phase costs (30%)	299,700	%	0.30	89,910
18	Allowance for Implementation phase fees (30%)	199,800	%	0.30	59,940
19	Allowance for block of line and uplift protection (KiwiRail) (30%)	33,300	%	0.30	9,990
20	Rounding	1	LS	1,780.00	1,780
21	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				5,110,000
	FUNDING RISK				
22	Allowance for construction (25%)	4,329,000	%	0.25	1,082,250
23	Allowance for Project Development Phase costs (25%)	86,580	%	0.25	21,645

Tuakau Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TUAKAU OPTION 4 - SIDE PLATFORM WITH NO TRACK REALIGNMENT COST ESTIMATE (Continued)				
24	Allowance for Pre-Implementation phase costs (25%)	389,610	%	0.25	97,403
25	Allowance for Implementation phase fees (25%)	259,740	%	0.25	64,935
26	Allowance for block of line and uplift protection (KiwiRail) (25%)	43,290	%	0.25	10,823
27	Rounding	1	LS	2,945.00	2,945
28	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				6,390,000

Pokeno Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 1 - SIDE PLATFORM WITH UNDERPASS COST ESTIMATE				9,230,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Construct ramp and stairs				
	Construct underpass under rail track				
	Construct underpass				
	Construct side platform				
	Construct carpark				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				

Pokeno Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Pokeno Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 1 - SIDE PLATFORM WITH UNDERPASS COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide underpass across rail track	8	m	30,000.00	240,000
3	3m wide underpass	100	m	14,000.00	1,400,000
4	Stairs	2	No	10,000.00	20,000
5	3m wide ramp	171	m2	1,500.00	256,500
6	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
7	Carpark	1,500	m2	150.00	225,000
	Sub Total for Physical Works				3,941,500
	TRAFFIC MANAGEMENT				
8	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
9	Allowance for Preliminary and General	4,011,500	%	0.20	802,300
	Sub Total for Preliminary and General				802,300
10	Rounding	1	LS	-3,799.42	-3,799
	Total for Physical Works				4,810,000

Pokeno Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 1 - SIDE PLATFORM WITH UNDERPASS COST ESTIMATE (Continued)				
	FEES				
11	Allowance for Project Development Phase costs (2%)	4,810,000	%	0.02	96,200
12	Allowance for Pre-Implementation phase costs (9%)	4,810,000	%	0.09	432,900
13	Allowance for Implementation phase fees (6%)	4,810,000	%	0.06	288,600
14	Allowance for block of line and uplift protection (KiwiRail) (10%)	4,810,000	%	0.01	48,100
	Sub Total for Fees				865,800
	CONTINGENCY				
15	Allowance for construction (30%)	4,810,000	%	0.30	1,443,000
16	Allowance for Project Development Phase costs (30%)	96,200	%	0.30	28,860
17	Allowance for Pre-Implementation phase costs (30%)	432,900	%	0.30	129,870
18	Allowance for Implementation phase fees (30%)	288,600	%	0.30	86,580
19	Allowance for block of line and uplift protection (KiwiRail) (30%)	48,100	%	0.30	14,430
20	Rounding	1	LS	3,460.00	3,460
21	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				7,382,000
	FUNDING RISK				
22	Allowance for construction (25%)	6,253,000	%	0.25	1,563,250
23	Allowance for Project Development Phase costs (25%)	125,060	%	0.25	31,265

Pokeno Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 1 - SIDE PLATFORM WITH UNDERPASS COST ESTIMATE (Continued)				
24	Allowance for Pre-Implementation phase costs (25%)	562,770	%	0.25	140,692
25	Allowance for Implementation phase fees (25%)	375,180	%	0.25	93,795
26	Allowance for block of line and uplift protection (KiwiRail) (25%)	62,530	%	0.25	15,632
27	Rounding	1	LS	3,365.00	3,365
28	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				9,230,000

Pokeno Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 2 - SIDE PLATFORM WITH FOOTBRIDGE COST ESTIMATE				6,200,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Construct footbridge				
	Construct side platforms				
	Construct carpark				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				

Pokeno Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Pokeno Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 2 - SIDE PLATFORM WITH FOOTBRIDGE COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide footbridge	75	m2	8,000.00	600,000
3	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
4	Carpark	1,500	m2	150.00	225,000
	Sub Total for Physical Works				2,625,000
	TRAFFIC MANAGEMENT				
5	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
6	Allowance for Preliminary and General	2,695,000	%	0.20	539,000
	Sub Total for Preliminary and General				539,000
7	Rounding	1	LS	-4,000.00	-4,000
	Total for Physical Works				3,230,000
	FEES				
8	Allowance for Project Development Phase costs (2%)	3,230,000	%	0.02	64,600
9	Allowance for Pre-Implementation phase costs (9%)	3,230,000	%	0.09	290,700
10	Allowance for Implementation phase fees (6%)	3,230,000	%	0.06	193,800

Pokeno Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 2 - SIDE PLATFORM WITH FOOTBRIDGE COST ESTIMATE (Continued)				
11	Allowance for block of line and uplift protection (KiwiRail) (10%)	3,230,000	%	0.01	32,300
	Sub Total for Fees				581,400
	CONTINGENCY				
12	Allowance for construction (30%)	3,230,000	%	0.30	969,000
13	Allowance for Project Development Phase costs (30%)	64,600	%	0.30	19,380
14	Allowance for Pre-Implementation phase costs (30%)	290,700	%	0.30	87,210
15	Allowance for Implementation phase fees (30%)	193,800	%	0.30	58,140
16	Allowance for block of line and uplift protection (KiwiRail) (30%)	32,300	%	0.30	9,690
17	Rounding	1	LS	5,180.00	5,180
18	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				4,960,000
	FUNDING RISK				
19	Allowance for construction (25%)	4,199,000	%	0.25	1,049,750
20	Allowance for Project Development Phase costs (25%)	83,980	%	0.25	20,995
21	Allowance for Pre-Implementation phase costs (25%)	377,910	%	0.25	94,478
22	Allowance for Implementation phase fees (25%)	251,940	%	0.25	62,985
23	Allowance for block of line and uplift protection (KiwiRail) (25%)	41,990	%	0.25	10,498

Pokeno Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	POKENO OPTION 2 - SIDE PLATFORM WITH FOOTBRIDGE COST ESTIMATE (Continued)				
24	Rounding	1	LS	1,295.00	1,295
25	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				6,200,000

Te Kauwhata Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE				12,360,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing island platform				
	Construct underpass under rail track				
	Construct underpass				
	Construct island platform				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				

Te Kauwhata Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Contingency - 30%				
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Te Kauwhata Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide underpass across rail track	13	m	30,000.00	390,000
3	3m wide underpass	137	m	14,000.00	1,917,999
4	Stair	1	No	10,000.00	10,000
5	Allowance for ramp	1	LS	90,000.00	90,000
6	Demolish existing platform	1,000	m2	500.00	500,000
7	Island platform including bench seating, signage and lighting	1,200	m2	2,000.00	2,400,000
	Sub Total for Physical Works				5,307,999
	TRAFFIC MANAGEMENT				
8	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
9	Allowance for Preliminary and General	5,377,999	%	0.20	1,075,600
	Sub Total for Preliminary and General				1,075,600
10	Rounding	1	LS	-3,599.20	-3,599
	Total for Physical Works				6,450,000

Te Kauwhata Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE (Continued)				
	FEES				
11	Allowance for Project Development Phase costs (2%)	6,450,000	%	0.02	129,000
12	Allowance for Pre-Implementation phase costs (9%)	6,450,000	%	0.09	580,500
13	Allowance for Implementation phase fees (6%)	6,450,000	%	0.06	387,000
14	Allowance for block of line and uplift protection (KiwiRail) (10%)	6,450,000	%	0.01	64,500
	Sub Total for Fees				1,161,000
	CONTINGENCY				
15	Allowance for construction (30%)	6,450,000	%	0.30	1,935,000
16	Allowance for Project Development Phase costs (30%)	129,000	%	0.30	38,700
17	Allowance for Pre-Implementation phase costs (30%)	580,500	%	0.30	174,150
18	Allowance for Implementation phase fees (30%)	387,000	%	0.30	116,100
19	Allowance for block of line and uplift protection (KiwiRail) (30%)	64,500	%	0.30	19,350
20	Rounding	1	LS	-4,300.00	-4,300
21	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				9,890,000
	FUNDING RISK				
22	Allowance for construction (25%)	8,385,000	%	0.25	2,096,250
23	Allowance for Project Development Phase costs (25%)	167,700	%	0.25	41,925

Te Kauwhata Option 1 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 1 - ISLAND PLATFORM WITH UNDERPASS COST ESTIMATE (Continued)				
24	Allowance for Pre-Implementation phase costs (25%)	754,650	%	0.25	188,663
25	Allowance for Implementation phase fees (25%)	503,100	%	0.25	125,775
26	Allowance for block of line and uplift protection (KiwiRail) (25%)	83,850	%	0.25	20,963
27	Rounding	1	LS	-3,575.00	-3,575
28	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				12,360,000

Te Kauwhata Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 2 - SIDE PLATFORM AT THE EXISTING STATION WITH REALIGNMENT TRACK COST ESTIMATE				9,800,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing side platforms				
	Construct underpass under rail track				
	Construct underpass				
	Construct ramp and stairs				
	Construct side platforms				
	Track realignment				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				

Te Kauwhata Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				
	Contingency - 30%				
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Te Kauwhata Option 2 Cost Estimate

Beca Cost Advisory

Project: Station Plans **Details:**

Building: Station Plans (Upper North Waikato Railways)

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 2 - SIDE PLATFORM AT THE EXISTING STATION WITH REALIGNMENT TRACK COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide underpass across rail track	19	m	30,000.00	570,000
3	3m wide underpass	70	m	14,000.00	980,000
4	Stairs	2	No	10,000.00	20,000
5	Allowance for ramp	1	LS	180,000.00	180,000
6	Demolish existing platform	900	m2	500.00	450,000
7	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
8	Track realignment	150	m	1,250.00	187,500
	Sub Total for Physical Works				4,187,500
	TRAFFIC MANAGEMENT				
9	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
10	Allowance for Preliminary and General	4,257,500	%	0.20	851,500
	Sub Total for Preliminary and General				851,500
11	Rounding	1	LS	1,000.00	1,000

Te Kauwhata Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 2 - SIDE PLATFORM AT THE EXISTING STATION WITH REALIGNMENT TRACK COST ESTIMATE (Continued)				
	Total for Physical Works				5,110,000
	FEES				
12	Allowance for Project Development Phase costs (2%)	5,110,000	%	0.02	102,200
13	Allowance for Pre-Implementation phase costs (9%)	5,110,000	%	0.09	459,900
14	Allowance for Implementation phase fees (6%)	5,110,000	%	0.06	306,600
15	Allowance for block of line and uplift protection (KiwiRail) (10%)	5,110,000	%	0.01	51,100
	Sub Total for Fees				919,800
	CONTINGENCY				
16	Allowance for construction (30%)	5,110,000	%	0.30	1,533,000
17	Allowance for Project Development Phase costs (30%)	102,200	%	0.30	30,660
18	Allowance for Pre-Implementation phase costs (30%)	459,900	%	0.30	137,970
19	Allowance for Implementation phase fees (30%)	306,600	%	0.30	91,980
20	Allowance for block of line and uplift protection (KiwiRail) (30%)	51,100	%	0.30	15,330
21	Rounding	1	LS	1,261.00	1,261
22	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				7,840,000
	FUNDING RISK				

Te Kauwhata Option 2 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 2 - SIDE PLATFORM AT THE EXISTING STATION WITH REALIGNMENT TRACK COST ESTIMATE (Continued)				
23	Allowance for construction (25%)	6,642,999	%	0.25	1,660,750
24	Allowance for Project Development Phase costs (25%)	132,860	%	0.25	33,215
25	Allowance for Pre-Implementation phase costs (25%)	597,870	%	0.25	149,467
26	Allowance for Implementation phase fees (25%)	398,580	%	0.25	99,645
27	Allowance for block of line and uplift protection (KiwiRail) (25%)	66,430	%	0.25	16,607
28	Rounding	1	LS	315.00	315
29	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				9,800,000

Te Kauwhata Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 3 - SIDE PLATFORMS TO NORTH OF EXISTING STATION COST ESTIMATE				7,000,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing side platforms				
	Construct underpass under rail track				
	Construct stairs and ramp				
	Construct side platforms				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				

Te Kauwhata Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Contingency - 30%				
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Te Kauwhata Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 3 - SIDE PLATFORMS TO NORTH OF EXISTING STATION COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide underpass across rail track	16	m	30,000.00	480,000
3	Stairs	2	No	10,000.00	20,000
4	Ramp	150	m2	1,500.00	225,000
5	Demolish existing platform	900	m2	500.00	450,000
6	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
	Sub Total for Physical Works				2,975,000
	TRAFFIC MANAGEMENT				
7	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
8	Allowance for Preliminary and General	3,045,000	%	0.20	609,000
	Sub Total for Preliminary and General				609,000
9	Rounding	1	LS	-4,000.00	-4,000
	Total for Physical Works				3,650,000
	FEES				
10	Allowance for Project Development Phase costs (2%)	3,650,000	%	0.02	73,000

Te Kauwhata Option 3 Cost Estimate

Beca Cost Advisory

Project: Station Plans **Details:**
Building: Station Plans (Upper North Waikato Railways)

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 3 - SIDE PLATFORMS TO NORTH OF EXISTING STATION COST ESTIMATE (Continued)				
11	Allowance for Pre-Implementation phase costs (9%)	3,650,000	%	0.09	328,500
12	Allowance for Implementation phase fees (6%)	3,650,000	%	0.06	219,000
13	Allowance for block of line and uplift protection (KiwiRail) (10%)	3,650,000	%	0.01	36,500
	Sub Total for Fees				657,000
	CONTINGENCY				
14	Allowance for construction (30%)	3,650,000	%	0.30	1,095,000
15	Allowance for Project Development Phase costs (30%)	73,000	%	0.30	21,900
16	Allowance for Pre-Implementation phase costs (30%)	328,500	%	0.30	98,550
17	Allowance for Implementation phase fees (30%)	219,000	%	0.30	65,700
18	Allowance for block of line and uplift protection (KiwiRail) (30%)	36,500	%	0.30	10,950
19	Rounding	1	LS	900.00	900
20	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				5,600,000
	FUNDING RISK				
21	Allowance for construction (25%)	4,745,000	%	0.25	1,186,250
22	Allowance for Project Development Phase costs (25%)	94,900	%	0.25	23,725
23	Allowance for Pre-Implementation phase costs (25%)	427,050	%	0.25	106,763

Te Kauwhata Option 3 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 3 - SIDE PLATFORMS TO NORTH OF EXISTING STATION COST ESTIMATE (Continued)				
24	Allowance for Implementation phase fees (25%)	284,700	%	0.25	71,175
25	Allowance for block of line and uplift protection (KiwiRail) (25%)	47,450	%	0.25	11,863
26	Rounding	1	LS	225.00	225
27	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				7,000,000

Te Kauwhata Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 4 - SIDE PLATFORMS WITH NO TRACK REALIGNMENT COST ESTIMATE				7,420,000
	Estimate prepared by: Jason Luo				
	Estimate reviewed by: Apolinario Briones				
	Date of Estimate: May 2023				
	Job No: 3814638				
	Inputs				
	Drawings				
	Scope of Work				
	Demolish existing side platforms				
	Construct underpass under rail track				
	Construct stairs and ramp				
	Construct side platforms				
	Assumptions				
	P & G - 20%				
	Project Development Phase costs - 2%				
	Pre-Implementation phase costs - 9%				
	Implementation phase fees - 6%				
	Block of line and uplift protection (KiwiRail) - 10%				

Te Kauwhata Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	Contingency - 30%				
	Funding Risk - 25%				
	Exclusions				
	Consenting fees				
	Land acquisition				
	GST				
	Escalation from September 2023				
	Impacts of extraordinary global events (such as the COVID-19 outbreak) within estimate.				

Te Kauwhata Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 4 - SIDE PLATFORMS WITH NO TRACK REALIGNMENT COST ESTIMATE				
	ENVIRONMENTAL COMPLIANCE				
1	Allowance for Environmental Compliance	1	LS	20,000.00	20,000
	Sub Total for Environmental Compliance				20,000
	PHYSICAL WORKS				
2	3m wide underpass across rail track	19	m	30,000.00	570,000
3	Stairs	2	No	10,000.00	20,000
4	Ramp	210	m2	1,500.00	315,000
5	Demolish existing platform	900	m2	500.00	450,000
6	Side platform including bench seating, signage and lighting	900	m2	2,000.00	1,800,000
	Sub Total for Physical Works				3,155,000
	TRAFFIC MANAGEMENT				
7	Allowance for Traffic Management	1	LS	50,000.00	50,000
	Sub Total for Traffic Management				50,000
	PRELIMINARY AND GENERAL				
8	Allowance for Preliminary and General	3,225,000	%	0.20	645,000
	Sub Total for Preliminary and General				645,000
9	Rounding	1	LS		0
	Total for Physical Works				3,870,000
	FEES				
10	Allowance for Project Development Phase costs (2%)	3,870,000	%	0.02	77,400

Te Kauwhata Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 4 - SIDE PLATFORMS WITH NO TRACK REALIGNMENT COST ESTIMATE (Continued)				
11	Allowance for Pre-Implementation phase costs (9%)	3,870,000	%	0.09	348,300
12	Allowance for Implementation phase fees (6%)	3,870,000	%	0.06	232,200
13	Allowance for block of line and uplift protection (KiwiRail) (10%)	3,870,000	%	0.01	38,700
	Sub Total for Fees				696,600
	CONTINGENCY				
14	Allowance for construction (30%)	3,870,000	%	0.30	1,161,000
15	Allowance for Project Development Phase costs (30%)	77,400	%	0.30	23,220
16	Allowance for Pre-Implementation phase costs (30%)	348,300	%	0.30	104,490
17	Allowance for Implementation phase fees (30%)	232,200	%	0.30	69,660
18	Allowance for block of line and uplift protection (KiwiRail) (30%)	38,700	%	0.30	11,610
19	Rounding	1	LS	3,420.00	3,420
20	Sub Total for Contingency				
	TOTAL EXPECTED ESTIMATE (P50)				5,940,000
	FUNDING RISK				
21	Allowance for construction (25%)	5,031,000	%	0.25	1,257,750
22	Allowance for Project Development Phase costs (25%)	100,620	%	0.25	25,155
23	Allowance for Pre-Implementation phase costs (25%)	452,790	%	0.25	113,198

Te Kauwhata Option 4 Cost Estimate

Beca Cost Advisory

Project:	Station Plans	**Details:**	
Building:	Station Plans (Upper North Waikato Railways)		

Code	Description	Quantity	Unit	Rate	Total
	TE KAUWHATA OPTION 4 - SIDE PLATFORMS WITH NO TRACK REALIGNMENT COST ESTIMATE (Continued)				
24	Allowance for Implementation phase fees (25%)	301,860	%	0.25	75,465
25	Allowance for block of line and uplift protection (KiwiRail) (25%)	50,310	%	0.25	12,578
26	Rounding	1	LS	-4,145.00	-4,145
27	Sub Total for Funding Risk				
	95TH PERCENTILE COST ESTIMATE				7,420,000