ATTACHMENTS

Late Reports
Ordinary Council meeting
Separate Attachments 1

Monday, 26 May 2025

Table of Contents

Title: Issues and options – Domain Road Upgrade

File Number: A18226898

Author: Jamie Lunam – Manager: Business Alignment

Authoriser: **Nic Johansson – GM Infrastructure**

ISSUE

1. As part of the Annual Plan process, 12 submissions were received showing concern for the delays in progressing improvements to the southern end of Domain Road in Pāpāmoa.
2. Specifically, the themes through the submissions received included:
   (a) Questioning the absence of the upgrade works from the 2026 Annual Plan
   (b) A lack of basic infrastructure including footpaths and the presence of large open drains
   (c) A lack of safe carriage options for cyclists
   (d) A general sentiment of neglect and underinvestment
   (e) Concern around this corridor being critical for emergency evacuation egress

ANALYSIS OF SUBMISSION POINTS

3. The Domain Road Upgrade project is noted in the Transport System Plan (TSP) and is identified as a public transport secondary route and a cycling secondary route with implementation planned in the TSP prioritisation for 2027 and noted as medium priority.
4. Domain Road is also part of a wider regional Public Transport Assessment. The Public Transport Services & Infrastructure (PTS&I) has highlighted Domain Road as a key public transport corridor.
5. Domain Road is identified as an evacuation corridor in the event of a natural disaster with the surrounding area sitting within a tsunami danger area.

DISCUSSION AND ANALYSIS

6. Domain Road runs in a north / south alignment over approximately 1.9km between Tara Road to the south and Pāpāmoa Beach Road to the north and serves as a major arterial corridor providing a connection between the Tauranga Eastern Link (TEL) and the Pāpāmoa community.
7. The need to urbanise Domain Road was identified in the 1990's when Pāpāmoa was rezoned for urban development. A Single Stage Business Case (SSBC) was completed which secured NZTA co-funding to a value of $12.8m in December 2019. The scope of the business case generally included the upgrade and pavement rehabilitation of the full length of Domain Road.
8. Domain Road is classified as a Secondary Collector, and recent traffic counts show that the road carries between 12,000 average daily traffic (July 2024) near the northern end at Pāpāmoa Beach Road, and 19,500 average daily traffic near the southern end at the SH2 interchange (October 2024). These volumes will change when the Pāpāmoa East Interchange opens in mid-2026 and will generally increase as the City grows.
9. The northern section of Domain Road (approx. 1.3km from Pāpāmoa Beach Road to The Gardens Drive) is generally a mixture of housing and retail businesses with a typical urban style cross section of one traffic lane in each direction, flush median, turning lanes at intersections, a mixture of on-road cycle lanes and parking areas, kerb and channel, and footpaths. Upgrades to this section were completed between 2018 and 2021.
10. The southern section (approx. 0.6km) is a mixture of light industry and agricultural land to the east and clear farmland to the west. From the Tara Road and Domain Road roundabout, for

approximately 220m there is provision for two lanes in each direction, on road cycle lanes, kerb and channel and footpaths. For the remaining approximately 360m (the area of interest) the cross section is one lane in each direction, no kerb and channel, open swales for stormwater, no footpaths, and no provision for cycling.

11. Staff note that the existing carriageway in the southern section is currently showing distress and has begun to fail in a number of locations resulting in an increased level of maintenance intervention to maintain an acceptable level of service (further details in options section). It is due for renewal and pavement rehabilitation.

12. No consultation of significance has been undertaken with residents, key businesses, stakeholders, mana whenua or other project partners since completion of the previous physical works in 2021.

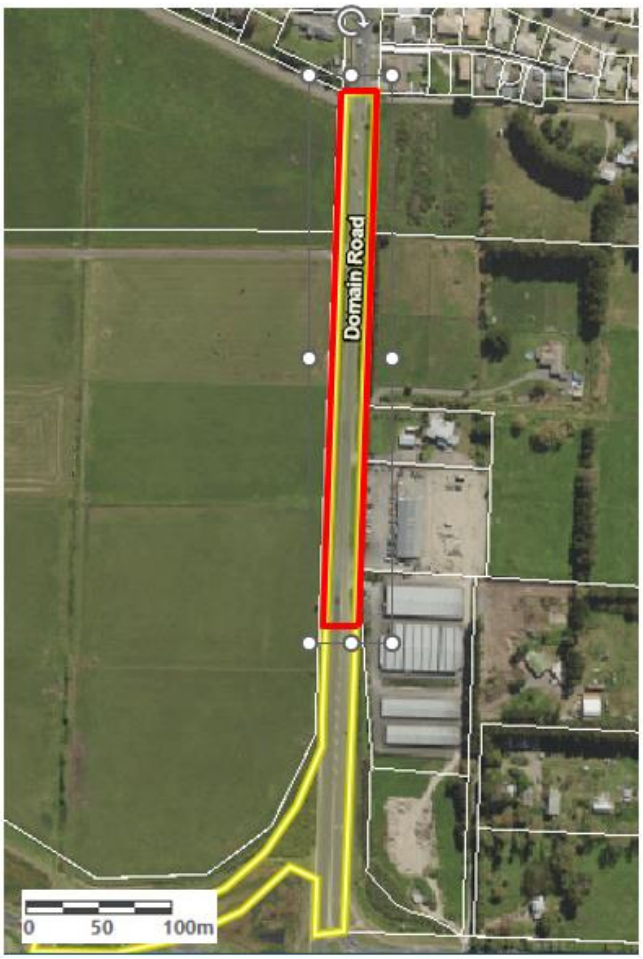


Figure 1: Domain Road – Section due for upgrade and described above outlined in Red

Work to Date

13. The Domain Road Upgrade project is noted in the Transport System Plan (TSP) and is identified as a public transport secondary route and a cycling secondary route with implementation planned for 2027 and noted as medium priority.

14. Domain Road is identified as an evacuation corridor in the event of a natural disaster with the surrounding area sitting within a tsunami danger area.

15. The TSP describes the scheme under number 36 with an implementation planned for 2027. It is also marked as a high priority scheme of the eastern corridor package.

16. In 2019 Council developed a business case to upgrade Domain Road to address that lack of footpaths, cycleways and congestion on Domain Road and to bring this section of Domain Road up to the same LoS as the surrounding network. The recommended option from the SSBC for the southern section of Domain Road as follows:

    (a) Two vehicle lanes (one in each direction) each 3.0m wide

    (b) Central flush median 2.5m wide

    (c) Sealed shoulders designated as cycle lanes 1.5m wide

    (d) Shared paths of 2.5m eastern side and 3.0m western site

    (e) Planting strips approximately 3.0m wide where possible

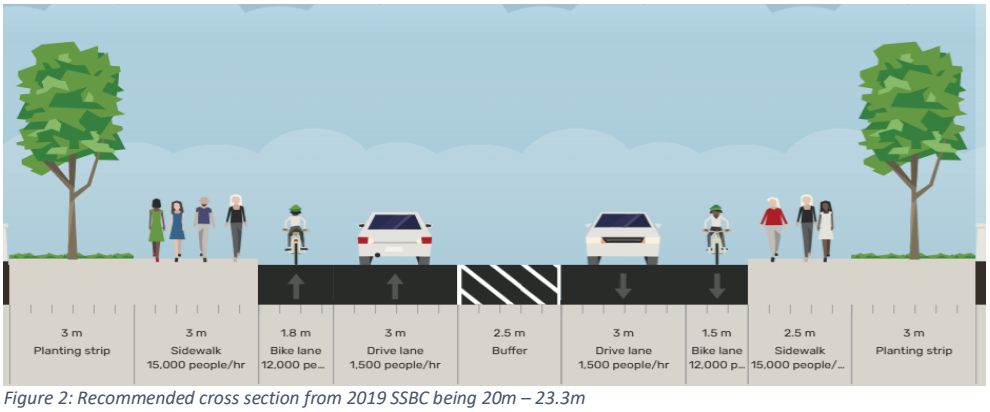


Figure 2: Recommended cross section from 2019 SSBC being 20m – 23.3m

17. In 2022, an early proposal to develop a large retail facility to the west of the as yet uncompleted 380m section introduced the prospect of substantially different traffic volumes and access considerations to those proposed through the SSBC. Consequently, the project was put on hold and no works were progressed in this section.

18. Although the developer has subsequently withdrawn their proposal, cost escalations at this late stage meant the funding was no longer sufficient to complete the project as originally planned.

19. Staff understand there is no development currently planned and we expect it to be some time before it is commercially viable. The land in question is very complex and expensive to develop, primarily due to ground conditions. As such the four-laning option has been temporarily planned in the LTP in FY31- 34 until further information is known.

20. For further context existing carriageway in the southern section is currently showing distress and has begun to fail in a number of locations resulting in an increased level of maintenance intervention to maintain an acceptable level of service (further details in options section). It is overdue for renewal and pavement rehabilitation.

OPTIONS ANALYSIS

21. Several options have been presented that consider the current situation as described above, while considering the current and short to medium term demands of the Domain Road corridor.

22. Existing funding provided by NZTA has been withdrawn due to uncertainty around the timing of the project and the policy position under the current GPS, specifically that footpaths and cycle ways are not prioritised.

23. Budget figures utilised below should be considered as indicative only and should only be used for comparative purposes of the options. There is significant work required from TCC staff and other parties to provide more certainty around costings.

24. Each option has been supported by a staff estimate based on existing information and is included in Appendix One.

Option 1: Do nothing

The southern section of Domain Road is not improved, and the upgrade works are postponed until future land and area use is understood and NLTF funding can be secured, likely to remain in the FY31- 34 period.

Advantages	Disadvantages
• No CAPEX requirement • Likely lower lifetime cost, as future works will better align with known demands/requirements • No risk of any immediate works conflicting with future use scenarios, resulting in rework	• Lower level of service • Poor community sentiment • Cycle safety and evacuation egress implications • Increased cost to maintain / OPEX • Increase risk of significant pavement failure

Budget – Capex: $0

Budget – Opex: $70k p.a. maintenance costs

Key risks:

- Increased extended risks to cyclists and pedestrians.
- The pavement is currently nearing end of life, however a further 5-8 years can be achieved with appropriate maintenance. The risk increases of a systemic pavement failure.
- Due to the high level of community interest, we will likely see more complaints by not proceeding with any works.
- Domain Rd serves as evacuation route and non-vehicular egress is limited at this location

Recommended: No

Option 2: Short Term treatment

Do not rebuild Domain Road but widen the carriageway by 2-3m in order to provide a basic shared path on the eastern side of Domain Road. This widening could be by way of asphalt or potentially a wooden board walk type structure. Staff will need to undertake further investigation to understand feasibility, likely costs and construction impacts in more detail.

Figure 3: Example of rural road with basic shared path facility – Te Puna Station Road.

Advantages	Disadvantages
• Improvement in cycle/mode safety • Provide some response to community needs/sentiment • Lower capital inputs in the short term • Does not require utilities (specifically power) to be moved • No property purchase or land take required • Fast to implement (3 months) • Limited benefit of evacuation egress needs	• All work likely to be removed in due course when the full project is understood and constructed • Still requires increased maintenance inputs for LOS on existing end of life pavement • Limited benefit of evacuation egress needs

Budget – Capex: initial estimate $1.3m

Budget – Opex: $70k p.a. maintenance

Key risks:

- May be seen as wasted funds by the community due to temporary nature and not undertaking rehabilitation of the road.
- Land use changes on both sides of Domain Road may occur quicker than expected, making the temporary improvements redundant in a shorter time.

Recommended: No

Option 3: Do Something (existing land use)

Rebuild of Domain Road to partial urban standard. This is a reduced scope and cost project from the previously preferred option from the SSBC, that will enable the construction of a shared path on the eastern side of Domain Road.

a. Rehabilitate Domain Road, 1 vehicle lane in each direction, add in a shared path on the eastern side, retain swales.

b. TCC will have to rework the existing business case for submission to NZTA for inclusion in the next NLTF in 2028-2031. NZTA would likely support the pavement renewal and however are unlikely to support the shared path.
c. This option may have potential stormwater impacts. TCC will investigate this further, as any widening of pavement will increase runoff.
d. Staff will need to undertake a further investigation to understand feasibility, more accurate costing and construction impacts.
e. Duration (Implementation) – 6 months

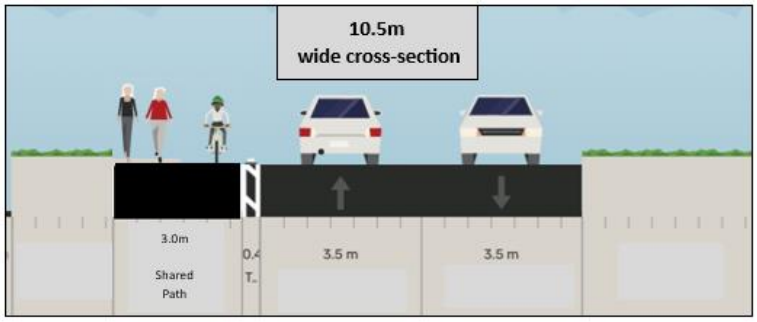


Figure 4: Indicative cross-section of a Do Something option.

Advantages	Disadvantages
• Cost efficiencies through combining rehabilitation of pavement and widening project • Staged option for future potential four – laning with potential for route protection • Provides for non-vehicle evacuation egress during a tsunami event • Improved LOS for all users and adjoining commercial properties reflecting the increasing urbanisation of this part of the transport system • Reduction in risk for cyclists and pedestrians • Does not preclude changes to land use in the future on either side of Domain Road. • Avoids need for significant service relocation (HV powerlines are on western side)	• Not affordable without NLTF support, which is unlikely in the current GPS settings due to the walking and cycling/mode component • No footpath provided on western side • Need to understand infrastructure interdependencies • Does not increase traffic capacity

Budget – Capex: Initial estimate $12.0m

Budget – Opex: Estimate of $50k of OPEX for reviewing the business case, then circa $100k p.a. for maintaining new assets

Key risks:

- If and when the rural land use changes, the road will likely require further works and disruption. Design works can consider this to make the eastern shared path durable through further development to widen the corridor to the west.
- Future settlement may reflect through pavement (Possible)
- Does not provide for local land use change

Recommended: **Yes**

Option 4: Do Something – Future land use scenario

Proceed with the previously approved Business Case design (as per Fig 2 above)

a. Updating of construction costs will be required and will have increased markedly.
b. More significant disruption due to larger scale construction project.
c. Implementation estimate of 6 months (services and enabling) + 12 months (preloading) + 6 months (completion)

Advantages	Disadvantages
• Meets immediate future needs of the area • Pleasing to the community and subsequent uplift in sentiment • Provides tsunami evacuation route • Provides opportunity for future bus lanes	• Unaffordable without NLTF support • Potential for significant additional work in the future to accommodate land use change • Likely to require preloading on western side of road • Requires land take (western side) • Requires significant service relocation including HV overhead powerlines

Budget – Capex: Initial Estimate is $22.3m

Budget – Opex: $100k p.a. to maintain the new assets

Key risks:

- Cost uncertainty – estimate is likely to have escalated significantly
- Unknown land use scenarios, adjoining sites to Domain Road could stay as they are for many years to come, or alternatively the situation could develop more rapidly.
- Consolidation process may extend beyond expected duration
- Future settlement may reflect through pavement (Likely) and/or impact services

Recommended: No

RECOMMENDATION

25. That staff progress the investigation of *Option 3: Do Something (existing land use)* refreshing the business case for inclusion of the project into the 28–31 NLTP for implementation in FY28 to FY29 subject to Council approval.

26. That funding allocated to FY2025 be carried forward into FY2026 to allow investigation work to continue before coming back to Council for next stage of the project.

NEXT STEPS

27. Continue investigation phase to increase certainty on scope, deliverability and estimates.

SUBMISSIONS RECEIVED

Submission #: 164, 211, 459, 514, 615, 617, 633, 644, 680, 683, 738, 744

ATTACHMENTS

Appendix One – Options costing detail and rationale

Appendix One – Options costing detail and rationale

Option 2: Short Term treatment

Description	Base	Scaling		Amount	Notes
Preliminary & General			$	140,000	Establishment / Traffic Control
Clearing			$	33,750	Minor trimming / Vegetation clearance
Earthworks			$	93,750	Cut to waste shoulder / Unsuitable
Ground Improvements			$	25,000	Minor retaining walls
Road & Paving			$	160,500	Basic pavement (Shared Path Only) + Line Marking
Water			$	-	
Sewer			$	-	
Stormwater			$	68,000	Piping isoltaed section so swale
Traffic Services			$	148,600	Wheel stop style edging + Isolated handrails. No lighting.
Services			$	-	
			$	**669,600**	
Escalation		0%	**$**	**-**	Based on current pricing
			$	**669,600**	
Professional Services	9%	$ 60,264			% as allowed for in BBO report
Procurement	1%	$ 6,696			% as allowed for in BBO report
MSQA	7%	$ 46,872			% as allowed for in BBO report
TCC Internal		$ 96,800			Initial estimate
			$	**210,632**	
			$	**880,232**	
Risk		50%	**$**	**440,116**	
			$	**1,320,348**	
Land Purchase			$	-	
			$	**1,320,348**	

Option 3: Do Something (existing land use)

Description	Base	Scaling	Amount	Notes
Preliminary & General	$ 475,309	200%	$ 950,618	Increased as noted in updated cost estimate
Clearing	$ 43,900	75%	$ 32,925	Majority of clearing is on eastern side
Earthworks	$ 453,163	30%	$ 135,949	Majority on western side, less significant on eastern side
Ground Improvements	$ 920,679	25%	$ 230,170	Majority on western side, less significant on eastern side
Road & Paving	$ 943,473	100%	$ 943,473	Full scope required. Cost appears low given scale. Assume covered by risk
Water	$ 311,614	100%	$ 311,614	Complete to remove need for future replacement
Sewer	$ -	100%	$ -	
Stormwater	$ 698,372	100%	$ 698,372	Majority on eastern side + outlets
Traffic Services	$ 638,597	100%	$ 638,597	Assume all lighting etc is required
Services	$ 340,000	100%	$ 340,000	Assume all services except Powerco relocated
			$ 4,281,718	
Escalation		56%	**$ 2,397,762**	Assume 26% to 2022 + 10% p.a.
			$ 6,679,480	
Professional Services	9%	$ 601,153		% as allowed for in BBO report
Procurement	1%	$ 66,795		% as allowed for in BBO report
MSQA	7%	$ 467,564		% as allowed for in BBO report
TCC Internal		$ 193,600		Initial estimate
			$ 1,329,112	
			$ 8,008,591	
Risk		50%	**$ 4,004,296**	
			$ 12,012,887	
Land Purchase			$ -	
			$ 12,012,887	

Note: Base value is taken from BBO Options Analysis Report (Sep 2023)
Scaling intended to align base scope with curent expectations for option

Option 4: Do Something – Future land use scenario

Description	Base	Scaling	Amount	Notes
Preliminary & General	$ 950,618	200%	$ 1,901,236	Increased as noted in updated cost estimate
Clearing	$ 32,925	100%	$ 32,925	Full scope required
Earthworks	$ 135,949	100%	$ 135,949	Full scope required. Cost appears low given complexity. Assume covered by
Ground Improvements	$ 230,170	200%	$ 460,340	Full scope required. Cost appears low given complexity. Increase plus cover
Road & Paving	$ 943,473	100%	$ 943,473	Full scope required. Cost appears low given scale. Assume covered by risk
Water	$ 311,614	100%	$ 311,614	Full scope required
Sewer	$ -	100%	$ -	
Stormwater	$ 698,372	200%	$ 1,396,744	Assume increase to meet changed discharge
Traffic Services	$ 638,597	100%	$ 638,597	Assume all lighting etc is required
Services	$ 340,000	300%	$ 1,020,000	Appears to excl. HV.
			$ 6,840,877	
Escalation		56%	**$ 3,830,891**	Assume 26% to 2022 + 10% p.a.
			$ 10,671,769	
Professional Services	9%	$ 960,459		% as allowed for in BBO report
Procurement	1%	$ 106,718		% as allowed for in BBO report
MSQA	7%	$ 747,024		% as allowed for in BBO report
TCC Internal		$ 406,560		Initial estimate
			$ 2,220,761	
			$ 12,892,529	
Risk		50%	**$ 6,446,265**	
			$ 19,338,794	
Land Purchase			$ 3,000,000	Initial Estimate Only
			$ 22,338,794	

Note: Base value is taken from BBO Options Analysis Report (Sep 2023)
Scaling intended to align base scope with curent expectations for option

Title: Issues and options – Papamoa Beach Road

File Number: A18226889

Author: Martin Taylor, Manager Transport Network Operations

Authoriser: **Nic Johannson – General manager Infrastructure**

ISSUE

1. Residents are strongly advocating for the immediate and comprehensive upgrade of Papamoa Beach Road, citing decades of neglect despite the road's high traffic volume and importance as a major arterial route.

2. **Key points raised in the submissions include:**

    - Severe road degradation
    - No significant investment in resurfacing
    - Resurfacing with asphalt
    - Inadequate safety infrastructure
    - Speeding
    - Lack of safe pedestrian crossings
    - lack of kerbing and drainage infrastructure
    - Comparative neglect - poor cousin of the Mount
    - Strategic importance: Papamoa Beach Road is a key access route to Papamoa East and future growth areas
    - Increasing traffic demand
    - Stop piecemeal work - provide a cohesive, end-to-end upgrade of the entire road.

ANALYSIS OF SUBMISSION POINTS

3. **Severe road degradation**:

    The submission states *'Papamoa Beach Road is described as being in an "appalling state" with no significant investment in resurfacing for a very long time. The current surface increases traffic noise, poses safety hazards, and lacks durability'.*

    - This description that does not reflect the actual condition and performance of Papamoa Beach Road. From an asset management perspective, the road is generally in fair to good condition and is being maintained in accordance with national best practice guidelines. There may be a perception that there has been *no significant investment in resurfacing for a very long time*, but the reality is that each section of the road has been resurfaced as and when it was needed over the past decade or so.
    - All roads are divided up into sections and each section has its own condition assessment and maintenance intervention plan which guides when the next maintenance treatment is and what it is, i.e. whether its resurfacing or pavement renewal. The 'worst looking' section of Papamoa Beach Road is the section from Parton Road, east towards Taylor Reserve. The next treatment for this section of road is a pavement reconstruction within the next 2-3 years. Its previous treatment a couple of years ago was a series of patch repairs and surfacing treatment to hold the pavement over for a few more years whilst the long-term proposals for the whole of Papamoa Beach Road are discussed and finalised.
    - The other sections of Papamoa Beach Road are at various stages through the life of their current surfacing and their next treatment is likely to be another reseal

- With respect to traffic noise, whilst it is accepted that it is an issue for some members of the community, there is no legislation in place that regulates road noise, and generally road noise is considered to be at acceptable levels, based on the very few complaints we receive on this matter in general across the city. With respect to Papamoa Beach Road, the noise levels there are no different to any street in Tauranga with the same surfacing, traffic volume and speed.
- With respect to the state of surfacing on Papamoa Beach Road posing a safety hazard, there are no safety risks identified along the road arising from its condition and it is providing a safe and efficient level of service
- In terms of durability, most of the road is in good condition and the various sections of sealed surfacing's are performing well and are expected to continue doing so for the rest of their remaining useful lives, so in that respect they are proving to be quite durable. The section from Parton to Taylor Reserve is near the end of its effective useful life and is in a holding pattern until its programmed for renewal within the next few years and whilst the current surface looks untidy and flushed, it is still doing its job of extending the life of the road section for a few more years until it programmed for reconstruction, so again, not pretty but it is durable.

4. **Resurfacing with asphalt**:

*Submitters consistently request **asphalt** (hotmix) rather than chip seal, as it significantly reduces noise (by up to 20 dB), minimizes loose debris, and is more pedestrian-friendly—especially important for older and younger residents.*

- NZTA fund 51% of the majority of Tauranga City's road maintenance programme. To be eligible for this substantial co-investment NZTA have performance and threshold criteria that Council is required to adhere to. One of these is around their value for money requirement, and with respect to road resurfacing, NZTA will only fund what has been determined to be the long-term least-cost surfacing option.
- The default surfacing that meets this criterion is a bitumen and chip surfacing, which at around $8/m2 to construct compared to a cost in the order of $50/m2 for asphalt, is difficult to argue against. NZTA will only fund an asphalt surface in areas where increased traffic volumes and stresses make it difficult to hold a chip seal. Typically, these areas include cul-de-sac heads, some intersections, industrial area with high heavy traffic turning movements, tight curves, etc. They also recognise the amenity value of an asphalt surface in CBD and other retail zones.
- TCC's resurfacing policy is aligned with NZTA's and requires the level of service for road reseals to be "fit for purpose" with the type of surfacing used being finally determined by an engineering assessment.

In general, this means that roads that are categories 1, 2 and 3 are likely to be sealed in asphalt and categories 4 and 5 roads are likely to be sealed with chip seal. The road categories are:

Type of Road	Category	Type of Reseal
Commercial and Industrial	1A	Asphalt
Tauranga City Centre, Mount Mainstreet area, and Greerton Village	1B	Asphalt
Arterial roads. These are roads that carry significant volumes of traffic and link major state highways, urban and commercial areas.	2	Asphalt
Collector roads. These are roads that carry moderate volumes of traffic and provide a connection between residential streets and	3	Asphalt or chip seal – **an engineering decision will be made as to the**

the arterial network. Most collector roads in Tauranga have more than 10,000 vehicles use them a day.		**appropriate surfacing type** depending on road and traffic factors.
Neighbourhood roads with greater than 200 vehicles per day.	4	Chip seal – except where there is a cul-de-sac head or an intersection with high wear and tear, or another valid engineering reason.
Neighbourhood roads with less than 200 vehicles per day.	5	Chip seal – except where there is a cul-de-sac head or an intersection with high wear and tear, or another valid engineering reason.
In special circumstances, exceptions to this policy may occur for engineering reasons		

- Additionally, TCC has one of the highest percentages of asphalt networks in the country, primarily driven by our strong residential growth over the past 10-15 years, and we are now under NZTA's spotlight to actively manage this down by programming a chipseal surfacing as the next treatment on residential streets with an asphalt surface.

City	AC Surfacing	Chipseal Surfacing
Tauranga City	60%	40%
Hutt City	20%	80%
Hamilton City	40%	60%

- TCC has approximately 230km of asphalted residential roads, primarily in Papamoa and Tauriko subdivisions, that under NZTA's policy will need to be chipsealed in order to gain their 51% subsidy. If TCC wished to provide a higher level of service and resurface these roads again with asphalt it would cost in the order of an additional $6M p.a., and as such a surfacing upgrade would not attract NZTA subsidy the cost difference between a chipseal and asphalt would have to be solely funded by TCC rates.
- Furthermore, if TCC wished to resurface some of its chipseal roads with asphalt, that would come at an even higher cost, as most of our chipsealed roads are what's called 'flexible pavements'. This means they depress slightly by a few millimetres with every vehicle pass. Chipseal surfaces, with their pliant bitumen base, flex with this movement without compromising their waterproofing characteristics.
- However, an asphalt surface is brittle like a biscuit and does not cope with ongoing underlying pavement flexure, eventually cracking. This in turn allows water to ingress into the underlying pavement, resulting in pavement failure. Therefore, before a chipsealed road can be considered for an asphalt surfacing, in many cases all the pavement layers would first have to be excavated, and a thicker non-flexible pavement constructed that's able to resist the impacts of passing traffic and support a n asphalt surfacing.
- Excluding Papamoa Beach Road, which is discussed further below, TCC has approximately 10km of other chipsealed roads that carry greater than 10,000 vehicles per day. For these roads to be resurfaced in asphalt instead of chipseal, they would have to be completely reconstructed as discussed above, and the cost to do so would be in the order of $55M.
- If 1km were reconstructed and resurfaced in hotmix per year, the annual cost would be in the order of $5.5M, however by the time all roads were completed after ten years, the

total cost to complete, allowing for inflation, would be in the order of $80 - $130M. This programme would also have to be largely solely rate funded as again. NZTA will only subsidise the equivalent of a chip seal surfacing on these roads.

5. Inadequate safety infrastructure:

Submissions expressed concern regarding speeding, claiming that vehicles reportedly reach 90 km/h, leading to calls for speed cameras. Additionally, a lack of safe pedestrian crossings, kerbing, and adequate stormwater drainage was cited, with concerns that this situation increases risks for residents.

- **Speed cameras** are placed where there's problems with excessive speed, and/ shows a history of crashes causing death and/or serious injury. This programme is led by Police in conjunction with NZTA (rather than by Council) and it identifies locations on the road network that have a proven history of crashes or potential for crashes resulting in death or serious injury. TCC have suggested that Papamoa Beach Road be assessed for a speed camera, but no decision has yet been made on this by NZTA. Staff will follow up with NZTA on a decision.
- **Pedestrian crossings** are prioritised across the city based on access to key destinations (e.g., schools, shops, community facilities), the number of potential users, and identified safety issues. On Papamoa Beach Road, there have in fact been a number of crossing facilities installed including a new zebra crossings near Alexander Place to access the shared path, and four additional refuge islands (north of Palm Beach Boulevard, south of Allan Place, south of Douglas Place and south of Grant Place.) Another crossing is planned near Motiti Road to facilitate access to the beach, shops, and a holiday camping ground. Further crossings will be evaluated against citywide priorities and implemented as resources allow.

6. **Comparative neglect**:

Papamoa is referred to as the "poor cousin of the Mount," with clear frustration that the Mount consistently receives higher quality roading treatments. Papamoa residents are calling for equal investment.

- This is a perception that is not supported by evidence. Papamoa actually has a higher percentage of asphalt roads than the Mount, primarily due to the subdivisional growth it has experienced over the past 10-15 years.
- The reason more maintenance funding is spent in the Mount Maunganui area is because it is an older part of the city with older streets that need more maintenance. Most of Papamoa is relatively new by comparison and has not required much in the way of maintenance intervention, as you would expect.

7. **Strategic importance**:

Submissions noted that Papamoa Beach Road is a key access route to Papamoa East and future growth areas such as Te Tumu, and that it must be upgraded to accommodate increasing traffic demand and ensure resilience against flooding.

- The reason sections of Papamoa Beach Road do not have kerb and channel on the beach side is because the road water sheds off directly into the very permeable sandy road shoulder and drains away fairly readily.
- The lack of kerbing also allows vehicles to pull off and park up on the grass berm to access the dunes and beach for recreation. Installing kerb and channel may reduce this benefit, or if vehicles continue to drive over the new kerb to still park on the berm, it will likely be detrimental to the integrity of the kerbing and cause it to crack and require maintenance prematurely.
- When the Papamoa Eastern Interchange comes on stream it is expected to divert a considerable amount of traffic off Papamoa Beach Road. It is therefore prudent for TCC to wait for this to come on stream so its benefits in terms of traffic flows into Papamoa East are able to be measured, before any proposed upgrades to Papamoa Beach Road are considered.

8. **Stop piecemeal work**:
Residents oppose the current strategy of small, scattered road segments being improved. Instead, they are demanding a cohesive, end-to-end upgrade of the entire road, starting from the eastern end where deterioration is most severe.

- All TCC roads are divided up into approximately 3800 sections, called treatment lengths, for maintenance purposes. A treatment length may be the length between two intersections, or a section through a shopping centre etc. A whole raft of detailed data is stored in the road database on each treatment length, such as length, width, pavement layer depths, structural strength, pavement age, surfacing age etc. Every 1-3 years road condition surveys are undertaken using specialised data collection vehicles with laser sensors and AI systems to collect updated condition and performance data on each treatment length. The data then undergoes an in-depth series of technical analyses that then outputs into an indicative schedule of when each treatment length is likely to require resurfacing again, or pavement renewal. This then is why maintenance works are undertaken on *small, scattered road sections.*
- With respect to the desire to upgrade all of Papamoa Beach Road, approximately half of its 10km length has kerb and channel on both sides of the road, and half has kerb and channel on one side only. The cost to progressively upgrade this road with kerbing on both sides for the full length and with an asphalt surface is in the order of $88M at today's prices. The reason for the high cost is due to the existing roads having thin flexible pavements that will require reconstruction in order to be able to support an asphalt surfacing If these roads were to be progressively upgraded over a 10 – 20 year period, the actual total costs at today's value, taking into account likely inflation, could be well in excess of $200M
- To resurface all of Papamoa Beach Road in chipseal, as per the current policy, is in the order of $1M by comparison
- The difference in costs between surfacing in asphalt and surfacing in chipseal would have to be solely funded by TCC as NZTA will only fund the equivalent of a chipseal surfacing
- There is approximately 10km of Papamoa Beach Road with kerb and channel on only one side of the road if this was all upgraded with kerb and channel on both sides and associated stormwater disposal infrastructure, and a road pavement strong enough to support an asphalt surface, the cost would be in the order of $55M. This would not attract NZTA subsidy as the current level of service is deemed to be fit for purpose. If it were undertaken in stages at say 10% p.a. ($5.5M), the total actual cost including cost escalation would be in the order of $90 - $130M)

DISCUSSION AND ANALYSIS

9. The current plan for Papamoa Beach Road is to continue waterproofing it with a series of chipseal surfacing's, in accordance with the TCC's current road surfacing policy and in order to continue attracting NZTA's full 51% subsidy for the activity.

10. There is pressure from the local ratepayer group to upgrade the surfacing on Papamoa Beach Road to asphalt. Not only does this come at a significant increase in costs to the ratepayer as discussed above, there are also about a dozen other roads across the city that should justifiably be given the same surfacing upgrade considerations. These include Tara Rd and Domain Rd in Papamoa, as well as Devonport Rd, Cambridge Rd, Fraser Rd, Gravatt Rd, Welcome Bay Rd, and Pyes Pa Road. All of these roads are key collector routes with traffic volumes in excess of 10,000 vpd with a mix of residential lots and service centres located along them, and they are all currently (appropriately) surfaced in a chipseal.

11. Unfortunately, the local community aspirations of having an asphalt surfacing on Papamoa Breach Rd cannot be considered in isolation. Adopting such a proposal outside of current policy has a significant flow-on effect on other parts of the city, and a much wider precedent setting consequence that also needs to be brought into consideration.

RECOMMENDATION

12. It is recommended that the Council continues to support the current road surfacing policy, recognising that it provides the long-term least-cost benefit to the ratepayer, by ensuring fit for purpose sealing is provided to all roads across the city, in a manner that continues to secure NZTA's 51% funding contribution.

SUBMISSIONS RECEIVED

Submission #: 407, 459, 514, 617, 680, 768

ATTACHMENTS

Appendix One: Costings to Support Papamoa Beach Rd Issues Paper for 2025 – 26 AP

Papamoa Beach Road - Parton Rd to Taylor Reserve
Cost to Reconstruct road sections with kerb on one side only
Includes cost to add new kerb and drainage infrastructure on seaward side
Area = 900m long x 11m wide = 9900m2

Item	Quantity	Unit	Rate	Total	Comment
Design /MSQA	1	lump sum	$294,285	$735,713	Allow 15% of construction costs
Digout and backfill 400mm base course including seal	9,900	square meter	$350	$3,465,000	
Traffic Control	1	lump sum	$5,000,000	$639,750	Allow 15% of construction costs
Kerb and channel - includes subsoils	900	lineal meter	$250	$225,000	
Asphalt 60mm mix 14	9,900	square meter	$50	$495,000	includes cost fluctuations
Drainage Pits	4	each	$20,000	$80,000	
				$5,640,463	

Current contract rates used
Excludes any City Waters infrastructure upgrades
Excludes any Safety improvements
Excludes any additional footpaths
Includes kerb and channel and associated drainage infrastructure

Papamoa Beach Road	K&C Both Sides (m)	K&C One Side (m)
Sandhurst to Hartford	1500	
Hartford to Palm Beach		850
Palm Beach to Huanui		300
Huanui to Beach Domain E	970	
Beach Domain E to Parton		2960
Parton to Taylor Reserve		900
Taylor Reserve to End	2800	
Total Length in m	**5270**	**5010**
Grand Total length: (m)		**10280**

Papamoa Beach Road
Cost to reconstruct road rections with kerb on one side only (excluding Parton to Taylor Reserve)
Includes cost to add new kerb and drainage infrastructure on seaward side
Area = 4110m long x 11m wide = 45,210m2

Item	Quantity	Unit	Rate	Total	Comment
Design /MSQA	1	lump sum	$3,000,000	$3,351,934	Allow 15% of construction costs
Digout and backfill 400mm base course including seal	45,210	square meter	$350	$15,823,500	
Traffic Control	1	lump sum	$5,000,000	$2,914,725	Allow 15% of construction costs
Kerb and channel - includes subsoils	4,110	lineal meter	$250	$1,027,500	
Asphalt 60mm mix 14	45,210	square meter	$50	$2,260,500	Allowed Cost flux 20%
Drainage Pits	16	each	$20,000	$320,000	
			Total Cost:	**$25,698,159**	
			Cost per year if 10% of total quantity completed per annum	**$2,569,816**	

Current contract rates used
Excludes any City Waters infrastructure upgrades
Excludes any Safety improvements
Excludes any additional footpaths
Includes kerb and channel and associated drainage infrastructure

	5% cost increase p.a.		10% cost increase p.a.		20% cost increase p.a.	
Year	Annual Cost	Cost Index	Annual Cost	Cost Index	Annual Cost	Cost Index
1	$2,569,816	1.05	$2,569,816	1.1	$2,569,816	1.2
2	$2,698,307	1.05	$2,826,797	1.1	$3,083,779	1.2
3	$2,833,222	1.05	$3,109,477	1.1	$3,700,535	1.2
4	$2,974,883	1.05	$3,420,425	1.1	$4,440,642	1.2
5	$3,123,627	1.05	$3,762,467	1.1	$5,328,770	1.2
6	$3,279,809	1.05	$4,138,714	1.1	$6,394,524	1.2
7	$3,443,799	1.05	$4,552,586	1.1	$7,673,429	1.2
8	$3,615,989	1.05	$5,007,844	1.1	$9,208,115	1.2
9	$3,796,788	1.05	$5,508,629	1.1	$11,049,738	1.2
10	$3,986,628	1.05	$6,059,491	1.1	$13,259,685	1.2
	$32,322,868		**$40,956,247**		**$66,709,033**	

Papamoa Beach Road
Cost to reconstruct road sections with kerb on both sides of road
Includes cost to add new kerb and drainage infrastructure on seaward side
Area = 5270m long x 11m wide = 57,970m2

Item	Quantity	Unit	Rate	Total	Comment
Design /MSQA	1	lump sum	$3,000,000	$7,478,130	Allow 15% of construction costs
Digout and backfill 400mm base course including seal	57,970	square meter	$350	$20,289,500	
Traffic Control	1	lump sum	$5,000,000	$26,666,200	Allow 15% of construction costs
Asphalt 60mm mix 14	57,970	square meter	$50	$2,898,500	Allowed Cost flux 20%

	5% cost increase p.a.		10% cost increase p.a.		20% cost increase p.a.	
Year	Annual Cost	Cost Index	Annual Cost	Cost Index	Annual Cost	Cost Index
1	$5,733,233	1.05	$5,733,233	1.1	$5,733,233	1.2
2	$6,019,895	1.05	$6,306,556	1.1	$6,879,880	1.2
3	$6,320,889	1.05	$6,937,212	1.1	$8,255,856	1.2
4	$6,636,934	1.05	$7,630,933	1.1	$9,907,027	1.2
5	$6,968,781	1.05	$8,394,026	1.1	$11,888,432	1.2
6	$7,317,220	1.05	$9,233,429	1.1	$14,266,118	1.2

				$57,332,330	
Cost per year if 10% of total quantity completed per annum				**$5,733,233**	

Current contract rates used
Excludes any City Waters infrastructure upgrades
Excludes any Safety improvements
Excludes any additional footpaths
Includes kerb and channel and associated drainage infrastructure

Cost to Resurface Papamoa Beach Rd in Asphalt - assumes reconstruction of full length **$88,670,951**

	5% cost increase p.a.		10% cost increase p.a.		20% cost increase p.a.	
Year	**Annual Cost**	**Cost Index**	**Annual Cost**	**Cost Index**	**Annual Cost**	**Cost Index**
7	$7,683,081	1.05	$10,156,772	1.1	$17,119,342	1.2
8	$8,067,235	1.05	$11,172,449	1.1	$20,543,210	1.2
9	$8,470,596	1.05	$12,289,694	1.1	$24,651,852	1.2
10	$8,894,126	1.05	$13,518,664	1.1	$29,582,223	1.2
11	$9,338,832	1.05	$14,870,530	1.1	$35,498,668	1.2
12	$9,805,774	1.05	$16,357,583	1.1	$42,598,401	1.2
13	$10,296,063	1.05	$17,993,341	1.1	$51,118,081	1.2
14	$10,810,866	1.05	$19,792,675	1.1	$61,341,698	1.2
15	$11,351,409	1.05	$21,771,943	1.1	$73,610,037	1.2
16	$11,918,980	1.05	$23,949,137	1.1	$88,332,045	1.2
17	$12,514,929	1.05	$26,344,051	1.1	$105,998,453	1.2
18	$13,140,675	1.05	$28,978,456	1.1	$127,198,144	1.2
19	$13,797,709	1.05	$31,876,301	1.1	$152,637,773	1.2
20	$14,487,594	1.05	$35,063,932	1.1	$183,165,328	1.2
	$189,574,819		**$328,370,917**		**$1,070,325,800**	

Papamoa Beach Road - Full Length
Cost to reseal the road again in chipseal
Includes cost to add new kerb and drainage infrastructure on seaward side
Area = 10280m long x 9m average width = 92,520m2

Item	Quantity	Unit	Rate	Total	Comment
Resurface road with two coat chipseal	$92,520	square meter	$8	$740,160	Allow 15% of construction costs
Traffic Control	1	lump sum	$111,024	$111,024	Allow 15% of construction costs
Cost Fluctuation Contingency based on 10% p.a.	1	Provisional sum	$115,586	$115,586	
				$966,770	
Cost per year if 10% of total quantity completed per annum				**$96,677**	

Current contract rates used
Excludes any City Waters infrastructure upgrades
Excludes any Safety improvements
Excludes any additional footpaths
Includes kerb and channel and associated drainage infrastructure

9	$125,759	1.05	$182,459	1.1	$365,994	1.2
10	$132,047	1.05	$200,705	1.1	$439,192	1.2
	$46,928		$115,586		$354,074	

Title: Issues and options – Papamoa Park and Ride

File Number: A18226871

Author: Shawn Geard, City Centre Infrastructure Lead

Authoriser: **Nic Johansson, GM Infrastructure**

ISSUE

1. There is a significant amount of traffic that travels between Papamoa East and City Centre, this results in driver frustration, and increased pollution.

ANALYSIS OF SUBMISSION POINTS

2. The submitter describes the traffic between Papamoa and the City Centre at peak times as 'ridiculous' traffic monitoring data shows the route is on average 20 minutes slower at 7:45am compared to 6am between Tara Road and Elizabeth Street, with travel time being approximately 2.5 times the typical 6am duration.

DISCUSSION AND ANALYSIS

3. There are two projects within the Long-term Plan expected to have a positive impact on travel time between Papamoa and the City Centre upon competition, these being 15th Ave/ Turret Road, and Connecting Mount Maunganui (Hewletts Road). It is however noted that during construction both projects are expected to increase traffic disruption on this route.
4. Tauranga City Council undertook development of a business case mid-2024 on a Park and Ride in Papamoa to assist with a funding application to NZTA through the National Land Transport Fund this business case found that the preferred option was;
   (a) A park and ride with 200 carparks on Tara Road approximately 200m east of Domain Road on land currently held by NZTA.
   (b) A new express bus service with a 15-minute frequency in a 2 hour period both AM and PM, it was noted that there are currently no bus services that could service this park and ride.
5. Funding for a Papamoa Park and Ride was not approved within the 2024-27 National Land Transport Plan as it was not prioritised within the available funds.
6. Bay of Plenty Regional Council are unlikely to fund a service enabling this park and ride due to funding constraints.
7. There is provision for construction of a park and ride around the Domain Road area in 2032/33 within the Long-term Plan.

OPTIONS ANALYSIS

8. Two predominant options exist in relation to a Papamoa Park and Ride:

Option 1: Do Nothing Now, Reconsider within Regional Land Transport Plan

9. This option pertains to enabling a park and ride to progress when adequately planned to fit the wider transport network and central government funding criteria.

Advantages	Disadvantages
• Minimises cost to TCC and ratepayers • Enables the option to be considered as part of further improvements to the Tauranga transport network.	• Does not provide for improvements to the commuter experience for Papamoa residents within the timeframe requested.

• Enables an application for funding to NZTA (potential for 51% funding)	

Budget – Capex: N/A

Budget – Opex: N/A

Key risks: Unless significant change occurs to central government priorities it is likely that this project will not be prioritised or funded within the next National Land Transport Fund cycle.

Recommended? Yes

Option 2: Fund a Park and Ride facility on Tara Road

10. Funding of a Park and Ride would require 100% TCC CAPEX contribution (rather than 49% if approved under the National Land Transport Fund), Also due to Bay of Plenty Regional Council funding constraints, and constraints on the current bus network, OPEX funding of a new express bus service would be highly likely to enable success of a park and ride. It is noted that if the bus service was funded through either TCC or BOPRC the rates burden would be similar.

Advantages	Disadvantages
• Provides for improvements to the commuter experience for Papamoa residents. • Allows for disruption mitigation to commuters on this route during major project construction.	• Would create a significant expense to the Tauranga ratepayer. Progressing without NZTA subsidy would create a direct additional ratepayer expense of $3.1m over three years compared to if NZTA supported the service.

Budget – Capex: $2,600,000 (refer to Appendix 7 of the attachment).

Budget – Opex: $2,300,000

Key risks: It is possible that if progressed in this manner NZTA would be unlikely to provide funding for the required bus service in future funding cycles, requiring a future decision on continuing to sole fund a solution vs closing the park and ride.

Recommended? No.

RECOMMENDATION

11. It is recommended at this point to do nothing, however that a park and ride in Papamoa is considered within future transport network planning (TSP, RLTP).

NEXT STEPS

12. Ensure inclusion within Transport System Plan and Regional Land Transport Plan.

SUBMISSIONS RECEIVED

Submission #125: The traffic coming from Papamoa to the city at peak times is now ridiculous. There needs to be a park and ride facility for Papamoa residents who work in the city. We have to get cars off the roads. This is not only good for peoples sanity, but good for the environment.

ATTACHMENTS

Park and Ride – Papamoa Single-stage Business Case Lite

Tauranga City Council

Park and Ride - Papamoa

Single-stage business case lite

Prepared by:	Vitruvius Ltd
Prepared for:	Tauranga City Council
Date:	17/5/2024
Version:	3.0
Status:	Final

Contents

Purpose

This Business Case explored the feasibility and options for the potential implementation of a short-term trial Park and Ride Facility in Tauranga. The study sought to determine the benefits for the trial and its preferred site location, layout and how the public transport services will operate the Park and Ride during the Trail.

Strategic Case

General context

Over the last 30 years Tauranga City has doubled in size reaching a population of over 135,000 people and is Aotearoa/ New Zealand's fifth largest city. Within the next 30-50 years, the WBOP population is forecast to increase by an extra 200,000 people and an additional 95,000 dwellings[1]. This forecasted growth could create two million additional transport movements per day which will add substantial pressure onto an already stressed transport system.

When compared to other cities within Aotearoa, Tauranga has a high proportion of trips taken by private vehicles, moderate walking and cycling use, and very low public transport use.[2] Given Tauranga's modest use of shared and active travel modes, there are significant opportunities to be gained by improving multimodal accessibility.

Like many other cities in Aotearoa, there is neither the space nor investment readily available within Tauranga to increase roading capacity to improve congestion and level of services for private vehicle users. In addition, numerous transport studies show that additional urban roading capacity induces demand and does not resolve congestion issues[3]. As such, much of the transport strategic direction and investment priorities are focussed on enabling multimodal access and providing greater transport choice.

National policy and strategic context

The following key national policies and strategies have been considered when developing this business case to ensure alignment:

- The Transport Outcomes Framework[4]
- The Government Policy Statement on Land Transport 2021[5]
- The Draft Government Policy Statement on Land Transport 2024[6]
- Road to Zero[7]
- Arataki[8] –
- The Emissions Reduction Plan[9] –
- The National Policy Statement on Urban Development (NPS-UD)[10]
- Keeping Cities Moving: A plan for mode shift[11]

The most recent of the above documents, and the most important from a likelihood of funding perspective is the draft GPS on Land Transport 2024. The draft GPS is very clear on where the government's priority areas are for public transport improvements (Auckland and Wellington). However, this activity responds directly to 2 of the 4 strategic priorities by:
Strategic Priority: Economic Growth and Productivity -
This activity supports economic growth and productivity by providing quality transport connections, which enable goods and people to reach their destinations efficiently. The activity assists to optimise the use of the existing network to deliver an appropriate level of service for users and help manage flows and congestion on a nationally significant freight corridor.
Strategic Priority: Value for Money
The activity also has the potential to respond directly to the expectation to increase public transport fare-box recovery, by charging an increased fare price to users of the new public transport service.

Regional policy and strategic context

There are several key regional policies and strategies relevant to this business case. A summary of key documents is outlined.

Urban Form and Transport Initiative (UFTI) and Transport System Plan (TSP)

To help improve community and transport outcomes, the UFTI Connected Centres Programme was developed and endorsed in 2020.[12] This Programme sets out a suite of land use and transport initiatives that will support growth in the WBOP sub-region whilst transitioning to a multimodal transport system that supports people's ability to live, learn, work, and play.

The Connected Centres Programme is premised on planning for growth to occur in an 'up and out' pattern with higher housing densities occurring within both existing areas and new greenfield developments. Supporting the increased density is the transport system that will over time increase multimodal accessibility, mode choice, and the ability to get to most destinations within 30 minutes.

To prioritise transport investment and optimise the sequencing of delivery of the transport interventions included in the Connected Centres Programme, the WBOP Transport System Plan (TSP) was developed[13]. The TSP uses current and estimated future levels of service to help identify the priority order for the transport projects to deliver the multimodal transport system set out in the Connected Centres Programme. Local Councils use the TSP, among other decision-making tools, to develop their Long-Term Plans and the Regional Land Transport Plan. The TSP initially identified a programme of investment within the Western Bay of Plenty to address issues around safety, access, and growth in the region for the 2021-24 NLTP. Within this programme, public transport improvements featured heavily, including Park and Ride facilities along the Northern and Eastern Corridors[14].

The TSP has recently been 'refreshed' in preparation for the 24-27 RLTP/NLTP. Two Park and Rides in the Eastern Corridor and 1-2 Park and Rides in the Northern Corridor, remain a priority in the TSP refresh, with business case and design work programmed for 2024-2027, and construction in years 2027-34. The list of activities in the TSP refresh have been submitted to all TSP partners, and each partner organisation is currently using the TSP refresh to inform the development of their programme of activities for the 2024 RLTP.

Regional land transport plan outcomes

The Regional Land Transport Plan 2021-31[15] (RLTP) sets the direction for the region's land transport system for the next 30 years within an overall vision that the transport system is sustainable, resilient, efficient, and enables safe and multimodal access that meets the needs of our diverse and growth communities, and the regional economy. The analysis and project prioritisation undertaken via the TSP was used in 2020 to help prioritise projects for investment based on sub-regional level of service and importance. The 2021-31 RLTP included a Park and ride in Papamoa with a DBC phase in FY23 and a pre-implementation phase in FY24, and a Park and Ride in Wairakei/Te Tumu with a DBC phase in FY24 The development of the 24-34 RLTP is currently underway.

Bay of Plenty regional mode shift plan

The Bay of Plenty Regional Mode Shift Plan[16] outlines the actions that Local Authorities are collectively undertaken to improve public transport and active mode use within the region. The Plan focusses on three intervention areas including shaping the urban form, making shared and active mode more attractive, and influencing travel demand and transport choices.

[1] See the UFTI Final Report available at https://ufti.org.nz/reports, accessed in June 2022
[2] See the Benchmarking Sustainable Urban Mobility 2022 report prepared for Waka Kotahi, available at https://nzta.govt.nz/assets/resources/sustainable-urban-mobility-benchmarking/sustainable-urban-mobility-benchmarking-report.pdf, accessed in June 2022
[3] Transport researchers have been observing induced demand since at least the 1960's when the economist Anthony Downs coined his *Law of Peak Hour Traffic Congestion*, which states that "on urban commuter expressways, peak-hour traffic congestion rises to meet maximum capacity.
[4] See Transport-outcomes-framework.pdf (cwp.govt.nz)
[5] See https://www.transport.govt.nz/multi-modal/keystrategiesandplans/gpsonlandtransportfunding/gps-2021/
[6] See https://www.transport.govt.nz/assets/Uploads/GPS-on-land-transport-2024-Consultation-4-March-2023-.pdf
[7] https://www.transport.govt.nz/assets/Uploads/Report/Road-to-Zero-strategy_final.pdf
[8] https://www.nzta.govt.nz/planning-and-investment/planning/arataki
[9] https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf
[10] https://www.hud.govt.nz/urban-development/national-policy-statement-on-urban-development/
[11] https://www.nzta.govt.nz/walking-cycling-and-public-transport/keeping-cities-moving/
[12] There is an extensive library of reports outlining the UFTI Connected Centres Programme and analysis the programme. These are available at https://ufti.org.nz/reports/, accessed in May 2022.
[13] The TSP documents are available at https://www.tauranga.govt.nz/council/council-documents/strategies-plans-and-reports/strategies/transport-plan, accessed June 2022
[14] Park and Ride along the Eastern Corridor (Domain Rd and Papamoa East) - Project Priority 7
Park and Ride along the Northern Corridor (Te Puna and Ōmokoroa) – Project Priority 19
[15] The 2021-31 RLTP is available at https://atlas.boprc.govt.nz/api/v1/edms/document/A3884906/content, accessed June 2022
[16] The BOP regional mode shift plan is available at https://www.nzta.govt.nz/assets/resources/keeping-cities-moving/BoP-regional-mode-shift-plans.pdf, accessed June 2022

Bay of Plenty Regional Council's long-term plan

From a transport perspective the Bay of Plenty Regional Council is responsible for developing the RLTP and providing public transport services across the region. BOPRC's Long-Term Plan 2021-31[17]16 (LTP) identified several priorities for each community outcome that it will focus on. The priorities that primarily relate to transport are:

- Regional transport and regional land use planning is integrated and responsive to growth and nature resources pressures.
- A fit for purpose public transport system enables a growing economy and a safe, healthy, and vibrant region.
- Our region is reducing net greenhouse gas emissions in line with national targets and is transitioning to a low carbon economy.

The LTP for 2024-34 is currently in development. BOPRC are seeking to include funding for service provision for a park and ride trial in their 2024-27 NLTP bid.

Tauranga City Council's long-term plan

From a transport perspective, TCC is responsible for planning, delivery, operations, and maintenance of the local roading network. Council works with Waka Kotahi and the BOPRC as key partners to provide the community safe and reliable multimodal access to social and economic opportunities. TCC are in the process of developing their LTP for the 24-34 period. Due to affordability constraints, the permanent park and ride activities included in the TSP refresh have been included in the LTP towards the end of the 10-year period but can be brought forward depending on the outcomes of the proposed park and ride trial.

Other relevant project and initiatives

Project partners are undertaking the following projects that are relevant to this business case as summarised in the table below. The project partners will work across these projects to ensure they are integrated.

Project	Relevancy to the Park and Ride trial
BOPRC Public Transport Continuous Programme	The BOPRC PT continuous programme is funded for the 2021-24 NLTP. The BOPRC PT Continuous programme for 24-27 is to be confirmed through the NLTP moderation process. It is expected that the existing routes in proximity to the park and ride will be rerouted to go via the park and ride, for at least the afternoon return journey, and possibly the morning citybound journey as well.
Tauranga Bus Network Refresh	Consultation on phase 2 of the Tauranga Bus Network Refresh is currently underway. Changes to the network are expected to occur over the 24-27 NLTP period. Consideration of re-routing of routes via the park and ride will be considered as part of this business case.
Public Transport Services and Infrastructure Business Case	BOPRC, in collaboration with TCC, Waka Kotahi, mana whenua, and other TSP partners, are currently developing the public transport services and infrastructure business case for the Western Bay of Plenty sub-region. A 'PT reference case' was developed in 2022, which explored options for the bus service network. A preferred option was endorsed by the TSP governance group on 22 August 2022. The recommended option is a 'hybrid' of a through-routing model through the CBD with some elements of a 'hub and spoke' model incorporated in areas of the city where the through-routed option was less appropriate. The ongoing business case is investigating the infrastructure required to support the endorsed PT service model, as well as specific routes, service frequencies, and opportunities for express services. Whilst this business case will likely be completed before the park and ride trial is completed, the park and ride trial will provide valuable information in respect to potential demand for such facilities to inform the timing of future park and rides across the city.

Summary of the policy context

With greater emphasis being placed on safe and reliable multimodal accessibility and travel choice, the recommended solution to implement a park and ride facility in the Eastern Corridor as a trial to determine demand for such a service in Tauranga is well aligned with relevant national and regional policy context.

The case for change	
Problem or opportunity to be addressed.	The Western Bay of Plenty sub-region is facing several challenges as the population and economy grows, including increasing demands on the transport network. There is currently a high reliance on cars in the sub-region, which, combined with low Public Transport mode share, is causing congestion and delays across the network and prevents the efficient movement of people and goods. Opportunities to reduce the number of trips made by private vehicles will assist in addressing this problem. A crucial part of Tauranga's transport future relies on improving the public transport service. Bus routes, bus stops, and frequency of services all need to be improved. User satisfaction with the public bus services in Tauranga has declined in the last 2 years from 74% in 2020 to 42% in 2022 (survey respondents were asked to rate their satisfaction with the previous 3 months).[18] However, it should be noted that this period was impacted by covid, driver shortages, and construction on the network impacting journey time reliability. Bus non-users in Tauranga cite the convenience of private transport as the principal reason they do not take the bus (66% of survey respondents), followed by time management (private transport is quicker) (25% of survey respondents). More frequent, reliable, and more direct routes were all cited as things that needed to change to improve the public bus services.[19] It is important to note that the intent of a park and ride is to attract new public transport users. Park and ride facilities will likely be part of this as the city grows, as well as new technology to make it as easy as possible for more people to use the bus service and leave their cars at home. The proposed trial aims to reduce single occupancy vehicles traveling from the periphery of Tauranga City to Tauranga CBD, as well as serving as a test case for other future, more permanent, park and ride sites in the sub-region. In developing this business case, we have remained cognisant that this is a business case lite. As such, we have not undertaken a specific Investment Logic Mapping (ILM) exercise for this project. There is a plethora of strategic-level documents (described in the strategic context section above) that have defined the problems that Tauranga is facing. The most relevant and most recent of these is the developing PT services and infrastructure business case. With permission from BOPRC, and with endorsement of the approach from TCC, BOPRC, and Waka Kotahi, we have used the draft ILM that has been developed as part of the PT services and infrastructure business case, which defines three problems as follows: 1. Buses share a congested network resulting in uncompetitive and unreliable bus journeys. (50%) 2. Current PT network will not efficiently support planned growth and enable access to social and economic opportunities. (30%) 3. Inconsistent bus stop and interchange quality reduces customer experience and comfort. (20%)
Investment description	The proposed investment is a short-term Park and Ride Facility and service, which will run as a trial for 2 years from a site in Tauranga, to encourage mode shift to public transport for commuter trips between the area proximal to the park and ride and the Tauranga CBD, and to inform future decision making in the region.
Scheduling / programming	As described above, there is a business case underway currently in the Western Bay of Plenty sub region to establish a preferred option for the long-term public transport service model and supporting infrastructure. This is currently at the long list stage and is exploring options including park and rides throughout the sub-region. As part of the longer-term Public Transport Services and Infrastructure Business Case and future proposed Park and Ride Business Cases, it has been assumed that the park and ride will be constructed from

[17] The BOPRC LTP 2021-31 is available at https://atlas.boprc.govt.nz/api/v1/edms/document/A3874526/content, accessed June 2022
[18] Bay of Plenty Bus User Survey 2022 Final Report
[19] Bay of Plenty Bus non-user survey 2022 Final Report (available on request from BOPRC)

	July 2024, with the trial commencing operations in early 2025 to provide relevant data and findings for decision making. As described above, a park and ride has been identified as a priority in the Western Bay sub-region for a few years now. There is the potential for park and rides to be a useful and key component of the Tauranga transport network. However, the effectiveness of a park and ride in the Western Bay context is unknown. As such, the TSP partners have resolved to conduct a trial now to inform the development of more permanent solutions in the Western Bay sub-region. Tauranga City Council have committed to funding the construction of the facility to enable the park and ride to be operational by Early 2025 within their Long-Term Plan. Bay of Plenty Regional Council are seeking to include funding for increased service provision (including an express service) in their NLTP bid for 2024-27, with the intent to commence the increased services in Financial Year 24/25.
Benefits delivered from addressing the problem or opportunity	In the PT services and infrastructure business case, the following benefits have been identified: • Improved PT competitiveness and reliability (50%) • Improved access (30%) • Enhanced customer experience and comfort (20%) Of these, the park and ride is expected to deliver: • improved PT competitiveness: an express service from the park and ride is likely to offer a more competitive option with cars, than the current service. • Improved PT reliability: PT reliability is unlikely to be improved significantly by a park and ride service alone, it requires public transport priority infrastructure on the bus route. However, a more direct, faster route, is less likely to experience delay simply due to the reduced duration of the service. • Improved access: the park and ride service should enable a greater percentage of the Tauranga population to travel to the CBD within a 45-minute travel threshold by public transport. • Enhanced customer experience: bus user customer experience has been enhanced where park and ride services have been implemented successfully[20]. In addition to the above, it is expected that the park and ride trial will also deliver the following benefits: • Improved public transport uptake: it is expected that the park and ride will attract new bus users, thereby increasing the overall patronage, which should result in a corresponding decrease in single occupancy vehicle users and light vehicle kms travelled between the outskirts of the city and the CBD each workday. These benefits have been assessed using the appraisal summary table within the economic case to determine the preferred option.
Alignment of the identified benefits to the problem or opportunity statement	Table 1 shows the links from problems to benefits, through to investment objectives and KPIs. The following investment objectives were developed to guide this business case: 1. To improve the competitiveness of PT by reducing the difference in average bus journey times compared to the car from the park and ride suburb to the CBD from xx mins to yy mins at peak hours during the trial period. 2. To improve the reliability of PT by reducing the variability in bus journey times in peak hours compared to the existing bus service in peak hours compared to off-peak from X% to Y% on average for the trial period.

[20] RTE - Evaluating the long-term impacts of bus-based park and ride, G Mills,P White, 2018

<table>
<tr><td></td><td>3. To increase access to key social and economic destinations by increasing the proportion of the population within a 45-minute travel time to Tauranga CBD via public transport from 20% to XX for the trial period.
4. To enhance PT customer experience and perception through increasing user satisfaction from 42% in 2022 to XX% by the end of the trial period for users of the park and ride service.
5. To increase public transport boardings from the corridor the park and ride site is located and the CBD from xx to yy by the end of the trial period, without unduly undermining the case for public transport in the vicinity of the park and ride.</td></tr>
<tr><td>Stakeholder and community engagement</td><td>
<table>
<tr><th>Stakeholder/individual/community/partner</th><th>Summary of engagement, outstanding issues, any relevant links</th></tr>
<tr><td>Bay of Plenty Regional Council</td><td>Engaged through the business case to provide input on PT services requirements, bus user demand, and PT subject matter expertise.</td></tr>
<tr><td>NZ Bus (via BOPRC)</td><td>Engaged as the current operator of the Tauranga Urban service regarding an operational cost estimate for the proposed express service. Will be engaged further following endorsement of this business case and approval of the next phase to confirm operational requirements for the new service.</td></tr>
<tr><td>NZTA (as landowner)</td><td>Engaged as the current landowner for the recommended site to ensure the proposed park and ride facility can be constructed on and service operated from the land. The enablement of using part of the land via lease arrangement with Waka Kotahi / LINZ will need to be formalised through a land use agreement between TCC and Waka Kotahi at the next phase.</td></tr>
<tr><td>Mana Whenua</td><td>Engagement with mana whenua regarding the use of this land has been ongoing since the planning and construction of the Tauranga Eastern Link. Engagement will continue through the Te Rangapū partnership.</td></tr>
<tr><td>Local community</td><td>Once funding is secure, communication with the local community and Royal Ascot drive residents about the park and ride service will begin through a staged communication plan</td></tr>
</table>
</td></tr>
</table>

	ILM Problem	ILM Benefit	Investment objectives	KPI	Measure	Waka Kotahi Benefits Framework reference	Baseline	Target
These problems and benefits align with the draft PT services and infrastructure business case. Investment objectives and measures have been tailored to be specific to this investment	Buses share a congested network resulting in uncompetitive and unreliable bus journeys. (40%*)	Improved PT competitiveness and reliability (40%)	To improve the competitiveness of PT by reducing the difference in average bus journey times compared to the car from the park and ride suburb to the CBD from xx mins to yy mins***** at peak hours during the trial period. (30%)	Bus travel time	Travel Time – Average travel time in minutes via park and ride service vs average travel time via private vehicle from Park and ride to the CBD.***	10.1.9 Travel time Average travel time in minutes via park and ride service vs average travel time via private vehicle from Park and ride to the CBD.	Current bus route time = xx mins; Average car time = xx mins Difference = xx mins	Express route time = 35 mins Average car time = xx mins Difference = xx mins
			To improve the reliability of PT by reducing the variability in bus journey times in peak hours compared to the existing bus service in peak hours compared to off-peak from X% to Y% on average for the trial period. (10%)	PT reliability	Express service peak – 2B/2W service off peak variability vs 2B/2W service peak – off peak variability.***	5.1.1 Punctuality – public transport Percentage of scheduled service trips between 59 seconds before and 4 minutes 59 seconds after the scheduled departure time of selected point	Current bus route service variability between peak and off peak =	Express service peak – current service off peak variability vs current service peak – off peak variability.
	Current PT network will not efficiently support planned growth and enable access to social and economic opportunities. (25%*)	Improved access (25%)	To increase access to key social and economic destinations by increasing the proportion of the population within a 45-minute travel time to Tauranga CBD via public transport from 20% to XX for the trial period. (25%)	Access to key destinations (CBD)	Increase in proportion of population living within 45-minute PT travel threshold of the CBD****	5.2.6 – Access to key economic destinations Proportion of population living within travel threshold (15 minutes, 30 minutes, or 45 minutes) of key economic opportunities (including work) by public transport in the morning peak.	Current population in 10km radius of Park and Ride location within 45-minute travel threshold = xx%	
	Inconsistent bus stop and interchange quality reduces customer experience and comfort. (15%*)	Enhanced customer experience and comfort (15%)	To enhance PT customer experience and perception through increasing user satisfaction from 42% in 2022 to XX% by the end of the trial period for users of the park and ride service. (15%)	Satisfaction	Quality satisfaction with bus journey from Park and ride site (compared with overall bus user survey results)**	User satisfaction is not listed as a benefit in the framework.	Current Tauranga urban bus user survey data, satisfaction with bus service over previous 3 months (42% satisfied in 2022). *	Comparison of park and ride user satisfaction vs rest of bus service user satisfaction at end of the trial.

Additional Opportunity Statement specific to this investment:	There is an opportunity to determine whether an alternate type of bus service can attract more private vehicle users to shift modes (20%)	Improved PT mode share (20%)	To increase public transport boardings from the corridor the park and ride site is located and the CBD from xx to yy by the end of the trial period, without unduly undermining the case for public transport in the vicinity of the park and ride. (20%)	PT Patronage	Bee card data - Number of public transport boardings at park and ride, and total public transport boardings from the park and ride location corridor****	10.1.1 People – throughput of public transport boardings Number of public transport boardings	Current boardings on relevant existing bus service	Total boardings on relevant existing services and new P+R services
				Mode Shift	Vehicle trips not taken between the park and ride area and the CBD (bee card data of boardings at park and ride, multiplied by survey data of percentage of users who previously used a private vehicle****	8.1.2 Mode shift from single occupancy private vehicle User to describe (This benefit will be measured through surveys undertaken on park and ride users to understand previous mode choice and shift in mode.	Zero	Average of 150 vehicles per day
				VKT reduction	Vehicle trips not taken between the park and ride area and the CBD, multiplied by xx km (return trip distance)****	8.1.3 Light vehicle use impacts Light vehicle kilometres travelled (light VKT)	Zero	-xxxxkm (based on 150 vehicles, and xxkm return trip)

Table 1: Problems, Benefits, Investment Objectives and KPIs, including alignment to NZTA Benefits Framework

*The relative weightings for the problem statements have been maintained from the PT Services and Infrastructure Business Case (rounding to the nearest 5%) but reduced in absolute terms to accommodate the opportunity statement within 100%. The opportunity statement has been given a weighting of 20%.

**These KPIs are considered totally attributable to the park and ride, in that the measures will provide data on the effectiveness of the park and ride service experience over and above the existing services

***These KPIs are considered totally attributable to an express service, in that the measures will provide data on the competitiveness and reliability of the express service over and above the existing services

****These KPIs are considered totally attributable to the combination of the park and ride and the express service, in that the measures will provide data on the effectiveness of the park and ride and express service over and above the existing services.

*****It should be noted that whilst placeholder values have been used here for the investment objectives, baseline, and targets, these have been completed in the benefits realisation section below.

Economic Case

This section outlines the options analysis undertaken and the preferred option.

Option Analysis

This options analysis section is divided into the following:

- Trial site location and infrastructure
- Service options
- Route options for an express service

Trial site location options

The Tauranga Short-Term Park and Ride Trial Scoping Study (Appendix 1) presents the optioneering process followed to determine a recommended trial location for a park and ride trial location. A summary of this study is presented here.

In development with project partners, a list of objectives was developed that could be used to assess each potential site for the trial as well as the future layout and operation of the trial. These objectives were grouped into key criteria groups as detailed below:

- Ease of access
- Enhance and promote Public Transport
- Longevity
- Short term implementation risk

The project team identified 16 short-listed sites within the region. The potential sites were either short-listed sites from previous reports and studies or from discussions with the project partners' transport planning and property teams. Each site was assessed by the project partners to understand the locations alignment to the project's objectives and goals.

Two sites demonstrated the most alignment with the selection criteria and were therefore recommended for further study and value for money costing. These were Tara Road, Pāpāmoa, and BayPark. Both sites predominately aim to target trips from the Eastern sub-region travelling into the city using State Highway 2.

Following further analysis (see Appendix 1) the Tara Road site was recommended as the proposed location for the trial. This site provides the highest alignment with the project goals and demonstrates the lowest risk and funding costs to implement.

This business case commenced following the initial scoping study. As such the scoping study did not assess the sites against the investment objectives. It was therefore considered important that the shortlisted sites be retested against the investment objectives using multicriteria analysis. The results of the MCA of the 2 shortlisted sites against the investment objectives are presented in Appendix 2.
The Tara Rd site scored better overall in the MCA than the Baypark site, scoring better against most of the investment objectives and critical success factors.

The recommended site at Tara Rd also has a small 400m walking catchment, which serves to reduce the detraction from the existing bus services that provide better walking access in the area.

Service options

Appendix 1 outlines 3 service options that were presented as part of the scoping study.
These options were as follows:

- Option 1: The implementation of a new express/limited stop service every 30 minutes during the peak periods.
- Option 2: The implementation of a higher frequency (15-min) peak service for Route 2B, travelling along the current 2B route.
- Option 3: The implementation of a new express/limited stop service every 15 minutes during the peak periods.

The recommendation at the end of the scoping study was to proceed with Option 3, which was endorsed by TCC Commissioners.

As part of the scoping study, BOPRC provided a list of public transport operation considerations to inform the development of service options. These are described in detail in Appendix 1, Section 5. Of most relevance to the development of service options is the following recommendations with respect to frequency and convenience:

- Frequency: International and Australasian research has concluded that headway (interval) between buses serving park and ride sites should not exceed 15 minutes at peak times. Park and ride utilisation declines substantially when headways exceed 15 minutes.
- Convenience: Some bus users need to return to park and ride sites before the afternoon peak period. All day public transport access to the park and ride is required to enable park and ride users to return to the park and ride via a bus service at any time of day.

With the above in mind, the following parameters were set prior to the development of options for the business case:

1. A new express service must not exceed a headway of 15 minutes**.**
2. All day access to the park and ride must be provided for the return (eastbound) journey.

This meant that Option 1 from the scoping study was eliminated from the business case optioneering process as fatally flawed as it does not provide a 15-minute service. It also ruled out any new options that did not provide all day access to the park and ride (for example, an option that does not reroute the existing appropriate all-day services via the park and ride in either direction).

In addition to the scoping study options, the following options were needed to explore the incremental benefits of the recommended option through a business case.

- Do nothing – the 2B service as current, without a park and ride in place. The Do nothing is the existing PT services operating in close proximity to the park and ride. The existing services that run near the Tara Rd site are the 2B service (Papamoa to Tauranga City) and the 20 service (Te Puke to Bayfair). The 2B runs at a 30-minute frequency from 6am – 7.05pm citybound, and from 6.45am – 8.10pm Eastbound weekdays (see Figure 1).
- Do minimum – the 2B service and 20 service as per current frequencies, rerouted via the park and ride. This is considered the minimum service provision if a park and ride is implemented.
- An extended route/ greater coverage option - implementation of a new express/limited stop service every 15 minutes during the peak periods, operating from the Tara Road Medical Centre Bus stop, via the Park and Ride and CBD to Tauranga Hospital, returning via the same route. This option removes the need to reroute the 2B service citybound as passengers can transfer at the Tara Road Medical Centre.

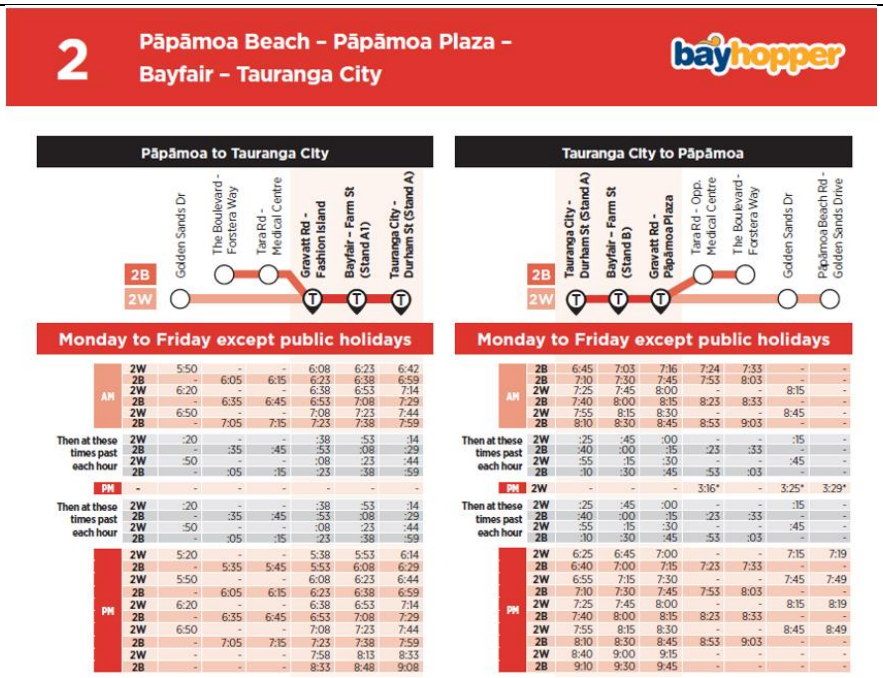


Figure 1: Weekday timetable for the existing 2 Service in both directions

The 20 service runs at a 60-minute frequency during the day with additional services around the school peak. The Te Puke service to Bayfair also runs down Tara Rd past the proposed park and ride trial site (See Figure 2).

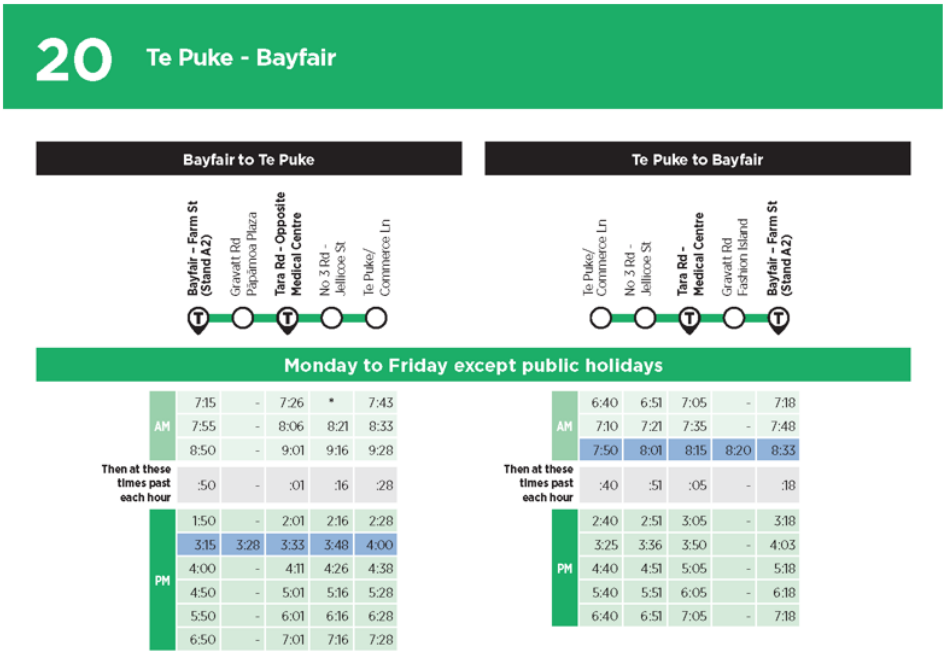


Figure 2: Weekday timetable for the existing 20 Service in both directions

To aid comprehension, we have reordered the above options as follows:

Option	Description
Do Nothing	The 2B and 20 services as current, without a P+R in place
Option A – Do Minimum	The 2B and 20 services as per current frequency (every 30 minutes), rerouted via the park and ride
Option B (previously Option 2)	The 20 service as per current frequency + the implementation of a higher frequency (15-min) peak service for Route 2B, rerouted via the park and ride
Option C (previously Option 3)	Option A + the implementation of a new express/limited stop service every 15 minutes from the P+R to Tauranga CBD in the am peak, and from Tauranga CBD to the P+R in the pm peak.
Option D	The 20 service as current (no change) + the 2B services as current citybound (services do not reroute via the park and ride) + 2B services Eastbound rerouted via park and ride + the implementation of a new express/limited stop service every 15 minutes during the peak periods, operating from Tara Rd Medical Centre via the park and ride, SH2, CBD, Cameron Rd, to Tauranga Hospital. Passengers wishing to transfer from the 2B or 20 service to the express service can change at the Tara Rd Medical Centre.

Table 2: Service option descriptions

For transparency, the following options are considered minor variations on the above options that can be explored at the preferred option stage when Public Transport Operational considerations are examined in detail:

- Variation to Option C - an option of not rerouting the 2B service citybound in the morning peak (this could involve commencing the express service at Tara Rd Medical Centre as per Option D)
- Variation to Option D – an option of commencing the express service at the park and ride (this could involve rerouting the 2B service via the park and ride citybound as per Option C)
- Variation to Options C and D – replacing one 2B service per hour with a "2B express" that begins at the start of the 2B route, follows the existing 2B route (including all stops) to Tara Rd, then deviates via the park and ride and then express into town.

The exact route of the express service, and whether the buses returning to the park and ride operate a return service via Bayfair (to offer passengers traveling from the hospital/CBD an express route to Bayfair in the morning peak) will be confirmed at the next stage.

An option to implement an express service without a park and ride was mooted, but discounted on the basis that it would fail to meet the objective of the project to test the effectiveness of a park and ride. Whilst an express service on its own would potentially provide a solution for Papamoa residents, it offers nothing for those from elsewhere in the Eastern Corridor (e.g., Te Puke, Paengaroa, Maketu) that need somewhere to park their car (i.e., a park and ride).

Multi-criteria analysis

A multi-criteria analysis was conducted on the above options. The MCA criteria were the five investment objectives, three technical feasibility critical success factors (extent to which the option can be accommodated as part of the existing public transport and road network), and three affordability critical success factors (extent to which the option has financial implications (affordability, supplier capacity, and funding availability). Other critical success factors (from the Waka Kotahi MCA template) were not considered relevant to the assessment of the service options or were common across all options (Consentability, Environmental impacts, Social and Cultural Impacts, Climate Change Mitigation and Adaption, and Property Impacts). Impacts on Te Ao Māori has not been assessed on the basis that there is no material difference between the different PT service options on the impact of Te Ao Māori. There is ongoing engagement with the Te Rangapū Mana Whenua o Tauranga Moana Partnership through the Public Transport Services and Infrastructure project. Value for Money was assessed by proxy by dividing the sum of the ratings against the investment objectives over the affordability rating, but the criterion was excluded from the calculation of overall ranking on the basis that it effectively duplicated those other criteria. The MCA of Service Options is presented in Appendix 3.

Weightings and Sensitivity Tests

Investment objectives were weighted in accordance with the weightings in Table 1. Achievability criteria were weighted equally. Affordability criteria were weighted equally.
For the overall MCA result, the investment objectives were given a greater weighting (50%) than the achievability and affordability criteria (25% each).

Sensitivity tests conducted were as follows:

Test	Description
1. Equal weighting across all criteria	Investment objectives were not weighted in accordance with the ILM and each objective carried the same weight, and the same weight as each affordability and achievability criterion. This tested the impact of the ILM weightings on the overall rankings.
2. Affordability 60%, Objectives 20%, Achievability 20%	Investment objective weightings maintained in accordance with the ILM, but a much stronger focus applied on affordability, to understand implications if affordability is a concern for decision makers.
3. Affordability 33%, Objectives 33%, Achievability 33%	Investment objective weightings maintained in accordance with the ILM, but the affordability criteria group and the achievability criteria group were given equal weight to the investment objectives group.
4. Equal weighting including value for money	As per sensitivity test 1 but including the value for money criterion.

Table 3: Sensitivity Test Descriptions

MCA Rankings

Option B scored the worst overall and worst across all sensitivity tests. Option A (Do minimum) scored 4th best overall but improved in ranking when more weight was given to the affordability criteria. Whilst, if we are to proceed with a park and ride, Option A is the cheapest service option available, it scores worse than the Do-Nothing option overall and in every sensitivity test, so it would be difficult to justify why you would proceed with Option A over the Do Nothing option.

Overall MCA ranking		Do Nothing	Option A	Option B	Option C	Option D
Overall (50% los, 25% achievability, 25% affordability)		0	-0.555	-0.8	0.0675	0.21
Overall Rank		3	4	5	2	1
Sensitivity tests	1. Equal weighting across all criteria	0.00	-6.00	-10.00	-2.00	-1.00
	Rank	1	4	5	3	2
	2. Affordability 60%, Objectives 20%, Achievability 20%)	0	-0.486	-1.178	-0.996	-1.104
	Rank	1	2	5	3	4
	3. Affordability 33%, Objectives 33%, Achievability 33%	0	-0.5841	-1.0725	-0.5544	-0.5148
	Rank	1	4	5	3	2
	4. Equal weighting including value for money	0.00	-8.00	-10.00	-2.00	-1.00
	Rank	1	4	5	3	2

Table 4: Multi-criteria analysis rankings

Based on the overall rankings and sensitivity tests, the comparative merits of Option C and Option D were discussed among project partners. The project partners agreed that Option D provided additional benefits over Option C, including greater coverage at both ends, better connectivity with the existing 2B service, and less disruption to the existing 2B timetable. The disbenefits of Option D (in comparison with Option C) is the need to consider where express buses will layover between trips. Option C, starting

at the park and ride, provides a convenient location to layover, with driver rest facilities. Option D, commencing at the Tara Road medical centre bus stop, is less convenient in this respect. Option D is also a longer route, requiring more buses/drivers to operate, and potentially reducing journey time reliability. It was discussed among the project partners that the bus lanes on Cameron Road would likely need to be operational to improve the reliability of the service.

Noting the above pros and cons of the two options, the project partners agreed to proceed with Option D.

An appraisal summary table (AST) has been completed for Option D. Refer to Appendix 4: Appraisal summary table for the completed table. As presented in the AST, the BCR for Option D is 1.0.

It should be noted that the BCR is low because the evaluation period is limited to a 5-year period and includes the cost of decommissioning the infrastructure at 5 years. It should also be noted that the base BCR uses a standard $2.72 fare, consistent with the standard Bee card fare on the rest of the Tauranga Urban network. There is an opportunity to increase the fare to $5, subject to BOPRC Council approval, which would also improve the BCR (see the increase in farebox recovery sensitivity test below).

Incremental Analysis

An incremental analysis was undertaken to determine the incremental benefit of Option D over Option C. The incremental benefits of Option D over Option C equate to $513,710. The incremental costs of Option D over Option C equate to $164,709. The Incremental BCR is therefore 3.12.

Incremental analysis has been completed. Please refer to Appendix 5.

DETAILS OF PREFERRED OPTION

The table below includes an outline of the preferred option:

Scope of the preferred option	**Preferred Option** The preferred option is the Tara Road Park & Ride with a peak Express Service Option D). The scope of the preferred option includes: The preferred option includes: • Recommended Park and ride infrastructure • Recommended Service option • Recommended express service route Park and ride infrastructure (Site Layout, Facilities & Access): The preferred option includes: - Left in left out access for buses and cars from Tara Road - Cycling access via the on-road cycle lane from the East, and via the existing shared path from the West - Pedestrian access via the existing shared path from the West. - 200 carparks - Bike parking for x bikes - Disability parking These are shown in Figure 1 below.

Figure 1 | Proposed Park and Ride Layout Concept

The Tara Road site was initially proposed to be constructed on the crown owned land adjacent to the Doncaster Drive/Tara Road roundabout, utilising the existing stub. However, through negotiations with the landowner (Ministry of Housing and Urban Development), the site has been identified for housing, and cannot be used for a park and ride in the interim.

An alternate location on Tara Rd was identified. This location is closer to the Domain Rd interchange with the TEL. The land is owned by Waka Kotahi, purchased originally as part of the Tauranga Eastern Link, and has been ear-marked as a potential Park and Ride location for many years. The closer proximity to the highway enables a quicker access to/from the highway. It also has the additional benefit of being a more likely long-term site, which means there is potential for the trial site to be utilised beyond the completion of the trial.

Design considerations for park and ride infrastructure

As part of the scoping study, the project partners attended a workshop to agree the list of infrastructure required for the park and ride. This was based on current best practice guidelines from Waka Kotahi, Auckland Council and Tauranga City Council documents. Each potential infrastructure item was categorised as either 'Essential', 'Desirable' or 'Not necessary'. The list of infrastructure is presented in the addenda to Appendix 1. Total costs were: $599,500 for the Essential items; and $1,427,880 for the Desirable (including the Essential) items. TCC Commissioners have endorsed the 'Essential' features list.

Access Layout

One of the key criteria in the site selection MCA was 'Ease of access'. The park and ride trial location needed to have efficient and quick access from the main strategic corridors, in a clear and visible location with clear signing and an obvious entrance point. Whilst the original Tara Rd site had a safe access point onto Tara Rd at the Doncaster Dr roundabout, the new site requires creating a new access point onto Tara Rd. The following access provisions of the preferred site were explored for multi-modal access to the park and ride.

Car and Bus access options

Three access layouts were considered for access to the site for cars and buses.

1. A new signalised intersection on Tara Rd
2. A left in left out access off Tara Rd at two different locations

Layout 1	**Unsignalised access between Royal Ascot and Twin Oak Dr** This layout provides a new access with restricted right turn out. The right turns out have been restricted over safety concerns crossing 4 lanes of traffic when the traffic is expected to be platooned after being dropped off by P&R bus. The distance to the roundabout may create the risk of users right-turning at this access. The shared path would need to be extended with crossing remaining at the domain roundabout. Bus Services would need to travel further west to U-turn at the roundabout. This would create a perception of additional unnecessary delay and detour for uses on the existing Route 2B. The site is located, outside the main flood area if positioned west, but doesn't interface with some areas of land identified with TCC GIS as flood risk. The costs of this option would be similar to Layout 3 with the additional costs of the extended shared path. 
Layout 2	**Signalised access at Royal Ascot** This layout provides a new access directly opposite Twin Oak Ave with the intersection upgraded to signals. The signals would enable safe crossing of Tara Road for cyclists and pedestrians to access the P&R. Bus Services would use the signals to access in and out of the facility and provide the shortest diversion of each option. The site is located, outside the main flood area, but will create wider impacts with restricting traffic along Tara Road and creating new signal access into the residential Twin Oak Ave development that may encourage more traffic down this road instead of using Doncaster Drive. The costs of the signals would make this most expensive option. Once the P&R is no longer active the signals would serve little purpose long-term. It is noted that for a permanent longer P&R solution, this option would provide the expected level of service and access for that use.

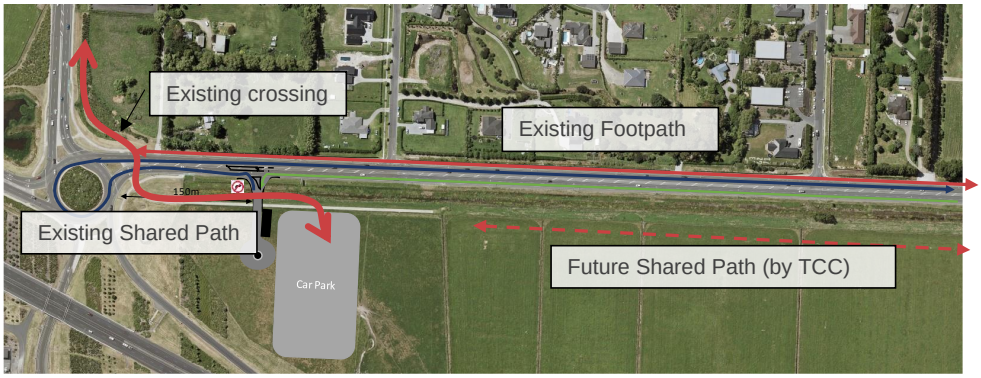
Layout 3	**Option 3 – Unsignalised access between Domain and Royal Ascot** This layout provides a new access with restricted right turn out. The right turns out have been restricted over safety concerns crossing 4 lanes of traffic when the traffic is expected to be platooned after being dropped off by P&R bus. The access is 150m from the roundabout and therefore the risk and appetite for users to form of illegal right turn out would be lower than option 1 Bus Services would need to travel further west to U-turn at the roundabout. This is the same as Option 1, but perception of the diversion could be expected to be lower. The site is located, outside the main flood area with ground conditions slightly better that Layout 1.

As this is a trial, the objective was to provide the lowest cost, safe access option that can delivered within the agreed timeframes. Layouts 1 and 2 were ruled out and preference is to proceed with Layout 3 and provide futureproofing to enable the traffic signals (Layout 2) be installed offline to provide greater longevity if the trial is deemed a success and the facility transformed into a permanent solution.

A traffic assessment has been completed for 3 (see Appendix 6), and the recommendations will be incorporated into the detailed design.

Pedestrian access options

From a mode shift perspective, the objective of a park and ride is to encourage people to shift modes from car to bus. Whilst walking to the site is possible, the location of the site is unlikely to attract pedestrians. Most residents within walking distance of the area will find it quicker and safer to walk to the existing bus stops on Doncaster Drive. However, there may be a small catchment off Royal Ascot Drive and Twin Oak Ave that may consider walking to the park and ride. Pedestrian access to the site is provided via the pedestrian refuge at the Tara Rd/Domain Rd roundabout and the existing shared path on the southern side of Tara Rd to the park and ride site. This is shown below. The trial will seek to understand demand for pedestrian access and determine whether an additional pedestrian crossing of Tara Rd is required.



Cycle access options

Cycle parking at the park and ride was identified as an essential feature of the design. However, as this is a trial, significant investment in cycling access to the site was ruled out. Cyclists will be able to access the park and ride using the existing on road cycle lane on the Southern side of Tara Rd between Doncaster Drive and the park and ride facility entrance. The design will consider whether there is an opportunity to add some paint and signage to provide a safer cycling environment along the existing shoulder or across the Entrance. East of the Doncaster drive roundabout, there is a shared path on the North side of Tara Rd adjacent to the college and Gordon Spratt Reserve, and a shared path and/or on-road cycleway the length of Te Okuroa Drive.

In the opposite direction, heading West from the park and ride, there is offroad access via the existing shared path on the southern side of Tara Rd to the Domain Rd roundabout. However, the existing level of service for cycling down the rural section of Domain Rd is poor (cyclists need to use the road carriageway or the footpath). TCC have plans to urbanise this section of the road in the short-medium term. The trial will seek to understand demand for cycle access in this direction and determine whether temporary investment in cycling infrastructure is needed in advance of the Domain Rd upgrade project if the park and ride facility continues to operate beyond the trial period.

Service options

The recommended Service option is Option D. Option D includes the addition of a new 15-minute frequency express service for 2 hours in the morning peak from the Tara Road Medical Centre via the park and ride, to the CBD and Tauranga Hospital, returning via the same route. and 2 hours in the afternoon peaks from Tauranga Hospital, via the CBD, to the park and ride and Tara Road Medical Centre, returning via the same route. The exact schedule will be determined by BOPRC and the bus operator in the next phase but is anticipated that the express service will commence shortly after the arrival of the 2B service at the Tara Road Medical Centre to enable passengers to interchange from the 2B service without too much delay to their journey.

The addition of the park and ride will have the following implications for the existing services:

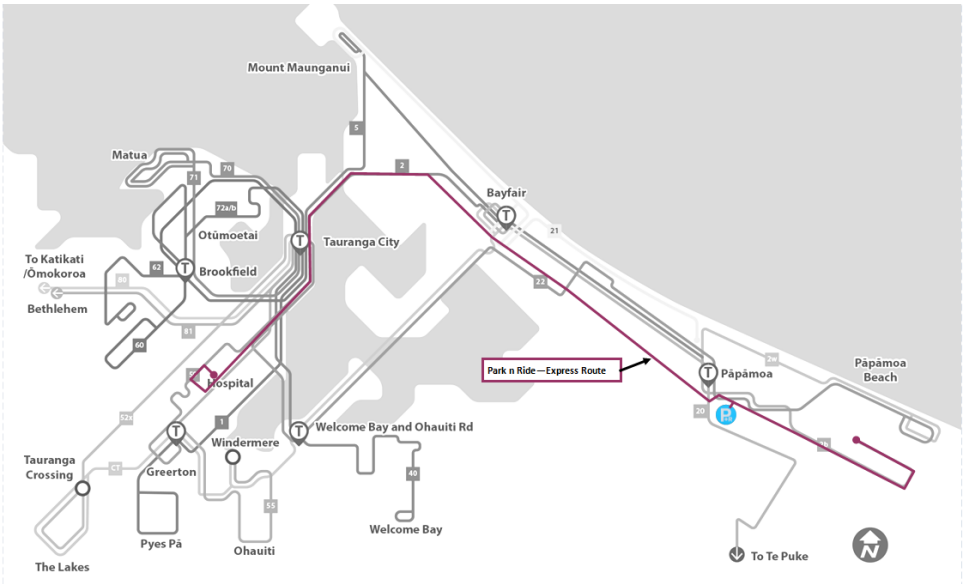
- 2B Service citybound – there will be no changes to the 2B service citybound.
- 2B Service eastbound – the 2B service will be required to reroute via the park and ride in the off-peak periods when the express service isn't operating. This is to ensure there is all

day return access to the park and ride. This will likely affect the services departing the city between 9.10am and 3.10pm; and between 6.10pm to 9.10pm.

- 20 Service citybound – there will be no changes to the 20 Service citybound. Passengers wishing to take the express to town can change at the Tara Road Medical Centre.
- 20 Service eastbound – there will be no changes to the 20 Service eastbound. Passengers wishing to take the 20 service to Te Puke can change at the Tara Road Medical Centre.

Operational considerations to be considered and confirmed at the next stage include:

- Integration of ticketing system on the express service buses. There is a risk that onboard ticketing systems cannot be procured in time. A complicating factor in this regard is that the Tauranga urban bus contract expires at the end of FY2027 and as such procuring new ticketing machines for a 3-year period only is not economical.
- Specific timetable
- Opportunities to employ the additional buses and drivers during the interpeak period.



Express Route options

The specific route that the express service will travel on has not been determined as part of this business case. The express route will likely be one of the following three options:

- Express route option 1 - Direct service on highway, Limited stops at Hewletts Rd, CBD
- Express Option 2 - Express service down TEL to Bayfair, right onto Girven, left onto Marlin, then follow existing 2 route to CBD. Limited stops at Bayfair, Hewletts Rd, CBD
- Express Option 3 - Express service down TEL to Sandhurst, right onto Sandhurst, left onto Grenada, then follow existing 2 route to CBD. Limited stops at Bayfair, Hewletts Rd, CBD

These are currently considered to have similar trip durations, depending on the quantum of traffic on any given day, with pros and cons for each, and will be explored in further detail during the design phase with BOPRC and the bus operator.

	Summary An overview of the preferred option can be found under 'Appendix 4: Appraisal Summary Table'. A detailed estimate of the whole of life costs for the preferred option can be found under 'Appendix 7: Whole-of-life cost estimate for the preferred option'.
Reconfirm prioritisation profile	IPM Profile This project has been assessed against the draft 2024-27 Investment Prioritisation Method as having an investment priority order of 3, based on the following: GPS Alignment: Very High The activity has the potential to help address a significant network constraint or opportunity in terms of network efficiency or wider economic productivity on a nationally significant corridor by reducing the amount of traffic on SH2 Hewletts Rd, thus improving freight reliability. This initiative supports economic growth and urban development by connecting people to employment opportunities and housing by providing a rapid transit (express PT service) to the City Centre and surrounds improving travel time and reducing congestion for those travelling in from the outer region. Scheduling: Medium Criticality: Moderate adverse consequences would arise in terms of outcomes (measured using benefits framework) or financial impact if the phase of the activity is not undertaken. This activity is a high priority for TCC Commissioners and BOPRC councillors to progress urgently. Interdependency: Another activity or non-transport investment (for example connecting transport infrastructure or service) is dependent on this phase of the activity being undertaken in the 2024-27 NLTP period and non-delivery of that phase in the 2024-27 NLTP period would have a significant impact on realising the benefits of the interdependent activity. The express bus service submitted by BOPRC has a critical dependency of this project being implemented. If this project were not to proceed, this service would not be viable. Efficiency: Low The BCR is 1.0

Sensitivity analysis

Sensitivity analysis has been carried out to test how sensitive the assessed benefits and costs are to change. The outputs for each sensitivity test are documented below:

Sensitivity scenario	Sensitivity test	Base BCR	Sensitivity value BCR
Total implementation cost	Total implementation costs through to completion increase by 25%	1.0	0.9
	Total implementation costs through to completion decrease by 25%	1.0	1.0
Discount rate	The discount rate applied to benefits is decreased to 3%	1.0	1.1
	The discount rate applied to benefits is increased to 6%	1.0	0.8
Public Transport Only			
Farebox recovery	Total farebox recovery for the first 3 years increases by 25%	1.0	1.4
	Total farebox recovery for the first 3 years decreases by 25%	1.0	0.8
Contract Cost	Total contract costs for the first 3 years increases by 25%	1.0	0.9
	Total contract costs for the first 3 years decreases by 25%	1.0	1.1
Total Benefits	Total diversion rate from car drivers increases by 20%	1.0	1.0
	Total diversion rate from car drivers decreases by 20%	1.0	1.0

Commercial Case

When was your procurement strategy last approved by Waka Kotahi	Tauranga City Council's current procurement strategy was published on 3rd May 2023 and approved by Waka Kotahi in 2023 for the 3-year period from 2023-2026[21]. Bay of Plenty Regional Council's procurement strategy for 2020-2022[22] was approved by Waka Kotahi in 2020. The BOPRC Procurement Strategy for Transport activities 2024-27 is complete and is currently going through the approvals process within BOPRC, prior to submission to NZTA

[21] https://www.tauranga.govt.nz/Portals/0/data/council/strategies/files/transport-procurement.pdf
[22] https://atlas.boprc.govt.nz/api/v1/edms/document/A3767195/content

Briefly describe the procurement approach and how it aligns to the organisation's approved procurement strategy	*Public Transport Services* Subsidised passenger transport in New Zealand must operate within the bounds of the Public Transport Operating Model (PTOM). This requires the services to be contracted by the Regional Council and includes aspects such as minimum contract lengths, fare regulation and vehicle standards for urban services. The park and ride trial service will need to operate within the bounds of the PTOM framework. Should the trial be operated by the current Tauranga urban operator, the number of RUB (Requirements for Urban Buses) compliant buses required is likely to exceed the number in the current fleet. This could present long lead times, whilst the operator acquires and equips suitable vehicles. Similarly, there may also be long lead times associated with recruiting and training drivers. *Bus service procurement* Bus service procurement would be undertaken with regard to the BOPRC Procurement Strategy for Transport Activities 2024-27 as required by the NZTA. The Land Transport Management Act 2003 (LTMA) requires Approved Organisations receiving investment from the National Land Transport Fund (NLTF) to use approved procurement procedures which are designed to obtain best value for money; enabling fair competition; and encouraging competitive and efficient markets. For the procurement of public transport services value for money is the key consideration. While a variety of procurement options may be assessed, BOPRC would consider options including: - Tendering the proposed contract, or - Service level variation with current operator. *Land arrangement* The land is currently owned by the Crown and set for disposal subject to potential long-term use as Park and Ride that is being explored under the PT Services Business Case. The enablement of using park of the land via lease arrangement with Waka Kotahi / LINZ is subject to the long-term use and recommendations of the PT Services Business Case. As well as formal land use agreement between TCC and Waka Kotahi. An alternative for Council to procure the land for public use as the Park and Ride has been explored with potential benefits for Council to own the full land parcel to remain public use for mix-use reserve / sport fields and parking. *Park and Ride Infrastructure Design* Professional services for preliminary design through to construction monitoring will be procured via direct appointment or closed tender, assuming the monetary threshold for these approaches are not breached. *Park and Ride Infrastructure Construction* The construction contractor will be procured using TCC's low-cost low risk supplier panel. This approach has been permitted, in principle, by the NZTA procurement team.

Financial Case (including affordability)

The activity is considered affordable from a local share perspective. The local share for this project will be funded by TCC and BOPRC. TCC have included the capital cost of construction of the park and ride within their long-term plan for 2024, which was recently adopted by TCC Commissioners. BOPRC have included the operational costs of the 2-year trial in their draft long-term plan, which subject to consultation, will be adopted on 26th June 2024. The table below presents the Capital (P50) and operational costs for the 24-27 NLTP.

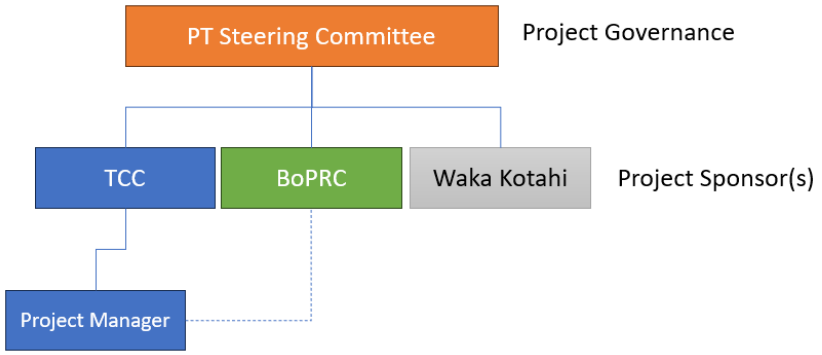
	Financial year			
	2024/25	**2025/26**	**2027/28**	**Total (24-27 NLTP)**
Capital expenditure	2,600,900*	0	0	2,600,900
Operating expenditure	2,406,407	2,406,407	2,406,407	7,219,221
Total expenditure	5,007,307	2,406,407	2,406,407	9,820,121
Revenue	274,459	274,459	370,519	919,437
Affordability				
Capital required	2,600,900			2,600,900
Operational funding required**	2,131,948	2,131,948	2,035,888	6,299,784
Funding source	Capital required: Tauranga City Council: 49%; NZTA: 51% Operational funding required: Bay of Plenty Regional Council: 49%; NZTA: 51%			

*The P50 estimate includes a contingency of $300,000. The P95 cost estimate is $3,154,500. Cost estimates were derived using SM014, see Appendix 7. Cost increases above the P50 estimate will require approval of a cost adjustment request through TCC councillors for the local share, and NZTA for the NLTF share.

**It should be noted that the trial is proposed as a two-year trial. The costs in 2027/28 above assume that the trial is successful and decision makers decide to continue with the trial beyond 2 years. The amount requested in Transport Investment Online for BOPRC is based on the original cost estimate provided by the bus operator for the Option C service and reflects what has been included in BOPRC's long term plan. It also reflects a two-year trial (i.e., operational costs are only indicated in TIO and the LTP for a 2-year period). The table above includes the costs for the extended coverage service, Option D. The operational costs will be confirmed with the operator during procurement. BOPRC acknowledge that if through the negotiations with the bus operator the confirmed costs are higher than what is currently in their LTP and/or the trial is extended beyond 2 years, they will revise their budgets accordingly through annual plan processes

Management Case

Project governance and management

Summarise the project management arrangements	This project will sit under the joint governance and steering from the current joint Public Transport Committee that include members from Tauranga City Council, Bay of Plenty Regional Council and NZ Transport Agency. Each project sponsor will manage the delivery and cost component of their individual elements. Tauranga City will manage the capital works construction of the P&R site, consents, land lease and then the operation of the parking facilities. Bay of Plenty Regional Council will manage the commercial arrangements with their current Bus Supplier (NZ Bus) to provide the operational bus service, ticketing, and timetabling. A project manager from TCC will manage the day-to-day delivery through to opening of the trial and then monitoring of the trial and parking use.
Provide a diagram or a description of the project governance structure	
Outline key milestones	

Task	Description	Interdependencies
Park and ride infrastructure detailed design completed	*Completed detailed design based on the scope of the preferred option outlined under the economic case*	*Land agreement, resource consent and land use change statutory approval*
Bus service operational requirements confirmed	*Operational requirements of express service and changes to existing services confirmed. Technology requirements for ticketing confirmed*	*None*
Procurement - infrastructure	*Procure infrastructure construction contractor based on the complete detailed design*	*Detailed design: funding for construction confirmed*
Procurement - Services	*Procure bus operator*	*Funding for operational expenditure confirmed*
Construction	*Construction of the activity commences*	*Procurement*

Risk management

Risk information			
Identify any significant constraints or unique issues for this activity	• *A new road is required onto Tara Road across a Council land easement.* • *The site is surrounding by low lying flood prone land with soft underlying soils. This means the earthworks / construction of the Park and Ride can only occur during dry summer months. (Nov-April).* • *The long-term PT services business case is not yet completed that would confirm the case and details for the long-term Park and Ride*		
Identify any significant issues that need to be resolved in order to implement the activity	• *Temporary land lease or purchase of LINZ to use the land for Council Park and Ride Asset (and/or future Sport Fields).* • *NZ Bus Operational Contract negotiations to include this additional service within the existing contract.*		
Describe the risk *(including cause and impact)*	**Likelihood of occurrence** *(Rare/Unlikely/ Possible/Likely/ Almost certain)*	**Consequence or impact** *(Insignificant/ Minor/Moderate/ Severe/Extreme)*	**Risk treatment/ mitigation**
Integration of ticketing system on the express service buses. There is a risk that onboard ticketing systems cannot be procured in time. A complicating factor in this regard is that the Tauranga urban bus contract expires at the end of FY2027 and as such procuring new ticketing machines for a 3-year period only is not economical.	Possible	Moderate	Early Engagement Alternative treatments of collecting fairs via parking tickets or tickets at the P&R platforms
Should the trial be operated by the current Tauranga urban operator, the number of RUB (Requirements for Urban Buses) compliant buses required is likely to exceed the number in the current fleet. This could present long lead times, whilst the operator acquires and equips suitable vehicles. Similarly, there may also be long lead times associated with recruiting and training drivers.	Possible	Severe	Early Engagement Flexible opening programme date to align with Bus Service
Land Lease agreement with Waka Kotahi may not be able to be completed for the trial with land being formally deposed through LINZ process	Possible	Severe	Early Land Lease Alternative land purchase agreement (approval in principle). TCC cover cost under wider Parks Property

			Alternative sites identified at Domain Road
PT Services Long-Term Solution recommendation may not align with current TSP and emerging preferred option and therefore not favour P&R under the Public Transport Service Business Case	Unlikely	Moderate	P&R facility to be planned as "do minimum" temporary site with option for either future P&R or Transport HUB
The funding request to NZTA for funding from the NLTF is declined (subject to NLTP prioritisation procedures for the 2024-27 NLTP, and approval of this business case).	Possible	Severe	The trial will not proceed in the 24-27 NLTP and will have to be parked until at least the 2027-30.
Identify the position responsible for any escalated risks	Project Sponsors through the Project Manager that include representation of: PT Services: Bay of Plenty Regional Council Transport Lead Park and Ride Infrastructure: Tauranga City Infrastructure Lead Further escalation would then go through the joint PT Service Committee and individual Project Sponsor via the Council and Waka Kotahi GM		
Briefly describe what project assurance processes are in place	If the project proceeds to implementation a risk register will be established and maintained in accordance with the NZTA risk management practice guide. This will be managed by the TCC project manager in collaboration with the project team representatives from BOPRC, and NZTA.		
Risk allocation *How much of the risk is allocated to Waka Kotahi and how much to the Approved Organisation?*	Cost increases will be allocated at 51%/49% NZTA/Council, as per Standard FAR, subject to approval of cost increase requests. The local share operational cost increase risk will sit with BOPRC. The local share capital cost increase risk will sit with TCC.		

Benefit Realisation

A Benefit Realisation Plan is provided in Appendix 8. Given the park and ride participants are potentially new bus users, there will also be a need to capture their reasons for not using a bus previously, and whether the park and ride has adequately addressed those issues. This will be captured via survey at the park and ride within the first 2 weeks of the trial. We will also capture previous mode shift data via this method as well to understand the mode shift from private vehicle. Reduction in vehicle kilometres travelled will be calculated from PT patronage and mode shift data.

Next Steps

The business case is to be submitted to NZTA, with an accompanying funding request for the pre-implementation and implementation phases. If this business case is endorsed, and if the activity is prioritised for inclusion in the 24-27 then the activity will proceed to pre-implementation and construction from September 2024.

Appendices

Appendix 1: The Tauranga Short-Term Park and Ride Trial Scoping Study Report

Appendix 2: MCA assessment- Site Options

Option			Site Option 1	Site Option 2
Description			Bay Park	Tara Rd
Critical Success Factors	Investment Objectives	Improves PT competitiveness (reduced difference between bus and car journey time)	Potential difference between car and bus reduced from +11 minutes to +/-6 minutes. Although the route bypasses the areas of highest congestion, to access the P&R site vehicles will have some delay travelling through a set of signalised intersections (either at BayPark or Sandhurst I/C)	Potential difference between car and bus reduced from +11 minutes to +/-5 minutes. Although the route is longer, the section between Tara Rd and Bayfair are where the most gains are made in comparison with the existing bus service. Domain I/C is currently free-flowing non-signalised roundabout with minimum delay
			1.5	2
		Improves PT reliability (reduced variability in service)	Moderately better than Tara Rd due to shorter route resulting in better reliability	Longer route, less reliable, small ↑ due to express route, negated slightly by impact of diversion to 2B
			2	1
		Increases access via PT between Park and Road Corridor and the CBD	No improvement in access. Majority of the population within 400m of the park and ride site can access the CBD within 45 minutes by PT already; no access off peak	Potential large increase in population who can access CBD via PT within 45 mins, also offers all day access
			0	2
		Enhances Customer Experience (note other aspects of experience covered by other investment objectives, so this only covers Impact of interchange infrastructure and location)	Small increase due to quality of interchange infrastructure, negated by ease of access to site by car, and proximity to city centre	small increase due to quality of interchange infrastructure
			0	1
		Increases public transport boardings	0.92	1.16
			1	1
Other critical success factors	Potential achievability	Extent to which route diversion impacts scheduling of current route	Lack of all-day access via current route (route only operates in peak). Will require a new all-day service to operate	increased trip duration from diversion of 2B route potentially has knock on impacts for later services
			-3	-2
		Scheduling/programming new route (rating based on the extent to which additional redundant capacity is created by the option)	No redundant capacity as all day service	3 buses needed. 1 bus x 2 trips (returns empty), 2 buses x 1 trip (return to depot).
			0	-1

		Safety and design	Proposed car park will require security . Isolated location poses minor SiD concerns	Proposed car park will require security . Isolated location poses minor SiD concerns
			0	0
		Consentability	Site already used for Parking and therefore potential no change in regional consents required. Risk that as Baypark is under a separate TCC Plan Change and any minor changes may need separate Plan Change notification if land not used for original intended use	No fatal flaws - Site will require land use consent and regional consents (Earthworks / Stormwater)
			-1	-1
	Potential Affordability (based on cost estimate)		Cost of new all day express service 30 min freq (>$1.5M)	Cost of new express in peak only 30 min freq (<1M)
			-3	-1
	Value for money (rating against investment objectives divided by cost) (not scored)		1.5	7
			1	3
	Supplier capacity and capability. No. of new buses/drivers needed (for 30 min frequency)		2	3
			-1	-1
Opportunities and impacts	Environmental Impacts		Existing carpark so no environmental impacts	The environmental screen identified no environmental impacts that cannot be mitigated in the design.
			0	0
	Social and cultural impacts		Existing carpark so no social and cultural impacts	The site is located near existing public road and cycleway infrastructure that will connect to the facility. Previous Cultural Values Assessment undertaken for Tauranga Eastern Link highlight this site as low value land use
			0	0
	Climate change mitigation			Site needs to be constructed so embodied carbon impact higher
			0	-1
	Climate change adaption			Site needs to be constructed. The environmental screen assessed that there are no hazards associated with the park and ride site. Low use facility. As temporary, all features are designed to be removed at the end of the project. Project intent to source local cut material to form import fill and avoid cartage of material from off site. (except for final granular basecourse and road material).
			0	-1

	Impacts on Te ao Maori		
	Property acquisition	Lease agreement needed with Crown	Lease agreement needed
		-1	-1
	Impact on properties	Reduced parking capacity for key events	Minimal
		0	0
	Cost pa	756000	433000
	Total cost (2 years) (not scored)	1512000	866000
Overall (equal ranking across all criteria) value for money removed		-3.50	-1.00
Rank		2	1

Appendix 3: MCA of Service Options

Option			Do Nothing	Option A -Do minimum	Option B	Option C	Option D
Description			2B and 20 services as current	2B and 20 services as current rerouted via P+R	20 service as current rerouted via P+R + 2B service rerouted via P+R at 15 min frequency in 2 hour am + pm peak, 30 min frequency otherwise	Option A + express service 15 min frequency in peaks	Extended coverage option. Express service 15 min frequency in peaks, from Tara Rd Medical Centre, via P + R and CBD, to Hospital. 2B only reroutes Eastbound (not citybound). 20 service as per Do Nothing.
Critical Success Factors	Investment Objectives	Improves PT competitiveness (reduced difference between bus and car journey time)		Small ↓ due to diversion causing increased trip duration	Small ↓ due to diversion causing increased trip duration; small ↑ due to increased peak frequency	Express service offers significant ↑ over Options A and B due to significant reduction in journey time	Express service offers significant ↑ over Options A and B due to significant reduction in journey time
			0	-1	0	3	3
		Improves PT reliability (reduced variability in service)		Small ↓ due to diversion causing increased trip duration	Small ↓ due to diversion causing increased trip duration	small ↑ due to express route, negated slightly by impact of diversion to 2B	small ↑ due to express route, negated by increased route length compared with Option E= likely to be marginally less reliable than the other express route options
			0	-1	-1	2	2
		Increases access via PT between Park and Road Corridor and the CBD				Moderate increase as improves door to door access via PT to the CBD within 45 minutes	Significant increase as improves door to door access via PT to the CBD but also the larger employment catchment down Cameron Rd to the hospital
			0	0	0	2	3
		Enhances Customer Experience (note other aspects of experience covered by other investment objectives, so this only covers Impact of interchange infrastructure)		Small ↑ due to quality of bus interchange infrastructure	Small ↑ due to quality of bus interchange infrastructure	Small ↑ due to quality of bus interchange infrastructure	Small ↑ due to quality of bus interchange infrastructure
			0	1	1	1	1

		Increases PT boardings over current service provision		Small ↓. Unlikely to attract new customers (and reroute detrimental to existing customers)	Neutral change. Increased frequency may attract new customers, negated by lack of direct service.	Small ↑. Express service likely to attract some new customers to shift modes. Reroute of 2B likely to detract existing customers. Express service likely to undermine existing 2B service as 2B customers likely to transfer to express service at P+R. Express service could also attract existing 2B services to drive to P+R.	Moderate ↑. Score reflects additional advantage over Option C of not rerouting the 2B service + advantage of additional coverage attracting new users. Also, less likely than Option C to detract from the existing service as 2B reliability maintained as per current.
			0	-1	0	1	2
Other critical success factors	Potential achievability	Extent to which route diversion impacts scheduling of current route		increased trip duration from diversion potentially has knock on impacts for later services	increased trip duration from diversion potentially has knock on impacts for later services	increased trip duration from diversion potentially has knock on impacts for later services	No 2B route diversion in am. Route diversion in pm likely to be manageable within existing timetable
			0	-2	-2	-2	-1
		Scheduling/programming new route (rating based on the extent to which additional redundant capacity is created by the option)		0 new buses needed	4 buses needed. Not enough time to get back for a 2nd trip in the 2-hour peak (return to depot).	5 buses needed, 3 buses x 2 trips, 2 buses x 1 trip (opportunity for buses to offer in service trips on return leg).	6 buses needed, 2 buses x 2 trips, 4 buses x 1 trip (opportunity for buses to offer in service trips on return leg).
			0	0	-3	-2	-3
		Safety and design		less impact than Options C-F as no express service added and no right turn bay needed	less impact than Options C-F as no express service added and no right turn bay needed	marginal greater impact as express route requires right turn movement into site	marginal greater impact as express route requires right turn movement into site
			0	-1	-1	-2	-2
		Consentability	Consentability discussed elsewhere. Level of consenting difficulty is considered low (see Environmental screen). There are no differences between service options				
	Affordabili	Potential Affordability (based on cost estimate)		Cost < $1M	Cost >$1M	Cost >$1M	Cost >$1M
			0	-1	-2	-2	-2

		Value for money (rating against investment objectives divided by cost) not included in overall rank (column AV) or sensitivity tests	0	-2.00	0.00	4.50	5.50
			0	-2	0	2	3
		Supplier capacity and capability. No. of new buses/drivers needed in peaks	0	0	4	5	6
			0	0	-1	-2	-3
		Funding availability impact on scheduling		Funding available to commence January 2024	All options requiring additional buses and drivers. Cannot commence until July 2024 due to funding constraints at BOPRC and Waka Kotahi		
			0	0	-1	-1	-1
Opportunities and impacts		Environmental Impacts	The environmental screen identified no environmental impacts that cannot be mitigated in the design. Aside from the differences in PT uptake and mode shift (covered by the investment objectives) there is no difference between options				
		Social and cultural impacts	The PT provides improved connection between the eastern suburbs and the city centre, which is covered by the investment objectives. The site is located near existing public road and cycleway infrastructure that will connect to the facility. Previous Cultural Values Assessment undertaken for Tauranga Eastern Link highlight this site as low value land use				
		climate change mitigation	Embodied carbon associated with the construction of the site is discussed separately (does not differ between service options). Difference between options associated with VKT reduction and reduced emissions is covered by the increased public transport boardings objective and was considered to duplicate if assessed here as well.				
		climate change adaption	There are no differences between these options with respect to climate related hazards or exposure over time. The environmental screen assessed that there are no hazards associated with the park and ride site. Low use facility. As temporary, all features are designed to be removed at the end of the project. Project intent to source local cut material to form import fill and avoid cartage of material from off site. (except for final granular basecourse and road material).				
		impacts on Te ao Maori	Assessment TBC				
		Property impacts (acquistion, Impact on Properties)	Does not differ across service options				
		Cost pa (not scored)	$ -	$ 155,724	$ 642,141	$ 653,957	$ 722,407
		Total cost (2 years) (not scored)	$ -	$ 311,448	$ 1,284,282	$ 1,307,915	$ 1,444,813

Overall score against weighted investment objectives	0	-0.45	0.05	1.95	2.4

Overall score against achievability (weighted equally)		0	-0.99	-1.98	-1.98	-1.98
Overall score against affordability (weighted equally)		0	-0.33	-1.32	-1.65	-1.98
Overall score (50% los, 25% achievability, 25% affordability)		0	-0.555	-0.8	0.0675	0.21
Overall Rank		3	4	5	2	1
Sensitivity tests	Overall (equal weighting across all criteria)	0.00	-6.00	-10.00	-2.00	-1.00
	Sensitivity Test 1 Rank	1	4	5	3	2
	Affordability 60%, Objectives 20%, Achievability 20%)	0	-0.486	-1.178	-0.996	-1.104
	Sensitivity Test 2 Rank	1	2	5	3	4
	Affordability 33%, Objectives 33%, Achievability 33%	0	-0.5841	-1.0725	-0.5544	-0.5148
	Sensitivity Test 3 Rank	1	4	5	3	2
	Overall (equal weighting incl value for money)	0.00	-8.00	-10.00	-2.00	-1.00
	Sensitivity Test 4 Rank	1	4	5	3	2

Appendix 4: Appraisal summary table

Appraisal Summary Table Template

Date:	18/03/2024	Evaluation Period: (baseline and forecast year) e.g 2020 - 2060	2024 - 2029	Option Name:	Option D	This is the preferred option	☑
Problem/opportunity statement:		**Investment objectives:**		**How project gives effect to GPS:**		**How project gives effect to local community outcomes:**	
1.Buses share a congested network resulting in uncompetitive and unreliable bus journeys. (50%)		1.To improve the competitiveness of PT by reducing the difference in average bus journey times compared to the car from the park and ride		The project responds directly to the 2021 GPS strategic priorities of Climate Change and Better Travel Outcomes by		Project has high alignment with overall UFTI programme which seeks to increase multimodal accessiblity and mode choice	
1. Summary of Non-Monetised Impacts (Description)		**2. Summary of Financial Impacts (nominal, non-discounted)**		**3. Summary of Monetised Option Impacts (present value, discounted)**			
Summary description of non-monetised measures and impacts		Capital Costs	**$3,000,900**	Total Monetised Benefits			**$13,220,869**
		Operating Costs	**$12,032,035**	Total Costs to Government			$12,954,417
				Total Economic Costs			**$13,542,533**
		Total Financial Costs	**$15,032,935**	BCRg			**1.0**
				BCRn			1.0

Transport Outcomes	Non-Monetised Impact: (description in numerical or narrative terms)				Monetised Impact: (description in dollar terms in real terms, non-discounted)	
Name of Benefit	**Name of Measure:**	**Baseline:**	**Do Minimum Impact:**	**Option Impact:**	**Do Minimum Impact:**	**Option Impact:**
Healthy and safe people *(Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)*						
Resilience and security *(Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)*						
		N/A				
Economic prosperity - excluding wider economic impacts *(Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)*						
5.1 Impact on system reliability	5.1.1 Punctuality - public transport	N/A	... type	... type	0	$7,018,671
Environmental sustainability *(Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)*						
8.1 Impact on greenhouse gas emissions	**8.1.1 CO2 emissions**	N/A	-	- 582	0	**$158,010**
8.1 Impact on greenhouse gas emissions	8.1.2 VKT			-3616704		
9.1 Impact on resource efficiency	9.1.1 Resource efficiency	N/A	... type		0	$0
Inclusive access *(Please insert a row below to add an additional benefit or measure, and delete rows as appropriate)*						
10.1 Impact on user experience of the transport system	**10.2.2 Accessibility - public transport facilities**					$0
12.1 Impact on Te Ao Māori	**12.1.1 Te Ao Māori**	N/A	... type	... type	N/A	N/A
10.1 Impact on user experience of the transport system	10.1.9 Travel time	N/A	No change	... type	... type	... type
Composite benefits						
Public transport road traffic reduction benefit		N/A	No change	... type	0	$43,009,192
PT users composite benefit		N/A	No change	... type	0	$198,816,075

Appendix 5: Incremental analysis

SP10 Existing public transport services

Spreadsheet released 14-Apr-2023

Worksheet 5 - BCR and incremental analysis

Time zero	1 July	2024
Base date	1 July	2023

BCR calculations	Do-minimum	Option	Option	Option	Option
Benefits					
Total benefits **(X)**	0	12,707,159	13,220,869		
Costs					
PV operating and maintenance costs of existing service (or do-minimum)	2,159,503	13,377,824	13,542,533		
PV of funding assistance (options) **(A)**		12,819,307	12,954,417		
BCR_c		0.99	1.02	0.00	0.00
BCR_n		1.13	1.16	0.00	0.00
Target incremental BCR					

Base option for comparison			Next higher cost option			Incremental analysis		
Option	Total costs **(1)**	Total benefits **(2)**	Option	Total costs **(3)**	Total Benefits **(4)**	Incremental costs **(5)=(3)-(1)**	Incremental benefits **(6)=(4)-(2)**	Incremental BCR_n **(7)=(6)/ (5)**
C	13,377,824	12,707,159	D	13,542,533	13,220,869	164,709	513,710	3.12
						0	0	0.00
						0	0	0.00
						0	0	0.00

Appendix 6: Traffic Impact Assessment

Appendix 7: Whole-of-life cost estimate for the preferred option

Infrastructure: Detailed whole-of-life cost estimate for the preferred option for the Park and Ride Infrastructure, prepared in line with SM014 – Cost Estimation Manual.

Project Estimate

Project Name: Tara Road Park and Ride

Prelim Design Estimate

Item		Description	Base Estimate	Contingency	Funding Risk Contingency
A		Nett Project Property Cost	excluded	$ -	$ -
		Project Development Phase			
		- Consultancy Fees	sunk - excluded		
		- TCC Managed Costs	sunk - excluded		
B		Total Project Development	$ -	$ -	$ -
		- Consultancy Fees	sunk - excluded		
		- TCC Managed Costs	sunk - excluded		
C		Total Pre-implementation	$ -	$ -	$ -
		Implementation Phase			
		- Consultancy Fees	$ 32,100.00	$6,400.00	$7,700.00
		- TCC Managed Costs	$ 53,500.00	$10,700.00	$12,800.00
		- Construction Monitoring Fees (MS	$ 85,600.00	$17,100.00	$20,500.00
		Sub Total Base Implementation Fee	$ 171,200.00	$34,200.00	$41,000.00
		Physical Works			
	1	Environmental Compliance	$ 35,600.00	$4,700.00	$8,100.00
	2	Earthworks/Demolition	$ 134,600.00	$17,800.00	$30,500.00
	3	Drainage and Utilities	$ 124,400.00	$16,400.00	$28,200.00
	4	Pavements and Surfacing	$ 979,000.00	$129,200.00	$221,600.00
	5	Traffic Services	$ 72,900.00	$9,600.00	$16,500.00
	6	Landscaping	$ 14,500.00	$1,900.00	$3,300.00
	7	Traffic Management	$ 57,900.00	$7,600.00	$13,100.00
	8	Amenities & Misc	$ 195,000.00	$25,700.00	$44,100.00
	9	P&G	$ 209,800.00	$27,700.00	$47,500.00
	10	Off-site Overheads and profit	$ 237,100.00	$31,300.00	$53,700.00
	11	Provisional Sums	$ 80,100.00	$10,600.00	$18,100.00
		Sub Total Base Physical works	$ 2,140,900.00	$282,500.00	$484,700.00
D		Project Base Estimate	$ 2,312,100.00		
E		Contingency (Assessed/Analysed)		$316,700.00	
F		Project Expected Estimate (D+E)		$ 2,628,800.00	
H		Funding Risk Contingency (Assessed/Analysed)			$525,700.00
I		95th percentile Project Estimate		(G+H)	$ 3,154,500.00

Date of Estimate : 18 August 2023		Cost Index (Qtr/Year)	Q3/2023
Estimate prepared by K Gouden/M Raby		Signed	
Estimate internal peer review by J Ferguson		Signed	
Estimate external peer review by		Signed	
Estimate accepted by TCC		Signed	
Note:	(1) These estimates are exclusive of escalation, land and GST.		

Tara Road Park and Ride Trial						
	Description	Unit	Quantity	Rate	Amount	Comments
1	**Environmental Compliance**					
	Environmental Compliance	LS	1	$ 7,500.00	$ 7,500.00	
	Cultural Monitoring	LS	0	$ 2,500.00	$ -	
	Ecologist - eel waterways	LS	1	$ 5,600.00	$ 5,600.00	
	Dust monitoring/ supression	LS	1	$ 22,500.00	$ 22,500.00	Close to residential area, with large houses and SH2 traffic, watercart and road sweeper allowance
					$ 35,600.00	
2	**Earthworks/Demolition**					
	General site clearance	m2	8700	$ 2.50	$ 21,750.00	Shrub removal, removal of existing farm fence, rubbish removal
	Installation of site haul road	m3	600	$ 60.00	$ 36,000.00	
	Excavate swale	m3	1200	$ 9.00	$ 10,800.00	
	Allowance for sand fill settlement period	LS	1	$ 12,000.00	$ 12,000.00	$800/day for three weeks, less productive plant/ labour
	Grading/ shaping of subgrade (grader and roller)	m2	8700	$ 2.50	$ 21,750.00	During construction period only
	Respread topsoil for swale (including grassing)	m3	1200	$ 17.50	$ 21,000.00	
	Cut to waste existing shared path	m2	72	$ 23.50	$ 1,700.00	
	Tree removal	ea	3	$ 700.00	$ 2,100.00	Medium sized trees
	Service investigations and markout	LS	1	$ 7,500.00	$ 7,500.00	500PE100 water at existing shared path and power at Tara Street
					$ 134,600.00	
3	**Drainage and Utilities**					
	TCC kerb	m	60	$ 127.00	$ 7,620.00	Supply and install to TCC IDC, no subsoil drainage has been allowed as per meeting with Nigel
	Piped 300mm culvert crossing	m	9	$ 660.00	$ 5,940.00	Under shared path, outlet to swale, assume 300mm pipe, including geotextile and 150mm AP40 bedding
	New 1800mm dia culvert	m	10	$ 2,500.00	$ 25,000.00	
	Trimming and bedding for 1800mm dia culvert	m	10	$ 500.00	$ 5,000.00	300mm sand bedding and over pumping
	Pour insitu headwall apron	ea	2	$ 4,300.00	$ 8,600.00	
	Supply precast wing walls	ea	2	$ 15,000.00	$ 30,000.00	Excluding rip rap surround
	New combined services route	m	67	$ 600.00	$ 40,200.00	
	Adjustment of utility chamber	ea	1	$ 2,000.00	$ 2,000.00	
					$ 124,360.00	
4	**Pavements and Surfacing**					
	Shared path reinstatement	m2	50	$ 97.00	$ 4,900.00	125mm thick, 20MPa concrete footpath on a sand blinding layer to TCC IDC
	Concrete foundations	m2	295	$ 150.00	$ 44,250.00	150mm thick blinding, 20MPa on sand blinding layer
	Chip Seal	m2	1800	$ 15.00	$ 27,000.00	Only chipseal for roundabout and access road, no asphalt, carpark is unsealed as per meeting with Nigel
	AP40/AP65 subbase	m3	3400	$ 125.00	$ 425,000.00	
	Terafil	m3	250	$ 750.00	$ 187,500.00	Allowance over culvert and watermain only
	Sand (from on site sanddunes)	m3	7400	$ 15.00	$ 111,000.00	
	A29 bidim	m2	8600	$ 3.00	$ 25,800.00	
	TX160 geotextile	m2	24800	$ 5.00	$ 124,000.00	
	Concrete median	m2	174	$ 150.00	$ 26,100.00	
	Pram crossings and kerb	m2	5	$ 150.00	$ 750.00	
	Tactiles	m2	6	$ 450.00	$ 2,700.00	
					$ 979,000.00	
5	**Traffic Services**					
	Remove existing road marking	LS	1	$ 1,500.00	$ 1,500.00	
	Car Park marking	m	1900	$ 4.00	$ 7,600.00	
	New road marking	LS	1	$ 10,000.00	$ 10,000.00	

	New Signage	no	16	$ 550.00	$ 8,800.00	
	Street light	ea	2	$ 10,000.00	$ 20,000.00	
	CCTV	ea	2	$ 7,500.00	$ 15,000.00	
	Traffic sign and street light relocation	LS	1	$ 10,000.00	$ 10,000.00	
					$ 72,900.00	
6	Landscaping					
	Central island, grassed	m2	200	$ 12.00	$ 2,400.00	
	Arborist allowance	LS	1	$ 2,500.00	$ 2,500.00	
	Planter boxes	ea	8	$ 1,200.00	$ 9,600.00	
					$ 14,500.00	
7	Traffic Management					
	Temp. fencing	day	70	$ 100.00	$ 7,000.00	Assume 14 weeks construction period including 3 weeks sand settlement
	Traffic Management	LS	1	$ 50,000.00	$ 50,000.00	
	Design and approve TTM plan	LS	1	$ 900.00	$ 900.00	
					$ 57,900.00	
8	Amenities & Misc					
	Toilet Block (Kennards)	mth	24	$ 1,400.00	$ 33,600.00	$350/ wk hire
	Toilet Block servicing	mth	24	$ 1,600.00	$ 38,400.00	
	Toilet block water connection	LS	1	$ 3,000.00	$ 3,000.00	
	Lockable Bike Shelter	LS	1	$ 40,000.00	$ 40,000.00	Permanent Albany bike shelter -$100k
	Bus Shelter	LS	2	$ 35,000.00	$ 70,000.00	1 bus shelter is provisional, temporary bus shelter not permanent, Include benches
	Lockable Gate at Entrance	LS	1	$ 10,000.00	$ 10,000.00	
					$ 195,000.00	
9	P&G	%	0.13	$ 1,613,860.00	$ 209,801.80	
					$ 1,823,661.80	
10	Off-site Overheads and profit	%	0.13	$ 1,823,661.80	$ 237,076.03	
11	Provisional Sums					
	O&M item - regrading of subbase	PS	1	$ 7,000.00	$ 7,000.00	Within trial period to achieve 3% grade
	3 Large Signs (SH2 and Tara Road)	PS	3	$ 1,500.00	$ 4,500.00	As per risk and opportunites register
	Additional concrete hardstand (provisional item)	m2	50	$ 97.00	$ 4,850.00	Between car park and bus shelter, assume 125mm thick 20MPa on sand blinding layer. R&O register
	Post and roofing rain protection (provisional item)	m	15	$ 250.00	$ 3,750.00	As per risk and opportunites register
	Subsoil drain under swale	PS	1	$ 20,020.00	$ 20,020.00	As per risk and opportunites register
	Rubbish bins	PS	2	$ 2,000.00	$ 4,000.00	
	Remove wastewater connection	PS	1	$ 4,000.00	$ 4,000.00	As per risk and opportunites register
	Bidim cloth to cover exposed sand dune	PS	1	$ 6,000.00	$ 6,000.00	Close to SH2, dust mitigation
	Timber half round post between swale and carpark	m	300	$ 20.00	$ 6,000.00	As per risk and opportunites register
	Reinstatement of farm fence	m	800	$ 25.00	$ 20,000.00	As per risk and opportunites register
					$ 80,120.00	
					$ 2,140,857.83	

PT Services

The cost estimate used presented in the Financial Case, is based on the estimate provided by the current bus operator for a 15 minute express service from the Park and Ride location to Tauranga CBD (i.e., Option C). This figure was then extrapolated out to provide a figure for the extended coverage option (the recommend option, Option D).

Latest cost estimate for operating a 15-minute express service from Park and Ride to Tauranga CBD, provided by current bus operator (Option C cost)	$2,148,900
Latest cost estimate for operating a 15-minute express service from the park and ride site to the CBD (i.e., Option C cost = $2148900) plus the percentage difference calculated between Option C and D using BOPRC's route cost estimator	$2,257,503
Additional operations cost to divert existing service (diversion of 2B Eastbound only)	$84,119
Estimated additional O+M cost due to growth	$64,785.09
Total	$2,406,407

Appendix 8: Benefits Realisation Plan

	ILM Problem	ILM Benefit	Investment objectives	KPI	Measure	Waka Kotahi Benefits Framework reference	Baseline	Target	Owner and reporting interval
These problems and benefits align with the draft PT services and infrastructure business case. Investment objectives and measures have been tailored to be specific to this investment	Buses share a congested network resulting in uncompetitive and unreliable bus journeys. (40%)	Improved PT competitiveness and reliability (40%)	To improve the competitiveness of PT by reducing the difference in average bus journey times compared to the car from Tara Rd to the CBD from xx mins to yy mins at peak hours during the trial period. (30%)	Bus travel time	Travel Time – Average travel time in minutes via park and ride service vs average travel time via private vehicle from Tara Road Medical Centre to the CBD during the morning peak (routes commencing between 7 and 9am).	10.1.9 Travel time Average travel time in minutes via park and ride service vs average travel time via private vehicle from Park and ride to the CBD.	Current 2B route time = 46 mins; Average car time = 35 mins Difference = 11 mins	Express route time = 35 mins Average car time = 35 mins Difference = 0 mins	BOPRC: Reported annually during trial
			To improve the reliability of PT by reducing the variability in bus journey times in peak hours compared to the existing 2B and 2W services in peak hours compared to off-peak from X% to Y% on average for the trial period. (10%)	PT reliability	Express service peak – 2B/2W service off peak variability vs 2B/2W service peak – off peak variability.	5.1.1 Punctuality – public transport Percentage of scheduled service trips between 59 seconds before and 4 minutes 59 seconds after the scheduled departure time of selected point	Current bus route service variability between peak and off peak = 25.1%	Express service peak – 2B/2W service off peak variability vs 2B/2W service peak – off peak variability.	BOPRC. Reported annually during trial.

	Current PT network will not efficiently support planned growth and enable access to social and economic opportunities. (25%)	Improved access (25%)	To increase access to key social and economic destinations by increasing the proportion of the population within a 45-minute travel time to Tauranga CBD via public transport from 20% to XX for the trial period.** (25%)	Access to key destinations (CBD)	Increase in proportion of population living within 45-minute PT travel threshold of the CBD	5.2.6 – Access to key economic destinations Proportion of population living within travel threshold (15 minutes, 30 minutes, or 45 minutes) of key economic opportunities (including work) by public transport in the morning peak.	Current population in 10km radius of Park and Ride location within 45-minute travel threshold = xx%		TCC. Reported at end of trial
	Inconsistent bus stop and interchange quality reduces customer experience and comfort. (15%)	Enhanced customer experience and comfort (20%)	To enhance PT customer experience and perception through increasing user satisfaction from 42% in 2022 to XX% by the end of the trial period. (20%)	Satisfaction	Quality satisfaction with bus journey from Park and ride site (compared with overall bus user survey results)	User satisfaction is not listed as a benefit in the framework.	Current Tauranga urban bus user survey data, satisfaction with bus service over previous 3 months (42% satisfied in 2022).*	Comparison of park and ride users vs rest of bus service users after 1 year and at the end of the trial.	TCC. Reported annually during trial period

Additional Opportunity Statement specific to this investment:	There is an opportunity to determine whether an alternate type of bus service can attract more private vehicle users to shift modes (20%)	Improved PT mode share (20%)	To increase public transport boardings from Papamoa East (East of Domain Road) from xx to yy by the end of the trial period, without unduly undermining the case for public transport in the vicinity of the park and ride. (20%)	PT Patronage	Bee card data - Number of public transport boardings at park and ride, and total public transport boardings from Papamoa East	10.1.1 People – throughput of public transport boardings Number of public transport boardings	Average weekday boardings East of Domain Rd on 2B and 2W services for August 2023 in the morning peak (6-9am) = 2B = 122 boardings; 2W = 46 boardings (168 total)	Total boardings on 2B, 2W, and P+R express services in the morning peak = 2B = 122 boardings, 2W = 46 boardings, Express = 100 (268 total)	BOPRC. Monitored regularly during initial weeks of trial. Reported 3 monthly during trial period.
				Mode Shift	Vehicle trips not taken between Tara Rd and the CBD (bee card data of boardings at park and ride, multiplied by survey data of percentage of users who previously used a private vehicle	8.1.2 Mode shift from single occupancy private vehicle User to describe (This benefit will be measured through surveys undertaken on park and ride users to understand previous mode choice and shift in mode.	Zero	Average of 150 vehicles per day	BOPRC (extrapolated from the above). Reported 3 monthly during trial period
				VKT reduction	Vehicle trips not taken between Tara Rd and the CBD, multiplied by 30km (return trip distance)	8.1.3 Light vehicle use impacts Light vehicle kilometres travelled (light VKT)	Zero	-6150km per day (based on 150 vehicles, and 41km return trip)	BOPRC (extrapolated from the above). Reported 3 monthly during trial period

Title: Issues and options – Tsunami Evacuation Pathways

File Number: A18219185

Author: Paula Naudé, Manager Civil Defence Emergency Management and Community Development

Authoriser: **Barbara Dempsey General Manager Community Services**

ISSUE

1. Areas for improvement to progress the efficiency of moving to safe zones during a tsunami event.

ANALYSIS OF SUBMISSION POINTS

2. Concern Over Tsunami Evacuation Pathways
   (a) There is a clear concern about the current status and progress of tsunami evacuation pathways, particularly in the Domain Road area.
   (b) The submitter implies that these pathways are critical for public safety, especially for the 40,000 residents of Arataki and Papamoa.
3. Funding Transparency and Prioritisation
   (a) Request for transparency regarding funding allocation for these essential safety upgrades.
   (b) The estimated cost for pedestrian tsunami evacuation pathways is seen as excessive, suggesting a need for cost-benefit analysis or alternative solutions.
4. Geographic Prioritisation
   (a) The submitter appears to advocate for greater prioritisation of the tsunami evacuation route on Domain Road.

DISCUSSION AND ANALYSIS

5. Council staff have previously engaged WSP New Zealand Ltd (WSP) to review the current major tsunami evacuation routes within the coastal areas of Mount Maunganui and Pāpāmoa.
6. The purpose of that review was to review and identify areas for improvement, in collaboration with the community. The study confirmed an extensive evacuation network does exist, but that this could be improved.
7. The study also made several recommendations as well as some financial estimates for potential enhancements to existing routes.
8. The report identified a significant cost for the option presented by the Papamoa Ratepayers association in the order of Capex: $59M (base estimate) / $94M (project expected estimate) / $171M (95th percentile project estimate). Council staff haven't evaluated this cost estimate however, it should be noted that the proposal would require purchase of private properties, which contributes to the cost estimates.
9. The WSP recommendations fall into two distinct areas, operational improvements and capital upgrades.

Operational

10. There were several operational recommendations the keys ones are listed below, Council staff have taken these on board and are working to implement these recommendations,

(a) Designated Safe Zones with Clear Signage

Council Staff are currently auditing signage, due date for completion 28 May 2025. Any identified updates will be addressed. Currently signage is audited annually, however, business as usual (BAU) will now encompass more regular audits as part of the work to ensure signage remains in good condition and remains relevant.

(b) Emergency Provisions at Safe Zones

We need to establish how we can quickly support people who have been evacuated to safe zones, this could include provision of supplies or transport to established community hubs. However, understanding where the majority of people will end up will play an integral part of this planning work. This goes hand in hand with any capital works.

(c) Routine Maintenance of Evacuation Routes and Signage

Staff do and will continue to review evacuation routes to ensure they are clear and well maintained as part of BAU work. City Operations are already coordinating with emergency management to this end.

(d) Promoting Gordon Spratt Park as a Vertical Evacuation Structure (VES)

Raise awareness of Gordon Spratt Park as a designated Vertical Evacuation Structure (VES), especially among residents and visitors in nearby areas. Include this information in public education materials and maps.

(e) Integrated Evacuation Planning:

Determine how we can ensure that new subdivisions are required to incorporate evacuation routes and are designed with tsunami resilience in mind, fostering seamless integration of safety measures from the outset. This task is being led by Emergency Management Bay of Plenty for the entire region and was a project initiated out of the Bay of Plenty Co-ordinating Executive Group Local Authorities (CEGLA).

(f) Community Education:

Arguably this is the most important task, no matter what infrastructure is put in place the community need to have an evacuation plan and they need to take action immediately.

Council Staff have established a community group, which includes representative from the community who will support the community education, along with identifying some of the other operational matters mentioned above.

The Virtual Reality system and community days, along with having students along beaches spreading the message have proven to be popular and we will keep up the education initiatives as this forms part of BAU. The members of the community working party will be a huge help with this task, particularly within their own activity such as schools and retirement villages.

Capital Projects

11. It is acknowledged that the desired outcome is for the community to be able to self-evacuate over the Tauranga Eastern Link (TEL). Travelling parallel to the TEL should be minimised, with the most direct route being optimal. Because of the way development has occurred this is a challenge however, we need to plan and make improvements so that more people get onto the road and over as quickly as possible, not travelling along the road. It is noted that the road could be closed to traffic as soon as a Tsunami warning is given.

12. Agent-based modelling conducted by GNS shows that if people respond straightaway, i.e. self -evacuate, most people should be able to evacuate the area prior to the arrival of the Tsunami.

13. Tsunami evacuation route modelling for Tauranga City relies on the Tonkin & Taylor (2013) inundation model, which has not been updated since 2013 and uses now outdated topography, sea levels, and tsunami data. Despite recent updates to tsunami inundation maps, significant advancements in tsunami modelling have not been integrated into evacuation planning, potentially limiting response efficacy. Emergency Management Bay of Plenty have engaged the Institute of Geological and Nuclear Sciences Ltd (GNS) to undertake a study of the inundation areas, using updated and consistent methodology across the Bay of Plenty. This modelling is due late in 2025/early 2026.

14. It is not anticipated that the instruction to evacuate to the inland side of the TEL will change, what is not known is whether or not people will be required to travel further inland than previously modelled, or a wider catchment of people will need to evacuate inland, meanwhile our planning remains focused on evacuations to that area.

15. For reference the coast inundation maps are attached.

16. As mentioned above, the most efficient evacuation plan would be to minimise the requirement to travel parallel to the TEL, however, it is acknowledged that some strategically placed parallel walkways would assist directing people to an appropriate access to the TEL.

17. Staff have undertaken some initial evaluation and have established a working group from appropriate teams of council to evaluate, price options and make recommendations. It is recommended that this work continue over the next 6 – 9 months, at that point the results of the modelling should be completed, and we can ensure the two pieces of work come together and at that point we could ensure that budgets are included in the Long-term Plan.

OPTIONS ANALYSIS

Option 1: Develop and Construct the Full PRRA/ECA Proposed Pathway Network.

18. Build a 12 km tsunami evacuation pathway parallel to SH2/TEL with perpendicular feeder paths from Pāpāmoa to Pāpāmoa Hills. (noting that the walkway could double as a cycle way)

Advantages	Disadvantages
• Creates a cohesive, high-capacity evacuation network • Increases redundancy and route flexibility • Enhances evacuation safety for densely populated zones • Encourages resilience and future-proofing	• High capital expenditure (capex) required • Complex coordination needed (e.g., easements, NZTA, landowners) • Long lead time to implementation • Maintenance and long-term operating costs (opex) • May not substantially/ positively impact evacuation efficiency for all residents

Budget – Capex:	$59M (base estimate) / $94M (project expected estimate) / $171M (95th percentile project estimate)
Budget – Opex:	TBC
Key risks:	Dependant on a number of factors outside of TCC control.
Recommended?	No.

Option 2: Retain the status quo.

19. Continue relying on existing tsunami evacuation routes without further upgrades.

Advantages	Disadvantages
• No immediate capital expenditure • Minimal operational impact • Provides time to receive updated GNS modelling to inform potential new routes. Modelling is expected March 2026.	• Leaves 40,000+ residents at risk due to population growth and congested routes • Route inefficiencies remain pending new modelling release. • Undermines public trust and misses opportunity to implement known improvements.

Budget – Capex: None

Budget – Opex: Low – Actions that can be done with BAU budget will continue.

Key risks: Public safety, Safety of residents not fully recognised, reputational damage.

Recommended? No.

Option 3: Implement Targeted Interim Improvements and provide recommendations on capex expenditure in time for inclusion in the 2027-2037 Long-term Plan.

20. Prioritize cost-effective upgrades (e.g., signage, obstruction removal, TEL access path) based on WSP recommendations within existing operational budgets and provide recommendations on capital upgrades to improve the evacuation of residents in the event of a Tsunami, while ensuring that the upgrades are consistent with the updated modelling.

Advantages	Disadvantages
• Fast and cost-effective implementation • Continue to addresses critical issues (e.g., signage clarity, physical access barriers) • Community education ensure Council proactively ensure residents understand the risk and the need for individual planning. • Ensures any capital expenditure remains relevant and in line with the updated modelling • Builds public confidence and shows progress	• May not significantly enhance evacuation efficiency for all zones • Lacks long-term network cohesion or major new route redundancy in the short to medium term • Community frustration at the time taken to build infrastructure.

Budget – Capex: Nil for the 2025/26 Annual Plan

Budget – Opex: Low – existing BAU budget covers actions.

Key risks: May be perceived as delaying, may not fully meet community expectations.

Recommended? Yes – ensures immediate actions within operational budgets, while undertaking detailed planning for any capital upgrades for the next Long-term Plan.

RECOMMENDATION

21. Adopt Option 3 which includes continuing to work with the community working party to implement, review and educate the community, while reviewing capital options to a timeline that ensure the new modelling, and the recommendations are consistent for including a budget as required into the 2027-2037 Long-term Plan.

SUBMISSIONS RECEIVED

Submission #: 501, 514, 738

ATTACHMENTS

Nil

Current Inundation modelling

Pap East: https://www.tauranga.govt.nz/Portals/0/data/community/civil_defence/files/tsunami-papamoa-east.pdf

Pap West: https://www.tauranga.govt.nz/Portals/0/data/community/civil_defence/files/tsunami-papamoa-west.pdf

Mangatawa: https://www.tauranga.govt.nz/Portals/0/data/community/civil_defence/files/tsunami-mangatawa.pdf

Arataki: https://www.tauranga.govt.nz/Portals/0/data/community/civil_defence/files/tsunami-arataki.pdf

TSUNAMI EVACUATION ZONE: Pāpāmoa East *(Wairakei)*

Tsunami Evacuation Zone

Tsunami Safe Area is anywhere beyond the Tsunami Evacuation zone

Tsunami Safe Locations are possible evacuation points

Evacuation Route

Waterway

Scale: 1:20,000

BAY OF PLENTY EMERGENCY MANAGEMENT GROUP

Tauranga City

IMPORTANT

Parts of this area are at risk of tsunami

A **LONG** or **STRONG** earthquake could be your only warning.

Long or Strong GET GONE

LONG or STRONG: GET GONE

DO NOT ignore these natural warning signs:

- Strong earthquake where it is hard to stand up.
- Weak, rolling earthquake shaking for longer than a minute.
- Unusual sea behaviour, like sudden sea level changes.
- The sea making loud and unusual sounds, especially roaring noises.

WHAT TO DO?

1. **Leave immediately, don't wait for an official warning.**
2. **Walk or bike quickly if possible. Only drive if you have to.**
3. **Move quickly to higher ground, or as far from the coastline as possible.**

STAY OUT OF THE TSUNAMI EVACUATION ZONE AND LOW-LYING AREAS UNTIL YOU GET THE ALL CLEAR FROM OFFICIAL CHANNELS

For more information visit:
www.bopcivildefence.govt.nz

Follow Bay of Plenty Civil Defence on social media for updates.

- **facebook.com/bopcivildefence**
- **twitter.com/bopcivildefence**
- **Listen to the radio**

VIEW ONLINE MAP HERE

TSUNAMI EVACUATION ZONE: Pāpāmoa West

Tsunami Evacuation Zone

Tsunami Safe Area is anywhere beyond the Tsunami Evacuation zone

Tsunami Safe Locations are possible evacuation points

Evacuation Route

Waterway

Scale: 1:20,000

BAY OF PLENTY EMERGENCY MANAGEMENT GROUP

Tauranga City

IMPORTANT

Parts of this area are at risk of tsunami

A **LONG** or **STRONG** earthquake could be your only warning.

Long or Strong GET GONE

LONG or STRONG: GET GONE

DO NOT ignore these natural warning signs:

- Strong earthquake where it is hard to stand up.
- Weak, rolling earthquake shaking for longer than a minute.
- Unusual sea behaviour, like sudden sea level changes.
- The sea making loud and unusual sounds, especially roaring noises.

WHAT TO DO?

1. **Leave immediately, don't wait for an official warning.**
2. **Walk or bike quickly if possible. Only drive if you have to.**
3. **Move quickly to higher ground, or as far from the coastline as possible.**

STAY OUT OF THE TSUNAMI EVACUATION ZONE AND LOW-LYING AREAS UNTIL YOU GET THE ALL CLEAR FROM OFFICIAL CHANNELS

For more information visit:
www.bopcivildefence.govt.nz

Follow Bay of Plenty Civil Defence on social media for updates.

facebook.com/bopcivildefence
twitter.com/bopcivildefence
Listen to the radio

VIEW ONLINE MAP HERE

TSUNAMI EVACUATION ZONE: Mangatawa

Tsunami Evacuation Zone

Tsunami Safe Area is anywhere beyond the Tsunami Evacuation zone

Tsunami Safe Locations are possible evacuation points

Evacuation Route

Waterway

Scale: 1:20,000

BAY OF PLENTY EMERGENCY MANAGEMENT GROUP

Tauranga City

IMPORTANT

Parts of this area are at risk of tsunami

A **LONG** or **STRONG** earthquake could be your only warning.

Long or Strong GET GONE

LONG or STRONG: GET GONE

DO NOT ignore these natural warning signs:

- Strong earthquake where it is hard to stand up.
- Weak, rolling earthquake shaking for longer than a minute.
- Unusual sea behaviour, like sudden sea level changes.
- The sea making loud and unusual sounds, especially roaring noises.

WHAT TO DO?

1. **Leave immediately, don't wait for an official warning.**
2. **Walk or bike quickly if possible. Only drive if you have to.**
3. **Move quickly to higher ground, or as far from the coastline as possible.**

STAY OUT OF THE TSUNAMI EVACUATION ZONE AND LOW-LYING AREAS UNTIL YOU GET THE ALL CLEAR FROM OFFICIAL CHANNELS

For more information visit:
www.bopcivildefence.govt.nz

Follow Bay of Plenty Civil Defence on social media for updates.

- **facebook.com/bopcivildefence**
- **twitter.com/bopcivildefence**
- **Listen to the radio**

VIEW ONLINE MAP HERE

TSUNAMI EVACUATION ZONE: Arataki

BAY OF PLENTY EMERGENCY MANAGEMENT GROUP

Tauranga City

IMPORTANT

Parts of this area are at risk of tsunami

A **LONG** or **STRONG** earthquake could be your only warning.

Long or Strong GET GONE

LONG or STRONG: GET GONE

DO NOT ignore these natural warning signs:

- Strong earthquake where it is hard to stand up.
- Weak, rolling earthquake shaking for longer than a minute.
- Unusual sea behaviour, like sudden sea level changes.
- The sea making loud and unusual sounds, especially roaring noises.

WHAT TO DO?

1. **Leave immediately, don't wait for an official warning.**
2. **Walk or bike quickly if possible. Only drive if you have to.**
3. **Move quickly to higher ground, or as far from the coastline as possible.**

STAY OUT OF THE TSUNAMI EVACUATION ZONE AND LOW-LYING AREAS UNTIL YOU GET THE ALL CLEAR FROM OFFICIAL CHANNELS

For more information visit:
www.bopcivildefence.govt.nz

Follow Bay of Plenty Civil Defence on social media for updates.

- **facebook.com/bopcivildefence**
- **twitter.com/bopcivildefence**
- **Listen to the radio**

VIEW ONLINE MAP HERE

Tsunami Evacuation Zone

Tsunami Safe Area is anywhere beyond the Tsunami Evacuation zone

Tsunami Safe Locations are possible evacuation points

Evacuation Route

Waterway

Scale: 1:20,000