Western Australian Planning Commission

Department of Planning

GOVERNMENT OF WESTERN AUSTRALIA

City of Melville

City of South Perth

Canning Bridge Precinct Vision

June 2011

Minister's foreword

The Canning Bridge Precinct Vision presents a planning concept for the future.

The document considers the most appropriate way to utilise the land close to the Canning Bridge public transport infrastructure and the existing commercial centre located to the west of the river.

Canning Bridge has been identified as well placed to develop into an important strategic centre because of its accessibility and close proximity to the Perth central business district.

The State Government is committed to the creation of transit oriented developments that encourage sustainable, cohesive and connected communities.

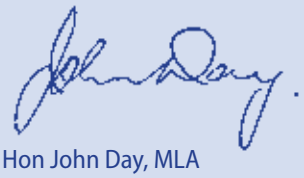
It is envisaged that the Canning Bridge precinct will become a diverse community hub with a mix of office, retail, residential and recreational uses.

The Vision presents a number of opportunities for the Canning Bridge area including additional employment and diverse housing options.

The document gives a valuable insight into the opportunities associated with the Canning Bridge precinct and addresses the challenges that need careful management in order to improve the quality of our city for generations to come.

The Canning Bridge Precinct Vision will guide further technical studies on matters such as traffic management, environmental considerations and the built form, all of which will inform structure planning for the precinct.

I encourage the community and key stakeholders to continue to be involved in the evolution of the Canning Bridge Precinct.



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The Canning Bridge Precinct Vision was prepared by GHD under the direction of the Canning Bridge Precinct Vision Project Management Group.

Chairman's foreword

The Canning Bridge Precinct Vision considers the opportunities associated with the future development of this important strategic centre.

The Canning Bridge area has all the fundamentals of a sound transit orientated development, a good location, public infrastructure and the necessary public transport options.

Looking to the future, the Vision identifies the precinct's potential to accommodate high quality development with a rich mix of land uses.

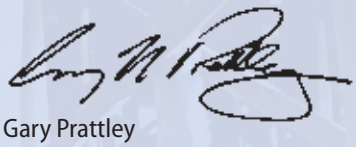
Across the State there is a strong focus on encouraging development that will activate areas and benefit to communities.

We want the public to be able to access these future developments. Appropriate planning guidance will encourage the provision of viewing decks, roof top gardens and restaurants.

It is also expected that the lower levels of developments will become well designed and active street frontages, ideal locations for coffee shops or retail boutiques.

The Canning Bridge Precinct Vision provides clarity to the future needs of the area and will be an important basis for moving forward.

The planning of the precinct will continue with both State and local government forming a working group to coordinate the progressive implementation of the Vision.



Gary Prattley
Chairman
Western Australian Planning Commission

Contents

Summary

In August 2010 the West Australian Planning Commission (WAPC) released *Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon* to guide development within the Perth Metropolitan Region and to manage the significant population projections for Perth in the next 21 year period.

This policy document, based on the identified six key themes of a liveable, prosperous, equitable, accessible, green and responsible city, was developed with significant community and stakeholder input.

Also released in 2010 was the WAPC's *State Planning Policy: Activity Centres for Perth and Peel (SPP)*. This SPP emerged from the previous *Network City: Community Planning Strategy for Perth and Peel* (Network City) released in September 2004.

In 2007 the commencement of the Southern Suburbs railway passenger service from Perth to Mandurah included a new bus/rail interchange at Canning Bridge. This station has now emerged as a significant node in the public transport network servicing the highest frequency bus routes in the metropolitan region and high frequency train services to and from the Perth CBD.

With its high level of public transport service Canning Bridge is identified in the SPP as a district town centre/ activity centre where community services, higher density housing, employment and a range of mixed use activities are encouraged to accommodate some of Perth's expected growth in the years to 2031 and beyond.

This planning analysis of the Canning Bridge precinct broadly represents land within an 800m walk of the rail station and includes the existing centre on the west side of the river. The analysis was commissioned jointly by the City of Melville (CoM), City of South Perth (CoSP) and the WAPC as a response to the provision of the Perth-Mandurah rail line and the new station at Canning Bridge.

The key focus of this project is to prepare a precinct vision and implementation strategy for the Canning Bridge area to facilitate the development of transit oriented development that will take advantage of its strategic location and prime regional access characteristics. The vision provides a non-statutory planning framework for the future development of the area as a major activity centre with significant opportunity for additional employment.

A number of key issues identified by stakeholders at both a local and State level have been considered in the preparation of this precinct vision, including traffic concerns, built form, open space, parking, safety and accessibility to the station.

Background reports

Supporting reports have been produced which are to be read in conjunction with this precinct vision report. The supporting reports include;

- a strategic and statutory framework analysis;
- consultation reports undertaken as part of the study;
- a precinct analysis;
- an economic analysis;
- an urban growth analysis;
- a movement network analysis; and
- a report on submissions.

The background reports are available at www.planning.wa.gov.au

Canning Bridge precinct vision statement

The Canning Bridge precinct will evolve to become a unique, vibrant, creative community centred on the integrated transport node of the Canning Bridge rail station. The precinct will be recognised by its unique location, its integrated mix of office, retail, residential, recreational and cultural uses that create areas of excitement, the promotion of its local heritage and as a pedestrian friendly enclave that integrates with the regional transport networks while enhancing the natural attractions of the Swan and Canning rivers.

Precinct vision

The key elements of the precinct vision and proposed land uses are shown in figures 1 and 2. The concepts depicted in the vision have been developed through extensive stakeholder consultation and are non-binding at this stage.

The key elements of the vision include:

- substantial redevelopment opportunities with an increase in residential densities and building heights subject to performance based streetscape and built form design guidelines;
- promotion of sustainable building types and uses which support the community;
- creation of a town square and central community hub in Applecross;
- opportunities for new commercial development adjacent to the freeway in Como in the longer term, including limited development on the foreshore;
- enhancement of streetscapes and foreshore reserves, including increasing the size of the foreshore recreation areas;
- improvement in pedestrian , cyclist and kiss'n'ride connections to a new bus/rail interchange and improvement in general pedestrian accessibility within each local government;
- allowance for a future ferry station integrated with the new bus/rail interchange;
- a new traffic connection resulting from the establishment of a third (replacement) structure over the river;
- a relocated/improved bus station in the short term, improved kiss'n'ride access and new bus routes from both sides of the river in the long term utilising a local connection through Como; and
- identification of opportunities for improved traffic movement associated with the Canning Highway/ Kwinana Freeway interchange.

The final design of the Canning Highway/Kwinana Freeway interchange will be subject to further detailed transport and economic studies.

A detailed analysis of the concepts depicted in the precinct vision can be found in section 3.

The following key actions are recommended to be implemented within the timeframes suggested below in order to improve the function and amenity of the precinct in a coordinated manner.

The timeframes proposed are critical (immediate), short term (1-5 years), medium term (6-10 years) and long term (10+ years).

A3 Map

Figure 1

A3 Map

Figure 2

Critical initiatives

- Develop a memorandum of understanding (MOU) between the City of Melville and the City of South Perth establishing their commitment to the vision for the Canning Bridge area.
- Seek the establishment of a dedicated steering body with State and local government representation to oversee development and implementation of the vision.
- Establish community/stakeholder liaison groups to enable ongoing engagement with the community
- Initiate the preparation of an economic development strategy for the precinct to inform town planning scheme and local planning strategy amendments.
- Develop landscape design guidelines, streetscape design guidelines and built form design guidelines (including performance based zoning guidelines) – as part of an activity centre structure plan.
- Undertake a detailed transport planning and design study to assess the feasibility of the proposed Canning Highway/Kwinana Freeway and bus/rail interchange concept and consider design solutions for the integration of the concept at Kintail Road and connections through Como (including recommendations for timing and staging of infrastructure development).
- Identify and seek funding to achieve the transport improvements required – prepare a business case for consideration by the Department of Treasury and Finance.
- Undertake a detailed parking and access strategy.
- Improve pedestrian and cyclist access to the existing Canning Bridge rail station as an interim priority measure; may include improved pedestrian phases at traffic lights, new pedestrian overpasses etc.

Short term initiatives

- Establish a bilateral development assessment unit (DAU) with CoM and CoSP, supported by changes to statutory planning controls, which will be responsible for assessing significant developments within the study area.
- Improvements to local roads subject to the transport planning study including alternative pavement treatments.
- Upgrade Canning Highway with priority bus lanes.
- Develop/construct proposed new bus and rail station interchange.
- Establish formal kiss'n'ride areas as per the vision plan and in line with the transport study outcomes.
- Design and construct the Manning Road to southbound Freeway on-ramp.
- Town planning scheme amendments to support first stage land use and zoning changes.
- Undertake a detailed design study and development concept for the foreshore reserve between the freeway and river.
- Develop incentives for new buildings to meet sustainable building objectives through built form design guidelines.
- Investigate underground power and improved communications infrastructure options.
- Investigate water and sewer upgrade requirements.
- Investigate and develop a community hub in the Applecross/Mt Pleasant area.
- Develop a strategy to implement entry statements, public art, playgrounds, exercise features, public toilets, water fountains, seats etc throughout the precinct.

Medium term initiatives

- Establish statutory mechanisms for developer's contributions for infrastructure upgrades for all new development.
- Improvements to the river foreshore (both sides) including wetland enhancement and improved public facilities.
- Construct a third bridge (new Canning Highway) over the Canning River immediately to the south of existing bridges to support long term replacement of existing ageing infrastructure. Divert westbound traffic movements to new bridge.
- Repair or replace existing southern Canning Bridge for long term traffic use. Divert eastbound traffic movements to existing/repaired/replaced southern bridge.
- Repair/upgrade existing northern Canning Bridge for local and through bus, kiss'n'ride and pedestrian traffic movements.
- (Ongoing) Develop entry statements, public art, playgrounds, exercise features, toilets, water fountains, seats etc throughout the precinct.
- Establish new roads within the precinct as development occurs in line with the vision.
- Investigate the opportunity for a ferry service connection.
- Development of public land with demonstration projects such as community buildings etc.

Long term initiatives

- Full upgrade of Canning Highway/Kwinana Freeway interchange including consideration of an improved Manning Road off-ramp/Canning Highway on-ramp weave.
- Construct ferry terminal based on previous studies.
- Maintain/upgrade/replace existing northern timber bridge for ongoing local traffic movements.

Implementation framework

The time frames in this document are indicative and recommended from a planning viewpoint. The funding of any regional infrastructure priorities will be a decision of the State Government.

It is important that the implementation framework recommended by this study be supported at the local and State Government level by service providers and the community to ensure the successful achievement of this vision occurs progressively over time. The redevelopment of established urban areas presents many challenges, and influencing change in the urban fabric is affected by development controls, land tenure, adequate service provision, community acceptance and funding issues.

Consequently, the successful implementation of the Canning Bridge precinct vision will rely on a close political and technical relationship between the two local governments and the State Government. A staged approach will be required with a focus on providing achievable and effective solutions in the short term, and the provision of higher cost infrastructure solutions in the medium to long term. A summary of the implementation framework can be found in Table 1.

1. Introduction

This study has been undertaken within the frameworks of the WAPC's *Directions 2031 and Beyond:* Metropolitan Planning Beyond the Horizon (Directions 2031), the *State Planning Policy: Activity Centres for Perth and Peel* and the previous policy document *Network City: Community Planning Strategy for Perth and Peel* (Network City).

Directions 2031 is proposed to guide development and to manage the significant population projections for Perth metropolitan region in the next 21-year period, and is based around the six key themes of developing a liveable, prosperous, equitable, accessible, green and responsible city.

1.1 Study area

The study area is broadly defined by an 800 metre radius centred on the Canning Bridge train station, which represents development within a short (approximately 10 minute) walk to the station.

Immediately across the river from the Canning Bridge rail station to the west is the Canning Bridge commercial hub in Mt Pleasant/Applecross, comprising offices, retail, restaurants/cafés, and several recreational uses. The area is generally well developed, with several medium to high rise developments, including the Raffles Hotel redevelopment, and a significant number of established private homes.

To the east of the train station are the suburbs of Manning and Como, which are generally established private residential areas with generally low density housing.

Figure 3 shows the general boundaries for the Canning Bridge precinct in its regional location, while Figure 4 shows the area in more detail. The boundary is arbitrarily based, and as such the scope of this study has not entirely excluded consideration of relevant issues outside of the study boundary.

This study comprised of the following key components.

- Engagement with key stakeholders to identify issues, opportunities and constraints within the study area.
- An economic study of the precinct to determine how it operates, to assist in identifying an appropriate land use mix for the precinct.

Figure 3 – Location plan

- An investigation into improving accessibility within and around the precinct; and particularly access to the train station.
- Comprehensive community consultation by the Cities of Melville and South Perth.
- Development of concept plans to facilitate an improvement to the function and amenity of the precinct.
- Identification of recommended capital improvements and funding opportunities.
- Development of a planning framework and implementation guide to facilitate a staged approach to improving the function, accessibility and amenity of the precinct.

Figure 4 – Study area

1.2 Background

Urban rail is experiencing a revival on a worldwide basis. Experience from cities around the world suggest that the provision of modern and efficient suburban electric rail systems provides a positive incentive for development of land in close proximity to stations for a higher density of housing, commercial, office and other relevant urban land uses.

The Western Australian Government recognises that rail is a particularly beneficial form of public transport because it contributes minimal pollution and provides a fast, efficient and comfortable service for commuters. The Western Australian Government has recently finished construction of the Southern Suburbs rail line from Perth to Mandurah, which is now in full operation.

The new Canning Bridge rail station is located within the City of South Perth (CoSP), directly under the Canning Highway Bridge and within the Kwinana Freeway reserve. The location is highly valued as a bus/rail transfer point, being the nexus of the railway and major east-west bus routes. However, the site for the rail station is highly constrained in a relatively narrow portion of the Kwinana Freeway reserve, which limits opportunities for associated urban development in close proximity to the station and constrains pedestrian access to the station.

1.3 Transit oriented development principles

Transit oriented development (TOD) can be described as planning for *"moderate to higher density development, located within an easy walk of a major transit stop, generally with a mix of residential, employment, and shopping opportunities designed for pedestrians, without excluding motor vehicles, whose design and orientation facilitate transit use"*. (Technical Advisory Committee for the "Statewide TOD Study: Factors for Success in California").

The key elements of TOD are identified below.

- An integrated and good quality transit system, that combines multiple transport modes.
- Reduced dependency on cars within the TOD precinct.
- Moderate to high residential densities within walking and cycling distance to major transit stops.
- Mixed uses that include destinations and activities that need to be accessed on a regular basis (eg live, work, play, shop, civic).
- Maximise safety to generate a safe night time economy which can backload transit use.
- High transit trip generating land uses near major transit stops.
- Creation of a quality sense of place within the public domain.
- Active street frontages that promote vibrancy and safety with a legible street pattern and robust buildings that may facilitate changing land uses over time.

This study will consider ways in which the above principles of TOD can be delivered effectively and in a timely manner to the Canning Bridge precinct.

2. Precinct vision

The concepts depicted in the precinct vision have been developed through extensive stakeholder and community consultation. The main concepts of the vision include:

- substantial redevelopment opportunities with an increase in residential densities and building heights subject to performance based, streetscape and built form guidelines;
- a new bus station integrated with the train station,
- promotion of sustainable building types and uses;
- creation of a town square and central community hub in Applecross;
- opportunities for new commercial development adjacent to the freeway in Como, including limited development on the foreshore;
- enhancement of streetscapes and foreshore reserves, including increasing the size of the foreshore recreation areas;
- improvement in pedestrian and kiss'n'ride connections to the bus/rail interchange and improved pedestrian accessibility within each local government;
- allowance for a future ferry station integrated with the bus/rail interchange;
- a new traffic connection resulting from the establishment of a third (replacement) structure over the river which supports the redeveloped bus station and kiss'n'ride access from both sides of the river and utilising a connection through local roads in Como; and
- identification of opportunities for improved traffic movement associated with the Canning Highway/ Kwinana Freeway interchange.

The final concept for the design of the Canning Highway/ Kwinana Freeway interchange will be subject to substantial transport planning studies in the immediate short term.

The precinct vision allows for substantial additional floor space development for both commercial and residential uses which will support a mix of uses and increased employment.

Key elements of the precinct vision are shown in Figure 1 and Figure 2.

2.1 Detailed features

2.1.1 Infrastructure requirements

The long term precinct vision includes a new traffic bridge over the freeway to the north of the Canning Highway/freeway interchange for all bus traffic and the bus/rail interchange (the bus bridge). This bridge would provide for bus, taxi, pedestrian and cyclist through traffic only, but the connection into the bus bridge would allow for local kiss'n'ride traffic or short term visitors to the foreshore from the west. The bus bridge is proposed to connect into local roads in the CoSP and at the Canning Beach Road/Canning Highway intersection in the CoM.

The bridge is to be introduced in a staged manner with the first stage including a bus station development on the western side of the existing freeway/highway interchange to support the immediate needs of bus and rail infrastructure providers. The second stage includes development of a connection into the CoSP to occur at such time as demand exceeds the capacity of the existing road network.

The vision includes a priority bus lane along the Canning Highway within the CoM heading east and the CoSP heading both east and west.

The new bus bridge and station interchange will provide for much better pedestrian and cyclist links to the rail and bus station when designed appropriately.

The vision also includes a proposed Manning Road southbound on-ramp, which has been the subject of much community support over recent years.

The vision shows local roads that may be improved within the precinct, with an improved intersection at Kintail Road and Canning Beach Road and possible roundabouts on Kishorn Road, Davilak Street and Cassey Street.

The vision proposes signalised intersections at Canning Highway/Canning Beach Road and at Canning Highway/Cassey Street intersections – subject to a more detailed traffic study and design.

The vision indicates possible new roads in the precinct which support improved accessibility and legibility, such as the road shown between Kintail Road and Canning Highway at the approximate location of the existing IGA supermarket.

Several roads have also been identified as having alternative road pavement treatments to slow down traffic speeds and signify the pedestrian nature of these areas as well as having some areas as 'kerbless' to encourage pedestrian priority over traffic.

Additional local roads have also been shown to reduce the size of existing street blocks between Kintail Road and the Canning Highway, Sleat Road and Kishorn Road and some laneways between Ogilvie Road and Kishorn Road and Kishorn Road and the Esplanade. This can only occur subject to agreement with landowners in these areas through integrated development plans.

2. Precinct vision

The vision also indicates upgrade requirements to Canning Bridge to replace the existing infrastructure comprising a new bridge to the south of the existing bridges, potential to either upgrade or replace the current southern bridge and the reuse/upgrading of the existing northern bridge to connect into the proposed bus station and bus bridge in the long term.

The foreshore reserve between the freeway and river is shown in the vision as having some development along the river's edge, a potential future ferry or boat dock, improved facilities and strong links to the bus/rail area. The links can be established by developing terraces or built form levels below the level of the bus station or landscaping and fill such that the level is eventually equal to the bus station level. Future land use and development in this area will need to be subject to further detailed planning and environmental assessment.

An extended foreshore in the Applecross/Mt Pleasant area is shown near the existing rowing clubs, which would allow for the development of some additional community facilities and created wetlands, as well as providing more open space area for the community to enjoy recreational pursuits. Likewise, foreshore enhancement on the eastern side of the river is illustrated and proposed in the vision. Enhancement of this foreshore area will be subject to detailed discussions with the Swan River Trust and further detailed design.

An investigation into the upgrade of the Manning Road off-ramp Canning Highway on-ramp weave to improve regional traffic efficiency and potentially support pedestrian and cyclists' activity and accessibility is also required.

2.1.2 Place activation

The precinct vision includes a number of place activation and place management opportunities.

The vision allows for, and provides space for, entry statements at strategic locations in and around the precinct and these can be combined with public art, seating and adequate signage for the precinct generally. Entry statements should clearly identify the precinct to visitors and users to encourage a sense of place in the regional context.

Public art is one way of creating a 'gateway' entry point to the precinct and may be used in conjunction with landscape design and different road treatments. Public art in the precinct should consider the river, the bridge and the city as a source of inspiration.

Once within the precinct, it should be clearly identifiable. A vision for the precinct would include a consistent and repeated palate of colours and design for street furniture, signage and public places.

The existing open, tree lined streetscapes continue to be shown in the precinct vision, with enhanced streetscapes and additional street trees shown throughout. The vision shows new parks along the Canning Highway, the Kwinana Freeway and adjacent to the new Manning Road on-ramp. A park/town square opportunity is also shown near the intersection of Moreau Mews and Kishorn Road and this is mirrored on the other side of the Canning Highway. This area is intended to become the central crossing place between the Mt Pleasant and Applecross sides of the highway, and should be integrated with the existing pedestrian overpass to encourage use of the overpass rather than crossing the highway at ground level.

The vision allows for considerably more development along Canning Highway, and this is expected to be supported by private landowners by way of design outcomes that will promote and encourage higher intensity activity and allow greater interaction between people within the precinct.

The vision shows enhanced green edges along the river front on both sides of the river. Generally it would be expected that all landscaping or planting proposed within the precinct will be of native species and that the river foreshore areas will be designed generally to improve the riverscape, including created wetland features like those seen at the foreshore near Lake Vasto in the City of Perth. The enhanced wetland would provide substantial additional areas and space for community interaction and recreational activity.

2.1.3 Land uses

The land use vision recommends a mix of building heights and land uses throughout the precinct. Greater intensity of commercial and mixed uses is shown along the key transport spines of Canning Highway and Manning Road, while higher density residential uses are proposed to transition into the surrounding traditional lower density neighbourhoods. Urban design guidelines will need to be developed to ensure that the transition areas have high amenity and attractive and equitable streetscapes.

To support and encourage interest and activity in the precinct, the vision identifies an opportunity for some limited development such as cafés, restaurants and retail facilities along the path across the existing northern Canning Bridge (subject to more detailed investigation) and onto the foreshore reserve on the eastern side of the river. Opportunities for similar activities occur at both McDougall Park and on the Mt Pleasant/Apex reserve foreshore.

Some commercial/residential mixed use functions are also shown in the CoSP in the area closest to the freeway, at the Mt Henry Tavern site and at the corner of Ley Street and Manning Road. These areas should be developed at a local scale, although it is likely they will attract regional users because of their strategic location close to high frequency public transport routes.

2. Precinct vision

2.1.4 Accessibility

Improved pedestrian and cyclist accessibility is shown throughout the precinct based around key infrastructure improvements. Key to the vision in the long term is the inclusion of a dedicated pedestrian/cyclist path along the bus bridge connecting, at a pedestrian/cyclist level, the west and east parts of the study area. This path should be designed to include weather protection for at least some parts of the journey, integrated with built form and activities of interest such as cafés where possible. Improved accessibility features will also need to respond to the needs of the elderly, disabled and children.

Areas designated as having alternative road surface treatments to slow vehicle traffic will likewise improve the pedestrian and cyclist environment in the precinct.

Removal of the existing bus/rail interchange from the Canning Highway/freeway interchange will greatly reduce the required number of phases (bus phase, traffic phase etc) at the signals. Reduced on road vehicle phases will result in greater allowances for pedestrian phases at signalised intersections throughout the precinct.

Additional pedestrian phases will also result from the proposed signalised intersections at Canning Highway/ Canning Beach Road and at Canning Highway/Cassey Street when the long term development of the bus bridge is completed.

All paths, existing and proposed, should be well lit, signed and clearly identified.

2.1.5 Built form

Changes to the existing built form of the precinct are proposed in the precinct vision including greater building heights and increased residential density. The opportunity for significant development should be based on the quality of architectural design and community benefits proposed in line with the performance standards outlined in section 3.2.7.

The major opportunities for built form changes are illustrated along the spines of the precinct on Canning Highway and Manning Road.

2.1.6 Building height

The land use vision shows a variety of building heights within the precinct and an overall graduation of heights downwards from main traffic routes towards the surrounding residential areas.

Generally, taller buildings are to be located along the Canning Highway spine of the study area, with some additional taller development along Manning Road and the freeway becoming progressively lower further away from these areas.

2.1.7 Building setbacks

Limited front and side setbacks are envisaged for development in the mixed use and performance based area, with any tower elements being setback in podium form to ensure the perception of human scale development at the street level. Some developments are shown to provide public spaces and plazas at ground level and these are encouraged. Figure 5 provides an illustration of appropriate street front development with podiums and setbacks.

Figure 5 – Podium development examples

3. Urban design framework

3.1 Optimal land use mix

Transit oriented developments are characterised by a mixture of land uses and activities that create vibrant, diverse centres for people to live and work. The Canning Bridge area is well suited to evolve and provide such opportunities for development, predominantly on the Melville side of the precinct.

It has the potential to become a significant employment centre with close links to the Perth CBD, the Bentley Technology Park (including Curtin University), new regional facilities such as the Fiona Stanley Hospital and the remainder of the metropolitan area generally. Also, its location on the Southern Suburbs rail line and along the major activity corridor of Canning Highway, serviced by the metropolitan areas highest frequency bus route, places it in the enviable position of being highly accessible.

The economic analysis undertaken as part of this precinct vision illustrates that the Canning Bridge precinct is a significant and desirable office space destination in the Perth metropolitan area which could support a substantial increase in office space. An increase in both residential and retail uses would complement increased office development and would allow for additional opportunities in the precinct to diversify the employment generating capacity of the area.

Given the proximity to the Perth central business district, the high amenity of the physical environment and the quantity and quality of infrastructure and social services available in the area, this precinct could support significant residential growth.

3.1.1 Current land use zoning

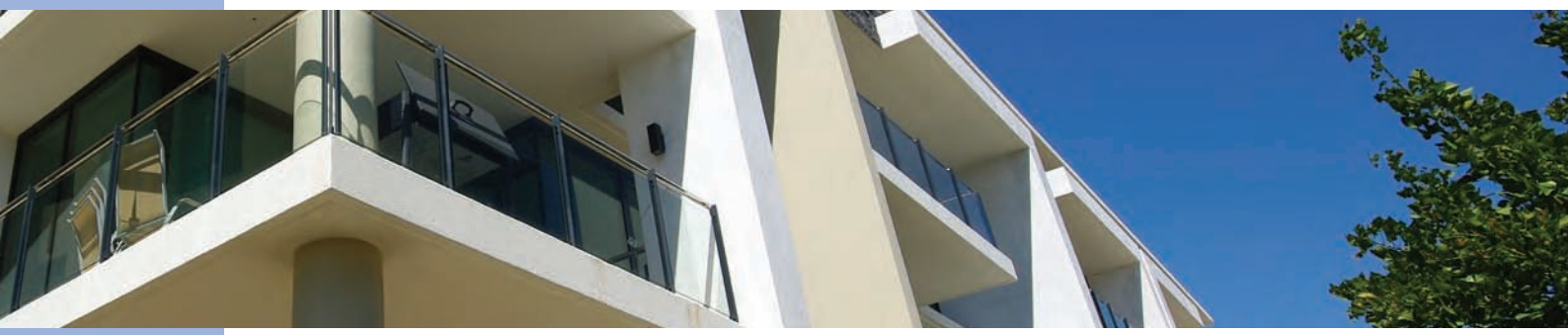
The current land uses are split into two distinct areas, being the commercial focus of the Applecross/Mt Pleasant areas and the residential focus of the Como/Manning areas. The detailed strategic and statutory framework report provides more detail with regard to zoning of individual properties.

3.1.2 Appropriate land use mix

Commercial growth in the Applecross/Mt Pleasant areas should be encouraged in the short term, subject to appropriate development standards being established. This includes the development of both retail and office floor space, with entertainment uses similarly being encouraged. Commercial uses should first be encouraged along the Canning Highway spine, complemented by residential uses and improvements to movement networks within the area.

Encouraging these developments in the short term will ensure that landowners are aware of and can consider long term options for their land holdings and this will potentially lead to more efficient developments which consider the long term planning for the precinct. Concessions based on high quality built form and community based outcomes may be a catalyst for the type of development being encouraged (see more detail at section 3.2.7).

The development of a multi user community facility should also be encouraged in the short term and has been identified at a number of possible locations. The preferred locations are adjacent to the Tivoli Hall or near to the Moreau Mews/ Kishorn Road/Ogilvie Road/Canning Highway nexus, where a new park area is proposed.



Specifically, the existing supermarket and service station facilities should be maintained, albeit in an altered format. Landowners in the area bounded by the Canning Highway, Kintail Road and Moreau Mews have already identified a possible way forward in this regard, in the form of a memorandum of understanding (MOU) between the landowners. Opportunities for increased development in the area can be substantially improved by considering this type of integrated redevelopment and this can be further encouraged in the form of minimum lot size development controls.

Increased residential densities should generally be encouraged in the short term responding to the unique opportunities afforded by the extensive public and private transport networks in the area. Also, the opportunities to live, work and play in the precinct encourage increased density.

Introducing commercial uses in the Como/Manning area should be considered very carefully. A substantial commercial floor space increase in this area could impact on the commercial viability of the existing Applecross/Mt Pleasant commercial precinct; nevertheless, the community in this area has expressed some demand to be better serviced. Several small commercial nodes could be developed as follows (shown in blue on Figure 2):

- Close to the rail station along Cassey Street and Robert Street.
- The northeast corner of Ley Street and Manning Road.
- At the Mt Henry Tavern site.

These specific locations are identified as they have strong links to key road networks and public spaces associated with proposed elements of the precinct vision.

Commercial development in these areas should be characterised by mixed uses[1] so as not to detract from the predominantly residential nature of the area, should be local in nature and should support the increased public transport proposals of the precinct, particularly the area along Cassey Street which may eventually be the closest access point to the future bus/rail interchange.

The existing commercial centre at the corner of Canning Highway and Henley Street should be maintained in its current format, as it has been identified in the CoSP Local Commercial Strategy that additional floor space here would have traffic impacts that reach beyond the boundaries of this study.

A small café or restaurant and community facilities are suggested at McDougall Park.

Residential densities will be increased generally across the precinct, with a focus on areas along the Canning Highway and Manning Road, adjacent to public open spaces such as Olives Reserve, McDougall Park and enhancing densities along Ley Street and Henley Street as the more significant traffic routes in the area.

NB: It is recommended that an economic development strategy form part of the planning for the precinct to inform the relevant town planning schemes and local planning strategies.

[1] Mixed use refers to sites which comprise development that combines residential, commercial, and/or office uses into one development or building. For example, a mixed-use building could have several floors. On the bottom floor, the space could be dedicated to retail or offices, while upper floors are solely residential.

3.2 Urban design principles

This section investigates the application of the following elements to the Canning Bridge precinct.

- Place activation and place management strategies.
- Integration of complimentary (mixed) land uses into developments (both horizontally and vertically).
- Appropriate and safe access to the foreshore, key activity nodes and the train station.
- Sustainability issues as they relate to place, TOD and built form.
- Crime prevention through environmental design (CPTED).
- Appropriate built form for the precinct, including, but not limited to identifying appropriate height, scale, bulk and design elements.
- Optimum and appropriate land use mix and density.

3.2.1 Place activation and place management

Place activation and place management will have a significant role to play in improvements to the precinct. It is understood from substantial community engagement throughout this process that the precinct is generally not considered to meet all the expectations of the users. This section provides some ideas and opportunities to address the activation and management of the precinct.

Key entry statements

Entry statements at key strategic locations in and around the precinct will help in identifying the precinct and will contribute to the sense of place of the precinct both for the local community and particularly for passing traffic.

Key entry statements to the precinct can be located along the Canning Highway at Sleat Road heading east to define the Applecross/Mt Pleasant area and at the corner of Henley Street heading west and the corner of Ley Street and Manning Road heading west to define the Como/Manning area.

Entry statements can be combined with public art, seating and adequate signage for the precinct generally, or can be stand alone features, but should clearly identify the precinct. It is recognised also that the CoM and the CoSP have different branding and would normally approach this element in their own way; however, it is recommended that the CoM and the CoSP consider a combined approach to wayfinding throughout the precinct.

Public art

Public art is one way of creating a 'gateway' entry point to the precinct and may be used in conjunction with landscape design and different road treatments.

The provision of public art can assist in creating interesting and interactive public spaces throughout the precinct by developing unique spaces and areas of focus. Public art also helps to create a sense of ownership in the precinct. Artwork can be used to create and highlight pedestrian walkways and the presence of the river. The bridge and the city could be used to provide a source of inspiration. Students from local schools and nearby universities (Curtin and Murdoch) should be encouraged to create artwork for placement within the community.

Public art in many varieties

Streetscapes

The existing open, tree lined streetscapes should be maintained, enhanced and expanded within the precinct to promote the sense of place which many of the community already associate with the area. Enhancements and increased tree planting are supported. Measures should also be taken to create streetscapes which encourage pedestrian activity, such as street furniture, public art, shelter and a kerbless environment in specific areas of the precinct such as along Kishorn Road, Kintail Road, Moreau Mews, Ogilvie Road, Cassey Street, Davilak Street, Robert Street and Clydesdale Street.

Development along the Canning Highway frontage needs to be improved for better activation and to allow greater interaction with passing pedestrians, which includes more visually interesting and permeable building frontages as well

as features on paths which separate the highway physically from the pedestrian area. Increasing the attractiveness of the dominant street frontages and attracting the visual interest of passers by within the centre along the highway will also assist in slowing passing traffic by way of creating 'visual friction', establishing the sense of an urban area where caution needs to be exercised rather than a highway for through traffic.

Consistency in the design of streetscape furniture such as seats, bins, light fittings, bollards, directional signage and pavement types will further support a sense of place for the community.

Form and character

Reinforcing the unique identity of the precinct with entry statements, public art and consistent streetscapes can be supported by forming distinct urban landmarks and vistas to key locations inside and outside the precinct. All developments should be sympathetic to the surrounding environment, particularly open spaces and the river by supporting key vistas to the river, the city or open spaces.

Shopfronts at ground floor level should provide for attractive window displays and active frontages, with limited reflective glazing and/or obscured window painting.

Landscaping

Development of landscaping or planting proposed within the study area should consider planting species native to the study area. Native plantings can be tied into public art through story boards or signs. While other, non-native species can also be considered, native species can contribute to habitat and feeding of native fauna and encourage diversity in native species.

Physical features such as retaining walls throughout the precinct should not be blank or support potential graffiti by way of landscaping in front of retaining, street furniture and articulation of the wall itself.

Landscaping features, such as hard landscape features of furniture etc, should also be consistently designed.

3.2.2 Integration of complementary land uses

A mix of land uses should be encouraged within the precinct that is appropriate to the primary function of the precinct. Greater intensity of commercial uses is recommended for the Applecross/Mt Pleasant area, while the inclusion of smaller more local commercial areas is recommended in the Como/Manning area. In both areas, increase in commercial intensity should be supported by an increase in residential density.

A diverse mix of uses will encourage and have the ability to extend the hours of activity within the centre. Residential development can result in active places throughout the day and into the evening. Mixed with the constant active use of the commercial areas both during the day and in the evening, residential development will support the vibrancy and safety of the area.

A mix and variety of uses is also encouraged both vertically and horizontally. In terms of design, developments which propose a mix of uses or are designed in such a way that supports building resilience (including the ability to convert building uses over time) or development which proposes a variety of community benefits as discussed in section 3.2.7 should be supported.

Mix of uses vertically and horizontally

3.2.3 Accessibility

Accessibility to the foreshore and the rail station are paramount to the success of the area as an 'activity centre'. Detailed infrastructure design must acknowledge the important function that 'people' and 'activity' have to 'place'. Pedestrians and cyclists should be prioritised where it is possible to do so without affecting the regional road function of the Canning Highway and the Kwinana Freeway and this could be achieved primarily by relocating the bus/rail interchange away from the highway.

The new dedicated bus/rail interchange will provide for an increased and more functional bus/rail interchange service and will cater for the long term growth of the public transport network.

The development of a third bridge to the south of the existing Canning Bridge pair in the medium term would allow for the re-use of the northern Canning Bridge as a local access road which could include bus movements (subject to additional traffic planning). The development of the bus bridge over the freeway and connecting to Canning Highway in the long term would provide for through bus, taxi, cycle and pedestrian movements only.

In the long term the proposed bus bridge would include shared paths along the full length, supporting access from both sides of the river and also allowing for the development of kiss'n'ride drop off areas (accessed from each side separately).

In the short term the bus/rail interchange (new bus station to be built adjacent to train station on western side of Freeway) would also allow for the possible development of some cafés and kiosks in proximity to the bus station and would support the redevelopment of the foreshore reserve on the eastern side of the river (either landscaped/raised or built form with landscaping above). This would ultimately see the pedestrian path leading to the same level as the bus interchange and the lifts to the rail station.

A relocated bus station away from Canning Highway would improve the overall configuration of the Canning Highway/freeway interchange and it should be fundamental to the improved infrastructure that pedestrian lights and phasing be integrated with the design, particularly at traffic lights associated with the Cassey Street/Canning Highway and Kintail Road/Canning Highway intersections. Pedestrian

light phasing will be critical in the future design of the interchange.

Dedicated shared bicycle/bus lanes in both the Melville and South Perth sides of the precinct have been indicated in the precinct vision and are supported by PTA. The Canning Highway road reserve currently allows for their development.

Improved pedestrian and cyclist accessibility could be achieved in line with the improvements of the general traffic infrastructure for the bus-rail interchange and an opportunity exists to combine new infrastructure with improved accessibility infrastructure and cyclist facilities. All paths, existing and proposed, should be well lit, signed and clearly identified.

Station environs and passenger facilities

Quality public transport stops should be integrated into the fabric of the precinct to encourage public transport and pedestrian and cyclist activity within the area. Strong, clear signage is encouraged to be incorporated within all development to support wayfinding, with opportunities for smart travelling systems such as electronic signage advising of next trains being incorporated in the precinct.

The Canning Bridge rail station itself, or an area easily accessible nearby, should provide improved facilities such as toilets, signage and bike parking.

All new developments should include end of journey bicycle parking facilities and change rooms or the like and these facilities should be located in an area that allows for passive surveillance and is well lit.

Additionally, development which includes community facilities accessible to all precinct users such as public toilets are encouraged and should be supported.

3.2.4 Sustainability

To achieve sustainable urban development is a challenge in a city that has been characterised by urban sprawl since the 1950s. The recent increased investment in Perth's public transport network provides an opportunity to focus on urban consolidation around major transport nodes and along major transport routes.

The objective is to create a more sustainable living environment centred on these public transport routes and to encourage more efficient travel habits and building design. While some of this can be achieved through the implementation of this precinct vision, ultimately it will fall to local governments to develop appropriate design guidelines or similar to incentivise sustainable building design and community creation.

The CoM currently has some policies in relation to sustainable development (see background report). These policies provide ideas and guidelines for sustainable residential design and development. The introduction of incentives for efficient design and also water and energy efficiency targets should be considered in the development of specific guidelines for this precinct.

All new development should be designed to maximise passive solar principles for heating, cooling, ventilation and energy conservation. This can be achieved by designing for the climate of the area through correct building orientation, allowing access to natural light and achieving the correct thermal performance of buildings and their materials. New commercial development can achieve significant energy savings by controlling solar gain through glass, particularly from low angle sun from the east and west. Some design factors are:

- orientation – north and south orientated facades require less energy, minimise west and east facing glass;
- provide adequate shading for all glass other than south facing glass;
- atriums maximise daylight and cross ventilation;
- thermal mass in commercial and residential developments to improve temperature stability;
- natural cross-ventilation to reduce air conditioning needs;
- low energy lamps and controls;
- building energy management systems;
- incorporation of an upper floor roof/ceiling construction with a minimum thermal resistance value of R1.5;
- use materials of a colour which reflects rather than absorbs solar radiation, while ensuring reflective material avoids transferring heat to adjoining properties; and
- encourage design of buildings to meet minimum standards of 4-Star Green Star Building and/or 4-Star rating using the National Australian Built Environment Rating System (NABERS).

3.2.5 Crime prevention through environmental design (CPTED)

Ensuring a well integrated urban form that provides a safe environment for all users by maximising visibility and surveillance, increasing pedestrian activity, maximising connections within the precinct and clearly defining private and public space responsibilities will support an active and vibrant precinct.

An opportunity exists to incorporate crime prevention through environmental design (CPTED) or designing out crime (DOC) principles into the design of new development, facilities, streetscapes and buildings within the precinct to assist in creating safer, more attractive spaces for the community.

CPTED strategies will assist in management of current stakeholder concerns such as negative safety perception and anti-social behaviours, and assist in providing a positive safety perception for future residents and users of the precinct.

CPTED strategies should be employed as far as practicable to enhance natural surveillance, natural access control and territorial reinforcement around the site. Where CPTED cannot provide the desired level of security, target hardening strategies using security measures may be considered.

The following principles should be applied:

Natural surveillance

- All pedestrian and vehicular entry points providing access to the site will be visible from adjacent apartments (balconies/windows/doors) to provide passive surveillance by residents, and deter offenders by providing 'perceived surveillance'.

3. Urban design framework

- Building elements will not obscure natural surveillance of pedestrian routes, recreational and parking areas.
- Lighting will be designed to provide uniform illumination throughout the site to enhance natural surveillance. Over-illumination that makes adjacent areas appear dark should be avoided.

Natural access control

- Facilities, such as garbage bin storage areas, will be designed and located in areas where they cannot be used to assist climbing walls or buildings.
- Some types of flora may be considered as able to support security (eg creepers against blank walls to hinder graffiti, thorny plants to deter climbing/ approach to windows etc).

Territorial reinforcement

- Different materials/patterns will be used for on-site roads and parking areas to enhance perception of transition from public roads (off-site) to semi-private roads (on-site) to semi-private parking.
- The boundary between private and public space will, where possible, be marked with low walls and/or fences, permitting a high degree of visibility from both private and public areas.

In the design of any development, physical security measures should not detract from the general appearance of the area. However, recognised construction techniques for passive resistance to forced entry are to be employed.

Specific CPTED strategies recommended for consideration for the precinct include:

- ensuring pedestrian access routes to-and-from public transport and main activity centres are designed with the above principles in mind (eg good illumination, bordered by active (safer) areas, clear indication of recommended safer access routes, designed and located to facilitate safety from vehicular access, avoidance of location adjacent to higher-risk areas (eg obscured or hidden areas or non-populated areas);
- main pedestrian access ways and public transport facilities should be provided with weather protection to encourage activity in all weather conditions;
- minimise the use of potential 'movement predictors' which can assist offenders to predict the movement of potential victims (eg access ways with walls on both sides);
- concentration of overlapping CPTED strategies in identified areas of potential risk (eg movement predictors, hotspots);
- illumination of recommended safer pedestrian access routes, areas where night-time activity is encouraged and areas with negative safety perception (note that lighting design should consider surrounding areas and potential effects of illumination on crime risk);
- encouraging traffic permeability to enhance natural surveillance of streetscapes;
- promoting active pedestrian streetscapes through strategic location of community activity areas, outdoor facilities, improvement in streetscape aesthetics, and design elements to encourage safer pedestrian activity such as crosswalks;
- consideration of anti-graffiti strategies in design of new buildings/facilities, distribution of casual surveillance opportunities, choice of building materials and surface treatments;
- selection of vegetation for new development and upgrades to streetscapes should consider maintenance and avoid obscuring pedestrian sightlines;

Windows orientated towards streets and public places provide natural surveillance

Blank walls orientated towards public spaces limit natural surveillance

- street furniture and lighting should be made of durable materials to a vandal-resistant design. Graffiti-resistant materials and surface finishes are appropriate at street level in all developments;
- taller buildings provide opportunities to enhance natural surveillance; and
- access ways that have walls on either side should be minimised where possible. If unavoidable, these types of access ways require consideration of measures to manage crime and unwanted behaviour opportunities

3.2.6 Built form

Substantial changes to the existing built form of the precinct are proposed in this precinct vision. The aim is to have a variety of building heights within the precinct, and an overall graduation of heights downwards from main traffic routes towards the surrounding residential areas. The opportunity for development of significant buildings on sites should be based on the quality of architectural design and community benefits proposed in line with section 3.2.7.

The taller built form should occur along the spines of the precinct along Canning Highway and Manning Road. Taller buildings will be encouraged to accommodate a mix of commercial and residential use within the precinct.

3. Urban design framework

Building height

Increased building height can be accommodated in the study area, but buildings should be sensitive to the human scale of the area at ground level. Podium development should prevail in commercial/mixed use areas with tower elements setback from the street frontages, as is illustrated in Figure 5.

Generally, taller buildings should be located along the Canning Highway spine of the study area, with some additional taller development along Manning Road and the freeway, becoming progressively lower further away from these areas. This will also allow the majority of development to access some views. Overall height at the street frontage should respond to the width of the street, with taller elements set back, which would need to be considered in greater detail during development of detailed design guidelines.

The height of residential apartments should respond to the surrounding development and can also include podium elements and a variety of towers and articulated features. A 17 storey building already exists in the precinct at the Raffles Hotel site.

The land use vision at Figure 2 also indicates suggested height limits within the precinct. These heights are indicative and will require careful consideration in the development of detailed built form design guidelines for the area, but generally follow these principles:

- Performance based development with buildings heights subject to development outcomes for community benefit, primarily proposed along the Canning Highway spine in the eastern part of the COM, which have a podium style development at lower levels to encourage human scale development at ground level with residential building elements set back from the podium edge. These developments should demonstrate provision of benefits to a broader range of users, such as public terraces and spaces and mid block streets or malls to improve accessibility in the precinct.
- Mixed use development of up to approximately 10 storeys subject to detailed built form design guidelines adjacent to the Canning Highway spine in the CoM, along the freeway and near to the local traffic road leading to the future bus bridge across the freeway in the CoSP, with podiums at ground level and residential building elements.
- Six storey developments in the CoSP along the major traffic routes and adjacent to the more intense nodes.
- Three, four and five storey developments are proposed as specific transition heights from the higher intensity central activity areas in the precinct to the low density areas adjacent which have a predominant height of one to three storeys. Design guidelines will specifically address building bulk and setbacks to both ground level and upper level development in these transition zones.

It is important to recognise the role that appropriately developed built form design guidelines will play in the development of this precinct. The elements described in this section will all need to be considered, however, transition guidelines from the core activity centre to the surrounding low density residential suburbs will be critical.

It is also noted that any development impacting on a State Registered Place must be referred to the Heritage Council of WA.

Density

Generally, the residential land areas which are considered to be transition areas to the surrounding established residential suburbs are proposed to have a density code of R40-R60. This density will need to be considered carefully in line with design guidelines for overall built form to ensure a smooth transition/interface.

The mixed use areas are proposed to have a residential density equivalent to R80-100, although it is unlikely that development would be guided specifically by the standard R-Codes in this area.

Density shall be considered on a case by case basis for all development in the performance based zone, but may be guided by detailed built form guidelines.

Street setbacks and side and rear setbacks

Commercial/mixed use areas

Nil front setbacks from streets for the first 2-3 storeys should be encouraged for all development of commercial areas, and then further height should be setback back in a podium style to retain the openness of the streets at the pedestrian scale. Development is also encouraged to provide public spaces and plazas and colonnades or awnings should be provided for all new development at ground level, particularly adjacent to corner truncations to contribute to pedestrian flow and comfort.

Similarly, new development should be built up to both side boundaries except where side boundaries abut a road reserve or pedestrian path, in which case podium style development is also encouraged. Development above the podium height should complement adjacent properties and be designed to allow for adequate access to sunlight and ventilation for all developments, and to support pedestrian activity, development should address all frontages adjacent to pedestrian paths and roads as if they were primary frontages.

Residential areas

Setbacks in residential areas should be designed to encourage a neighbourhood feel without creating 'gaps' in the flow of streets. Setbacks should be adequate to allow for landscaping and parking, clear entrances and passive surveillance of spaces.

Plot ratio

Variations to the scale and intensity of development throughout the precinct area are encouraged and there is a need to consider performance based development in line with section 3.2.7. An analysis of plot ratio should be undertaken in more detail to determine if plot ratio is an appropriate control for bulk and scale in the precinct, outside of the residential areas.

Responsiveness to public spaces

Development with a focus on supporting public transport and pedestrian/cyclist services, and which protects and enhances pedestrian links while ensuring they are conducive to social activity, safety, shelter and amenity, are encouraged. Development proposed adjacent to bus stops should be designed to provide enough physical space between the building and the stop for comfortable pedestrian usage, including where alfresco dining areas are proposed, and should provide additional shelter for bus patrons.

Significant corner sites should be developed with landmark features such as additional height for the corner element or alternative articulation features. Development of feature corners will further support wayfinding throughout the precinct and should be encouraged to be developed to a scale and in a manner that enhances the overall legibility and amenity of the area.

3. Urban design framework

Appearance/facades

Developments should respond sensitively to the site, should be pleasing to the eye, be interactive, and provide definition between public and private spaces.

Continuous frontages with large amounts of clear glazing to promote visual interest, active windows and balconies above ground level and development which proposes active uses at podium levels is encouraged. Development of podiums that are publicly accessible (cafés, restaurants, open spaces) would be highly desirable, particularly in the Applecross/Mt Pleasant commercial area and along the river fronts.

Developments should also discourage graffiti and vandalism in their design and include a high level of lighting in all pedestrian links.

Site coverage

To encourage intensity of development while also catering for the wellbeing of precinct users it is proposed that within individual sites in the commercial mixed use areas, development may cover 100 per cent of the site. However, in lieu of ground level open space in development, it would be expected that developments provide adequate terraces and public and private outdoor spaces. As previously identified, public spaces at podium levels are encouraged.

Additional open spaces to cater for the needs of the community are shown in Figure 1 along the foreshore on both sides of the river, as well as in more dedicated small parks. The enhancement of the foreshore is subject to environmental investigation and detailed design with the Swan River Trust but could contribute significantly to the health of the river by incorporating natural drainage 'filter' ponds and other natural infiltration management features. The development and ongoing management of these areas can be supported by developer or development contributions.

Public alfresco deck above lower level development

Site coverage in residential areas will generally be in accordance with the relevant R-Codes, although some areas will need to be provided with additional guidelines as the R-Codes do not always address relevant higher density development standards.

Landscaping design should be incorporated for all developments that do not propose a nil setback, providing that the landscaping maintains openness and visibility into the development site. Water sensitive design should be required for all landscaped areas in the precinct.

Parking

Adequate vehicle parking and access within and around the precinct is fundamental from both an operational and community perspective. However, generally it is expected that the precinct will discourage excessive vehicle use, and traffic calming and management measures as well as parking policies that consider paid parking and reciprocal arrangements are encouraged. It is unlikely that there will be any long term car parking provided in association with the station as a means of encouraging pedestrian, cycle and bus access.

Parking for commercial uses will need to be considered in line with the relevant state planning policy and the provisions of the relevant town planning schemes would not generally be applicable in this precinct. Detailed design guidelines will need to provide parking requirements, and it is expected that reduced parking provision would be considered based on the numerous public transport alternatives available to precinct users.

A CAT bus service, shuttle service or similar is highly desirable and has been suggested in many of the community forums held. This type of service may contribute to both the local and regional efficiency of this precinct; however, the funding and operational details of this, as well as any potential route, will need to be considered in more detail beyond this study.

Adequate on site parking should be provided for all multi-storey development and should be linked to pedestrian routes and car parking should not dominate the street frontage. Effective screening techniques such as planting, semi-transparent fences or screens should be used to conceal large car parking areas, or active uses should surround car parks.

Opportunities exist for the CoM in particular to utilise its land assets in the area to provide some public parking facilities. Land at and adjacent to the Tivoli Theatre and along the Esplanade could be more efficiently utilised to develop some parking facilities in conjunction with other uses such as community or office spaces.

An access and parking strategy should be developed specifically for the precinct, and this could be undertaken in conjunction with the detailed traffic analysis and modelling proposed in the implementation strategy.

Levels

Pedestrians and users should at all times be visually connected with the land uses that form part of the precinct. Development should maintain a finished floor which ensures interaction between pedestrians and the adjacent buildings.

Roof-scape

Public access to podiums and towers should be encouraged and could incorporate uses such as community facilities and restaurants and bars. Roof gardens or green roofs are also encouraged and can contribute greatly to the amenity of the area and the buildings' immediate users. Additionally, all roof plant (air conditioners, lift shafts, satellite dishes) should be screened from public places by way of good design.

3.2.7 Performance based zoning

Focusing on development proposals generating community benefits:

A relaxation of the residential density and building heights applicable to the parts of the precinct identified in the land use vision as 'performance based zone' may be achieved by consideration of higher densities and a greater mix of uses provided that proposed development plans can demonstrate the provision of benefits to the community or the local government such as:

- controlled public access to upper levels of buildings (viewing deck, rooftop garden, restaurant, health studio, clubs);
- commercial use, hotel accommodation and conference facilities;
- diversity of residential products (small size units to maintain affordability);

3. Urban design framework

- provision of affordable one bedroom apartments to a maximum size of 55 m^2;
- student accommodation;
- public car parks;
- landscaped public spaces at ground and or podium level;
- pedestrian connections through the site;
- enhancement of view corridors;
- exceptional urban design standards;
- exceptional consideration of and respectful development adjacent to places on the State Heritage Register;
- amalgamation of land parcels;
- water and energy efficient buildings;
- demonstrable commitment to sustainability principles;
- low overshadowing of adjacent properties during mid-winter;
- street art, arbours, fountains, street furniture;
- well designed and active street frontages; and
- maintenance of security without discouraging pedestrian activity.

To achieve bonuses for height or density based on the performance of the proposal, the developer would need to demonstrate how any or all of the above elements have been met. The establishment of a development assessment unit (see section 3.3) would be required which would have powers to make decisions and provide advice to Council regarding applications in the area subject to appropriate advertising and consultation occurring.

To promote the development of combined parcels of land resulting in better built form outcomes, these performance based controls should also include minimum lot size controls.

In addition, developers would be expected to provide a detailed urban design statement which demonstrates and explains the positive townscape contribution of the proposal and which addresses compliance to the criteria above. The statement should include the following in addition to the standard requirement for site plans, floor plans and elevations:

- drawings of the proposed development in the context of surrounding development, including the streetscape;
- drawings of the proposed landscape area, including species selected and materials to be used, presented in the context of the proposed building or buildings, and the surrounding development and its context;
- photomontages of the proposed development in the context of surrounding development;
- a sample board of the proposed materials and colours of the façade;
- detailed sections of proposed facades; and
- if appropriate, a scale model that includes the context.

A more thorough analysis of the performance based zone is required in the development of detailed design guidelines for the precinct.

3.3 Development assessment unit

A development assessment unit (DAU) should be established which consists of members from both local governments and where relevant the State Government. The DAU would be used for all development proposals within the precinct area and assess proposals against the design guidelines and other guidelines which would be created. The DAU would provide advice and/or recommendations to the relevant local government Council within which the proposed development is located.

The DAU would include expert members with a background in relevant disciplines such as urban design, town planning, landscape architecture, architecture, built form sustainability and interior design. It would also be expected that an elected member from each local government Council would be invited to participate.

The DAU would need to recognise and relate to the processes and operations of the relevant Development Assessment Panel (DAP) as created in the *Approval and Related Reforms (No. 4) (Planning) Act 2010* which commences on 1 July 2011.

3.4 Capital improvements

A detailed description of capital improvements can be found in section 4.2. However, within the context of the urban design framework the following capital improvements should be considered for the precinct:

3.4.1 Key infrastructure requirements

An upgrade of the Canning Highway/Kwinana Freeway interchange to safely and efficiently accommodate pedestrian and cyclists activity is required, including consideration of an improved Manning Road off-ramp Canning Highway on-ramp weave, Manning Road southbound on-ramp and upgraded bicycle infrastructure. The upgrade of the Canning Bridge should also be considered now as it is reaching the end of its life cycle.

A traffic overpass (the bus bridge) over the freeway has also been proposed in the long term to the north of the Canning Highway/freeway interchange for an improved bus/rail station interchange which is accessed via priority bus lanes along the Canning Highway heading both east and west. While the bus bridge is not proposed to support private vehicular through movements, the infrastructure may be utilised for local private traffic movements to access kiss'n'ride facilities on both sides of the freeway. Vehicle turn around areas are to be provided on each side of the station.

Local roads that may be upgraded include an improved intersection at Kintail Road and Canning Beach Road, signalised intersections at Canning Highway and Canning Beach Road and Cassey Street and possible roundabouts on Kishorn Road, Davilak Street and Cassey Street.

The northern foreshore reserve between the freeway and river has been identified as an area of some limited tourism/ commercial/retail development opportunities and the

conceptual planning for this area has identified it as being raised to connect more directly with the bus station and bus bridge level. This may be achieved through development of terraces or built form levels below, or landscaping and fill.

A future ferry terminal is also proposed at this location and should integrate with the bus/rail interchange, as was foreshadowed in the CoM Transport Strategy.

Improved power and communications infrastructure is desirable to improve the appearance, functionality and useability of the precinct, whilst the upgrade of other essential infrastructure such as sewer and water will be critical.

3.4.2 Key entry statements and public art

Key entry statements to the precinct should be located along the Canning Highway at Sleat Road heading east to define the Applecross/Mt Pleasant area and at the corner of Henley Street heading west and the corner of Ley Street and Manning Road heading west to define the Como/Manning area.

Public art should be incorporated into entry statements and should also be considered at the corner of Kishorn Road and Moreau Mews, Ogilvie Road and the Canning Highway, near Raffles close to the Canning Bridge, at the Mt Henry Tavern site and in McDougall Park.

NB: Public art in some form is also encouraged in private developments.

3.4.3 Parking opportunities

In addition to parking that can be provided by private developments, it is recommended that the CoM and CoSP consider the development of Council or State Government owned land for parking (perhaps in the short term). As part of the broader detailed traffic study, a parking and access strategy should be developed for the precinct.

The parking and access strategy should be undertaken to determine the appropriate number of parking bays within the precinct based on public transport frequency and should ensure that the road network does not become overly congested by an increase in intensity in the precinct.

It is not recommended that large scale parking structures be developed as these are considered by all stakeholders to be unsightly. Rather, it is recommended that where parking structures are proposed that these be either underground or surrounded by office or retail uses so they are not obvious at streetscape level.

Parking structures wrapped by retail, café or office uses

Where private development proposes to provide public parking, it is recommended that the CoM and CoSP be included in development discussions and consider the management of parking areas by the local authority similar to the management arrangements occurring at the Raffles site.

3.4.4 Public/community outcomes

In addition to proposed improvements in infrastructure, the improved landscape and built form throughout the precinct has a substantial opportunity to provide improved public facilities.

A community hub has been identified as a positive outcome within the CoM. It is recommended that this be located either at a CoM owned site in Canning Beach Road or closer to the corner of Kishorn Road and Moreau Mews where a new park is proposed. The community hub has been described as being a single facility which encompasses all of the existing Applecross/Mt Pleasant civic uses into one facility, including the library and senior citizens' centre.

3.4.5 Landscape/streetscape improvements

A consistent landscape and streetscape design should be considered imperative to the building of sense of place throughout the precinct. The CoM and CoSP should consider consistent design requirements across local government boundaries, albeit in separately branded forms.

Improvements to open space provision in the precinct are necessary generally and an opportunity exists through the increased development proposed within the precinct to support the enhancement of the foreshore reserves and rehabilitation of the wetland environment similar to that exampled at Lake Vasto in the City of Perth.

An extended foreshore, subject to environmental investigation and approvals, could also be designed to support the Swan River Trust's intent to better manage sediment movement along the foreshore in this area, to support improved ground and surface water infiltration into the river, to possibly support improved feeding and habitat grounds for native fauna and provide larger foreshore areas for active and passive recreation use.

The foreshore area could include additional wayfinding, signage and educational public art connected with the river and the rehabilitated foreshore area.

Alternate/coloured street pavements in selected locations throughout the precinct should be considered to support the area as a pedestrian environment (along streets identified in section 3.2.1 under streetscapes).

Foreshore areas with recreated and enhanced wetland areas with associated local networks and open space

4. Implementation

It is important that the implementation framework recommended by this study be supported by local and State Government, service providers and the community to ensure the successful implementation of this vision occurs progressively over time.

The redevelopment of established urban areas presents many difficulties and influencing change in the urban fabric is affected by challenges in respect to land tenure, service provision, community acceptance and funding issues.

It must be acknowledged that the successful implementation of this study will involve a long term staged approach with a focus on providing achievable, low cost and effective solutions in the short term (ie additional dual use paths, landscaping and zoning changes) with a view to providing higher cost infrastructure solutions in the medium to long term.

There are several key components of the implementation process that are necessary to progress the implementation of the recommendations of this study:

- adoption of the preferred precinct vision by the CoM and CoSP Councils and endorsement by the WA Planning Commission following a suitable consultation process with the community;
- seek agreement from relevant government agencies and service providers for the additional studies, staged funding and provision of key infrastructure;
- adoption of design guidelines by each local government to provide appropriate development control measures over areas of public domain;
- a comprehensive review of town planning scheme provisions for the CoM and CoSP to incorporate provisions required to facilitate the implementation of the precinct vision; and
- set up a dedicated steering body to facilitate the development of the foreshore area near the train station and Kwinana Freeway and the improved freeway interchange, bus station, bus bridge and rail station.

Major opportunities, ideas and implementation issues have been identified throughout this study with both stakeholder agencies and the community. The following Implementation guide has been developed based on the information obtained through this study. A summary of the implementation framework can be found in Table 1.

4.1 Funding opportunities

Funding opportunities need to be identified to contribute to the major infrastructure works that this vision proposes. Features such as substantial upgrades of the Canning Highway/Kwinana Freeway interchange, improvements to the rail station and a new bus station and new bridges over the Canning River all require significant public investment.

At the federal level, one avenue for funding the high cost infrastructure requirements is the Australian Government's newly established Infrastructure Australia Fund (IAF) and subsequent Building Australia Fund (BAF). A budget allocation of $20 billion over four years was established for the BAF to provide support for a national approach to planning, funding and implementing the nation's future infrastructure needs. While the BAF funding has now been allocated, it would be expected that the IAF program, or similar programs, will continue to be available in the future.

The State Government, CoM and CoSP could also develop a business case for development of major infrastructure in the precinct for funding through the Department of Treasury and Finance (DTF) as an ongoing budgetary consideration. The business case would need to provide a clear economic feasibility assessment of the alternatives for the precinct ('do nothing'/upgrades/significant infrastructure improvement) as well as consider all the policy implications for the precinct (ie Directions 2031).

Public private partnerships (PPP) may also be considered appropriate in this precinct given the large areas of privately owned land compared to Government managed assets.

At the local level, local governments can seek developer contributions for community infrastructure, which is defined as 'the structures, systems and capacities which help communities and neighbourhoods to function effectively' (WAPC, 2008) using the framework of State Planning Policy 3.6: Development Contributions for Infrastructure (see the background report).

Developers' contributions from all new development initiatives in the precinct should be required to establish streetscapes, other public space improvements and required infrastructure upgrades and infrastructure works.

Other funding sources for capital infrastructure works include the State Government Perth Bicycle Network grants.

Additional planning studies may be funded through the WAPC, Public Transport Authority (PTA), Main Roads WA (MRWA) and the CoM and CoSP upon endorsement of the Directions 2031 Framework. The Canning Bridge precinct has been identified as a district centre in Directions 2031 and should be considered a key priority in the delivery of the 29 per cent growth expected to be achieved in the central sub-region.

4.2 Capital improvements and future planning requirements

4.2.1 Key infrastructure requirements

Roads

In relation to improvements in the road network within the precinct, the following actions are required.

- A comprehensive traffic planning study, traffic modelling and feasibility is required to further investigate the preferred concept for the redevelopment/improvement of the Canning Highway/ Kwinana Freeway interchange to support:
  - pedestrian and cyclists' activity, accessibility and safety;
  - consideration of an improved Manning Road off-ramp Canning Highway on-ramp weave;
  - upgraded/improved bus station facility to cater for increased public transport activity in the short term;
  - Manning Road southbound on-ramp;
  - replacement of one or both of the Canning Bridges;
  - traffic overpass over the freeway to the north of the Canning Highway/freeway interchange in the long term;
  - Canning Highway priority bus lanes from Sleat Road to Henley Street; and
  - general improvement to the Canning Highway/ Kwinana Freeway interchange and the capacity of the road network.
- Improvements to the Canning Highway/Kwinana Freeway interchange to improve the safety and accessibility of the station as a result of the above transport study:
  - improvements to the pedestrian and cyclist access;
  - new bus bridge and bus/rail interchange;
  - Manning Road off-ramp Canning Highway on-ramp weave and improvement to the Canning Highway/ Kwinana Freeway interchange;
  - Manning Road southbound on-ramp;
  - kiss'n'ride facilities; and
  - Canning Highway priority bus lanes.
- Improvements to local roads to support the precinct as an active urban space including an improved intersection at Kintail Road and Canning Beach Road, a signalised intersection at Canning Highway and Canning Beach Road, a signalised intersection leading onto the Canning Highway from Cassey Street in the long term and possible roundabouts on Kishorn Road and Davilak Street (as indicated previously, these intersections require detailed design).
- New roads which may be developed or existing roads which may be upgraded include some additional roads within the precinct resulting from redevelopment of large blocks of land. These roads will support improved and more efficient connections through the precinct and are located in the CoM area within the busy commercial centre. Nominally, these roads are illustrated in Figure 6 and are subject to detailed planning in the precinct.

Figure 6 – Opportunities for new internal road networks

Bus/rail interchange

In relation to improvements for the Canning Bridge bus/rail station, the following actions are required.

- Design and construct a new bus station immediately west of the train station (short term) and bus bridge over the freeway (long term) connecting to Canning Highway as identified under 'Roads'.
- Establish formal kiss'n'ride on either side of the proposed bus bridge near the bus/rail station.
- Upgrade the existing Canning Bridge rail station to include facilities such as toilets, more bike stores and directional/wayfinding signage as a minimum.

Landscape

In relation to improvements for the landscape of the precinct, the following actions are required.

- Undertake a detailed design study and urban development concept for the northern foreshore reserve between the freeway and river.
- Undertake the development of the foreshore reserve between the freeway and river considering future urban development and/or landscape development to raise levels to connect more appropriately with the bus station and bus bridge level.

- Undertake improvements to the river foreshore generally, including placement of street furniture, rubbish bins, public toilets etc.
- Consider rehabilitation programs to improve the wetland environment of the river.
- Develop landscape design guidelines for the whole of the precinct.

Service infrastructure

In relation to upgrades to service infrastrcuture of the precinct, the following actions are required.

- Investigate options to underground power throughout the precinct.
- Investigate improved communications infrastructure for the precinct.
- Investigate capacity of water and sewer infrastructure to determine required upgrades

Parking opportunities

In relation to opportunities for parking in the precinct, the following actions are required.

- Undertake a detailed parking and access strategy to determine maximum and minimum parking requirements for the precinct to sustain an acceptable level of service without contributing undue congestion into the road network.
- Utilise the parking and access strategy to determine the appropriateness of development of Council or State Government owned land for parking and to establish on and off street parking policies.
- Prepare built form design guidelines for private development which encourages private developers to provide public parking that may be managed by the local government.

Built form

The following actions are required in relation to the built form in the precinct.

- Develop detailed design guidelines for the precinct to ensure the highest quality and consistency of development. Design guidelines may be developed for specific areas separately (ie all areas identified as commercial/mixed use and separate guidelines for residential areas), or as a single document agreed to by both CoM and CoSP.
- Incorporate guidelines for built form, streetscape and landscape in an 'activity centre structure plan' as per the *State Planning Policy 4.2*.
- Develop guidelines including implementation guides for private landowners encouraging the establishment of memorandums of understanding (MOUs) that will be acceptable to the CoM and CoSP, for future development of combined land parcels.
- Improve the amenity and the transport concerns near the existing IGA supermarket and Kishorn Road/Canning Beach Road intersection through redevelopment of this super lot.
- Undertake an assessment of the land redevelopment opportunities that can be achieved based on the current traffic infrastructure in the precinct. This should occur in conjunction with the transport planning study.

Streetscape improvements

In relation to opportunities for streetscape improvements in the precinct, the following actions are required.

- Develop streetscape design guidelines for the whole of the precinct.
- Establish a developer's contribution strategy for all new development initiatives in the precinct to establish streetscape and other public space improvements.
- Develop alternative/coloured street pavements in selected locations throughout the precinct when undertaking road upgrades.

Key entry statements and public art

In relation to development of entry statements and public art in the precinct, the following actions are required.

- Develop entry statements at the corner of Canning Highway and Sleat Road heading east, corner of Canning Highway and Henley Street heading west and the corner of Ley Street and Manning Road heading west.
- Incorporate public art into entry statements, at the corner of Kishorn Road and Moreau Mews, Ogilvie Road and the Canning Highway, near the Raffles close to the Canning Bridge, at the Mt Henry Tavern site and in McDougall Park.
- Develop playgrounds or exercise areas in the precinct.
- Ensure built form design guidelines for private development encourage public art within private landholdings.

Public/community outcomes

In relation to opportunities for public and community outcomes in the precinct, the following actions are required:

- Investigate and develop a community hub in the Applecross/Mt Pleasant area combining existing public services into one facility, including the library and senior citizens' centre.
- Develop community facilities such as toilets, water fountains etc in public spaces such as the foreshore, McDougall Park, Olives Reserve and newly created open space within the precinct.

4.3 Statutory requirements

The implementation of this vision will require modifications to both the CoM and CoSP town planning schemes. In the short term these include:

- identify land required for infrastructure improvements and reserve/protect it from future development;
- scheme amendment to support land use and development standards;
- introduction of increased residential densities and performance based zoning (relaxation of planning requirements for proposed developments where community benefits are provided) to achieve the highest and best use of the land in the town planning schemes;
- consideration of plot ratios to accommodate the proposed building heights in non-performance based areas;
- introduction of development contribution plans and development contribution areas into both schemes as per draft State Planning Policy 3.6; and
- the introduction of incentives for new buildings to meet sustainable building objectives (eg at a minimum, a 4-Star Green Star Building and/or a minimum 4 Star rating using the National Australian Built Environment Rating System (NABERS).

4.4 Governance

The implementation of the precinct vision will require strong governance and cooperation between both local Councils and the State Government. The following actions and concepts should be considered.

- A separate partnership between the local governments should be initiated as a MOU outlining their commitment to the vision and to provide assurance to developers of the future of the precinct.
- Establish a dedicated steering group with State and local government representation to oversee implementation of the vision (could be an existing committee or group).
- The establishment of a joint development assessment unit (DAU) within CoM and CoSP to assess the performance of proposals in performance based zones.
- The development of an economic development strategy for the precinct to inform town planning scheme and local planning strategy amendments.
- Feasibility studies to allow commitments to be made on major infrastructure issues and provide certainty to potential private or public developers.
- Seek a commitment for the Canning Highway/Kwinana Freeway interchange road, rail and pedestrian/cyclist improvements between the WAPC, CoM, CoSP, PTA , DoT and MRWA.

4.5 Land assembly

The assembly of land and dealing with land tenure issues that will arise during the implementation of this vision is a critical factor that needs to be efficiently dealt with. The following actions should be undertaken to assist in the assembly of necessary land parcels and to deal with private land tenure issues.

- A development plan is required for the performance based zone areas in the precinct and the immediately adjacent properties to facilitate the redevelopment of the privately held land. Government demonstration projects on State-owned land such as the land adjacent to the Tivoli Theatre are recommended to catalyse development and showcase what the objectives and outcomes are to the residents.
- The dialogue established by CoM and CoSP with the landowners in the area should be extended and ongoing to support quality land development.
- The redevelopment of the lots adjacent to the Canning Highway/Kwinana Freeway interchange, which are constrained by and may be affected by any future improvements to the interchange, could occur under several scenarios:
  - 'improvement plan' under Part 8 of the Planning and Development Act;
  - demonstration projects on land already in Government ownership;
  - public private partnerships involving a partnership between land owners and Government.
- Any development proposed over the Kwinana Freeway reservation and parks and recreation reserve will require careful consideration in order to create an appropriate land assembly framework. Consideration needs to be given as to whether freehold lots are created or leasehold arrangements are made.
- Separate to the planning process, there is the need to review public owned and/or vested land (State and local) within the study area in order to provide the precinct with key infrastructure and services.

In residential transition areas development is unlikely to occur in a sequential manner, but will occur as each landowner decides. It may also be the case that development consortiums will buy up land as it becomes available on the market, in order to amalgamate small landholdings to achieve a larger development. Staging of residential development on privately owned land is expected to occur gradually and progressively over a period of time.

4.6 Implementation action framework

The following table outlines the key actions, time frames and responsibilities to assist in the implementation of the Canning Bridge precinct vision.

The timeframes in this document are indicative and are recommended from a planning viewpoint. Funding of any regional infrastructure priorities will be a decision of the State Government.

The timeframes proposed are critical (immediate), short term (1-5 years), medium term (6-10 years) and long term (10+ years).

Table 1 – Implementation action framework

Action	Time frame	Responsibility
Governance	(Critical, Short, Medium or Long Term)	(Lead agencies highlighted)
A separate partnership between the local governments should be initiated as a MOU outlining their commitment to the vision and to provide assurance to developers of the future of the precinct.	C	**CoM**, **CoSP**
The establishment of a dedicated steering group with State and local government representation to oversee development and implementation of the vision.	C	**CoM**, **CoSP**, **DoP**, DoT, MRWA, PTA
Initiate the preparation of an economic development strategy for the precinct to inform town planning scheme and local planning strategy amendments.	C	**CoM**, **CoSP**, DoP
Establish a community/stakeholder engagement plan and community/stakeholder liaison groups to enable ongoing engagement with the community	C	**CoM**, **CoSP**, **DoP**,
The establishment of development assessment units (DAU) within both COM and CoSP, or a combined DAU for both local governments to assess the performance of proposals in performance based zones.	ST	**CoM**, **CoSP**
Seek a commitment for the Canning Highway/Kwinana Freeway interchange road, rail and pedestrian/cyclist improvements.	ST	**DoP**, DoT, MRWA, PTA
Infrastructure improvements		
Roads:		
A detailed traffic planning study is required to investigate the preferred concept for the redevelopment/improvement of the Canning Highway/Kwinana Freeway interchange including pedestrian and cyclist requirements. The study to include a full feasibility study to allow commitments to be made on major public infrastructure to provide certainty to potential private or public developers.	C	**MRWA**, **DoP**, DoT, PTA, CoM, CoSP
Undertake parking and access strategy (having regard to staged development of the precinct).	C	**CoM**, **CoSP**, DoP, DoT, PTA
Improvements to the Canning Highway/Kwinana Freeway interchange as a result of the above transport study – develop new bus station interchange and upgrade existing rail station platform to encourage greater use and allow for increased capacity requirements.	C-ST	**MRWA**, **DoT**, **PTA**, DoP, CoM, CoSP

Action	Time frame	Responsibility
Develop transitional access arrangements to the new bus station that can be integrated into the road network when the replacement southern Canning Bridge is developed.	ST	**MRWA**, **PTA**, **DoT**, DoP, CoM, CoSP
Establish priority bus lanes along the Canning Highway heading both east and west.	ST	**DoT**, **MRWA**, **PTA**, DoP, CoM, CoSP
The provision of the proposed Manning Road to South-bound Freeway on-ramp.	ST	**MRWA**, PTA, DoT, DoP, CoSP
Improvements to local roads including an improved intersection at Kintail Road and Canning Beach Road and possible roundabouts on Kishorn Road and Davilak Street.	ST	**CoM**, **CoSP**, MRWA
Develop new roads which support the road network in the COM as the result of private development.	ST-MT	**CoM**, Private Developers
Construct a new Canning Bridge to the south of the existing bridges. Transition east bound traffic to the new bridge. Repair, upgrade or replace the existing southern Canning Bridge and transition west bound traffic to this bridge.	MT	**MRWA**, DoP, CoM, CoSP
Repair and upgrade the existing northern Canning Bridge to accommodate bus and local traffic movements, maintain the heritage aspects of the bridge and facilitate development if agreed as an outcome of detailed urban design studies (cafés, kiosks etc). Transition bus traffic onto the bridge.	MT	**MRWA**, PTA, DoP, CoM, CoSP
Left in left out intersection leading onto the Canning Highway from Cassey Street connecting into the bus bridge(greater consideration of this element in conjunction with local landowners is required).	LT	**MRWA**, PTA, CoSP
Bus/rail interchange		
Design and construct a proposed new bus station integrated with the rail station.	ST	**DoT, PTA**, MRWA, DoP, CoSP, CoM
Improve access to the Canning Bridge rail station as a priority – short term measures such as increased pedestrian phases at lights and new pedestrian overpasses etc.	C	**MRWA**, **CoM**, **CoSP**, PTA, DoP,
Establish formal kiss'n'ride areas near the existing railway station and foreshore reserve.	C-ST	**PTA**, MRWA, DoP, CoM, CoSP
Upgrade the existing Canning Bridge rail station to include facilities such as toilets, more bike stores and directional/wayfinding signage as a minimum in the short term.	ST	**PTA**, DoP
Develop an agreed strategy for wayfinding within the precinct (colours, palate of materials etc) and implement improvements.	ST	**CoM**, **CoSP**, DoP, MRWA, PTA
Landscape		
Undertake a detailed design study and urban development concept for the foreshore reserve between the freeway and river.	ST	**CoSP**, DoP, DoT, MRWA, PTA, SRT, DIA
Develop landscape design guidelines for the whole of the precinct.	C	**CoM, CoSP**
Undertake the development of the foreshore reserve between the freeway and river considering future urban development and/or landscape development to raise levels to connect more appropriately with the bus station/bus bridge level.	ST for levels, M-LT for balance of development	**CoSP**, DoP, SRT, DEC

Action	Time frame	Responsibility
Undertake improvements to the river foreshore generally including development of street furniture, rubbish bins and public toilets.	MT	**CoM**, **CoSP**, DoP, SRT
Consider rehabilitation programs to improve the wetland environment of the river.	MT	**SRT**, CoM, CoSP, DoP, DEC, DIA
Service infrastructure		
Investigate the feasibility of underground power throughout the precinct.	ST	**CoM**, **CoSP**, OOE
Investigate the feasibility of improved communications infrastructure for the precinct.	ST	**CoM**, **CoSP**
Investigate water and sewer capacity in the area to ensure upgrades can be planned to occur in line with staged development.	ST	**CoM**, **CoSP**, WC
Parking		
Undertake a parking and access strategy and community engagement to manage community expectations and user groups.	ST	**CoM**, **CoSP**
Utilise the parking and access strategy to determine the appropriateness of development of Council or State Government owned land for parking and to establish on and off street parking policies.	ST	**CoM**, **CoSP**, DoP
Ensure built form design guidelines for private development encourage private developers to provide public parking that may be managed by the local government.	ST	**CoM**, **CoSP**
Built form		
Develop design guidelines for the precinct to ensure high quality and consistent development including staging of development. Design guidelines may be developed for specific areas separately (ie all areas identified as commercial/mixed use and separate guidelines for residential areas), or as a single document agreed to by both CoM and CoSP.	C	**CoM**, **CoSP**
Ensure adequate investigation of potential climate change impacts are considered in the development of detailed design guidelines.	C	**CoM**, **CoSP**
Undertake a heritage plan for the precinct to protect, enhance or recognise heritage features unique to the area. Consider heritage elements in the development of detailed design guidelines.	C	**CoM**, **CoSP**
Develop guidelines including implementation guides for private landowners to establish memorandums of understanding (MOU) that will be acceptable to the CoM and CoSP, for future development of combined land parcels.	ST	**CoM**, **CoSP**, DoP
Improve the amenity and the transport concerns near the existing IGA supermarket and Kishorn Road/Canning Beach Road intersection (new development).	ST	**CoM**
Undertake an assessment of the land redevelopment opportunities that can be achieved based on the current traffic infrastructure in the precinct. This should occur in conjunction with the transport planning study.	ST	**CoM**, **CoSP**, DoP
Community outcomes		
Investigate and develop a community hub in the Applecross/Mt Pleasant area combining existing public services into one facility, including the library and senior citizens' centre.	ST	**CoM**
Develop community facilities such as toilets, water fountains etc in public spaces such as the foreshore, McDougall Park, Olives Reserve and newly created open space within the precinct vision.	M-LT	**CoM**, **CoSP**

Action	Time frame	Responsibility
Develop entry statements at the corner of Canning Highway and Sleat Road heading east, corner of Canning Highway and Henley Street heading west and the corner of Ley Street and Manning Road heading west.	S-MT	**CoM**, **CoSP**
Develop playgrounds or exercise areas in the precinct.	M-LT	**CoM**, **CoSP**

Statutory requirements		
Develop an activity centre structure plan for the Canning Bridge commercial area in line with State Planning Policy 4.2: Activity Centres for Perth and Peel.	C	**CoM**, **CoSP**, DoP
Identify land required for infrastructure improvements and reserve/protect it from future development.	C	**CoM**, **CoSP**, DoP, DoT,
Scheme amendment to support proposed land use and development standards.	ST	**CoM**, **CoSP**
Introduction of increased densities and performance based zoning (relaxation of planning requirements for proposed developments where community benefits are provided) to achieve the highest and best use of the land in the town planning schemes.	ST	**CoM**, **CoSP**
Consideration of plot ratios to accommodate the proposed building heights in non-performance based area.	ST	**CoM**, **CoSP**
Introduction of development contribution plans and development contribution areas into both schemes as per draft State Planning Policy 3.6.	ST	**CoM**, **CoSP**
The introduction of targets for key sustainability indicators within the precinct, including water usage and quality and the energy performance of buildings (targets should identify water reuse and energy efficiency percentages for buildings/land uses).	ST	**CoM**, **CoSP**
Introduce incentives for new buildings to meet sustainable building objectives as identified in built form design guidelines (eg at a minimum, a 4-star Green Star building and/or a minimum 4-star rating using the Australian Building Greenhouse Rating (ABGR) scheme).	ST	**CoM**, **CoSP**

Land assembly		
Establish a development plan for the performance based zone areas in the precinct and the immediately adjacent properties.	ST	**CoM**, **CoSP**
Government demonstration projects to catalyse development and showcase objectives and outcomes.	S-LT	**CoM**, **CoSP**
Extend the established dialogues with the landowners in the area to support quality land development.	ST	**CoM**, **CoSP**
Review public owned and/or vested land (State and local) within the study area in order to provide the precinct with key infrastructure and services.	ST	**CoM**, **CoSP**
Establish a working group to consider the appropriate land assembly framework for and potential development of land between the freeway and the river.	S-MT	**CoSP**, DoP, MRWA, LandCorp

CoM – City of Melville
CoSP – City of South Perth
DEC – Department of Environment & Conservation
DIA - Department of Indigenous Affairs
DoW – Department of Water
DoP – Department of Planning
DoT - Department of Transport
OOE – Office of Energy
MRWA – Main Roads WA
PTA – Public Transport Authority
SRT – Swan River Trust
WC – Water Corporation