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Introduction

The Mornington Peninsula, south of Melbourne, has no single public transport service to the city. The fastest way to get from Rosebud to the city by public transport is with the route 788 bus to Frankston, and then the connecting train, which takes around 2 hours 20 minutes in total, depending on traffic. This forces residents to drive to the city to save time, adding to traffic congestion.

To compare, trains alone take two hours to get to the city from Bendigo, an hour and forty minutes from Ballarat, and an hour and a half from Warragul and Seymour.

The Peninsula Link freeway does a good job of getting residents to the city quickly, but not all residents own cars, and still rely on public transport to get around. In addition, Eastlink’s tolls and the high price of petrol are deterrents from using the car.

By building a railway line through the highly-populated western side of the Mornington Peninsula, traffic congestion is further eased, allowing for easier travel for road and rail commuters all the way into Melbourne. Fewer cars on the road also helps reduce pollution in the long run. Furthermore, travel time would be cut by forty minutes if the trains go all the way to the city. Myki will also be cheaper in the long run than petrol and Eastlink tolls combined.
The first railway line on the Mornington Peninsula opened from Frankston to Baxter on Monday October 1 1888, and was then quickly extended to Mornington and Hastings on Tuesday September 10 1889, and then to Stony Point on Tuesday December 17 1889. Passenger services back then ran to and from Flinders Street in Melbourne, hauled by two steam locomotives. At Baxter, the train would split into two trains, each hauled by a single steam locomotive.

On Monday July 6 1914, a spur line was built outside Crib Point to serve the HMAS Cerberus Naval Base, with one regular passenger service each Saturday.

On Friday December 2 1921, a line was built from Bittern, via Balnarring and Merricks, to Red Hill. This line mainly carried goods, but once a week it carried goods and passengers in a "mixed" train. The Red Hill line was short-lived, being closed on Wednesday July 1 1953. The line was dismantled shortly afterward, with much of the line, especially on Frankston-Flinders Road, built over.

During the 1950s, passenger trains to Melbourne largely ceased, being replaced shuttles to Frankston. However, one service each Sunday ran from Flinders Street to Stony Point, its carriages hauled by a suburban set as far as Frankston, and then a steam locomotive would take them the rest of the way.
On Saturday March 29 1969, a new spur line was built between Tyabb and Hastings, serving the new steel mill at Long Island.

During the 1980s, the New Deal For Country Passengers served to completely reshape Victoria's regional network. Part of this included closing every branch line in the state. The Mornington and Stony Point lines were among the first to go, the Mornington line closing on Monday June 15 1981, and the Stony Point and Naval Base lines closing a week later. The Mornington line was leased to preservation group Mornington Railway, and they run the line to this day.

On Thursday September 27 1984, the Stony Point line was reopened to revenue service, the only branch line in Victoria to do so to this day. Services were run as shuttles between Frankston and Stony Point.

The Naval Base line did not reopen except for a brief period as a tourist railway before Mornington Railway moved to Moorooduc on the Mornington line. It was dismantled, along with all sidings on the Stony Point line, in the early 1990s.

The Mornington Peninsula has never had a double-track railway. All of its lines have been single-track for the entirety of their existences.
Rail on the peninsula today

Today, the only rail services run on the peninsula are 10 (on average) return passenger services between Frankston and Stony Point, and two return steel trains to Long Island per day, as well as 12 return tourist services a month on Mornington Railway. The Stony Point line being single-track for its entirety limits how many trains a day can run on it.

Despite being home to 30% of the peninsula’s population, the region from Dromana to Portsea, including Rosebud and Rye, has never had its own heavy rail service. Its only ever services to the city were bus routes 788 (Portsea-Frankston), the recently-introduced 887 (Rosebud TAFE-Monash Peninsula via Frankston), and a short-lived daily express bus to Melbourne.
Route 788 Frankston-Portsea
45-minute frequency weekdays
75-minute frequency weekends

Route 901 Frankston-Melbourne Airport
15-minute frequency weekdays
30-minute frequency weekends

Stony Point line
100-minute frequency weekdays
120-minute frequency weekends

LEGEND
- Track used only by suburban trains
- Track used only by regional trains
- Track used by both suburban and regional trains
- Bus route
- Mornington Railway

Each line on a rail corridor indicates how many tracks run on that corridor.
Proposed Route

The Peninsula Rail Link would run from Sorrento to the city via Rye, Rosebud, Dromana, Mount Martha, Baxter and Frankston, terminating at Southern Cross.

Following the same route as V/Line’s Gippsland services, peninsula trains would stop at Richmond and Caulfield stations to connect with a number of suburban train lines.

Initially, trains would run via Cheltenham, sharing tracks with Frankston line trains. However, trains could be redirected via Dandenong if the Melbourne Metro rail tunnel is extended to Caulfield and the Dandenong line is quadruplicated. In the meantime, the triple track that goes through Mordialloc station would have to be extended to the adjacent stations of Aspendale and Parkdale to allow peninsula trains to overtake suburban trains.

The line between Frankston and Baxter would be duplicated and electrified, allowing for more frequent services to the university and Power Centre at Leawarra in between, as well as more frequent services on the Stony Point line. This would require that Frankston station be upgraded so both platforms are through platforms, as part of the Frankston Transit Interchange project. Duplication of the Stony Point line would also be necessary to allow its trains to join onto trains from Sorrento at Baxter to form a single train to Melbourne. Langwarrin station could also be rebuilt at the location of the old station, and be served by suburban trains.

The line to Sorrento would be double-track for its entire length. It would run next to the existing track for the Mornington line, which itself would be used by Mornington Railway, who are working to restore the line so they can run their tourist trains to Baxter. The Peninsula Rail Link would branch off at the Moorooduc Highway roundabout, just before Moorooduc station, and then run down the median strip in the middle, where there is adequate space for two tracks. The Peninsula Link freeway’s bridge over the Mornington line would allow for 3 tracks and electrification, allowing the line to run under it without affecting future tourist services on the corridor.

Once trains are redirected via Dandenong, a line from Dandenong to Frankston would be built in between. This line would also be double track for its entire length. It would run as a skyrail along the median strip of Frankston-Dandenong Road, branching east just after Thompson Road to connect with the Cranbourne line. Initially Carrum Downs would be the only station on this section of the line, but as residential development continues, stations may also be possible at Frankston North and Dandenong South.
The plan

The entire Peninsula Rail Link project can be completed in three stages, all incorporating other projects that have already been proposed, funded or even begun construction.

• Stage 1 (2016-2023) incorporates Baxter electrification, Southland station and Quadruplication of the Caulfield-Dandenong corridor, as well as improvements to existing services on the peninsula, in preparation for construction of the new line to Sorrento.

• Stage 2 (2023-2029) will be when the Peninsula Rail Link itself is built, along with accompanying projects that will allow peninsula trains to run all the way to Melbourne. New buses and rollingstock will be introduced at this stage.

• Stage 3 (2029-2040) sees the line’s services separated from suburban services between Frankston and Caulfield, with the construction of a new “Frankston-Dandenong Rail Link” via Carrum Downs, boosting capacity and reliability for the Baxter, Sorrento and Stony Point lines.
Stage 1 (2016-2023)

LEGEND
- Track used only by suburban trains
- Track used only by regional trains
- Track used by both suburban and regional trains
- Bus route
- Mornington Railway
  Each line on a rail corridor indicates how many tracks run on that corridor

Route 788 Frankston-Portsea
30-minute frequency weekdays
60-minute frequency weekends

New bus route Hastings-Mornington
30-minute frequency peak
60-minute frequency off-peak

New bus route Hastings-Rosebud
60-minute frequency peak
120-minute frequency off-peak

Route 901 Frankston-Melbourne Airport
10-minute frequency weekdays
20-minute frequency weekends

Electrification & duplication to Baxter, new stations at Frankston Hospital & Langwarrin, removal of McMahons Road level crossing

Extension to Clyde and full duplication

To Ringwood and Melbourne Airport
To Pakenham & Traralgon

To Clyde

Quadruplication Caulfield-Dandenong

To Pakenham

New station at Southland

Stony Point line
80-minute frequency weekdays
90-minute frequency weekends

South Yarra

Caulfield

Dandenong

Clyde

Ringwood and Melbourne Airport

Portsea

Dromana

Rosebud

Flinders

New station at Southland

Stony Point

To Pakenham & Traralgon

To Clyde

Flinders

Stony Point

To Pakenham & Traralgon

To Clyde
• **Southland station**
  – **Timeframe: 2016-2017**
  – Construction of Southland station began in mid-2016. The station is primarily built to serve the nearby Southland Shopping Centre. Peninsula trains would stop here to improve access to the centre for peninsula shoppers and workers.
  – Southland station will reduce traffic congestion along Nepean Highway, as it will encourage more people to take the train to the centre instead of the car.

• **Baxter electrification**
  – **Timeframe: 2019-2023**
  – This project is an extension of the Frankston line to Baxter. In addition to duplicating and electrifying the line in between, it includes the construction of two stations, one at Frankston Hospital and one in Langwarrin. In addition, a new maintenance facility will be built at Baxter, accompanied by a huge stabling yard that can fit 30 trains.
  – The Stony Point line currently runs services every 100 minutes on weekdays and every 120 minutes on weekends. Electrification will increase this to 80 minutes on weekdays and 90 minutes on weekends between Baxter and Stony Point, and every 10 minutes between Frankston and Baxter. Stony Point line trains will terminate at Baxter instead of Frankston, allowing for this frequency boost to occur without needing extra carriages.
• **McMahons Road level crossing removal**
  – Timeframe: 2019
  – This level crossing runs through a major road gateway to the Mornington Peninsula, an extension of the Frankston Freeway. As part of Baxter electrification, this crossing must go. Because the line is on a steep 1:50 gradient, the track cannot be raised or lowered. Thus, the road will have to be lowered beneath the railway line.
  – Removal of this crossing increases the reliability of services and reduces traffic congestion on McMahon’s Road. It also prevents the crossing from turning into a major bottleneck.

• **Dandenong line quadruplication**
  – Timeframe: 2019-2023
  – The Dandenong corridor is the busiest in all of Victoria, if not all of Australia. This causes a bottleneck on the existing two tracks during peak periods, slowing regional trains and preventing the running of expresses. Quadruplication will widen the corridor by adding two express tracks.
  – Quadruplication will allow for regional and freight trains to run faster by overtaking stopping trains, reducing travel times for Gippsland, as well as any future regional trains that would use the corridor. It is also an important first step towards separating peninsula trains from Frankston/Baxter trains, and introducing faster express services to the outer southeast.
• **Bus service upgrades**
  
  – Increase the frequency of bus route 901 (Frankston-Melbourne Airport) from 4 buses per hour (bph) on weekdays and 2 bph on weekends to 6 bph on weekdays and 3 bph on weekends. This will increase capacity and reduce overcrowding in Melbourne’s outer suburbs.

  – Increase the frequency of bus route 788 (Frankston-Portsea) from 40 minutes on weekdays and 80 minutes on weekends to 30 minutes (2 bph) on weekdays and 60 minutes (1 bph) on weekends. This will increase capacity and reduce overcrowding along the peninsula’s west coast.

  – There are no cross-peninsula bus services on the peninsula. Residents must either drive or change at Frankston to cross the peninsula. A Mornington-Hastings route was trialled in 2011, but failed because its services only ran in the off-peak. Reinstating the route with hourly frequencies (20-minute frequencies during peak periods) will vastly improve cross-peninsula services. A 2-hourly bus service from Hastings to Rosebud via Flinders would do the same.
Stage 2 (2023-2029)

**LEGEND**
- Track used only by suburban trains
- Track used only by regional trains
- Track used by both suburban and regional trains
- Bus route
- Mornington Railway

Each line on a rail corridor indicates how many tracks run on that corridor.

- **South Yarra**
- **Caulfield**
- **Frankston**
- **Mornington**
- **Balcombe**
- **Dromana**
- **Rye**
- **Red Hill**
- **Flinders**
- **Stony Point**
- **Hastings**
- **Baxter**
- **To Ringwood and Melbourne Airport**
- **To Pakenham**
- **To Clyde & Leongatha**
- **Reinstatement of regional trains to Leongatha**
- **Introduction of articulated and/or double-decker buses to route 901**
- **Duplication to Stony Point, provision of sheds and turnback at Hastings, extension of services to Melbourne**
- **New bus route Rosebud-Dromana via Red Hill**
- **Peninsula Rail Link**
  - 15-minute frequency peak
  - 30-minute frequency off-peak
  - 60-minute frequency weekends

**South Yarra**
- Melbourne Metro rail tunnel

**South Yarra**
- To Ringwood and Melbourne Airport
- To Pakenham

**Dandenong & Traralgon**
- To Clyde & Leongatha

**Stony Point line**
- 15-minute frequency from Hastings peak
- 30-minute frequency from Hastings off-peak
- 60-minute frequency from Stony Point

**FLINTERS**
- 15-minute frequency peak
- 30-minute frequency off-peak
- 60-minute frequency weekend

**LEGEND**
- Track used only by suburban trains
- Track used only by regional trains
- Track used by both suburban and regional trains
- Bus route
- Mornington Railway

Each line on a rail corridor indicates how many tracks run on that corridor.
• Melbourne Metro rail tunnel
  – Timeframe: 2018-2026
  – The Melbourne Metro is a rail tunnel that will run from South Yarra to Footscray underneath Melbourne’s CBD. It will be used by Pakenham, Cranbourne and Sunbury trains, and later by Melton, Rowville and Airport trains.
  – The Melbourne Metro will get trains out of Flinders Street, Southern Cross and the City Loop, allowing for the running of more trains throughout metropolitan Melbourne, reducing traffic congestion everywhere. It will also provide room at Flinders Street and Southern Cross for peninsula trains to run to Melbourne.

• High-capacity signalling and high-capacity trains
  – Timeframe: 2026-2029
  – High-capacity trains will be introduced to the Baxter line shortly after the Pakenham, Cranbourne and Sunbury lines, and maintained at Baxter’s maintenance facility. High-capacity signalling would be installed on the Baxter line and throughout the peninsula as part of this rollingstock rollout.
  – These modern trains will greatly boost capacity, reliability and safety on the Baxter line. They would also allow for the retirement of nearly the entire fleet of suburban Comeng trains.

• Peninsula Rail Link
  – Timeframe: 2023-2029
  – The Peninsula Rail Link itself can be built immediately after electrification to Baxter is complete. The entire line would be double track, and 9 new stations would be built on the line.
  – The line to Sorrento will allow peninsula residents to get to Melbourne in a single mode of public transport, or to Frankston faster and in more comfort than a bus.
• New regional train fleet
  – Timeframe: 2023-2029
  – A brand new fleet of trains would be introduced to the Sorrento, Stony Point and Gippsland lines. These new trains would have special doorways next to the driver cab that would allow passengers to walk between carriage sets while the train is moving, without having to leave the train. These trains would be capable of speeds up to 160km/h, and have high-capacity signalling installed in them. There is also the option of powering their lighting, air-conditioning and PIDs powered by solar power instead of diesel fuel.
  – These trains would provide comfort, speed and reliability to the peninsula and Gippsland. They would also be able to divide or couple together partway through a trip, without forcing passengers to board specific carriages beforehand. Solar-powered interiors would also save fuel and allow the trains to travel further on one tank.

• Stony Point line duplication
  – Timeframe: 2023-2029
  – The entire Stony Point line is single-track. This limits how many services can run on it. Duplication will greatly boost capacity. This project will include the upgrade of Somerville and Hastings stations to Staffed stations, and the construction of sheds in Hastings to stable trains.
  – Duplicating the Stony Point line will allow its services to match those of the Peninsula Rail Link, providing the east coast with the same level of service as the west coast.
• **Bus service upgrades**
  
  – Further increase capacity and reduce overcrowding on route 901 by introducing articulated and/or double-decker buses to the route.
  
  – Route 886 (Rosebud Gardens-Rosebud TAFE) can be upgraded to an hourly service from Rosebud to Dromana via Red Hill to connect Red Hill to the new railway line. Route 787 (Safety Beach-Sorrento) can also be overhauled to connect with the line.
  
  – Two new feeder bus routes can be introduced to Mornington to help connect Balcombe station to Main Street. The Mornington-Hastings bus route can also have its frequency boosted to 2 bph in the off-peak and 4 bph during peak.
Stage 3 (2029-2040)

LEGEND
- Track used only by suburban trains
- Track used only by regional trains
- Track used by both suburban and regional trains
- Bus route
- Mornington Railway
- Tram line
  Each line on a rail corridor indicates how many tracks run on that corridor

South Yarra
  Extension of Melbourne Metro rail tunnel to Caulfield

Caulfield
  To Ringwood and Melbourne Airport
  To Pakenham
  To Clyde & Leongatha

Dandenong
  & Traralgon

Frankston
  Frankston-Dandenong Rail Link
  5-minute frequency peak
  10-minute frequency off-peak
  30-minute frequency weekends

Mornington
  Mornington Light Rail
  20-minute frequency

Portsea
  Route 788 Frankston-Portsea
  20-minute frequency weekdays
  60-minute frequency weekends

Dromana

Sorrento

Rye

Red Hill

Balcombe

Flinders

Stony Point
  Stony Point line
  10-minute frequency from Hastings peak
  20-minute frequency from Hastings off-peak
  40-minute frequency from Stony Point weekdays
  60-minute frequency from Stony Point weekends
• Mornington Light Rail
  – Timeframe: 2029-2032
  – Patronage on the Mornington-Hastings bus is expected to increase too much for buses to cope shortly after the construction of the Peninsula Rail Link. Trams would be necessary to run between Balcombe and Main Street, backed up by Mornington-Hastings buses.
  – The use of trams would increase capacity, reduce traffic congestion and reduce pollution better than relying on buses. They would also provide passengers with increased comfort.

• Melbourne Metro extension
  – Timeframe: 2034-2040
  – Even after the construction of the Melbourne Metro, the Caulfield-South Yarra corridor will remain a bottleneck that will prevent an increase in service frequency in Victoria’s southeast. This can be solved by extending the Melbourne Metro tunnel to Caulfield.
  – This extra pair of tracks will separate Pakenham and Cranbourne trains from Gippsland trains, allowing for more frequent trains on all three lines.
• Frankston-Dandenong Rail Link
  – Timeframe: 2034-2040
  – This project would combine with the Melbourne Metro extension to provide the capacity needed to separate peninsula trains from Baxter trains. The double-track line from Frankston to Dandenong would also provide a faster alternative to the route 901 bus in connecting the two major suburbs. Carrum Downs would be the only new station on this line, but stations may be built later at Frankston North and Dandenong South.
  – The new line would allow Carrum Downs residents to get to Melbourne in a single mode of public transport. The boosted capacity would also allow for an off-peak frequency of 3 tph on both the Stony Point and Sorrento lines. They would also no longer need to couple or divide at Baxter, boosting travel times and allowing 6 tph off-peak frequencies between Frankston and Dandenong. The connection via Carrum Downs would also ease pressure on the Baxter line by moving passengers to more local trains.
Station Structures

The following slides will describe each individual station, from layout, to features, to staff level. The stations in the list on this page will be discussed. Stations not mentioned here will not be changed as part of the project.

- Southland
- Mordialloc
- Carrum Downs
- Frankston
- Frankston Hospital
- Leawarra
- Langwarrin
- Baxter
- Balcombe
- Mount Martha
- Safety Beach
- Dromana
- Arthurs Seat
- McCrae
- Rosebud
- Boneo
- Rye
- Sorrento
Southland

- Zone: 2
- Platforms: 2
- Staff level: Unstaffed
- Melway Ref: 77 G11

The construction of Southland station will greatly benefit shoppers, many of whom will no longer need to rely on buses or cars to get to the centre. With fewer cars parking at the centre, and increased activity as a result of the station, it is possible for the shopping centre to further expand.

According to an article in *The Age*, Southland shopping centre’s owner, Ventana, wishes to build above the station, connecting the station and centre together. This would allow for a similar build to Box Hill station, with concourses and lifts up to the shopping centre, PID screens and toilets.

The former Napthine government has committed money to get this project started, and construction began earlier this year.
Mordialloc

- Zone: 2
- Platforms: 2
- Staff level: Staffed full-time
- Melway Ref: 92 F1

Mordialloc station may have 2 platforms, but it has 3 tracks in between, with the middle track used by empty trains and the Long Island steel train. Peninsula trains would also need to use the middle track to overtake suburban trains, so the track surrounding this station would have to be triplicated further, at least as far out as the neighbouring stations of Aspendale and Parkdale. The ability to overtake suburban trains at Mordialloc would speed up travel times beyond Frankston by 4 minutes.

Public Transport Victoria’s Network Development Plan for Metropolitan Rail suggests building a new stabling yard and maintenance facility at Baxter so the line can support and stable up to 30 brand new high-capacity trains. This will be plenty to support the entire line in the medium term, freeing up space to convert Mordialloc’s stabling yard to a small freight terminal, delivering petrol to nearby petrol stations and goods to the warehouses in Braeside, a very short truck trip away from the station.
Carrum Downs

- Zone: 2
- Platforms: 2
- Staff level: Unstaffed
- Melway Ref: 98 F12

Carrum Downs station would be built as part of the Frankston-Dandenong Rail Link when peninsula trains are separated from Frankston line trains. They would supplement bus route 901 (Frankston-Melbourne Airport) between Frankston and Dandenong, providing far faster services between the two major suburbs.

The location is negotiable, but the current site is the terminus of bus routes 778 (Kananook-Carrum Downs), 832 and 833 (both Frankston-Carrum Downs), where the buses connect with route 901.
Frankston

- Zone: 2
- Platforms: 2
- Staff level: Staffed full-time
- Melway Ref: 100A E6-E7

Rebuilding Frankston station as part of the Frankston Station Precinct Redevelopment is necessary for any form of rail expansion beyond Frankston.

The newly-rebuilt station is expected to make both platforms at the station “through” platforms, allowing trains to go through the station regardless of which platform they are on, which is currently impossible from platform 1, which is a dead-end platform. This will allow trains from Stony Point and Sorrento to easily run all the way to Melbourne without having to awkwardly manoeuvre around suburban trains. It is also an important first step for electrification to Baxter, as well as building a line to Sorrento.

40% of people who park in the carpark at Frankston station hail from the Mornington Peninsula. The Peninsula Rail Link will move most of these cars to carparks at peninsula stations, freeing up room for more local cars to take suburban trains.
With most stabling moved to Baxter, room will be freed up at Frankston to convert part of its stabling yard to a freight yard, from which petrol could be delivered to the 23 petrol stations in its vicinity, while still leaving enough room for 3 or 4 suburban trains to stable should more trains be needed on the line.
Frankston Hospital

- Zone: 2
- Platforms: 2
- Staff level: Unmanned
- Melway Ref: 100A G10

A new station at Frankston Hospital was announced as part of the federal Liberal government’s promise to do a feasibility study to electrify the line between Frankston and Baxter in the 2016 election.

This station could be built on the west side of Clarendon Road, with two side platforms long enough to accommodate high-capacity trains. Parking and bike racks would be built on the opposite side of Clarendon Road.

Peninsula trains would run express through suburbia, stopping only at a few major stations. These trains would bypass Frankston Hospital, but passengers can change trains at Baxter or Frankston to connect with the hospital.
Leawarra

- Zone: 2
- Platforms: 2
- Staff level: Unmanned
- Melway Ref: 102 G4

A second line and platform would be built opposite the current site of Leawarra station, and the foot crossing next to it changed to an overpass. Both platforms would also be extended to accommodate high-capacity trains.

As part of the Frankston line’s extension to Baxter, Leawarra station would be electrified. Doing so will tremendously improve access to the nearby Monash University, Power Centre and Frankston Hospital, with service frequency increasing tenfold, to every ten minutes. However, peninsula trains would bypass it.
Langwarrin

- Zone: 2
- Platforms: 2
- Staff level: Unmanned
- Melway Ref: 103 C9-D9

Langwarrin station can be rebuilt on the site of the old station from the 1970s, with 2 platforms, shade areas and PIDs. Its design would be similar to Frankston Hospital and Leawarra stations. In October 2014, PTV also discussed two other options with the public for the location of a potential new Langwarrin station: one closer to Bayside Christian College, and one closer to Karingal Shopping Centre. The result of this consultation session is unknown.

Like Frankston Hospital and Leawarra, this station would not be served by peninsula trains; only by suburban trains.
Baxter

- Zone: 2
- Platforms: 5
- Staff level: Staffed full-time
- Melway Ref: 107 B4

As the new terminus for the electrified line and the junction to the Stony Point line, Baxter station will be expanded tremendously, with two new island platforms, two runaround loops, customer service facilities and a large maintenance facility and stabling yard, big enough to fit up to 30 suburban high-capacity trains.

Mornington Railway Preservation Society, who runs tourist trains between Moorooduc and Mornington, aim to restore the line between Baxter and their HQ at Moorooduc and run their trains to Baxter. They would get Platform 1 for their services.

Platforms 2 and 3 would be used by peninsula trains to and from Sorrento and Stony Point. Here, trains from both lines would join together to form one larger train before continuing to Melbourne, and trains from Melbourne would split into two trains before proceeding to Sorrento and Stony Point. Running trains this way allows trains on the Stony Point line to also run to Melbourne without further congesting the suburban line.
Platforms 4 and 5 would be used by suburban trains to Melbourne. Despite being used by terminating trains, these platforms will be through platforms in case a regional platform becomes unusable. Likewise, platforms 2 and 3 would be electrified in case platforms 4 and 5 can’t be used.

An overpass would connect the platforms to the nearby shopping centre and carparks. The overpass would contain Myki gates, a customer service centre, toilets and a large PID. Ramps would provide access to the platforms.

The corridor between Baxter and Moorooduc Highway would be used by trains to Sorrento and Mornington Railway’s trains, but on separate tracks. The corridor would therefore be triple-track: one track for Mornington Railway, one for trains from Sorrento, and one for trains to Sorrento.

Both major federal parties pledged to undertake a feasibility study for electrification to Baxter if elected in the 2016 election. It is hoped the Peninsula Rail Link project could be factored into their study one way or another.
Balcombe

- Zone: 2
- Platforms: 2
- Staff level: Staffed full-time
- Melway Ref: 146 D5

Balcombe station would primarily serve Mornington Racecourse. It would also be used by the people of Moorooduc and Mornington.

Because the road dips steeply here, the station would lie above the ground. It would be an island platform.

Carparks would be located southwest of the station, with another ramp leading to the station under the tracks. A bus terminal would also be located here, with buses connecting passengers to Main Street. Eventually, a tram line could also run from here to Main Street.

A freight siding may also be built next to the station, allowing trucks to transport petrol and goods a short distance without congesting major suburban roads.
Extra services could run to this station during special events. To that end, a turnback track would have to be built at the station, so trains can terminate there and immediately return to the city.

Because Mornington-Tyabb Road often sees major traffic congestion during such events, and because trams can handle crush loads better than buses, a light rail from Balcombe station to Main Street could also be built to more easily transport large groups of passengers through the centre of Mornington.
Mount Martha

- Zone: 2/3
- Platforms: 2
- Staff level: Unmanned
- Melway Ref: 151 B7

Mount Martha station would be situated on Nepean Highway, on Jacksons Hill. Although relatively far from the large residential area of Mount Martha, it can easily be accessed via Forest Drive and Hopetoun Avenue. Its distance means that a large amount of space for carparks will be necessary here.

The route 788 bus can serve the station, allowing easier access to Mornington and Mount Eliza, and the route 781 bus could be rerouted slightly to terminate at the station as well.
Safety Beach

- Zone: 3
- Platforms: 2
- Staff level: Unmanned
- Melway Ref: 160 H1

Safety Beach station would be located on Island Drive, just south of the end of Martha Cove. It would be a short distance away from Safety Beach Country Club and Grand Pacific Retirement Village.

An overpass would provide access to the station from the road and carpark.

The Route 787 bus, which terminates at Safety Beach, could be extended to connect with trains at the station.
Dromana

• Zone: 3
• Platforms: 2
• Staff level: Staffed full-time
• Melway Ref: 159 F8

If the line goes down the middle of the Mornington Peninsula Freeway, the freeway’s nature strip would have to be widened slightly to allow for two platforms at Dromana station. The station would reside underneath a footbridge, which would be used as station access. The footbridge itself would be rebuilt with a roof, customer service facilities, toilets and bike racks.

This station would be a short walk away from the local shops, and Dromana Primary School.

A set of multi-storey car parks would be built on the north side of the station. Unfortunately it is difficult to build carparks to serve the south side without acquiring a nearby property, so a large number of bike racks may be built inside the station building to compensate. This in turn would encourage more bike usage over car usage, encouraging cheaper and more sustainable commuting habits among locals.
Arthurs Seat

- Zone: 3/4
- Platforms: 2
- Staff level: Unmanned
- Melway Ref: 159 E8

The primary purpose of Arthurs Seat station is to serve Arthurs Seat State Park. It would be a short walk from the new Gondola, built on the site of the former chairlift.

This station would be even closer to Dromana Primary School than Dromana station, and so would be more convenient for students to use, especially if they live further down the peninsula towards Portsea.

There is enough room for carparks on both sides of the station without having to acquire properties. A footbridge would link these carparks, and lead out to the carpark at the foot of Arthurs Seat itself.

The line between Arthurs Seat and McCrae stations is very steep, so a small tunnel would need to be built to ease the track’s gradient as it passes through this part of the line.
McCrae

• Zone: 3/4
• Platforms: 2
• Staff level: Unmanned
• Melway Ref: 158 J12

Building a station at McCrae would ease pressure on Rosebud and Arthurs Seat stations, as well as local roads. Like Dromana, this station would be built under a bridge, and its surrounding area does not have room for carparks short of property acquisition, meaning a large bike shelter would have to be built at this station instead, further encouraging bike use over car use.
Rosebud

• Zone: 3/4
• Platforms: 2
• Staff level: Staffed full-time
• Melway Ref: 170 A6

Rosebud station would be one of the busiest stations on the line, if not THE busiest. It would be built underneath Boneo Road, in a similar style to the recently-built stations at South Morang, Tarneit and Wyndham Vale: customer service facilities, toilets and Passenger Information Displays (PID s) at the road level, and an island platform with PID s.

Even if the Mornington Peninsula Freeway was extended along with the line, there is still a tremendous amount of room for carparks immediately south of the station, which could be accessed from the nearby roundabout.
Boneo

- Zone: N/A
- Platforms: N/A
- Staff level: N/A
- Melway Ref: 169 J8

A short spur line from Rosebud station would go to a freight terminal behind Rosebud’s industrial area. Here, freight trains can unload their goods, trains can be serviced at a maintenance facility, and a few passenger trains can be stabled.

The spur line would be connected to the main line with a wye, or triangular junction, so rollingstock can go from the yard to Melbourne or Sorrento as needed.
Fingal

- Zone: N/A
- Platforms: N/A
- Staff level: N/A
- Melway Ref: 169 C9

Another spur line would branch off at the Rye Resource Recovery Centre. Daily rubbish trains would deliver rubbish to the site from suburban Melbourne, easing pressure on suburban tips. A spur line will keep the train out of the way of main line services.
Rye

- Zone: 4
- Platforms: 2
- Staff level: Staffed full-time
- Melway Ref: 168 B7

Rye station would be built on the eastern edge of Dundas Street. There is plenty of room here for a lot of carparks, a bus stop, and some vandal-proof sheds.

The Route 786 bus would stop at the station, and take passengers into town.
Sorrento

• Zone: 4
• Platforms: 2
• Staff level: Staffed full-time
• Melway Ref: 156 K7

Although it was once thought impossible to run rail beyond Rye station, the recent controversy over the Skyrail project between Caulfield and Dandenong stations has revealed the possibility of running elevated rail beyond Rye, to Sorrento. The line would run along the reserve for the Mornington Peninsula Freeway extension, and then alongside Melbourne Road, elevated for its entire length except for parts of the freeway extension reserve where the line would run along the ground, and when it crosses Melbourne Road opposite Tarakan Street, where it would go under the road in order to maintain level track.

Sorrento station itself would be located above Ocean Beach Road, just a short walk away from existing carparks, which would be connected to the station by a ramp.
Passenger Services

Trains on the Peninsula Rail Link and Stony Point line would be run in a similar fashion to V/Line services; that is, once citybound trains reach the suburban network they run express through most stations and no longer pick up passengers, while outbound trains don’t set down passengers until they are outside the suburban network.

When in the metropolitan network, peninsula trains would stop only at Baxter, Frankston, Southland, Caulfield, Richmond, Flinders Street and Southern Cross.

However, since this would mean the trains would get emptier as they get closer to the city, this results in empty space that could be used to ease pressure on suburban trains if suburban passengers are allowed to use peninsula trains at Baxter, Frankston and Southland, like what happens at Pakenham and Sunbury, where passengers may take a Metro or V/Line train to and from other suburban stations.
Between stages 2 and 3 of the plan, in order to ease congestion on the Baxter line, trains from Stony Point and Sorrento would couple together at Baxter on their way to Melbourne and become one train, while trains from the city would divide at Baxter and then go on to Sorrento and Stony Point. Once the Frankston-Dandenong Rail Link is built and peninsula trains are separated from Frankston line trains, this will no longer be necessary.

A single peak hour service could also run from Hastings to Rosebud in the morning, and the other way in the afternoon, if a wye is built at Baxter. This would ease pressure on trains on both lines.
The biggest factor that would determine the success of any public transport project is how many people will use it.

As of the 2011 census, 86,900 people live along the west coast of the Mornington Peninsula, between Mornington and Portsea, and in other nearby towns. This is a larger population than the towns served by the Gippsland, Bendigo and Seymour lines.

4,576 western peninsula residents work in areas along the Frankston train line, most commonly Frankston, and the area of Kingston that includes Southland. This is a higher number than Bendigo line residents who work on the Sunbury line, and Seymour line residents who work on the Craigieburn line. This does not include Mount Eliza residents, as a bus to Frankston followed by a suburban train will still be more convenient for them.
2,132 residents who live along the Frankston line work on the west coast of the peninsula. This is more than all other V/Line routes, although 1,582 of these residents are Frankston residents who work in Mount Eliza, Mornington or Mount Martha.

In both cases, the vast majority of west coast peninsula residents work in Frankston (2,818), and vice versa (1,958). On top of peak hour patronage, a lot of holidaymakers would also use the service, to the point where peak periods, such as summer and long weekends, would require more, and bigger, trains. The railway would even open up the opportunity for overseas holidaymakers to visit the peninsula without having to hire a car.

Students of all ages can also use the train to get to and from school, with a primary school, a high school and a TAFE within walking distance of the line, as well as a university at Leawarra and another TAFE at Frankston.
Rollingstock

With trains from Stony Point and Sorrento joining together at Baxter, Diesel Multiple Unit (DMU) trains like VLocities and Sprinters are highly recommended for the majority of services, as they can join together far faster than pairs of locomotive-hauled trains, and differing couplers prevent V/Line’s current fleet of locomotive-hauled trains and DMUs from coupling to each other. However, locomotive-hauled trains could be used on the summer express.

During the summer months, the population of the peninsula is increased 30% by holidaymakers. Longer trains and possibly more services would be needed to handle the expected increase in patronage. This may require 9-car VLocity trains on some services.
There is also the option of introducing a whole new series of DMU trains tailor-made for the Mornington Peninsula, with doorways on either end of the train that allow passengers to walk between train sets while the train is moving, allowing passengers to move to the carriages that will run down their line before they divide at Baxter, without having to board a specific carriage at the station they board at. Such trains are very common in the United Kingdom.
Potential freight services

There is a lot of untapped potential for rail freight all over Victoria, and the Mornington Peninsula is no exception. There are calls to move the transport of petroleum products and even rubbish from suburban roads to rail to ease congestion in the inner city.

There is adequate space for goods yards at Balcombe and near Rosebud where petrol and miscellaneous goods can be transferred between road and rail. A single daily freight train can serve 21 petrol stations on the peninsula, 23 in Frankston and 12 in Carrum and Mordialloc, potentially taking up to 112 trucks per day off inner city roads. This is before factoring in any miscellaneous goods that can be added to the train.

In addition, there is potential for the transport of rubbish from the Frankston and Dandenong corridors to the Rye Resource Recovery Centre, which is located right next to where the line would be built between Rosebud and Rye stations. While the reduction in traffic congestion would be minimal in this scenario, the movement of rubbish out of metropolitan Melbourne will ease pressure on suburban landfills.
Level Crossing Safety

One of the biggest issues regarding rail transport and safety is level crossings. Due to the hilly terrain of the peninsula, level crossings are not viable, making the line largely crossing-free. However, because Mornington Railway has plans to run tourist trains to Baxter, it is advised that the Moorooduc Highway, Frankston-Flinders Road and Sumner Road crossings remain as crossings for heritage reasons. These crossings can be upgraded with lights and boomgates. Furthermore, the Frankston-Dandenong Rail Link will be crossing-free.

As part of the project, some of the busiest level crossings on the suburban line will have to be removed entirely due to increased rail congestion. On top of those planned to be removed by the state Government, it is also recommended to remove the tram square at Glenhuntly station to speed up express trains, including those from the peninsula. The McMahons Road crossing in Frankston, and eventually Webster Road in Dandenong, would also have to go.
If the McMahons Road level crossing (pictured) is replaced with a bridge, it is advised to do the same with the pedestrian crossing in front of it. This will help further improve travel time and safety for both commuters and pedestrians.
Environmental Impacts

One of the most important aspects of the project is reducing the line’s potential impact on Climate Change. One way to achieve this would be to install solar panels at every station. By using solar panels to power each station, we save electricity, which helps save money and the environment. This translates to greater profits and a longer-lasting, greener planet.

During construction of the line, many trees will be destroyed, especially along the Mornington Peninsula Freeway. To make up for this, it is recommended to plant a large amount of new trees around the peninsula at a 2:1 ratio (2 new trees planted for each tree destroyed) so the environment also becomes stronger as part of the project. New trees could be planted at each station as part of this, so that the line doesn’t completely sever ecosystems on either side of the corridor.

It would also be prudent to invest in more environmentally friendly railcars to eventually take over from current stock. In India, solar panels are being installed as a trial on their carriages. The same could be done on the next generation of Victorian trains.
The average passenger train removes 525 cars from our roads. This alone will drastically reduce carbon emissions, and also reduces traffic congestion in the inner city.

The Mornington Peninsula Shire’s slogan is “Committed to a Sustainable Peninsula”. Public transport plays an important role in making a region sustainable. Reducing emissions is one factor, and reducing traffic congestion is another, but so too is car dependency. Having access to fast and reliable public transport as an alternative to the car makes a community less vulnerable to the increasing price of petrol, and gives people mobility if they lose their car or licence. Furthermore, people who travel more on public transport will spend less on petrol. Since most petrol money goes offshore, this will strengthen Victoria’s economy by keeping more money in Victoria.
All railway lines that run through Flinders Street are broad gauge. This gauge is wider than the standard gauge used on the interstate rail network.

Having two different gauges makes transport from parts of Victoria to other states difficult, and the steel train to the Long Island steel mill in Hastings is impacted by this. Its products come from Wollongong NSW, which uses standard gauge. This means that steel has to be transferred from a standard gauge train to a separate broad gauge train in Melbourne.

When the Melbourne Metro rail tunnel is built and the suburban network’s lines are reorganised, the Frankston line will become a standalone loop line, sharing tracks with no other suburban lines. This opens up the opportunity to standardise the line without impacting the rest of the network. This in turn would allow steel to get from Wollongong to Hastings faster, with a single train.

Standardisation also opens up the opportunity for passenger trains from as far out as Cairns, Darwin and Perth to also visit the peninsula, making it much easier for interstate tourists to visit the peninsula and boost tourism.
However, there are a few weaknesses with standardisation. Mornington Railway cannot be standardised for heritage reasons, and because their steam locomotive cannot be gauge-converted, meaning heritage rollingstock would no longer be able to visit the railway, and vice versa, limiting the ability to swap locomotives as needed for maintenance purposes like the Victorian Goldfields Railway between Castlemaine and Maldon sometimes does.

In addition, the Frankston-Dandenong Rail Link would also have to be standardised. This would mean Dandenong-city would have to be dual gauge, and this limits that line’s speed to 80km/h. While 80km/h is its present top speed meaning nothing is immediately lost going dual gauge, it prevents the ability to potentially double the line’s speed for Gippsland and peninsula trains, which would’ve further reduced travel times by 5 minutes.

If PTV’s Network Development Plan for Metropolitan Rail is followed to the letter, the Frankston line’s trains would eventually start running via Melbourne Central to Craigieburn. This would require standardisation of the Craigieburn (and possibly also Flemington Racecourse) line, and a second City Loop track, to match, which will cost more with little added benefit.

If standardisation was to happen, the Melbourne Metro would have to be built first, as would the construction of a maintenance facility on the Frankston line, which is proposed to be done at Baxter.
Benefits to the Broader Community

In addition to the western Peninsula towns the line would serve, the construction of the Peninsula Rail Link will have a ripple effect that will benefit almost the entire Mornington Peninsula.

The electrification of the line between Frankston and Baxter would give far easier access to Monash University’s Peninsula campus, and the Frankston Power Centre, near Leawarra station. The duplication of the entire Stony Point line would allow for far more frequent services.

Having trains go from both sides of the peninsula all the way to Melbourne advertises the peninsula as an accessible holiday destination to interstate and overseas tourists, attracting more tourists to the peninsula, and thus boosting the local economy.

Once Mornington Railway Preservation Society completes the restoration of the old Mornington line between Baxter and Moorooduc stations, and then starts running their heritage trains from Baxter, access to their services would be greatly improved. The electrification of the line from Frankston to Baxter will further improve this tenfold.
Ethical issues

Although much of the line can be built with little drama, there are a few sections that the public may not agree with.

• **Skyrails**
  
  “Skyrails” are long rail bridges that run above the ground in built-up areas, typically above large numbers of roads. Skyrails have been proposed as part of a number of level crossing removals, especially along the Pakenham, Cranbourne and Frankston lines, but have been met with significant resistance. Unfortunately, three sections of the Peninsula Rail Link will also be skyrails:
  
  • Rye-Sorrento must be a skyrail, otherwise the line will be forced to terminate at Rye with a connecting bus going the rest of the way.
  • Balcombe station will be on a skyrail above Bungower Road, Mornington-Tyabb Road and Bentons Road. This skyrail is not negotiable because the line would be too steep if a trench was built here instead.
  • The entire Frankston-Dandenong Rail Link would run above Frankston-Dandenong Road until it gets to Dandenong South. A trench is doable but a lot more expensive.

• **Tootgarook Swamp**
  
  The Save Our Swamp campaign is opposed to development over the Tootgarook Swamp, and this brings them into conflict with the Peninsula Rail Link, which would run through the swamp between Rosebud and Rye. If development here remains blocked, trains would have to terminate at Rosebud, and stabling, freight yards and maintenance facilities would have to be redesigned accordingly. Rubbish trains would also be unable to run.
Advantages

– Improved public transport in the Mornington Peninsula
– Greatly improved access between the peninsula and the city
– Removal of a few level crossings
– Construction of long-proposed Southland station
– Increased service frequency on the Stony Point line
– Creation of thousands of short-term jobs, and around 350 long-term jobs
– Easier access between east and west coasts of the peninsula by public transport
– Cuts travel time to the city by public transport by 45 minutes from Rosebud, and 25 minutes from Stony Point
– Reduces pollution from cars, and traffic congestion, with up to 90 fewer cars on the road per carriage
– Reduced car dependency
– Improved access to Monash University’s Peninsula Campus (via Leawarra station) and Chisholm Institute of TAFE’s Rosebud campus (via Rosebud station) by public transport
– Improved access to the peninsula for holidaymakers, especially from overseas, boosting tourism
Disadvantages

– Added train congestion on the Baxter line
– Some deforestation
– Loss of farmland in Mount Martha
– Removal of a number of emergency U-turns on the Mornington Peninsula Freeway
Bibliography

• Gregory, Ross. Team Leader, Infrastructure Planning and Policy, Mornington Peninsula Shire. December 18, 2013
• Kontos, Rita. Sustainable Transport Project Co-ordinator, Mornington Peninsula Shire. December 8 2015