

Single-minded mania?

In this article, Andrew McLean argues that singling the double-tracked Bendigo line as part of the Regional Fast Rail project is not driven by a desire for an improved railway, but by a desire to reduce future maintenance costs. The author also argues that singling is being carried out in such a way as to make it as difficult as possible for future governments to repair the damage.

N470 hauls 8027 Down Bendigo passenger on the double track approaching Elphinstone tunnel on Friday 29 December 2000. Stuart Turnbull

Introduction

Approximately six months after announcing a two-week review into the proposed singling of the Kyneton – Bendigo line as part of the Regional Fast Rail (RFR) project, Victorian Transport Minister Peter Batchelor announced in November 2003 that he had “listened to the community’s concerns” and that “a single track with three long sections of double track will be built” between Kyneton and Bendigo¹.

People who live along the Bendigo line have expressed repeatedly their clear preferences at public meetings, in the media and to government officials that:

- The main obstacles to reducing travel times are in the suburbs of Melbourne. Most, if not all, of the RFR engineering upgrade project money should be spent there. Realignment and track and signalling upgrades in the metropolitan area will return greater benefits than money spent on similar works in the country.
- Market research conducted by the Department of Infrastructure (DOI) also revealed this, finding that poor reliability and low speeds in the suburbs of Melbourne were by far the greatest concerns of rail users. Meanwhile, the Victorian government and Minister Batchelor continue to argue the politically motivated line that the Government is spending money in regional Victoria because this is where the need is greatest.
- Any concrete sleepers used in the upgrade should be gauge convertible. Minister Batchelor has stated that the Bendigo (and Ballarat) lines could and should never be standardised, no matter what happened in the future, because they were not part of the national network. The Minister further claimed that using gauge convertible sleepers on the Bendigo upgrade would cost “\$25 million extra”, plus “millions more” in legal costs. With 160,000 concrete sleepers being used on the Bendigo upgrade, this equates to \$156 extra per sleeper to make them gauge convertible. This figure is simply not credible. In this magazine, the author has argued previously that gauge standardisation of the Bendigo and Ballarat lines offered many advantages to both rail operators and users², but Transport Minister Batchelor and his minions at the DOI have deliberately made this as difficult as possible for future administrations.

Reliability and frequency for each and every passenger train was far more important than outright speed for one ‘flagship’ train in each direction per day. The retention of double track through to Bendigo was essential for this, even if it meant slowing to pass under so-called ‘heritage structures’. The Minister has stated the exact opposite.

The Government case for a single line

The initial ‘target time’ for trains on the Bendigo corridor proposed by the Government was 80 minutes between Spencer Street station and Bendigo, with the section Spencer Street – Sydenham (24 kilometres) taking 23 minutes and Sydenham – Bendigo (138 kilometres) taking 57 minutes. According to the Government:

“An 80-minute travel time could be achieved for an express service using 180kph rolling stock provided there were extensive works carried out in both the Melbourne metropolitan area and rural areas... The cost of the works is estimated at \$270 million. The estimate is based on the assumption that only one track, with several crossing loops, is required between Sunbury and Bendigo. If both existing tracks are upgraded the cost will be higher.”³

With the failure to attract private sector funding, the 57-minute Sydenham – Bendigo timing was eased to 61 minutes, giving the present 84-minute target time and the idea of singling Sunbury – Kyneton was quietly dropped. But perhaps the most significant shift in the Government’s stance was the changed reason for



The Bendigo line abounds in impressive stone structures. Here, an N class hauls a 3-car N set across Taradale viaduct on Friday 14 February 2003 as 8027 Down Bendigo Passenger. The viaduct is an original structure built in 1861 and was strengthened during the 1930s. Stuart Turnbull

singling Kyneton – Bendigo. Rather than double track being too expensive, it became unsafe.

The Melbourne-Bendigo line was built to a high standard as a double-tracked railway right from the start, with an eye to absorbing future traffic growth, even if two tracks were initially unjustified. Historian Geoffrey Blainey described both the Bendigo and the Geelong – Ballarat lines as having:

“... double tracks and gentle curves, high bluestone houses for stationmasters and arched, stone bridges over lonely stretches of the line in order to save farmers’ and hawkers’ carts from colliding with trains at level crossings. They were also the most expensive country railways ever built in Australia, and £8,000,000 was spent on them in the belief that they would carry heavy traffic; they did, but four trains each way on a busy day did not justify double tracks.”⁴

In the section between Kyneton and Bendigo, there remain numerous examples of these arched masonry bridges over the line and also two tunnels, which have what are by today’s standards limited clearances. The Government rapidly seized upon the notion that a fast double track railway was impossible due to the limited clearances on bridges and in tunnels, and therefore the line would have to be singled. A letter to the author from the DOI is typical:

“Two tracks cannot remain in service in this section without major remodelling of heritage structures to create a safe distance between the two tracks for fast trains.”⁵

Minister Batchelor repeated this argument, in a letter to Mt Alexander Shire Council:

“The Fast Rail services will be travelling at speeds up to 160km/h, and trains will need more space on either side of the track to conform to modern safe clearance standards for high speed train operation. (Providing one high standard track) allows larger radii in curves for faster speeds, avoids the need for costly reconstruction of the Elphinstone and Big Hill tunnels, and keeps open the option for two tracks in future... The single track solution enables smoother, faster and more comfortable journeys...”⁶

Amazingly, singling the line is also supposed to make it more reliable: Minister Batchelor once again:

“While the new design north of Kyneton requires train operations to be managed more precisely, services will be more reliable as the present signalling system, which is prone to breakdowns, will be replaced by a state-of-the-art automatic system, and the faster trains and better infrastructure will allow trains to make up for any lost time.”⁷

Problems with the single track argument

1. Smoother riding trains, but unsafe structures?

At present, there are no speed restrictions due to the arched bridges over straight track, with loco-hauled trains allowed 115km/h and Sprinters 130km/h. Speeds under bridges on curved track are the same as those on curves without bridges, typically 120km/h on 1200m radius curves. Elphinstone tunnel



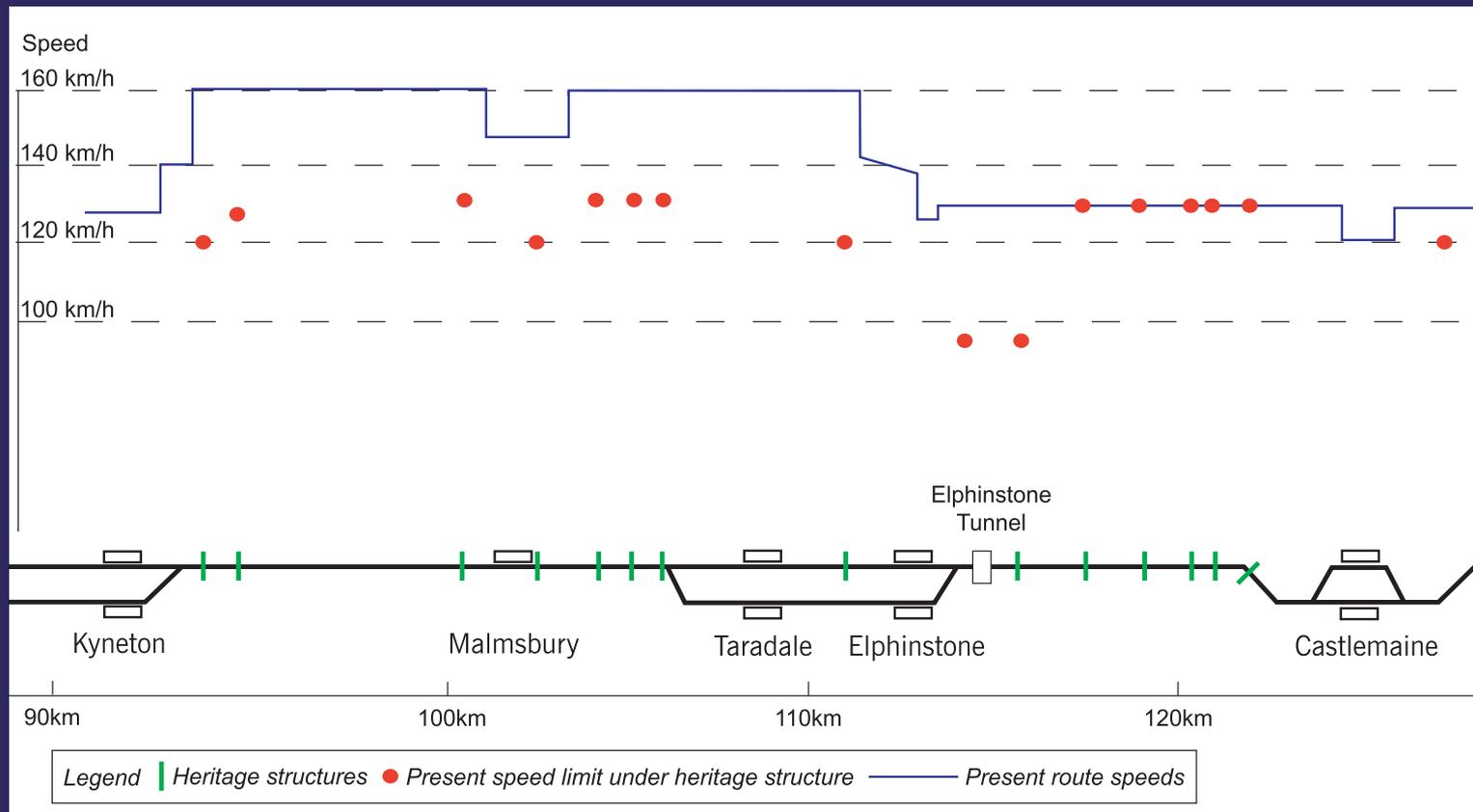
is on a long 1200m radius curve, with a 95km/h speed limit over the whole curve. The author does not know why the speed limit is so low. Big Hill tunnel is straight, and there is no speed restriction, although it is sandwiched between two 1200m curves, both limited to 120km/h. Official documents show 130km/h is allowed through Big Hill tunnel. The Government has stated clearly that the upgraded line must be 'not less safe' than the present line. If Sprinters on today's 'rough' double track can pass under bridges and through a tunnel safely at 130km/h, then surely the new VLocity trains on upgraded track could travel at least slightly faster without being less safe. The DOI has been asked specifically "How can smoother, narrower trains be more likely to strike a bridge or an oncoming train?" and "What is the fastest safe speed on upgraded double track under heritage structures?" but it has as yet refused to answer.

2. Bridges too small, or trains too big?

One simple way of solving the narrow clearances argument would have been to build slightly smaller trains. Government propaganda makes much of the fact that the new trains will have four abreast^s seating rather than the five abreast of current stock, so new trains could be narrower while still offering far more space per passenger than existing ones.

VLocity trains will be 2900mm wide, well under the maximum 2975mm allowed in Victoria. A British HST trailer car still seats four abreast, but is only 2740mm wide. And at 3810mm high, it is 460mm lower than the Victorian height limit. HSTs run safely at 200km/h on much closer track centres, under tighter bridges, and through smaller tunnels than occur anywhere on the Bendigo line.

The Elphinstone tunnel is one of the contentious structures at the heart of the DoI's singling proposal for the Bendigo line. Here, N467 exits the tunnel with 8024 Up Bendigo Passenger on Tuesday 25 November 2003. **Bob Wilson**



Clearly, the DOI should be able to state the maximum possible outline compatible with fast double track, but it has refused to do so. Rather than admit that building slightly smaller trains would have solved the problem at zero cost, it simply claims that the trains are not too big, but the bridges are too small.

3. Why not lower the track under arched bridges and tunnels?

Lowering track under arched structures creates considerable extra width for the tops of vehicles, and can be done without disturbing the heritage aspect of the arch. The DOI has refused to say why track could not be lowered under bridges or in the tunnels.

4. Why not slow down for tight bridges and tunnels?

Communities along the line have argued consistently that delays due to slowing for heritage structures would be minimal, and in fact less than the inevitable delays due to singling of the line, and the DOI finally responded in its *Community Forum Notes*, *Gisborne* dated 25 September 2003:

Q: "Would it not be easier and cheaper to preserve the bridges rather than remove the arch? (By means of speed restrictions)"

A: "The Government has committed to providing regional rail services which are not only more frequent, reliable and comfortable, but are faster, providing a possible express travel time of 84 minutes between Bendigo and Melbourne. The retention of existing speed restrictions or the introduction of new restrictions would diminish the benefits being delivered for regional Victorians."

As far as the author is aware, this is the only argument ever given by the DOI against the speed restriction proposal. Unfortunately,



Narrow clearances under arched bluestone overbridges are another reason offered by DoI for singling long sections of the Bendigo line. Here, N473 seems to have little trouble clearing the Dalysesford-Malmsbury Road overbridge at the line speed of 130km/h with a passenger service on Tuesday 7 October 2003. Bob Wilson

there is absolutely no evidence that the DOI has ever bothered to calculate the time lost in slowing for heritage structures. The total time lost in slowing to today's limits from the proposed higher speeds is actually well under one minute, and singling in many cases will offer no speed gain at all. An example of the claimed speed gains that simply don't exist is the Big Hill tunnel, about 10 kilometres south of Bendigo.

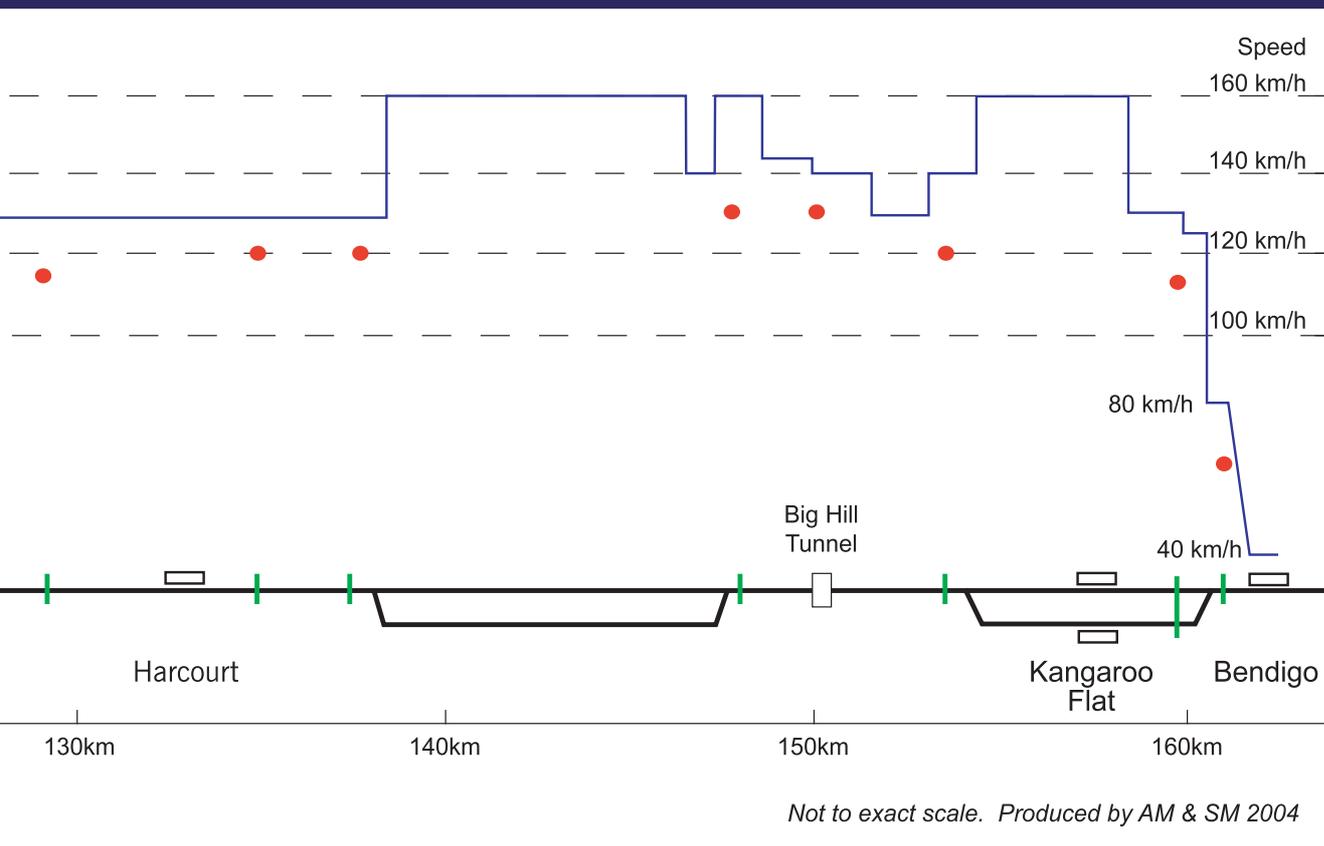


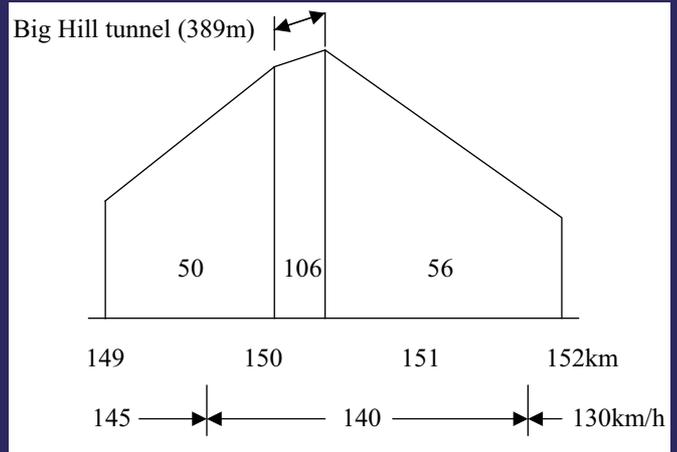
Figure 1: Chart showing allowable speeds, heritage structures and proposed track plan of main line Kyneton - Bendigo

Big Hill tunnel

Big Hill tunnel has been specifically mentioned time and again by the Minister and his Department as an example where higher speeds are absolutely essential, but would be unsafe on double track, and singling is supposedly the only alternative to massive reconstruction of a heritage asset. The diagram at right shows the grades leading up to the tunnel, and the speeds that will apply after the upgrade. DOI officers admit grudgingly that the present limit of 130km/h through Big Hill tunnel is safe.

Northbound, a train is restricted to 140km/h from 149.6km. Simple calculations predict the speed will drop to about 133km/h by the tunnel portal. Southbound, speeds are restricted to 130km/h as far as 151.8km, and speeds will either stay constant or drop slightly, depending on the exact performance of the new trains.

If smoother track allowed the tiniest increase in speed to 135km/h, there would be no delay at all in retaining double track. With today's limit, the total delay for the return journey is a fraction of one second. Singling the tunnel to allow higher speeds safely and avoid massive reconstruction costs is obviously a total nonsense.



The single track plan

When singling the line, the Government has announced that it will 'construct' three long sections of double track, as well as a loop at Castlemaine station. The sections of track not used for the loops will be removed, as they cannot remain in place because the track will be realigned and curves eased when upgraded. The realignment argument completely contradicts the Minister's claim that one of the advantages of singling the line is that it could be easily redoubled. The affected sections of track (displayed in Figure 1. on the previous page are:

- Kyneton Down end (92.0km) – Conlans Rd Taradale (106.4km) **Single**
- Conlans Rd– Elphinstone Down end (114.0km) **Double**
- Elphinstone – Castlemaine Up end (124.1km) **Single**
- Castlemaine Down end (126.1km) – Harcourt Nth (138.2km) **Single**
- Harcourt Nth – Beilharz Rd (147.7km) **Double**
- Beilharz Rd – Phillis St (154.4km) **Single**
- Phillis St – Thistle St (160.6km) **Double**
- Thistle St – Bendigo (162.2km) **Single**

Allowable speeds and the track configuration are also shown in Figure 1. With the exception of the track through Castlemaine station, all single tracks will be based on today's Down line, with the Up line removed.



When the speed profile is compared with the track layout, one can see immediately that the singling for faster speeds argument is nonsense. The DOI claims that singling the line will result in 42km of high-speed single track. It also claims that trains will run at a sustained speed of 160km/h from Kyneton to Kangaroo Flat. But beyond Elphinstone, of the 30km of track to be singled, 25km will be limited to 130km/h or less, and just a single kilometre will be passed for 160km/h!

Why remove the second track?

The only possible explanation for what can only be described as official vandalism is to prevent public pressure forcing the reinstatement of a mothballed track once the upgrade is complete and single line delays start to occur. The argument that the remaining track will be realigned for higher speeds is false.

In NSW, normal maximum cant on main lines is 125mm, and XPTs are allowed 110mm 'cant deficiency'. This total of 235mm represents the total cant, or superelevation, that would be required for the forces on the rails to be equal at maximum speeds. Calculated speeds for curves with an 'equilibrium cant' of 235mm on standard gauge are as follows:

Curve radius (m)	Speed (km/h)
800	126
1000	141
1200	155
1400	167

The singled sections between Elphinstone and Harcourt North will have a maximum speed of 130km/h, with only two curves sharper than 1200m radius:

- a) 825m radius just south of Castlemaine, proposed speed 120km/h
- b) 1000m radius just north of Castlemaine, proposed speed 130km/h.

On the 1000m radius curve through Elphinstone station, remaining double, and not realigned, the proposed speed is 125km/h. This shows that the entire speed gain from removing one track to allow realigning of the remaining track on more than 22km of line on this section is effectively zero, as the proposed speeds will still be well below normal NSW limits, and easily possible on the existing alignment.

This view of the Down end of the station and yard area at Kyneton station taken on Saturday 3 April shows approximately where the double track will end, and a long section of single track (some 14.5 kilometres in length) will begin. The remnant semaphore signalling will also go, along with the signal box as resignalling of the line is also slated as part of the Regional Fast Rail project. **Scott Martin**

Speed gains due to singling

Slowing to today's limits under bridges and through the tunnels from the DOI's proposed speeds involves a delay averaging about 2 seconds per structure. Table 1 shows the delays (in seconds) for an Up train over each single line section, with various maximum permitted speeds (curves permitting) through heritage structures.

Single line Section	Length (km)	No. of Heritage structures	Delay at present limits	Delay at 130 km/h	Delay at 140 km/h	Delay at 150 km/h
Phillis St – Beilharz Rd	6.7	3	4	4	2	1
Harcourt Nth – Castlemaine Nth	10.1	3	3	0	0	0
Castlemaine Sth - Elphinstone	10.1	7	3	0	0	0
Conlans Rd - Kyneton	14.4	7	28	24	7	0
Totals	41.2	20	38	28	9	1

Amazingly, singling the three northern sections to meet the necessary travel time targets saves a maximum possible 10 seconds if today's limits were kept, and this falls to just 4 seconds if 130km/h was allowed instead of today's 120km/h.

Allowing 140km/h under bridges on straight track where 130km/h is allowed today would reduce the total time delay for all four single line sections to less than 10 seconds. It is difficult to comprehend why any competent railway management would single 41km of railway to gain 10 seconds for one high priority train, with much greater delays for many others, with the specious argument that this was a benefit for regional Victorians.

Singling the Elphinstone – Castlemaine section in particular, is even more incomprehensible. Speeds under the five bridges on straight track are presently 130km/h. After a closure of six months, the line will reopen as a single track, still limited to 130km/h. The Minister claims that this will make the line faster and more reliable!

Delays due to singling

One of the problems right from the start of the RFR proposals is that the express running time for effectively one train in each direction per day has been the *only* criterion for success. This is undoubtedly why bidding consortia were so eager to offer single line solutions, as it became very obvious early on in the bidding process that any possibility of duplicating the Ballarat line was completely ruled out. One major problem with the 'express only' criterion is that it encourages high expenditure at major stations where all trains normally stop, and thus both Kyneton and Castlemaine are to have their track arrangements smoothed out for almost no benefit to rail users.

But an even greater problem is that there is absolutely no need to minimise running times for all the non-express trains, and in some cases, high speed works will make them slower. Table 2 (at right) shows the running times for an Up train from Bendigo, stopping at Castlemaine and Kyneton, by far the most common stopping pattern. The extra times taken to use the 'loops' are also shown.

The present timetable involves an hourly service in each direction for parts of the day, and as this ought to be the starting point for a reasonable new timetable, trains need to pass opposing trains every 30 minutes. This means that most trains will cross at least once beyond Kyneton, and at least half of these will be delayed by using the much slower loops between single line sections. The Thistle Street – Phillis Street double-tracked section cannot be used for an hourly service, because there is no loop 30 minutes closer to Melbourne.

Elphinstone – Conlans Rd is highly undesirable, giving just two to three minutes margin at Bendigo, requiring an extra train and regular use of platform 2.

This leaves Beilharz Rd – Harcourt North as by far the most likely section for regular crosses, involving a regular delay of about 1½ minutes for every return journey. This also would cause the next 'cross' on the Up to be just south of Kyneton. Therefore, retaining Elphinstone – Castlemaine – Harcourt North as double track would offer two major benefits:

- 1) Double track would extend for over 40km, long enough to cross reliably, and;
- 2) Crossing near Castlemaine on the 130km/h section would allow trains in *both* directions to use the upgraded, faster track beyond Harcourt North.

Since the time savings due to the single line 'upgrade' between Elphinstone and Harcourt North are far less than the delay using any of the loops, the upgrade on this section actually makes almost all return journeys slower, even if trains are running perfectly to time.

'Hidden' single line delays

As well as the obvious delays due to running in and out of loops (65km/h points are to be used) and slower running on the 'non-main' line, there are many other delays harder to quantify, but just as real, nevertheless. DOI propaganda claims that the loops are 'long', and this will allow trains to cross 'without stopping'. But just how likely is the 'perfect' flying cross? At 160km/h, the nine-kilometre loop between Harcourt North and Beilharz Road (the longest loop) takes about 3½ minutes to traverse, so there is actually very little margin for error. What is most likely is that the lower priority train will be timetabled into the loop first, even if only by a minute or two. This is exactly what happens at present on the Ballarat line.

The DOI's own Design Review seems to admit this. Under 'Operation – Single Track', it states:

"The issue of improving recovery time is a factor that can be built into the new timetables."¹⁰

Another very real cause of delay on single lines is the problem of arriving at the suburban boundary exactly at the right part of the suburban timetabling cycle. Bendigo line users already see suburban delays as the biggest problem, and these can only get worse.

Capacity

One of the many unbelievable claims made by the Minister and the DOI is that singling the line will *improve* capacity. According to the *Bendigo Line Design Review*:

"... peak services in this section could be provided approximately every 20 minutes, an increase from less than one service per hour to three services per hour in each direction. The single track design solution could accommodate 5.5 times the current daily capacity..."¹¹

The table below shows the pre-upgrade evening peak Bendigo services:

Table 3: Evening peak services to Bendigo (pre-upgrade)

Spencer Street	1552	1632	1733	1836
Bendigo	1754	1837	1930	2031

The DOI's claim of "less than one service per hour" is completely incorrect, with three trains arriving Bendigo within 96 minutes. After

Table 2: Bendigo – Kyneton running times and loop delays

Location	Running time	Delay using loop
Bendigo	0.0	0.0
Thistle St (start of loop)	1.5	0.0
Phillis St (end)	4.5	1.0
Beilharz Rd (start)	8.0	-
Harcourt Nth (end)	11.5	1.5
Castlemaine	18.0	1.0
Elphinstone (start)	25.0	-
Conlans Rd (end)	28.0	1.5
Kyneton	35.0	-



In this view, N452 wheels the 2.10pm Down Bendigo Passenger from Spencer Street out of Malmsbury, heading for Castlemaine, while in the distance Sprinters 7015/7014 race toward Melbourne with an Up train from Eaglehawk on Friday 13 February. Crossing movements such as these will become more difficult in this section once the Up line is lifted between Kyneton and Taradale. Fergus McKay

the upgrade, it is highly probable that one, if not both, of the additional '84-minute express' and 'major stops only' down services will also run in the evening peak.

The 1815 Bendigo – Melbourne service already passes two of the Down trains between Bendigo and Kyneton, and, with the extra services, is highly likely to cross three Down trains on the single line. With only four loops available, it is clear that extra paths in the evening peak will be almost impossible, making a mockery of the DOI's claims.

It is also difficult to see how the 1815 Up train will not be slower than pre-upgrade, as it is also likely to use the 'slow' line all the way to Sunbury.

Retaining the 'status quo'?

Many travellers using the Bendigo line see the retention of double track as so important that they regard doing no track remodelling north of Kyneton as a better option than the single track 'upgrade', and the DOI was forced to respond.

According to the *Bendigo Line Design Review*:

"... performing a refurbishment of the Up track only (Bendigo – Kyneton)... would increase the express travel time by an estimated 8 to 9 minutes. This would result in an express travel time of 92 – 93 minutes... (so)... further investigation was not pursued."¹²

It is a pity that the DOI couldn't be bothered even reading the V/Line Passenger timetables. In September 1997, an Up Sprinter was timetabled (very unusually for the Bendigo line) with just one stop (Castlemaine), with a 95-minute running time. With each stop costing approximately two minutes, this is equivalent to a 93-minute express timing. (The current timetable's fastest time of 101 minutes with four stops is equivalent to 93 minutes.)

In effect, the DOI argued that 'remodelling' the Up track between Bendigo and Kyneton, and completely rebuilding the Down track between Kyneton and Sunbury and the Up track from Sunbury to Sydenham, would produce a time saving of between zero and one minute!

What are the gains north of Kyneton?

Table 4 shows the running times for a range of options for Up trains stopping Castlemaine and Kyneton. A power figure of 6kW at rail/tonne (enough to achieve the 84-minute timing) has been assumed. Column 1 shows the times for pre-upgrade speeds. Column 2 shows the times possible with minor improvements, but still limited to 130km/h. Column 3 shows the benefits of a 'partial' upgrade, with 145km/h allowed. Column 4 shows the benefits of the 'full', 160km/h upgrade.

Table 4: Bendigo – Kyneton Running times, 6kW at rail/tonne

Scenario	1	2	3	4
Max Speed	130	130	145	160
Bendigo to Castlemaine	20.37	19.29	18.57	18.46
Bendigo to Kyneton	39.41	37.34	36.13	35.42
Gain over pre-upgrade	0.00	2.07	3.28	3.59

This table shows just how desperately the DOI has tried to justify line singling, with an actual gain of around four minutes compared with the DOI's claim of 8 to 9 minutes.

Equally important, though, is that half of the four-minute gain is nothing to do with high-speed running, heritage structures or single track, but simply ironing out kinks and going slightly faster (but still below NSW speeds) around curves.

What the DOI *should* have discovered, but completely ignored, is that a typical (i.e. one cross each way) return journey from Castlemaine to Bendigo on a much cheaper *partially* upgraded double line railway would be *faster* than a typical return journey on a 160km/h single line, as the difference in times is less than the delay crossing.

Benefits of the full upgrade

Yet another example of the deceptive claims about time benefits is the 'express' time savings. The 'Fact Sheet' of November 2003 claims:

"The upgraded track will provide an 84-minute express trip, saving 15 minutes on the fastest existing trip."¹³

This might be true, but it is deliberately misleading, as the fastest existing service has four stops. The actual gain for a high priority express is 9 – 10 minutes, but even this figure overestimates the actual benefit, as trains slowing for stations and accelerating away do so no faster on better track. Analysing an actual timetable illustrates this. The present service has hourly departures with a mix of stopping patterns for much of the day, and the two shown below are typical:

Spencer Street	10.16	11.16
Sunbury	10.49	11.51
Gisborne	11.03	12.10
Kyneton	11.21	12.30
Castlemaine	11.40	12.49
Bendigo	12.03	13.12
Total intermediate stops	7	12
Total time	107	116
Average total time		111½

With an hourly service, trains will cross twice between Sunbury and Bendigo, once south of Kyneton (where only one track is to be upgraded) and once north of Kyneton, on the 'single' line. A return journey from Sunbury will therefore usually involve four crosses. Logically, Down stopping trains would use the Slow line between Gisborne and Kyneton, as the time gain from faster running uphill is minimal. They could then have priority on the single line, and the timetable would then be as follows:

Spencer Street	10.16	11.16
Sunbury	10.49	11.51
Gisborne	11.02	12.10
Kyneton	11.20	12.30
Castlemaine	11.37	12.47
Bendigo	11.58	13.08
Total time	102	112
Average time		107

Amazingly, the typical gain for Down trains might be less than five minutes, with Up trains (gaining more downhill south of Woodend, but delayed crossing near Castlemaine) just slightly better. Coming at a cost of around \$200 million, and reduced reliability, this must be just about the worst value for money option possible.

More powerful trains?

The 84-minute timing requires a Sydenham-Bendigo express time of 61 minutes, and since there is a long, potentially high speed climb to the summit at 580 metres (between Macedon and Woodend), train performance is critical. Table 5 shows the Sydenham - Bendigo express timings for a range of power at rail to mass ratios

Table 5: Sydenham-Bendigo Express timings

kW at rail/tonne	6	8	10
Sydenham - Bendigo timing	60:30	58:40	58:10

A 6kW/t train is powerful enough to meet the target time of 61 minutes, but an 8kW/t train is nearly two minutes faster. This difference is far more than the time lost slowing to pre-upgrade limits for every heritage bridge along the line. If slowing for bridges would diminish the benefits being delivered for regional Victorians then surely using less powerful trains (resulting in much bigger delays) would be an even greater loss of benefit. But the very same officials who refuse to consider slowing for bridges simply don't know how powerful the new trains will be. The DOI has been completely unable to inform the author of the exact performance of VLocity railcars, and its only answer has been literally "Ask Bombardier".

Run more trains?

The service during much of the day is likely to be a two-car VLocity set every hour. What would be the effect of running two single-car trains per hour instead, one express and one stopping? The following timetable shows what could be done on the *existing* track:

Spencer Street	10.16	10.36
Intermediate stops	(2)	(12)
Castlemaine	11.32	12.12
Intermediate stops	-	(2)
Bendigo	11.55	12.39
Total time (minutes)	99	123

This service is vastly superior to the DOI upgrade, for many reasons:

- 1) A train to Bendigo every hour averaging 99 minutes journey time, compared with 107 minutes.
- 2) Hourly services to all smaller stations
- 3) A true 'clock face' timetable
- 4) Much greater reliability

Perhaps the greatest advantage of this approach is that it would come at a fraction of the cost of upgrading the line. The only cost of running two small trains in place of one larger train is the extra crew, and splitting 10 trains per day each way might cost around the \$1 million mark per year.

It is obviously possible to pay for this from the \$200 million budget for the Bendigo line and still have many millions left over to make improvements that actually make sense.

Why?

Perhaps the question most often asked of the author is "Why?"

- Why has a Minister with \$200 million to spend on "better passenger services", who claims to be offering "the biggest rail upgrade in 120 years", found virtually unanimous opposition from present and potential rail travellers, as well as the community in general?
- Why did the Minister ignore the clear intent of a packed public meeting in Castlemaine, where a motion calling for the retention of double track, with speed limits under bridges if necessary, was carried overwhelmingly?
- Why did the Minister completely ignore a petition to Parliament with over 700 signatures, again calling for retention of dual track?
- Why is a Minister pressing ahead with a hugely unpopular plan, at a tremendous political cost, when spending the same money wisely (suburban upgrades and many more services) would have been a sure fire vote winner?



Freight traffic will also suffer when the Bendigo line is singled, with further relegation of freight train running to the hours of darkness and fewer daylight paths available for freight operators. Scenes like this may soon be consigned to history, as 9084 Up Deniliquin freight exits Bendigo yard on the double track approaching Golden Square station with G516/S30/P23 on Thursday 27 November 2003. Stuart Turnbull

It seems to the author that there are two possible explanations. The first possibility is that the DOI believes its own propaganda. Using Big Hill tunnel as an example, this would mean that DOI officials firmly and honestly believe that passing through Big Hill tunnel on the present double track at 130km/h is 'safe', but passing through on upgraded double track at 133km/h is 'unsafe'. Furthermore, the time difference of about 0.2 seconds is so critical that singling is essential.

The second possibility is that the DOI *doesn't* believe its own propaganda. Rather than the line being singled to satisfy some arbitrary clearance requirement, the clearance requirements were invented to justify singling, and that single track, rather than faster trains, is the actual goal.

Conversations with DOI officials have made it obvious to the author that a single line, and not better services, is the DOI objective. In public, the DOI and the Minister talk of 'protecting heritage bridges', and 'meeting travel time targets'. But every criticism of the DOI's faulty claims in private is met with the same reply: 'Single line saves money, Bendigo doesn't need or deserve double track.'

The entire campaign by the Minister and the DOI to justify single track has been an extraordinary saga of disinformation and deceit. It shows just how far out of touch with public sentiment a government and its bureaucracy can be, and the extraordinary steps it is prepared to take in deceiving the very public it is paid to serve.

Andrew McLean lives in Taradale on the Bendigo line. A previous article by the same author on the Fast Rail project is in the December 2003 edition of Railway Digest. Visit the Railway Digest website <http://www.arhsnsw.com.au/rdigest.htm> for additional information.

Endnotes

- ¹ Minister of Transport Media Release, 17 November 2003: *Long double track sections to provide for high-quality services on Bendigo rail line.*
- ² Andrew McLean: 'Getting Fast Rail Back on Track', in *Railway Digest*, ARHSNSW Redfern, December 2003.
- ³ Victorian Government: *Final Report of the Feasibility Studies into Fast Rail Links to Regional Centres*, 2000, p. xii.
- ⁴ Geoffrey Blainey: *The Tyranny of Distance - How distance shaped Australia's history (Revised Edition)*, Sun Books, Melbourne, 1983, p.234.
- ⁵ Letter from DOI to author, 18 November 2002.
- ⁶ Letter from DOI to Mt Alexander Shire Council, 10 April 2003.
- ⁷ *Ibid.*
- ⁸ Minister of Transport Media Release, 21 February 2003: *New Fast Trains to get four- across seating for greater comfort.*
- ⁹ Department of Infrastructure: *Regional Fast Rail Project - Community Forum Notes Gisborne Wednesday, 25 September 2003*, p. 4.
- ¹⁰ Department of Infrastructure: *Regional Fast Rail: Bendigo Line Design Review - Kyneton to Bendigo*, November 2003, p. 5.
- ¹¹ *Ibid.*, p. 4.
- ¹² *Ibid.*, p. 10.
- ¹³ Department of Infrastructure: *Fact Sheet - Bendigo Line of Regional Fast Rail Project*, November 2003, p. 1.