

# ST. VINCENT STREET + COMMERCIAL ROAD CONCEPT PLAN

March 2008



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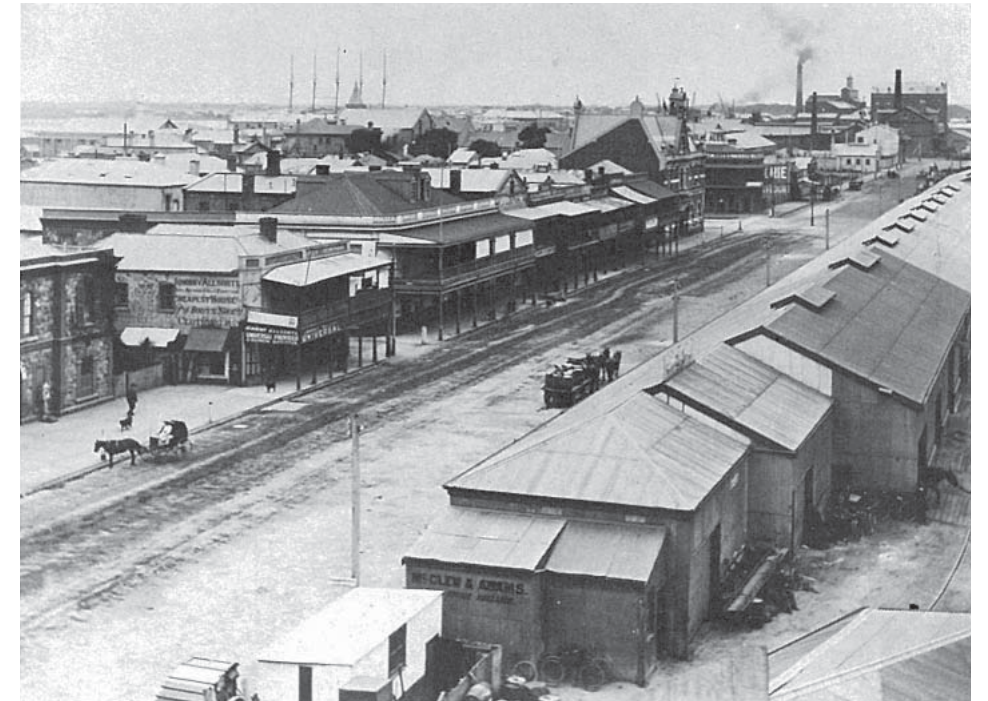


## *introduction*

The upgrade of St. Vincent Street and Commercial Road represents an important step in the revitalisation of the Port Adelaide Centre and comes at an important time in the Port's history.

The Port Adelaide Centre was once a thriving working port and thus has a rich cultural and industrial history. With many of the Port's waterfront activities being superseded by advancements in technology and transport modes, the Port Centre has become devoid of activity and is suffering from visible economic decline.

With the Port River Expressway and new vehicle and rail bridges over the Port River nearing completion, the Port Waterfront redevelopment and other public and private investment initiatives within the Port Adelaide locality, the concept plans for St. Vincent Street and Commercial Road are particularly relevant and present an opportunity to provide a vision for the Port Centre that builds on previous work done in the Port Adelaide Vision and Urban Design Framework document prepared in 2006. This report recognises St. Vincent Street and Commercial Road as high priority projects. Their physical and cultural context within the Port Centre forms the heart of what was once, and can again be, an important and vibrant regional centre.





# *introduction*

## 1.1 Project scope

The study area, as shown, encapsulates St. Vincent Street from Perkins Drive to the Jervois Bridge and Commercial Road from the existing lighthouse to Grand Junction Road, excluding the existing rail bridge overpass.





# introduction

## 1.2 purpose and objectives

The purpose and objectives of this report are to provide / confirm the vision for the two roads and set the agenda for the concept designs for both streets. This report explores the issues and opportunities associated with the project and establishes an urban design and landscape framework to guide the development.

This report has been prepared to establish an urban design and landscape framework for the redevelopment of St. Vincent Street and Commercial Road, Port Adelaide.

The report proposes an integrated approach to the design and management of the streets and public places.

The public realm is shared by a great many and variety of people and, as such, needs to be robust and flexible in its design and management to cater for differing needs and expectations.

The aim of this report is to establish overall principles and a strategy for the provision and design of implementable projects within the context of the two roads and the greater Port Centre. This report focusses on the issues and opportunities associated with the two roads and confirms the vision and objectives for the project.

The report also identifies design principles and promotes best practice.

Recommendations pertaining to urban elements such as paving, street furniture and lighting will need to consider Council’s Public Domain Manual which is currently in development. This document aims to provide a palette of urban elements to ensure consistency across the Council area.

Through initial investigations by the consultant team and initial stakeholder consultation, it has become clear that the success of any streetscape upgrade for St. Vincent Street and Commercial Road relies on three crucial elements outside our project brief being resolved in principle. These are:

### Traffic Management

Heavy vehicles and other traffic currently have high volumes along St. Vincent Street and Commercial Road. Heavy vehicle numbers are expected to reduce with the opening of the PREX bridge between Dock 1 and Dock 2 and initial projections saw a reduction in traffic volumes overall. More recent predictions by DTEI consultants have indicated that traffic volumes through both streets will actually increase due to new residential developments and various development occurring on the Le Fevre Peninsula. Unless restrictions are placed on heavy vehicle access to St. Vincent Street and Commercial Road there is no guarantee that some trucks will not still use this route.

The strategic decision to reduce all through traffic in St. Vincent Street and Commercial Road needs to be made for the vision outlined in this report, and the Port Adelaide Centre Vision and Framework document, to be successfully realised.

### Public Transport

Again, the resolution of public transport is critical to the success of not only St. Vincent Street and Commercial Road, but the Port Adelaide Centre as an active and economically viable Regional Centre. Current routes within the centre do not service the areas most reliant on them and may in fact be contributing to economic decline due to the location of layover zones and the areas being serviced.

The re-organisation of public transport routes and stops is complex and beyond this consultancy but is vital to enable the implementation of a successful streetscape upgrade.

### Car Parking

The provision of adequate on street car parking will be investigated, however, regardless of on-street numbers provided, parking for weekends and events is unlikely to cater for the likely volumes of vehicles. While on-street parking is desirable, it should not necessarily be the main driver for the streetscape design and cross sections of the road corridor will need to be tested with other desirable objectives taken into account. Situations may arise where a balance between objectives needs to be taken into consideration.

Certain assumptions will need to be made which are realistic, to guide the project towards concepts that will be viable in the context of the future of the Port Centre in relation to these issues in particular.



context

2.1 regional / economic context

Since the 1970’s there have been many attempts to revitalise the centre of Port Adelaide. Within that time frame considerable effort has been placed on protecting and enhancing the historic fabric of the State Heritage Area and improving the diversity of tourism facilities in the area.

In more recent years there have been significant developments that are now leading to massive change at the Port, including the following:

- Significant expansion (and future expansion) of port, industrial and defence related industries on the LeFevre Peninsula.
- The construction of the Port River Expressway and the road and rail bridges over the Port River.
- The commencement of the Port Waterfront Redevelopment by the Land Management Corporation/Multiplex/Urban Construct joint venture which will see the development of approximately 2,000 dwellings and extensive tourism facilities.
- Redevelopment of Semaphore Road through streetscape enhancements with a focus on pedestrian and bicycle linkages between Semaphore and Port Adelaide Centre.
- Expansion and competition from the West Lakes and Arndale District Centres (which threaten to capture trade from the Port Adelaide Centre).
- Declining use of public transport in the area.
- Potential light railway route through the Port Adelaide Centre - this has been promoted by Council but has not been endorsed by the State Government. It is intended that the Concept Master Plan provides flexibility in the proposals for St. Vincent Street to allow for such a facility in the future.

In 2006 the “Port Adelaide Centre: Vision and Framework” Report was completed by Hassell on behalf of Council, the Land Management Corporation and Planning SA. This overarching urban design framework for the whole of the Port Adelaide Centre provides the context for this study, which is focussing on proposals to enhance St. Vincent Street and Commercial Road within the Centre.

2.2 local context

There are a number of more local considerations that have an important bearing on this project, including the following:

- Significant retail decline along parts of both Commercial Road and St. Vincent Street.
- Significant impacts from commercial vehicles along both streets.
- Significant amount of through traffic unrelated to activities within the Port Centre.
- Proposals by private investors to upgrade and expand the existing shopping centre.
- Poor relationship between public transport and the key shopping precinct, with opportunities for improvement.
- Council’s Bicycle Strategy which is currently being completed.
- Lack of on and off street car parking within the Port Adelaide Centre, which could be exacerbated as a result of significant further expansion of residential and tourist related activities around the waterfront.
- Increasing demand for contemporary office space within the Centre.
- Increased development of medium density housing in and around the Centre.
- Preparation of a Port Adelaide Centre Plan Amendment Report by Council aimed at implementing many of the recommendations of the Hassell Report.

The Port Adelaide Centre: Vision and Framework Report argued that the Port Centre could and should not compete with the retail functions of West Lakes or Arndale. Rather, the Port Centre must develop as one of Adelaide’s key “destinations” and capture increased patronage from tourists and visitors. At the same time, however, the conventional retail offered at Port Adelaide Centre needs to be improved, together with improvements to the overall layout of the shopping centre precinct and linkages between it and the main streets and the Port Waterfront. Other factors necessary to improve the retail performance include the provision of more on-street parking, improved lighting and street furniture, improvements to the quality of pedestrian spaces and linkages, and a strategy for businesses to work together to more effectively manage and promote the Centre (refer Section 4.2).

2.3 community / social context

“The culture of the Port continues to change. The shift in industry activity, together with the changing demographics as a result of investment in waterfront and coastal housing development will result in the complete transformation of Port Adelaide and its surrounding suburbs.”<sup>1</sup>

Port Adelaide’s social context derives heavily from its maritime origins and, prior to that, its significance to the Kaurna Aboriginal Community. The Port Centre has become a focal point of community services for Aboriginal people. The Indigenous population continues to grow, with many Aboriginal families having ties to the area over many generations.

The surrounding industrial base provides significant employment to local residents, particularly in “blue-collar” employment. As the employment base increases in areas surrounding the Port Centre, changes to the nature of the workforce are expected, with high numbers of highly skilled workers and “white-collar” workers likely to make up the new workforce.

With the roll out of the Port Waterfront Redevelopment project and the construction of over 2,000 apartments for the middle and upper ends of the market, further demographic changes are likely.

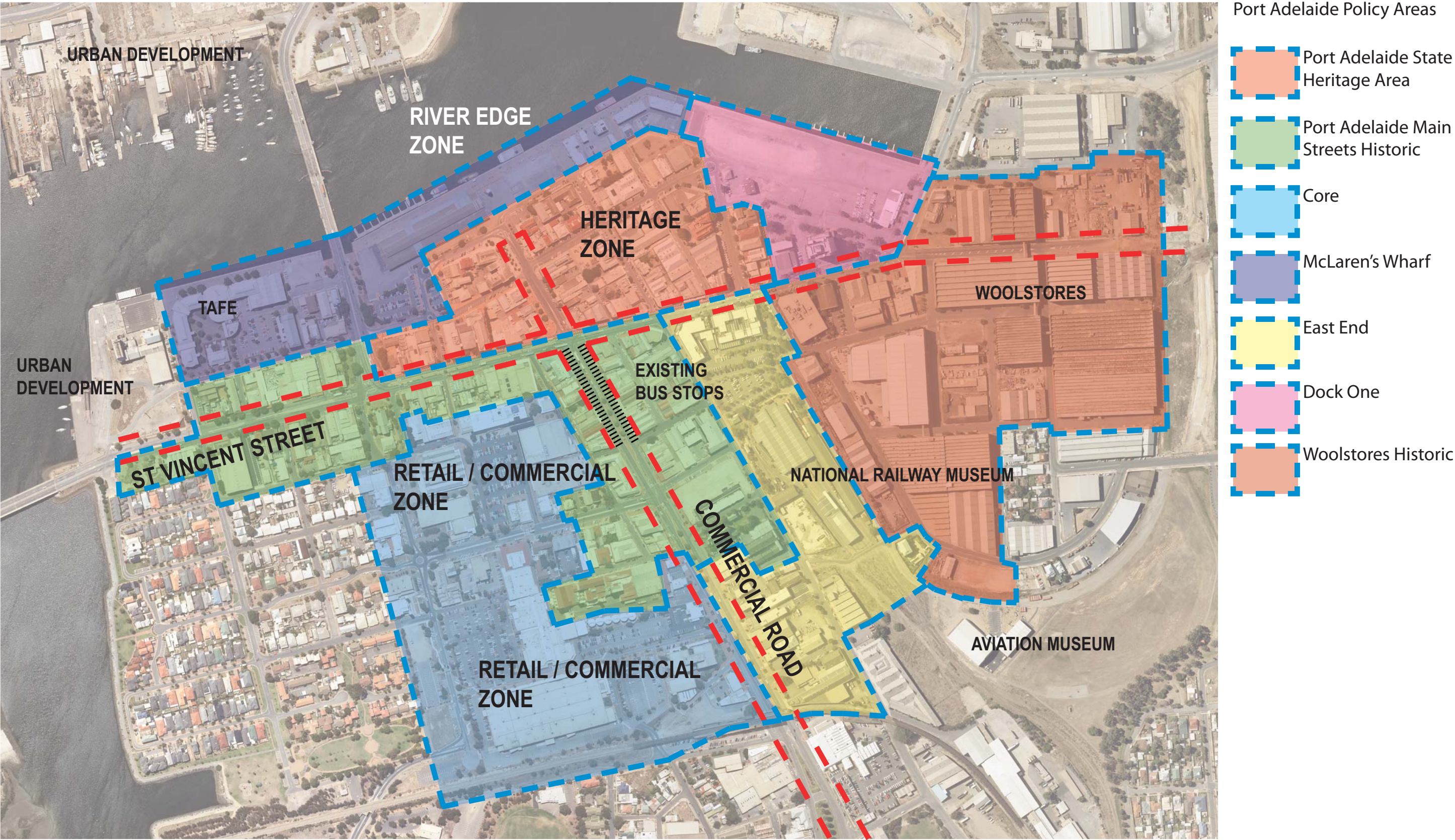
The most recent community consultation undertaken as part of the Port Adelaide Centre: Vision and Framework Study resulted in the following key “messages” expressed by the community:

- *Protect and celebrate the history of the Port.*
- *Remove heavy traffic.*
- *Revitalise the main streets.*
- *Improve the appearance of the Centre.*
- *Make it easier to get to and around the Port Centre.*
- *Provide greater variety of shopping and entertainment activities.*
- *Recognise the Indigenous heritage of the area.*
- *Make housing more affordable.*
- *Be more welcoming of tourists.*
- *Improve the quality of the environment.*<sup>2</sup>

1 Port Adelaide Centre: Vision and Framework - HASSELL (2006)  
2 Port Adelaide Centre: Vision and Framework - HASSELL (2006)



2.4 physical context





# vision and objectives

## 3.1 vision

The vision for St. Vincent Street and Commercial Road can be summarised as:

*To create an active regional centre based around the St. Vincent Street / Commercial Road intersection that is vibrant and diverse, and an appealing destination for locals and visitors that is easily accessible for pedestrians and well connected to surrounding facilities and attractions. The centre should reflect the unique qualities of the Port and it's heritage while providing a quality, contemporary and functional streetscape environment.*

This vision sits within the broader context of the Port Adelaide Centre: Vision and Framework document prepared by Council and its consultants.

## 3.2 objectives

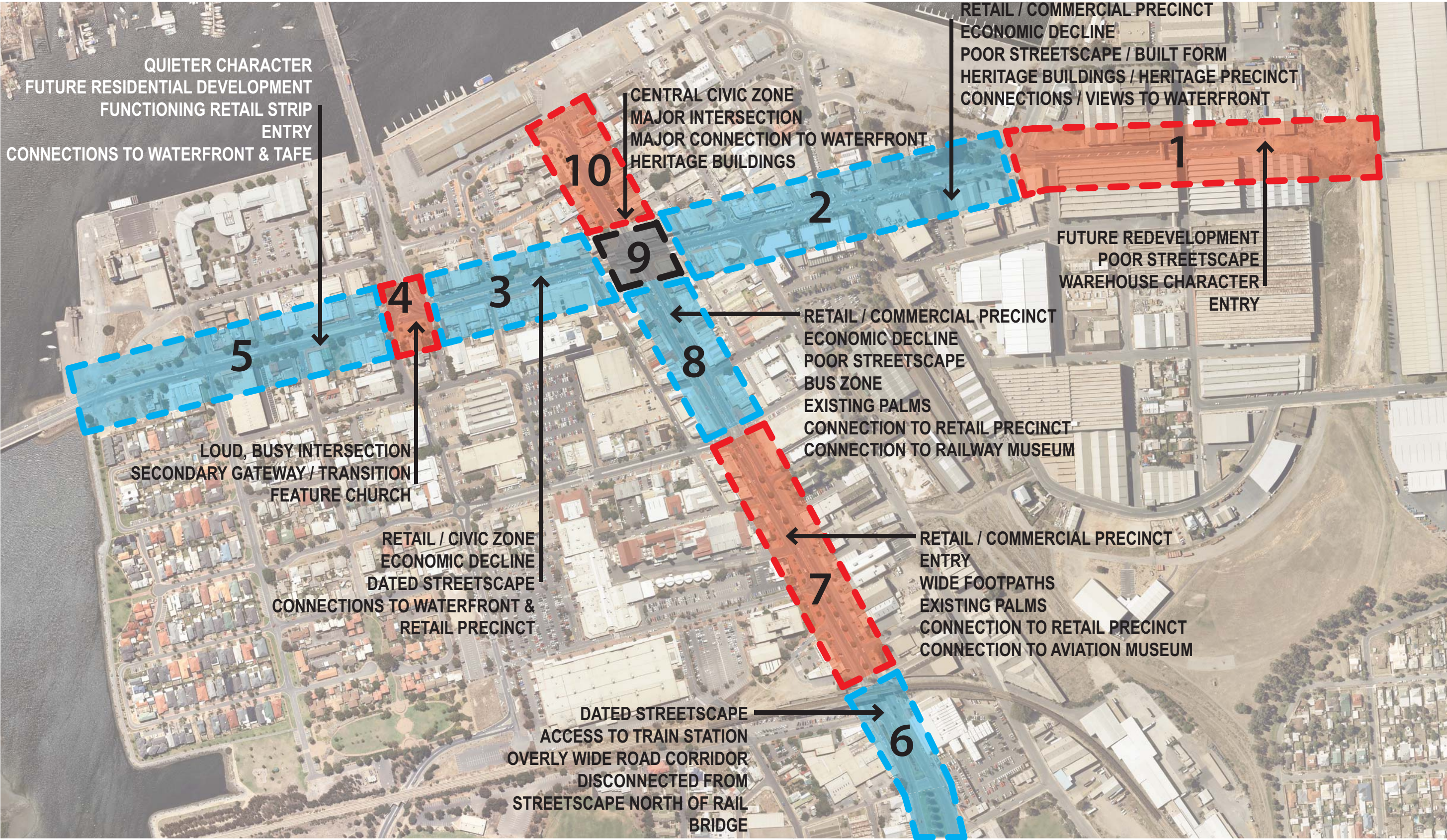
Broadly, the objectives of the project are:

- A contemporary and unified design.
- Celebration of the distinctive precincts.
- Economic revitalisation.
- Enhanced social vitality.
- Balance between the needs of motorists, pedestrians, cyclists, car parking and public transport users.
- Functional pedestrian environment that is equitable, legible and well connected.
- A destination that adds to the reasons people are attracted to the Port.
- Reduction in the volume of 'through' traffic while accommodating 'destination' traffic.



issues + opportunities

4.1 precincts

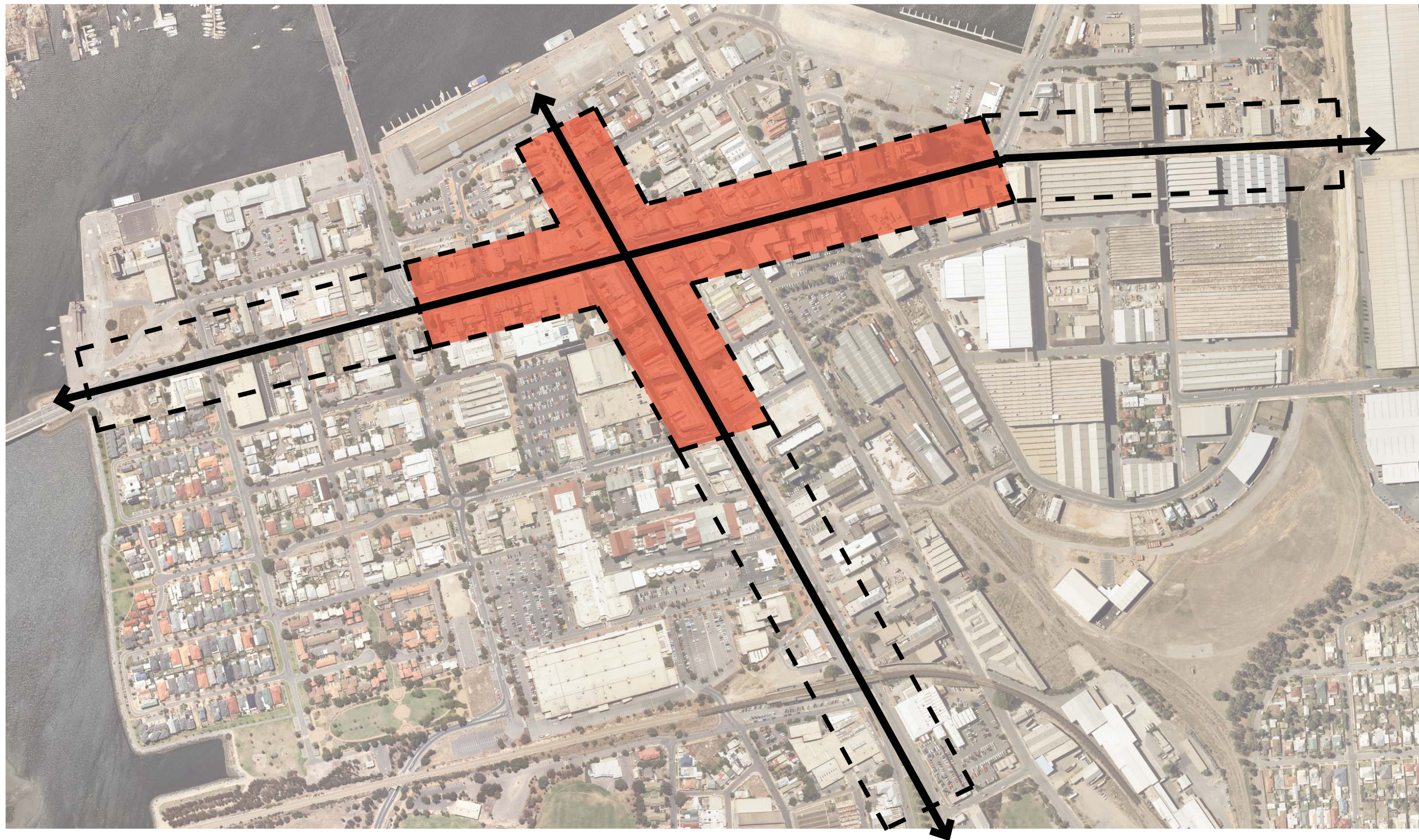




## 4.1.1 central core

This diagram represents the 'central core' or main hub of activity for both streets.

Priorities for development should be focussed around this area as the greatest economic benefit will be derived from improvement to this area.





issues + opportunities

4.2 issues and opportunities

Through initial investigations by the consultant team and stakeholder consultation, four major issues have been raised that require resolution to enable any streetscape upgrade to be successful.

Traffic Management

Original projections predicted a decrease in traffic volumes post PREX whereas revised projections anticipate an increase in traffic volumes. DTEI is being cautious regarding figures and is waiting to see the effect of the PREX bridge opening.

The strategic decision to reduce all through traffic in St. Vincent Street and Commercial Road is critical for the vision outlined in this report, and the Port Adelaide Centre Vision and Framework document, to be successfully realised.

St. Vincent Street and Commercial Road currently take large volumes of ‘through’ traffic as well as heavy vehicles. The two roads are used as a major route between north and south and this current function as an arterial road is not conducive to a pedestrian and retail friendly streetscape environment.

If the function of the roads is to remain as such then a number of objectives of this project, and the Port Adelaide Centre Vision and Framework, will not be viable.

It is suggested that a commitment from the State Government is required to actively promote the use of alternative routes while discouraging the use of St. Vincent Street and Commercial Road as a thoroughfare between north and south.

Public Transport

The location of bus stops in Commercial Road adjacent to the St. Vincent Street intersection is detrimental to adjacent businesses and is not adequately servicing the retail core or the waterfront. The current operators of the service are not in favour of the stops in this vicinity as they do not service passengers, nor do they provide drivers with adequate amenities.

A new bus interchange and route to link the retail and commercial zone should be considered to better service the retail core and to remove the buses from their current location which is visually dominant in the streetscape and contributing to poor trade.

Again, the resolution of public transport is critical to the success of not only St. Vincent Street and Commercial Road, but the Port Adelaide Centre as an active and economically viable Regional Centre. It is recommended that re-routing of buses is investigated further.

Car Parking

Off street car parking policy needs to be addressed to ensure there is adequate parking provided in and around the centre. Further expansion of residential development and tourism activities within the Port need to be considered and allowed for.

The streetscape redevelopment should not necessarily be driven by maximising on street car parking. A balance of objectives needs to be taken into consideration and a broader strategy for car parking needs to be investigated.

Other issues that were raised through investigation and consultation that can be considered general to both streets include:

- TRAFFIC VOLUMES - a broader traffic management plan is needed to divert ‘through’ traffic around the Centre.
- TRAFFIC SPEED
- TRUCKS - trucks need to be discouraged from using the streets including the provision of a load or axle limit on the Birkenhead Bridge. This would also remove trucks from the Nelson Street intersection which is considered very dangerous.
- ON STREET PARKING - angle parking is required to enable a viable retail centre.
- PEDESTRIAN ACCESS ACROSS ST. VINCENT STREET - this is made difficult as a result of traffic volumes and poor pedestrian crossing points. Presents a barrier to a vital link from the retail core to the waterfront.
- PUBLIC TRANSPORT - current service considered to be inadequate. A service is required to take passengers to Commercial Road north and/or to service the retail core via Dale Street.
- INFRASTRUCTURE - footpaths are generally in poor condition and are inconsistent in type and there is a lack of consistent strong urban elements providing cohesiveness to the streetscapes.
- STREET TREES - street trees are only present in a few locations due to restrictions in space caused in a number of instances by verandahs extending to kerb lines. Where street trees are present they are not consistent.

The need for a traffic management plan to provide alternative routes for the vehicles that currently use St. Vincent Street and Commercial Road as a thoroughfare was seen as the number one priority by a number of business interests approached in the process of gathering information for this project.

Business Development Strategy

Apart from the above-mentioned issues relating to transport, parking and physical improvements to the streetscape, a key issue requiring considerable attention is the need to better manage and promote the Port Adelaide Centre. Unlike district and regional shopping centres under single ownership, it is difficult to manage and promote Centres such as the Port Adelaide Centre given the multiple ownerships and large sections of “strip” shopping. The difficulty is further exacerbated by the fact that the new retail core areas incorporating the supermarket and discount department stores are located away from the main streets, and have over the years drawn trade away from the more traditional shopping strips.

Solving the traffic and parking issues and improving the streetscapes will help but won’t be sufficient to revitalise economic activity along these main streets. Furthermore, the revitalisation of the Inner Harbour with extensive residential and tourism related development will certainly help, but will not guarantee business development along the main streets.

It will therefore be critical to develop a Business Development Strategy for the Port Centre, including a particular focus on the main streets of Commercial Road and St Vincent Street. The development of this Strategy is beyond the scope of this project, but will be an important recommendation for the ongoing implementation.

There are various management models that can be investigated to suit the Port Adelaide Centre context, and there are various income raising models to ensure that sufficient funds are available to promote and manage the Centre on a sustainable basis.

Finally, one of the key issues to be addressed will be the attraction of new businesses to the Port Centre, uses that reflect the “new” Port, are sustainable and bring new life to the area.



issues + opportunities

4.2.1 St. Vincent Street

4.2.1.1 St. Vincent Street East (Perkins Dr. - Ocean Steamers Rd.)  
Precinct 1



ISSUES

- Streetscape dominated by power lines.
- No street trees.
- Poor pedestrian access - footpaths are in poor condition.
- Built form / land use does not provide active frontages.
- Built form is in poor condition.
- Heavy vehicles dominate the traffic creating a noisy and hazardous pedestrian environment.

OPPORTUNITIES

- Corridor presents a 'gateway' opportunity to provide a sense of arrival or departure to and from the port. Potential for iconic elements to 'badge' the streetscape.
- Development opportunity for warehouses.
- Take advantage of the unique warehouse character.
- Improve pedestrian access.

4.2.1.2 St. Vincent Street (Ocean Steamers Road - Commercial Rd.)  
Precinct 2



ISSUES

- Precinct currently has two characters. Ocean Steamers Rd. - Todd St. has poor streetscape character and built form punctuated by 1970's style native planting. Buildings generally do not provide active frontages or the opportunity to create these in the future. Todd St. - Commercial Rd. has a better streetscape quality and better (heritage) built form with existing functioning retail.
- Built form between Lipson St. and Baker St. on the southern side of the street is poor and does not provide active frontages.
- Small isolated traffic islands predominantly between Todd St. and Commercial Rd. make the streetscape cluttered and illegible.
- Heavy vehicles dominate the traffic creating a noisy, polluted environment that is not conducive to outdoor activity.
- Turning requirements for large vehicles create wide intersections at side streets which present pedestrians with large crossing distances.
- Cycle lane on the northern side of the road terminates at Todd St. when travelling west.
- Cycle lane on the southern side of the road terminates at Webster St when travelling west.
- Connections to the waterfront to the north and other attractions to the south are not clear.
- Wide street with a painted median only providing no pedestrian refuge when crossing.
- There is a mixture of paving types along the footpath and no consistency of urban elements.

OPPORTUNITIES

- Enhance the existing retail character and encourage increase in retail activity through streetscape amenity and future reduction in heavy vehicle use.
- Reinforce the change to a more retail character at Todd St. and utilise as a secondary 'gateway'.
- Development opportunity exists on the northern corner of Ocean Steamers Rd. The view from the east looking along St. Vincent St. terminates at this site creating an important focal point.
- Provide continuous footpaths through the retail precinct to establish an environment where pedestrian traffic takes precedence over vehicular traffic.
- Reduce widths of side streets to reduce crossing distances.
- Provide wider footpaths for improved pedestrian amenity and to reduce the overall width of the road carriageway, thus reducing crossing distances.
- Introduce a solid median strip to reduce the amount of bitumen visually and provide a pedestrian refuge.
- Improve links to the waterfront, Maritime Museum, Railway Museum and Aviation Museum.
- Provide a continuous cycle lane to both sides of the street.
- Provide new street trees.



issues + opportunities

4.2.1 St. Vincent Street

4.2.1.3 St. Vincent Street (Commercial Rd. - Nelson St.)  
Precinct 3



ISSUES

- Currently in economic decline. Large number of vacant tenancies on the southern side.
- A number of buildings are poorly maintained.
- South side is very enclosed due to verandahs extending to the kerb line creating a dark and uninviting streetscape.
- Heavy vehicles dominate the traffic creating an unappealing pedestrian environment.
- No cycle lane.
- Civic function on the northern side of the street does not provide the same level of activity that a retail precinct might.
- Connections through to the Port Mall / Quebec Mall and associated car parking are not well identified.
- Paving is in reasonable condition but has dated.
- Existing Plane trees are in average condition and may not be of appropriate scale for the streetscape.
- Connections to the streets to the north and the associated car parking, and to the waterfront beyond are poorly identified.

OPPORTUNITIES

- Southern side presents a key area for economic revitalisation with the potential for a diverse mix of commercial opportunities eg art galleries, clothing stores.
- Potential for mixed use occupancy, eg, retail, business, first floor residential.
- Open up sections of the verandah on the south side to access natural light and highlight key entrances eg at the mall entry.
- Provide continuous footpaths at side streets to establish an environment where pedestrian traffic takes precedence over vehicular traffic.
- Reinforce connections to the street network and car parking to the north, and the waterfront beyond.
- Reinforce connections into the Port Mall / Quebec Mall and the associated car parking.
- Provide wider footpaths for pedestrian amenity and to facilitate outdoor dining and street life in general.
- Provide new street trees.

4.2.1.4 St. Vincent Street / Nelson Street / Church Place intersection  
Precinct 4



ISSUES

- Very wide and open intersection that is dominated by wide turning requirements for large vehicles accessing the Birkenhead Bridge. Two right hand turn lanes from St. Vincent St. dominate the traffic movement. Total of seven lanes entering and exiting Nelson Street.
- Confusing lane configurations for vehicular traffic.
- Very unfriendly pedestrian environment due to the scale of the intersection and the volume of heavy vehicles.
- Visually congested by light poles, street signs and particularly overhead power lines.
- Church plaza is poorly designed.
- Planting to the verges is inconsistent and lacks structure.

OPPORTUNITIES

- Create a secondary 'gateway' incorporating sculptural elements acting as a transition point between the characters east and west of the intersection.
- Consolidate the traffic lanes. Investigate the possibility of reducing the right hand turn into Nelson St. to one lane and reducing the left hand turn out of St. Vincent St. to one lane.
- Provide a contemporary design to the Church plaza that integrates it with the streetscape character and provides a quality urban space and foreground to the building. Provide continuous footpaths to Church Place (east and west) intersections as a means of extending / integrating the plaza to the streetscape.
- Provide feature planting to the east and west verges of Nelson St. and utilise the existing Coral tree and shady character on the eastern side. Provide a more human scale to the intersection.
- Remove overhead lines and other visual clutter where possible.
- Provide uplighting to the church.



issues + opportunities

4.2.1 St. Vincent Street

4.2.1.5 St. Vincent Street (Nelson St. - Jervois Bridge)  
Precinct 5



ISSUES

- Area in economic decline however appears to be doing better than the section east of Nelson St.
- Generally quieter than the rest of St. Vincent St. due to the majority of heavy vehicles entering and exiting via Nelson St.
- Overhead power lines are dominant.
- Existing street trees provide shade and character, however they will grow to be very large trees that may be inappropriate for the scale of the street. They have the potential to cause ongoing maintenance problems by lifting pavers.
- Built form provides some good character but is in poor repair in a number of cases.
- Footpaths, kerbs and watertables are in poor repair.
- No cycle lane.
- Poor connection to TAFE.
- Pedestrian connections to the Jervois Bridge and along the waterfront to the south east side of the river are poor.
- The arrival from the Jervois Bridge is poor with vacant land on both the north and south sides. This will be improved when development on the northern side is complete. Rann Place on the south appears to be unused and wasted space.

OPPORTUNITIES

- Upgrade footpaths to accommodate future increase in pedestrian traffic from new residential developments.
- Provide new street trees.
- Improve connections to TAFE, especially via Hare Street.
- Improve connections to the waterfront generally.
- Provide a cycle lane. Important to service future increase in residential.
- Reinforce existing character of a quieter attractive precinct.
- Diversify use by promoting a variety of business types.
- Improve pedestrian connections to the Jervois Bridge.
- Create a 'gateway' feature along the Jervois Bridge that acts as an entry / exit to and from the precinct. This could be achieved by providing new iconic lighting to the bridge and cleaning generally.



issues + opportunities

4.2.2 Commercial Road

4.2.2.1 Commercial Road (Grand Junction Rd. - Russell St.)  
Precinct 6



ISSUES

- The road corridor is particularly wide south of the rail bridge with over 60m between property boundaries at its widest.
- Road width weakens the visual and physical connections across the street.
- Lack of strong streetscape character due to road width.
- The number of lanes, including service lanes, and painted protuberances result in a confusing road environment.
- Wide road corridor creates an unpleasant pedestrian environment.
- Pedestrian linkages across the street are poor.
- Buildings are generally not tall enough in proportion to the road width.
- Train station and overhead bridge are unattractive and create a strong visual barrier. Clearly two different characters north and south of the bridge.
- Legibility at the train station is poor.
- Poor connections to the shopping precinct south of Dale St.
- Poor connections to the Military Vehicles Museum, Tauondi College and Riverside Oval complex.
- Lack of a strong street tree structure to the verges. Palm trees to the verge dominate.
- Very wide median presents a barrier between east and west sides of the road.

OPPORTUNITIES

- Reduce the road width to the minimum number of lanes practicable and increase the footpath width.
- Provide clear pedestrian crossing points in the median.
- Improve access to businesses and associated car parking through more legible entries and improved signage.
- Provide better connections to the Military Vehicles Museum and the Riverside Oval complex, especially car parking off Baynes Place.
- Provide a strong consistent character that signifies the beginning of the precinct and the arrival at the Port. Possibility for a 'gateway' feature.
- Provide new street trees to the verges for amenity and to provide structure to the streetscape.
- Upgrade paving and urban elements to reflect a more contemporary approach.
- Remove service lanes and simplify traffic management.
- Improve the legibility of on-street parking.
- Provide better connections and access to the train station.

4.2.2.2 Commercial Road (Russell St. - Dale St.)  
Precinct 7



ISSUES

- Streetscape is in reasonably good condition and the area appears to operating successfully economically with a variety of uses.
- Very wide road corridor that lacks a strong character.
- There is a variety of parking configurations and footpaths widths detracting from the legibility of the streetscape.
- Poor connections to the shopping precinct south of Dale St.
- Poor connections to the Rail and Aviation museums.
- Landscape treatment to the verges is weak.
- Heritage themed approach is dated and not necessarily appropriate.
- Lack of a strong street tree structure to the verges. Palm trees to the verge dominate.

OPPORTUNITIES

- Align kerbs to create a visually stronger corridor that is clearly legible.
- Upgrade paving and urban elements to reflect a more contemporary approach.
- Improve access to retail precinct and associated car parking through more legible entries and improved signage.
- Provide better connections to Railway Museum and Aviation Museum.
- Provide new street trees to the verges for amenity and to provide structure to the streetscape.



issues + opportunities

4.2.2 Commercial Road

4.2.2.3 Commercial Road (Dale St. - St. Vincent St.)  
Precinct 8



ISSUES

- Area is currently in economic decline signified by a number of vacant premises.
- There is a lack of on street parking which may be contributing to poor trading.
- Long bus ‘layover’ zones dominate the street with buses taking up potential parking bays, blocking the view of businesses from the street and creating an unpleasant pedestrian environment due to noise and fumes.
- Verandahs enclose the footpath from the building edge to the kerb line in a number of locations creating dark footpaths and not allowing space for street tree planting. In areas where buses are present this creates a very enclosed, dark and uncomfortable space.
- Connections to the retail precinct north of Dale St. are poor.
- Traffic lane configurations at the St. Vincent St. intersection are confusing.

OPPORTUNITIES

- This is a key area for economic revitalisation.
- Provide wider footpaths to enable street tree planting in the verges.
- Remove bus ‘layover’ zones.
- Provide improved connections to the retail precinct and car parking north of Dale St.
- Provide on street car parking to service businesses.
- Investigate increasing off street car parking opportunities in Quebec Mall.
- Investigate car parking opportunities in adjacent side streets such as Kyle Place and Butler Street.
- Provide a high quality contemporary environment attractive to business.
- Highlight the heritage character in a contemporary way.
- Retain existing palm trees as an iconic feature.
- Reconfigure traffic lanes at the St. Vincent St. intersection.

4.2.2.4 Commercial Road North / Black Diamond Square (incorporating the St. Vincent St. / Commercial Rd. intersection)  
Precincts 9 + 10



ISSUES

- Currently reads as a road environment.
- Wide footpaths on the western side are under-utilised street trees are at the wrong scale blocking visual access along the corridor.
- Is visually very busy with inconsistent kerb lines and a lot of street signage. Isolated kerb protuberances at Divent St. compound this issue.
- Has a poor connection to the waterfront.
- Traffic needs to be managed through the area.
- On street parking is vital to the ongoing success of the businesses.
- Poor physical and visual access to the Tourist Information Centre. Poor presentation of the Port’s tourism centre.
- Paving type is different to the north and south of Nile St. contributing to the area not reading as a whole.
- Traffic management at the McLaren Pde, North Pde intersection is poor and is difficult for pedestrians to negotiate.
- The St. Vincent St. / Commercial Rd. intersection is very wide, generally consisting of five lanes and a median. The intersection has been designed to cater for turning movements of large vehicles.

OPPORTUNITIES

- Provide a strong visual and physical connection to the waterfront and create a hub for a variety of activities providing the Port centre with a physical and cultural heart.
- Create an environment that facilitates pedestrian movement as well as retaining car parking opportunities to support business. Reduce the dominance of the car and provide a high quality pedestrian environment of an appropriate scale.
- Remove the roadway and create a plaza that is at grade and can be closed off to traffic for community events while retaining vehicular access and parking at other times.
- Provide better access to the waterfront, Fisherman’s Wharf Markets and lighthouse, as well as strengthening connections to the Lipson St. heritage precinct and civic facilities.
- Highlight the quality heritage built form.
- Provide better access and address to the Tourist Information Centre.
- Reduce the number of lanes at the St. Vincent St. / Commercial Rd. intersection.
- Investigate one way access either in or out of Commercial Rd. north.



issues + opportunities

4.3 principles, assumptions and framework

4.3.1 Overview

The following general principles assist in providing the framework for the design and management of St. Vincent Street and Commercial Road. They reflect aspirations for a well-designed and well-maintained streetscape environment which is safe and attractive to users.

- A commitment to environmental sustainability – this involves consideration of issues relating to biodiversity, energy reduction, water conservation, waste minimization, materiality, whole of life costing and species conservation.
- Social equity – this involves consideration of access, equity, cultural development, flexibility in the design and management the streetscape and open spaces, and amenity and safety.

Consistency in detailing, boldness and simplicity, appropriate design quality, materials, colours and scale, and appearance all contribute towards an environment that is functional, attractive and easily maintained.

4.3.2 Development principles

The following physical planning criteria are important:

Walkability

- Encourage an environment which caters for the needs of pedestrians and permits pedestrian access to all parts of the streetscape.

Activity

- Encourage a density of activities so that the streets and open spaces are well-used, providing security, local identity and character.
- Encourage “active” street frontages.
- Provide a safe and accessible environment.

Permeability

- Maximise connections to and within the streets and provide a variety of routes to and from various places with particular emphasis on providing access to the waterfront.
- Develop a coordinated signage strategy.

Variety

- Mix uses so that streets and places have a variety of forms giving a rich and memorable character.
- Introduce art work in public spaces (with priority on integrated artwork within required infrastructure).

Economic Sustainability

- Encourage long-term investment security in the precinct by maximizing the retail and commercial setting through a quality streetscape treatment.
- Increase availability and quality of on and off-street car parking.

Integration

- Achieve connections with the adjacent open spaces, shopping precincts, tourist attractions, residential developments and community facilities and services.



4.3.3 Key Assumptions

A number of assumptions have been made arising from the three main issues identified during initial investigations and consultation that are critical to being able to realise the vision for the Port Centre.

Traffic

We have assumed that the volumes of through traffic along both St. Vincent Street and Commercial Road will reduce and that changing the streetscape and lane configurations to achieve the objectives in this report will not severely hinder traffic flow beyond an anticipated slowing effect. A broader traffic management strategy will be employed to effectively divert the majority of through traffic around the centre via a number of by-pass options (refer to diagram). In diverting the through traffic, we assume that with continuing development in the Port and a growing tourism industry, there will be enough activity to attract destination traffic to ensure vibrancy and liveliness.

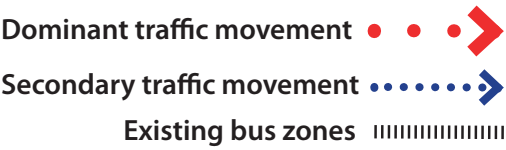
Public Transport

We have assumed that the bus layover zones near the St. Vincent Street intersection on Commercial Road will be relocated and the routes altered to better service the retail core and improve the quality of the streetscape where they currently exist. This is vital to any retail success in this area.

We have also assumed that light rail along St. Vincent Street is a possibility as indicated in the Project Brief. The implications of this are that kerb alignments cannot be significantly altered as the minimum width required to include a tram corridor, platform at stops, single travel lane in each direction and parallel parking will not fit if the overall carriageway is reduced. If wider footpaths are required then it could result in abortive works if a tram was introduced (refer to diagram for potential bus routes).

Car Parking

With the anticipated increase in attractions to the Port and the increased residential development it is critical that adequate car parking is provided within the Port Centre. Current parking facilities are inadequate and even with an increase in parking numbers along St. Vincent Street and Commercial Road, it is unlikely to accommodate the number of vehicles attracted to the Port in peak times. Whilst on street car parking is important to revitalise the retail viability of shops on both streets it should not necessarily be the main driver behind the streetscape upgrade. It has therefore been assumed that at least one off street car parking facility of significant capacity will be developed to service the Port Centre.



Traffic Management



Public Transport



Potential By-pass Routes



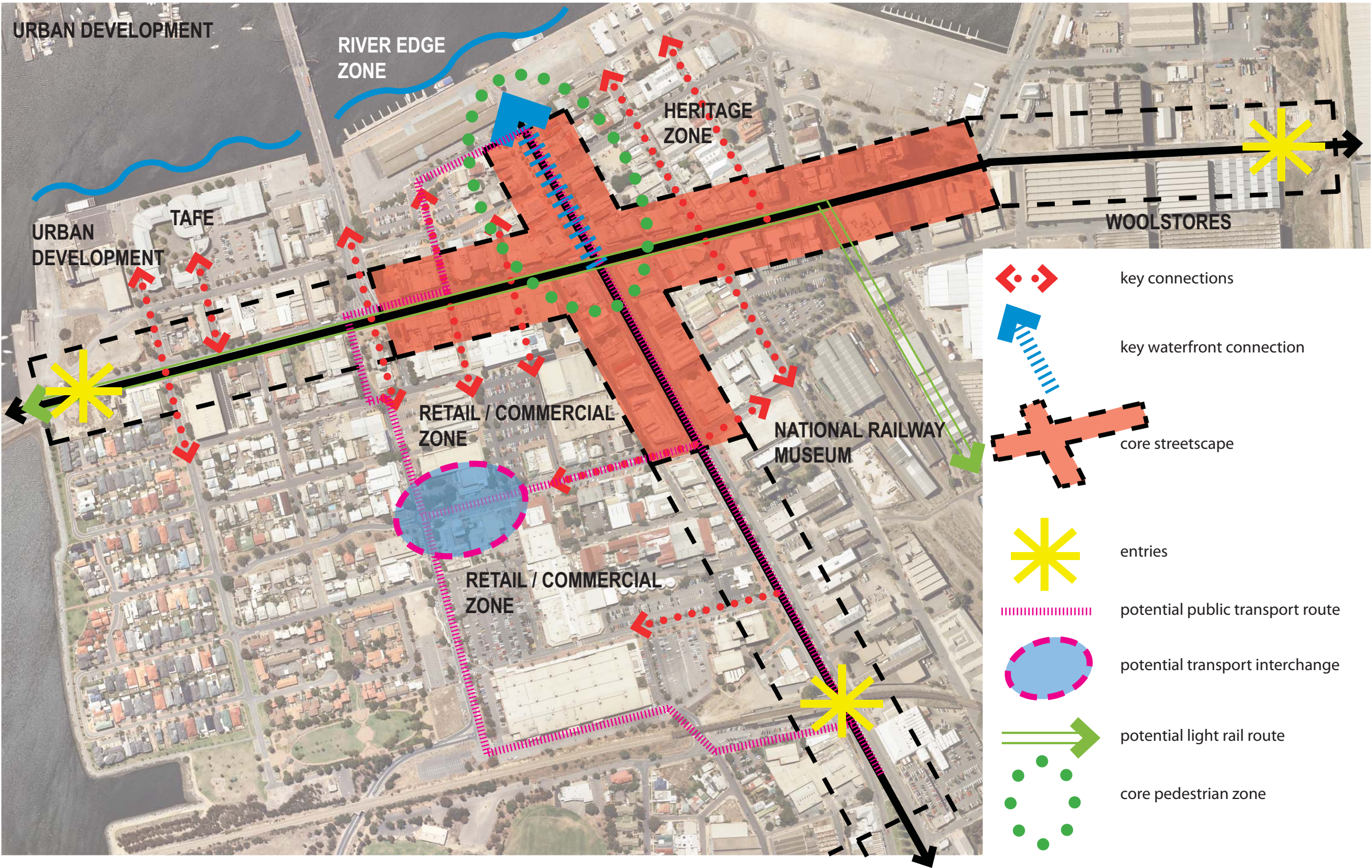


issues + opportunities

4.4 development framework

The diagram opposite illustrates the overall Development Framework for the study area. Key elements of the Framework comprise:

- A core streetscape area which will be the focus of streetscape improvements and pedestrianisation, with a focus on increasing on-street car parking to help revitalise commercial and community activities.
- Strengthened pedestrian linkages between the core retail precincts and the Port Waterfront.
- Enhanced pedestrian linkages throughout.
- Improved bus network focusing on the retail core.
- Eastern, Southern and Western entry / gateways.
- Provision for a possible future light rail route along St. Vincent's Street
- Additional off-street car parking to cater for expected intensification of retail and tourism activity (sites to be determined).





## strategies

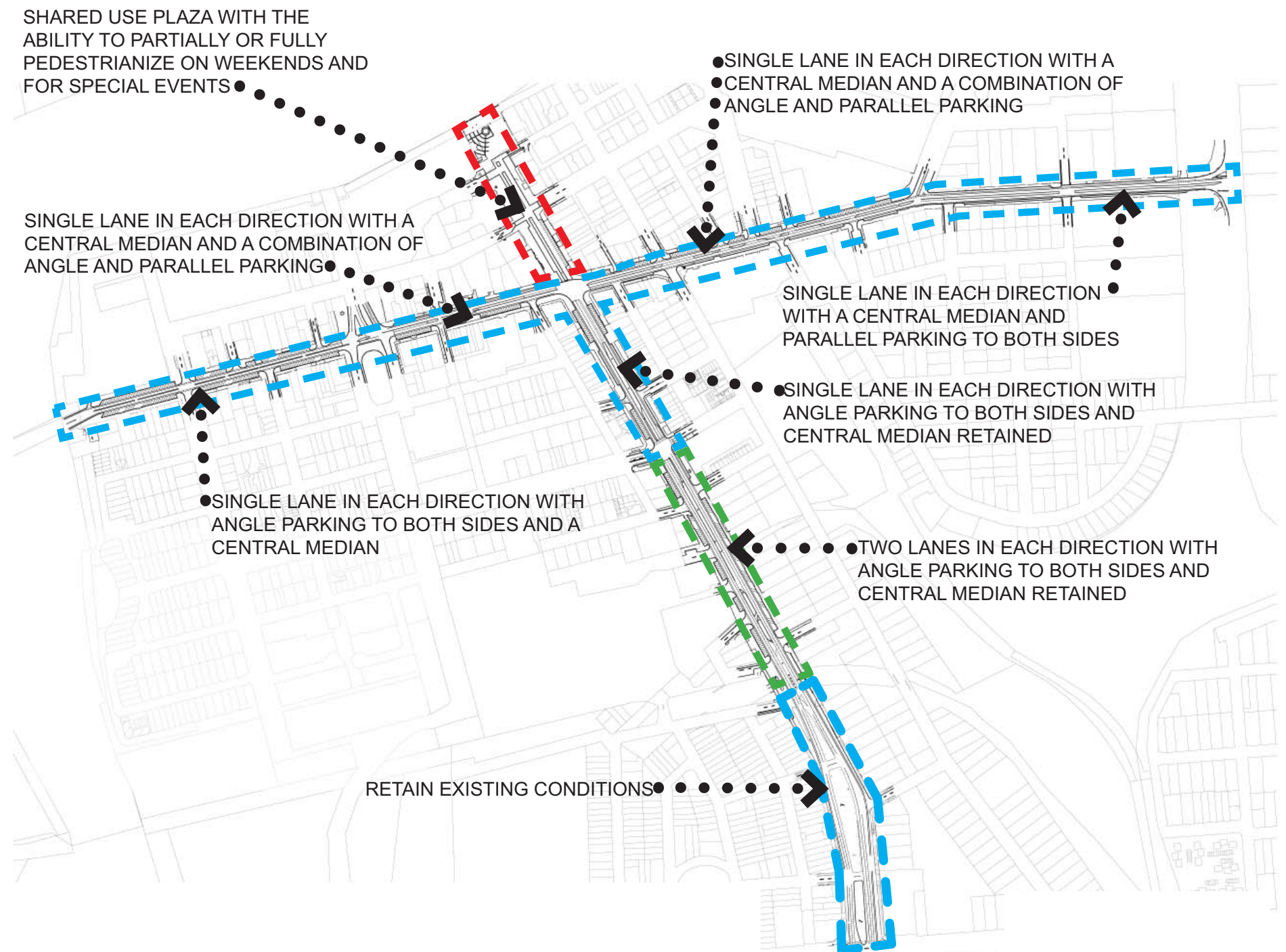
### 5.1 economic revitalisation

A key focus of the Concept Plan for St. Vincent Street and Commercial Road is the economic revitalisation of the Port Centre. The two streets have been severely impacted upon by high volumes of through traffic, with high proportions of heavy vehicles. Retail and commercial development along these streets is also being affected by the re-direction of retail activity into the newer shopping centres immediately to the Southwest of the two streets.

While physical improvements can assist in rejuvenating economic activity, they are not sufficient to fully revitalise precincts. A range of management and other initiatives will be required to ensure that the economic performance of these streets improves over time and takes maximum advantage of the impending major developments along the Port Waterfront (including residential, tourism and commercial growth).

The following strategies are recommended:

- establish a clear vision for the main streets of Port Adelaide that celebrates their unique difference, maintains the values of the local community and current businesses to make it attractive to both the local community and visitors.
- improve safety for pedestrians, cyclists and public transport users in the streets to reinforce their role as a focus of community life.
- strengthen the relationship between the streets and the Port River Waterfront.
- establish an effective body to manage, market and oversee the business development of the Port Adelaide Centre, with the formation of a sub-committee focusing on the unique needs of the two main streets.
- embrace the principles of co-ordinated town centre management and recognise the importance of management, marketing and business development components to a successful Centre in addition to physical improvements.
- establish an agreed image and identity for the Centre and in the usage of signage, promotional literature, etc.
- establish a database of activities and property owners in the Centre to ensure that information can be sent to all parties about up-coming events and opportunities.





## *strategies*

### 5.2 movement

#### 5.2.1 Overview

The overall strategy for improving the movement network targets the reduction of through traffic along both Commercial Road and St. Vincent Street. This will be greatly facilitated following the opening of the Port River Bridge, but is also likely to rely on the development of suitable eastern and western bypass routes, as discussed in Section 4.3.

At the same time conditions along the street must be appropriate to attract legitimate users of the Port Adelaide Centre who wish to visit by car, and similarly provide for the needs of commercial vehicles servicing the Centre.

The other broad Strategy relates to improving the environment along the streets for pedestrians, cyclists and users of the public transport system.

#### 5.2.2 Vehicular Traffic

- Following the completion of a broader traffic management study for the Centre once the new bridges over the Port River are operational (and the construction of any required traffic bypass routes), reduce the number of vehicle travel lanes (other than at intersections) in St. Vincent Street between Nelson Street and Commercial Road and in Commercial Road between St. Vincent Street and Dale Street to a single lane in each direction.
- Improve vehicular connections from St Vincent Street through to the commercial, educational and tourism precincts to the north by generally maintaining right turn lane access from St Vincent Street and by inserting a new protected right turn lane. A new signalised intersection is proposed at Mundy and Minories Streets to improve connections to TAFE.
- Undertake local area traffic improvements within the core retail area, including Church and Dale streets, to improve traffic circulation, access to car parking and bus usage.

#### 5.2.3 Pedestrians

- Improve all footpaths through quality paving treatments and upgraded pram ramps.
- Reduce, where possible, the width of roadways at pedestrian crossing points and provide continuous 'at grade' footpath crossings.
- Develop a flexible plaza / roadway in Commercial Road between St. Vincent Street and the waterfront, that increases pedestrian space with improved amenity in normal conditions and creates flexible pedestrian only spaces on weekends and / or during tourist related events. The space has the flexibility to be half closed or fully closed depending on the event size.
- Improve amenity along both streets to encourage pedestrian usage (e.g. widened footpaths in strategic locations, seating, shade, places for congregation and social interaction, public art).
- Improve conditions for pedestrians at bus stops.
- Improve the existing pedestrian activated crossing adjacent Council offices by changing the crossing to a single phase crossing and reducing the crossing distance.

#### 5.2.4 Cyclists

- Maintain existing on-road cycle lane in Commercial Road between Grand Junction Road and St. Vincent Street.
- Extend on-road bicycle lanes along the full length of St. Vincent Street
- Install bicycle parking rails at strategic locations along both streets and medians.

#### 5.2.5 Public Transport

##### **BUS**

- In conjunction with the Public Transport Division and the Private Operator, establish new bus routes that utilise the Dale/Church Street link into the retail core to enable shoppers to access the main shopping areas more directly by bus.
- Reassess the location of bus stops along St. Vincent Street and Commercial Road, with the view to reducing their length along the streets and consequently increasing pedestrian amenity and the availability of on-street car parking.
- Encourage the location of bus layovers in locations away from the main streets.
- Improve infrastructure at bus stops to promote usage.

##### **POSSIBLE FUTURE LIGHT RAIL/TRAM**

- Ensure that the design for the upgrade of St. Vincent Street incorporates the potential for a future light rail / tram system along the section of St. Vincent Street between Baker Street (approximate) and the Jervois Bridge (note that the proposed street cross-sections for St. Vincent Street do allow for a possible future light rail, although the result would be a significant loss of on street parking and possibly the on-road bicycle lane. If light rail were to proceed, kerb protuberances would need to be removed and lighting locations changed from the central median.



strategies

5.3 car parking

5.3.1 On-Street Parking

- Provide for an overall increase in the availability of on-street car parking along Commercial Road and St. Vincent Street (it is not intended to maximise on-street parking as there are other important factors that need to be provided for in the overall streetscape design).
- Undertake an assessment of time - limits and other special parking requirements along both streets with the view to providing for the needs of service vehicles and appropriate levels of parking turnover, particularly for businesses with a frontage to the streets.

5.3.2 Off-Street Parking

- Continue to investigate opportunities for additional off-street parking opportunities within the Port Adelaide Centre, including a new multi-level car park to the north of the Council offices, or within the shopping precinct to the same side of St. Vincent Street.
- Improve signage on Commercial Road and St. Vincent Street to provide information to motorists on the availability of off-street car parks.
- Work with the business and trader groups to encourage workers to park in strategic locations away from the key shopping areas which should be kept available for shoppers.

5.4 streetscape amenity

The following elements relate to the design and management of the streetscape of St. Vincent Street and Commercial Road. When considered together, these will ensure an appropriate environmental and cultural response to the public realm.

Ultimately, the selection of urban elements for St. Vincent Street and Commercial Road needs to be done in the context of the Port Centre Public Domain Manual. This document provides an easy reference for recommendations in different precincts within the Port Centre. Opportunities for the selection of alternative materials and items based on a particular design are still acceptable.

The use of a common palette of furniture, materials and design elements within St. Vincent Street and Commercial Road emphasises continuity throughout the streetscapes and reinforces the high quality and contemporary character and appearance of the redevelopment. Within this palette of materials there is flexibility to provide unique elements to highlight a particular precinct or individual location within the context of the unified whole.

The palette of materials and furniture chosen are appropriate to the following criteria:

- contemporary, high quality durable materials,
- compliment the character of the area,
- tolerant to site conditions,
- accommodate high pedestrian traffic and use and,
- require low levels of ongoing maintenance.

Where possible, efforts should be made to use materials that are recycled and / or have a low embodied energy, in particular in the construction of pavements. Also, for example, custom designed and fabricated furniture and structures may be built from recycled or plantation timbers.

The following describes the urban elements that will inform the concept master plan.

**Colours**  
A colour palette for the public realm is developed from the desire to create a contemporary streetscape. This palette plays a critical role in consolidating the physical structure of the public realm. The palette provides for broad but coordinated choice in materials for pavers and street furniture, with detail elements highlighted.

**Paving**  
The guidelines aim at reinforcing the hierarchy of the streetscape character and open spaces. The selection of materials and construction techniques for laying pavers are consistent with the requirements of best practice and those of the City of Port Adelaide Enfield. Selection should reflect the Port Centre Public Domain Manual.

**Street Lighting**  
Street lighting will be designed to meet current illumination requirements under the relevant Australian Standards. Non standard ETSA poles and luminaires are proposed to provide a more distinctive character to the streetscape and a higher quality public realm.

**Public Lighting**  
The public realm will be illuminated by well-designed fittings that provide a distinctive appearance to the landscape. Lighting adds safety and liveliness and becomes an integral part of the character of the public realm. This report addresses amenity and feature lighting at key locations in the public realm, and pedestrian lighting along footpaths.

**Street Furniture**  
Street furniture will be provided in appropriate locations located along footpaths and in open spaces. A suite of well-designed and distinctive street furniture not only provides amenity, but distinctive character to the streets.

**Street Trees**  
Street trees improve the amenity and appearance of the public realm. The guidelines recommend tree species and placement within the footpaths and open spaces. Street trees of appropriate structure and scale, and with proven performance in urban conditions, and in particular, local conditions, are proposed.

**Other Planting**  
Other planting is recommended for open spaces, verges, medians and at other feature areas. Generally plantings should be low – medium species that are low maintenance and suited to the local conditions. Planting to verges should provide structure to the streetscape.

**Signs and Public Information**  
The signs and public information guidelines are concerned with information content, coordination and image. Street signs are proposed in keeping with other design elements.





Paving

The paving materials, sizes, and colours have been selected to suit the contemporary, high quality image envisaged for the Port Centre and to ensure a long life span for the public realm. Final material selection should be undertaken with reference to the ‘High Amenity’ section of the Port Adelaide Centre Public Domain Manual.

Paving materials include:

- large format precast concrete unit paving to high use pedestrian areas and activity nodes,
- high quality in situ washed aggregate / shot-blast paving
- high quality bituminous paving
- Alternate materials, colours and sizes to highlight and articulate (eg. paving bands and header courses to trees and use of natural stone and other inlays).

The selection of paving considers the following:

- durability and quality of materials
- cost
- installation techniques
- modular sizes
- appropriateness of materials to context
- appropriateness of colours to context
- suitability to vehicular traffic

The specifications for paving need to meet the City of Port Adelaide Enfield’s specifications for paving.

The following pavers are recommended for use within St. Vincent Street and Commercial Road.

Zone	Precinct	Surface Materials	Colours / Finish	Base
High use / high profile pedestrian zones	St. Vincent Street - between Nelson St. and Ocean Steamers Rd. Commercial Road - between St. Vincent St. and Rail Bridge	600 x 300 x 60mm precast concrete unit pavers with 300 x 300 x 60mm precast concrete unit paver header course and articulation	Charcoal with exposed aggregates. Honed finish	75mm FCR base 25mm sand
Medium use / medium profile pedestrian zones	St. Vincent Street - between Nelson St. and the Jervois Bridge and Ocean Steamers Rd. and the Eastern by-pass. Commercial Road - beyond the Rail Bridge.	High quality bituminous paving with 300 x 300 x 60mm precast concrete unit paver header course and articulation	Black bitumen Charcoal pavers with exposed aggregates. Honed finish.	75mm FCR base 25mm sand
Feature nodes	Black Diamond Square, Nelson St. intersection, entrances to the Port Mall, Lipson St. intersection and other key intersections with protuberances	A combination of 600 x 300 x 60mm and 300 x 300 x 60mm precast concrete unit pavers with inlays of natural stone, metal and lighting and opportunities for the incorporation of public art.	Charcoal with exposed aggregates. Combination of honed and shot-blast finishes. Natural stone colours. Polished or weathered metals	75mm FCR base 25mm sand
Trafficable pavements	Black Diamond Square	300 x 200 x 70mm precast concrete unit paver with 300 x 300 x 60mm header course.	Charcoal with exposed aggregates. Honed finish	100mm FCR base 25mm sand





Lighting

The lighting system for St. Vincent Street and Commercial Road includes:

- street lighting
- pedestrian / amenity lighting
- feature lighting

Lighting is one of the key components of the public realm and, along with street trees, is the major element badging the appearance of the public realm. Public lighting must meet criteria in terms of quality of lighting, illumination levels, visual appearance of the lanterns, robustness in terms of vandal resistance and low maintenance, and energy efficiency. Lighting should not attempt to light ‘everything’, but to provide safety and highlighting to features.

The use of solar power will be explored and incorporated in pedestrian and feature lighting if economically feasible. Lighting may also be powered by solar energy collected by structures supporting solar panels within the public realm. These structures may be shelters or merely sculptural follies within the landscape.

Lighting will be used within the precinct to:

- provide legibility for pedestrians, vehicles and cyclists
- ensure safety for pedestrians at night
- improve the night time character and amenity
- highlight features along the streetscape

The following lighting is recommended for use within St. Vincent Street and Commercial Road.

	Pole and Lantern	Lamp	Finish
Streets (standard)	Thorn Eclatec ‘Elipt’ luminaires on Smart Pole	70W Metal Halide	Powdercoat charcoal grey
Streets (feature)	Thorn Eclatec ‘Elipt’ luminaires on Smart Pole clad with large recycled wharf warehouse timbers	70W Metal Halide	Powdercoat charcoal grey
Pedestrian	Thorn Eclatec ‘Elipt’ luminaires on Smart Pole	70W Metal Halide	Powdercoat charcoal grey
Feature	Thorn ‘Avisco’ luminaires and post	70W Metal Halide	Powdercoat paint finish - dark charcoal grey

The final selection of lighting for St. Vincent Street and Commercial Road should be done with reference to the ‘High Amenity’ section of the Port Adelaide Centre Public Domain Manual.





Outdoor Furniture

Outdoor furniture and its arrangement is part of a well-integrated and well-maintained public realm. The design of street furniture for St. Vincent Street and Commercial Road provides the opportunity for badging the Port Centre with a distinctive character that is both functional and interesting in appearance.

The range of furniture includes:

- Seating
- Bins
- Bus shelters
- Water fountains (optional dog bowl)
- Bike stands (secure fixing)
- Bollards
- Bus shelters

The following items are recommended for use within the streets.

	Detail	Finish
Seats (standard)	Fabricated steel and hardwood timber seat (Urbum with armrests)	Oiled timber slats Powder coat aluminium castings
'Arts' seats	Custom designed seats to 'badge' the area.	As directed
Bin Stands	Custom designed 120l wheeled bin surround	As directed
Bollards	Custom designed to 'badge' the area	Stainless steel Powdercoated
Drinking Fountains	Street Furniture Australia DF3 with accessible bowl	Stainless steel Chrome finish
Bicycle Storage	Stainless Steel hoops	Brushed
Bus Shelter	Adshell 'EVO'	Powdercoat / glass

Materials for outdoor furniture should, where possible, be recycled and have low embodied energy. Items of furniture may be specifically designed for St. Vincent Street and Commercial Road by specialist designers / fabricators with this brief in mind.

Final furniture selections should be made with reference to the Port Adelaide Centre Public Domain Manual.

Shelter / Shade Structures

The provision of shade within the public realm is an important design criteria. Shelters are recognised destinations within the public realm, and are located to best service the needs of users. The structures should be simple and robust, promoting contemporary architectural forms appropriate to the image of the Port Centre. Refer to recommendations made within the Port Adelaide Centre Public Domain Manual.

Permanent shade structures are complimentary to the shade provided by tree planting within the public realm. Opportunities for shelter structures exist in Commercial Road north where space permits.





## Signs + Public Information

A coordinated signage network is established throughout the precinct to improve legibility and connectivity and to encourage circulation. The network provides directional information between the public realm, community facilities, tourist attractions, shops and other destinations within and surrounding St. Vincent Street and Commercial Road.

To add additional value and interest within the public realm, interpretive signage is provided to educate and entertain visitors, including discovery walks, heritage information relating to particular buildings or precincts or information regarding indigenous culture.

Signs and public information are concerned with information content, coordination and image. Aims include:

### Marketing

Information and signage has a marketable identity that inherently reinforces the character of the streetscape.

### Image

This is linked to marketing, but is also concerned with creating a recognisable community identity that locals and visitors can relate to.

### Clarity and consistency

Signage must be coherent and consistent across the range of display material, but should allow for the unique requirements of specific uses and activities.

### Safety, surety and visibility

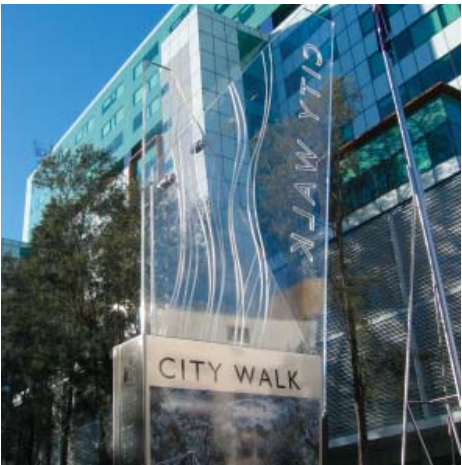
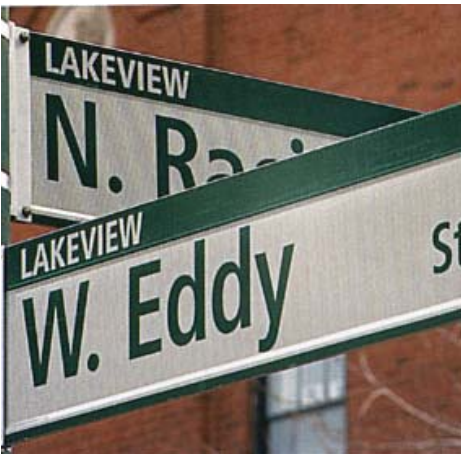
The placement of signs and information should ensure safety to users and contribute to the perception of personal safety. Signage must meet the needs of users 24 hours a day and year round.

### Aesthetics

The overall design approach must result in minimal visual clutter whilst maintaining effective communication.

Signage will be developed in conjunction with marketing and interpretation objectives for St. Vincent Street and Commercial Road as determined by the Council and their consultants during future design development stages. Recommendations made within the Port Adelaide Centre Public Domain Manual will be considered.

Where possible, signage should be fabricated using materials of low embodied energy.





## Planting

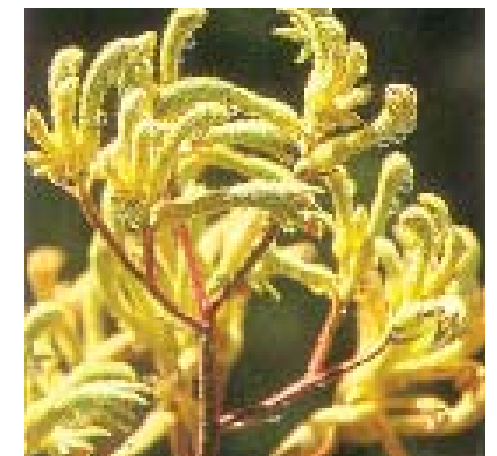
Planting beds provide colour and interest within the streetscape, and assist in defining the structure and character of the public realm. Structured planting reflects the high quality contemporary image of St. Vincent Street and Commercial Road. Native and exotic species are selected appropriate to the site conditions, suitability of form and limited ongoing maintenance and watering requirements.

Planting beds are used to:

- mark entry points,
- define edges and paths,
- enhance amenity and interest,
- educate, and
- provide seasonal change across the development.

Wherever possible, locally raised native plants are used and local suppliers supported. We have not included a full range native species available - this, along with opportunities to incorporate planting beds within the public realm will be determined in the detailed design stage.

The final species selection will be determined in conjunction with the 'High Amenity' section of the Port Adelaide Centre Public Domain Manual.





Public Art

Art is integrated throughout the development, creating a socially rich environment that allows for the expression of European and indigenous culture and the heritage, natural character and other distinctive features of the site.

A coordinated approach to public art through collaboration supports the creation of a strong regional identity and meaningful sense of place along St. Vincent Street and Commercial Road. Art input is integrated into the design of the public realm and the associated paving, furniture, signage and plantings.

Public art is memorable and contributes to image and character. Types of public art may include:

- stand-alone pieces
- entry markers
- paving patterns, stencilling or inlays
- furniture, structures and other urban elements
- signage

The integration of public art will need careful consideration in the design development phase of the project and should be done in conjunction with the City’s Public Art Policy. The Port has a strong and active arts community and their participation should be encouraged.





## Street Trees

The conditions under which trees have to grow at St. Vincent Street and Commercial Road are relatively harsh due to the character of the site soils and compaction.

Good tree form and health is dependent upon:

- adequate tree pits preparation and planting technique,
- provision of adequate irrigation,
- protection from vandalism and accidental damage from vehicles,
- avoiding compaction around the base of the trees and preferably within the drip zone, and
- use of root control barriers where required.

New street trees / open space tree planting includes:

- selection of species appropriate to the scale and use along the street or within the open space,
- continuity and consistency along the length of the street. Priority is given to establishing a single character along the length of a street rather than breaking streets into a number of precincts with different planting characters.
- diversity of species to reinforce street identity and promote ecological diversity.
- provide effective shade cover and have an attractive form,
- available in advanced sizes.

For St. Vincent Street and Commercial Road we recommend planting:

***Celtis laevigata*** as the main street tree for St. Vincent Street and Commercial Road.

***Zelkova serrata*** as the secondary street tree for Commercial Road, to be used in conjunction with the existing palm trees and as a smaller scale tree in Black Diamond Square.

***Pistachia chinensis*** as feature planting to provide autumn colour.

The final selection of tree species will need to be done in conjunction with the City's Parks and Gardens Manager and the recommendations contained within the 'High Amenity' section of the Port Adelaide Centre Public Domain Manual.

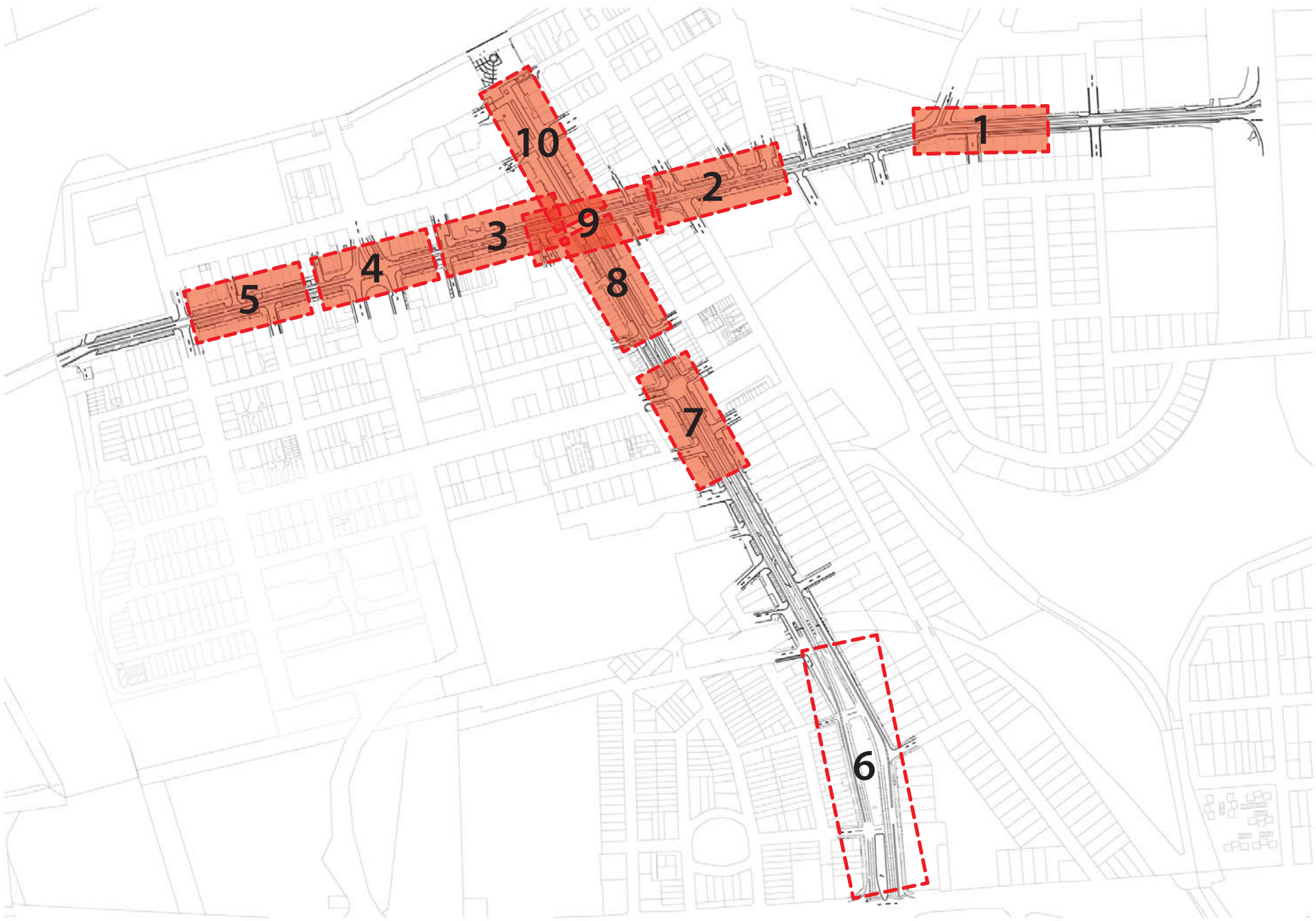




proposals

The following concept proposals are intended to show a typical treatment for within a precinct. Each area is representative of the strategies recommended for within each precinct. The proposals shown are not intended to cover 'everything', but indicate key elements of the proposals for within a precinct such as lane numbers and configurations, parking configurations, bus zones, street trees, lighting and a heirarchy of recommended paving treatments. The areas chosen reflect the 'central core'; the recommended focus for redevelopment, as shown in section 4.1.1.

The concept proposals set up a robust framework for future design development and detailed design.

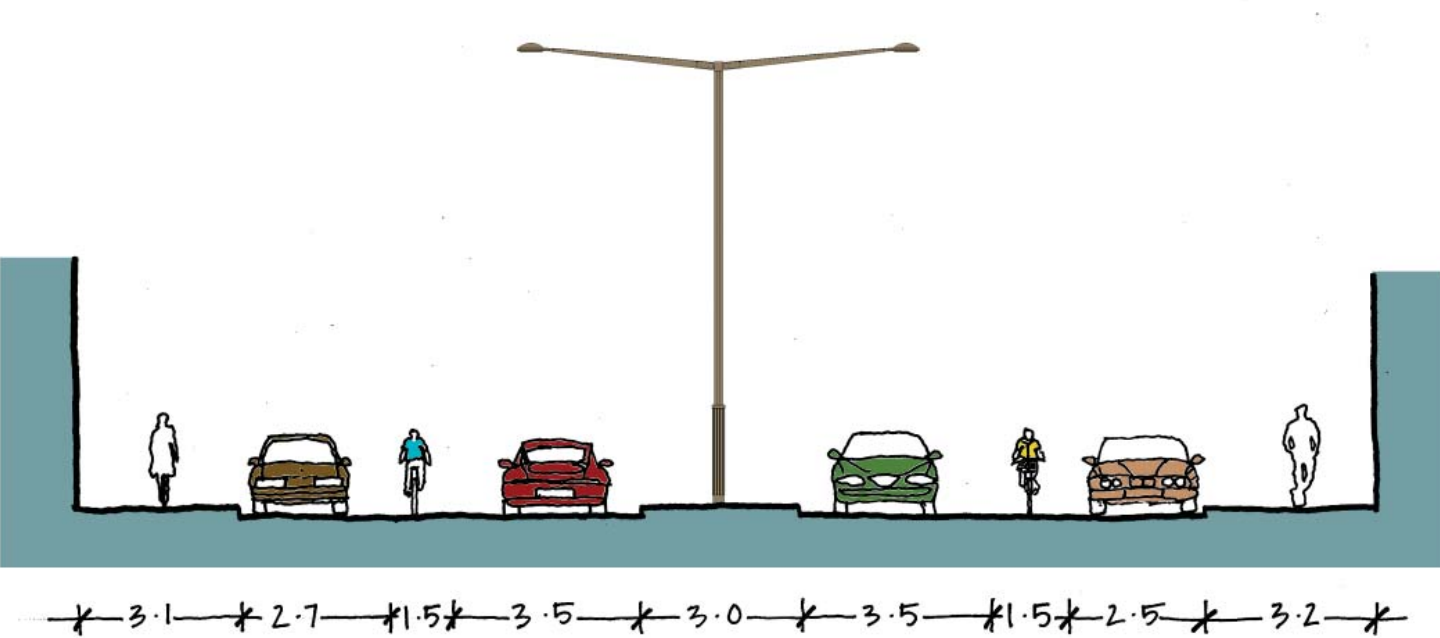
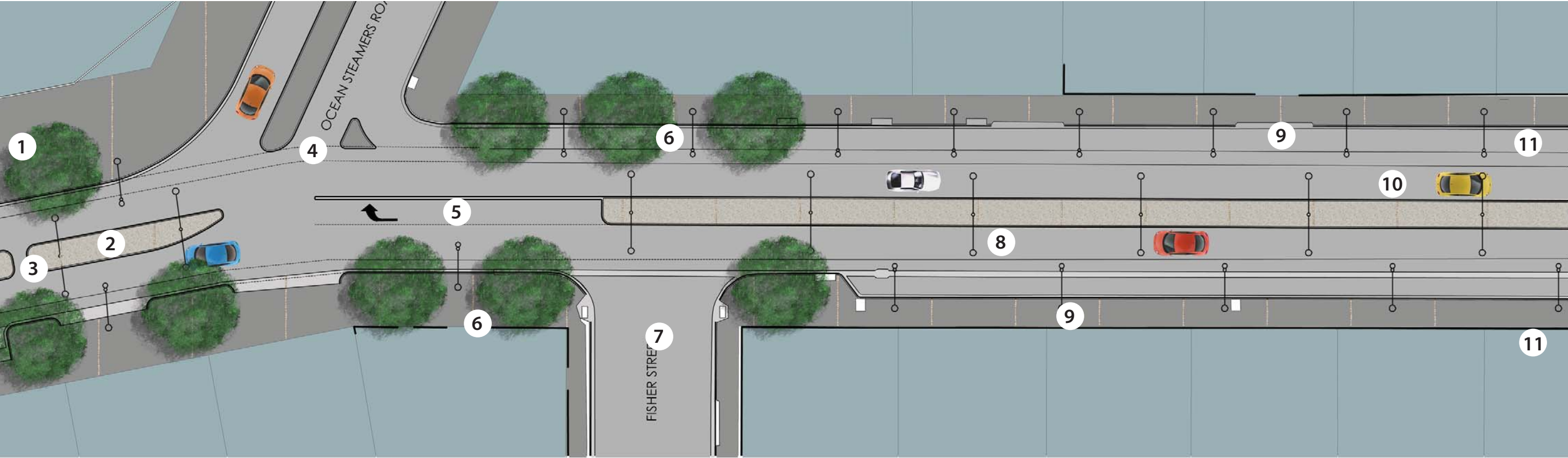


Precincts



proposals

6.1 precinct 1



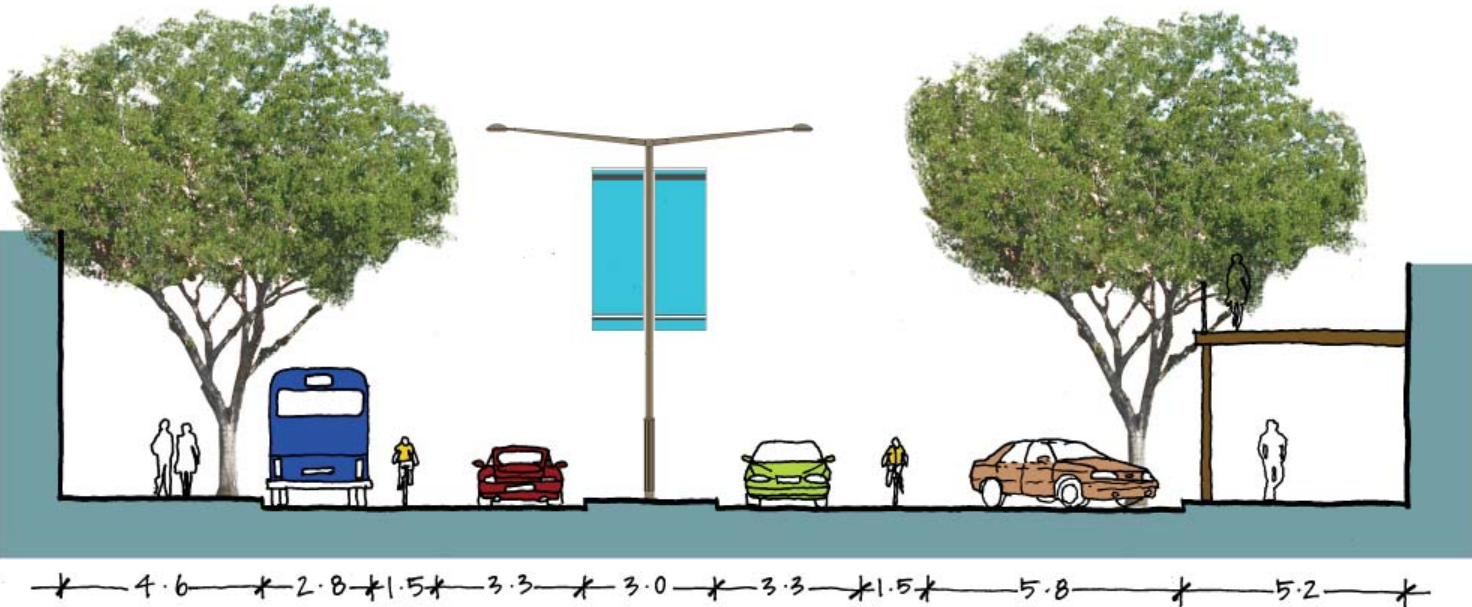
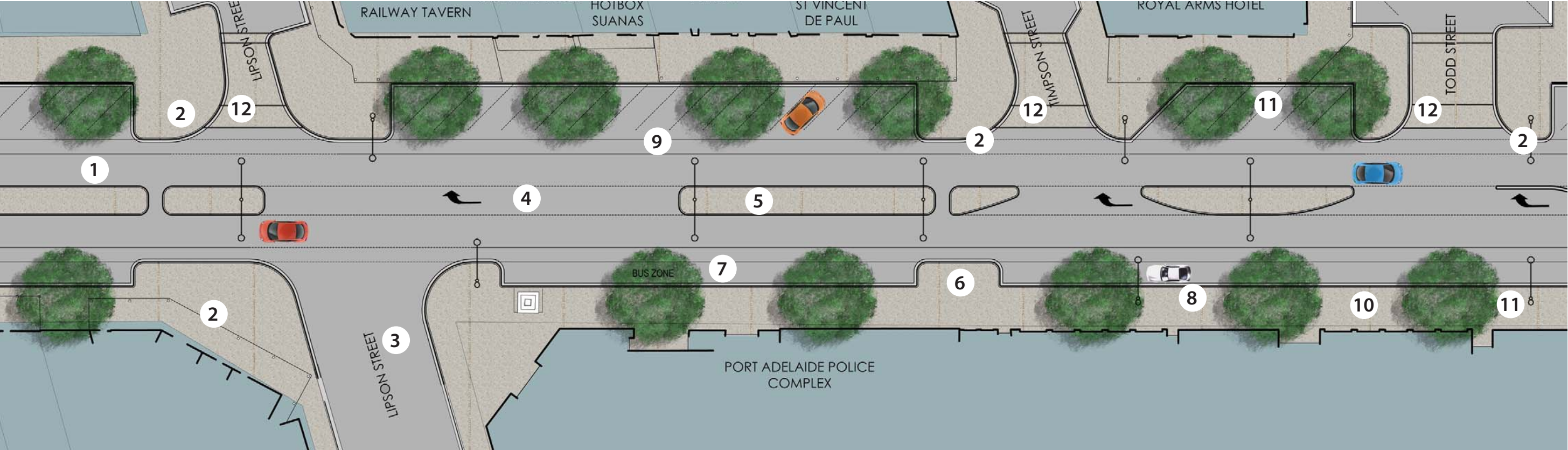
- 1. Wide verge at Ocean Steamers Road intersection in keeping with future development of the adjacent site.
- 2. New 3m wide solid median with new lighting poles centrally located. Provide in situ concrete washed aggregate paving.
- 3. Pedestrian refuges at crossing locations for additional safety.
- 4. Reconfigure Ocean Steamers Road intersection to reinforce St. Vincent Street as the dominant traffic flow. Provide new solid median and traffic island.
- 5. Protected right hand turn lane to Ocean Steamers Road.
- 6. New street tree planting to provide shade and structure to the streetscape.
- 7. Retain width of Fisher Street at intersection to allow truck access to warehouse precinct.
- 8. Provide new solid medians to replace current linemarking. Pave with in situ washed aggregate paving and provide new feature lighting to centre of median to act as a gateway element.
- 9. Retain existing kerb alignment and parallel parking.
- 10. Single travel lane in each direction with a dedicated 1.5m cycle lane.
- 11. New bituminous paving to footpath with pre-cast concrete unit paving banding to provide articulation. No street trees to verge to allow visual access to historic woolshed facades. Underground power lines to improve the streetscape visually.

St. Vincent Street East  
Ocean Steamers Road - Crozier Street



6.2 precinct 2

PLAN  
1.200 @ A1



- 1. Single travel lane in each direction with a 1.5m dedicated cycle lane.
- 2. Kerb protuberances at intersections.
- 3. Retain road width at Lipson Street south to allow truck access to warehouse precinct.
- 4. Protected right hand turn lane into Lipson Street.
- 5. Solid 3m wide median to replace existing linemarking with new lighting poles centrally located. Provide insitu washed aggregate concrete paving.
- 6. Protuberances to provide shorter crossing distances for pedestrians and provide better access to the waterfront and historic precinct to the north.
- 7. Indented bus bay and some parallel parking combined.
- 8. Parallel parking to south side of the road adjacent institutional buildings.
- 9. Forty-five degree parking to north side of the road to service businesses, the historic precinct and waterfront.
- 10. New pre-cast concrete unit pavers to footpaths.
- 11. New street trees in verge and between carparking to provide shade and improve streetscape character.
- 12. Continuous 'at grade' footpaths at minor intersections to promote pedestrian priority.

St. Vincent Street East  
Lipson Street - Todd Street

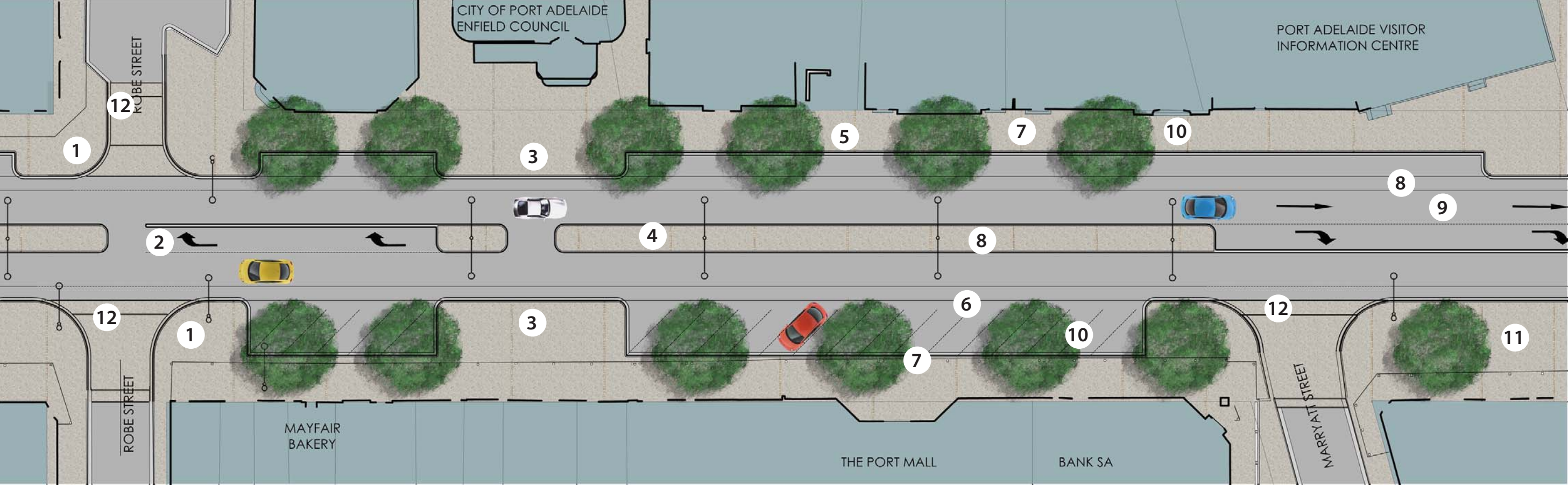
SECTION NTS

CONCEPT PLAN

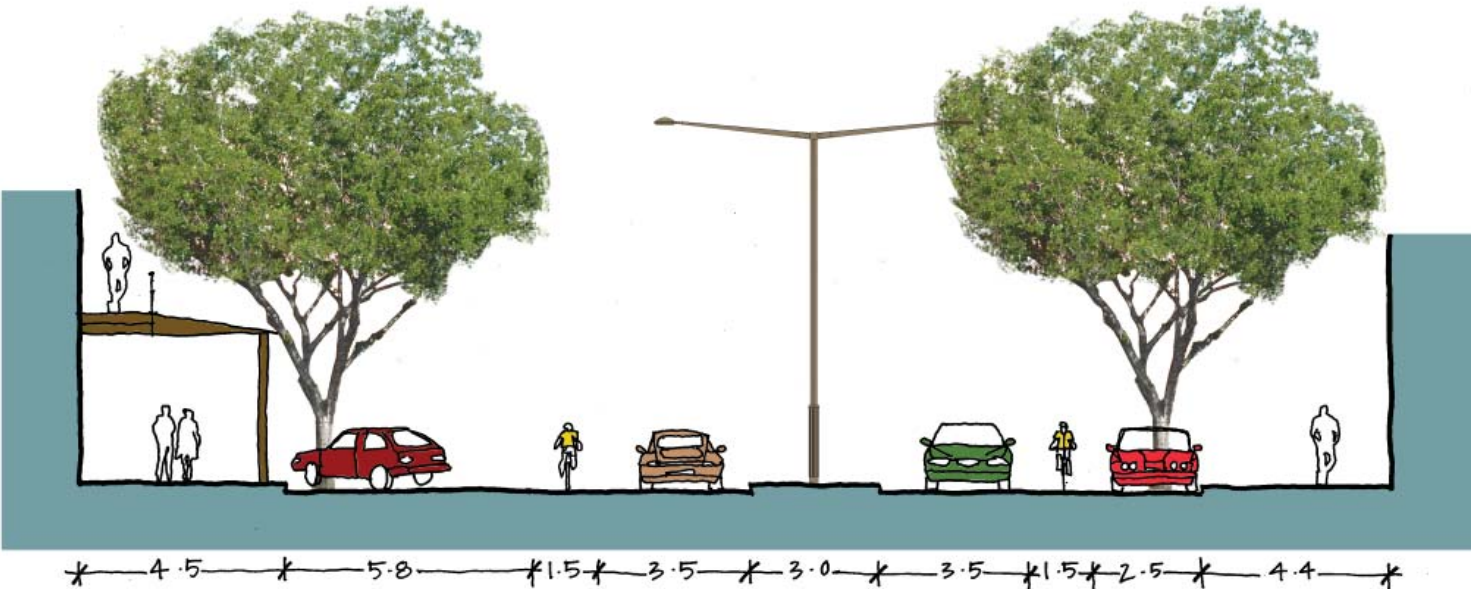


6.3 precinct 3

PLAN  
1.200 @ A1



- 1. Kerb protuberances at intersections to provide shorter crossing distances for pedestrians and better streetscape legibility.
- 2. Protected right hand turn lane into Robe Street providing better access to the waterfront precinct.
- 3. Reconfigure existing 2 phase signalised pedestrian crossing to provide a single phase signalised crossing.
- 4. Provide a solid 3m wide median with new lighting poles located centrally. Median to be paved with in situ washed aggregate concrete paving.
- 5. Parallel parking to the northern side of the street.
- 6. Forty-five degree parking to the south side of the street to service businesses.
- 7. New precast concrete unit pavers to footpaths.
- 8. Single travel lane in each direction with a dedicated 1.5m wide cycle lane.
- 9. Protected right hand turn lane into Commercial Road.
- 10. New street trees in verges and between car parking to provide shade and improve streetscape character.
- 11. Kerb protuberance to provide a wide verge outside Black Diamond Hotel. Opportunity for outdoor furniture/dining.
- 12. Continuous 'at grade' footpaths to side street intersections to promote pedestrian priority.



SECTION NTS

St. Vincent Street  
Robe Street - Commercial Road



6.3 precinct 3



Proposed



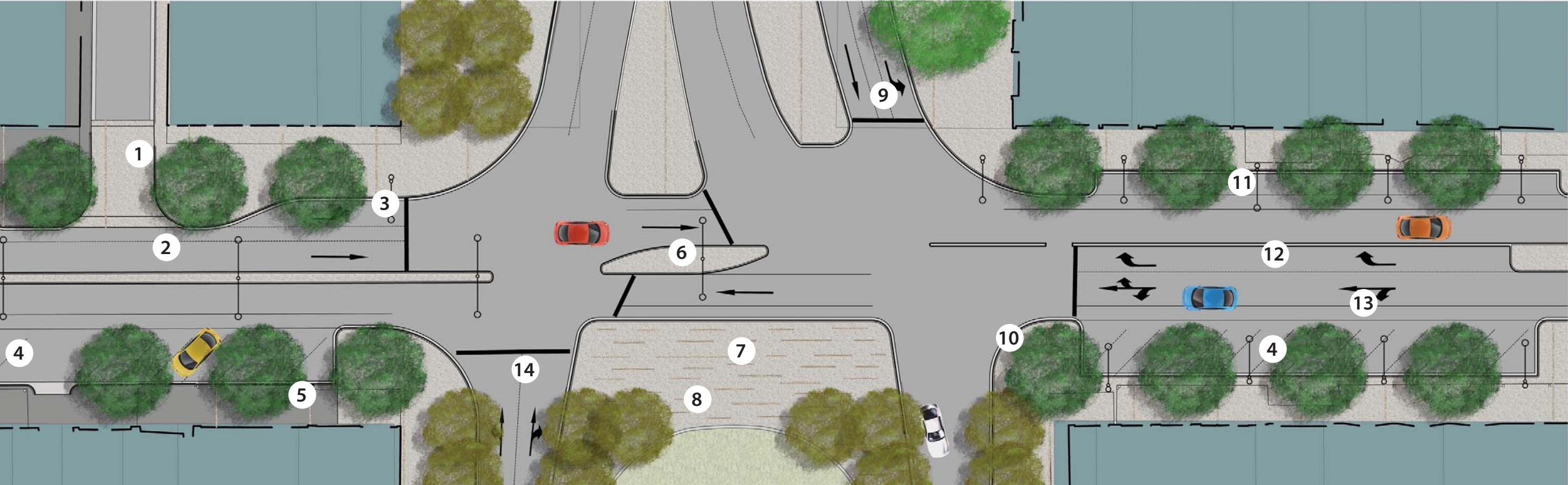
Existing

St. Vincent Street  
Robe Street - Commercial Road

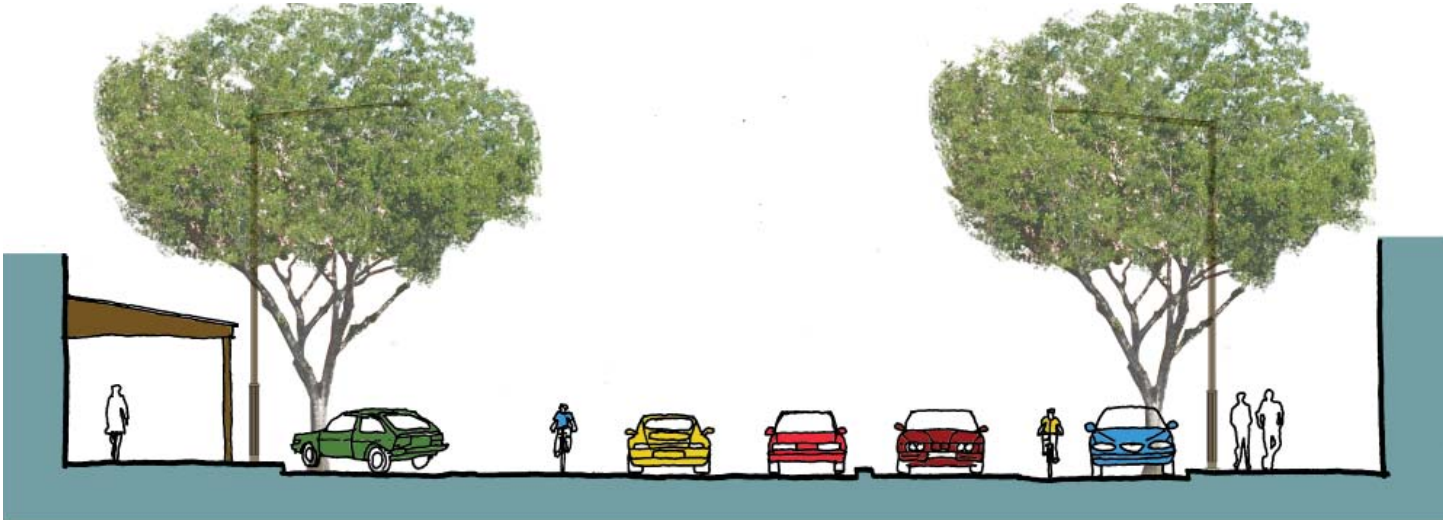


6.4 precinct 4

PLAN  
1.200 @ A1



- 1. Continuous 'at grade' footpaths to side street intersections.
- 2. Single reavel lane in each direction with a dedicated 1.5m wide cycle lane.
- 3. Dedicated left hand turn lane.
- 4. Forty-five degree parking with new street trees between car parks to provide shade and structure to the streetscape.
- 5. New bituminous paving to footpaths west of the intersection with pre-cast concrete unit paving banding to provide articulation.
- 6. Single through lane in each direction through the intersection with a new solid median.
- 7. Widened footpath outside St. Paul's Church to create a paved plaza and improved setting for the architecture. Paving bands of natural stone provide detail and a point of difference to the plaza. Opportunity to provide seating, feature lighting and public art.
- 8. New tree planting to provide shade; positioned so as not to obscure the church.
- 9. Dedicated through lane, 1.5m wide cycle lane and dedicated left hand turn lane from Nelson Street into St. Vincent Street.
- 10. Kerb protuberances at intersection to provide shorter crossing distances for pedestrians and better streetscape legibility.
- 11. Parallel parking to the north side of St. Vincent Street, east of the intersection.
- 12. Dedicated right hand turn to Nelson Street and combined through, left and right hand turn lanes.
- 13. Continuous 1.5m wide cycle lane.
- 14. Retain existing configuration at Church Place intersection.



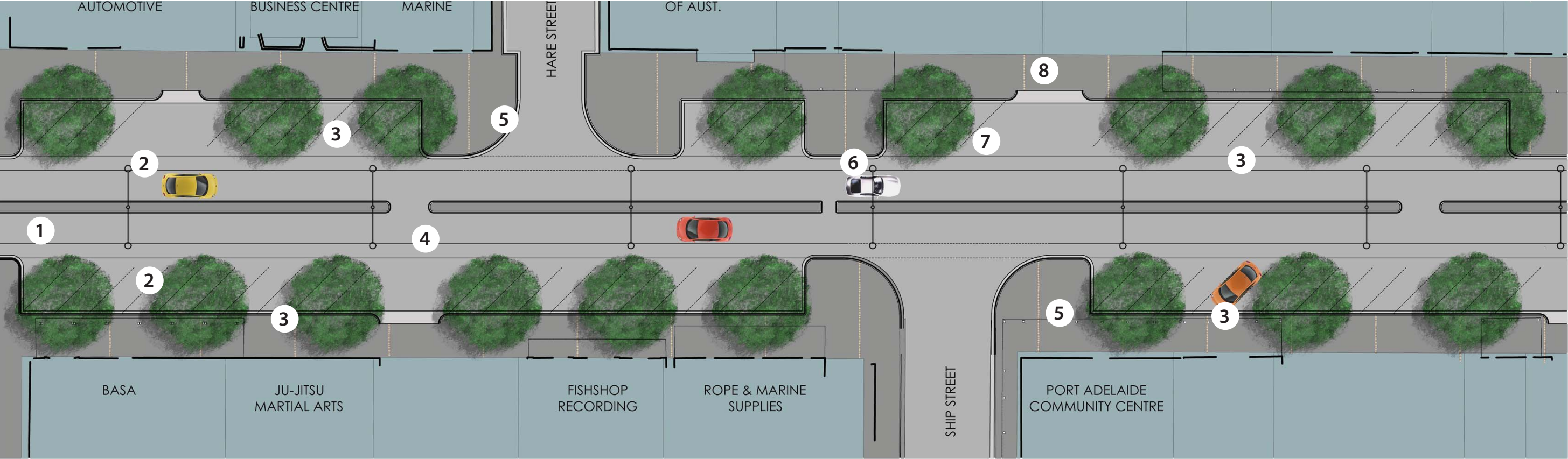
St. Vincent Street  
Nelson Street Intersection

CONCEPT PLAN

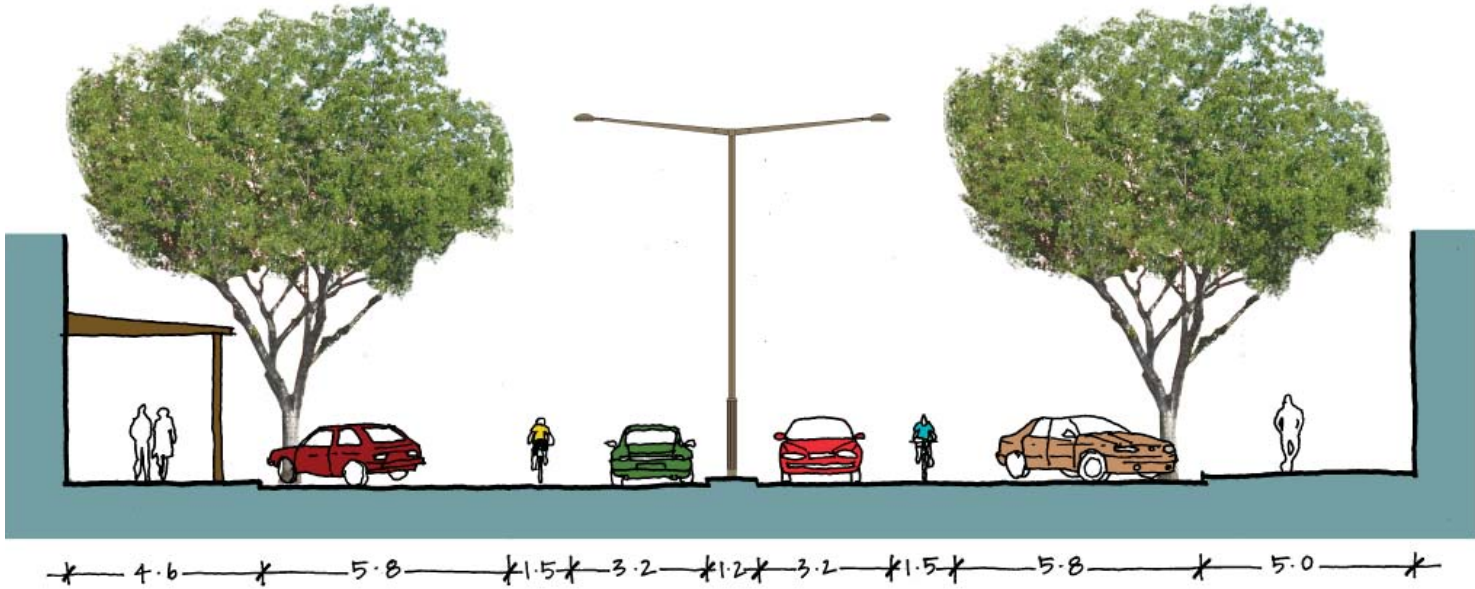


6.5 precinct 5

PLAN  
1.200 @ A1



- 1. Solid 1.2m wide median with a single travel land in each direction. New lighting poles to central median.
- 2. 1.5m wide cycle lane in each direction.
- 3. Forty-five degree parking both sides of the street to service businesses as well as tourism.
- 4. Breaks in median to allow for u-turning.
- 5. Kerb protuberances at intersections to provide shorter crossing distances for pedestrians and better streetscape legibility.
- 6. Protuberances to prodive shorter crossing distances for pedestians and provide better access to and from the waterfront further north.
- 7. New street trees between car parking bays to provide shape and structure to the streetscape.
- 8. New bituminous paving to footpath with precast concrete unit paving banding to provide articulation.



SECTION NTS

St. Vincent Street  
West of Nelson Street



6.5 precinct 5



Proposed

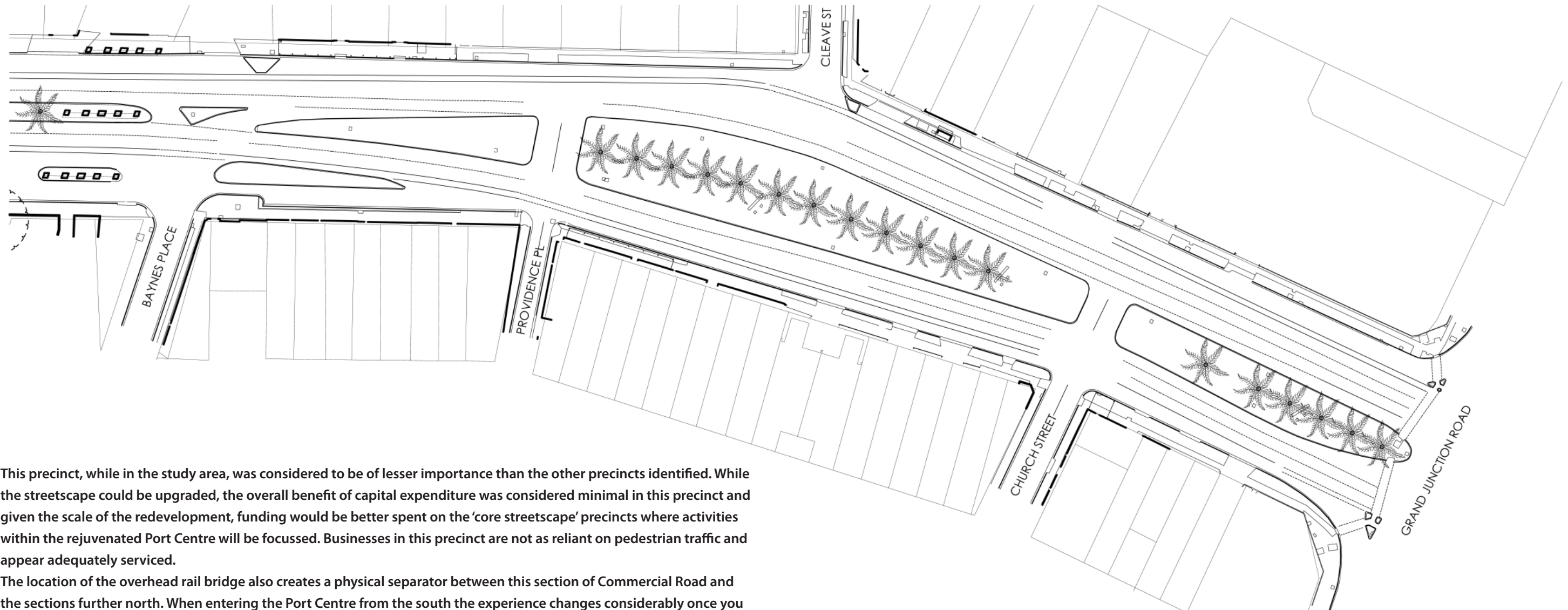


Existing

St. Vincent Street  
West of Nelson Street



## 6.6 precinct 6



This precinct, while in the study area, was considered to be of lesser importance than the other precincts identified. While the streetscape could be upgraded, the overall benefit of capital expenditure was considered minimal in this precinct and given the scale of the redevelopment, funding would be better spent on the 'core streetscape' precincts where activities within the rejuvenated Port Centre will be focussed. Businesses in this precinct are not as reliant on pedestrian traffic and appear adequately serviced.

The location of the overhead rail bridge also creates a physical separator between this section of Commercial Road and the sections further north. When entering the Port Centre from the south the experience changes considerably once you have passed under the rail bridge.

Reconfiguring this section of Commercial Road would also need to be done in the context of the Grand Junction Road intersection. Detailed survey information for this intersection was not available and the conceptual redesign of the intersection was outside the scope of this study.

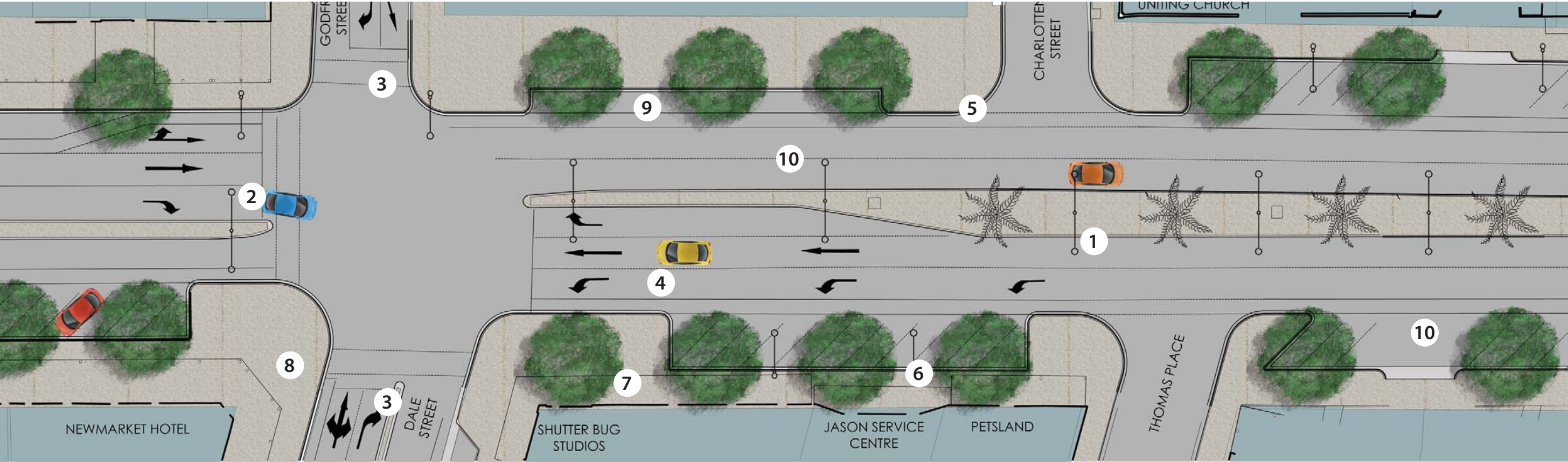
Commercial Road  
Baynes Place - Grand Junction Road

CONCEPT PLAN

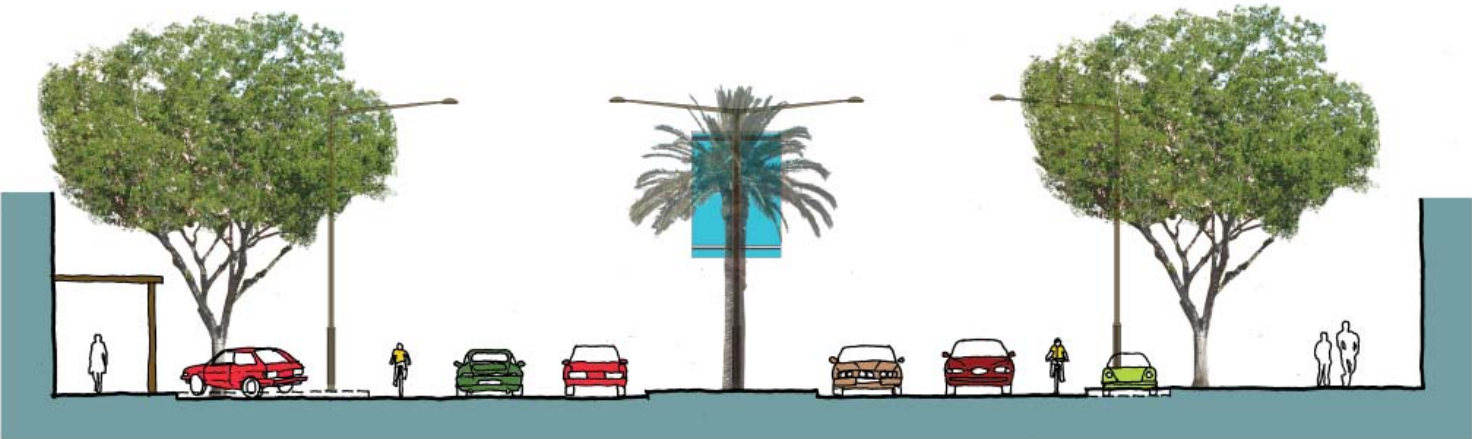


6.7 precinct 7

PLAN  
1:200 @ A1



- 1. Retain existing median and palms. Re-pave with in situ washed aggregate paving.
- 2. Provide protected right hand turn into Dale Street and introduce a left hand turn/straight through lane to continue to 2 lanes south of Dale Street.
- 3. Retain existing conditions at Dale and Godfrey Streets.
- 4. Provide dedicated left hand turn into Dale Street to encourage this traffic movement. Provides a transition point to reduce to a single lane north of Dale Street.
- 5. Protuberances at intersections providing shorter crossing distances for pedestrians and better streetscape legibility.
- 6. Forty-five degree parking to service businesses.
- 7. New street tree planting in verges and between car parking to provide shade and improve streetscape character.
- 8. New pre-cast concrete unit pavers to footpaths with banding to provide articulation.
- 9. Indented bus bay.
- 10. 1.5m wide continuous cycle lane.



SECTION NTS

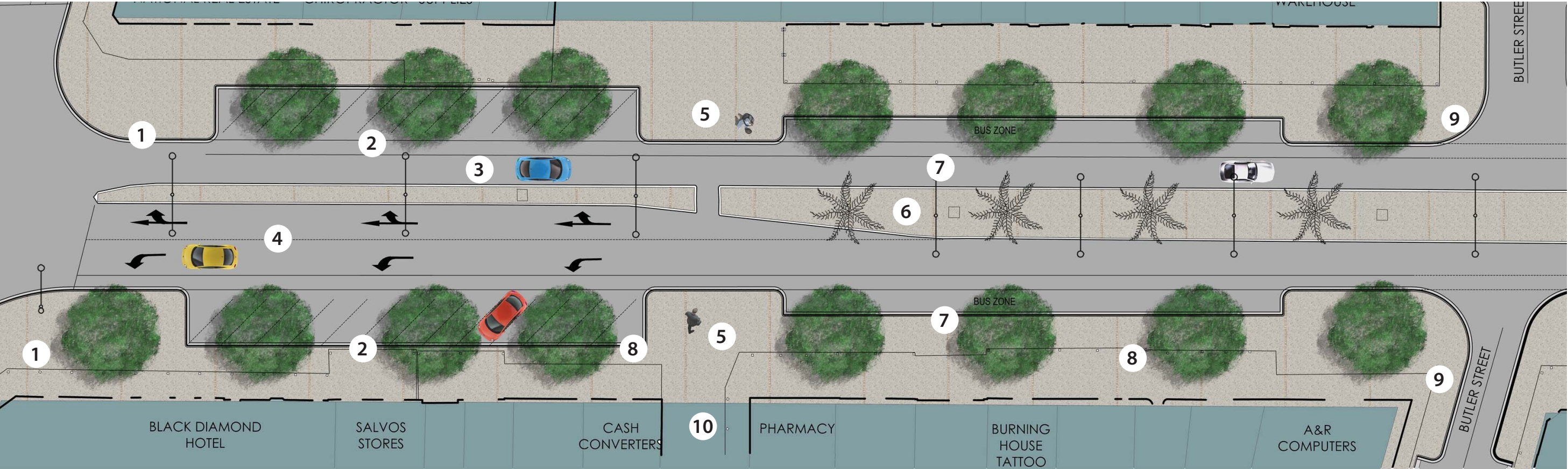
Commercial Road  
Dale Street - Thomas Place

CONCEPT PLAN

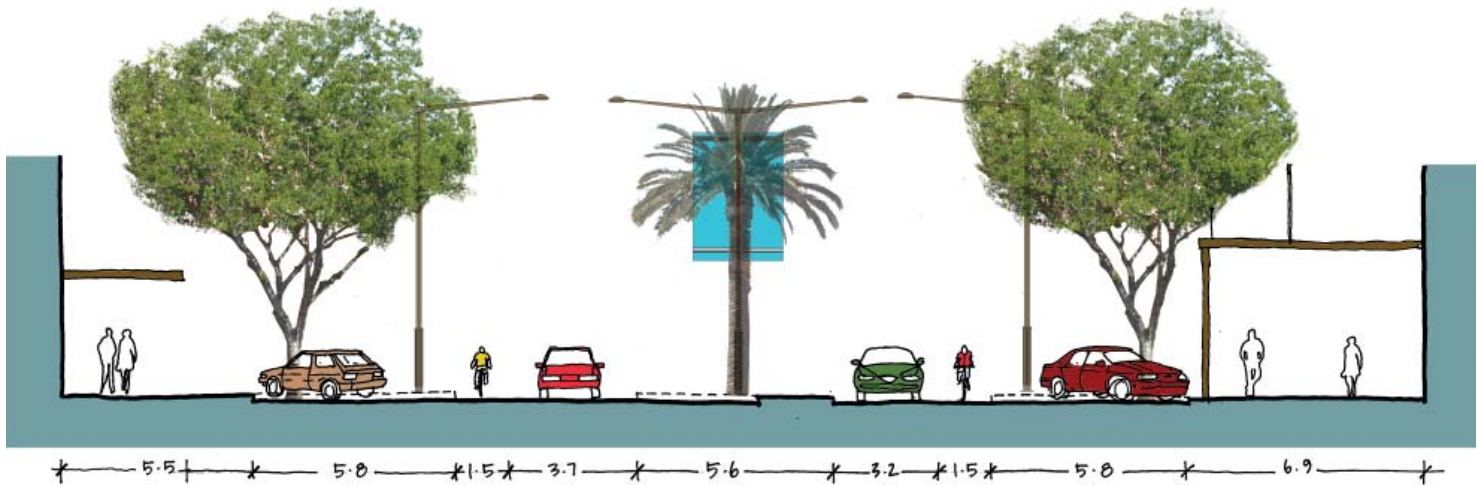


6.8 precinct 8

PLAN  
1.200 @ A1



1. Kerb protuberances to reduce the scale of the intersection and provide shorter crossing distances for pedestrians.
2. Relocate existing bus zones and provide forty-five degree parking to service businesses.
3. Single travel lane only.
4. Dedicated left hand turn and combined right hand turn and straight ahead lane at intersection.
5. Retain existing pedestrian crossing location.
6. Retain existing median and palm trees. Re-pave with in situ washed aggregate concrete paving.
7. Indented bus bays with wider footpaths adjacent for better pedestrian circulation and amenity.
8. New street trees in verges and between carparking to provide shade and improve streetscape character.
9. Kerb protuberances to side street intersections to provide shorter crossing distances and improve streetscape legibility.
10. Existing mall entry.



SECTION NTS

Commercial Road  
St. Vincent Street - Butler Street



6.8 precinct 8



Proposed



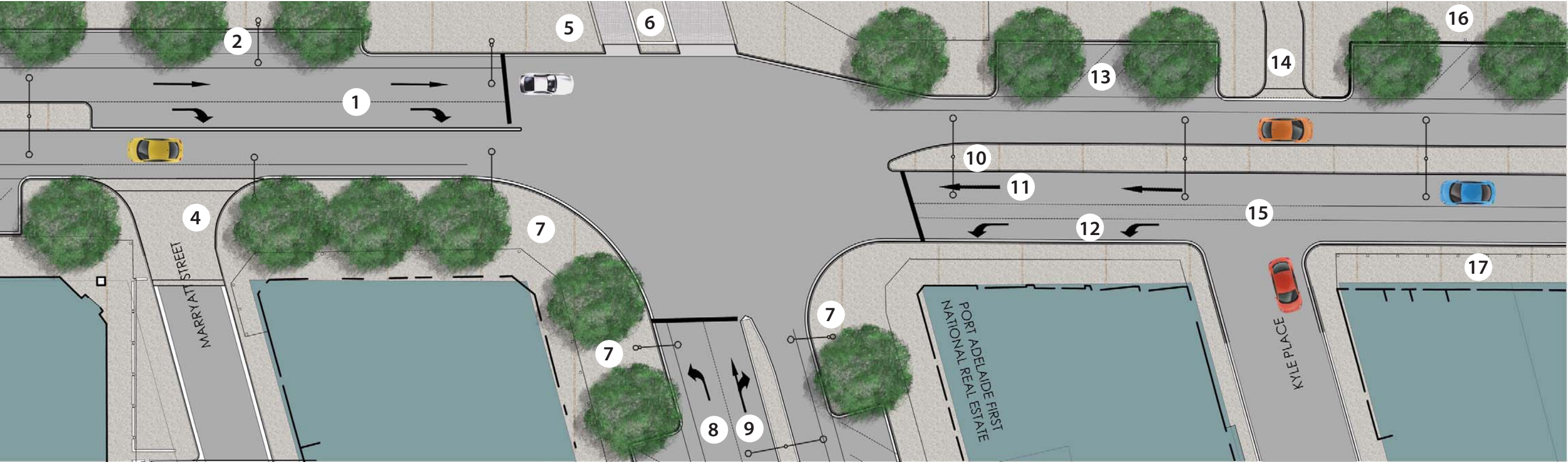
Existing

Commercial Road  
St. Vincent Street - Butler Street

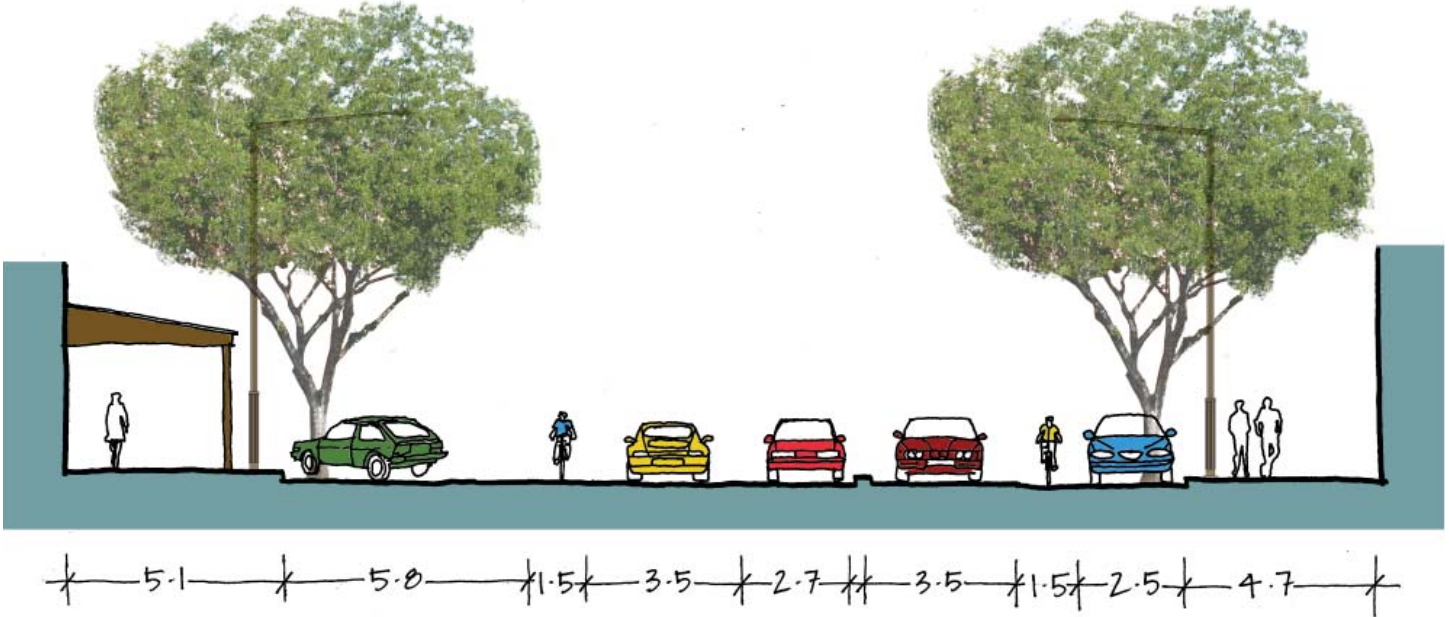


6.9 precinct 9

PLAN  
1.200 @ A1



1. Single travel lane in each direction with a dedicated right hand turn from St. Vincent into Commercial Road. Left hand turn into Black Diamond Square is removed with access restricted to entry from Commercial Road, North Parade, McLaren Parade, Divent Street and Nile Street.
2. Parallel parking to the south side of St. Vincent Street.
3. New street tree planting to widened protuberances.
4. Continuous 'at grade' footpaths to Marryatt Street intersection.
5. 'At grade' access to Black Diamond Square.
6. Relocate the Silent Policeman to the intersection, close to its original location as a traffic control device.
7. Widened protuberances to provide shorter crossing distances for pedestrians and reduce the scale of the intersection.
8. Left hand turn lane from Commercial Road to St. Vincent Street.
9. Straight ahead and right hand turn lane.
10. Provide a 3m wide solid median with centrally located lighting poles. Median to be paved with in situ washed aggregate paving.
11. Single lane through to St. Vincent Street west only. No right hand turn into Black Diamond Square.
12. Dedicated left hand turn into Commercial Road.
13. Forty-five degree angle parking to the north side of the street to service businesses.
14. Continuous 'at grade' footpath.
15. Dedicated 1.5m wide cycle lane.
16. New street tree planting between carparking to provide shade and improve streetscape character.
17. New pre-cast concrete unit pavers to footpaths.

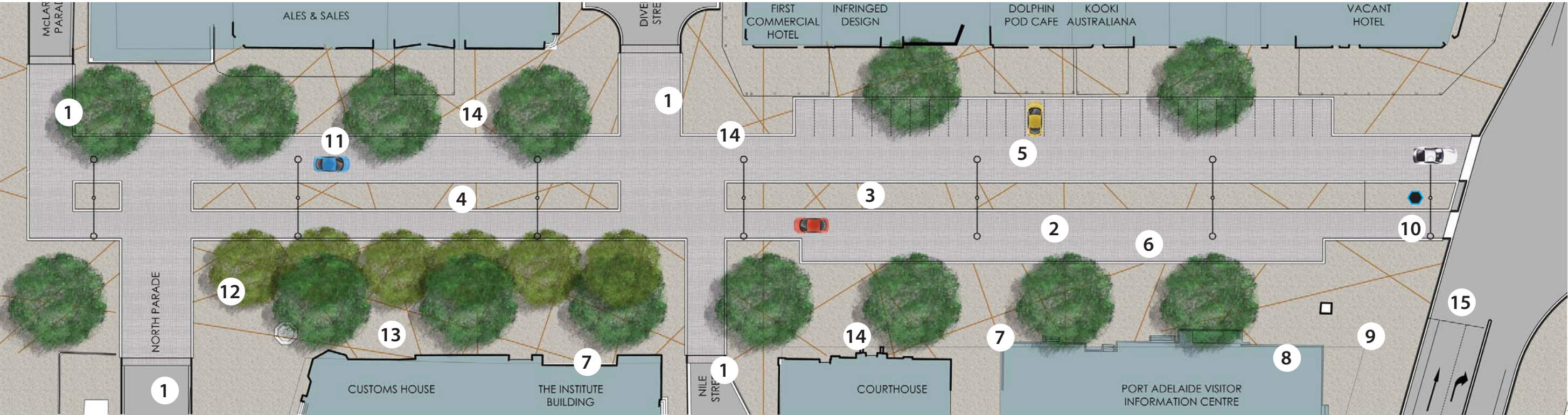


St. Vincent Street  
Commercial Road Intersection  
CONCEPT PLAN

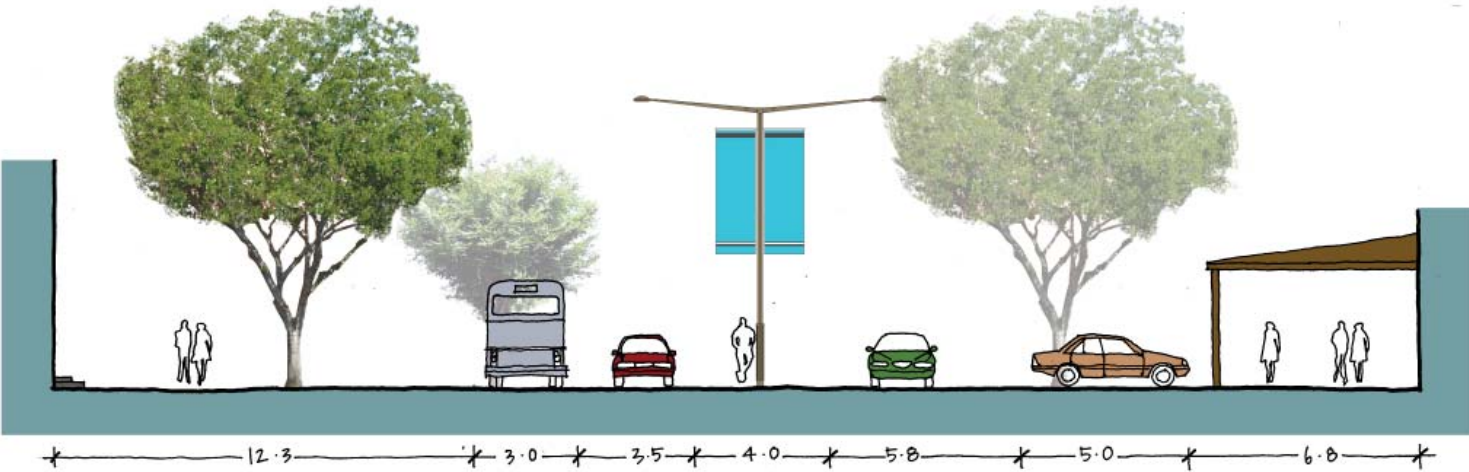


6.10 precinct 10

PLAN  
1.200 @ A1



1. Retain existing access to and from McLaren Parade, North Parade and Nile Street.
2. New paved surface to 'roadway'/shared use plaza. Paving to be at the same level as the footpath to promote a pedestrian shared zone.
3. Central 'at grade' median to delineate vehicular zone - provide 300mm wide flush edge between vehicular paving and pedestrian paving.
4. Portion of plaza north of Divent Street can be closed to vehicular traffic on weekends with car parking to the south still remaining accessible.
5. Ninety degree car parking to service businesses.
6. Parallel parking and tourist bus zone.
7. New pre-cast concrete unit pavers to pedestrian zones. Provide inlays including brass strips with interpretive detail into the paving in the pattern of a nautical navigation chart.
8. Reconfigure entrance to Visitor Information Centre. Remove ramps and balustrades and provide a level change further into the plaza and away from the visitor centre entry. Provide a better entry and address so the Centre is visually and physically more accessible. Opportunity to provide a cafe or outdoor facility associated with the visitor info centre.
9. Retain monuments and artwork and incorporate into new plaza.
10. Relocate the silent policeman near the Black Diamond Intersection, close to its original location as a traffic control device.
11. New large deciduous trees appropriate to the scale of the plaza.
12. Smaller deciduous trees providing a second tree layer and different scale for pedestrians.
13. Potential outdoor dining/bar space associated with a new tenancy in Customs House (currently vacant)
14. Wider pedestrian zones providing opportunities for outdoor activity associated with adjacent businesses.
15. Remove left hand turn access from St. Vincent Street.



SECTION NTS

Commercial Road  
Black Diamond Square

CONCEPT PLAN



6.10 precinct 10



Proposed



Existing

Commercial Road  
Black Diamond Square



# *implementation*

## 7.1 further studies

As outlined in Sections 4.3 and 5, the final design of some sections of the upgrades for Commercial Road and St. Vincent Street are reliant on further studies. These include:

- A broader traffic study to assess the traffic conditions following the opening of the new Port River Bridges during 2008.
- An investigation of the possible eastern bypass corridor linking Commercial Road (near the railway overpass) with the Port Adelaide Expressway.
- An assessment of the potential to upgrade the role of Church Street along the western edge of the core retail area (which would provide an improved north - south linkage between Old Port Road and Nelson Street / LeFevre Peninsula).
- An investigation into the preferred bus routing through the Port Adelaide Centre, including new routes into the core retail area utilising Dale / Church Streets and a possible bus interchange.
- An investigation into the longer term public transport requirements relating to increased tourism activity along the Port Waterfront to the north of the Study Area.



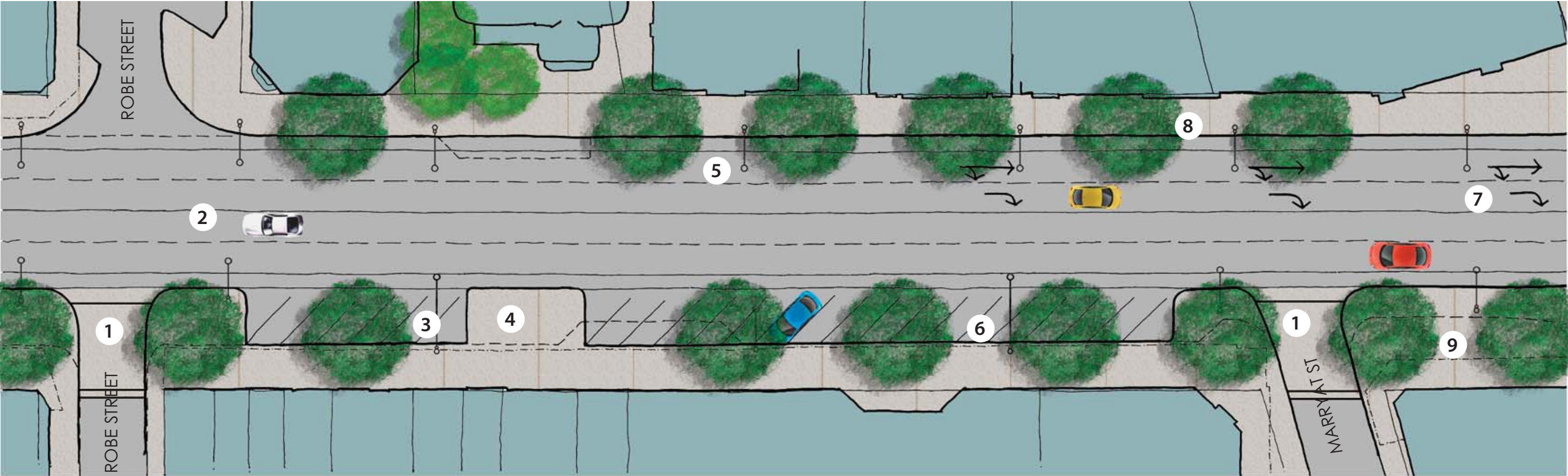
## 7.2 implications of additional lanes

If it is not possible to reduce the travel lanes down to a single lane in each direction through the core retail area, the following implications would result.

- Reduced opportunities for on-street parking
- Reduced opportunities for street tree planting
- Little improvement to vehicle and pedestrian access to the water front.
- No opportunities for protected right hand turn lanes along St. Vincent Street.

Design possibilities for St. Vincent Street, between Commercial Road and Robe Street, and Commercial Road, between St. Vincent Street and Butler Street, are shown to indicate potential outcomes if a single travel lane in each direction cannot be achieved.





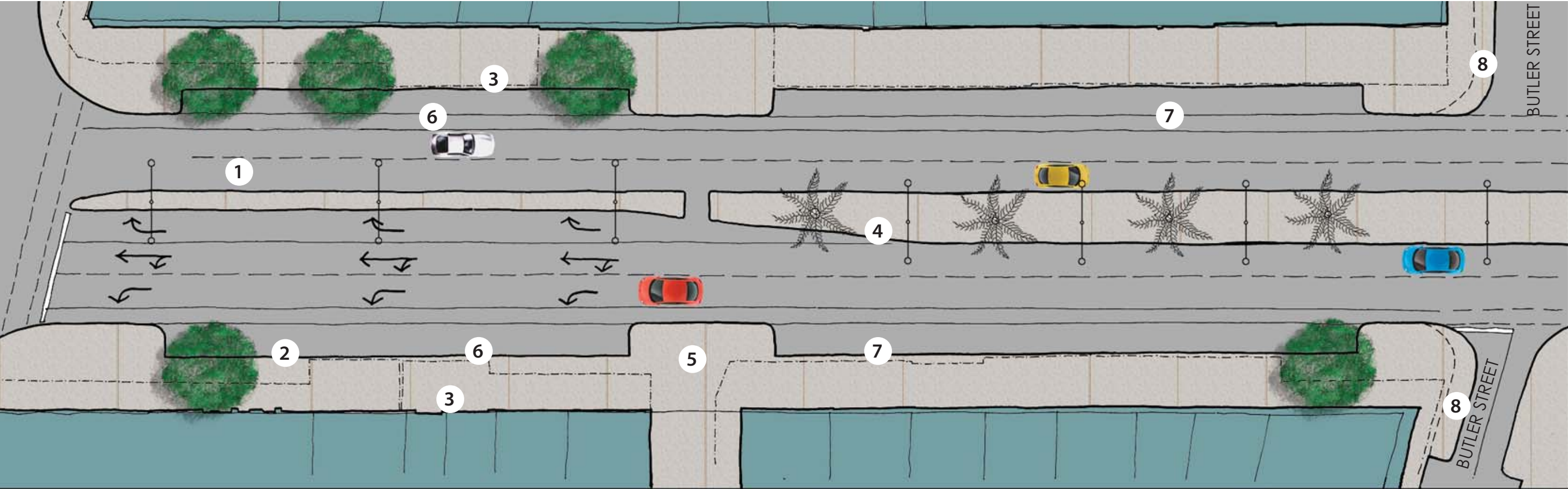
1. Continuous 'at grade' footpath at intersection giving pedestrian priority.
2. Two travel lanes in each direction with a dedicated 1.5m wide cycle lane in each direction. No central median.
3. Forty-five degree angle parking to the south side to service businesses/retail with is predominatly on the south.
4. Protuberance to allow for safer crossing and shorter crossing distance. Retain signaled crossing.
5. No parking to the northern side of St. Vincent Street between Commercial Road and Nelson Street.
6. New tree planting between car parking to provide shade and structure to the streetscape.
7. Two right hand turn lanes and a single through lane at Commercial Road intersection.
8. New street tree planting to the verge on the north side of the street.
9. Increased footpath width outside Black Diamond Hotel.

St. Vincent Street  
Alternative Option - 2 lanes retained





 **PLAN**  
1:200 @ A1



- 1. Two lanes in each direction retained and lane configurations retained.
- 2. New street trees where verandah set backs allow.
- 3. New pre-cast concrete unit pavers to footpaths.
- 4. Existing median retained - re-pave with in situ washed aggregate concrete paving. Palms to be retained.
- 5. Protuberances at pedestrian crossing to be retained.
- 6. Existing bus zone to be replaced with parallel parking to help service businesses.
- 7. Existing bus zone retained.
- 8. Kerb protuberances at side street intersections to provide shorter crossing distances for pedestrians.

Commercial Road  
Alternative Option - 2 lanes retained

CONCEPT PLAN



# *implementation*

## 7.3 priorities and staging

### 7.3.1 Priorities

The key principles for determining the priorities for upgrade works along St. Vincent Street and Commercial Road include the following:

- Focus on St. Vincent Street rather than Commercial Road given relatively poor quality streetscape in St. Vincent Street.
- Focus on locations where maximum economic improvement can be derived.
- Timing of works staged in accordance with other private and government investment (e.g. adjacent Port Adelaide Waterfront Redevelopment Project)
- Focus on locations that demonstrate significant change to the urban fabric to reinforce the fact that Port Adelaide is undergoing transformation.
- Undertake works such that no re-work is required due to change in the circumstances.
- Only reduce traffic flow following the completion of the overall traffic management study and opening of the Port River bridges (as discussed above).



7.3.2 recommended staging

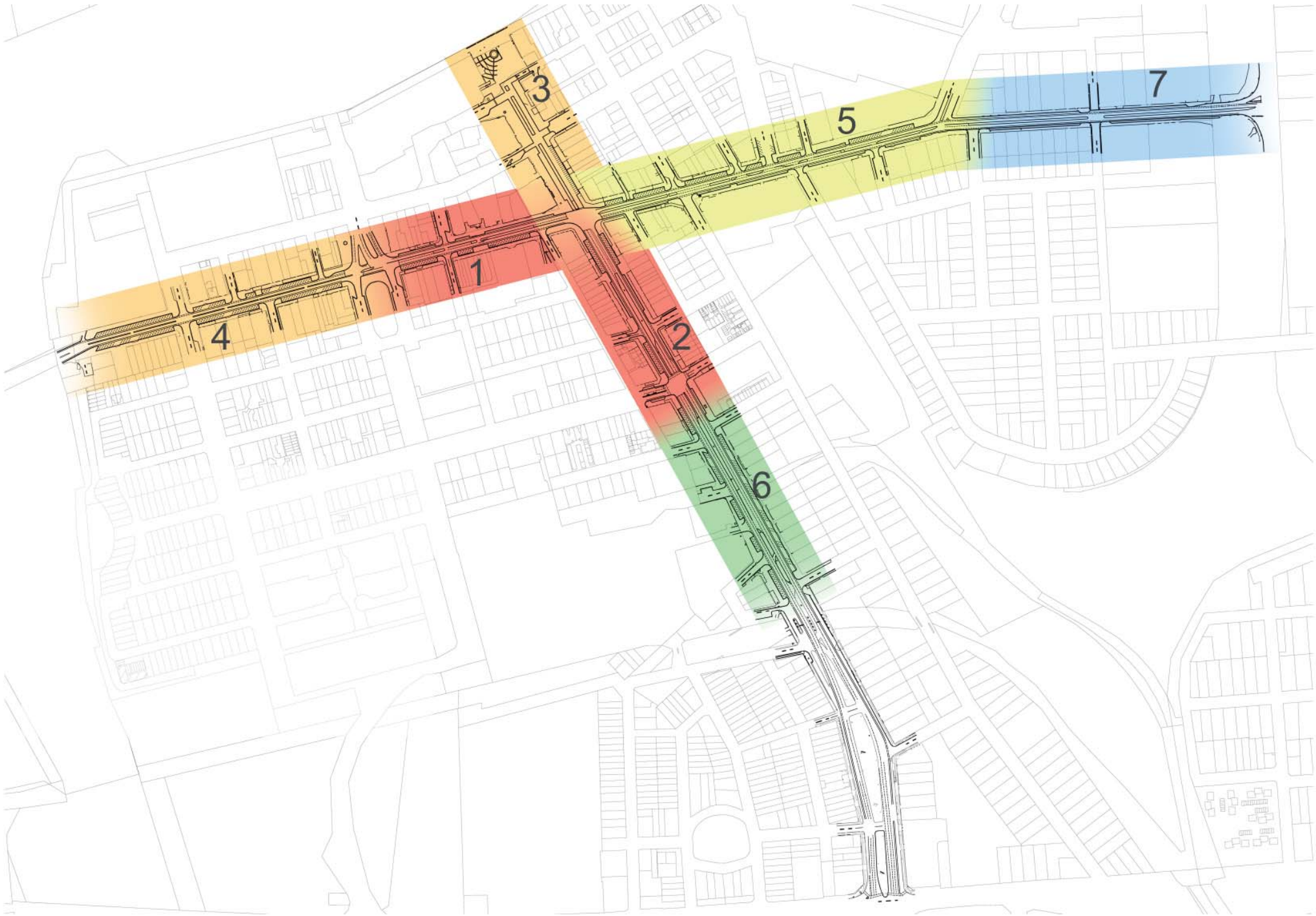
The diagram opposite indicates the recommended staging of works along Commercial Road and St. Vincent Street. This staging is based on no work commencing construction until after the completion of the overall traffic study and any necessary bypass routes.

The priority stages are as follows:

- Priority 1 (Precincts 3 & 4)**  
St. Vincent Street between Commercial Road and Nelson Street (including the Nelson Street intersection).
- Priority 2 (Precinct 8 & 9)**  
Commercial Road (between St. Vincent Street and just south of Dale Street and including the Commercial Road intersection).
- Priority 3 (Precinct 10)**  
Commercial Road / Black Diamond Square (north of St. Vincent Street).
- Priority 4 (Precinct 5)**  
St. Vincent Street (between Nelson Street and Jervois Bridge).
- Priority 5 (Precinct 2)**  
St. Vincent Street (between Commercial Road and Ocean Steamers Road).
- Priority 6 (Precinct 7)**  
Commercial Road (between Dale Street and the railway overpass).
- Priority 7 (Precinct 1)**  
St. Vincent Street east.

If, however, construction is to commence prior to the broader traffic / bypass route study, the abovementioned highest priority stages cannot be developed initially. Staging should then commence in the abovementioned priority order, with the two highest priority stages being delayed (i.e Priority 3 becomes Priority 1) until the final design for these sections can be completed, based on the findings of the broader studies.

The diagram opposite indicates the recommended stages, numbered in order of priority.





## 7.4 funding opportunities

The following are potential funding sources that the City of Port Adelaide Enfield may wish to consider to enable the further development of design concepts and implementation of works.

- PLEC (Power Line Environment Committee)
- Places for People (Administered through Planning SA)
- Black Spot Funding (Federal Government)
- The Land Management Corporation
- The Department of Transport, Energy and Infrastructure

### 7.4.1 PLEC

The Power Line Environment Committee seeks registrations of interest for proposals to underground electricity infrastructure for the benefit of the general community.

### 7.4.2 Places for People

The Places for people program is a State Government funded initiative aimed at revitalising important public places within the State. The program offers funding to assist local governments to plan, design and build high quality community places to encourage community life and economic investment and development.

Contact Planning SA  
Stephen Oliver  
Places for People Coordinator  
Phone: (08) 8204 8374  
Email: [oliver.stephen@saugov.sa.gov.au](mailto:oliver.stephen@saugov.sa.gov.au)

More information on Places for People and how to apply can be found at:

[www.planning.sa.gov.au/go/placesforpeople](http://www.planning.sa.gov.au/go/placesforpeople)

Further information on available grants that may be relevant to St Vincent Street and Commercial Road can be found at:

[www.grantslink.gov.au](http://www.grantslink.gov.au)  
[www.grants.ord.sa.gov.au/](http://www.grants.ord.sa.gov.au/)

### 7.4.3 Arts SA

The role of Arts SA includes assisting the development of the arts and cultural industry and providing strategic financial support programs to the arts and cultural industry. Arts SA has five competitive grant areas. The ones of most relevance to the St Vincent Street and Commercial Road strategies contained within this plan are:

**Project assistance** - supports the State's independent arts sector by offering grants to assist professional development, creation of new work and presentation of projects. Most applicants to this program will be individual artists and groups of artists; however, organisations, local and state government agencies, community groups and businesses can also apply when their projects involve South Australian artists.

**Public art and design** - supports the commissioning of high-quality works of art and design for the public arena. Most applicants to this program will be individuals, organisations, community groups and local and state government agencies. Businesses can get information on the commissioning process, and can apply for support when in partnership with an eligible applicant.

**Health promotion through the arts** - supports the arts to play a role in promoting healthy lifestyles and building community well being. Most applicants to this program will be community and arts organisations, and partnerships between government, local government agencies and community organisations.

For more information contact:

West's Coffee Palace  
110 Hindley Street  
GPO Box 2308  
Adelaide SA 5001  
AUSTRALIA  
Tel: +61 8 8463 5444  
Fax: +61 8 8463 5420  
or [artssa@saugov.sa.gov.au](mailto:artssa@saugov.sa.gov.au)

Further information on funding and applications can be found at [www.arts.sa.gov.au](http://www.arts.sa.gov.au)

The 2008 Support and Funding handbook and guidelines will be available in January 2008.

### 7.4.4 Blackspot Program

The Federal Government Blackspot program may be a source of funding for road safety improvement works on St Vincent Street and Commercial Road. The program primarily focuses on cost effective treatment of hazardous road locations and aims to provide financial assistance to improve the physical condition or management of locations and encourage implementation of safety related measures.

Funds under the program are available for works on public roads regardless of ownership or control (except national highways or roads of national importance). The program is administered on behalf of the Federal Government by the DOTARS and managed at a local level by Transport SA.

Criteria for eligibility is based on a proven history of casualty crashes over a given period. This could be at discrete locations (blackspots) or over lengths of road (black lengths).

### 7.4.5 LMC

The Land Management Corporation is a key stakeholder in the Port Centre and Port Waterfront developments and such has an interest in the improvement of the public realm and the economic revitalisation of the precinct. The LMC may be able to assist with the funding of certain project packages.

### 7.4.6 DTEI

St Vincent Street and Commercial Road are both currently DTEI owned roads. Opportunities may exist for cost sharing between the State Government department and Local Government.



## 7.5 cost estimate

An Order of Cost Estimate was prepared by Rider Levett Bucknall (RLB) based on the concept designs and assumptions made regarding technical requirements, the details of which will be need to be determined during future design development and documentation phases.

A summary of the Order of Cost Estimate is as follows. Note that precinct numbers here refer to precincts identified based on construction staging, rather than precinct numbers identified earlier in the report which were based on streetscape character. A diagram on the following page identifies the precincts in relation to RLB's estimate.

### Commercial Road

Commercial Road Precinct One	\$3,525,000
Commercial Road Precinct Two	\$3,100,000
Commercial Road Precinct Three	\$2,550,000

**Commercial Road Precinct Sub-Total**                      **\$9,175,000**

### St Vincent Street

St Vincent Street Precinct One	\$3,150,000
St Vincent Street Precinct Two	\$3,200,000
St Vincent Street Precinct Three	\$4,600,000
St Vincent Street Precinct Four	\$2,625,000

**St Vincent Street Precinct Sub-Total**                      **\$13,275,000**

**Streetscape Works Total (excl GST)**                      **\$22,450,000**

Other seperable costs identified, but not included within the above estimate include:

Public Art (PC Sums)	\$900,000
Power Line Environment Committee (PLEC)	\$2,400,000
ETSA Augmentation	\$1,060,000

### Excluded items

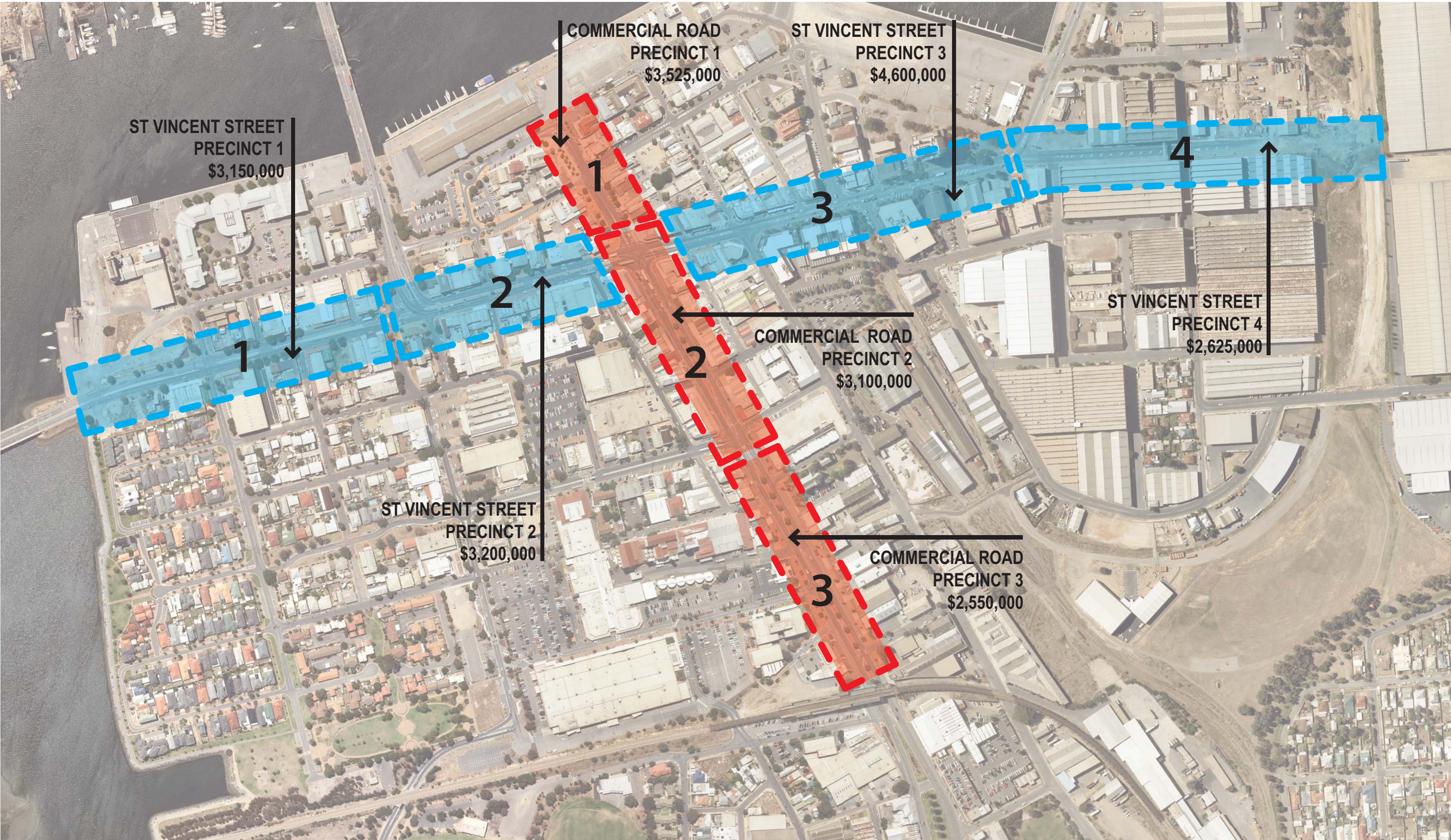
The Order of Cost Estimate specifically excludes the following items which may require consideration with regards to project feasibility.

- Professional fees and charges
- Authority fees and charges
- Removal of redundant railway tracks
- Contaminated ground removal or remediation
- Ground pollutant traps / stormwater treatment
- Major stormwater infrastructure upgrade
- Replacement / upgrade of existing underground services
- Work outside site boundaries
- Staging of works and temporary works associated with staging requirements
- Holding costs and interest charges
- Pre-project fees and community consultation costs
- Legal costs
- Contributions/incentives/compensation to existing Commercial Road and St Vincent Street traders/retailers
- Telstra conduits and associated works
- Escalation beyond mid 2008
- Goods and Services Taxation

A detailed Order of Cost Estimate Report has been provided to the City of Port Adelaide Enfield, which fully defines the proposed scope of works and associated costs.



7.5 cost estimate







Port Adelaide Enfield Council

Report for Port Adelaide Centre Revitalisation  
Commercial Road - St Vincent Street Traffic Analysis

October 2007

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Appendices

- A DTEI Surveyed 2003 / 05 Traffic Volumes (AM & PM Peak)
- B Adjusted 2005 AM & PM Peak Traffic Volumes
- C AADT Analysis (Existing and Proposed)



1. General

1.1 Introduction

This report outlines the traffic modelling undertaken (assumptions and analysis) for three signalised intersections within the Port Adelaide – Enfield City Centre including:

- Commercial Road and St Vincent Street;
- Commercial Road and Dale Street; and
- St Vincent Street and Nelson Street.

1.2 Traffic Volumes

The traffic volumes employed in the traffic modelling were obtained from DTEI's Traffic Information Unit. The traffic volumes for Commercial Road / St Vincent Street and St Vincent Street / Nelson Street intersections was for the year 2005. The traffic volumes for Commercial Road / Dale Street intersection was for the year 2003.

It is considered that 2005 traffic volumes would be a more accurate representation of traffic flows along Commercial Road and St Vincent Street on completion of the construction works associated with the Port River Expressway and Bridge works. The 2003 turn counts at Commercial Road / Dale Street intersection were adjusted based on the 2005 turn counts at the adjacent signalised intersection to the north and south (that is, Commercial / St Vincent Street and Commercial Road / Grand Junction Road respectively).

The surveyed AM and PM peak flows for the three intersections are presented in Appendix A, with the adjusted (2005) base AM and PM peak presented in Appendix B.

1.3 Modelling Assumptions

The assumptions employed in the SIDRA traffic modelling include the following:

- Employed a five (5) second extra start loss for left turn movements to account for delays associated with pedestrians.
- Employed a fixed cycle time of 120 seconds for all intersections modelled during both the morning and evening peak periods.
- The heavy vehicle percentages per turn movement have been based on DTEI survey traffic data (and as presented in Appendix B).
- The speed limit along Commercial Road, St Vincent Street and Nelson Street has been assumed to be 60 kph, where as the speed limit along Church Place, Commercial Road (adjacent to Black Diamond Square), Dale Street and Godfrey Street has been assumed to be 50 kph.
- The phase arrangement for each intersection has been optimised based on the proposed intersection configuration and that detailed in Traffic Signal Plans TS148 (St Vincent Street / Nelson Street), TS311 (Commercial Road / Dale Street) and TS06 (Commercial Road / St Vincent Street).
- St Vincent Street / Nelson Street intersection has been modelled as a single intersection in SIDRA.

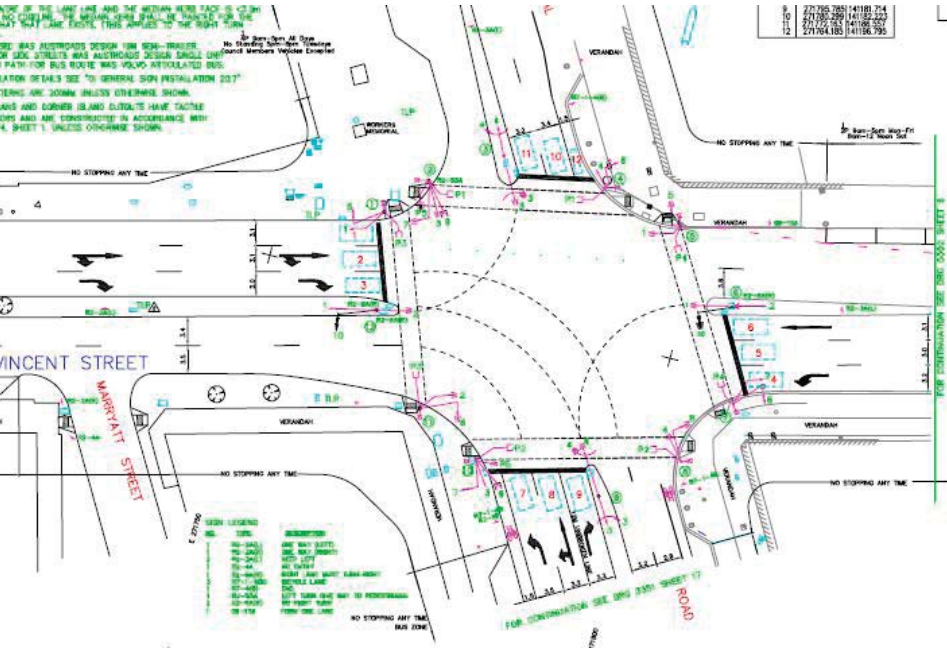




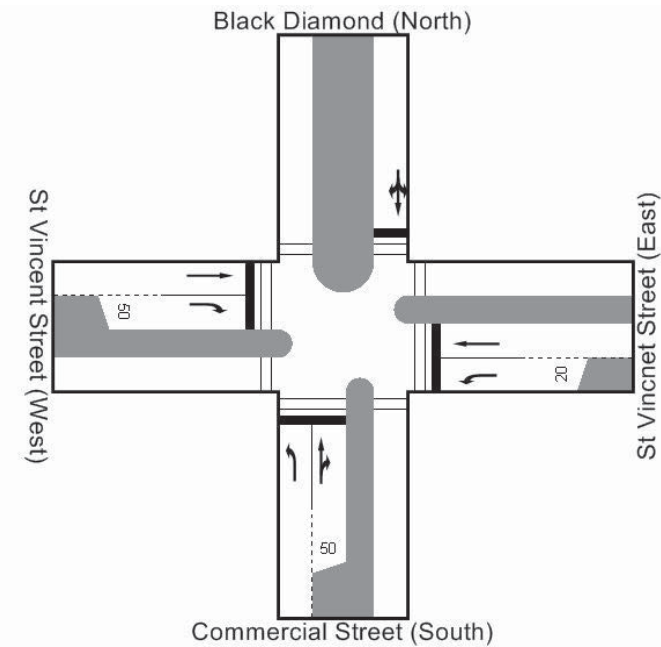
2. Traffic Analysis (SIDRA)

2.1 Commercial Road / St Vincent Street

2.1.1 Existing Configuration

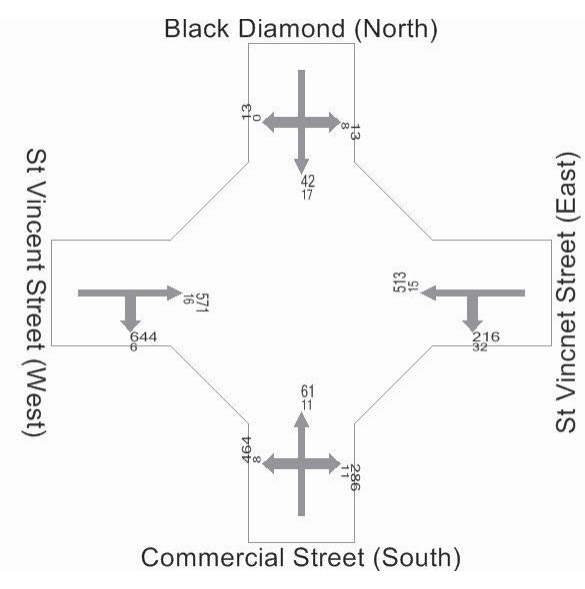


2.1.2 Proposed Configuration

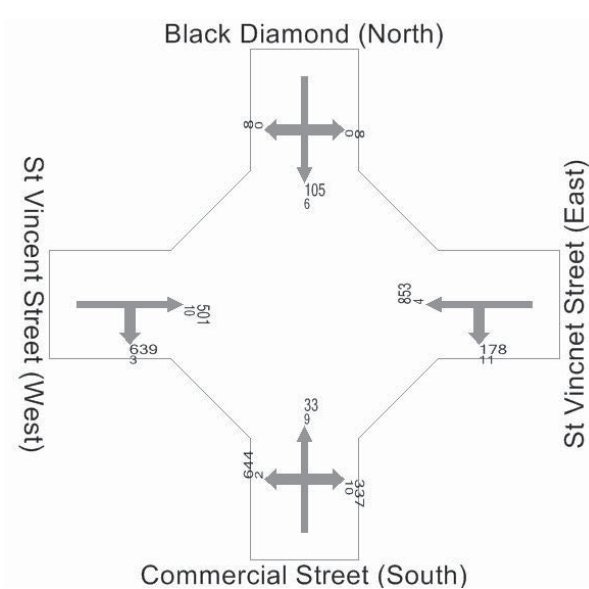


2.1.3 Traffic Volumes

AM Peak



PM Peak



2.1.4 Phase Arrangement

Phase A	Phase B	Phase C	Phase D

Note: As a result of the low traffic volumes exiting the northern approach (Black Diamond Square) the turn movements from this approach have been set up as actuated signals in SIDRA.





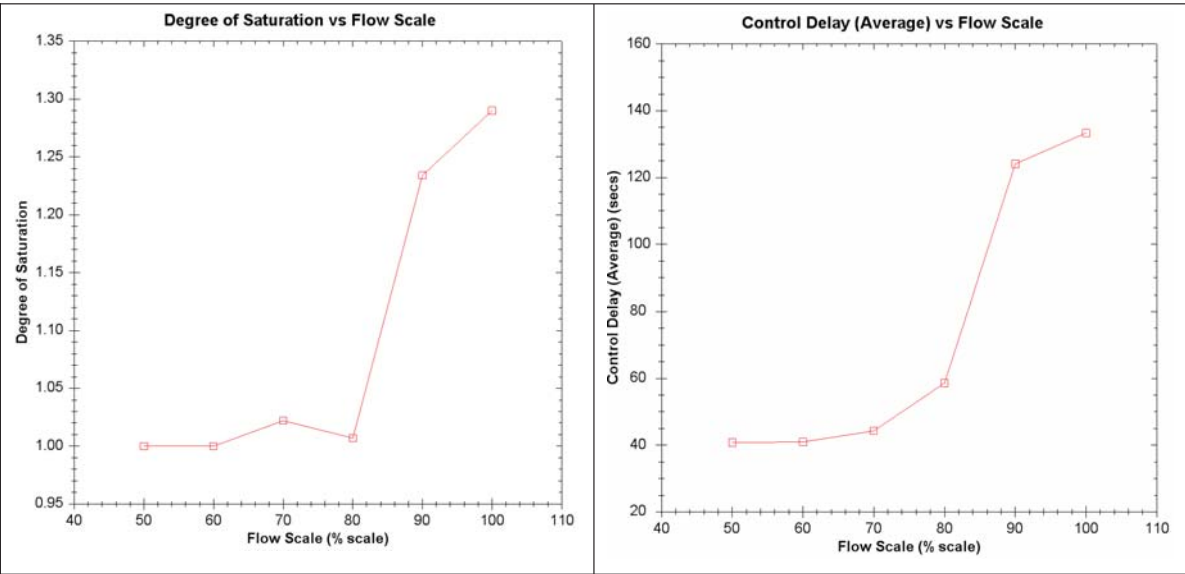
2.1.5 Intersection Performance Results

Table 1 Commercial Road / St Vincent Street AM Peak (CT = 120 seconds)

Flow Scale %	Demand Flow (veh / h)	Degree of Saturation	Average Vehicle Delay	Level of Service	95% Back of Queue	
100%	2973	1.290	137.1	F	1160	St Vincent Street West
90%	2673	1.234	127.3	F	945	St Vincent Street West
80%	2377	1.007	58.8	E	505	St Vincent Street West
70%	2080	1.022	43.8	D	259	St Vincent Street East
60%	1784	1.000	40.3	C	207	St Vincent Street East

Source: SIDRA Intersection 3.1

Figure 1 Commercial Road / St Vincent Street AM Peak (Flow Scale Analysis)



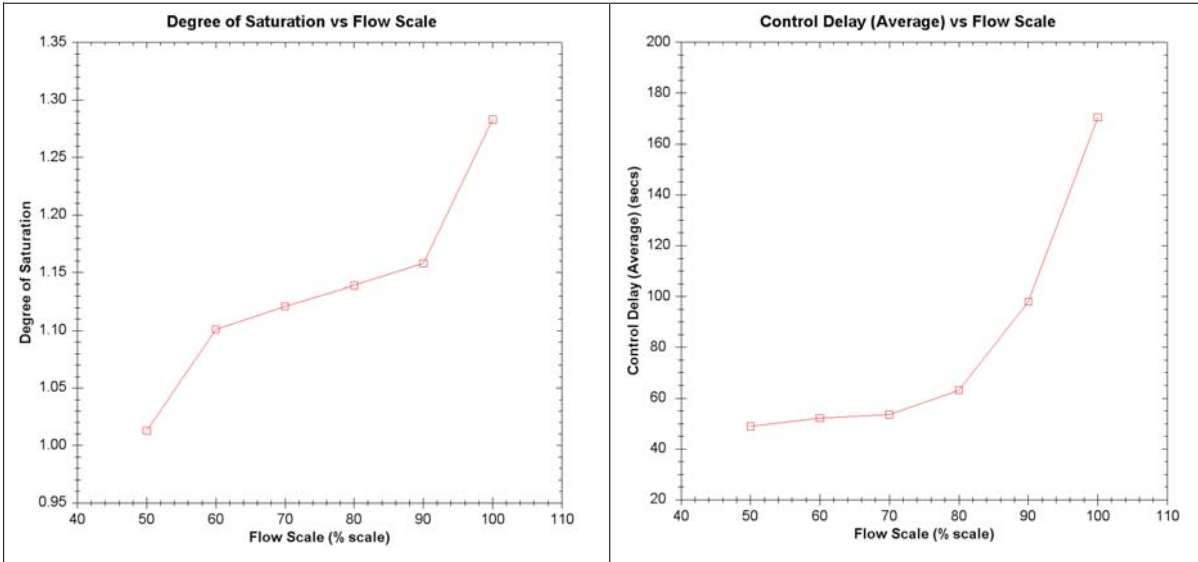
Source: SIDRA Intersection 3.1

Table 2 Commercial Road / St Vincent Street PM Peak (CT = 120 seconds)

Flow Scale %	Demand Flow (veh / h)	Degree of Saturation	Average Vehicle Delay	Level of Service	95% Back of Queue	
100%	3480	1.283	175.2	F	984	Commercial Street South
90%	3132	1.158	99.7	F	649	St Vincent Street East
80%	2783	1.139	63.5	E	536	St Vincent Street East
70%	2435	1.121	53.5	D	419	St Vincent Street East
60%	2088	1.101	52.1	D	347	St Vincent Street East

Source: SIDRA Intersection 3.1

Figure 2 Commercial Road / St Vincent Street PM Peak (Flow Scale Analysis)



Source: SIDRA Intersection 3.1

2.1.6 Summary of AADT versus Flow Scale versus Intersection Performance

The results in Table 1 and Table 2 highlights that to achieve satisfactory intersection performance for Commercial Road / St Vincent Street intersection during the morning and evening peak periods based on 120 second cycle time, peak period turn movements obtained from DTEI traffic surveys for the year 2005 (pre construction works) and the proposed future intersection configuration a 30% reduction in traffic volumes is required.

A summary of the peak period traffic volume reductions for the overall intersection (as a percentage) and the adjusted AADT along Commercial Road and St Vincent Street is shown in Figure 3.



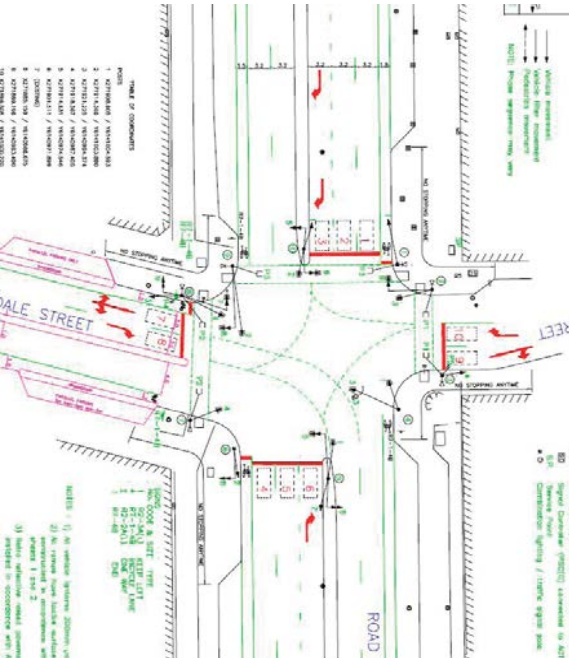


Figure 3 Summary of AADT versus Flow Scale versus Intersection Performance

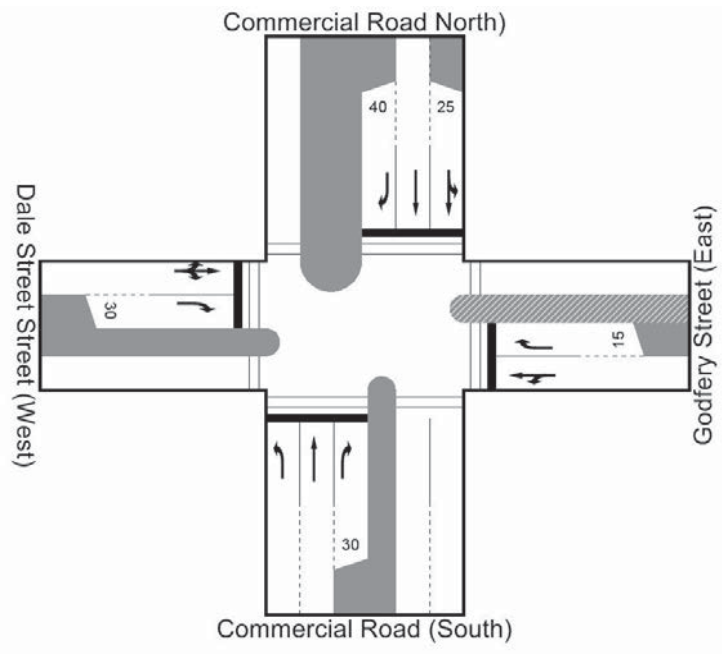
	AADT				
	100%	90%	80%	70%	60%
St Vincent Street West	26000	23400	20800	18200	15600
AM Peak	2205	2205	1985	1764	1544
PM Peak	2651	2651	2386	2121	1856
St Vincent Street East	18700	16830	14960	13090	11220
AM Peak	1589	1589	1430	1271	1112
PM Peak	1877	1877	1689	1502	1314
Commercial Road North	2400	2160	1920	1680	1440
AM Peak	139	139	125	111	97
PM Peak	160	160	144	128	112
Commercial Road South	21200	19080	16960	14840	12720
AM Peak	1713	1713	1542	1370	1199
PM Peak	1936	1936	1742	1549	1355
Intersection Performance					
AM Peak	DoS	1.29	1.234	1.007	1.022
	AvD	137	127	59	44
	LOS	F	F	E	D
PM Peak	DoS	1.283	1.158	1.139	1.121
	AvD	175	100	64	54
	LOS	F	F	E	D

2.2 Commercial Road / Dale Street Intersection

2.2.1 Existing Configuration

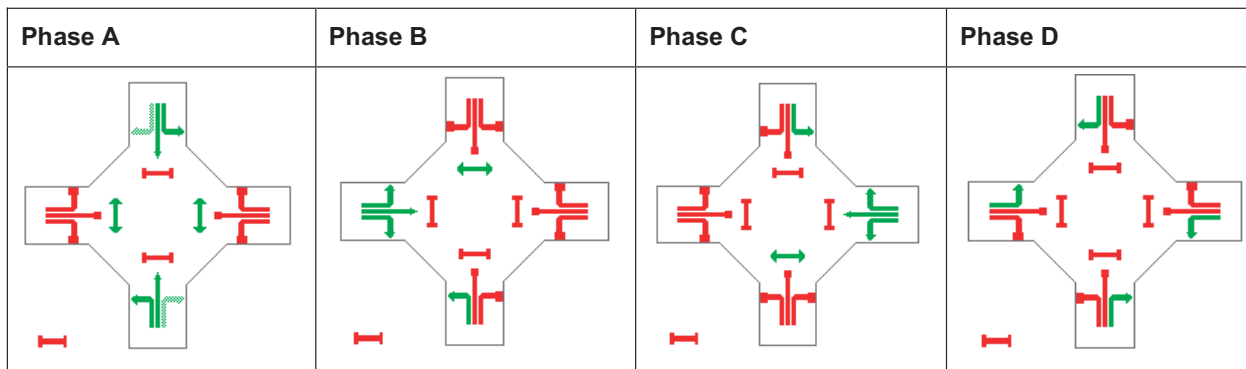


2.2.2 Proposed Configuration





**AM Peak**



**Table 3      Commercial Road / Dale Street AM Peak (CT = 120 seconds)**

Flow Scale %	Demand Flow (veh / h)	Degree of Saturation	Average Vehicle Delay	Level of Service	95% Back of Queue	
100%	2300	0.832	21.3	B	256	Commercial Road South

33/13822/33752

Flow Scale %	Demand Flow (veh / h)	Degree of Saturation	Average Vehicle Delay	Level of Service	95% Back of Queue	
100%	2565	0.880	24.0	B	312	Commercial Road South

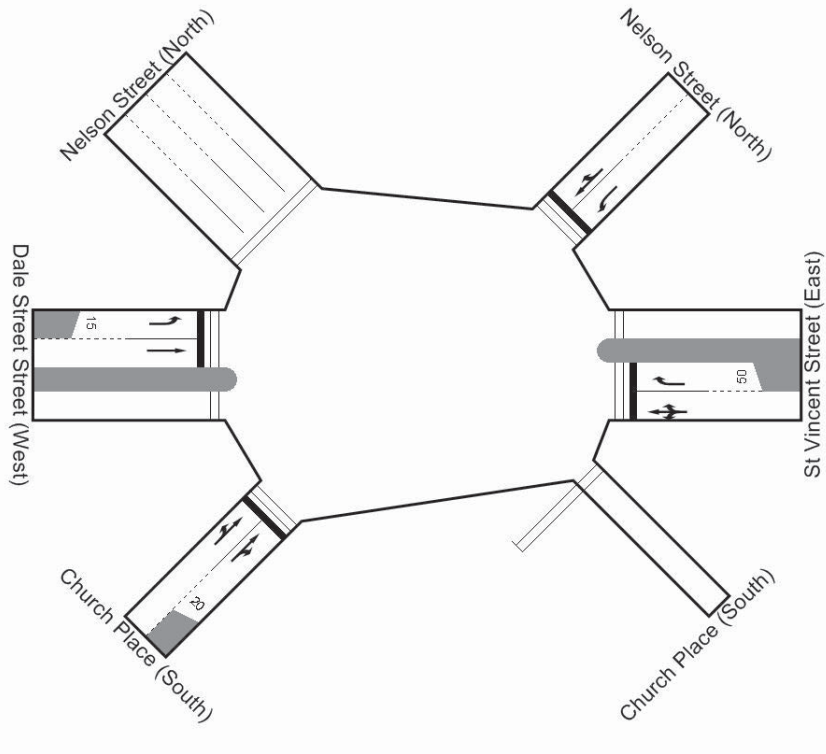
### 2.3 St Vincent Street / Nelson Street

[illegible]



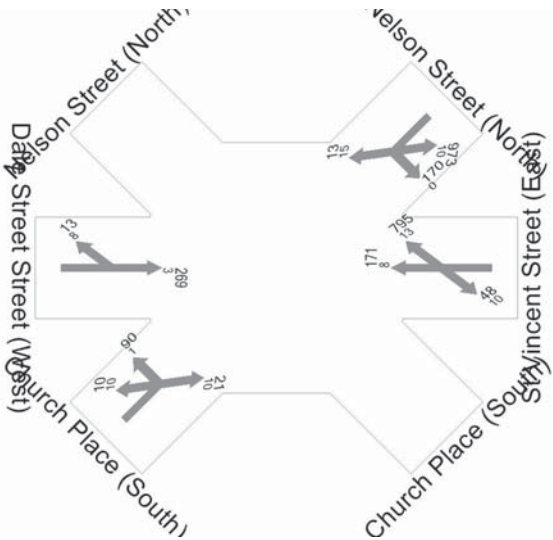


2.3.2 Proposed Configuration

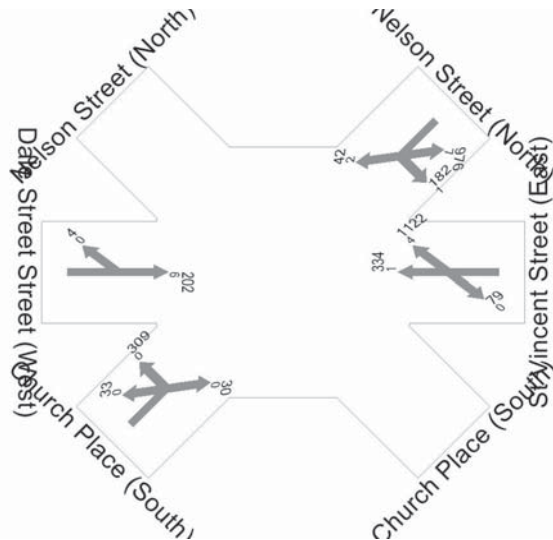


2.3.3 Traffic Volumes

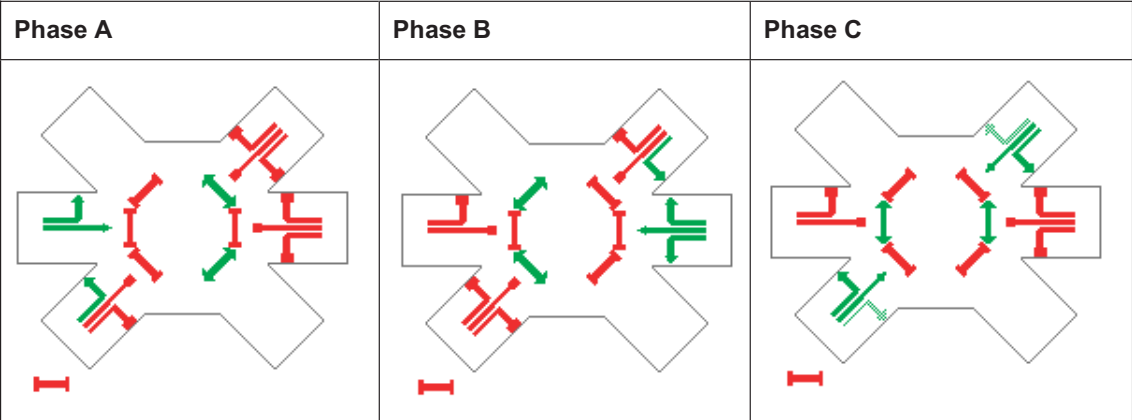
AM Peak



PM Peak



2.3.4 Phase Arrangement



Note: As a result of the long distance for a vehicle to cross the intersection east-west an eight second inter-green has been employed for Phase A and B.

Table 5 St Vincent Street / Nelson Street AM Peak (CT = 120 seconds)

Flow Scale %	Demand Flow (veh / h)	Degree of Saturation	Average Vehicle Delay	Level of Service	95% Back of Queue
100%	2708	0.857	36.2	C	166 Nelson Street North

Source: SIDRA Intersection 3.1

Table 6 St Vincent Street / Nelson Street PM Peak (CT = 120 seconds)

Flow Scale %	Demand Flow (veh / h)	Degree of Saturation	Average Vehicle Delay	Level of Service	95% Back of Queue
100%	3488	0.942	53.9	D	380 St Vincent Street East

Source: SIDRA Intersection 3.1





3. Conclusion

The traffic modelling has highlighted that the proposed design for Commercial Street / St Vincent Street intersection will act as a bottleneck based on a 100% flow scale. The intersection performance is shown to operate at capacity (LOS F) with high average vehicle delays and queues during both the morning and evening peaks. Table 1 and Table 2 highlights that the intersection would operate at a satisfactorily level of service D at a reduced flow scale of 70% during the morning and evening peak periods. The degree of saturation exceeds capacity (that is, > 1.0) for all flow scale scenarios modelled as a result of the high left / right turn volumes and short turn bay lengths.

Commercial Street / Dale Street and St Vincent Street / Nelson Street intersections are shown to operate at a satisfactory level of service during the morning and evening peak periods at 100% flow scale, with the highest level of service being LOS D and degree of saturation of 0.942.

Figure 3 and Appendix C provides a summary of the AADT's based on the reduced flow scales and associated intersection performance.

Appendix A  
DTEI Surveyed 2003 / 05 Traffic Volumes  
(AM & PM Peak)



Appendix A  
AM Peak (7.45 - 8.45 AM)

- 7 December 2005
- 24 Novemeber 2005
- 15 September 2003





ST. VINCENT STREET + COMMERCIAL ROAD port adelaide, south australia

Appendix A  
PM Peak (16.30 - 17.30 PM)

- 7 December 2005
- 24 Novemeber 2005
- 15 September 2003







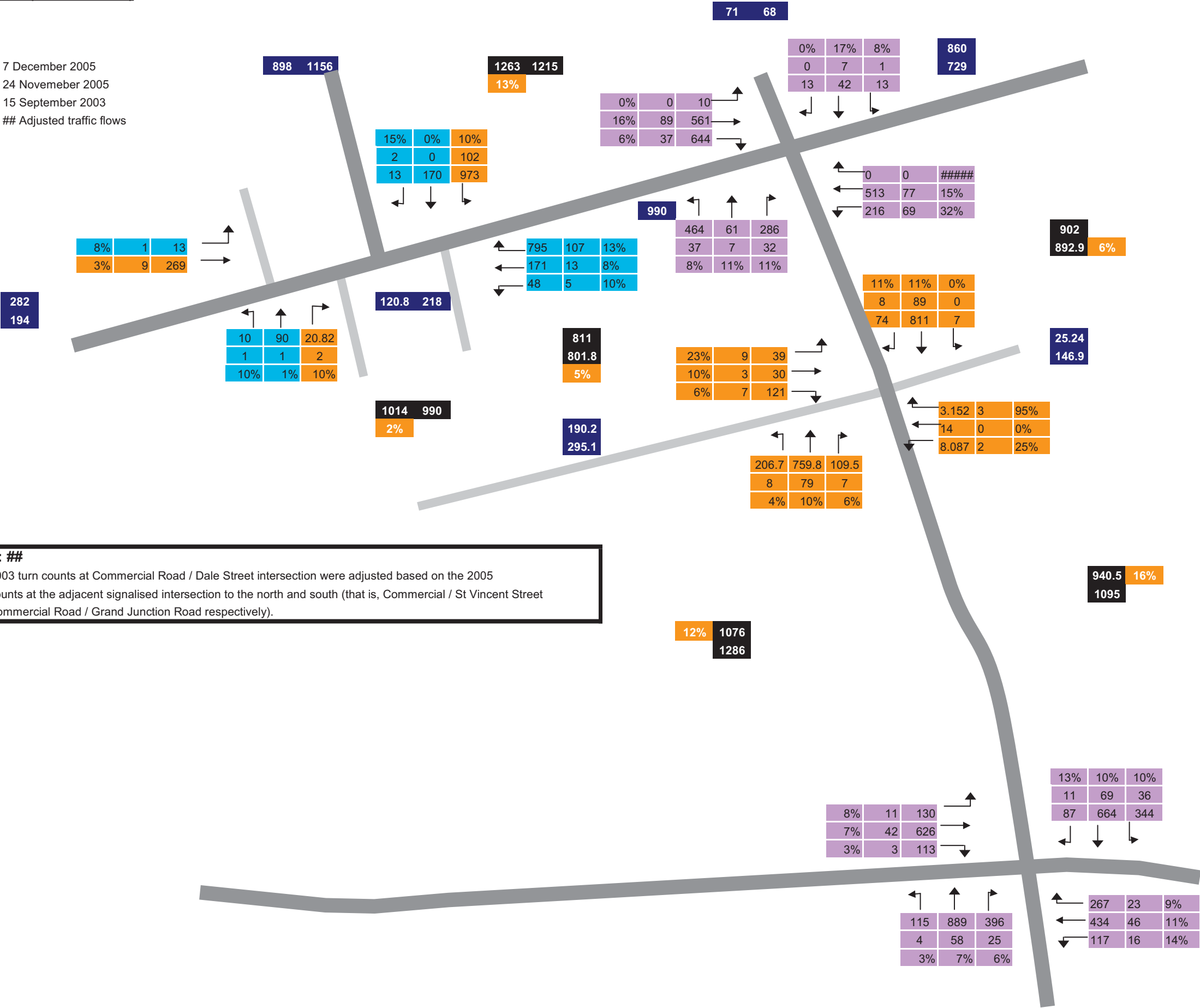
Appendix B  
Adjusted 2005 AM & PM Peak Traffic  
Volumes



ST. VINCENT STREET + COMMERCIAL ROAD port adelaide, south australia

Appendix B  
AM Peak (7.45 - 8.45 AM)

- 7 December 2005
- 24 Novemeber 2005
- 15 September 2003
- ## Adjusted traffic flows



**Note: ##**  
The 2003 turn counts at Commercial Road / Dale Street intersection were adjusted based on the 2005 turn counts at the adjacent signalised intersection to the north and south (that is, Commercial / St Vincent Street and Commercial Road / Grand Junction Road respectively).

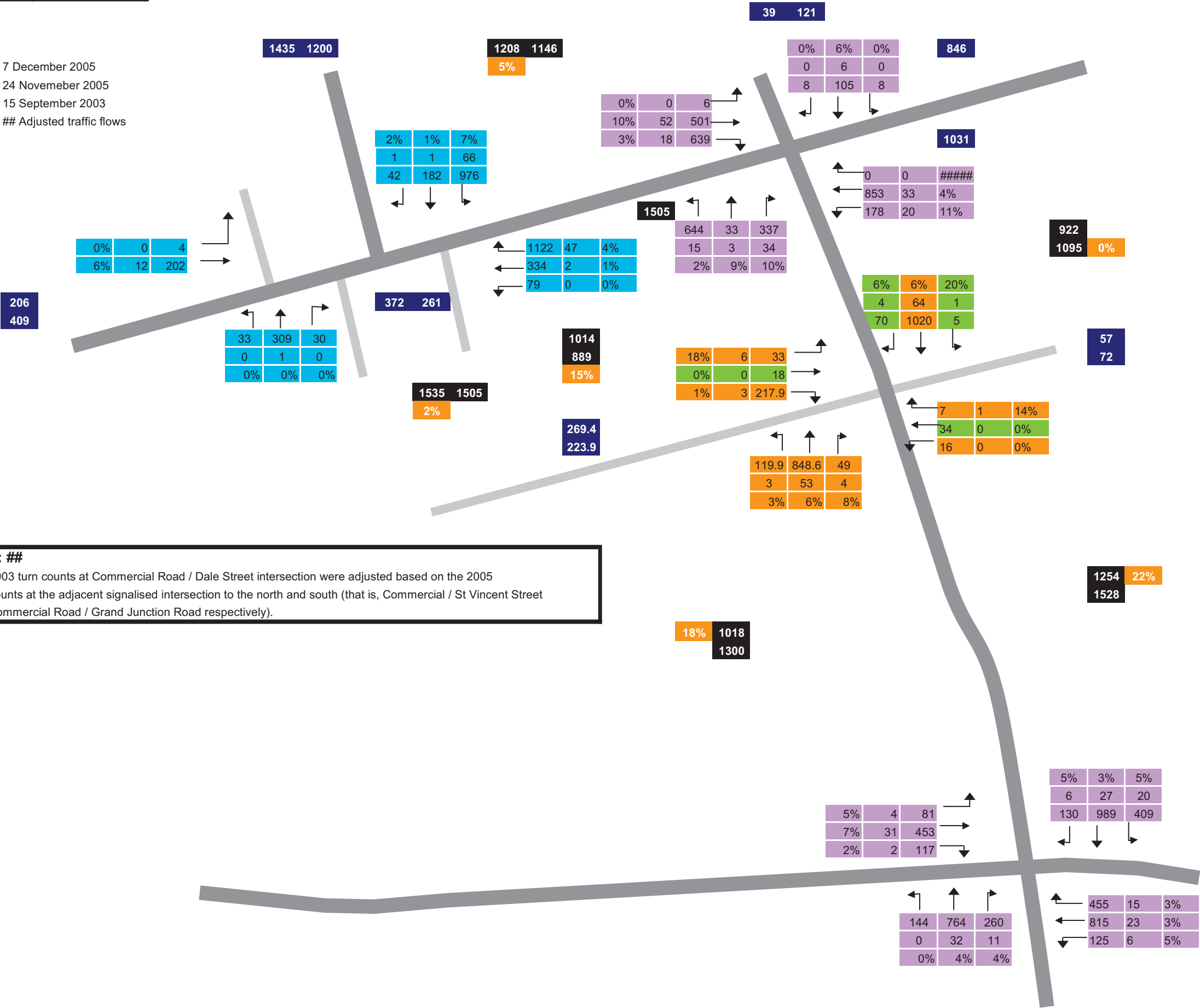


ST. VINCENT STREET + COMMERCIAL ROAD port adelaide, south australia

Appendix B

PM Peak (16.30 - 17.30 PM)

- 7 December 2005
- 24 Novemeber 2005
- 15 September 2003
- ## Adjusted traffic flows





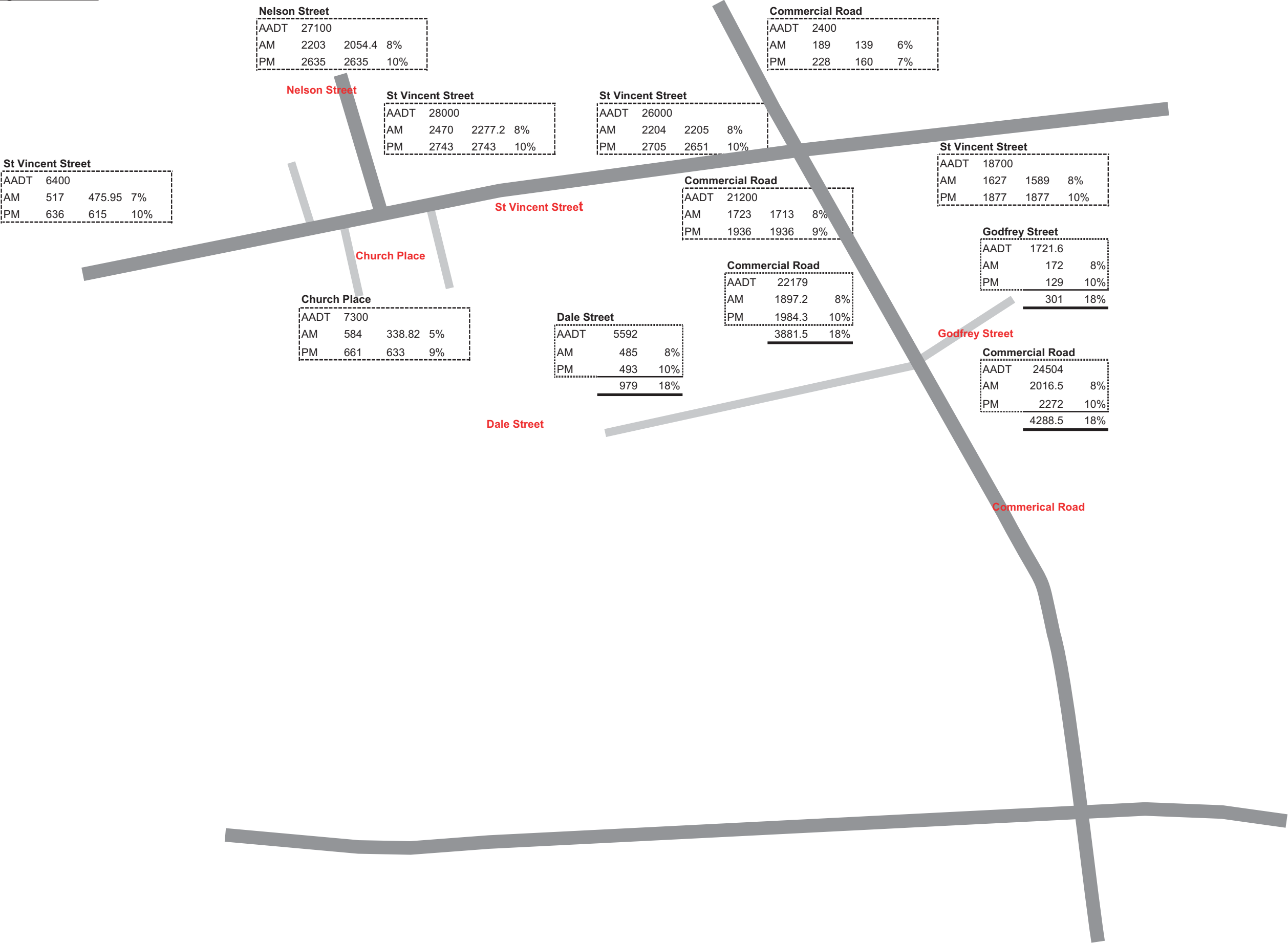


Appendix C  
AADT Analysis (Existing and Proposed)



ST. VINCENT STREET + COMMERCIAL ROAD port adelaide, south australia

Appendix C  
Existing 2005 AADT's





ST. VINCENT STREET + COMMERCIAL ROAD port adelaide, south australia

Appendix C

Revised AADT Based on SIDRA Results

Reduction in Flows at Commercial Road / St Vincent Street of 70% during the AM peak and 70% during the PM peak







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