

Final Report

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1. Introduction

Taith Consulting Limited has been commissioned by Taranaki Regional Council (TRC) to undertake a public transport network review, for the following services which are contracted to private operators:

- New Plymouth (Citylink urban and school routes);
- Ōpunake - Hāwera – Stratford - New Plymouth Connector; and
- Southlink services in south Taranaki.

Ministry of Education (MoE) bus services and Total Mobility are not part of this review.

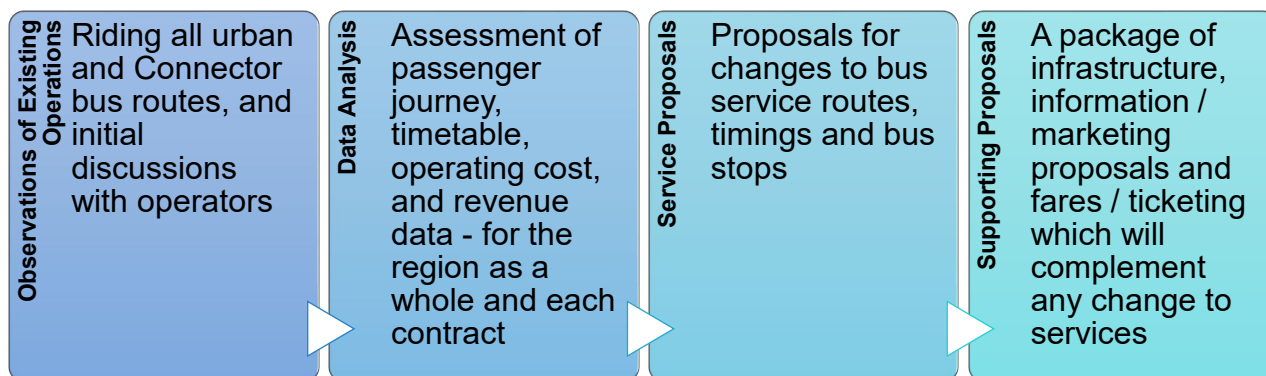
This report sets out technical work which has been undertaken, options for making positive service changes and recommendations for supporting measures to encourage mode shift to bus.

A key aspect of the review is the need to make better use of existing funding, before suggesting improvements. The New Plymouth urban current network has been in place since 2009 and fares have not been revised since 2016.

2. Technical Methodology

The network review has been undertaken using the following staged methodology:

Figure 2.1: Public Transport Network Review Methodology



3. Observations of Existing Operations

Reviewing existing operations on the ground is good practice, as it enables a good sense of what is going on, which can then be validated (or otherwise) by data.

The New Plymouth urban routes, and boarding / alighting at the main secondary schools, were surveyed from Monday 03 to Thursday 06 April. A New Plymouth – Hāwera return journey on Connector was undertaken on 18 May.

Our main observations can be summarised as follows:

- The Ariki Street Bus Centre is a good passenger facility, but currently under-utilised.
- Whilst timetable information is available at the Ariki Street stops, no leaflets are available within the Bus Centre (and there is no sign to say that they are available at the adjacent I-Site).
- Bus stops in New Plymouth are of a reasonable standard, with timetables provided in most cases.
- A few long gaps between bus stops in New Plymouth are evident.
- Bus stops in the town centres of Inglewood, Stratford and Eltham are not located on the main streets.

- New Plymouth Citylink buses arrive and depart on time, and there was no evidence of any late or early running.
- Connector buses do not appear to have sufficient time in the schedule, which means they arrive late at intermediate timing points and the end of the journey.
- All buses are clean and presentable, both inside and out.
- Bus drivers are generally friendly, and evidence of good customer service was observed during the journeys.
- Bus driver skills and road user behaviour appear to be good.
- The majority of peak passengers are school children, and outside of these times New Plymouth Citylink bus loadings are generally less than ten per vehicle.

Initial engagement has been undertaken with local operators Transit (New Plymouth Citylink) and Pickering's (Connector). There was general support for potential changes, subject to more detail.

4. Analysis of Existing Data for Taranaki Region

(a) Introduction

This section assesses data at the regional level, for all bus services. There are three types of data:

- Number of passengers;
- Revenue income from fares; and
- Costs of operating the contract.

The standard data analysis approach is to produce annual figures for:

- Average number of passenger journeys per month (which accounts for seasonality);
- Average number of passengers per bus service; and
- Farebox recovery (percentage of operating costs covered by revenue income).

However, there are significant challenges in trying to establish the “normal” level of passenger journeys and revenue because of the influences of COVID-19 and the Government half fare scheme (which ran from April 2022 to June 2023). Therefore the alternative approach is to compare single months across different years, where passenger numbers are not influenced by

school and public holidays. The best month to use is March, although the data provides the most optimistic figures, which would not be replicated every month.

(b) Assessment of Patronage Changes Between March 2022 and March 2023

Analysis of high-level summary Bee card passenger data for the whole of the Taranaki region, supplied for March 2022 and March 2023, has been undertaken, with changes between the two dates established. Table 4.1 provides key performance metrics for the months of March 2022 and March 2023:

Table 4.1: Taranaki Regional Patronage and Revenue Comparison – March 2022 and March 2023

Performance Metric	March 2022	March 2023	Change (%) *
Total number of passenger journeys	60,928	82,447	+35
Total farebox revenue (\$)	161,510	106,952	-34
Total number of adult passenger journeys	8,894	17,131	+93
Total number of child passenger journeys	42,246	49,938	+18
Total number of Super Gold passenger journeys	3,800	4,731	+25

* Percentage changes rounded up to nearest whole number.

There has been considerable growth in passenger journey numbers between March 2022 and March 2023. The March 2022 figure is likely to be lower than normal because of the COVID-19 pandemic impact. Therefore growth in the year to March 2023 is likely to be the result of more people having the confidence to return to public transport.

Passenger growth has also been strongly influenced by the Government half fare scheme, which ran between April 2022 and June 2023. Growth in passenger journeys of 35% has been accompanied by a 34% reduction in farebox revenue. Adults showed the highest percentage patronage increase (93%), albeit from a much smaller base level compared with children.

Now that the Government has introduced free fares for children under 13 years of age, and half price fares for young people aged 13-24, getting more full fare paying adults on to buses will assist with improving both mode share and financial performance of the service. The number of journeys by people with Super Gold cards (providing half price off-peak fares) is relatively low, which suggests this may be a market for further growth.

An assessment of changes for Citylink urban and school services show that passenger increases and fare revenue decreases between March 2022 and March 2023 have been:

- 54% increase in passengers on urban services, with a 32% decrease in revenue; and
- 16% increase in passengers on school services, with a 42% decrease in revenue.

The increase in passenger journeys has been much lower on school routes, which were already well used. Similarly the revenue decrease is greater on school routes as there were previously larger numbers of child passengers paying a full fare.

The passenger and revenue figures between March 2022 and March 2023 for the Connector / Your Connector group of routes are affected by the introduction of the Your Connector services between the two dates. This means that higher patronage is at least partly the result of additional services being introduced.

5. New Plymouth Citylink Service Proposals

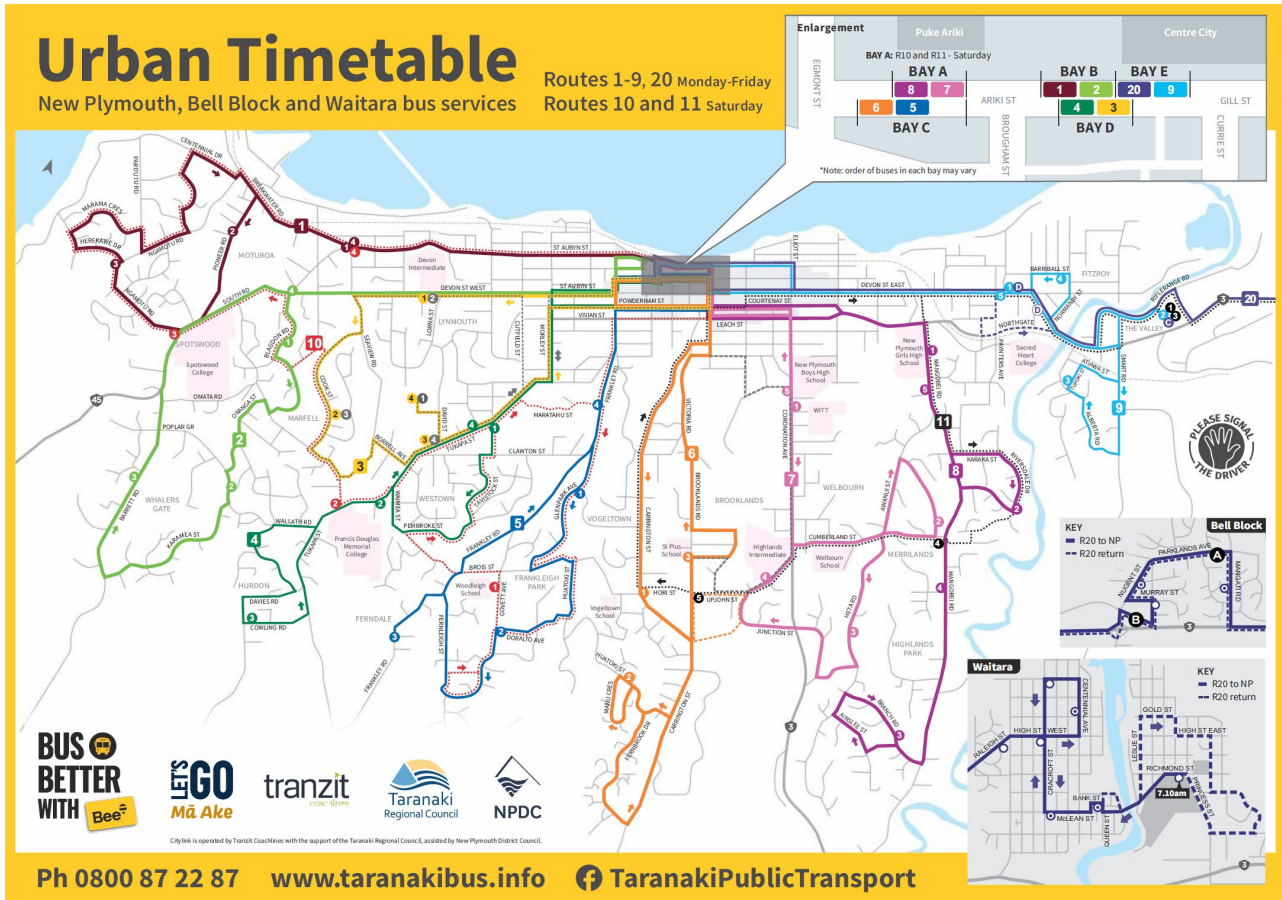
(a) Routes

Ten New Plymouth Citylink urban services operate Monday to Friday until around 6pm. There are two Saturday services which follow a different circular route around the city. There is currently no Sunday or Public Holiday service. Table 5.1 and Figure 5.1 summarise the Citylink urban services:

Table 5.1: New Plymouth Citylink Urban Services

Service Number	Route	Number of Services per Day
1	City Centre - Moturoa	14
2	City Centre - Whalers Gate	14
3	City Centre – Lynmouth - Marfell	14
4	City Centre - Westown - Hurdon	14
5	City Centre - Frankleigh Park - Ferndale	14
6	City Centre – Vogeltown - Brooklands	14
7	City Centre - Welbourn - Highlands Park	14
8	City Centre – Merrilands - Highlands Park	14
9	City Centre - The Valley - Glen Avon	14
10	Western loop of city – Saturday only	2
11	Eastern loop of city – Saturday only	2
20	City Centre - Bell Block - Waitara	6

Figure 5.1: Current New Plymouth Citylink Network Map



(b) Data Analysis

The current New Plymouth urban network has been unchanged for many years and is complex both in terms of routes and timetables. Some service routing – such as 2, 5 and 6 - use different streets in different directions along the route. Service 3 runs to different patterns before and after 10.00am. Weekend services 10 and 11 run to a different route compared with weekday services 1 to 9.

Weekday services 1 to 9, and 20, each have one bus allocated to the route. Services 1 to 9 depart the Ariki Street bus hub, all at the same time (a “pulse” timetable). On weekdays, service 1 to 9 frequencies are variable, with anything between 30- and 85-minute gaps between departures at different times of day. Service 20 – running out to Bell Block and Waitara – runs every two hours.

Vehicle utilisation is sub-optimal with buses sitting idle at the Ariki Street bus hub for significant periods between trips, until all vehicles are ready to depart at the same time. Whilst this operational approach allows interchange between all services at Ariki Street, it also means that best use is not made of the available resources.

A detailed analysis of data supplied for March 2023, for Citylink urban services, has been undertaken along with comparison of the various passenger categories.

Figure 5.2 below summarises the Citylink services by passenger numbers in March 2022 and March 2023. Services 10 and 11, which run just two journeys each, are shown for completeness.

Figure 5.2: Comparison of Citylink Passenger Numbers, March 2022 and March 2023

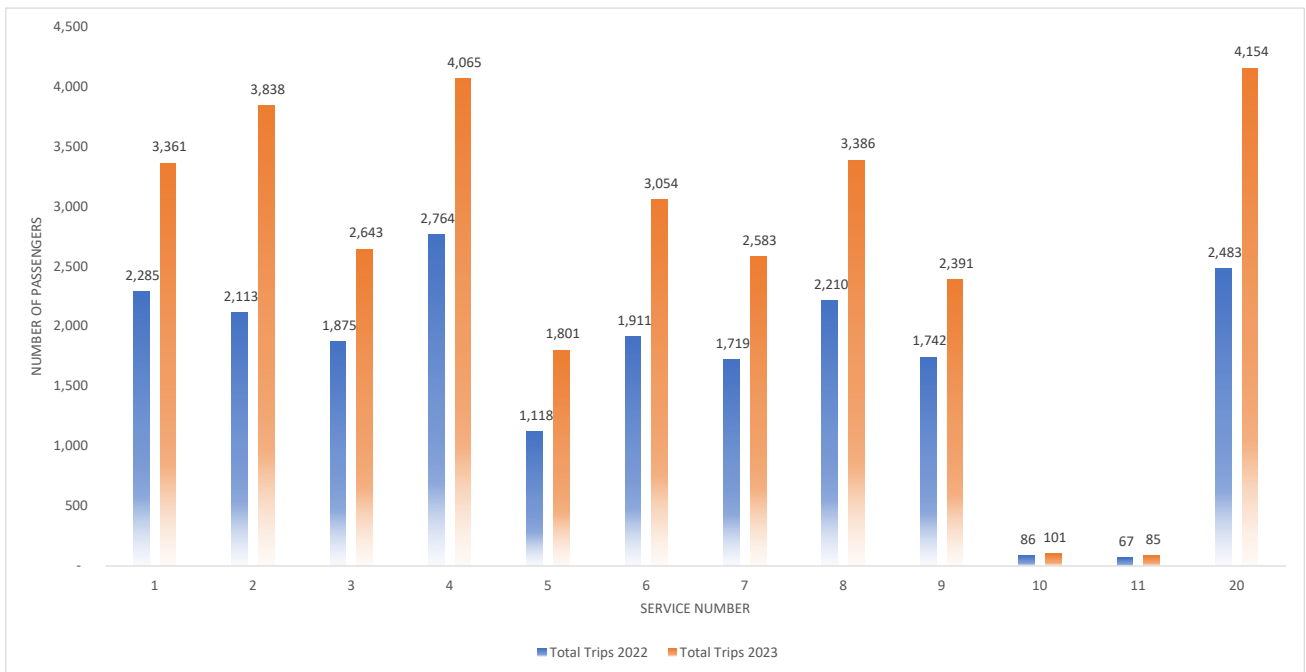


Table 5.2 below shows a one to ten ranking for each Citylink weekday service based on passenger numbers for: all users (total), adult & Super Gold (SGC), and children.

Table 5.2: Ranking of Citylink Weekday Bus Services by Passenger Numbers (March 2023)

Service Number	Ranking by Total Passenger Numbers (from 1 to 10)					
	All Users 2022	All Users 2023	Adult and SGC 2022	Adult and SGC 2023	Child 2022	Child 2023
1	3	5	3	2	6	6
2	5	3	8	6	2	1
3	7	7	5	5	7	7
4	1	2	1	3	4	3

Service Number	Ranking by Total Passenger Numbers (from 1 to 10)					
	All Users 2022	All Users 2023	Adult and SGC 2022	Adult and SGC 2023	Child 2022	Child 2023
5	10	10	10	10	10	9
6	6	6	6	8	3	4
7	9	8	8	4	8	8
8	4	4	7	9	1	2
9	8	9	4	7	9	10
20	2	1	2	1	5	5

Some services, notably numbers 2 and 8 carry a higher proportion of children.

Table 5.3: Citylink Average Passengers per Journey (March 2023)

Service	Total Passengers	Average Passengers per Journey	Rank by Passengers per Journey
1	3,361	10.91	6
2	3,838	12.46	4
3	2,643	8.58	9
4	4,065	13.20	2
5	1,801	5.85	12
6	3,054	9.92	8
7	2,583	8.39	10
8	3,386	10.99	5
9	2,391	7.76	11
10	101	12.63	3
11	85	10.63	7
20	4,154	15.73	1
All	31,462	10.31	-

Services 3, 5, 7 and 9 carry consistently lower numbers of passengers, and are ranked lowest in terms of passengers per journey. Despite running to the hospital service 3 is poorly performing, as it has only one unique section in the Cook Street area. On average only 7.4 people per day board service 3 at the Base Hospital, which is lower than would be expected. The complex operating pattern, when it runs in different directions at different times of day, means that it is not easy for new users to understand.

In spite of offering two round trips per day Saturday services 10 and 11 carry relatively high numbers of passengers per journey, even though total numbers are low. This indicates that improving Saturday services could generate additional demand.

The poorly performing routes have been studied in more detail and there are some sections which have low passenger numbers - see Table 5.4 below.

Comparing year-on-year, services 2, 4 and 20 have seen by far the biggest increases. Despite running at half the frequency, service 20 to Bell Block and Waitara carried the most passengers in March 2023, meaning that the average number of 15.73 per journey is much greater than any other route.

All these factors lead to a conclusion that there may be sensible service efficiencies to be made on existing routes, and then to reinvest expenditure into future network enhancement.

(c) Proposal Summary

In general, passengers (and particularly new or occasional users) understand simple consistent services and standard clockface frequencies, which in turn make them more likely to use the bus. Most residents only use their local service and, even in the world of mobile apps and journey planners, they appreciate knowing that the bus will leave their local stop at, for example, 20 minutes past each hour, which means they can easily plan a trip without having to refer to timetable or computer.

The proposals in this review therefore set out to simplify the routes and timetables and make them more easily understood, thereby paving the way for further frequency increases which can drive passenger growth. In summary the proposal is that:

- Services 1, 8 and 4 are inter-worked as a group to improve vehicle utilisation.
- Services 2, 7 and 6 are also inter-worked as a group to improve vehicle utilisation.
- Part of existing service 3 and service 20 are merged to create a new cross-city service 3 from the Base Hospital to Waitara. The remaining sections of service 3 are withdrawn, and largely covered by service 2.

- Service 5 is operated at a lower frequency by a bus which otherwise undertakes school duties.
- Service 9 is withdrawn, and its main sections other than Glen Avon are covered by new service 3. A morning and afternoon school bus is diverted via Glen Avon to pick up and drop off school children.
- Saturday services 10 and 11 are withdrawn and replaced by the weekday services 1 to 9 (except 5), but operating on a lower two-hourly frequency.

(d) Service Routing Proposals

Table 5.4 outline proposed routing changes for each bus service in more detail:

Table 5.4: Proposed Detailed Routing Changes by Service

Service	Proposed Changes
1: City Centre - Moturoa	At an average of 10.91 passengers per journey in March 2023, this is one of the better used services and so no change is proposed, except that the bus would arrive in the city centre at Ariki Street Bay A on its return.
2: City Centre - Whaler's Gate	This service has seen good passenger growth in the last year and is now ranked third in the city in terms of patronage (at an average of 12.46 passengers per journey). However, the section of route in Blagdon Road and Endeavour Street is little used, with only an average of nine passengers per day boarding between the four bus stops on this section. This section would be withdrawn. The revised route would leave from Ariki Street Bay C and then via Egmont Street to Devon Street West. The revised route will operate instead via current service 3 along Seaview Road, Cook Street; then turning right into Omata Road to re-join current service 2 at Oranga Street. The remainder of route is unchanged, except entering the city centre via Devon Street West and Egmont Street, to set down at Ariki Street Bay A.
Withdrawn Service 3: City Centre - Lynmouth - Marfell	An average of 8.58 passengers per journey use this service, with the route being very complex and hard to understand, operating in a different way at different times of day. There is only a relatively small unique section as the route runs parallel with either services 2 or 4 for a good part of its length. It is proposed to withdraw the current service completely, replacing it with a new cross-city service 3, which

Service	Proposed Changes
	<p>would be combined with current service 20. The Cook Street area would be served via a diverted service 2 and the Seaview Road / Borrell Avenue section replaced by a diverted service 4.</p>
<p>New Service</p> <p>3: Base Hospital - City Centre – Fitzroy - The Valley - Bell Block - Waitara</p>	<p>New service 3 would start at Base Hospital (ante-natal) and operate via David Street, Tukapa Sreet, Morley Street, Devon Street West, Egmont Street to Ariki Street. Then it would operate as current service 20 now to The Valley Megacentre, before splitting into two: Service 3B would run to Bell Block and Service 3W would run fast to Waitara.</p> <p>Service 3B: The proposal would be to provide greater coverage of Bell Block residential areas, thereby improving access. The short loop around Bell Block Court, Wynyard Street and Murray Street would be withdrawn operating instead along Nugent Street in both directions. After Mangati Road the route would turn left on to SH3 and the left again on to Wills Road, completing an anti-clockwise loop via Wills Road, Tiromoana Crescent, Dillon Drive and Mangati Road to Parklands Avenue.</p> <p>Service 3W: To make journeys into the town centre more convenient, the route into Waitara via Raleigh Street would be withdrawn. Instead, the service would operate direct into Waitara via SH3, Nelson Street and McLean Street, direct to the Queen Street central stop. The route would then split into two loops to provide more extensive coverage in Waitara:</p> <p>Waitara West: McLean Street - Cracraft Street - Centennial Avenue - Grey Street - Whitaker Street East - Queen Street.</p> <p>Waitara East: Whitaker Street East - West Quay - Leslie Street - Gold Street - High Street East - Ihaia Street - Clifton Drive - Princess Street - Richmond Street - West Quay - Whitaker Street East - Queen Street.</p> <p>The return journey from Queen Street, Waitara / Bell Block to the city centre and Base Hospital would be the reverse of the outward except on entering the city centre the route would operate via Liardet Street and left into Gill Street, picking up at Ariki Street Bay D.</p>
<p>4: City Centre - Westtown - Hurdon</p>	<p>A relatively well-performing service at an average of 13.20 passengers per journey. This route currently operates via Tavistock Street outbound, but not inbound. The section of route on Tukapa</p>

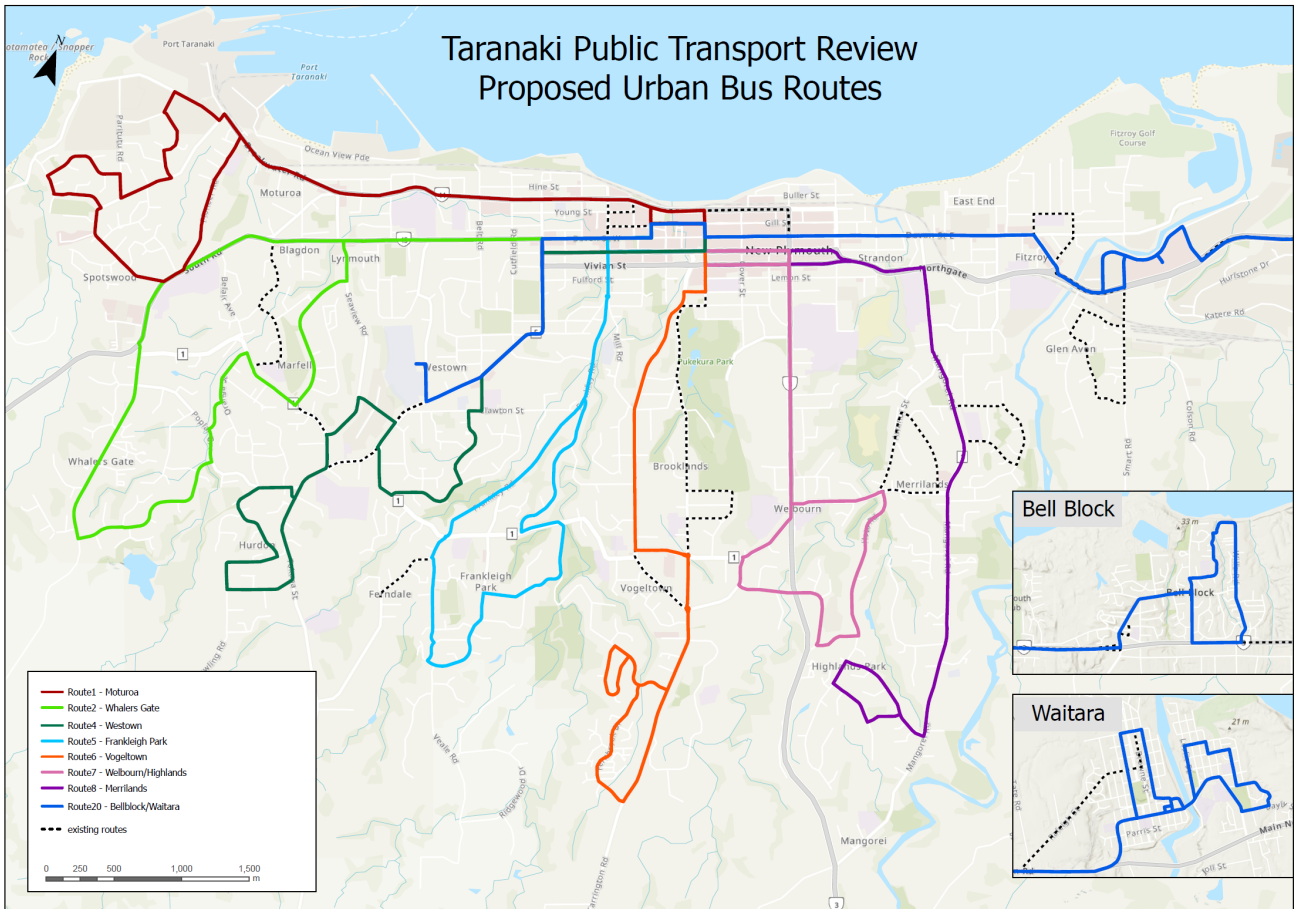
Service	Proposed Changes
	<p>Street past the hospital is little used. The proposal is that outbound journeys would run as now until the junction of Waimea Street and Tukapa Street. Buses would then then turn right into Tukapa Street, left into Borrell Avenue, left into Seaview Road, left into Omata Street, right into Tukapa Street and as now around the Davies Road loop. The return journey would be the reverse of the outward, so that buses run two-way along Borrell Avenue and the Tavistock Street loop. Additional stops would be needed on Borrell Avenue near the junction of Sunley Street, which would not only be more convenient for passengers, but also allow the operator to undertake crew changes at this location. The route would enter the city centre via Devon Street West and Egmont Street, to set down at Ariki Street Bay B.</p>
<p>5: City Centre - Frankleigh Park - Ferndale</p>	<p>This is the least used route on the New Plymouth city network, carrying an average of 5.85 passengers per journey. The route extends a stop near Clyde Street, Ferndale where an average of less than three people per day board the bus. A less than ideal reversing manoeuvre off Frankley Road is required at this location. It is proposed the service would at a lower frequency during early morning / off peak only so that a school bus can be used, thus saving vehicle resources. The extension from the Fernleigh Street / Frankley Road junction to Frankley Road / Clyde Street would be withdrawn.</p>
<p>6: City Centre – Vogeltown - Brooklands</p>	<p>An average of 9.92 passengers per journey use this complex service, where again the route runs along different streets inbound and outbound. Analysis shows that the Brooklands Road inbound route (except the stop near St Pius School) is very little used with only an average of three passengers per day. Seven times as many passengers use the Carrington Street section. It is proposed that the outbound routes operate as now via Carrington Street until the junction with Hori Street. Then the route turns left into Hori Street, right into Brooklands Road and then continues as now around the Manu Crescent and Fernbrook Drive loops. The return journey would operate as the outbound via Brooklands Road, Hori Street and Carrington Street and then into the city centre as now. The section of Brooklands Road from Hori Street and through to Victoria Road would be withdrawn. New stops at either end of Hori Street, and on</p>

Service	Proposed Changes
	Brooklands Road near the junction with Tarahua Street, would be required.
7: City Centre - Welbourn - Highlands Park	At an average of 8.39 passengers per journey, this is one of the less busy services, despite the fact that it travels to / from WITT and the Boys High School. In particular the loop around Nevada Drive is little used with just one stop boarding more than six passengers per day. To speed up the service for the majority of users, it is proposed that the route operates as now except that the one-way loop around Awanui Street, Nevada Drive and Cumberland Street (Nevada Drive to Heta Road section) is withdrawn. Also on return the route would enter the city centre on Liardet Street and turn left into Gill Street to Ariki Street Bay C. Additional bus stops are recommended to fill the long gap between stops in Puketotara Street and Junction Street.
8: City Centre – Merrilands - Highlands Park	Passenger numbers on this service (average of 10.99 per journey) are skewed by the fact that many students are carried to the Girls High School. It is ninth out of ten in the ranking for adult passengers. In view of peak hour loading it is proposed to keep the service as now, except that to benefit longer distance passengers, the outbound one-way loop around Karaka Street, Riversdale Drive and Kauri Street would be withdrawn, operating direct along Mangorei Road in both directions instead. This loop picks up an average of less than five passengers per day. The walk to board the bus on Mangorei Road is not a great distance. The return journey on entering the city centre would turn left from Liardet into Gill Street to terminate at Ariki Street Bay D.
Withdrawn Service 9: City Centre - The Valley - Glen Avon	At only an average of 7.76 passengers per journey, this service is very poorly used with the exception of the morning / afternoon trips which carry school students. For much of its length between the city centre and Fitzroy it runs parallel to service 20. Outside of the school time journeys, an average of less than six people per day board the service in Glen Avon. It is proposed to withdraw the service completely, and to divert Bell Block school service 35 to pick up the ten or so children who board in Glen Avon. The 35 could also be extended to terminate in the city centre. The new more frequent cross-city service 3 will take over from service 9 on all sections other than Glen Avon. The one-way section of route around Normanby

Service	Proposed Changes
	Street and Barriball Street will be withdrawn, as it is used by very few passengers.
Withdrawn Service 20: City Centre - Bell Block - Waitara	Despite having the lowest frequency, with half the number of journeys of any other, this service carries the greatest number of passengers (average of 15.73 per round trip journey). It is proposed to operate at an increased frequency as new service 3 operating cross-town from the Base Hospital. The route in Bell Block would change to serve more of the village and it would operate direct to the centre of Waitara, then splitting into two loops.
Revised Service 10: Saturday West 11: Saturday East	<p>The current two Saturday services are completely different from the Monday - Friday offering and only operate two round trips per day each on loops which cover the east and west of the city. Total passenger numbers are small, with average number of passengers per journey being 12.63 (service 10) and 10.63 (service 11). It is proposed that the current services 10 and 11 are withdrawn and consideration be given to operating the standard Monday-Friday routes on Saturdays at a lower frequency. Only three buses would be required to operate a two-hourly frequency on all the proposed new services, except service 5 for which no Saturday provision is proposed. Only four passengers per day use this section of service 10.</p> <p>The only minor difference is that because of the much lower frequency, new service 3 would serve Bell Block and Waitara combined on Saturdays.</p>

Figure 5.3 summarises the proposed weekday service routing changes, with the dotted lines denoting sections which will no longer be served. With the exception of number 5, Saturday services will follow the same routes as the weekday. This means that Waitara would get a Saturday service for the first time.

Figure 5.3: Proposed Service Routing Changes



(e) Frequency and Vehicle Requirements

Once the route for each service is established, draft timetables in **Appendix A** show two options:

1. A **standard hourly frequency** on all city routes (except number 5); or
2. Additional journeys which would upgrade the hourly services to **half hourly**.

Due to current vehicle workings, the Citylink network timetable currently requires ten buses to operate the timetable, one for each service. A standard hourly frequency on all city services (except number 5) under new inter-working arrangements would require only six vehicles, reduce the number of trips on each route from 14 to 12 per day and deliver estimated **cost savings** of just under **\$6,000 per week**, or **\$300,000 over 50 weeks** (effectively one year).

The alternative half hourly frequency on all services (except number 5) would require 12 vehicles (two more than the current ten) and incur significant additional timetable hours and vehicle

kilometres. The **additional cost** above the current contract price is estimated at just over **\$22,000 per week**, or **\$1.1 million over 50 weeks**. The detailed workings are shown as Appendix B.

(f) Bus Stop Changes

As noted in the service changes table above, some stops become redundant while, in other locations, new ones would be required, as a bus now operates in both directions along a street. Also, there are some existing sections of route with long gaps between stops, which ideally should be addressed. It is accepted practice that bus stops are located approximately every 400 metres along a route to maximise user convenience. It is therefore recommended that additional stops are investigated by TRC and New Plymouth District Council (NPDC), as the infrastructure owner and funder).

Appendix C gives a complete summary of recommended new and removed stops to support proposed service changes.

Appendix D lists the various stops recommended for removal, the average number of passengers boarding and approximate walking time to the nearest alternative stop.

Some network reviews suggest reducing the number of bus stops to speed up buses. Whilst there might be logic for this approach in large urban areas with high frequency services, it is not appropriate for New Plymouth. The widely accepted formula for the amount of time perceived to catch a bus from home is “walking time to stop plus 50% of service interval”. So, for example, if there is an eight-minute walk to the nearest stop, which has a 30-minute service frequency, the perceived time to catch a bus is 23 minutes. With large numbers like this, increasing walking time by having fewer stops will adversely affect public perception of service accessibility.

In town / city centres or large retail locations, it is important to locate bus stops as close to the centre as possible. The bus cannot be as competitive as the car at the home end of a trip (unless the user has a bus stop outside their house) and so, to achieve mode shift, city centre bus stops need to be as close to the retail core as possible and ideally more convenient than car parking locations.

Ariki Street in New Plymouth is a reasonably central location which enables easy access to shops, library, and coastal walkway. Queen Street in Waitara is also a relatively good location for the supermarket and shops. There may also be a need for TRC and NPDC to investigate locations for new stops on the approaches to the city centre.

(g) City Centre Bus Driver Facilities

The route and timetable proposals mean that the vehicles are used much more intensively and efficiently than at present. As a result, drivers will not be able to take meal breaks with their vehicle and instead must swap from one bus to another for different parts of their shifts. This will produce a requirement for a city centre rest room / toilet facility which will give drivers a reasonable place to

take their rest periods. One option is conversion of the now redundant Bus Centre facility in Ariki Street to a drivers' room. If this proposal is not possible then the operator would need to rent a city centre property for this purpose, the cost of which would need to be covered through existing budget savings (under option 1 – hourly services) or added to the contract price (under option 2 – half hourly services).

The current Ariki Street Bus Facility is open to all vehicles, which is not ideal from a safety point of view, particularly at times when large numbers of school children are present. Whatever plans may be for the longer term, we would recommend that Ariki Street become a buses and pedestrians only street as soon as possible. We would also recommend the TRC and NPDC investigate installation of comprehensive bus information and timetable displays at each of the five bays, including real time displays.

(h) Transfer Trips

The current “pulse” timetable allows all routes to connect with each other in the city centre, albeit with a transfer time of around 20 minutes. The proposed new hourly timetables make better use of the vehicles but, as a result, services no longer all depart Ariki Street at the same time. From initial observations, the number of transfers is not high, other than at school times. In March 2023, around 14% of all trips in the region were transfers (with the vast majority of these likely to be in New Plymouth). It is possible that some transfer recordings shown in the ticket system were actually return trips, as a result of the generous one-hour time window.

There may be some concern about less convenient transfers on certain journeys, but the number of people disadvantaged will be far outweighed by benefits to those who have a better service. If 30-minute frequency timetables are adopted, this will reduce waiting times for people who wish to transfer between routes in the city centre.

6. New Plymouth School Services

(a) School Routes

Table 6.1 shows the current school routes:

Table 6.1: Current New Plymouth School Routes

Service	Area Served
Orbiters 51 to 54	Clockwise and anticlockwise services linking all New Plymouth secondary and intermediate schools

Service	Area Served
91-93 and 95	Direct, afternoon-only services from New Plymouth Girls High School, New Plymouth Boys High School, Sacred Heart, and Highlands Intermediate to the Ariki Street Bus Centre
12	Merrilands to Spotswood College, via New Plymouth Boys High School and Devon Intermediate
21-24	Waitara / Urenui / Motunui / Tikorangi / Lepperton
21 and 30-34	Bell Block
40 and 42-45	Oākura
41	Omata
98	Inglewood

(b) Data Analysis

Table 6.2 summarises school service passenger data for March 2023, both total numbers and average loadings:

Table 6.2: School Service Passenger Numbers (March 2023)

Service	Total Passengers	Average Passengers per Journey	Rank by Average Passengers per Journey
12	1,690	38.41	16
21	1,520	34.55	18
22	2,011	45.70	14
23	2,167	49.25	13
24	1,111	25.25	24
30	1,420	32.27	21
31	2,185	49.66	10
32	1,973	44.84	15

Service	Total Passengers	Average Passengers per Journey	Rank by Average Passengers per Journey
33	1,555	35.34	18
34	1,550	35.23	19
35	1,251	28.43	23
40	2,794	63.50	2
41	416	9.45	28
42	882	20.05	25
43	1,570	35.68	17
44	2,232	50.73	9
45	645	14.66	26
51	2,360	53.64	7
52	2,669	60.66	4
53	2,476	56.27	6
54	2,353	53.48	8
55	512	11.64	27
91	1,319	59.95	5
92	42	1.91	29
93	1,344	61.09	3
95	651	29.59	22
98	1,999	90.86	1
All	42,697	39.61	-

In general, passenger numbers show that nearly all school services are well loaded, with standing or additional buses in some cases.

(c) Recommendations

Whilst there might be some more logical routes to be designed, this would not achieve significant cost savings in terms of number of vehicles or drivers required, unless double decker vehicles were to be introduced on major flows such as from Bell Block. There is also a longer-term question as to whether any new schools and housing areas could change travel patterns.

It would therefore seem sensible to defer any major rework of school routes, including a longer-term assessment of demand, until it is clear when the next bus contract will be let.

Analysis of the data for school services reveals a significant weakness in the system. For each school service, only timing points are shown into the Bee card system, rather than all the stops where pupils may board or alight. The result is that numbers are grouped together at only a few stops shown in the system. For example on service number 12, 719 pupils (33 per day) are shown as getting on at the first stop in the morning and 566 (26 per day) are shown as getting off the bus at the Boys College in the afternoon. This means that it is impossible to determine where pupils actually get on or off, or how many people might be on a bus at a given point. Operator Tranzit has confirmed that children are allowed to board or alight at any intermediate stop.

7. Hāwera – New Plymouth Connector

(a) Introduction

The New Plymouth-Stratford-Hāwera-Ōpunake services are confusingly advertised as two different brands, “Connector” and “Your Connector”. The main service operates under the name Connector, whereas Your Connector is used for some early and late journeys, primarily for students. There are four different timetable leaflets for this one corridor.

Table 7.1: Connector Group of Services

Service	Details
Connector	Four return trips (two morning and two afternoon) per weekday: Hāwera – Eltham – Stratford – Inglewood – New Plymouth (both city centre and Base Hospital) First and last single trip is extended to / from Ōpunake
Your Connector	Two weekday morning outbound trips (school days only) from Hāwera, one to New Plymouth Boys High School and one to New Plymouth High Girls School; returning in the afternoon Two daily journeys which are for Dialog employees

(b) Data Analysis

Table 7.2 summarises passenger numbers in March 2023 for the Connector group of services.

Table 7.2: Connector and Your Connector Passenger Numbers (March 2023)

Service	Total Passengers	Average Passengers per Journey
Connector	3,036	17.25
Your Connector (Dialog)	514	9.73
Your Connector (School / College)	4,396	49.95
All	8,288	23.55

The Your Connector routes – predominantly for school and college students – are heavily used, and the operator is now providing additional vehicles because of overcrowding. The Connector service has a reasonably healthy average passengers per journey, albeit spread over a long route. In contrast, the Your Connector bus for Dialog employees is poorly used.

(c) Route Design

The current Connector service pattern is complex with loops being operated at both ends of the route, in different directions at different times of day. This arrangement is hard to understand for new users. The Your Connector journeys that serve New Plymouth schools do not extend to any other parts of the city, which is a missed opportunity to make the service more attractive for adults.

At the Hāwera end, one journey each way per day is extended to / from Ōpunake. This incurs considerable additional timetable hours and kilometres and yet carries on average one to two people per trip. It is recommended that the Ōpunake to Hāwera section of route is withdrawn unless there are strong social reasons for continuing with it.

(d) Timetable

Timekeeping on the Connector route is poor with most journeys running late at some point. There is not enough allowance in the timetable for the drivers to run to time. As a result, the operator is substituting additional vehicles at the Hāwera end of the route.

The timetable leaflet states that times are approximate only. This gives users no confidence that a bus will turn up at any given time. The timetable should be designed so that running times are achievable and then drivers instructed that they must never leave early from any timing point.

The proposed new Connector timetable (**Appendix E**) includes additional running time to restore punctuality and the following additional features:

- Ten-minute breaks at the New Plymouth end of the route so that the operator can properly comply with the provisions of Employment Relations Amendment Act (ERAA) Regulations.
- The route in New Plymouth operates via the city centre in both directions to give passengers the fastest possible trip into the city on all journeys.
- The route in Hāwera operates via the city centre in both directions to give more direct journeys on all trips. This means the route will also act as a two-way town service between the Glover Road area across town to the Hospital / Hunter Road area.
- Morning and afternoon journeys serving the schools would be extended to serve New Plymouth city centre or Hospital giving more journey opportunities for other passengers.
- Although not specifically shown on the timetable, it is recommended to remove the stop at Stratford Health Centre and replace it with stops on the main road State Highway 3, which would require support and investment from Waka Kotahi. This change will avoid delays as buses try to join the main road. It is only a few dozen metres walk from the main road to the Health Centre.

(e) Financial Performance

The Connector group of services feature a number of financial deals with third parties.

The Western Institute of Technology Taranaki (WITT) provides funding of around \$115,000 per annum (including inflation payments). Assuming 40 education weeks per year this equates to \$2,875 per week. In March 2023, 1,045 WITT journeys per week were made, equivalent to an average fare of \$2.75. Given the mix of long and short journeys, this seems a fair reimbursement rate, but we would recommend that it is reviewed at the time of the next fares increase.

The Taranaki District Health Board (now Te Whatu Ora) provides around \$90,000 per annum. It is understood that this is a payment for both passengers and carriage of parcels between Hāwera Hospital and New Plymouth Base Hospital. Given that only 142 passenger journeys to the hospitals were made in March 2023 this is a well-funded scheme, providing significant social benefits to users who have no other means of accessing health facilities. Transporting parcels on the same service is good practice, and saves on additional vehicle trips.

The Dialog Scheme relates to Your Connector routes 3102 and 3103, which do not appear in the public timetable. Dialog pay a maximum of \$5 per passenger journey for employees who use the two routes. In March 2023, which is likely to see the highest level of patronage in the year, only 856 one-way journeys were made on the two services – resulting in revenue of \$4,280. The two routes operate approximately 300 kilometres per weekday.

While no detailed operating costs are available, it is evident on the basis of passenger numbers and kilometres travelled that, in spite of best efforts by Dialog, the service is not financially self-funding as originally intended.

On this basis, it is recommended that the Council terminates the contract with Dialog and withdraws the two bus routes 3102 and 3103.

Whilst passenger loadings on Connector are generally good, overall financial performance is not as strong as might be expected. In March 2023, total contract costs were around \$77,000, with total income from passenger fares, Super Gold / half fare reimbursement and all financial contributions being \$47,000. Therefore even with support from external bodies such as WITT and Te Whatu Ora, and assuming that passengers continue to travel in the same numbers now that adult fares have return to previous levels, total route income is still only 61% of costs in the busiest month of the year. The percentage of revenue from actual passengers paying on the bus drops to just less than 20%.

(f) Bus Stop Provision

In the three main intermediate centres along the route - Inglewood, Stratford, and Eltham - buses do not stop in the town centre close to shops and other facilities, but instead are diverted into side streets. This arrangement makes the bus appear to be a second-class choice. Whilst removing a small number of car parks may be contentious, we recommend that central bus stops are placed in the main streets on State Highway 3, which will help increase awareness of the service and convenience for passengers. This recommendation will require support and investment from Waka Kotahi.

In the three larger settlements mentioned above, there are virtually no bus stops other than those in the centre and at Hāwera Hospital. It is recommended that a study be undertaken to propose introduction of additional stops on the State Highway 3 approaches to these towns. In New Plymouth city centre it is recommended to relocate the Connector service from Egmont Street to Ariki Street to make transfers with Citylink services as easy as possible.

8. Southlink

(a) Introduction

The rural Southlink services are made of up three routes:

- Ōpunake – Kaponga - Manaia - Hāwera (serves Ohawe on-demand): one return journey on Thursdays only;
- Waverley – Pātea – Hāwera: one return journey on Tuesdays and Thursdays; and

- Ōpunake – Okato – Oākura – New Plymouth city centre – The Valley Megacentre: one return journey on Fridays only.

(b) Passenger Demand and Financial Performance

The three services all carry small numbers of passengers. Table 8.1 shows the figures for March 2023.

Table 8.1: Southlink Service and Passenger Journeys (March 2023)

Service	Number of Service Journeys	Number of Passenger Journeys	Average Number of Passengers per Journey
Ōpunake – New Plymouth	10	130	13.00
Ōpunake – Hāwera	10	42	4.20
Waverley - Hāwera	18	119	6.61
All	38	291	7.66

Table 8.2 shows that in March 2023, the three Southlink services had a total contract cost of \$8,000, but fare revenue of only \$273. This imbalance between costs and revenues results in a very high level of subsidy per journey and low farebox recovery ratio (percentage of operating costs covered by fare income).

Table 8.2: Southlink Subsidy and Farebox Recovery (March 2023)

Service	Number of Passenger Journeys	Contract Cost (\$)	Fare Revenue (\$)	Subsidy per Passenger Journey (\$)	Farebox Recovery (%)
Ōpunake – New Plymouth	130	3,108	120	22.98	3.86
Ōpunake – Hāwera	42	1,334	63	30.26	4.72
Waverley - Hāwera	119	3,567	90	29.22	2.52
All	291	8,009	273	26.58	3.41

The Ōpunake – New Plymouth service carries more passengers than the other two Hāwera-based routes, at an average of 13 per journey. For the three services subsidy per passenger journey varies between \$23 and \$30. There do not appear to be any records for the number of Super Gold card holders carried, which may mean that no claim is made to Ministry of Social Development (MSD) for these routes. The number of passengers carried in March 2023 increased by 42% from March 2022 (partly as a result of the Government’s half fare scheme), but from a very low base number.

In summary, whilst subsidy per passenger is high, total subsidy is not huge as the services run on only one or two days per week. It therefore becomes a purely social need decision as to whether to continue with the operation of Southlink, which cannot really be justified by any commercial value for money appraisal.

(c) Recommendations

In terms of improving the offering to customers there are four recommendations for the short term.

- Thursday Southlink journeys arrive in Hāwera after the Connector service has left for New Plymouth. Once a new Connector timetable is finalised, Southlink services should be retimed to ensure a connection in both directions.
- Journeys which terminate in Hāwera should be diverted / extended to additionally serve the hospital.
- The timetable leaflet for the Waverley - Hāwera service says that \$3 fares will be reviewed in June 2019 and that the Tuesday service is only for a six-month trial period (presumably over the same timescale). We would recommend that, along with other routes, fares should be reviewed and the Tuesday service either made permanent or discontinued.
- There are no figures for how many passengers, if any, travel to or from The Valley Megacentre on the Ōpunake - New Plymouth Route. After discussions with the operator, consideration should be given to withdrawing this section of route, with any occasional passengers being able to connect on to the new Citylink route 3.

In the medium to longer term, it is recommended that Southlink routes are assessed against provision of a community transport alternative, in order to deliver lower operating costs, better value for money and a more flexible on-demand service for passengers.

9. Supporting Interventions

(a) Introduction

This section briefly outlines supporting interventions which should be considered for implemented as part of any future bus network changes.

(b) Timetables and Timing Points

Timetables for Citylink services show times running across the page, which is different from Connector where they run down the page. In order to improve legibility, it is recommended that new Citylink timetables are also displayed with time running down the page (to make it consistent with Connector).

With the exception of the start of each route, timings are all referred to in the timetable leaflet as “approximate”. This does not inspire customer confidence and is not good operational practice. For the new timetables, realistic intermediate timing points should be set, and drivers instructed that they must never leave early.

(c) Ticketing and Fares

At present, there is no reward for frequent usage. Regular passengers pay the same single fare as occasional users. In order to encourage more regular usage, it is recommended to reward frequent passengers by introducing a weekly or monthly cap on the fares they pay. This means that any usage over the cap level is effectively discounted and then free for the remainder of the period.

For example, one zone travel passengers would need to accumulate seven single trips (at \$2 per trip) to spend a total of \$14. If an \$15 weekly cap is introduced, the eighth journey costs only \$1, and subsequent journeys for the remainder of the week are completely free. On a monthly basis, if a passenger undertook 20 one zone trips in a four-week period, introducing a \$60 cap would save them \$20 compared with paying \$2 every time.

Under the Government’s Community Connect extension scheme, under 13s will travel free and 13-24s pay half fare. Therefore the fares and capping proposals would only apply to full fare payers.

It is recommended that regular reviews of fares are undertaken to assess the potential for both increasing patronage (for particular target groups) and improving financial performance of the service.

(d) Bus System Visibility and Information Provision

For occasional and new users in particular, information provision is essential for providing confidence to use what may be an unfamiliar system.

Key requirements for customers include:

- High visibility of the bus stop;
- Appropriate wayfinding and signage to / from the stop;
- Static and real-time information provided at the stop; and
- Information on-board the bus in relation to the end destination, and each stop along the route.
- Service contact information available at stops.

Accurate and easy-to-follow timetables should be available and accessible at bus stops, stations, in public buildings, online and via apps. Timetables should be clearly displayed so they can be seen by wheelchair users and, where possible, there should be real-time audio-visual announcements. Proper notice should be given of any planned changes to services or routes with notices on buses and at stops, in the local press, on radio, on social media and via apps. Drivers should also be able to communicate changes directly to passengers, particularly regular users.

At present bus stops in Taranaki have very little public profile, sometimes limited to the standard legal sign affixed to a lamp post or telegraph pole. Stops with shelters are much more visible. There are few, if any signs, to bus stops – even the main facilities in the various urban centres. Provision of printed timetable information is generally reasonable in New Plymouth. Real time information is available via the Transit app. Buses are currently not set up to provide in-vehicle announcements or information on screens.

In order to raise the public profile of the bus network, a new branded bus stop flag should be investigated for New Plymouth Citylink and Connector.

The example in Figure 9.1 below, from Surrey in the UK, shows the route number and location shown on the flag. It is also good practice to have a “towards [x location]” to enable passengers to know they are going the right way (although this may be less important for circular routes which start and terminate in the same location).

For the larger transport hubs – such as Ariki Street, Waitara, Stratford and Hāwera – consideration should be given to installing high profile information totems, which can include larger amounts of information than just a timetable (including a local map and directions to key destinations).

Figure 9.2 shows an example of a totem from Wellington, which is next to a stop with an illuminated display which shows the network map.

Figure 9.1: Example of Bus Stop Flag (Surrey, UK)



Figure 9.2: Example of Bus Stop Totem (Wellington Hospital)



(e) Communication and Publicity

Once a new network is agreed, after public consultation, there will need to be a communications plan and compelling publicity prepared.

In addition, we would suggest that initial thought needs to be given to a significant budget for marketing and promotion, perhaps including special offers for travel. The change will be a great opportunity to promote bus use in Taranaki.

Appendix A: Routes 1, 4 & 8 Timetable

Monday - Friday Option 1 - Hourly Service - Journeys in black type only

Monday - Friday Option 2 - Half Hourly Service - All Journeys

Route 1 City Centre - Moturoa

CBD, Ariki St (Bay B)	--	--	0650	0720	0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750	1820
Moturoa Shops	--	--	0655	0725	0755	0825	0855	0925	0955	1025	1055	1125	1155	1225	1255	1325	1355	1425	1455	1525	1555	1625	1655	1725	1755	1825
Moturoa School	--	--	0658	0728	0758	0802	0858	0928	0958	1028	1058	1128	1158	1228	1258	1328	1358	1428	1458	1528	1558	1628	1658	1728	1758	1828
Ngamotu Road (Dairy)	--	--	0703	0733	0803	0833	0903	0933	1003	1033	1103	1133	1203	1233	1303	1333	1403	1433	1503	1533	1603	1633	1703	1733	1803	1833
Moturoa Shops	--	--	0710	0740	0810	0840	0910	0940	1010	1040	1110	1140	1210	1240	1310	1340	1410	1440	1510	1540	1610	1640	1710	1740	1810	1840
CBD, Ariki St (Bay A)	--	--	0720	0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750	1820	1850

Route 8 City Centre - Merrilands & Highlands Park

CBD, Ariki St (Bay A)	--	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1500	1530	1600	1630	1700	1730	1800	--	--
NPGHS	--	0708	0738	0808	0838	0908	0938	1008	1038	1108	1138	1208	1238	1308	1338	1408	1438	1508	1538	1608	1638	1708	1738	1808	--	--
Mangorei Rd (Smith Rd)	--	0712	0742	0812	0842	0912	0942	1012	1042	1112	1142	1212	1242	1312	1342	1412	1442	1512	1542	1612	1642	1712	1742	1812	--	--
Branch Road	--	0715	0745	0815	0845	0915	0945	1015	1045	1115	1145	1215	1245	1315	1345	1415	1445	1515	1545	1615	1645	1715	1745	1815	--	--
Mangorei Rd (Smith Rd)	--	0718	0748	0818	0848	0918	0948	1018	1048	1118	1148	1218	1248	1318	1348	1418	1448	1518	1548	1618	1648	1718	1748	1818	--	--
NPGHS	--	0721	0751	0821	0851	0921	0951	1021	1051	1121	1151	1221	1251	1321	1351	1421	1451	1521	1551	1621	1651	1721	1751	1821	--	--
CBD, Ariki St (Bay D)	--	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1500	1530	1600	1630	1700	1730	1800	1830	--	--

Route 4 City Centre - Westown & Hurdon

CBD, Ariki St (Bay D)	0710	0740	0810	0840	0910	0940	1010	1040	1110	1140	1210	1240	1310	1340	1410	1440	1510	1540	1610	1640	1710	1740	1810	--	--	--
Westown School	0715	0745	0815	0845	0915	0945	1015	1045	1115	1145	1215	1245	1315	1345	1415	1445	1515	1545	1615	1645	1715	1745	1815	--	--	--
Borrell Ave (Sunley St)	0720	0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750	1820	--	--	--
Cowling Road (Davies Rd)	0725	0755	0825	0855	0925	0955	1025	1055	1125	1155	1225	1255	1325	1355	1425	1455	1525	1555	1625	1655	1725	1755	1825	--	--	--
Borrell Ave (Sunley St)	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1500	1530	1600	1630	1700	1730	1800	1830	--	--	--
Westown School	0735	0805	0835	0905	0935	1005	1035	1105	1135	1205	1235	1305	1335	1405	1435	1505	1535	1605	1635	1705	1735	1805	1835	--	--	--
CBD, Ariki St (Bay B)	0740	0810	0840	0910	0940	1010	1040	1110	1140	1210	1240	1310	1340	1410	1440	1510	1540	1610	1640	1710	1740	1810	1840	--	--	--

Saturday Timetable

Route 1 City Centre - Moturoa

CBD, Ariki St (Bay B)	0720	0920	1120	1320	1520	1720
Moturoa Shops	0725	0925	1125	1325	1525	1725
Moturoa School	0728	0928	1128	1328	1528	1728
Ngamotu Road (Dairy)	0733	0933	1133	1333	1533	1733
Moturoa Shops	0740	0940	1140	1340	1540	1740
CBD, Ariki St (Bay A)	0750	0950	1150	1350	1550	1750

Route 8 City Centre - Merrilands & Highlands Park

CBD, Ariki St (Bay A)	0800	1000	1200	1400	1600	--
NPGHS	0808	1008	1208	1408	1608	--
Mangorei Rd (Smith Rd)	0812	1012	1212	1412	1612	--
Branch Road	0815	1015	1215	1415	1615	--
Mangorei Rd (Smith Rd)	0818	1018	1218	1418	1618	--
NPGHS	0821	1021	1221	1421	1621	--
CBD, Ariki St (Bay D)	0830	1030	1230	1430	1630	--

Route 4 City Centre - Westown & Hurdon

CBD, Ariki St (Bay D)	0840	1040	1240	1440	1640	--
Westown School	0845	1045	1245	1445	1645	--
Borrell Ave (Sunley St)	0850	1050	1250	1450	1650	--
Cowling Road (Davies Rd)	0855	1055	1255	1455	1655	--
Borrell Ave (Sunley St)	0900	1100	1300	1500	1700	--
Westown School	0905	1105	1305	1505	1705	--
CBD, Ariki St (Bay B)	0910	1110	1310	1510	1710	--

Saturday Service

Route 2 City Centre - Marfell & Whalers Gate

CBD, Ariki St (Bay C)	0720	0920	1120	1320	1520	1720
Devon Intermediate School	0725	0925	1125	1325	1525	1725
Cook St Shops	0728	0928	1128	1328	1528	1728
Poplar Grove (75)	0733	0933	1133	1333	1533	1733
Barrett Rd (Tiverton Cres)	0740	0940	1140	1340	1540	1740
Blagdon Shops						
CBD, Ariki St (Bay A)	0750	0950	1150	1350	1550	1750

Route 7 City Centre - Welbourn & Highlands Park

CBD, Ariki St (Bay A)	0800	1000	1200	1400	1600	--
NPBHS	0808	1008	1208	1408	1608	--
Heta Road (158)	0812	1012	1212	1412	1612	--
Highlands Intermediate Sch	0815	1015	1215	1415	1615	--
NPBHS	0821	1021	1221	1421	1621	--
CBD, Ariki St (Bay C)	0830	1030	1230	1430	1630	--

Route 6 City Centre - Vogelstown

CBD, Ariki St (Bay C)	0840	1040	1240	1440	1640	--
Carrington St (Selwyn St)	0845	1045	1245	1445	1645	--
Hori St (Brooklands Rd)	0850	1050	1250	1450	1650	--
Huatoki St (Manu Cres)	0855	1055	1255	1455	1655	--
Hori St (Brooklands Rd)	0900	1100	1300	1500	1700	--
Carrington St (Selwyn St)	0905	1105	1305	1505	1705	--
CBD, Ariki St (Bay C)	0910	0810	1310	1510	1710	--

Appendix A: New Route 3 Timetable (Formerly Route 20)

Base Hospital - City Centre - The Valley - Bell Block - Waitara (East or West)

Monday - Friday Option A - Hourly Service

Route Number	3	3	3	3	3	3	3	3	3	3	3	3	3
Base Hospital (Ante Natal Clinic)	--	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800
CBD, Ariki St (Bay E)	--	0710	0810	0910	1010	1110	1210	1310	1410	1510	1610	1710	1810
The Valley Megacentre	--	0722	0822	0922	1022	1122	1222	1322	1422	1522	1622	1722	1822
Bell Block (Parklands Ave)	--	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830
Waitara (Queen Street)	--	0750	0850	0950	1050	1150	1250	1350	1450	1550	1650	1750	1850
Waitara (Cracroft St/ Norman St)	--	0755	--	0955	--	1155	--	1355	--	1555	--	1755	--
Waitara (Gold St)	--	--	0855	--	1055	--	1255	--	1455	--	1655	--	1855
Waitara (Gold St)	0655	--	0855	--	1055	--	1255	--	1455	--	1655	--	--
Waitara (Cracroft St/ Norman St)	--	0755	--	0955	--	1155	--	1355	--	1555	--	1755	--
Waitara, (Queen Street)	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	--
Bell Block (Parklands Ave)	0720	0820	0920	1020	1120	1220	1320	1420	1520	1620	1720	1820	--
The Valley Megacentre	0725	0825	0925	1025	1125	1225	1325	1425	1525	1625	1725	1825	--
CBD, Ariki St (Bay D)	0740	0840	0940	1040	1140	1240	1340	1440	1540	1640	1740	1840	--
Base Hospital (Ante Natal Clinic)	0750	0850	0950	1050	1150	1250	1350	1450	1550	1650	1750	1850	--

Monday - Friday Option B - Half-Hourly Service

Route Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Base Hospital (Ante Natal Clinic)	--	--	0630	0700	0730	Then	00	30		1600	1630	1700	1730	1800
CBD, Ariki St (Bay E)	--	--	0640	0710	0740	At	10	40		1610	1640	1710	1740	1810
The Valley Megacentre	--	--	0652	0722	0752	These	22	52		1622	1652	1722	1752	1822
Bell Block (Parklands Ave)	--	--	0700	0730	0800	Mins	30	00	Until	1630	1700	1730	1800	1830
Waitara (Queen Street)	--	--	0720	0750	0820	Past	50	20		1650	1720	1750	1820	1850
Waitara (Cracroft St/ Norman St)	--	--	0725	--	0825	Each	--	25		--	1725	--	1825	--
Waitara (Gold St)	--	--	--	0755	--	Hour	55	--		1655	--	1755	--	1855
Waitara (Gold St)	--	0655	--	0755	--	Then	55	--		1655	--	1755	--	--
Waitara (Cracroft St/ Norman St)	0625	--	0725	--	0825	At	--	25		--	1725	--	--	--
Waitara, (Queen Street)	0630	0700	0730	0800	0830	These	00	30		1700	1730	1800	--	--
Bell Block (Parklands Ave)	0650	0720	0750	0820	0850	Mins	20	50	Until	1720	1750	1820	--	--
The Valley Megacentre	0655	0725	0755	0825	0855	Past	25	55		1725	1755	1825	--	--
CBD, Ariki St (Bay D)	0710	0740	0810	0840	0910	Each	40	10		1740	1810	1840	--	--
Base Hospital (Ante Natal Clinic)	0720	0750	0820	0850	0920	Hour	50	20		1750	1820	1850	--	--

Monday - Friday Option C - Half Hourly Service to Bell Block and Waitara Split

Route Number	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W	3B	3W
Base Hospital (Ante Natal Clinic)	--	--	0630	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330	1300	1330	1300	1330	1600	1630	1700	1730	1800
CBD, Ariki St (Bay E)	--	--	0645	0715	0745	0815	0845	0915	0945	1015	1045	1115	1145	1215	1245	1315	1345	1415	1445	1515	1545	1615	1645	1715	1745	1815
The Valley Megacentre	--	--	0657	0727	0757	0827	0857	0927	0957	1027	1057	1127	1157	1227	1257	1327	1357	1427	1457	1527	1557	1627	1657	1727	1757	1827
Bell Block (Parklands Ave)	--	--	0705	--	0805	--	0905	--	1005	--	1105	--	1205	--	1305	--	1405	--	1505	--	1605	--	1705	--	1805	--
Bell Block (Dillon Drive)	--	--	0712	--	0812	--	0912	--	1012	--	1112	--	1212	--	1312	--	1412	--	1512	--	1612	--	1712	--	1812	--
Waitara (Queen Street)	--	--	--	0750	--	0850	--	0950	--	1050	--	1150	--	1250	--	1350	--	1450	--	1550	--	1650	--	1750	--	1850
Waitara (Cracroft St/ Norman St)	--	--	--	0755	--	--	--	0955	--	--	--	1155	--	--	--	1355	--	--	--	1555	--	--	--	1755	--	--
Waitara (Gold St)	--	--	--	--	--	0855	--	--	--	1055	--	--	--	1255	--	--	--	1455	--	--	--	1655	--	--	--	1855
Waitara (Gold St)	--	0655	--	--	--	0855	--	--	--	1055	--	--	--	1255	--	--	--	1455	--	--	--	1655	--	--	--	--
Waitara (Cracroft St/ Norman St)	--	--	--	0755	--	--	--	0955	--	--	--	1155	--	--	--	1355	--	--	--	1555	--	--	--	1755	--	--
Waitara, (Queen Street)	--	0700	--	0800	--	0900	--	1000	--	1100	--	1200	--	1300	--	1400	--	1500	--	1600	--	1700	--	1800	--	--
Bell Block (Mangati Rd/Trimble Pl)	0635	--	0735	--	0835	--	0935	--	1035	--	1135	--	1235	--	1335	--	1435	--	1535	--	1635	--	1735	--	--	--
Bell Block (Parklands Ave)	0642	--	0742	--	0842	--	0942	--	1042	--	1142	--	1242	--	1342	--	1442	--	1542	--	1642	--	1742	--	--	--
The Valley Megacentre	0650	0720	0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750	1820	--	--
CBD, Ariki St (Bay D)	0705	0735	0805	0835	0905	0935	1005	1035	1105	1135	1205	1235	1305	1335	1405	1435	1505	1535	1605	1635	1705	1735	1805	1835	--	--
Base Hospital (Ante Natal Clinic)	0720	0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750	1820	1850	--	--

Saturday Service

Route Number	3	3	3	3	3	3
Base Hospital (Ante Natal Clinic)	0700	0900	1100	1300	1500	1700
CBD, Ariki St (Bay E)	0710	0910	1110	1310	1510	1710
The Valley Megacentre	0722	0922	1122	1322	1522	1722
Bell Block (Parklands Ave)	0730	0930	1130	1330	1530	1730
Waitara (Queen Street)	0750	0950	1150	1350	1550	1750
Waitara (Cracroft St/ Norman St)	--	0955	--	1355	--	1755
Waitara (Gold St)	0755	--	1155	--	1555	--
Waitara (Gold St)	0755	--	1155	--	1555	--
Waitara (Cracroft St/ Norman St)	--	0955	--	1355	--	--
Waitara, (Queen Street)	0800	1000	1200	1400	1600	--
Bell Block (Parklands Ave)	0820	1020	1220	1420	1620	--
The Valley Megacentre	0825	1025	1225	1425	1625	--
CBD, Ariki St (Bay D)	0840	1040	1240	1440	1640	--
Base Hospital (Ante Natal Clinic)	0850	1050	1250	1450	1650	--

Appendix A: Route 5 City Centre - Frankleigh Park

CBD, Ariki St (Bay C)	0725	0900	1100	1300	1445	1600	1730
Glenpark Avenue (Parsons St)	0732	0907	1107	1307	1452	1607	1737
Doralto Road (Govett Ave)	0737	0912	1112	1312	1457	1612	1742
Frankley Road (Maratuhu St)	0742	0917	1117	1317	1502	1617	1747
CBD, Ariki St (Bay C)	0755	0930	1130	1330	--	1630	1800

Notes	(a)	(b)	(c)	(d)
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(a) Bus then runs empty to Mangorei School to start Route 12 at 0810

(b) Bus runs empty from Route 12 FDMC at 0837 to start this journey at Ariki St

(c) Journey terminates at Frankley Rd (Clawton St) and runs empty to FDMC for Route 12 at 1515

(d) Orbiter Route 52 terminating at Ariki St at 1538 can operate this journey

No Saturday Service

Appendix B: Current and Proposed Route Statistics and Cost Variations

Current Network											
Route No	Round Trips per Weekday	Rounds Trips Per Saturday	KM per trip	Weekday KM Per Day	Saturday KM per Day	Timetable Hours per Trip	Weekday Hours per Day	Saturday Hours per Day	Weekly Total KM	Weekly Total TT Hours	PVR
1	14	-	12.95	181.30	--	0.60	8.40	-	906.50	42.00	1
2	14	-	13.71	191.94	--	0.60	8.40	-	959.70	42.00	1
3	14	-	9.35	130.90	--	0.60	8.40	-	654.50	42.00	1
New 3B	-	-	-	-	--	-	-	-	-	-	-
New 3W	-	-	-	-	--	-	-	-	-	-	-
4	14	-	13.23	185.22	--	0.60	8.40	-	926.10	42.00	1
5	14	-	10.61	148.54	--	0.60	8.40	-	742.70	42.00	1
6	14	-	12.80	179.20	--	0.60	8.40	-	896.00	42.00	1
7	14	-	12.04	168.56	--	0.60	8.40	-	842.80	42.00	1
8	14	-	14.93	209.02	--	0.60	8.40	-	1,045.10	42.00	1
9	13	-	11.99	155.87	--	0.60	7.80	-	779.35	39.00	1
10	-	2	21.80	-	43.60	0.75	-	1.50	43.60	1.50	-
11	-	2	22.83	-	45.66	1.00	-	2.00	45.66	2.00	-
20	6	-	47.48	284.88	--	1.75	10.50	-	1,424.40	52.50	1
TOTALS	131	4		1,835.43	89.26		85.50	3.50	9,266.41	431.00	10

Proposed Network Option 1 - Hourly Frequency																		
Route No	Round Trips per Weekday	Rounds Trips Per Saturday	KM per trip	Weekday KM Per Day	Saturday KM per Day	Timetable Hours per Trip	Weekday Hours per Day	Saturday Hours per Day	Weekly Total KM	Weekly Total TT Hours	PVR	Weekly KM Change	Weekly Hours Change	PVR Change	Weekly KM Cost Change @1.80/km	Weekly Hours Cost Change @\$35/hr	Weekly PVR Cost Change @ \$600pv	Total Weekly Cost Change
1	12	6	12.95	155.40	77.70	0.60	7.20	3.60	854.70	39.60	0.67	- 51.80	- 2.40	- 0.333	-\$ 93.24	-\$ 84.00	-\$ 199.80	-\$ 377.04
2	12	6	12.63	151.56	75.78	0.60	7.20	3.60	833.58	39.60	0.67	- 126.12	- 2.40	- 0.333	-\$ 227.02	-\$ 84.00	-\$ 199.80	-\$ 510.82
Old 3	-	-	-	-	-	-	-	-	-	-	-	- 654.50	- 42.00	- 1.000	-\$ 1,178.10	-\$ 1,470.00	-\$ 600.00	-\$ 3,248.10
3B	6	-	28.59	171.54	-	1.92	11.52	-	857.70	57.60	1.00	857.70	57.60	1.000	\$ 1,543.86	\$ 2,016.00	\$ 600.00	\$ 4,159.86
3W	7	6	48.94	342.58	293.64	1.92	13.44	11.52	2,006.54	78.72	1.00	2,006.54	78.72	1.000	\$ 3,611.77	\$ 2,755.20	\$ 600.00	\$ 6,966.97
4	11	5	15.66	172.26	78.30	0.60	6.60	3.00	939.60	36.00	0.67	13.50	- 6.00	- 0.334	\$ 24.30	-\$ 210.00	-\$ 200.40	-\$ 386.10
5	7	-	10.05	70.35	-	0.60	4.20	-	351.75	21.00	-	- 390.95	- 21.00	- 1.000	-\$ 703.71	-\$ 735.00	-\$ 600.00	-\$ 2,038.71
6	11	5	12.97	142.67	64.85	0.60	6.60	3.00	778.20	36.00	0.67	- 117.80	- 6.00	- 0.333	-\$ 212.04	-\$ 210.00	-\$ 199.80	-\$ 621.84
7	12	5	10.04	120.48	50.20	0.60	7.20	3.00	652.60	39.00	0.67	- 190.20	- 3.00	- 0.333	-\$ 342.36	-\$ 105.00	-\$ 199.80	-\$ 647.16
8	12	5	13.68	164.16	68.40	0.60	7.20	3.00	889.20	39.00	0.67	- 155.90	- 3.00	- 0.334	-\$ 280.62	-\$ 105.00	-\$ 200.40	-\$ 586.02
Old 9	-	-	-	-	-	-	-	-	-	-	-	- 779.35	- 39.00	- 1.000	-\$ 1,402.83	-\$ 1,365.00	-\$ 600.00	-\$ 3,367.83
Old 10	-	-	-	-	-	-	-	-	-	-	-	- 43.60	- 1.50		-\$ 78.48	-\$ 52.50	\$ -	-\$ 130.98
Old 11	-	-	-	-	-	-	-	-	-	-	-	- 45.66	- 2.00		-\$ 82.19	-\$ 70.00	\$ -	-\$ 152.19
Old 20	-	-	-	-	-	-	-	-	-	-	-	- 1,424.40	- 52.50	- 1.000	-\$ 2,563.92	-\$ 1,837.50	-\$ 600.00	-\$ 5,001.42
TOTALS	90	38					71.16	30.72	8,163.87	386.52	6	- 1,102.54	- 44.48	- 4.000	-\$ 1,984.57	-\$ 1,556.80	-\$ 2,400.00	-\$ 5,941.37

Proposed Network Option 2 - Half Hourly Frequency

Route No	Round Trips per Weekday	Rounds Trips Per Saturday	KM per trip	Weekday KM Per Day	Saturday KM per Day	Timetable Hours per Trip	Weekday Hours per Day	Saturday Hours per Day	Weekly Total KM	Weekly Total TT Hours	PVR	Weekly KM Change	Weekly Hours Change	PVR Change	Weekly KM Cost Change @1.80/km	Weekly Hours Cost Change @\$35/hr	Weekly PVR Cost Change @ \$600pv	Total Weekly Cost Change
1	24	6	12.95	310.80	77.70	0.60	14.40	3.60	1,631.70	75.60	1.33	725.20	33.60	0.334	\$ 1,305.36	\$ 1,176.00	\$ 200.40	\$ 2,681.76
2	24	6	12.63	303.12	75.78	0.60	14.40	3.60	1,591.38	75.60	1.33	631.68	33.60	0.334	\$ 1,137.02	\$ 1,176.00	\$ 200.40	\$ 2,513.42
Old 3	-	-	-	-	-	-	-	-	-	-	-	654.50	42.00	1.000	-\$ 1,178.10	-\$ 1,470.00	-\$ 600.00	-\$ 3,248.10
3B	13	-	28.59	371.67	-	1.92	24.96	-	1,858.35	124.80	2.00	1,858.35	124.80	2.000	\$ 3,345.03	\$ 4,368.00	\$ 1,200.00	\$ 8,913.03
3W	13	6	48.94	636.22	293.64	1.92	24.96	11.52	3,474.74	136.32	2.00	3,474.74	136.32	2.000	\$ 6,254.53	\$ 4,771.20	\$ 1,200.00	\$ 12,225.73
4	23	5	15.66	360.18	78.30	0.60	13.80	3.00	1,879.20	72.00	1.33	953.10	30.00	0.332	\$ 1,715.58	\$ 1,050.00	\$ 199.20	\$ 2,964.78
5	7	-	10.05	70.35	-	0.60	4.20	-	351.75	21.00	-	390.95	21.00	1.000	-\$ 703.71	-\$ 735.00	-\$ 600.00	-\$ 2,038.71
6	23	5	12.97	298.31	64.85	0.60	13.80	3.00	1,556.40	72.00	1.33	660.40	30.00	0.334	\$ 1,188.72	\$ 1,050.00	\$ 200.40	\$ 2,439.12
7	23	5	10.04	230.92	50.20	0.60	13.80	3.00	1,204.80	72.00	1.33	362.00	30.00	0.334	\$ 651.60	\$ 1,050.00	\$ 200.40	\$ 1,902.00
8	23	5	13.68	314.64	68.40	0.60	13.80	3.00	1,641.60	72.00	1.33	596.50	30.00	0.332	\$ 1,073.70	\$ 1,050.00	\$ 199.20	\$ 2,322.90
Old 9	-	-	-	-	-	-	-	-	-	-	-	779.35	39.00	1.000	-\$ 1,402.83	-\$ 1,365.00	-\$ 600.00	-\$ 3,367.83
Old 10	-	-	-	-	-	-	-	-	-	-	-	43.60	1.50	-	-\$ 78.48	-\$ 52.50	\$ -	-\$ 130.98
Old 11	-	-	-	-	-	-	-	-	-	-	-	45.66	2.00	-	-\$ 82.19	-\$ 70.00	\$ -	-\$ 152.19
Old20	-	-	-	-	-	-	-	-	-	-	-	1,424.40	52.50	1.000	-\$ 2,563.92	-\$ 1,837.50	-\$ 600.00	-\$ 5,001.42
TOTALS	173	38		2,896.21	708.87	-	138.12	30.72	15,189.92	721.32	12	5,923.51	668.82	2.000	\$ 10,662.32	\$ 10,161.20	\$ 1,200.00	\$ 22,023.52

Appendix C: Proposed Bus Stop Additions and Removals

Service	Proposed Stop Addition	Proposed Stop Removal
1	17 Findlay Street Portview Drive / Centennial Drive Junction	None
2	65 Omata Road 115 Omata Road	5 Blagdon Road Opposite 48 Blagdon Road 16 Endeavour Street 64 Endeavour Street
Old 3	None	33 Omata Road 50 Omata Road 108 Tukapa Street
New 3	<p>New Plymouth</p> <p>591 Devon Street East</p> <p>Bell Block</p> <p>6 Nugent Street 9 Nugent Street</p> <p>131 Parklands Avenue 132 Parklands Avenue</p> <p><i>6 Wills Road</i> 11 Wills Road 45 Wills Road <i>48 Wills Road</i> <i>116 Wills Road</i> 123 Wills Road 19 Tiromoana Crescent <i>Opposite 19 Tiromoana Crescent</i> 62 Dillon Drive <i>77 Dillon Drive</i> 28 Dillon Drive <i>29 Dillon Drive</i> 86 Mangati Road <i>87 Mangati Road</i></p> <p>Waitara</p> <p>9 Nelson Street</p>	<p>Bell Block</p> <p>Bell Block School 20 Wynyard Street 16 Nugent Street</p> <p>Waitara</p> <p>159 Raleigh Street 7 Raleigh Street 69 Cracroft Street</p>

Appendix C: Proposed Bus Stop Additions and Removals

Service	Proposed Stop Addition	Proposed Stop Removal
	10 Nelson Street 76 McLean Street 70 Cracroft Street 57 Grey Street 34 Queen Street Gold Street / Leslie Street Intersection 23 High Street East 16 Ihaia Street 59 Clifton Drive 1 Clifton Drive 2 North Street	
4	183 Seaview Road Borrell Avenue / Sunley Street intersection (both sides) 77 Tukapa Street 141 Tukapa Street 13 Waimea Street 10 Omata Road 150 Pembroke Street 22 Tavistock Street 60 Tavistock Street 4 Tavistock Street 32B Sanders Avenue 33 Sanders Avenue	175 Tukapa Street 196 Tukapa Street
5	None	322 Frankley Road
6	410 Carrington Road 484 Carrington Road 39 Manu Crescent 188 Brooklands Road 189 Brooklands Road 31 Hori Street 34 Hori Street 3 Hori Street	275 Carrington Street 297 Carrington Street 327 Carrington Street St Pius School / Brooklands Road 70 Brooklands Road 32 Victoria Road 3 Gilbert Street

Appendix C: Proposed Bus Stop Additions and Removals

Service	Proposed Stop Addition	Proposed Stop Removal
	226 Carrington Street 180 Carrington Street 132 Carrington Street 100 Carrington Street 68 Carrington Street Opposite 31 Pendarves Street NPDC Offices	
7	8 Puketotara Street Opposite 29 Junction Street	84 Awanui Street 3 Nevada Drive 53 Nevada Drive
8	180 Mangorei Road	48 Riversdale Drive 26 Kauri Street
9	None	Barriball Street (Fitzroy School)
10	None	109 Tukapa Street 131 Tukapa Street 33 Omata Road 45 Cook Street 75 Cook Street 109 Cook Street 72 Govett Avenue 85 Brois Street
11	None	111 Cumberland Street 48 Upjohn Street

Note: Stops *highlighted in italics* are not required if new route 3 splits between Bell Block and Waitara.

Appendix D: Proposed Bus Stop Removals and Nearest Alternative

Service	Proposed Stop Removed	Average Number of Passengers per Day	Walk Time to Nearest Alternative Stop (Minutes)
2	5 Blagdon Road	2.14	1
	Opposite 48 Blagdon Road	0.86	7
	16 Endeavour Street	2.45	3
	64 Endeavour Street	3.32	10
Old 3	50 Omata Road	3.64	1
New 3	Bell Block		
	Bell Block School	4.45	4
	20 Wynyard Street	0.45	4
	16 Nugent Street	5.32	1
	Waitara		
	159 Raleigh Street	0.73	23
7 Raleigh Street	2.68	5	
4	108 Tukapa Street	0.18	2
	175 Tukapa Street	2.27	4
	196 Tukapa Street	12.68	1
5	322 Frankley Road	2.91	7
6	275 Carrington Street	4.45	2
	297 Carrington Street	0.77	5
	327 Carrington Street	3.45	2
	St Pius School / Brooklands Road	20.36	4
	70 Brooklands Road	1.09	17
	32 Victoria Road	1.55	6
	3 Gilbert Street	1.50	3
7	84 Awanui Street	0.23	5
	3 Nevada Drive	6.50	8
	53 Nevada Drive	3.55	3
8	48 Riversdale Drive	2.05	7
	26 Kauri Street	2.41	4
9*	Barriball Street (Fitzroy School)	15.32	6

* Bus stops in Glen Avon will remain for school use, but nearest bus stop serviced by Citylink urban services is at The Valley (19-minute walk).

Appendix E: Proposed Connector Timetable

Bus Working	1	2	3	1	2	1	3	2
Hawera Hospital	0610	-	-	0950	-	1325	-	1525
Hawera I-Site	0615	0700	0700	0955	-	1330	-	1530
Stratford	0650	0735	0735	1030	-	1405	-	1605
Inglewood	0710	0755	0755	1050	-	1425	-	1625
WITT/NPBHS	0730	0820	-	1110	-	1445	-	1645
SHGC	-	-	0835	-	-	-	-	-
CBD, Egmont St	0740	-	0845	1120	-	1455	-	1655
FDMC	-	0830	-	-	-	-	-	-
Base Hospital	0750	0835	-	1130	-	1505	-	1705
Base Hospital	0800	-	-	1140	1340	1515	-	1715
FDMC	-	-	-	-	-	1520	-	-
CBD, Egmont St	0810	-	-	1150	1350	-	1520	1725
SHGC	-	-	-	-	-	-	1530	-
WITT/NPBHS	0820	-	-	1200	1400	1540	-	1735
Inglewood	0840	-	-	1220	1420	1600	1600	1755
Stratford	0900	-	-	1240	1440	1620	1620	1815
Hawera I-Site	0935	-	-	1315	1515	1655	1655	1850
Hawera Hospital	0940	-	-	1320	1520	-	-	1855