City of Ballarat Integrated Transport Plan Urban Transit discussion paper

Feedback from the Public Transport Users Association

Overview

The PTUA thanks the City of Ballarat for its initiative in pursuing a detailed discussion paper on its urban transit system, and welcomes the opportunity to provide feedback.

The discussion paper makes good points about the need for an improved bus network in order to drive mode shift away from cars and onto public transport. As the paper notes, the main problems with Ballarat's current bus network are the inefficient routes and the heavily-padded timetables; many of the other problems identified are symptomatic of these core problems. Fixing these problems would also provide the opportunity to actively improve the service offering, by reinvesting savings into increased frequencies and/or spans of hours.

The paper also provides a clear, sequential model for how improving bus services interacts with the goal of increasing dense, highly-livable corridors, and how improvements on both measures can begin a feedback loop which leads to further improvements. The PTUA strongly supports this model as a way of ratcheting up improvements to our transport network and urban form over the coming years.

We do have some concerns about some of the suggestions for altering timetables in an attempt to improve the services within existing funding envelopes. These need to be considered in detail and with specifics, so it is often difficult to make blanket statements in advance of a draft timetable, and we approach such suggestions with caution; we suggest City of Ballarat and the State government should too.

A key missing aspect of this report is the problem of climate change, and how Ballarat's bus network can help address it. By carrying more people, buses are more resource-efficient than private cars, so encouraging mode shift away from private cars and onto the existing diesel buses would have a positive impact in the fight against climate change. However, in due course it will still be important to decarbonise our buses, and replace them with either battery electric and/or hydrogen powered buses. As outlined in the PTUA's Connecting Ballarat paper, these technologies are now mature and are ready for the transition to begin; we would encourage the City of Ballarat to include the transition in its lobbying to the State government. Small-scale tests (ie individual buses) are currently underway in Melbourne; the next step is a larger-scale test, to transition a whole depot from diesel to one of the cleaner types. As Ballarat is a relatively small, self-contained network, run by only one bus operator, it would be an ideal test site for this next phase.

2.1 Population

The PTUA agrees that Ballarat is growing fast, and that this growth cannot be served solely by cars; whether walking, cycling or public transport, the broad direction of the ITP must be to encourage mode shift away from private car use.

It is well noted that, while the CBD is the largest single destination, it is not the destination of the majority of trips. Wendouree is another key focal point, but the pattern is broadly one where people travel from anywhere to anywhere; our bus system should be able to facilitate all those trips.

The report notes that "only 5% of train passengers access the train via bus (even with the best possible bus-train connections to every service)". While the 5% figure may be accurate, the PTUA would dispute the assertion that this number reflects "the best possible connections to every service". In short, these connections are far from "the best possible", and as long as the fundamental issues with the bus network remain, the current 5% figure cannot be taken as a true reflection of the number of people who would take the bus to the station if it were better.

As the PTUA's Connecting Ballarat paper noted, commuters who wish to catch the 5:21am train from Ballarat station have no bus service which will deliver them to the station early enough; only some routes run early enough to connect with the next train at 6:15am. At the other end of the day, commuters who catch the 5:10pm or 5:50pm trains should have a connecting bus by the time they reach Ballarat, but those who catch the 6:23pm train - or any train after it - do not.

If a person cannot be assured that there will be a bus available for both legs of their journey, they will drive - so these issues with the span of hours act as a significant deterrent to train commuters using the bus network.

Similarly, many of the timetabling issues noted in the Connecting Ballarat paper (as well as this paper) can mean even in the middle of the day when all routes are running, they connect more poorly with trains than the timetables might indicate (see case study "Early, then late" for more details). This is without even considering the general deterrent effect of the slow, meandering bus routes when compared to fast, direct car travel.

2.3 Congestion

The report notes a relatively small amount of congestion on Ballarat's roads is likely in the 2031 forecasts, and suggests that bus priority measures such as dedicated lanes and signals may be necessary to prevent congestion slowing down buses. Such measures are already essential in congested cities like Melbourne, and may one day be required in Ballarat. City of Ballarat should certainly raise this prospect with the State government on appropriate intersections. However, in the interim there may be low-hanging fruit that can be obtained more quickly, easily and cheaply to reduce the impact of traffic congestion.

Ballarat's bus routes are often impacted by congestion even today, but this is largely symptomatic of poor route design and/or outdated traffic flow assumptions. For example, outbound buses currently leave Ballarat station on Lydiard Street, and turn left at the lights onto Mair Street (usually without undue delays). After travelling a few blocks down Mair Street, they must make a right-hand turn at the lights onto Peel Street; this set of signals strongly prioritises through traffic along Mair Street, and has quite a short right arrow phase, which means that only a few vehicles can make the turn in a single cycle. Particularly given that bus timetables are designed in a "pulse" system that causes many buses to leave the station in rapid succession, it's common for buses to get stuck behind each other (as well as general car traffic) waiting to turn right at this intersection. Buses similarly struggle to turn off Peel Street onto Little Bridge Street; there is again only a short right arrow phase, and while this is not followed by a red arrow (instead followed by a general green phase) the amount of oncoming traffic at peak times hampers the ability to make right-hand turns. After the Little Bridge Street interchange, different routes take different paths depending on their destination, but for example Routes 21 and 23 must make another right-hand turn off Eastwood Street onto Peel Street at a signalled intersection, which can again cause delays. Inbound buses have fewer of these issues (as they make predominantly left turns rather than right turns) but nonetheless are still impacted by the choice of a zigzagging route.

These issues could potentially be solved by giving buses traffic light priority, but this is a relatively complex technical fix, which can be expensive and therefore may be difficult to convince the State government to implement. However, it's likely that similar gains could be made by simply straightening out the routes and reducing the number of right-hand turns that need to be made at busy intersections in the CBD. The pre-2016 network covered nominally the same parts of the CBD

and had to deal with a comparable traffic environment, and it had far fewer issues with congestion; by making smart route choices it should be possible to achieve a faster, more free-flowing network for effectively no cost. The proposed routes in the PTUA's Connecting Ballarat document were drawn up with this in mind, and while these exact paths may not ultimately chosen, these principles should form part of the consideration of the routing through the CBD in any future reforms.

Alternately, or in addition to re-routing, it may be possible to simply tweak the timings of the existing traffic signals in order to improve bus flows. It's likely the assumptions around the current timings have not been reevaluated since the bus network changed; simply making the green right arrow last a few seconds longer each cycle might make a significant improvement to traffic flow.

2.7 Travel times

The report notes well the issues with timetable padding, and it is pleasing to see this quantified much more comprehensively than was possible for the Connecting Ballarat proposal.

However, figure 2-6 does somewhat distort the actual PT catchment; Ballarat's bus network is certainly slower than driving, but not by the margin shown. This image is effectively showing how far it is possible to travel by public transport at all, not how far it is possible to travel within 60 minutes. For example, it seems to imply that it takes 60 minutes to get to the Buninyong terminus of Route 21, when in fact it takes 38 minutes; or that it takes 60 minutes to get to Delacombe Town Centre, when in fact it takes about 25 minutes. In fact, almost all destinations within Ballarat are reachable within 30-40 minutes by bus, but the outliers deserve attention. Miners Rest, for example, has a dramatically slower service than other parts of Ballarat, due in part to the need to interchange between infrequent and poorly-coordinated routes - but this image makes it seem like it's pretty much on equal footing to every other route in town.

It would therefore be more accurate to show the different modes on the same time scale; for example, how far a person can get in 30 minutes by either bus or car. This would still show that buses are much slower, as only about half the distance could be covered, but it would be more accurate - and would show how some parts of Ballarat receive much quicker service than the rest.

2.8 Patronage

In addition to the points the paper makes about the high-patronage routes tending to serve key destinations, it is also noteworthy that patronage seems to be broadly correlated with the straightness and frequency of the routes.

Even with the problems these routes face, the pattern is noticeable - providing better service leads to higher patronage.

3.1 Principles

The PTUA concurs with the principles outlined here. While many of these principles will require State government support, it will be important for the City to do its part as well.

It is important to note that this may require some bold action by the City, not just allowing for it to happen. Densifying the urban core and increasing infill development will be crucial to the plan's success, and while the City of Ballarat has indicated support for these measures in the past, the uptake has been lower than required - too much of our growth remains on the urban fringes. This is at least in part because developing greenfields sites on the urban fringe is cheaper and easier than infill developments, so as long as fringe land is abundantly available, developers will prefer to use it. It may therefore mean that the City needs to delay the release of further land on the urban fringe,

and/or reduce the size of land released, in order to level the playing field somewhat for infill development. Such a move may be unpopular in some quarters, but necessary - we cannot continue with the sprawl we've seen in recent years.

4.1.1 Plan for Highest Quality Services in Convenience Living Corridors

The PTUA is strongly supportive of the paper's approach to improving bus services along key corridors.

In addition to these suggestions, and in the spirit of the integrated nature of the plan, we would note that it will be important to improve active transport infrastructure along the same corridors - given the many benefits of such improvements, they should be prioritised for completion as early as possible. It will not only be necessary to improve bus stops themselves, but to ensure that there is good walkability for 400m in every direction from each bus stop, so that people can safely and easily access the bus stops. This would at a minimum include footpaths on both sides of the street, and may require more serious intervention in some locations where traffic is heavy and/or vehicle speeds are high - such as curb outstands, central median buffers, wombat crossings, etc as may be appropriate for each location.

This report largely takes the designated corridors from the Ballarat Strategy without further discussion. While most of these corridors are ideal, some are imperfect, and given that the Ballarat Strategy is now five years old - and that the Integrated Transport Plan is centred around these corridors - now may be the time to update these to reflect best practice. See detailed discussion in the Response to the Draft ITP document.

4.1.2 Service Improvements With Existing Resources

The paper makes the point that the current bus network, both in its routing and its timetabling, is heavily geared towards connecting people with trains, and that therefore all buses arrive at Ballarat station (and leave Ballarat station) in quick succession, leaving large service gaps even on routes with many buses. It notes that only 5% of train passengers reach the station by bus, and questions the wisdom in having a system so focussed on connecting with trains with relatively little regard for intra-Ballarat trips. It also notes an area outside of central Ballarat where multiple routes converge and have unevenly-spaced timetables: the Mount Clear - FedUni corridor. It recommends that these corridors which see four or more buses per hour have their timetables more evenly spaced to reduce wait times.

The timing of buses to all arrive at Ballarat Station at roughly the same time is known as a "pulse" timetable, and is designed to serve two purposes - to allow for easy interchange between buses and trains, and to allow easy interchange between bus routes. Broadly it does achieve the goal of allowing easy interchange between bus routes, though the incredibly poor routing choices (sending buses zigzagging around Bridge Mall on both the inbound and outbound legs) obscures this to a large degree. It also broadly achieves its goal of connectivity with trains, with the exception of those routes where the combination of extra-CBD timetable padding and intra-CBD congestion causes significant late running at peak times (see Connecting Ballarat case study "Early, then late"). Breaking this connectivity should not be done lightly; numbers using the buses to connect to trains may be low now, but if we want any chance of reducing pressure on car parking at the stations, good bus connections will be absolutely crucial.

The timing of buses in the Mount Clear-FedUni corridor are aligned for a different reason - they align well with university class times, and with worker shift times at the university itself, as well as the

private businesses on the campus and at the adjacent Tech Park. Outbound buses arrive shortly before the hour and the half-hour, allowing students to get to class on time and workers to get to their desks on time; inbound buses depart shortly after the hour and the half-hour, allowing students and workers time to finish up and get to the bus stop, and have a minimal wait before heading home (or back to the railway station for onward connections).

The point of increasing frequencies and reducing wait times is to give people more choice in when to travel; this makes sense in a corridor with mixed uses and people wanting to travel at essentially random times, but people with fixed class and shift times have very rigid travel needs, and the existing arrival and departure times meet those needs quite well.

In June 2015, at the launch of the Regional Rail Link, PTV conducted an exercise in "service improvements with existing resources" and revamped the timetables of all bus routes (while leaving the existing route structure in place). This was a disaster, particularly on the Buninyong route; inbound buses would leave slightly before the hour and the half-hour, meaning students either needed to leave class early, or leave on time and have a 25 minute wait for the next bus. This cannot be allowed to happen again; providing a timetable that works well for the key users must be the priority, and evenly-spaced service frequencies should only be implemented if it can be done in a way which does not interfere with this.

The Sturt Street corridor, on the other hand, is not so tied to a single trip generator, and buses along here need to serve many different types of trip - so the idea of staggering buses to achieve lower wait times has much more merit here. However even here, due consideration should be given to how this will affect connection times between buses and trains, and any proposal to break these connections should be approached with extreme caution. The PTUA would need to see specific timetables before being able to determine whether the changes would be a net gain or loss.

There is one significant exception to this discussion. Currently, Routes 10 and 13 follow the same path from Ballarat Station to the corner of Norman and Doveton Streets, at which point Route 13 continues north to Invermay and Route 10 heads west to Wendouree. Both routes run hourly, but are timetabled to leave and depart from Ballarat Station at approximately the same time - meaning people in this corridor see two buses in sixty seconds, then no buses for the next 59 minutes. As with other routes, they are timetabled to connect with trains at Ballarat Station; however, Route 10 also passes by Wendouree Station. If Route 10 were offset by 30 minutes, it would break the connection with trains at Ballarat Station, but connect fairly well with trains at Wendouree Station instead. In this case, offsetting the buses would effectively double the frequency in the shared corridor, while maintaining connectivity with the rail network.

The PTUA maintains that investment in buses is incredibly important and worthwhile, and that the State government must accept that they will never get a truly good bus network unless they are willing to pay for it. However, if service improvements with existing resources are the name of the game, the PTUA notes that the paper has outlined several ways of improving the efficiency of the existing bus network. If routes on opposite sides of town were connected and through-routed along sensible paths, this would mean an appreciable drop in vehicle km travelled (and therefore driver time/wages) while maintaining coverage, because buses wouldn't have to back-track so much. If timetables were rewritten to get rid of excess padding, this would also save considerable driver time. These two changes on their own could result in significant savings of driver time, which in a cost-neutral scenario could be reinvested into higher frequencies; this would be the preferred way to reduce wait times on those key corridors. In any case, once frequencies are higher, planning specific connections becomes less important, and staggering buses may become more feasible.

4.1.3 Connecting Ballarat's Suburbs - Moving Beyond a CBD-direct/cented network

The PTUA supports the points made in this section, notably the desirability of linking CBD-centric routes to allow passengers to travel through the CBD without needing to interchange, and the desirability of non-CBD routes that would allow suburb-to-suburb passengers a more direct trip.

In particular, we would note that a direct Wendouree-Delacombe route was considered for inclusion in the 2018 Connecting Ballarat proposal, potentially as part of a "purple orbital" that would link our proposed Routes 10 & 11. The route was not included at that time, as it was felt that more growth was needed before it became a priority - but now, in 2020, it is clear that that growth has happened more quickly than we anticipated, and such links will be crucial in any bus reform that happens in the next few years.

The suggestion that this Wendouree-Delacombe link could be an extension of the existing Miners Rest route is a very good idea.

We do note that in Figure 4-6, the first and second routes are shown as terminating at Wendouree Station. While we understand that this is not necessarily designed to convey the whole route, and can be considered the "core" section of the route, we do feel that Stockland Wendouree is a sufficiently large trip generator that it should be considered part of the "core"; high-frequency buses should call at Wendouree Station then head north to Stockland.

4.1.4 Servicing residential growth areas

The report notes well the issues with the lack of public transport in Ballarat's new western fringe suburbs, and the urgent need to extend the network to cover these areas. However, the suggested route extensions included are not particularly well-designed.

The proposed Route 26 extension would take what is currently one of the quickest and most direct bus corridors in Ballarat, and turn it into a slow, meandering mess. We would instead suggest that this growth area be served by a new route along La Trobe Street, which would also serve one of the Convenience Living corridors which does not currently have any bus service.

The proposed Route 25 extension has some merit in its own right, but would mean a tradeoff that took coverage away from another Convenience Living corridor; so doing this would mean another route would need to replace that section. Instead, we would suggest that this growth area be served by the aforementioned Wendouree-Delacombe extension of the Miners Rest route (which could provide a one-seat journey to the rail network and many key facilities, and a two-seat journey to other destinations).

The proposed Route 24 extension would represent an acceptable change from the status quo, which is already quite squiggly. However, as it stands this route is less direct than it should be, and the PTUA's Connecting Ballarat proposal suggested straightening it out (and extending the Albert Street route) to make for a more direct service while maintaining coverage. In 2018, the PTUA's version deviated off Tait and Crown streets to hew closer to existing developments on Walker and Kossuth Streets, however the intention was always to make this a more sensible rhombus along Tait and Crown in the future. In 2020, with much more housing built and the Bonshaw Early Learning Centre open, it would now be appropriate to do this.

The potential new route in figure 4-9 has some merit, but it would serve very different needs to the suggested route extensions, so should not be considered as a direct alternative.

In a broad sense, it is the PTUA's view that accessibility by public and active transport should be given more weight when council is conducting strategic planning for growth corridors. The "south west" and "west of west" options may have looked like strong candidates on other criteria, but as this section highlights, they are a long way from rail heads and existing activity centres, and are extraordinarily difficult to serve by public transport. Council should consider the potential to build new localities, centred around new railway stations, west of Wendouree along the Ararat line, or north of the Freeway on the Maryborough line. These developments could be planned with mini-CBDs, with space allocated for a railway station being used as a bus terminal until approval and funding for said station was forthcoming from the State government. They could have walkable centres of shops and jobs immediately adjacent to the station site, with mixed-use streets fading into principally-residential streets further away from the station site. In addition to being on a rail head, these locations would align well with existing fast, direct bus corridors along arterial roads (Remembrance Drive and the Midland Highway).

4.1.5 Making routes simple and direct

The PTUA agrees with the paper's assessment of routes in Ballarat East. The routes proposed in the Connecting Ballarat paper would present an alternative route structure that would address these concerns.

4.1.6 Improve service speed and reduce travel time variability

The PTUA concurs with the paper's assessment of the artificial inflation of timetabled journey times, and considers this a high priority for reform.

4.1.7 Improved Access to Bus Stops

As noted above, the PTUA agrees that the City of Ballarat should make it a priority to ensure bus stops are accessible, with appropriate surrounding footpaths and other supporting infrastructure.

4.1.8 Building Awareness & Promotion

The PTUA concurs with the assessment of the marketing environment.

In addition to the suggestions made in the paper, we suggest that once improvements to the service have been made, there should be visible branding on the buses themselves that make this clear. For example, if one key corridor is given a 10-minute frequency from 6am-9pm, the buses used on this route should be given visually distinct branding - an analogy would be with Perth's CAT bus network, where the frequent Central Area Transit lines have big black panther decals on the sides to make them instantly recognisable. A local precedent for this would be the trial hybrid buses run by CDC in Melbourne, which combine the standard PTV orange gem branding with a green swathe. This kind of on-bus branding would make it clear to users and non-users alike that there had been a significant change to the service and that they should check it out, whereas branding at bus stops is likely to only attract the attention of existing users, and brochures are unlikely to attract significant attention from anyone.

The PTUA is also supportive of the introduction of a Commuter Club for Ballarat passengers. Such a program already exists for travellers in Melbourne Zones 1+2, whereby businesses coordinate with PTV to provide it to their staff. The PTUA provides the Commuter Club to its members, and also administers it on behalf of a number of external organisations (including some municipalities in suburban Melbourne). As such, the PTUA would be happy to assist the City of Ballarat in coordinating such a program for its staff, and/or other businesses in Ballarat.

4.1.9 Precincts - major events/station

Major Events Shuttle

As noted in our response to the Rail discussion paper, it is the PTUA's view that the location on the Maryborough line is a poor choice of site for a new railway station. We reiterate this, and our preference for a new station to be built south of the stadium on the Ararat line. Please refer to our previous submission for detailed reasons.

The need for a shuttle bus service in the interim may have merit, but it depends on what other changes may occur to the bus network in the near future, as well as the anticipated split between Ballaratians and out-of-towners attending events. There should be a holistic approach to determining the travel needs of event attendees.

If the other suggestions made in this paper, our response, and/or the Connecting Ballarat proposal, were to go ahead then this would provide considerable extra connectivity for those coming from within Ballarat itself. In the event that the network were better set up to handle fast cross-town trips, and already had reasonably high frequencies, it may be better to provide something like a "peak" service on this network - temporarily increasing frequencies on existing routes before and after events - rather than introducing distinct shuttles. Given that most events do not coincide with school dropoffs and pickups, this "peak" service could use underutilised school buses and drivers. By stopping at all the usual stops the route uses - rather than an "express" service that only stops at a few key carparks - this option would have a much larger passenger catchment.

For those coming from outside Ballarat, there is likely to be a need for a shuttle bus/coach connection between Ballarat Station and the stadium, for those coming from Ballan, Bacchus Marsh, Melton and Melbourne. However, for those coming from Ararat, Horsham, Maryborough and similar origins, it could be worth V/Line running dedicated "Footy Coaches" from those places to provide a one-seat journey, rather than just a short shuttle. This would provide a more attractive option and be more likely to attract those regional attendees out of their cars.

Wendouree Railway Station

Currently, Wendouree Railway Station presents a huge challenge for bus routing in the area, due to the one-way entrance on Learmonth Rd and the one-way exit on Gillies Street with right-hand turns prohibited.

If we wished to extend the Miners Rest route south to Delacombe, as suggested above, this route could call into Wendouree Station northbound, via a circuitous and time-consuming path. But it would not be possible for the bus to call into the station precinct southbound; it could get into the precinct but not out again, because it would not be possible to make the required right-hand turn onto Gillies Street. The southbound bus would need to simply continue down Gillies Street, with interchanging passengers having to walk back to the station from the Gregory Street stop. A simple stop on the street is good for bus efficiency, but not for passengers with mobility issues who may really need the bus to stop right in the station precinct.

Notably, the recently-announced signalisation of the Gregory Street Intersection will help make this area somewhat more pedestrian-friendly and reduce the difficulty in making the aforementioned interchange. Nonetheless, addressing these issues must be among the highest priorities of the Wendouree Station Master Plan. Buses should be able to get in and out of the precinct quickly and easily in both directions, giving passengers a smooth transfer without having too negative an impact on bus times.

4.2.2 Historic tram network servicing key tourist attractions

Heritage issues are outside the PTUA's remit. However, we do note the potential for any extension to the heritage tram network to also be used by more modern trams, as public transport rather than tourist attraction; the proposed heritage tourist tram would after all align with the Convenience Living corridors. What starts out principally as a tourist tramway could ultimately become a tourist tram that runs on a modern public transport network - something like the Colonial Tramcar Restaurant in Melbourne.

Something akin to Bendigo's heritage tram network, with minimal coverage and primarily single-track, would not really be compatible with running a proper public transport system; to run public transport trams, Ballarat would need a fairly long route of double-track.

It is unlikely these issues will come up for many years, but they do have bearing on things like the choice of alignment for the heritage tram tracks, and on the public transport end, discussions about Melbourne-style trams with conventional overhead electrification vs battery-powered trams, third-rail electrification, "trackless trams", etc. Conversations on these topics should keep both sides of the equation in mind, to future-proof whatever is built.

4.2.3 Achieving a 10 Minute City in Ballarat

The PTUA strongly agrees with the paper's conclusions about the important of densification and intensification on key existing corridors, to combat urban sprawl.

4.3.1 Higher frequency urban transit network serving Convenience Living corridors

It is not really accurate to say that real-time tracking is not yet visible to the public; this information is readily available via the PTV app, and savvy users already make use of this. Providing PIDs at key locations would help make this information more visible to casual users, however the paper seems to be overstating the value of this somewhat. As long as frequencies and other facets of the actual service quality remain poor, PIDs will have at best a marginal impact on ridership.

Broadly, however, the PTUA agrees that the steps in this section provide a good model for improving public transport on key corridors. Provide the best buses you possibly can, help shift the land use along the corridor to something more PT-friendly, use the increases in passengers to justify further bus upgrades, and ultimately use these passenger increases to justify trams.