

cranbourne east *precinct structure plan*

Sustainable Transport Specialist Report

CEUGP/SR16A

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1 INTRODUCTION

PREFACE

This is a draft report. Its purpose is to seek comment from key stakeholders.

This draft has not yet been reviewed by Casey City Council or any other agencies, and therefore its findings have not been endorsed by them.

1.1 Process

1.1.1 Specialist Report

The purpose of this report is to identify current levels of sustainable transport (Walking, Cycling, and Public Transport) provision within and around the area of Cranbourne East and the impact this level of provision has on the study area for the Cranbourne East Urban Growth Plan.

Conclusions will identify issues around accessibility via sustainable modes and provide initial recommendations on improvements to be considered throughout the Cranbourne East Urban Growth Plan development.

This report will draw on a literature review, workshop discussions, investigations, site visits and experience to provide an overview of the issues facing the development of sustainable transport for this site

1.1.2 Workshops

As part of the process, various workshops and meetings have been planned to engage the relevant agencies and open dialogue to help understand the issues. City of Casey officers, VicRoads officers, Department of Infrastructure representatives and the consultant team have already been involved in discussions. The discussions have helped to inform this report and provide a view that considers all the stakeholders inputs.

1.2 Desirable Outcomes

The following desirable outcomes were identified through the processes:

- Encouraging walking and cycling strategies.
- Encouraging future residents to shop and work on the site or nearby.
- Encouraging public transport use with the development of the Cranbourne East Railway Station.
- Establish a goal of (an average of) one car per household.
- Traffic calming and vehicle reduction measures.
- The need for a quality public transport link between the site and surrounding Activity centres such as Cranbourne town centre.
- Connections to schools within and adjacent to the study area.
- Measures to achieve the one-car-household strategy (eg encouraging car-share companies).

2 BACKGROUND

2.1 Policy Review

2.1.1 Background

As part of the existing situation study it is important to fully review the relevant policies that have guided the sustainable transport agenda to date for Cranbourne East. As part of this review, the following documents have been looked at:

- Melbourne 2030
- Meeting Our Transport Challenges
- The draft DOI PT guidance
- Casey C21
- Cranbourne West Structure Plan

Each of these has been reviewed and summarised below.

2.1.2 Melbourne 2030

In general Melbourne 2030 takes a wider strategic view that growth should be concentrated in urban areas however some fringe growth will continue and where this occurs, the following policies should guide the development:

Policy 2.2 – Concentrate urban expansion into growth areas that are served by high-capacity public transport;

Policy 7.3 – Contribute to national and international efforts to reduce energy usage and greenhouse gas emissions;

Policy 7.6 – Ensure that land-use and transport planning and infrastructure provision contribute to improved air quality;

Policy 8.3 – Plan urban development to make jobs and community services more accessible;

Policy 8.5 – Manage the road system to achieve integration, choice and balance by developing an efficient and safe network making the most of existing infrastructure;

Policy 8.7 – Give more priority to cycling and walking in planning urban development and in managing our road system and neighbourhoods;

Policy 8.8 – Promote the use of sustainable personal transport options;

This snapshot of some of the sustainable policies stated within the Melbourne 2030 leave no doubt that growth such as that being proposed in Cranbourne East should be based on improved sustainable practice that challenges the unrestrained car-based developments that have been previously acceptable.

2.1.3 Meeting Our Transport Challenges

This document reflects on the future trends in population and growth that are expected to face Victoria in the coming 25 years. The plan states ‘...requires the completion of the Principal Public Transport Network (PPTN), giving high priority to developing those parts of the network that are missing or inadequate in

providing for major travel flows.... Completion of the PPTN will make public transport increasingly relevant and attractive to the extensive and growing market for suburban travel.'

'...better access for pedestrians and cyclists is integral to the planning and successful development of activity centres. It is also critical to the effectiveness of the public transport system.'

'...rising petrol prices will make public transport an increasingly viable option (in outer suburbs) with fast, frequent and reliable bus services likely to attract more and more people in Melbourne's outer suburbs who regularly travel across town and between suburbs, rather than to and from the CBD.'

'The Government will better connect communities by:

Extending public transport services into growing areas and improving the quality of transport services in suburbs and regions;

Developing new cross-town connections in Melbourne;

Improving access to the transport system for older Victorians and people with disabilities and restricted mobility by making modifications to the network and to trains, trams and buses;

Ensuring that public transport reflects the changing travel patterns of Victorians, are tailored to meet diverse community needs and are able to meet the needs of our ageing population.'

Overall the document refers to continued and improved public transport provision to help cater for the increasing public transport requirements as new development occurs in and around Victoria. For the Cranbourne East site, local public transport improvements identified include the Yellow Orbital bus route that will provide high quality and high frequency bus services linking Frankston to Dandenong and beyond.

Rail line improvements are identified for the Dandenong/Caulfield rail corridor and this again will provide improved regional connectivity if the Cranbourne East site can link in with this. A new station is identified for Lynbrook which is close to the Cranbourne East site and should be considered for further connections. Cranbourne Station itself is identified for works affecting 'stabling' which will increase the reliability and frequency of services.

Road building is also identified within the document. 'In the short-term, priority will be given to delivering projects through the Outer Metropolitan Arterial Roads Program that:

Improve cross-town and regional connections;

Provide access to Transit Cities and activity centres;

Upgrade major public transport routes;

Tackle safety and performance problems.

2.1.4 The Draft DOI PT Guidance

The following extracts have been taken from the draft DOI Guidelines for public transport design and are relevant in the Cranbourne East context.

'Public transport services will not run efficiently without quality infrastructure and adequate patronage. It is crucial therefore to ensure that new developments take account of both public transport routes and access, and encourage more sustainable modes of transport such as public transport services. The public transport and personal transport routes should form a comprehensive network that provides modal choice, including the delivery of people from origin to destination with ease and in a timely manner.'

'Access to public transport must be integrated with the preparation of development plans and planning permit applications. These guidelines provide technical design guidance for the provision of public transport access

and infrastructure. New urban developments should be contiguous, allowing sequential public transport route development.'

'Public Transport networks and services should be considered in the context of their surrounding areas, including how pedestrians will access the services. This means that pedestrian design features such as safety, amenity and urban design will be important considerations when planning public transport services.'

The guidance goes on to talk about 'New Major Developments' with some important elements listed that should be considered in the design of the Cranbourne East site. These include:

In cases where congestion causes unreasonable delays, bus priority measures such as traffic signal priority and dedicated bus lanes should be implemented, particularly where buses are accessing/egressing a modal interchange

The provision of public transport enhancement of infrastructure in proportion to the travel demand generated by the proposed development.

There is an emphasis placed here by the DOI on ensuring that congested networks are designed to cater for public transport ensuring that the general traffic delays do not interfere with the operation of public transport. The guidance talks about the infrastructure that can be used to facilitate public transport and includes public transport lanes as an option. Given that the future modelling for the Cranbourne East area clearly shows the roads to be congested, it is vital that provision for public transport is planned for now when land can be made available and this priority can be safe-guarded.

2.1.5 C21 Strategy - A Vision for the City of Casey

In 2002 the City of Casey released its C21 Strategy - A Vision for the City of Casey. The strategy presented a blueprint for the future development of this rapidly developing Municipality, which it is envisaged will ultimately accommodate over 300,000 residents.

One of the key elements of the C21 Strategy is the creation of an *Accessible City*. The strategy recognised that *"Accessibility to goods, services, jobs and facilities is a fundamental right of people in the community. It is a social objective not an infrastructure goal. Casey's location on Melbourne's fringe requires innovative planning if the needs of the community are to be met"*.

The strategy identified 10 goals aimed at achieving its Accessibility Objective, as follows:

1. Integration of land use and transport outcomes
2. Mile grid of arterial roads
3. Public transport friendly suburb design
4. A shift to public transport
5. New east-west arterial road links
6. Key regional transport links
7. Upgrade local roads
8. Casey Trail Network
9. Regional through routes
10. Safer local roads

Clearly the above goals must be embraced in the planning of Cranbourne East.

One of public transport initiatives outlined in C21 is a line haul bus network of three loops running in both directions at 15 minute frequencies combined with feeder bus services. This network would provide access to;

The regional centres of Fountain Gate/Narre Warren CBD and the Cranbourne Town Centre.

Each of Casey four sub regional centres.

Each of the three tertiary educational facilities and the proposed Casey Technology Park.

The proposed public hospital and the integrated care centre.

Six of the eight neighbourhoods shopping centres.

Five of the seven railway stations.

The line haul service would connect a high proportion of Casey residents with local services, education and job opportunities encouraging more 'local living'. The 'Eastern Loop' of the proposed service would run close to the Cranbourne East site and through the Cranbourne Town Centre. Initial cost estimates of service are 12 million per year.

The alignment of the Eastern Loop may need to be considered due to the Cranbourne East growth area that will act as a major new public transport attractor.

2.1.6 Cranbourne West Structure Plan

In 2007, a structure plan was devised for the Cranbourne West Growth Area that is located approximately 3 kms due west of the Cranbourne East site. The growth area was planned and developed based on a series of sustainable criteria that it is proposed to be replicated in the planning and design for Cranbourne East. The outcome of the Cranbourne West Structure Plan was a development plan that looks to encourage and actively promote sustainable travel and local living.

The Cranbourne West process identified a series of public transport enhancements to ensure the site will be well served by public transport. A network of regional PPTN and local services were proposed to link the residents of Cranbourne West to the services located both inside and outside the site. It is suggested that a similar approach be undertaken for the Cranbourne East site to continue to develop the sustainable transport network.

3 SITUATION ANALYSIS

3.1 The Site

The site for the Cranbourne East Urban Growth Plan is located to the East of the existing Cranbourne Town centre. The study area is made up of two distinct areas; the northern section which extends mostly between Thompsons Road to the north and the Berwick-Cranbourne Road to the East and South, and the Southern section which is mostly between the Berwick-Cranbourne Road to the north and South Gippsland Highway to the south. FIGURE 1 shows the study area boundaries in more detail.

The site is mostly undeveloped with some road infrastructure in place with significantly more proposed including various upgrades to roads.

A disused railway line dissects the study area with various at-grade crossing points located in or near to the site. The rail corridor is disused however it has been retained by the Department of Infrastructure to ensure that the line could be re-opened if sufficient demand was generated.

The Clyde-Cranbourne road is proposed to be upgraded to a 'high-standard' road which will involve substantial works and road re-alignment. The exact alignment is currently undetermined and subject to further discussion. The effects of the realignment are likely to be substantial as the road borders the eastern edge of the site.

3.2 Existing Trip Attractors

Casey Fields is a large recreational facility located just south of the Berwick-Cranbourne Road and is adjacent to the study area. Cranbourne town centre is a Principal Activity Centre as defined in Melbourne 2030 and therefore acts as a significant draw for services and shopping from the surrounding area. Further north, Narre Warren Fountain Gate is a regional attractor and the regional towns of Dandenong and Frankston also play a regional role and will act as key destinations to potential residents.

These locations and others will be considered in terms of their importance and their accessibility in the development of local and regional transport networks.

3.3 Permit Applications

The Cranbourne East site as mentioned is currently largely undeveloped but as a result of this process is expected to propose significant levels of new residential development. Further to this, there are a number of existing permits in the area which will also have an impact on the levels of traffic and transport in the immediate area.

Figure 1 – Study Area

The site is largely undeveloped with the exception of some low density housing which exists on the western edge of the northern section with access via the Berwick-Cranbourne Road. Apart from the roads mentioned, no public transport, cycle paths or pathways of any notable value exist within the site. Some existing and proposed transport facilities are located abutting or adjacent to the site and are detailed in the following sections.

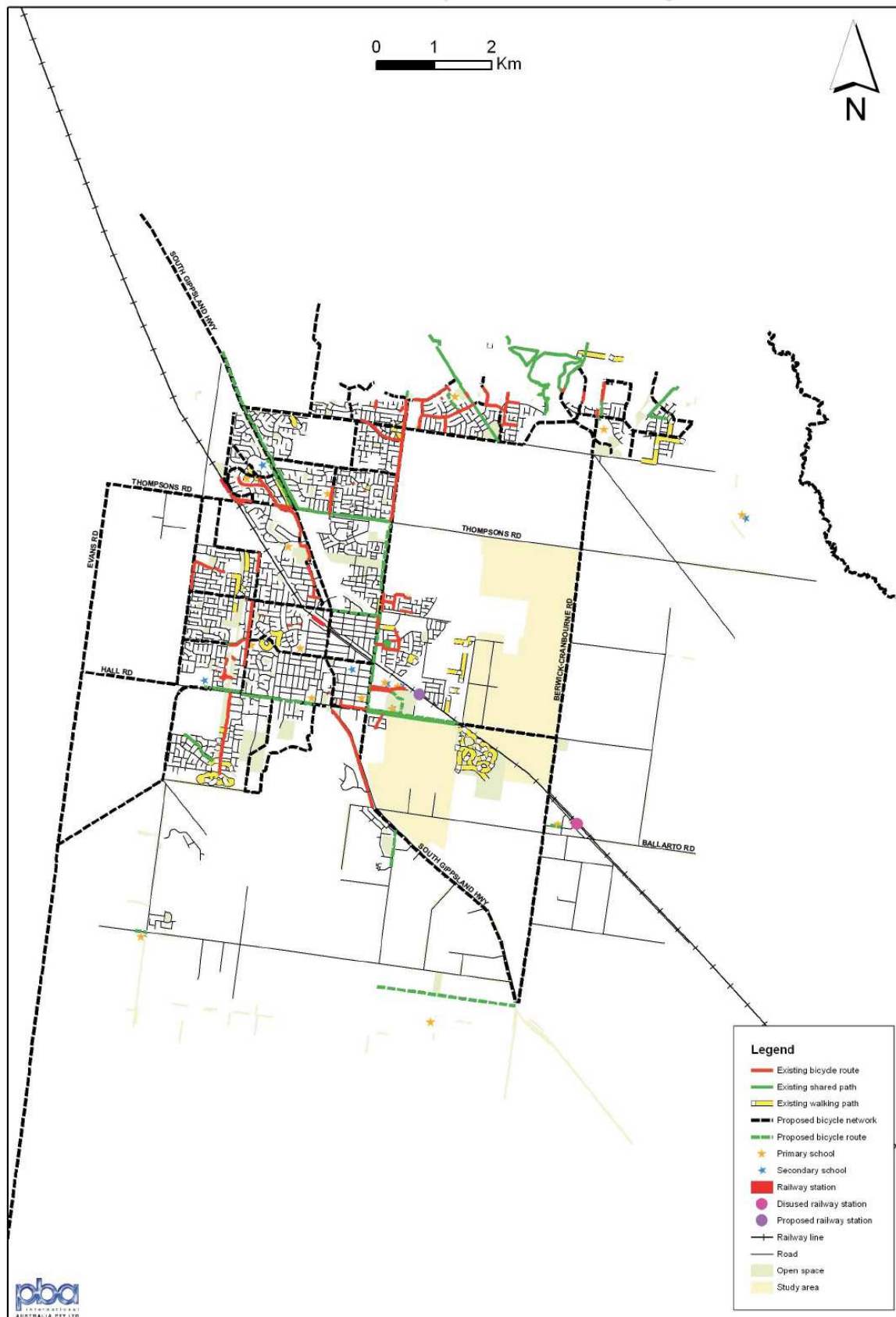
3.4 Cycling and Walking

With minimal existing development within the study area there is generally very little infrastructure in place. The access roads to the low density housing (Mayfield Road, Collison Road, Heather Grove and Garden Street) are unsealed roads with no cycle or footpath provision. To the west of the study area some off-road footpath connections have been implemented connecting the Blue Hills retirement village with the proposed areas of park land. A footpath connection also exists between Garden Street and the proposed park land and future primary and secondary school site.

A shared cycle and pedestrian footpath exists along the Berwick-Cranbourne Road from the intersection with Cameron Street and the Casey Fields site.

The figure shows that the existing and proposed cycle facilities adjacent to the site. VicRoads Principal Bicycle Network (PBN) commits to funding and developing cycle facilities on the following routes within the area:

- Berwick- Cranbourne Road (east-west)
- Berwick-Cranbourne Road (north-south)
- South Gippsland Highway
- Cameron Street / Narre Warren – Cranbourne Road
- Thompsons Road

Figure 2 – Existing Walking and Cycling Facilities

3.5 Existing Public Transport Services

The following public transport routes within the area adjacent to the proposed Cranbourne East site.

3.5.1 Buses

Three bus routes currently operate near to the study area, 795, 796 and 896.

Bus route 795 departs from the terminus at Cranbourne Railway Station Bus Interchange and runs via Station Street, Camms Road, High Street and Lyall Street (opposite Cranbourne Park Shopping Centre). The service then runs via Lyall Street, Codrington Street, South Gippsland Highway, Fisheries Road, Cannons Creek Road, Currawong Grove, Glenalva Parade, Cannons Creek Road, Baxter-Tooradin Road, Warneet Road, Kallara Road, Balaka Street and Culgoa Street to the terminus at Warneet General Store. The 795 also runs in the opposite direction.

Bus route 796 departs from the terminus at Cranbourne Railway Station Bus Interchange and runs via Station Street, Camms Road, High Street, Lyall Street (opposite Cranbourne Park Shopping Centre), Codrington Street, Sladen Street, Cameron Street, South Gippsland Highway, Craig Road, Finsbury Road, Clyde-Five Ways Road, Oroya Grove, Railway Road, Clyde-Five Ways Road, Berwick-Cranbourne Road, Sladen Street and High Street to the terminus at the Cranbourne Railway Station - Bus Interchange

Bus Route 896 departs from Cranbourne Railway Station via High Street, Sladen Street, Narre Warren-Cranbourne Road via the Hunt Club and then Brindalee Place, Dartmoor Drive, Otley Way, Barham Way Trafalgar Way, Camms Road back to the Station.

Table 1 – Existing Bus Services

Bus Service	Origin to Destination	Avg Weekday Frequency	Avg Sat Frequency	Avg Sun Frequency	Within 400 metres?
795	Cranbourne Stn to Warneet	Every 90 mins	None	None	Yes
796	Cranbourne to Clyde to Cranbourne (SD)	3 Services M-F	None	None	Yes
896	Cranbourne Stn to Cranbourne East	Every 30 mins	Every 20 mins	Every 30 mins	Yes
830	Frank to Dandenong	Every 60 mins	Every 60 mins	None	No
831	Frankston to Dandenong	Every 60 mins	Every 120 mins	None	No
832	Frankston to Skye	Every 45 mins	Every 45 mins	None	No
841	Narre Warren to Cranbourne	Every 45 mins	Every 60 mins	5 per day	No
893	Cranbourne to Dandenong	Every 45 mins	None	Every 60 mins	No
896	Cranbourne Stn to Cranbourne East	Every 30 mins	Every 30 mins	Every 30 mins	Yes
897	Cranbourne Stn to Central Pkwy	Every 60 mins		None	Yes

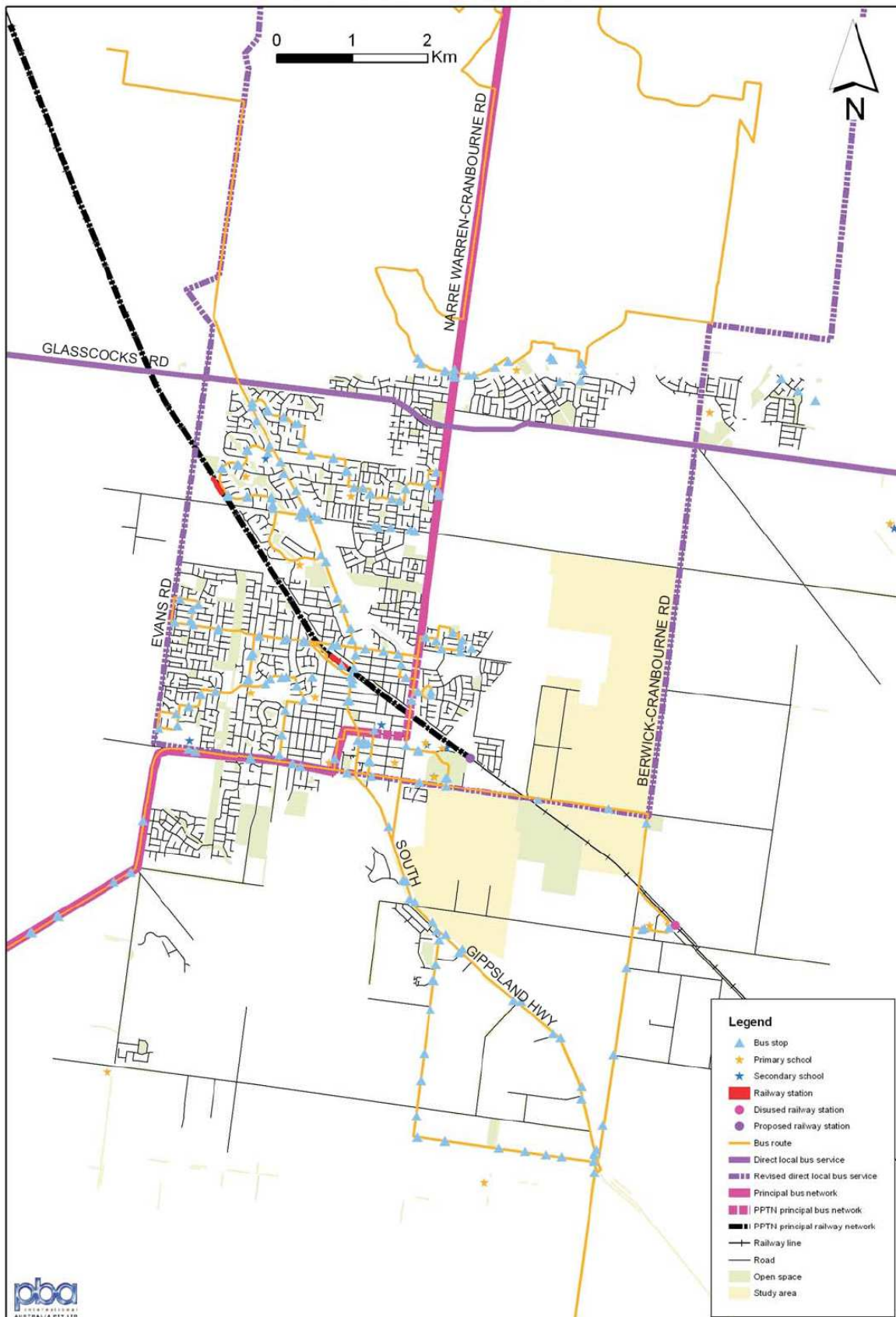
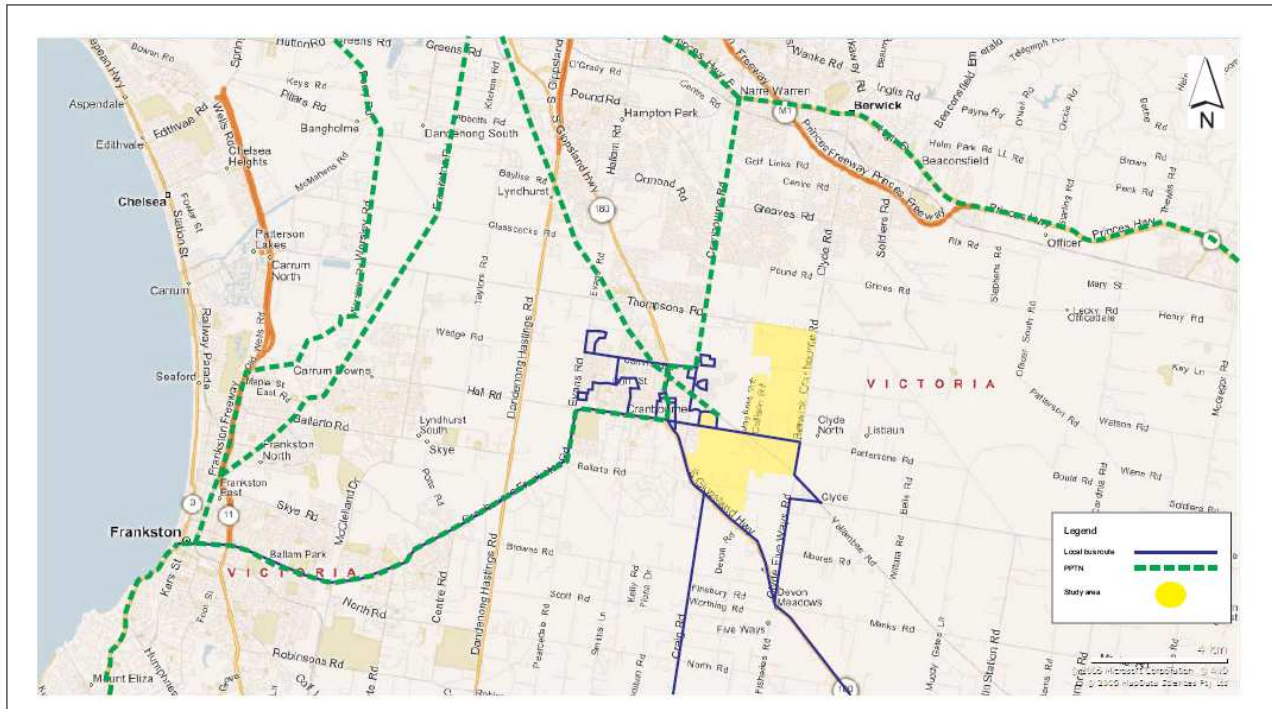
Figure 3 – Existing Public Transport

Figure 4 – Existing and Proposed Regional Public Transport (draft)



3.5.2 Railway

The existing railway line operates only as far as Cranbourne town centre. This is the terminus station although tracks exist beyond Cranbourne and dissect the study area. These tracks are no longer operational and would require significant repairs to ensure their safe use for passengers. The disused railway line has been reserved however to ensure that the line could be reopened if it became viable to do so.

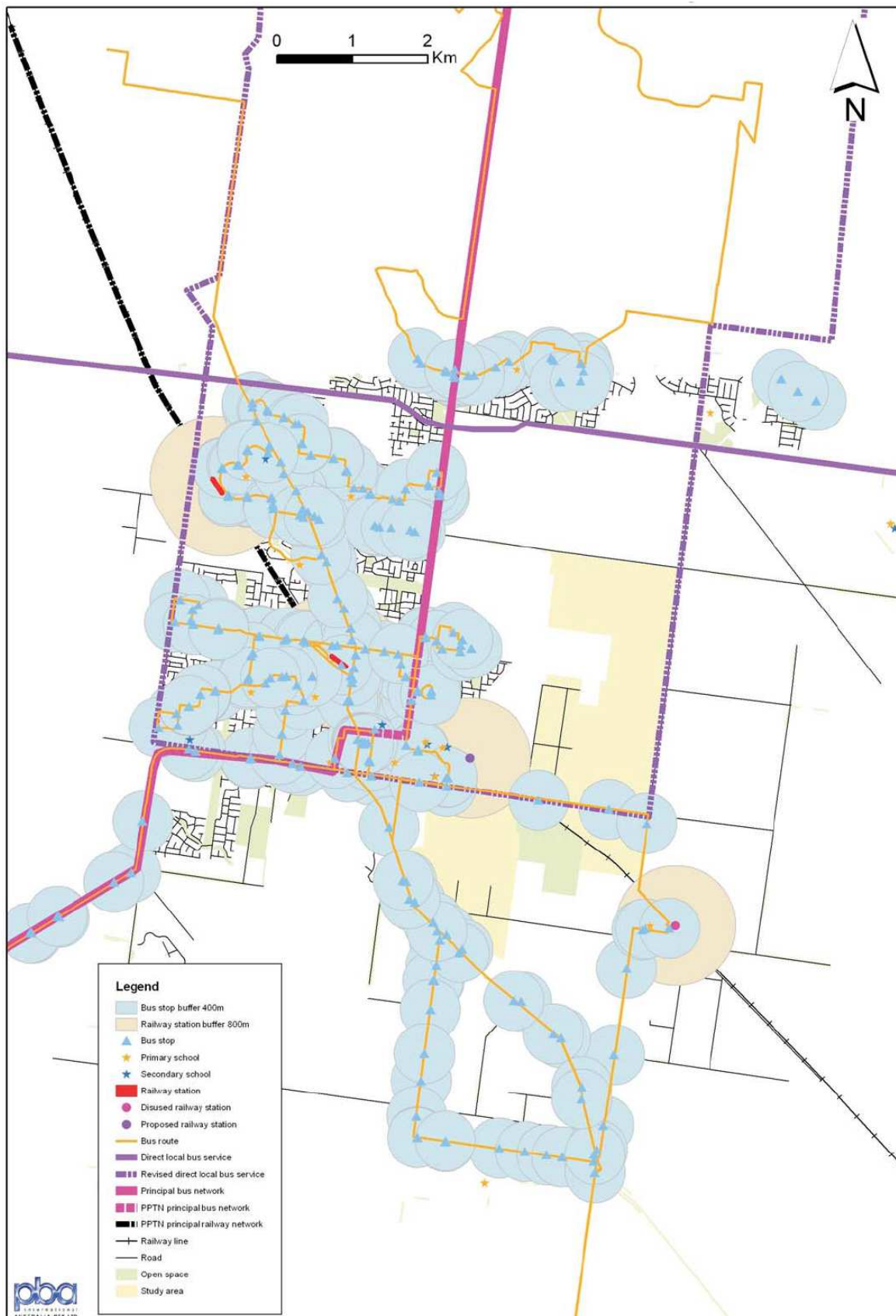
The Pakenham railway line is also in operation and is located approximately 8 km from the Cranbourne East site. The existing service levels for these lines are shown in the next table.

Table 2 – Existing Rail Services

Rail Service	Origin to Destination	Avg Weekday Frequency	Avg Sat Frequency	Avg Sun Frequency
Pakenham Line	Pakenham to Flinders Street	Every 15 mins	Every 20 mins	Every 20 mins
Cranbourne Line	Cranbourne to Flinders Street	Every 15 mins	Every 20 mins	Every 20 mins

3.5.3 Public Transport Network Coverage

It is recommended that residential properties be located within 'acceptable' walk distances of public transport services to help maximise accessibility. The standards promoted by the Department of Infrastructure list access to bus and tram stops should be no more than 400 metres walk (approximately 5 minutes) whilst access to rail services should be no more than 800metres (approximately 10 minutes). The following figure shows the current accessibility to public transport.

Figure 5 – Existing Public Transport Service Coverage

3.6 Existing Public Transport Proposals

There are a number of potential public transport schemes that have been previously suggested or discussed by stakeholders which will need to be considered in the context of the additional Cranbourne East development opportunities. The following schemes have been proposed by various agencies but should only be considered as 'possible' future schemes as they have not been approved for implementation.

3.6.1 Principal Public Transport Network (PPTN)

The Department of Infrastructure and VicRoads provide the regional and strategic on and off-road public transport through the Principle Public Transport Network (PPTN). Where there is the intention to expand the network, this is referred to as the Proposed PPTN. The following map identifies the proposed PPTN and therefore the current commitment to public transport in the Cranbourne East locality,

3.6.2 Cranbourne Rail Line Extension

There is potential for an extension to the PPTN along the Cranbourne Line extending the line South-East of Cranbourne along the former South Gippsland Railway. The railway line is now disused but has been protected to allow for the re-opening of the line should it be deemed appropriate. The disused railway line extends south east beyond Cranbourne Station and potential station locations have been identified at Cranbourne East and at Clyde.

The implications of extending the railway line operation and opening either or both of the proposed stations are very significant. The development of the Cranbourne East growth area is likely to add additional patronage to the line and increase demand for services.

The current alignment of the disused railway line between Cranbourne and the potential Clyde Station includes three at-grade rail crossings with the Narre Warren-Cranbourne Road, the Berwick-Cranbourne Road and the Clyde-Five Ways Road. In line with policy, these crossings will need to be grade-separated should the line be re-opened which will involve significant works to take the rail crossing either over or under these roads.

Initial discussions with the Department of Infrastructure and VicRoads have identified the grade separation as a key issue in the potential reopening. The following provisional thoughts have been raised during discussions with these agencies:

- The grade separation of the rail poses significant design issues that will need to be rectified should the rail extension be agreed. The rail extension to Cranbourne East requires the grade separation of one crossing, namely the Narre Warren-Cranbourne Road intersection only. Should the rail extension be continued to Clyde, the crossings at Berwick-Cranbourne Road and at Clyde-Five Ways Road will also need to be grade separated.
- These three crossings can be considered individually or as one much bigger scheme.
- There maybe staging opportunities attached with the development of the 1,2 or 3 crossings.
- The DOI are adamant that the provision for future use of the railway corridor to move freight or passengers is maintained.
- As such, growth area development should look to provide sufficient critical mass of potential passengers or freight then the reopening of the line and the potential new stations at Cranbourne East and Clyde should be considered.
- DOI raised concern about the apparent ease and frequency at which the Urban Growth Boundary is moved and consequently the difficulty associated in providing long-term rail planning to service this growth. Station catchment is increasingly difficult to assess given the fact the urban boundary appears to be reviewed and moved every few years.

- The role of the stations is very important point to consider. The existing Cranbourne Station already operates well with the car park regularly operating at over-capacity as people drive to the station to take the train. The park & ride function is something that clearly exists but may change with the introduction of new stations further out.
- The long term strategic rail planning should be considered when looking at the potential development of this part of the railway network.
- If the Berwick-Cranbourne Road is being realigned to a major highway status then grade separation of the intersection with the rail line could be included within the designs.

At this stage of the Cranbourne East development process, the outcomes of the rail and road interactions are still up for debate and will be integrated into the planning for Cranbourne East as much as possible.

3.6.3 Yellow Orbital Smart Bus

This initiative has been promoted by the Department of Infrastructure and is a 48km Outer Eastern SmartBus route providing a cross-town connection from Frankston to Ringwood along Stud Road and Frankston-Dandenong Road. It is proposed to be introduced in 2008 and would provide a high frequency service connecting to several key nodes such as Bayside, Know City and Eastland shopping centres.

It is proposed to offer four services per hour on weekdays during and between peak periods, and two services per hour beyond the peak periods to around midnight. Saturday services are planned to provide two services per hour to around midnight, while Sundays two services per hour are proposed to apply to around 9pm.

The SmartBus project will provide a significant improvement in the levels of public transport connections along the route however the closest point to the Cranbourne East site is approximately 9km away which is not sufficiently accessible to potential residents. It will be important to consider providing public transport connections to the SmartBus route however multiple public transport journeys rely on interchange which is often too time consuming to ensure a convenient service. Consequently, there may be limited usage to or from Cranbourne East.

3.6.4 C21 line haul bus network

As mentioned in the policy review of this report the Casey C21 strategy proposes three high frequency bus services connected with feeder services designed to connect the population of Casey with local goods, services, education and employment. Options will be looked at to work with these proposed local loop services and where necessary, suggested alterations to the alignment of the services proposed in C21 will be considered.

3.6.5 Cranbourne West Growth Area Public Transport Network

The Cranbourne West growth area is located approximately 3km to the west of the Cranbourne East site. This area is currently subject to a growth area planning framework which has identified a series of public transport initiatives in the area. In discussions with the DOI, the proposed public transport network has been confirmed along the key routes adjacent to the Cranbourne West site including along sections of Evans Road and along the Cranbourne-Frankston Road connecting the growth area to Cranbourne town centre. Additionally, Casey Council in discussions with DOI identified two bus services which performed a local access function connecting the proposed residential areas of the Cranbourne West site with the proposed and existing activity centres.

Whilst it is acknowledged that none of these services directly connect to the Cranbourne East site, there is potential to provide connections to these services, particularly the PPTN services, to further connect the Cranbourne East site to the regional network.

3.7 Public Transport Patronage

3.7.1 Travel Patterns

It is recognised that proposed land use and densities would need to be appreciated before public transport corridors could be determined. Consequently, considerable modelling has been undertaken as part of the Cranbourne East Urban Growth Plan and is reported in the Specialist Report 'Travel Demand Forecasting and Road Infrastructure Planning'. The following information has been drawn from this modelling and is used to help identify where public transport may be most usefully employed.

On a typical weekday there are about 336,000 journeys made by Casey residents commencing at their home, and a similar number returning to their home. 60% of these journeys made from home by residents of Casey (about 204,000 journeys) are made to destinations within the Municipality, while the balance (approximately 132,000 journeys) is to destinations external to the Municipality.

Of the journeys made to external destinations, 34% of external journeys are to Greater Dandenong and 33% are to the inner eastern suburbs of Melbourne. Very few (4%) external journeys are made to the City of Melbourne because of the distance and travel time involved and there are also significant travel interactions with the Frankston and Knox sectors.

Journeys to work provide a completely different travel pattern relative to the total travel described above. Only 30% of Casey's resident workforce travel to work destinations within the Municipality. Currently 70% are employed externally. The main external employment destinations for the resident workforce are:

- The inner eastern suburbs of Melbourne (39%)
- Dandenong (30%)
- Frankston (8%)
- Knox (7%) and
- City of Melbourne (7%)

It is understood that these travel patterns are based on existing City of Casey data and may alter depending upon the demographics of the future residents of Cranbourne East however it is likely that they provide indicative trends. To this end, development of longer distance public transport connections will need to focus on the key destinations such as Dandenong, Frankston and the inner suburbs of Melbourne rather than Melbourne CBD connections.

3.8 Assumptions

All traffic flow analysis is based on Veicht Lister modelling outputs which are detailed in the Specialist Report 'Travel Demand Forecasting and Road Infrastructure Planning' produced as part of the Cranbourne East Urban Growth Plan. The Zenith transport model draws on a series of mode choice/travel cost relationships to estimate public transport patronage. Full details of the modelling techniques are available in the transport modelling report.

4 OPPORTUNITIES

4.1 Approach

4.1.1 Local Living

'Local Living' will underpin the overall approach to developing the Cranbourne East Growth Area. Local living refers to the provision of increased services close to the residential areas to increase the occurrences sustainable mode choice whilst reducing the overall length of the trips. The process will ensure sufficient residential catchment for services such as schools, shops, community services and recreation.

4.1.2 Sustainable Choices

With local services in place, ensuring there is provision of high quality, direct and safe walk, cycle and public transport services will provide a level of real choice for residents when it comes to making trips. Well constructed and enjoyable facilities will provide the resident's with a genuine opportunity to choose alternative modes of transport to the private car.

New residents will be making a step change to their routines when they move to Cranbourne East. It is the perfect opportunity to encourage a lower reliance on the private car. We understand that there will be a requirement for some car travel but the opportunity may exist for some families to only own and operate one car, saving them money. Overall, this approach will seek to achieve a lower car ownership rate than would otherwise exist.

The reason behind this approach is the longer term trends for traffic and transport. It is now widely accepted that traffic congestion is continuing to rise as is the price of petrol. The short to long term predictions show these trends continuing making them less and less attractive and viable. This strategy is looking to plan for 30 years into the future where it is anticipating extremely high petrol prices and a significant increase in demand for sustainable transport.

4.1.3 Sustainable Design

The urban design of Cranbourne East will ensure that accessibility and permeability will be maintained and that movement is facilitated across the site. This means no dead ends and easily accessible locations. The design will ensure that as a pedestrian or cyclist, facilities will be provided and that public transport will be able to access every area.

4.2 Public Transport

4.2.1 Good Practice / Best Practice

It is required in accordance with state policy that 95% of all residences are located within 400m of a public transport node. Additionally, the Principal Public Transport Network (PPTN) aims to provide an improved level of service for regional connections and access to Activity Centres.

As part of the proposals for Cranbourne East, it is proposed to improve on these recommendations in pursuit of best practice. Local services will be proposed with improved coverage, frequencies and operating times and where suitable, the PPTN will be extended to provide wider coverage in the growth areas. Improving the train services will be an important part of the Cranbourne East public transport strategy and this will be investigated further.

4.2.2 Opportunities

The opportunity may exist to extend the railway line beyond the existing terminus station of Cranbourne to as far as Clyde. This would include the addition of two new stations and approximately 6km of replacement track. The implementation of this extension relies on the ability to grade separate 3 road/rail crossings. Options will need to be tested but one option that has been suggested is the lowering of the rail track south east of Cranbourne. The disused status and the potential 3 intersection economies mean this option should be considered.

A scheme of this size and scale is of regional importance and is likely to cost accordingly however the potential to develop and extend the rail services will have long term benefits for the potential residents. This and other options will be considered and discussed with the various stakeholders but is likely to have a significant effect on overall public transport usage in the Cranbourne East growth area.

5 CONCLUSIONS

5.1 Walking and Cycling

Walking and cycling should be promoted and provided for as the first and second choice of modes of transport and should receive the same level of priority. Minimum standards will ensure good quality pedestrian and cycle linkages exist along all roads as well as through open spaces and wherever demand exists. This can be presupposed by providing connections between residential areas, activity areas and public transport nodes and ensuring they are attractive, safe and efficient.

Intersection design should be required to provide actual priority to pedestrians and cyclists ensuring a safer environment than is typically provided in Victoria. By ensuring local services are provided within walkable catchments, walking and cycling throughout the Cranbourne East development can be encouraged. Where journeys cannot be accommodated through walking and cycling, public transport services should be provided in such a way as to provide a real choice for people living and visiting Cranbourne East.

5.2 Public Transport

The rail line extension and new stations offer a rare opportunity for this growth area to design and include both road and rail public transport into the overall transport network and provide real mode choice to the future residents. The Cranbourne East development combined with the Berwick-Cranbourne road realignment potentially increases the opportunity to develop the rail network by undertaking some of the works at the same time. With up to three intersections required to be grade separated between Cranbourne and Clyde stations, the opportunity to undertake this as one scheme and benefiting from the disused status of the track means the scheme could be more cost effective than when considered separately. Further investigations into the options are required and will happen as a result of this growth area planning process.

Current public transport does not serve the site adequately with a small proportion of the site within 400m of a bus stop and/or 800m of a train station. These distances equate to approximately 5 and 10 minutes walk time and are generally acceptable walking distance to public transport.

The overarching principle to delivering a more sustainable development will be to provide convenient, well-located, regular public transport to appropriate destinations. The current and proposed provision is inadequate or located too far away to provide this 'high-quality' service.

The development should therefore look to extending existing bus routes to and through the site and proposing new services linking the residential areas with key nodes such as Activity Centres and key public transport nodes. Regional connections will need to be tested looking for PPTN levels of service or better to key destinations such as Cranbourne town centre, Frankston, Dandenong etc.

Park and ride already occurs at existing stations and is a possibility from the proposed train stations if they are implemented. Encouraging Park & Ride and encouraging public transport usage should be considered separately and the role of the stations must be agreed with agency stakeholders.

Significant public transport priority must be planned for from the outset to ensure that the predicted congestion does not adversely affect the operation, efficiency and reliability of public transport in the future. Further to this, public transport congestion must be considered in terms of available space on trains during the peak hours.

5.3 Principles

As mentioned, in order to achieve these sustainable principles, appropriate planning and land use decisions must be agreed and made from the outset. The opportunity exists to develop a convenient and effective transit oriented design to underpin the entire Cranbourne East development to promote increased sustainable living from its residents and visitors.

Principles that will be a part of the design process include (but are not limited to):

Local living. Employment to be located near transport nodes enabling employees to conveniently use public transport;

Define a hierarchy of road users to aid design that benefits sustainable users first i.e. pedestrians, cyclists and public transport users over single occupancy cars;

Encourage services to be provided within walkable catchment distances of all residential developments.

Ensure that designs enhance the pedestrian and cycle environments through safer design of lighting, public spaces, intersections and crossing points.

5.4 Guidelines

Creating an integrated transport network, which addresses barriers such as conflict between cars and pedestrians and serves the majority of the population, provides acceptable choices in favour of sustainable transport modes.

As part of the development process, PBAI will be looking to develop an overall network of transport links to help promote walking, cycling and public transport use. This network will be based on minimum guidelines and standards.