5
Physical framework

This section sets out the key spatial proposals of the Capital City Planning Framework. These are the elements that set the overarching future direction for the next generation of city building, to contribute to the growing and changing functions, activities and community in central Perth. It presents central Perth's evolution in a longer-term vision.

These elements are derived from an application of the underlying principles identified in Section 4 to the existing fabric of central Perth, outlined in Section 2.

The propositions of the physical framework fall into four main parts:

- **Setting** describes a proposal for the city's green infrastructure, including its parklands and urban tree canopy, enhancing the contribution to our social and economic wellbeing and Perth's sense of place.
- **Activity and Built Form** focuses on land use in response to growth in population and the activity, sustainability, and design quality within the future of central Perth.
- **Movement** sets out the vision for the networks for moving in and around central Perth.
- **Spatial Form** amalgamates elements from the previous three sections to spatially envisage a future form of central Perth.

As statements of the State Government's broad strategic directions for central Perth, the propositions outlined are generally of a higher order or conceptual nature. It is intended that greater detail for these concepts will be developed over time, in the context of continued community dialogue and changing circumstances.

5.1 Setting

The City's extraordinary setting – the relationship between built form, landscape and vegetation – is an asset often celebrated in literature, imagery, guides and plans, and is a fundamental part of Perth's identity. Loss of identity is one of the potential costs of poorly planned growth. Whilst central Perth will continue to grow and change with the rest of the metropolitan area, this change will be a positive transformation if it responds to the qualities that define Perth. By doing so we will build a more liveable, prosperous and robust city.

This section explores central Perth's setting, looking for its sense of place, and proposes some key spatial outcomes for its next phase of development.

5.1.1 Key concept 1: A city with a reconceived setting

The setting for central Perth is to be reconceived as a world class, multifunctional green network, shaped by the City's sense of place, providing benefits to people and wildlife and showcasing our unique city-scapes and biodiversity.

Perth is sold on its strong sense of place, derived from a distinctive combination of weather, lifestyle, opportunities, city, park and beach landscapes, unique wildlife and culture. Perth's economic and environmental wealth places the city in an enviable global position. Combining these two advantages can help to transform contemporary challenges into opportunities, and will ensure that Perth continues to enjoy the beneficial legacies of its rich environment and cultural heritage.

As part of this enlightened approach, we can think about green spaces in a new way. Perth's setting is to be reconceived as a green infrastructure network, delivering a wide range of measurable ecosystem services (benefits to people and wildlife) and facilitating sustainable development. By creating a broader baseline from which environmental assets are valued, this approach will help to address the cumulative effects of a wide range of drivers, and limit the loss of natural and cultural assets by attrition.

Sense of place

Along with the complementary built environment, green infrastructure forms the very fabric of what makes Perth unique in a world sense. The beauty and diversity of the City's natural and cultural assets form the backdrop to everyday life, encourage people to enjoy healthy outdoor activity, and promote Perth as a destination for tourism, investment and migration. These assets record a rich cultural history and support an amazing variety of plants and animals found only in this region of Australia.

When people are asked about central Perth's sense of place, some constant themes emerge:

- the Swan River and Kings Park, primarily as elements of natural beauty against which the city centre and its suburbs are set;
- the sense of light and openness in the general landscape;
- indigenous plants and birds; and
- mature suburbs which include trees, single houses and local activity centres.

These attributes are physically embodied in the arrangement of central Perth in its riverside and parkland setting, and its adjoining well-treed suburbs. Enhancing the quality of this juxtaposition and re-conceiving the constituent parts as an integrated whole has the potential to build on our sense of place.

Perth's green infrastructure

The City's multifunctional green network consists of parks, open spaces and reserves, trails, cycle routes, greenways, rivers, lakes, wetlands and streams, along with the wider urban tree canopy. Collectively, these parts can be planned, designed

and managed as a network so that the whole is of more value than the sum of the parts.

Effective green infrastructure is characterised by good connectivity and the capacity to perform multiple functions. These are important principles for land use in any growing city, where green spaces must work in tandem with the built environment to perform a wide range of services for the urban population. Connected spaces help to future-proof our urban areas from a range of challenges – climate change, the urban heat island effect, flood risk, biodiversity and water management, and create comfortable and attractive places in which to live, travel, work and play.

Connectivity for people and wildlife varies across Perth's green network. In places it is relatively well expressed, for example along parts of the River foreshore. In other places connectivity is absent, under threat, or poorly articulated, for example between Herdsman Lake and Lake Monger, and between Kings Park and Bold Park. In some areas there are opportunities to better connect parks, open spaces and remnant habitats as part of large scale re-development projects, such as the city foreshore, Burswood Peninsula and parts of Shenton Park.

Green infrastructure objectives and principles

The outcomes of reconceiving, then enhancing and connecting Perth's green infrastructure include:

- a resilient and sustainable city, able to adapt to change more efficiently and cost-effectively;
- reconnection of urban Perth with its natural environment, and improved integration of built form and vegetation;
- a place with stronger connections to indigenous and non-indigenous culture;
- a place which showcases and celebrates the diversity of flora, fauna, landscapes and city-scapes of coastal Perth;
- a healthier place to live, with a clean, safe environment that encourages outdoor activities and supports child development; and
- a place rich in experiences for residents and visitors, with diverse recreational activities, ranging from a solitary walk along the coastal beach, to 200,000 people sharing events like the Australia Day Skyworks around Perth Water.

The following guiding principles set out the future direction and approach to implementing these objectives.

Principle 1: Making the most of our land

Perth's green infrastructure will be strategically developed and implemented as a multifunctional network, reflecting and enhancing the full range of social, economic and environmental benefits that these natural and cultural assets can provide.

With increasing numbers of people placing demands on natural systems within the context of a changing climate, we need smart solutions that allow our green fabric to work harder for us. Similarly to the way in which we plan for 'grey' infrastructure (for example drains, roads, water supply pipes), future demands for green infrastructure functions will be identified, predicted, measured and planned. The social and economic value of green infrastructure will need to be factored into planning policy and decision making. For example, an understanding that well-treed streetscapes, parks, and yards enhance liveability and property values. A climate and built environment regulated by urban trees and open spaces leads to savings in health care, lower cooling and heating energy costs.

Principle 2: Harnessing nature for healthy places

Enhancement of green infrastructure functions will be maximised by working at the appropriate scale with natural systems to re-vitalise their functions, helping to manage our water environment, regulate the climate, and safeguard our natural environments.

This principle is about working with, rather than against, natural systems, and solving problems at the scale at which natural systems operate. The health of people and wildlife relies on natural processes, many of which occur well beyond urban boundaries. Urban areas cannot function without the support of water, climate and biological systems, even though these may be highly modified and less effective in the built environment. Key components of these regulatory systems – pervious surfaces, soils, vegetation, fauna, ground water, waterways and wetlands – are located within our green infrastructure.

Well-planned green infrastructure is designed to support natural processes, adapt to change, and be cost-effective over the long term. New approaches to urban water management and technological advances in engineering have improved the way stormwater is managed and transported, and can sensitively protect and re-engineer shorelines and drainage routes, whilst at the same time enhancing habitats, improving aesthetics, and saving money. Biofilters, swales, and nutrient stripping ephemeral areas can reduce pollutant loading and flood waters entering rivers and wetlands, and can be located, designed and planted to be aesthetically pleasing and beneficial to wildlife. Landscaping with locally native plants will reduce water use (and therefore costs) and improve biodiversity. Urban vegetation can be retained and enhanced, and integrated with the built environment to positively influence the local climate.

Principle 3: Inspiring places, uniquely Perth

To strengthen Perth's sense of place, the contribution of Perth's natural and cultural environment to the city's character will be described and articulated in plans and designs for the city's future. Sense of place will be supported by retaining and enhancing important natural and cultural features within the green infrastructure network, and by improving the relationship between the built and green environment.

Behind this principle is the need to understand and explain the characteristics of Perth's green infrastructure and its interrelationship with the built environment. This embraces:

- typical characteristics of everyday city-scapes, and how they vary across Perth - places do not have to be iconic to be important to sense of place;
- special or valued places – landmarks, iconic views, natural environments and heritage sites;
- the nature and extent of integration between green spaces, urban trees and built form; and
- the cumulative effects of change on sense of place, and trends to be considered in future planning.

Retaining and enhancing important cultural and natural assets in situ is preferable to loss or damaging modifications. Re-creation of these assets is often unsuccessful, and at best symbolic.

The typology on pages 42-47 sets out more detail on the application of these principles.

Delivering green infrastructure benefits

A suitable implementation framework is required which positions green infrastructure planning alongside other considerations for a growing city. This approach should recognise the importance of each green infrastructure element from a new

perspective of inherent benefits and services, including the contribution to life-supporting natural systems and processes. The desired approach is to co-ordinate and guide strategic and local action to achieve regional outcomes, encourage collaboration and help stakeholders to develop and share good practice.

Central Perth regional parklands

The Capital City Planning Framework proposes that major green spaces, the riverside zone and connecting areas be reconceived as central Perth regional parklands, a single system interwoven with the urban form of Perth. Complementary to this is the strategic understanding, planning and management of the urban tree canopy, and mechanisms for incorporating green infrastructure planning into relevant policies, plans, designs and actions.

Two of Perth's regional parks are Yellagonga Regional Park (which takes in the line of wetlands north of central Perth including Lake Joondalup) and Beeliar Regional Park (which includes many lakes and wetlands in southern Perth including Thomson's Lake and Bibra Lake).

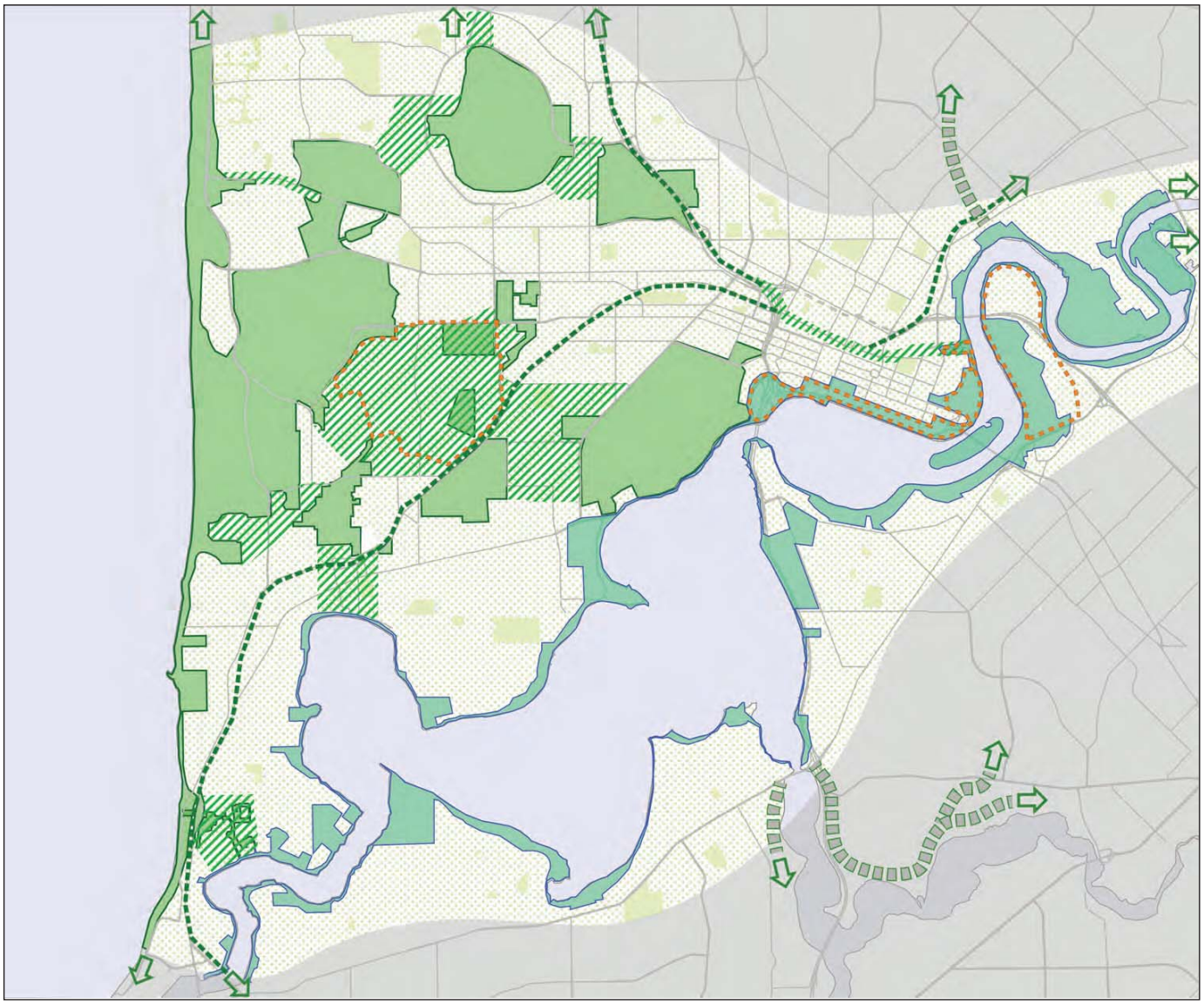
Yellagonga is named after a leader of the Oordalkalla Whadjuk Noongars who are the traditional owners of the area north of the Swan River, while Beeliar is named after the Beeliar Whadjuk Noongars, who are the traditional owners of the area south of the Swan River.

In the tradition of these names and the desire to make more apparent the indigenous history of the Swan estuary it would be appropriate to use an indigenous name for the new central Perth regional parklands. Appropriate wide consultation will need to take place, particularly with the South West Aboriginal Land and Sea Council, to establish the most appropriate name for the parklands.

Mapping green infrastructure

The search area for green infrastructure mapping has been the primary system connecting the city to the river and coast, which is also the focus for the central Perth regional parklands proposal. Within this area, the map captures key elements and opportunities identified through an initial strategic scoping, and should therefore be considered as a basis for ongoing discussion between stakeholders. As the concept is developed, it will be important to explore connections to recreational systems in adjoining areas of the city and beyond.

Green infrastructure concept



Green infrastructure

Regional Parklands
- Major green space
- Riverside zone
- Regional connectivity zone
- Transport greenway

- Parkland enhancement zone
- Urban tree canopy
- Neighbourhood green space *(simplified)*

- External link
- Search areas for future green infrastructure

Urban setting and central Perth regional parklands – a green infrastructure typology

This typology provides a language and logical structure for describing the main elements of Perth's setting, and defines broad implementation policy areas. The typology is high level, describing the main nodes, connections and potential linkages in the network. It provides a framework for a more fine-grained assessment of the distinctive character, functions and values of each constituent part.

The footprint of each type can be considered as a search area for more detailed investigation of green infrastructure potential. In recognition of the whole-system approach, there is no hierarchy implied in this structure – each element is considered an important part of the network.

Each green infrastructure type shares common characteristics in terms of size, distribution, strategic location, and degree of protection from a land-use and environmental policy perspective. This categorisation is driven by the implementation mechanisms likely to be employed. Consequently, functions and landscape characteristics (such as degree of naturalness, land form, type of vegetation, activities supported) tend to vary within each type.

'Potential futures' outlines the direction of change for each type, and proposes ways of improving connectivity and green infrastructure functions in line with the guiding principles. This is a menu of regional and local implementation strategies intended as a basis for further discussion amongst stakeholders. Many of the mechanisms listed are already being implemented by state agencies, local governments and non-governmental organisations in isolated locations. There is considerable opportunity to co-ordinate this activity, and share good practice.

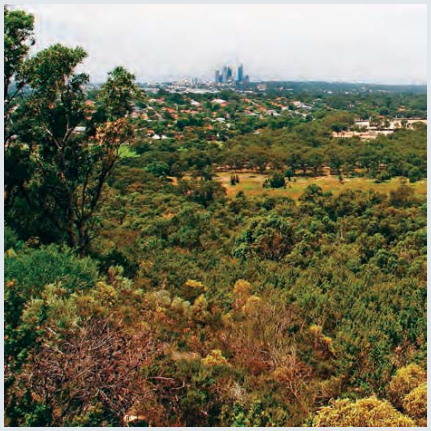
Major Green Spaces

Characteristics

- Include sizeable green spaces across the city to the west coast, and core nodes of the central Perth regional parklands.
- Consist mainly of large parks, golf courses and public lands, reserved as Parks and Recreation or Public Purpose within the Metropolitan Region Scheme, and include adjoining non-reserved land offering green infrastructure benefits.
- Contain a mix of natural and modified landscapes including bushland, dunes, sports fields and golf courses.
- Have a variety of roles and functions – biodiversity, heritage, recreation, sport and defence.
- Play important roles in biological, water and climate systems due to size, shape and distribution and surface permeability.
- Collectively contain the largest viable habitat patches and Bush Forever sites in the city, along with the Riverside Zone.
- Maintain important functions as settings for regional trails, and as tourism attractions.
- Represent high community values, for meetings, events, as activity hubs and for quiet enjoyment of nature and cultural heritage.
- Retain an important relationship to urban areas for the setting of built form.
- Convey high recreational, health, quality of life, tourism and property values through their proximity to urban areas.

Menu of potential futures

- Retain existing Metropolitan Region Scheme status, and consider opportunities for establishing Parks and Reserves zoning on Public Purpose and other land.
- Develop an overarching central Perth regional parklands management framework to co-ordinate current activity and generate system-wide plans for biodiversity, landscape, heritage, water management, climate, access, sport and recreation.
- Within this framework, continue existing management arrangements, and devise management arrangements for remaining sites.
- Improve ecological connectivity by progressing the recommendations provided in the *Central Perth Regional Parklands Concept: Vegetation Connectivity Analysis*, and facilitate people movement between sites, notably in Regional Connectivity Zones and Parkland Enhancement Zones, and appropriate access through public land.
- Develop the regional recreational and commuting cycle network through and between these sites, and address access issues on Public Purpose land, for example, as part of the *Western Australian Bicycle Network Plan*.
- Potentially extend the Bibbulmun Track to the west coast from the Riverside Zone.
- Enhance and expand the range of functions in each space for maximum cumulative effect. For example introducing water management and wetland features, to manage the effects of changes in rainfall and groundwater.
- Restore the habitat value of existing bushland and wetlands, and re-introduce native vegetation on non-essential grasslands to reduce water use and associated costs. Improve biodiversity functions and increase shade of pathways and sports-field spectator areas.



Riverside Zone

Characteristics

- Consists of two corridors adjacent to the north and south shores of the Swan River.
- Are core elements of the central Perth regional parklands, providing connectivity in a north-east, south-east and south-west direction.
- Include many corridors which are relatively narrow, encompassing part of the Swan–Canning River Park and widening to include river-side parks, sport and recreation spaces, heritage sites, bushlands and wetlands.
- Are mostly reserved as Parks and Recreation within the Metropolitan Region Scheme, however the zone includes areas where there are breaks in this status and where the riverside trail requires detours.
- Have the river as a common feature, but whose character varies considerably in terms of the type and intensity of use and user-experiences.
- Includes a wide range of tenures and adjacent areas of redevelopment results in very different approaches to design, planting and management across the zone.
- Contains some of the most significant Bush Forever sites in Perth, along with Major Green Spaces.

Menu of potential futures

- Retain existing Parks and Reserves Metropolitan Region Scheme status and consider opportunities for establishing further reserves to enhance connectivity.
- Ensure that management and development is in keeping with a regional-scale wildlife habitat and recreational corridor, and guided by the Swan River Trust's river protection and the Swan Estuary Marine Park objectives.
- Look for opportunities to share good practice between State agencies, local governments and non-government organisations, and showcase good green infrastructure outcomes in re-development projects.
- Promote a unified approach by coordinating existing activity, expressed through cohesive design and management policies.
- Emphasise the river's importance to indigenous and non-indigenous people through signage, planting design and the use of native plants, and a high-quality, unbroken recreational trail.
- Manage sport and recreation spaces to reduce nutrient run-off and water usage.
- Connect the existing foreshore walking and cycle network, requiring a combination of land purchases and enhancement of unavoidable detour routes.
- Explore extension of the Bibbulmun Track through Perth in the up-stream section of the zone.
- Link habitats, trails and movement networks from the foreshore through Regional Connectivity Zones and Parkland Enhancement Zones to inland parts of the network and community centres, including within the CBD, Claisebrook, Kings Park and Claremont.
- Progress the recommendations provided in the *Central Perth Regional Parklands Concept: Vegetation Connectivity Analysis*.
- Use opportunities in associated riverside parks and reserves to enhance riverside bushland and wetland qualities, and locate water-improvement features.
- Take advantage of proximity to the river to manage flood events and nutrient-stripping linked to drainage outfalls, where these cannot be done up stream.
- Protect the built and natural environment from predicted sea-level rise and storm surges, through integrated wetland creation and soft engineered shorelines.
- Revegetate selected areas of grass lands to reduce water use and run-off, as well as fertiliser use, and provide compensation for lost bushland habitats.

Regional Connectivity Zones

Characteristics

- Usually linear areas, strategically located to establish better connectivity between core elements of the green network.
- Consist mainly of built areas, roads and verges. May contain remnant native vegetation, local parks, heritage and nature trails, and significant areas of, or potential for, urban trees on public and private land.
- Represent areas where facilitating people and wildlife movement is highly desirable, in conjunction with greener streetscapes.
- Criteria for selection include the spatial relationship of core elements, existing or proposed regional trails, regional ecological linkages, the urban tree canopy, and drainage routes with potential for surface expression.

Local connectivity zones are desirable to support local trail routes and habitat connections between Neighbourhood Green Spaces. There are numerous potential candidates and these are not shown on the green infrastructure map.

Menu of potential futures

- Require strategic planning to provide or improve connectivity for recreation and biodiversity, to retain existing assets, and to improve the relationship between built and natural landscapes.
- Refer to guiding principles for establishing ecological linkages and progressing the recommendations, as provided in the *Central Perth Regional Parklands Concept: Vegetation Connectivity Analysis*.
- Identify the capacity of open spaces to deliver the needs of a growing population, and seek opportunities to connect the network with ecological and recreation linkages.
- Achieve green infrastructure objectives by a range of approaches, combining policies, restrictions and incentives, such as tree retention and plant subsidy schemes for landowners and businesses.
- Implement connectivity objectives by a range of mechanisms, including local planning strategies, local planning policies, urban design guidance, structure plans, developer contribution schemes for acquiring remnant vegetation, planning conditions, tree policies and registers, planting incentives and interpretative trails.
- Promote and share good practice in establishing recreational and ecological linkages.
- Share good practice in green infrastructure planning in redevelopment projects between State government agencies, local governments and non-government organisations.
- Retain and plant trees and native vegetation on private and public land, such as reserves, verges and median strips; identify walking and cycle trails and align these to ecological linkages; identify potential park avenues and boulevards within denser urban areas; and design green infrastructure into development sites.
- Consider urban densities in these areas to provide for nature strips and gardens with native vegetation.
- Examine opportunities for minimising the impacts of major roads across corridors on people and wildlife movement, including the feasibility of road and rail overpasses and underpasses.
- Consider the future of road reserves and the potential to provide green infrastructure functions, such as the Stephenson Avenue extension route and Stirling Highway.
- Consider incentives for schools and other institutions to provide, restore and create suitable habitat within their grounds.

Parkland Enhancement Zones

Characteristics

- Large, high profile areas strategically located within the network, mainly in public tenure.
- Zones with high actual or potential economic, social, landscape, biodiversity and recreational values.
- Areas undergoing redevelopment or other changes.
- Consist of three areas: Shenton Park, the city water frontage and Burswood Peninsula.

Menu of potential futures

- Plan and design these zones by considering their location in the central Perth regional parklands network alongside pressures for re-development.
- Support protection and enhancement of existing valued features, and seek opportunities to re-connect with open spaces and parks.
- Use collaborative structure planning to provide important recreational and biodiversity linkages, soft infrastructure for water management and other contributions to the green network.
- Seek opportunities to progress the recommendations from *Central Perth Regional Parklands Concept: Vegetation Connectivity Analysis* in these areas.
- Design and manage open spaces so that they deliver the maximum range of benefits to the whole community, with enhanced recreational access where feasible.

Neighbourhood Green Spaces

Characteristics

- Smaller than Major Green Spaces, tending to be relatively isolated from each other and encircled by built environments.
- Generally Parks and Reserves in the Metropolitan Region Scheme and usually managed by local governments.
- Provide important biodiversity, water management, recreation and sporting functions, sometimes all within one space.
- Enhance the setting and values of adjacent properties, and can be important refuges and stepping stones for wildlife.

Menu of potential futures

- Retain existing Metropolitan Region Scheme status, and pursue some form of protection for non-reserved sites.
- Undertake a strategic review of the range and balance of functions of these areas to consider their role as part of a wider network and identify their capacity to deliver the needs of a growing population.
- Seek a balance of spaces preserved for recreation, sport and nature.
- Seek opportunities to connect to the wider green network with ecological and recreation linkages.
- Incorporate opportunities for water management features linked to catchment management and water quality improvement plans.
- Restore the habitat value of existing bushland and wetlands to enhance open space function as biodiversity stepping stones, and where possible re-creating new habitats using local species.
- Nominally link these areas to provide an accessible, visible network by enhancing the urban tree canopy, particularly within Regional Connectivity Zones and along cycle routes and trails.

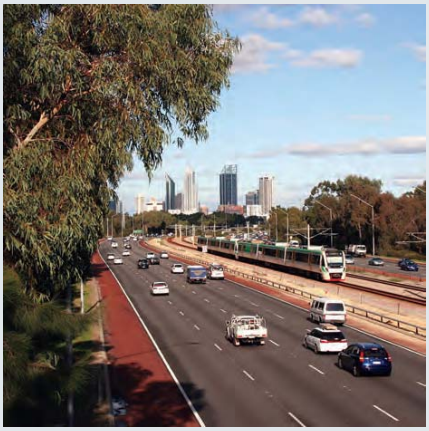
Transport Greenways

Characteristics

- Linear transport corridors with relatively wide verges, passing several larger network nodes and Regional Connectivity Zones.
- Highly visible but generally inaccessible to people apart from adjacent dual-use paths.
- Includes the Mitchell Freeway/Joondalup rail corridor, the Fremantle and Midland rail corridors.
- Other routes may be identified, for example major arterial routes and gateways into the city, such as Stirling Highway, the Graham Farmer and Kwinana Freeways.

Menu of potential futures

- Progress the recommendations provided in the *Central Perth Regional Parklands Concept: Vegetation Connectivity Analysis*.
- Establish strategic corridors of vegetation in surplus land on reserves to enhance landscape and biodiversity functions and provide cooler, shady movement corridors.
- Balance habitat enhancement objectives with the limitations of future infrastructure improvements, and the risks associated with attracting wildlife to dangerous environments.
- Expand dual-use paths to better link with adjacent parks, reserves, trails and sports fields.
- Seek opportunities to provide better surface expression of the water cycle, increasing biodiversity functions, helping to clean and control run-off water.
- Focus maintenance and operational activities to take account of the actual and potential biodiversity and recreational functions of these areas.
- Identify additional transport greenways with potential for recreational and wildlife links and to enhance as gateways to the city.



Urban Tree Canopy

Characteristics

- Includes trees of any size and species across the entire area, on public and private land, in yards, streets, verges, cemeteries, the grounds of public buildings and institutions, parks and open spaces.

Menu of potential futures

- Develop a strategic approach to urban tree management that will enhance tree canopy benefits and services. This will:
  - map the tree resource using available digital imagery and monitor change;
  - identify the range of services that urban trees provide;
  - evaluate the social, economic and environmental benefits;
  - assess changes, trends and threats to urban tree values; and
  - formulate policies and actions, including the sharing of good practice between local governments.
- Incorporate urban tree canopy objectives into urban planning and design processes, biodiversity plans, and the management of green spaces, including targets for tree canopy coverage.
- Progress the relevant recommendations provided in the *Central Perth Regional Parklands Concept: Vegetation Connectivity Analysis*.
- Emphasise the importance of retaining trees on public lands such as schools, hospitals and universities.
- Identify potential park avenues and boulevards for denser urban areas and in connectivity zones.
- Use regional tree canopy values and local tree assessments to inform local planning strategies, schemes and structure plans, including spatial plans for higher urban densities and the spatial plan for urban consolidation for metropolitan Perth and Peel.
- Identify significant trees and tree groups, including valued heritage and streetscape trees, and trees which are important for endangered wildlife such as Carnaby's cockatoo roosting sites.
- Safeguard significant trees through the creation of tree registers, regional and local polices and incentives, such as grants and environmental projects.
- Pursue undergrounding of overhead lines in areas where the tree canopy is under threat.
- Ensure a balanced approach to managing non-native trees. Significant non-native trees, groups and avenues to be recognised for their amenity and increasing wildlife value, and appropriateness to the urban environment due to their form, vigour, shade provision, pollution tolerance and other characteristics.
- Develop proactive monitoring, planting and replacement strategies to focus efforts on areas of risk and opportunity, such as Regional Connectivity Zones and Parkland Enhancement Zones, and encourage retention of good quality trees.
- Promote the choice of native species for new planting schemes to achieve maximum biodiversity and water conservation values, and fitness for a changing climate, appropriate to a liveable urban environment.

Key elements of Perth's green infrastructure

The diversity of Perth's green infrastructure is to be celebrated. Special places and everyday streetscapes can be enhanced through better understanding of their contribution to Perth's setting. Well known, iconic attractions work alongside local parks, rail verges and street trees to enhance the city and our way of life.

Major Green Spaces

City spaces, parks and dunes

Close to the city centre and Swan River and edged with towering apartments and dignified boulevards, Kings Park offers a wide range of experiences. With natural bushland, restaurants, exotic botanic gardens, indigenous heritage, spectacular city and river views, state memorials and children's play areas, the park caters for 6.5 million visitors a year. Bold Park provides a different experience, with large areas for quiet enjoyment, extensive bushland walks and magnificent views of the city to the east and coast to the west. Both parks are impressive for their scale, biodiversity, climate regulation and recreational values.

Herdsman Lake Regional Park and Lake Monger are the most sizeable remnants of the once extensive wetland system that extended from the Swan River at Claisebrook to Lake Monger and Herdsman Lake, northwards parallel to the coast to lakes at Yellagonga Regional Park and beyond. Closer to the coast and estuary is Lake Claremont. Other lakes and wetlands survive in smaller open spaces across the area, along with a complex and highly modified interconnecting ground water and drainage system. Collectively these areas provide important biodiversity, landscape, recreational, climate and water management functions for the city. There is considerable potential across the region to enhance wetlands by improving water quality and restoring native vegetation in adjacent areas.

Swanbourne's dune and coastal heathland habitats connect the network to the beach. Although access is restricted on Defence Department lands, this has helped to protect the natural environment.

Riverside Zone

The Swan and Canning Rivers

Water has always been fundamental to Perth's identity and lies behind the long history of human use in this region. The local Noongar culture and economy centred on the edges of the coastal plain's rivers and wetlands. The first European settlements at Fremantle, Perth and Guildford were physically connected by the Swan–Canning estuary and, over time, grew around the river until they united as a single metropolitan area.

Today, river views, parks, wildlife and heritage sites are enjoyed along the almost continuous dual-use path, parts of which are used for commuting. Open spaces for recreation, and land near the city centre double as places for major events. City foreshores are in close proximity to the city centre, providing an important setting for the City skyline, and are well connected to the city grid. The river itself is a valuable resource, important for the city's setting, climate, wildlife and as a focus for water-based recreation.

The river and foreshore values are recognised in the establishment of the Swan–Canning Riverpark. Within the river, the Swan Estuary Marine Park protects three important areas of the river of international importance for migratory birds.

Water quality and riverside landscape and habitats are under increasing environmental stress. With views of the river from private property at a premium, riverside trees can be damaged and revegetation and restoration proposals resisted. Large stretches of the shore line and associated native habitats have been modified to accommodate development and formal parks, for bank protection or to provide transport routes. Polluted water enters the river from a number of the City's drains and from agricultural lands upstream. Erosion of the river banks threatens trails and wildlife habitats. Point Fraser is an example where initiatives to trap and clean surface water run-off, manage flood waters and create wetlands are helping to redress the balance.

Regional Connectivity Zones

Linking the city, parks, river and coast for people and wildlife

Zones establishing better connectivity between the City, river foreshore, Kings Park, Bold Park, the coast, Herdsman Lake and Lake Monger will enhance regional trail routes and ecological linkages to connect the city to the coast, and potentially provide a route for an extended Bibbulmun track. Successfully establishing connections between Kings Park and Bold Park offers the greatest challenge, and potential gains. These zones include large areas of important remnant bushland, tree-lined streets, government institutions, open spaces and a cemetery.

Connectivity zones with piped drainage may allow for conversion to more water-sensitive design such as living streams, multifunctional wetlands and ponds. This includes the link between Wembley Golf Course, Herdsman Lake and at Claisebrook.

Imminent planning for the regeneration precinct of Royal Perth Hospital and surrounding areas offers the opportunity to incorporate parkland and landscaped elements to evoke the original Claisebrook Valley. Some further physical and functional presentation of the brook and former wetlands would assist recognition of the original setting of central Perth, improve surface water management, and assist recreational connection of the Northbridge area to the river foreshores. This planning will also need to explore the future connection of Roe Street east of Stirling Street, the nature of Royal Perth Hospital's campus and the future of the car parks around Claisebrook Station.

Parkland Enhancement Zones

The city river foreshore, Shenton Park and Burswood Peninsula

Shenton Park, Karrakatta cemetery, the Queen Elizabeth II hospital site and surrounding suburbs are strategically located in the Regional Connectivity Zone between Bold Park and Kings Park. Much of this area is in public ownership and parts are undergoing re-development. There is still an opportunity to incorporate green infrastructure between the two parks.

The Elizabeth Quay project may act as a catalyst for the area around the Narrows Interchange being redesigned to include natural nutrient-stripping systems for the mouth of the Mounts Bay main drain, and for better connections with Kings Park.

Significant opportunities also exist for enhancing natural systems and wildlife habitats, parklands and riverside trails in the redevelopment of Burswood Peninsula.

Neighbourhood Green Spaces

Parks provide important bushland, wetland and water features for wildlife, sports, recreation and play facilities to support active lives, and provide local communities with an opportunity to socialise. They can provide a focus for local trails, such as the Wetlands Heritage Trail in the City of Vincent, and may include significant areas of bushland, such as Hale School grounds.

Transport Greenways

Central Perth has many roads, railways and other infrastructure that are accommodated in wide reserves. Whilst these reserves provide robustness for future planning and within which transport requirements take priority, they also provide an opportunity to add to the indigenous vegetation of the city – such as the initiative for the Fremantle rail corridor– and to become recreational and environmental assets. In places, the reserves adjoining the Mitchell Freeway support mature trees which link to dual-use paths and Major Green Spaces such as Lake Monger. Major gateway routes entering the city provide the opportunity to provide entry statements which capture the city's sense of place.

Urban Tree Canopy

Urban trees, including those in streets, parks and on private land, are important elements of Perth's natural and built environment. They give shade and shelter to pedestrians, reduce noise and pollution, provide habitats for wildlife, enhance our streetscapes and yards and modify the city's climate to reduce heating, cooling and health costs.

In many places, Perth's mature tree canopy is under threat from removal, damage, disease and climate change. A strategic approach to assessing and monitoring the urban tree canopy will help us to understand and cost the collective value of trees, identify threats, and formulate effective actions for tree canopy management. A region-wide assessment can identify areas to focus action on tree retention and tree planting, such as ecological linkages, walking trails, cycle routes and roads, and where trees can enhance urban character and shade hard surfaces. Active monitoring will identify incremental loss of tree canopy, and identify preventative and corrective actions.

5.1.2 Key concept 2: A city of capital city places

Representation of Perth as the State's capital city is to be focused on three main precincts of the Perth city centre.

Capital city precincts

The primary elements that make Perth city the capital of Western Australia are the cultural, legal and political institutions of the State that are established in the city centre. These institutions are almost wholly located in three public precincts, making them the primary capital-city precincts of the State. It is in these places that citizens and visitors experience institutions of State and culture.

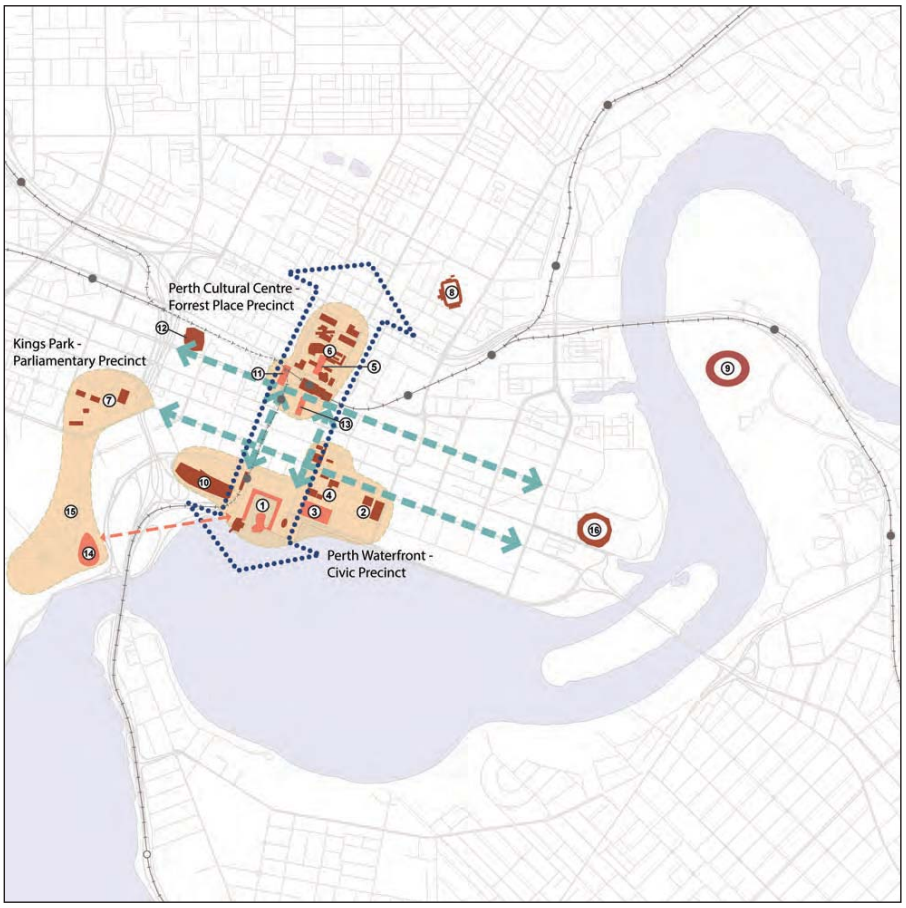
The three capital city precincts are the:

- Kings Park - Parliamentary Precinct;
- Perth Cultural Centre - Forrest Place Precinct; and
- Perth Waterfront - Civic Precinct.

Although these precincts are markedly diverse, they share much in common, including:

- places for the State's most important institutions;
- home to some of the most historic buildings, places and events during the State's history;
- places of low-height pavilion buildings in garden landscapes, contrasting strongly with the intensive urban forms and usually taller buildings of surrounding areas;
- places that host civic activities and gatherings;
- locations of monuments for significant events and people;
- vistas to and from iconic features and places;
- essentially public park domains, accessible for people to walk through and enjoy; and
- locations around the edges of the city's main business area and within walking distance of each other.

The careful design of these precincts and their integration with the larger city is paramount to the design of Perth as a capital city and to these places as key civic precincts. Aspects to be collectively addressed in shaping these places as high-quality capital city precincts include:



City centre structure

Central activity axis

Principal connections

Notional links

Significant landmark or building

Principal public space

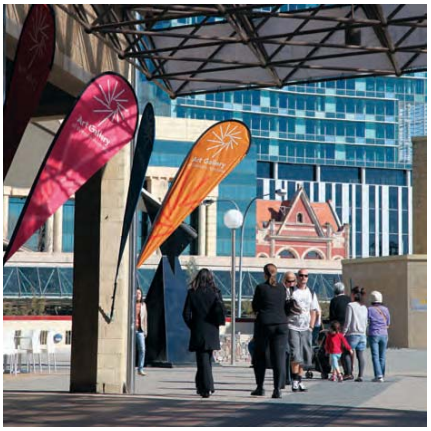
Capital city precinct

Significant places

1. Perth Waterfront
2. Government House
3. Supreme Court Gardens
4. Council House and Supreme Court
5. Perth Cultural Plaza
6. Perth Cultural Centre
7. Parliament House
8. NIB Stadium (Perth Oval)
9. Proposed major stadium, Burswood
10. Convention Exhibition Centre
11. City Square
12. Perth Arena
13. Forrest Place
14. Mount Eliza
15. Kings Park
16. WACA Ground

- clarifying the form and definition of each precinct, to activate and emphasise their role as the premier locations of the State's capital and to enhance their attractiveness as essential destinations for citizens and visitors;
- ensuring the Metropolitan Region Scheme allows a co-ordinated planning approach to develop and integrate the precincts as capital city places as the whole city evolves;
- retaining and incorporating elements of Western Australia's rich indigenous culture and natural history within the precincts;
- building on the civic qualities, significance and design of each precinct. Enhancing their public realm, their role as gathering spaces and places for community stewardship and cohesion; and
- addressing the challenge of allowing clear paths of access between the three precincts, particularly critical access from the Perth Cultural Centre to the Perth Waterfront, and Perth Waterfront to Parliament and Kings Park.

In addition to these collective conditions, each precinct holds individual opportunities that can assist in the evolution towards high-quality capital city places as the structure of central Perth evolves and grows. These are outlined below, along with their major institutions and places.



Kings Park-Parliamentary Precinct

Institutions and places

- State Parliament, the State Constitutional Centre, and the State's main military and civil memorials, the Old Perth Observatory.
- Outdoor places and gardens that make up Kings Park.

Opportunities

- The improved relationship between Kings Park, the Perth Waterfront, the Swan River, Parliament House and the city centre. Including addressing the Mitchell Freeway barrier and pedestrian access between these elements.
- The extension of Parliament House and the management and role of Parliament Hill as a public place.

Perth Cultural Centre-Forrest Place Precinct

Institutions and places

- The Perth Institute of Contemporary Art (PICA), the State Library of Western Australia, the Art Gallery of Western Australia, the Western Australian Museum, the State Theatre Centre, the Central Institute of Technology and Perth Station transit hub.
- Forrest Place, Perth Cultural Centre plaza, Perth Station forecourt, and the future City Square.

Opportunities

- The improved pedestrian connection between Forrest Place and the Cultural Centre plaza.
- The form of the Perth Cultural Centre plaza, incorporating the major redevelopment of the art gallery and museum buildings.

Perth Waterfront-Civic Precinct

Institutions and places

- Government House and its ballroom, the City of Perth and its Town Hall, the Supreme Court, the Perth Concert Hall, the Perth Exhibition and Convention Centre, the Commonwealth Law Courts, the former home of the Legislative Council and State Executive, the proposed State's indigenous cultural centre, the Esplanade Station transit hub, the Swan Bells, the Barrack Street Ferry Port and the Anglican Cathedral.
- The State's first botanic gardens at the Supreme Court, Barrack Square, the Concert Hall forecourts, Government House gardens and, the future Elizabeth Quay.

Opportunities

- The role and management of Government House gardens.
- The extension to the Supreme Court.
- The accommodation of the West Australian Symphony Orchestra.
- The redevelopment of the Terrace Road car park.
- The final design of Elizabeth Quay including the nature and form of a State indigenous cultural institution.
- Adaptation to rising river levels.
- Connection to Kings Park.

These precincts are complex places. Their ongoing development and management must remain a partnership between agencies, in particular the City of Perth, which itself is a major capital city institution.

Stadiums

Major event arenas are further elements that help define capital cities. Western Australia's main arenas for major sports and other events are all located in or near central Perth, giving further weight to the importance of the framework focus area to the State.

The Perth Arena and the Western Australian Cricket Association (WACA) ground are located in the heart of the central city, while Perth Oval (NIB Stadium), Subiaco Oval, the proposed Burswood stadium and the cluster of sports facilities at AK Reserve/UWA Sports Park are located in the collar around the city centre. There is strong logic to locating major sport facilities in close proximity to the city centre, which includes:

- The capacity to draw people together from across the State for a major event is an important moment for the larger community. Associating such large events with the capital city gives prestige to the city and the event, and allows people to feel a part of their capital.
- Good public transport infrastructure to disperse crowds is essential for any major arena, and the city centre and its immediate surrounds is where the public transport system is most accessible and most directly connected to the rest of the city and State's regional areas.
- The capacity to use major sports events as leverage for the promotion of cities is very strong. Television coverage that captures the venue, city centre, the Swan River and Kings Park in the same view could help to build an iconic image of Perth and its setting. This should be considered when deciding the location of future facilities.
- The location of stadiums within walking distance of places that offer complementary activities to major events, such as parks and restaurant areas, allows a spreading of high loads over wider periods on the public transit and road systems, thereby minimising the need to build transport infrastructure especially for major events.

Perth Arena, located adjacent to Perth's main public transit hub and the city's main retail and nightlife areas, has these qualities. The State's other primary and planned venues at Burswood, Subiaco Oval, Perth Oval, the WACA ground and the AK Reserve/UWA Sports Park facilities also embrace many of these qualities in varying ways.

Unlike the primary civic and cultural institutions, Perth has not clustered the primary sports facilities into distinct sports parks. The exception to this is the cluster of smaller venues at AK Reserve/UWA Sports Park, where the Western Australian Institute of Sport has its home. This has become a distinctive part of Perth's form and there appears to be significant logic in maintaining the current dispersed distribution of the venues in close proximity to the city centre.

5.2 Activity and built form

The distribution and nature of activity is a key dimension of the form of any city. This framework seeks to guide the refinement of central Perth's pattern of activity to enhance its sense of place and its sustainability, while delivering greater economic strength and liveability for the people who reside, work, shop, study and play within its confines.

While central Perth will have to grow to accommodate a wide range of new activities in a mixed-use environment, the underlying distribution of business activity is likely to remain very much as it is today. The city centre will remain the heart of business investment, while the surrounding activity centres and connecting corridors will deliver additional places where business activity can occur in an ever-richer mix with other activities. Places for business are not likely to be in short supply over the coming generation.

There are real challenges in finding new ways to facilitate population growth, and to balance this with the other activities of central Perth. This section focuses on places for living, and the ways in which knowledge and cultural activity are catered for in central Perth. This activity can deliver great leverage for achieving many positive outcomes, and often benefit from clustering in communities of complementary activities.

5.2.1 Key concept 3: A city for growth

Central Perth is to further embrace the activity and intensification of built form that accompanies growth in its population.

There are forces that make significant growth and intensification in central Perth desirable and in many ways inevitable. This growth and intensification needs to be reflected in the scale of activity occurring within central Perth.

Growth with good planning presents opportunities for central Perth to adjust relatively easily to the many social, other environmental and economic challenges that will be generated in the coming 50 years. Our success in harnessing growth for general betterment will in many ways be the greatest test of the city's success.

Growth associated with a larger population does not necessarily only entail increased residential density within areas of unchanged amenity. The areas of central Perth in which residential growth will lead to an evolving structure and form will also embrace principal issues such as:

- transport infrastructure that allows choice in mode of travel, good accessibility to key locations, and integration with surrounding land uses;
- employment density and the attraction of a diversity of businesses and services to allow short travel distances between home and work, and a choice of nearby retail and commercial services;
- improved amenity in open space, the public realm, and the availability of civic, public and community buildings and infrastructure; and
- a mix of land uses to support a connected community.

Through thoughtful planning and good design many of the perceived negative outcomes of growth will be more than counterbalanced by positive changes.

Good communication, true dialogue and partnerships between stakeholders such as local and State government, the community, businesses, service providers and industry groups should ensure overall positive outcomes for current residents, future residents, local businesses, employees and visitors.

5.2.2 Key concept 4: A city with resilient urban characteristics

A more sustainable, liveable and resilient city is to occur in unison with urban growth and in alignment with the underlying city structure.

For central Perth to become a more sustainable and resilient place we will need to challenge our policies, lifestyle choices and engagement in communities. Planning can contribute by making places more conducive to energy-efficient lifestyles (particularly transport energy), enabling better interaction between people, and encouraging effective responses to a changing climate.

The underlying urban structures of central Perth largely predate the era of the motor car, and retain many of the characteristics associated with community interaction and reduced energy use. Elements such as adaptable street grids, main streets with people-focused edges, and local activity centres with good access by walking and public transport are important assets to the objectives of this framework.

Many infrastructure adaptations of the late twentieth century facilitated primary access to the city by car. This has manifested in places dedicated to single uses; main streets inhospitable to pedestrians and cyclists; and land use and built form dominated by car movement and parking. Greater priority is now being given to making sustainable places for people and appreciation of the underlying structures of the city will assist to redress this balance.

Strategies to help build resilience and sustainability within central Perth include the following:

- At the urban structure level, energy-efficiency and human interaction can be supported through aligning growth and change with the original structure of central Perth.
- Adaptive re-use of existing building fabric can significantly reduce embodied energy and waste compared to new construction. Retaining and revitalising existing buildings also reinforces local character and identity.
- Existing buildings can reduce operational energy use, often with relatively uncomplicated methods. Improvements such as seals, insulation and solar thermal systems are increasingly efficient and cost-effective.

- New buildings can optimise orientation, solar passive design, natural ventilation and building services to minimise energy use. Selection of appropriate building materials and construction techniques can reduce resource consumption and embodied energy. New building types should also consider adaptability for future uses.
- Energy that is produced from distributed sources closer to where it is used is also a possibility. This matches with the general characteristics of resilient systems, including diversity, spare capacity and the potential for collective or autonomous operation.
- Sustainable water management should be a priority at all scales from urban planning to design of specific buildings and open spaces. City growth will need resilient strategies for water resources, conservation, quality and quantity management.
- Response to changing climatic patterns will require vulnerability and risk assessment for infrastructure and communities. For example, assessment of sea-level change may lead to responses that are precautionary and with a long-term view. Over time this may lead to changes in policies and standards for buildings and urban structures at risk of inundation.
- Communication and cooperation between government agencies, industry and the community is a critical factor in meeting these challenges.

5.2.3 Key concept 5: A city for living in

Central Perth is to become home to many more people, especially within the city centre, its neighbourhood activity centres and its main public transport corridors.

The major challenges facing greater Perth identified in this framework include:

- accommodating significant population growth;
- improving on current infill densities;
- achieving a connected city growth pattern;
- increasing housing diversity and affordability;
- reducing car dependency; and
- achieving greater liveability.

The planning implications of responding to these challenges are many; however, a necessary common spatial outcome is the need to accommodate many new homes in higher density configurations in targeted locations.

Central Perth needs to be particularly responsive in accommodating new homes because it is here that many qualities of household sustainability and liveability coincide. These qualities include the greatest access to jobs, education, public transport and rich mix of cultural and recreational activities.

Currently, central Perth has an overall residential density only moderately above that of the rest of the established areas of Perth, while the residential density of the city centre is below that of surrounding suburbs. To achieve the expected significant dividend from increased housing this pattern will need to be reversed. The city centre should be the place in the metropolitan area with the greatest density of housing, and the remainder of central Perth should have a density significantly above that of the surrounding region.

If this pattern is to be achieved by simply increasing the possible residential densities throughout central Perth, many negative outcomes could be realised. To achieve this increase in residential population therefore requires some focused intensification within selected areas and the preservation of current amenity and structure within others. *State Planning Policy 4.2: Activity Centres for Perth and Peel* provides residential density targets within the activity centres of Perth and Peel. Such a strategy is desirable to:

- maintain the choice of lower density suburban living as a viable option;
- maintain the heritage and amenity of some suburban areas;
- increase the proportion of apartments, units and townhouses relative to single housing;
- make good use of locations where it is easy to move around without a car; and
- make good use of locations where it is possible to be adjacent to shops, parks and other amenities.

The provision of affordable housing (in this context meaning housing at a sufficient standard and cost to allow other living expenses to be adequately met over time), is a valuable ingredient in contributing to the overall strength, cohesion, diversity and equity of the whole community. It is also an essential part of the encompassing concept of affordable living, and will need to be considered as part of this focused intensification.

Central Perth has seen a deterioration in housing affordability due to a number of factors, including the constraint of available land and house supply, and more generally because of population growth and changes in household structure. There are other contributing factors, such as housing investment, financing and workforce participation.

Thus, while not being the sole contributor to affordable living, planning can influence affordability through guiding such things as dwelling density, diversity of size and other housing characteristics. The delivery of these things does not need to occur at the expense of design quality and performance. The Department of Housing's *Affordable Housing Strategy 2010-2020* identifies a number of aims and initiatives with coinciding intent[22].

Liveability and affordable living can also be addressed through good access to public transport and urban infrastructure and destinations like schools, parks, shops and employment. Some of these amenities and services are also provided by community organisations which contribute to liveability but can themselves also be affected by affordability issues in high amenity locations.

In central Perth, which is rich with this amenity and infrastructure, providing houses for people and households on all income levels thus becomes particularly important.

5.2.4 Key concept 6: A city for knowledge and culture

Perth city centre and the three university-based centres are to be developed as the primary places in which to foster the knowledge and cultural industries within central Perth.

Fostering knowledge and culture has emerged as a major driver for ensuring that Perth builds on its importance as an international centre for excellence, including in resource and environmental industries. These industries are important contributors to the building of diversity and robustness in the economic base of the State, and to most of the qualities articulated in this framework as being desirable for a liveable and sustainable city.

The attraction of tourists to experience Western Australian culture and place is also major contributor to economic diversity and employment as well as the liveliness of central Perth. As an area that contains numerous attractions and activities for tourists and a hub for tourists going to other parts of the state, tourism needs be further supported in central Perth through such planning as public transport and pedestrian access, accommodation and encouraging amenity that complements tourism development.

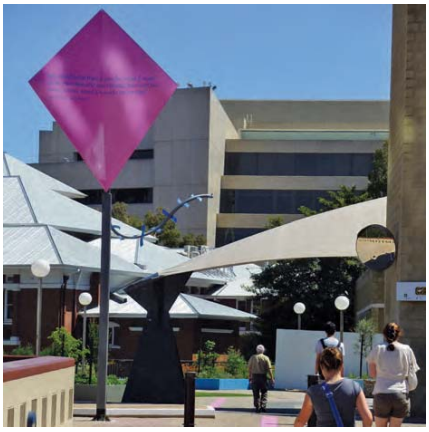
The clustering of knowledge and cultural industries is distinctly arranged in central Perth and this will exert a major force on its development over coming decades. The hubs of this knowledge, creativity, innovation and culture in central Perth are Perth city and the locations containing the three main university campuses – Nedlands-Crawley, Bentley and Mount Lawley. The Capital City Planning Framework therefore assigns particular emphasis on the activity and places associated with these.

Perth city

Perth city is home to an extraordinarily dense cluster of knowledge and cultural activities. The interconnectivity sustained by this density of activity by businesses, institutions and government agencies is a large part of the rationale for the city centre's existence. Therefore, each of these sectors is reliant on the health of the other for its prosperous operation.

While Perth city is strong in business, governance and culture, most educational, health and research institutions are located just outside its confines. Only the Central Institute of Technology, Royal Perth Hospital and Curtin Graduate School of Business provide major centres for the education and health sectors. The potential for additional health, research and education services close to the city centre should be considered in future planning, particularly in regard to existing and prospective educational institutions.

Being directly linked to all educational facilities makes the Perth city an obvious location for dedicated student accommodation. This is reflected in many students' preference for living close to the amenities of the city, particularly among the overseas student population. The *Public Spaces Public Life: Perth 2009* report by Gehl Architects identified the need to increase student activity and the student population in the city centre as a key strategy for achieving a lively and viable city centre for Perth.



Nedlands-Crawley, Bentley and Mt Lawley

After Perth city, the three centres in which universities are located are the most important centres of activity for knowledge and culture in central Perth. The centres at Bentley (Bentley-Curtin), Nedlands-Crawley (UWA-QEII) and Mount Lawley (Edith Cowan University) have each gone through major growth and have branched out from traditional university teaching and research locations to become important activity centres for culture, health, and technology industries.

Directions 2031 and Beyond designates Nedlands-Crawley (UWA-QEII) and Bentley-Curtin as specialised centres in the hierarchy of activity centres in the metropolitan area. Mt Lawley includes some important specialised facilities such as Edith Cowan University (ECU), which links central Perth to the greater ECU and the Western Australian Academy of Performing Arts (WAAPA). It is anticipated in *Directions 2031 and Beyond* that the Mount Lawley location will emerge over time as a recognised specialised centre.

These three centres have grown from suburban surrounds to become complex multi-organisational clusters attracting other institutions and businesses that deliver services or partnerships to knowledge and cultural industries. These three centres are all bypassed by Perth's radiating rail lines and have become reliant on frequent road-based services. The consequence of this is increased congestion and parking problems for students, visitors and workers. As a result, public transport links, particularly with Perth city, have become fundamental to their existence.

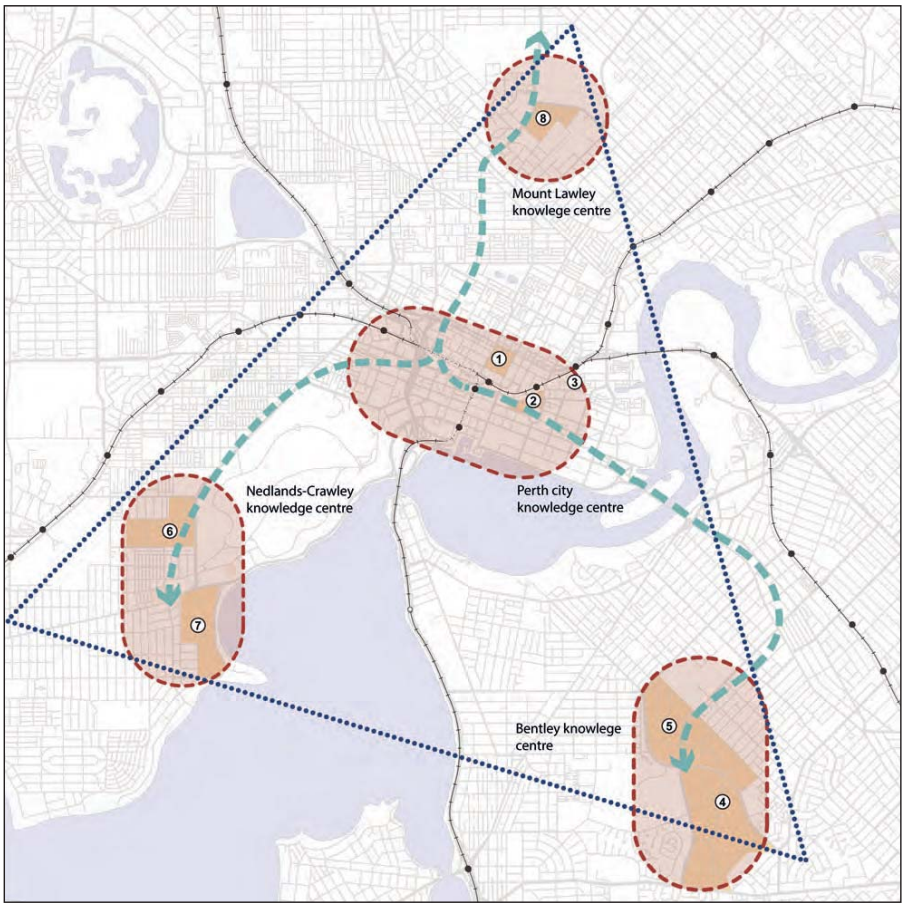
A knowledge triangle

The knowledge triangle concept proposes that Perth city along with the specialised activity centres at Nedlands-Crawley and Bentley and the Mt Lawley university precinct are conceived as being primary building blocks for the structure of central Perth. The specialised centres form a triangular arrangement around Perth city and can facilitate the establishment of clear patterns of employment, residential accommodation and transport and build on their role of clusters of knowledge and culture through spatial proximity.

The three centres outside Perth city exert a strong influence on movement and activity within, and can contribute to further defining central Perth. Planning to support the physical structure of these centres to assist further development as the primary places for stimulating knowledge and cultural endeavours should include:

- A distinct focus on access from surrounding locations, particularly by active and public transport, and infrastructure that allows for excellent connectivity within centres. Transit and frequent bus services are favourable elements in this access from surrounding areas.
- Development as key places to live, with high levels of amenity, general commercial and community services. Appropriately diverse and affordable housing within and close to these centres to cater for large and diverse populations, including for students, key and knowledge workers, and residents.
- The development in each location of an urban heart or town centre to unite the various fragmented campuses and businesses into a cohesive activity centre. This needs to include legible structures to further build interconnectedness and satisfy the demand for the diverse services of regular activity centres, while considering the area's character and land availability.
- A focus on creating a high-quality and varied public realm to contribute to amenity and legibility, with walking and cycling and interaction between people, including face-to-face communication.
- The provision for a mix of well designed non-residential building types with varied cost, ownership and use arrangements that allows for a range of institutions, organisations and functions to be in relatively close proximity.

The planning of the physical arrangement and form of these centres to assist further development as primary places for knowledge and culture is one aspect of reaching this goal. Planning needs to be suitably combined with other policies, initiatives and qualities encapsulated in the whole city to result in a comprehensive and positive outcome.



Knowledge triangle

Proposed transit service concept

Knowledge triangle

Knowledge centre

Place of knowledge

Significant knowledge places and precincts

1. Perth Cultural Centre & education precinct
2. Royal Perth Hospital precinct
3. Central Institute of Technology East Perth campus
4. Curtin University of Technology
5. Bentley Technology Park
6. QEII Hospital
7. University of Western Australia
8. Edith Cowan University Mount Lawley campus.

5.2.5 Key concept 7: A city of well-designed places

Central Perth is to become an exemplar for places that use good design to exhibit the best characteristics of sustainability, beauty, durability, legibility and robustness.

The Capital City Planning Framework aspirations are centred on improved liveability, sustainability and cultural identity. The quality of architecture and urban design in Perth city and surrounds is important as it will contribute to achieving these objectives and ensuring a positive legacy for future generations. Better design outcomes must be a shared goal for all city stakeholders, including the public, and need to be championed from the highest level.

The COAG Reform Council has reviewed State and local government systems with the aim of better integrating consistent planning goals across the states. The *Review of capital city strategic planning systems* identifies nine national planning criteria including the encouragement of world class urban design and architecture. The Major Cities Unit of the Federal Department of Infrastructure and Transport has developed another national initiative, collaborating with peak community and industry organisations, States, territories, local governments, and the Australian Government to produce *Creating Places for People: An urban design protocol for Australian cities (AUDP)*. This document establishes twelve broadly-agreed principles for quality urban places in Australia, which are closely aligned to the values underpinning this framework.

Fulfilling the ambitions of the Capital City Planning Framework will demand good design outcomes and a commitment to quality. The framework envisages a city with spaces, places and buildings that enhance the experiences of people and their engagement and interaction with the public realm; this means everything from our doorsteps, to public squares, parks, streets and riverfronts. Private buildings also contribute to the public realm; at an urban scale as part of streetscapes as well as the human-scale interface. It is all around us, and a vital part of everyday urban life. A well-designed built environment increases the public life of a city by inducing more walking, cycling and taking pleasure in public space.

Good design is an intrinsic part of achieving this richness and vitality, and in securing Perth as an exemplar for urban quality. Western Australia is a widely recognised place of creativity in many fields including music, literature, performance, visual arts, fashion and more. Our city can offer a tangible demonstration of this creative capacity and this framework seeks to foster that outcome.

Image: Adrian Lambert

Good design

Good design refers to how things work, not just how they look. Within the built environment good design is about functionality, performance and building quality as much as innovation and creativity. Good design is sustainable and resource-efficient. It embraces its context and makes a positive contribution to its environment. Good design delivers value for money as well as better buildings and spaces, particularly when attention is paid to the full costs associated with managing and maintaining public spaces over their lifetimes. Good design results in an environment that works well for all users and the broader community by improving the quality of life in a city to make it a place where people want to be.

The value of good design

There is an overwhelming body of evidence that documents how good design adds economic, social, environmental and cultural value to places. A well designed and maintained built environment contributes directly to the delivery of public services for education, health, law-enforcement, employment and transport, which should be acknowledged as an important factor in government spending. Research by the UK Commission for Architecture and the Built Environment (CABE) demonstrates that good design may cost a little more initially, but reduces whole-of-life costs, which can be more than five times the cost of construction and 25 times the cost of design fees.

The cost of bad design

Badly designed places impose recurrent costs on their occupiers, their neighbours and on society. Badly designed streets serve to undermine one of their basic social functions. They are not just for through movement, they are places for people to stop, interact with others, buy things and so on. A key reason why these costs are not taken into account is that they are paid not by the people who make the decisions but by the wider community.

Bad design is a result of poor decision-making. There is no excuse for bad design and no reason to accept poor outcomes, yet exemplary buildings and spaces remain the exception. The buildings and spaces we construct now will shape the way our city functions for many decades. To ensure a positive legacy for future generations we need to seek design quality as a matter of course.

Achieving better design

Decision-makers need to understand, value and promote the benefits of good design. They need to prioritise design quality from the outset and lead the way in demonstrating what can be achieved. This framework can contribute significantly to achieving a quality built environment by articulating this priority and developing an expectation of good design within State and local government and the broader community. Better design is encouraged by the clear definition of qualitative requirements and the use of appropriate design procurement methods.

Identifying good design

Good design is not a subjective idea; it can be defined and measured. The AUDP offers a clear structure for discussing the quality of the public realm. The document establishes twelve principles for quality urban places with the overarching aim:

To create productive, sustainable and liveable places for people through leadership and the integration of design excellence.

To demonstrate how these principles align with the Framework they are expanded upon below to include subsidiary criteria for delivering high quality design outcomes for central Perth.

The AUDP provides a hierarchy of physical scales or settings at which the criteria can be applied. In the context of the framework, these are:


Town/district (central Perth)


Neighbourhood


Streets


Sites

Design principles about place: productivity and sustainability

AUDP Principle 1
Enhancing: enhances the local economy, environment and community.


- Contributes to a 'sense of place' by recognising and enhancing the unique characteristics of our city's built heritage, community and cultural life.
- Enhances the built environment, visually, physically and functionally to establish the quality of space people want to spend time in.
- Enhances the natural environment by promoting sustainability, ecology and amenity in an integrated way.


- Encourages an engagement with place to support cultural enrichment, community and civic pride.
- Embraces its context and makes a positive contribution to its environment, the site and surrounding areas.


- Responds positively to the local distinctiveness of the streetscape and setting, and encourages social activity.
- Enhances a good public realm which is not undermined by poorly resolved servicing.

AUDP Principle 2
Connected: connects physically and socially.


- Optimises the use of public infrastructure and reduces dependence on private transport by improving the integration of the public domain and private development with public transport.
- Considers a connection and engagement with nature through the integration of landscape environments and buildings.


- Presents a legible urban structure that is well-connected to surrounding areas, maximises the number of ways through places and helps people to find their way around.
- Supports community needs by providing access to jobs, schools, shops, facilities and services.


- Ensures highly permeable and attractive streets encourage people to walk and cycle.
- Provides high quality pedestrian connections to support vibrancy of key places.

Design principles about place: productivity and sustainability

AUDP Principle 3
Diverse: diversity of options and experiences.

- Supports inclusiveness and interaction by offering a range of opportunities and maximising the variety of uses for the community.

- Offers a varied and complementary mix of uses to promote activity, vitality, extended hours of activity and intensify the use of existing infrastructure.

- Provides visual interest and variety and a sense of value in the public realm through high quality architectural and visual elements.

AUDP Principle 4
Enduring: Sustainable, enduring and resilient.

- Is flexible and adaptable to accommodate changing economic and social conditions.
- Minimises resources, energy use and water use over the life of the project, and responds to climate change.

- Is robust, fit for purpose, and reflects a high quality of design and construction.
- Demonstrates innovation in the adaptive reuse of historic buildings, through distinctive contemporary layering that respects heritage building fabric and its cultural significance.

Design principles about people: Liveability

AUDP Principle 5
Comfortable: comfortable and welcoming.

- Promotes a sense of civic pride and demonstrates an investment in public life through high-quality architecture that positively impacts the public realm.
- Enhances participation in recreational, cultural and community activities through well-designed parks, squares and public spaces.

- Promotes a visual identity and increases the range of sensory experiences which a range of users can enjoy.
- Enhances visual interest and visual connections between inside and outside spaces.

AUDP Principle 6
Vibrant: vibrant, with people around.

- Supports densities appropriate to its context, and responds to infrastructure, public transport, community facilities and environmental quality.

- Supports a sense of connectedness and cohesion and encourages greater physical activity.
- Supports vitality, diversity and mix of amenities and activities through urban setting and built form.

- Encourages a range of activities, and adapts and responds to different community needs and expectations.
- Provides an active interface between land uses, activities and built form and public spaces.

AUDP Principle 7
Safe: feels safe.

- Improves safety and security for people and property by encouraging community participation and minimising opportunity for crime.

- Embraces designing-out-crime including passive surveillance and clear visual linkages to strategic places and along common access-ways.

Design principles about people: Liveability

AUDP Principle 8
Walkable: Enjoyable and easy to walk and bicycle around.

- Demonstrates an integrated approach to transport and takes advantage of public transport and existing infrastructure to encourage pedestrian activity.

- Prioritises clear pedestrian movement to promote inclusive and socially equitable spaces.

- Develops streets as places for both human interaction and ease of movement, with an inclusive and responsive public domain; provides safety, good access, fine-grained permeability and legibility.

Principles about leadership and governance

AUDP Principle 9
Context: works within the planning, physical and social context.

- Contributes to the civic value of a place, enhancing the built environment visually, physically and practically.
- Understands contextual issues and recognises the local benefits and impacts of capital works, from major infrastructure to small-scale projects and buildings.
- Has a relationship with the physical location as well as the cultural and historical context of the surrounding area.
- Implements worlds best practice in planning, built form delivery and project delivery processes.
- Incentivises design quality. Attaches conditions to the disposal of public land to encourage quality in development.

AUDP Principle 10
Engagement: engages with relevant stakeholders.

- Promotes collaboration, integration and transparency between government agencies and governance structures, aligning strategic opportunities.
- Focuses on the delivery of high-quality urban design outcomes with the involvement of skilled advisors and designers.
- Promotes public and stakeholder participation to improve the fit between the design and stakeholder needs.

Principles about leadership and governance

AUDP Principle 11
Excellence: excellence, innovation and leadership.

- Champions design quality and encourages strong leadership throughout planning and delivery.
- Coordinates design and policy to realise and enhance the benefits of good design.
- Prioritises the engagement of competent, skilled professionals to design and deliver on best practice planning, design, engineering, procurement maintenance and monitoring.
- Seeks high-quality design advice and establishes an appropriate design management and review process, with a clear reporting structure.
- Utilises Design Review Panels to provide independent expert advice for key projects.

AUDP Principle 12
Custodianship: considers custodianship and maintenance over time.

- Considers whole life value and recognises environmental, social and economic costs and benefits of development, operations, maintenance and disposal, rather than short term gains and costs.
- Involves community, place managers, operating staff and maintenance staff in the design process to create the most appropriate and site-specific design solutions.

Making the most of opportunities

With a rapidly expanding population the demand for housing and development in Perth will enable redevelopment where land has been underutilised and create new opportunities for higher intensity development across central Perth. A well-managed approach to design, procurement and delivery will make the most of these opportunities.

This framework recognises the need for central Perth to embrace urban consolidation strategies that enhance our quality of life. Good planning for cities, that addresses principles of good design in an integrated way, and supports a coordinated approach to the public realm and public infrastructure, is key to the creation of high-quality environments in our capital city.

5.2.6 Key concept 8: A city with a well-connected city centre

Planning is to overcome barriers constraining the city centre and unlock the potential of important surrounding areas.

Perth city is bounded by several man-made and natural conditions that have constrained the form and function of the city centre. Several of these have been addressed through three current major urban renewal projects:

- The Perth City Link project will result in the underground sinking of the northern rail corridor to allow new development and the creation of links between the city centre and Northbridge.
- The Elizabeth Quay project will connect the city centre with its southern river frontage.
- The Riverside project will create a new city precinct and improve connection between the city centre and its eastern river frontage.

This framework identifies other constraining elements at the northern, southern, eastern and western edges of the city centre. In these investigation areas major transport infrastructure is commonly a dominant factor. Freeways and railways create severance effects between the city centre and surrounding neighbourhoods and the graduation between this infrastructure and local streets is often problematic.

These investigation areas are likely to become the focus for the next generation of urban renewal and city building projects, where addressing planning issues may yield diverse new urban places, improve connectivity and add to the civic qualities of central Perth. This section looks at how these parts of the city centre's edges may evolve to embrace the place-making and connectivity principles set out in this framework.

Northern edge

Perth City Link concentrates on the strategically important railway land west of the Perth Railway Station. The rail corridor and freeway to the east of the station also present challenges to urban growth and connectivity. Revised planning of the precinct between Perth Railway Station and the Swan River foreshore in the vicinity of the Graham Farmer Freeway and the Armadale railway line could achieve significant community returns. This area is currently structured with fragmented planning jurisdictions, conflict between land uses, poor connectivity and inhospitable environments.

There are a number of likely catalysts for change. One is the restructuring and refocusing of Royal Perth Hospital, which is planned to coincide with its consolidation onto a smaller site, resulting in major opportunities for renewal.

Another is the long-term ambition to extend Roe Street eastwards from Stirling Street into East Perth and the Graham Farmer Freeway interchanges. This would assist Newcastle Street, St Georges Terrace and Wellington Street in distributing east-west traffic movements in the city centre when the role of Riverside Drive is reduced due to the Elizabeth Quay development. The alignment and connections of Roe Street could have a significant bearing on future urban development, in particular the redevelopment of the Royal Perth Hospital precinct.

A further catalyst exists through the desire to make Claisebrook a more important part of the city's parkland amenity. Extension of the linear parkland further west could provide access to parkland in a part of central Perth that is low on green space.

Eastern edge

Currently the Burswood Peninsula is somewhat isolated from the city centre and mostly occupied by large scale recreational land uses. The proposed major outdoor stadium on the peninsula is an opportunity to build a world-class facility in a potentially iconic location, with the Graham Farmer Freeway being one of the primary 'gateway' approaches to the city centre. The access constraints inherent to the peninsula however present challenges for the movement of large crowds to and from major events.

Planning needs to look beyond the stadium as a piece of infrastructure and consider the future role of peninsula as a precinct at the edge of the city centre. Development as an integrated locality may result in extension of the central Perth regional parklands concept, better utilisation of existing rail stations, improved social infrastructure and more legible connections with the city centre. A pedestrian crossing, or in the long-term a potential road based or transit crossing over the river could provide this enhanced connection.

The opportunities for more intensified urban development in an attractive inner-city location need to be assessed against the capacity of the transport network and the sustainability of dense development on the parts of the peninsula that are filled land. This is due to possible issues related to high building costs, anticipated sea-level rise and ground contamination.

Southern edge

Perth city centre is bounded to the south by the Swan River foreshore. This is an area currently characterised by expansive public open space on a low lying, filled river area, with the dominant presence of Riverside Drive. This road currently acts as a feeder between the city centre and the freeway network, as well as for cross-city movement between the Causeway and Mounts Bay Road. The construction of the development at Elizabeth Quay will change the role of Riverside Drive as an inter-regional route. Most of its cross-city traffic will be redistributed amongst other east-west routes and through increased use of public transport and bicycles.

The reduction in traffic is likely to be the catalyst for further projects to enhance the city-river interface, along the city's southern foreshore. This may also allow for the extension of green infrastructure principles, well demonstrated at the Point Fraser wetlands, as part of the central Perth regional parklands concept.

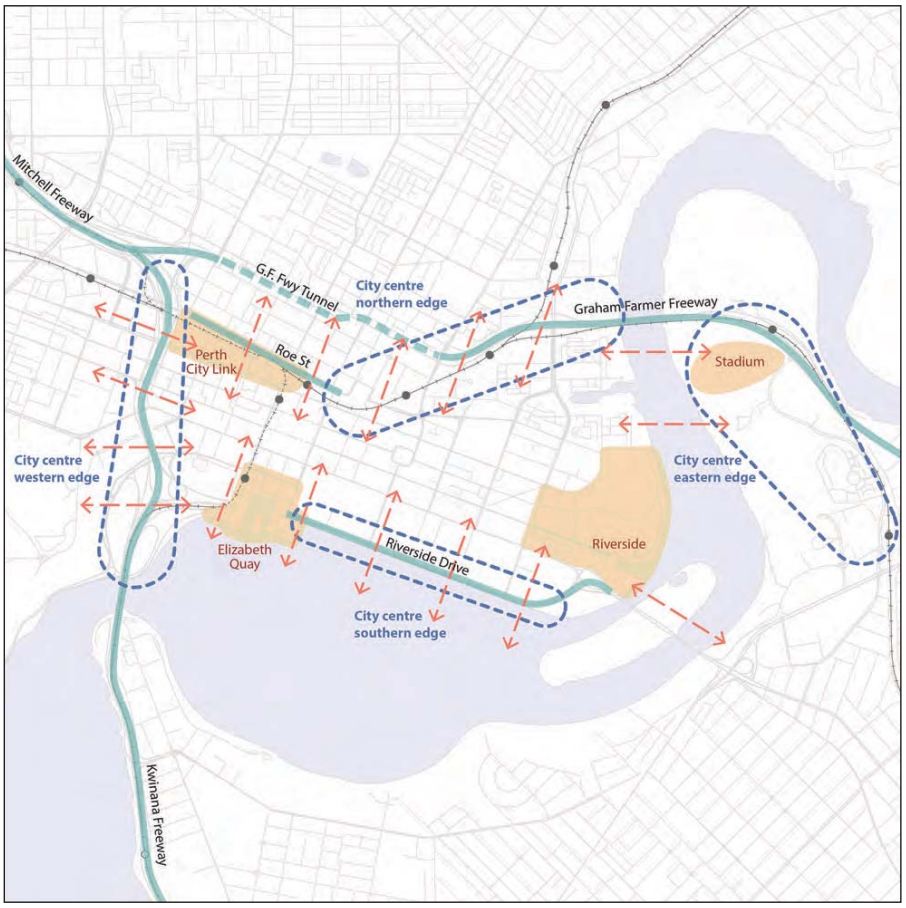
Western edge

The construction of the Mitchell Freeway was undertaken in the 1960s as an engineering project to revolutionise car travel to and through the city centre. The present-day paradigm for city design however, seeks to redress the balance within the city centre as a place for people as well as cars.

The freeway currently prevents effective pedestrian connection between many of Perth's major natural and cultural iconic features including the Swan River, Kings Park, Elizabeth Quay, Parliament House and the city centre. Further investigations are proposed to seek better relationships between these elements and to optimise the freeway system's operations to current and future needs.

The open freeway cutting through the forecourt of State Parliament has caused great functional and symbolic severance between parts of the city centre. In effect, traffic to and from the Mitchell Freeway has resulted in the pedestrian focus of Hay and Murray Streets being compromised around their freeway interchanges.

The Narrows Interchange was designed as the junction for three freeways, however the third freeway was never built as designed and Riverside Drive remained a main road. The changed role of Riverside Drive due to the Elizabeth Quay project may allow the size and complexity of this junction to be rationalised in the future if there is sufficient impetus to do so.



City edge

Road transport route

Desired connectivity

Current project area

Investigation area

5.3 Movement

Movement lies at the core of the organisation of a city and influences the way a city looks, feels and functions. The continued accessibility, efficiency, reliability and resilience of Perth's movement system are likely to be subject to major challenges in the future. A number of elements of the city are entwined with this system.

- **Congestion:** Congested road space and an overloaded public transport system can lead to reduced economic competitiveness and liveability. Appropriate investment can increase public transport capacity; however, there are absolute limits on the space that can be devoted to roads, thus requiring us to work more smartly with existing streets.
- **Social inclusion:** Personal interaction and participation in social and economic activity is highly related to the capacity to move around easily. One third of Perth's residents do not have a driver's licence and many do not have access to a car. The proportion of income consumed by car travel is also likely to escalate as the costs of motoring and parking increase. A variety of affordable and viable travel options is therefore essential for a well balanced community.
- **Pollution:** Road transport produces a large proportion of urban pollution, including greenhouse gases. Minimising these outputs must be a major part of reducing our environmental footprint.
- **Safety:** Road accidents are a major cause of trauma, particularly among younger drivers.
- **Health:** Active transport can provide beneficial exercise for a society where obesity and inactivity are major causes of health problems.
- **Demographics:** As the hub of the metropolitan region, central Perth's growing commercial and civic function will stimulate increased travel demand regardless of where new population is located. Transforming work and recreation patterns, an ageing population and fewer people per household all point to changing travel demands.

The following section indicates how the movement network of central Perth can evolve to assist in addressing these elements and associated future challenges.

5.3.1 Key concept 9: A city with streets for movement and activity

City streets are to be redefined as places for both activity and movement.

The challenges to how we move around our city make it clear that new approaches are needed when considering and designing streets. Streets are an integral component of the movement network and urban structure and should not be thought of as the sole domain of private motor vehicles. A key shift needs to revolve around an increasing proportion of people moving out of cars and into more sustainable, social and less space-consuming travel modes. Although central Perth will remain dependent on private vehicles in the near term, the steady shift to public transport, cycling and walking will improve liveability and contribute to increased resilience, affordability, and safety.

Street activity

Streets need to be places for both movement and the activity of community life. While some major arteries such as freeways will always need to be prioritised for movement, some streets can be designed to create a balance for the enhancement of movement and activity. Acceptance of this has already seen a shift from uncontrolled allocation of space for cars to an appropriate symmetry between vehicular movement and street-side activity. Further integration of this principle is an important aim for central Perth.

Central Perth is characterised by a relatively well-connected and contiguous street network, albeit interrupted in places by major natural features. It is this interconnectedness that has enabled the movement network to function well. In providing choices of routes and allowing local traffic to filter through a filigree of streets, the need to construct excessively large and expensive elements of road infrastructure has been avoided. Additionally, providing an interlinked network of walking routes enhances this interconnectedness and provides excellent accessibility.

The interconnectedness of the street network should be maintained. New connections should be created where opportunities can improve local connectivity, enhance choice of movement and reduce pressure on other parts of the network.

Overcoming congestion

Congestion is generally recognised as an economically inefficient and socially inequitable way of rationing limited road space. Yet it is estimated that it is only the last few per cent of vehicles on streets that transform efficiently functioning roads to those with long delays. It is unlikely that high fuels costs associated with energy constraints will solely reduce congestion, as technologies such as electric cars and the inelastic demand to changes in price are likely to allow a continued demand for private vehicle use.

Mechanisms for keeping the vehicle volumes below tipping points while still providing easy and equitable access therefore become a key city management issue. Most contemporary solutions revolve around lifting the quantity and competitiveness of space-efficient travel modes, thereby allowing greater overall street movement. Solutions used so far in central Perth include reallocation of road space for walking, buses and cycling, limiting the number of car parking bays, and prioritising public transport at designated traffic lights. The introduction of car parking bay levies in the city centre has redirected funds directly to public transport in the area.

Price incentives to park in the city before peak times encourage a more regular demand for road space over the day. Such solutions give an immediate price feedback to drivers regarding the cost of travel at particular times and provide incentives for people to make time and travel mode adjustments to journey planning. This can assist in rationally allocating limited road space. Price incentives can also be applied to public transport fares through differentiated charges based on time of travel thereby reducing pressure on daily peak periods.

Further pricing measures are likely to be feasible elements of the street and public transport management system in the foreseeable future as innovative technologies provide new ways to deliver price messages.

As well as price incentives, a reduction in private vehicle use and congestion can occur through people making informed choices and being mindful of the broader personal and societal benefits of other travel methods. These choices can be driven in part by education and information programs from which central Perth can benefit as part of the larger metropolitan area.

Street comfort and attractiveness

Although movement is something that allows us to undertake daily activities, the act of travel can be one of the most enjoyable and satisfying experiences of city living. Walking in particular can be a highly pleasurable activity for many people. It allows engagement with the world at a human scale, interaction with others and can relieve the stress from sedentary activities. It is the primary means of transport for moving between places and between other types of transport including a natural adjunct to using transit.

The majority of planning during the late twentieth century encouraged travel within central Perth by car. While the capacity, comfort and convenience of car travel has improved, the quality of the experience for other street users has noticeably decreased.

An improvement in the comfort and convenience of travel by non-car modes will assist in shifting demand for travel from cars. This improvement includes:

- weather protection, road crossing priority and street activation for pedestrians;
- road space, direct routes between destinations, trip facilities and access priority for cyclists; and
- increased buses, trains, comfortable stations, bus stops and attractive routes for public transport users.

These factors are addressed further in each of the sections on the walking network, the public transport network and bicycle network within the next key concept.

Developing a central Perth movement network strategy

The principles guiding the initial elements of a central Perth movement network strategy have been developed by the Department of Planning in consultation with Main Roads Western Australia, the Department of Transport, the City of Perth, and representatives of other local governments in central Perth. This strategy is also designed to be integrated with the plan, *Public Transport for Perth in 2031*.

As the emphasis of the strategy's development moves from strategic land use-movement integration into scenario testing and project coordination, it is anticipated that the next stage will be led by the Department of Transport. Further consultation and the same partnership of government stakeholders will ensure that this strategy remains connected to community aspirations and cross-government priorities. Engagement between State and local governments is integral due to the required integration of land use planning and the movement network and the understanding that local governments oversee a significant proportion of the road network and traffic management within central Perth.

The preparation of a CBD Transport Plan is an example of the next stage of development. Green infrastructure planning will also help to support walking and cycling movement networks.

5.3.2 Key concept 10: A city with networks for all modes

Networks for each mode of movement are to be built upon to embody the multiple roles of our city's streets.

In addition to the recognition that central Perth's streets are to be redefined as places for activity and movement there is also an acknowledgement of the multiple transport functions of these streets. This means an improved balance between walking, cycling, public transport and vehicles, where within the network no one mode predominates.

The following section translates the key concepts of streets for movement and activity into tangible desired outcomes for the central Perth movement system. It proposes roles for various modes of movement, access control measures and networks for general traffic, bicycles, and public transport using a new shared vocabulary of transport planning.

5.3.3 The road network

The road network is the underlying structure that facilitates the integration between all methods of travel. Pedestrians, bicycles, public transport and private vehicles all make use of some aspect of the road network, a network that must also integrate with surrounding activity.

To help achieve a balance between various types of transport and activity along central Perth streets, we need a language to define how such a balance might be achieved in specific locations. This would include road space allocations, vehicle speed, frontage treatments and the route's relationship to adjacent land uses. Such an approach would complement existing road classification models.

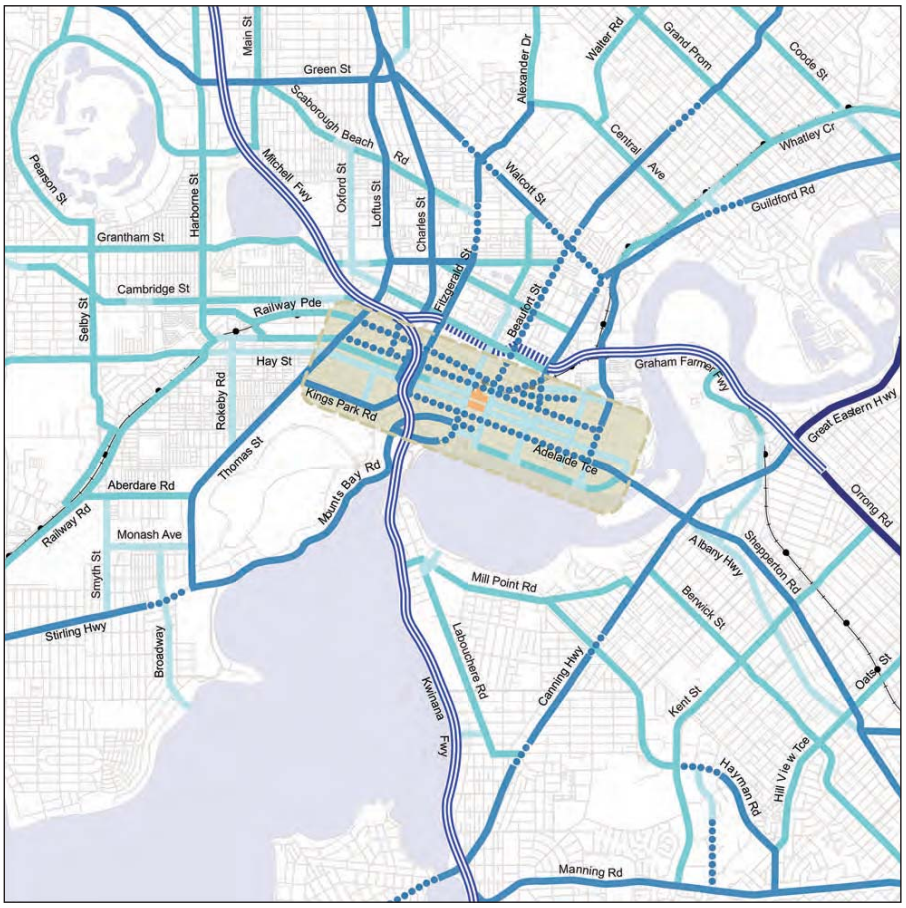
A method to conceptualise transport and land-use functions would not classify roads solely according to their transport function or motor vehicle capacity but would introduce a classification that embodies the transport function along the route with the ability to cross the route, known as the severance effect. The Department of Transport is formulating a Metropolitan Perth Moving People Network Plan which contributes to these concepts.

The future road network plan has been developed to indicatively designate roads (or sections of roads), guided by the principles of this classification method. The plan builds on

the intention of making the city more liveable for all, acknowledging the need for aspects of street activation, connectivity and comfort. The scale and focus of this framework means the plan concentrates on more active routes. Local streets and pedestrian malls are important, as they are vital in the creation of quality pedestrian environments for a liveable city, and need to be addressed at a more intimate level.

The network plan proposes a balance between roads considered through-routes (those with higher vehicle capacity) with those that are more integrated with the activity and human scale of the surrounding place. It is recognised that there will be some freight movement within the urban street network as a result of local demand such as for deliveries and construction, however regional freight movement should be discouraged from using the street network of central Perth. The only designated freight routes thorough central Perth are the freeways, as per the *Statement of Planning Policy: Metropolitan Freight Network (Draft).*

The Mitchell and Graham Farmer freeways provide major bypass routes around the city centre. The capacity of the freeways through central Perth however is close to maximum at peak times. Expansion of the Graham Farmer Freeway tunnel to six lanes may compensate for changes in other routes without expanding the overall capacity of the network. Other smaller improvements may increase this capacity in the short term, but it is likely that in the longer term the use of traffic prioritisation measures will need to be implemented to enable their continued smooth operation as the city grows.



Road network

- Railway / freeway
- Tunnel (Graham Farmer Freeway)
- Major highway
- Arterial road
- Arterial road through centre
- Major road
- Main street
- Pedestrian mall
- Local street
- City centre subject to detailed planning

A new approach to movement networks

Within central Perth, as in all urban areas, there are important connections and a close integration between the use of land adjacent to transport routes, and the movement function of these routes. Improved recognition of this interface will provide benefits and balance between the requirements of people active in places along streets and the needs of others that use streets as transport routes to move efficiently between destinations.

The needs met by a pedestrian mall in a city are just as valuable as the needs met by a freeway. The continuum outlined below aims to recognise route types in terms of both their movement roles and place roles, and as a continuum should not be considered a hierarchy of importance according to transport function.

Railways and freeways

The dominant role of railways and freeways is to move people and freight; their place role is secondary. Movement is at high speeds and volume, with a minimum of access points. These routes are large in scale. Pedestrian and cycling facilities are separated from motorised transport. Movement across these routes (those that are not tunnels) is limited and they cause major severance to pedestrians, cyclists and local traffic. While such routes are good at providing access to large centres, land adjacent to them requires independent access. The Fremantle passenger railway line and the Kwinana Freeway are examples.

Major highways

Major highways meet the regional need for the movement of people and freight. They operate at greater than normal urban speeds, carry high traffic volumes, and have limited driveway and side road access. Their scale is large, leading to potentially noisy immediate environments, and they present major severance to pedestrians, cyclists and local traffic. Adjacent land uses usually have limited direct car access and they can provide good access to the edges of activity centres. Great Eastern Highway east of the Graham Farmer Freeway is an example.

Arterial roads

Arterial roads meet a combination of regional and local needs and are often roads along which strip development has occurred. They cater for a medium level of speed with a reasonably high volume of movement, and generally have a medium-width road reserve. Driveway access is likely. The priority for these routes is general traffic, buses and cyclists while traffic lights or median islands are generally provided to help pedestrians cross comfortably.

Adjacent land use is able to address these routes. There can be considerable pedestrian and cyclist movement. The volume of traffic however can create major pedestrian severance. Canning Highway and Scarborough Beach Road are examples.

Arterial roads through centres

These are a subset of arterial roads. They can be segments passing through centres that have a significant amount of roadside activity in which land use is sufficiently intense to merit a reduction in through-movement efficiency, and they are amenable to traffic-speed reduction. They can also be full-length streets in their own right, especially when they have been former tram streets such as Beaufort Street and parts of Albany Highway. While these routes allow for lower speeds, have potentially a smaller scale, and allow for reduced pedestrian severance, they still cater for significant car, commercial vehicle, bus and cycling movement.

Major roads

Major roads cater for medium road speeds and volumes. They allow for significant driveway access and cater for general traffic. They should be reasonably easy to cross but past practice has sometimes allowed excess width, which increases their severance effect. They may have guided school crossings for children; and roadside land uses generally do not generate large amounts of kerbside activity. Grantham Street and Harborne Street are examples.

Main streets

Main streets are mixed people and vehicle environments that are primarily designed to accommodate large numbers of varied activities associated with the street spines of activity centres. They give equal priority to non-vehicle users (such as pedestrians and cyclists) and motorised vehicles. The vehicle speeds on these streets are very slow and traffic is of a medium volume, providing for pedestrians while allowing moderate accessibility by cars and light commercial vehicles. Their landscape design revolves around people. Limited driveway access generally complements the pedestrian priority of these streets. Rokeby Road in Subiaco and Oxford Street in Leederville are examples.

Local streets

Local streets are the everyday streets of the city that make up the remainder of our street network. They are slow speed, low-volume environments with roadside buildings that generate fairly low amounts of roadside activity such as housing. Excellent connectivity between main streets, local streets and pedestrian malls is essential for good accessibility within centres.

Pedestrian malls

These are major routes for pedestrians, with walking being the dominant transport method. Ample provision is made for bicycle parking but cyclists may need to dismount in pedestrian malls. Vehicular access is restricted – often early or late in the day or during emergencies.

5.3.4 The walking network

Walking, incorporating mobility assistance such as wheelchairs, is the common factor for each of us, including as a link to and between other forms of transport and destinations. This suggests that many trips and parts of trips involve walking. Additionally, many more trips could be walked. For example, metropolitan Perth residents make more than 250,000 private car trips daily that are less than one kilometre, which is around a 10-minute walk[23]. A greater commitment to walking for these types of short trips can be encouraged.

All streets within central Perth (other than freeways) should be designed to encourage walking. This can include:

- Streets that have pedestrian footpaths and an appropriate level of shade and shelter. In residential streets this is likely to focus on protecting and planting street trees, whereas in activity centres and in other places of significant non-residential uses at street level, the shade and shelter for pedestrians should be provided through the use of overhanging canopies and other shading devices in addition to street trees.
- Careful consideration given to intersections and major road crossing points to ensure that pedestrians are given frequent, safe and dignified opportunities to cross roads in places where relatively high numbers of pedestrians are expected.
- Streets that can be used by all, including those who require assistance, through such aspects as providing room for walking with no obstacles, places to sit, street surveillance and a high quality and interesting public realm that is suited to the human scale.

In addition to the urban street-based walking network, the open spaces and nature corridors of central Perth provide further opportunity for recreational walking. The walking trails and paths in these locations should share similar attributes to the streets in embracing signage, safety, seating and some level of shelter.

5.3.5 Parking

The provision of car parking relates closely to whether people choose to travel by car or another form of transport. Regulation of parking supply and pricing is therefore an effective means of managing travel patterns, as limiting parking supply can encourage people to travel by other modes. It should be recognised however that the transition to less dependence on car travel is likely to be gradual and, for the immediate future, car use will still be significant with many businesses which depend on access by car and, therefore, parking.

As a basic guide to what is a complex issue it is suggested that regulation of key aspects of parking supply and pricing need to be applied over the entire central Perth. It is likely that in major destinations which are well served by public transport (such as the three university-based activity centres), parking will need to be regulated by State-coordinated parking plans, similar to the regulation that currently applies in the city centre. In smaller commercial areas, such as local activity centres, there should sufficient parking to cater for a reasonable demand, especially through the use of highly reciprocal on-street parking.

5.3.6 The public transport network

Public transport has a key role in building a resilient and dynamic movement network for a growing and liveable city that enhances the experience and choices for people. For a city in which it is envisaged that trips by public transport will more than double by 2031, the availability, accessibility, integration and legibility of public transport will need to be key considerations of planning and delivery.

While passenger rail will continue to be the primary skeleton of the public transport network, highly interconnected lines of other public transport modes will need to develop further to build a network with all the qualities that are required to make public transport a more logical and preferential way of navigating the city.

The public transport network plan for Perth by the Department of Transport identifies a network of major transit access corridors that may be serviced by rapid and frequent bus services or ultimately some other form of transit vehicle with high passenger capacity, such as light rail. The availability of a high-quality public transport service on these corridors is considered critically important as there are a number of significant centres around central Perth, not serviced by passenger rail that will be accessible by this rapid-transit network. These are places such as universities, hospitals, commercial activity centres and residential growth areas.

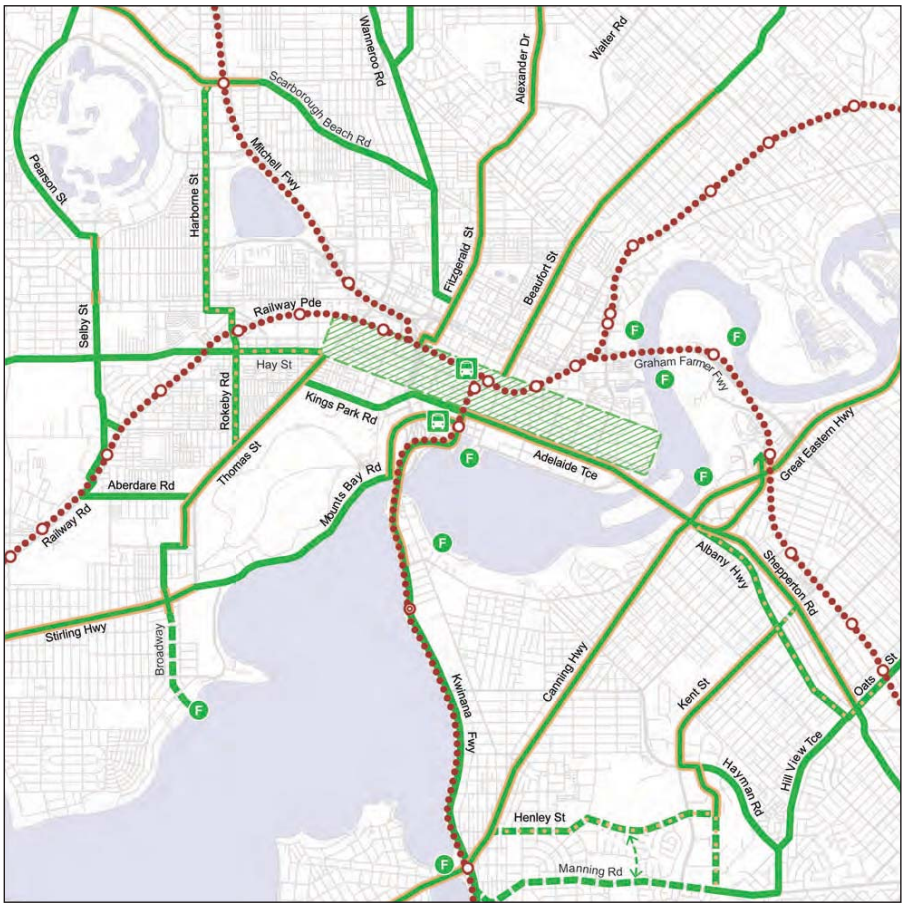
A rapid-transit system will require the dedicated cooperation and support of organisations such as State Government agencies and local governments. The role of local governments will be particularly important due to the location of transit routes on a variety of road corridors, and the need to integrate public transport facilities with existing infrastructure.

In central Perth high-frequency lines can be augmented through the provision of priority measures for public transport. In different

locations, methods such as modified traffic signals, lanes for public transport and jump lanes may be required to provide priority on these routes. As well as potentially enhancing the speed and reliability of individual routes, priority measures can contribute to building the notion that public transport is genuinely valuable and a highly legitimate way of travelling around the city.

The future public transport route map indicates routes that have been identified as higher frequency, and sections where some level of future priority is envisaged. When reading this map, the following should be noted:

- Perth is diversifying through a number of important centres, and it is proposed that bus routes that create cross-connections between them be established. The city centre will continue to be the primary hub of the system.
- Fitzgerald Street will become the major road rapid-transit route to the northern suburbs east of the Mitchell Freeway. It is expected that this route will have a number of the most frequent transit services in the city and be serviced by some of the best transit priority measures.
- Connection to Perth Airport to support tourism or commerce in the shorter term will be assisted by sections of bus priority on Great Eastern Highway. In the longer term a rail link is proposed joining with the Midland rail line to form a legible and firm link between the airport, central Perth and the city centre.
- There is an obvious role for ferries in the city. New nodes of activity in proximity to the river, such as at Burswood, Canning Bridge and Elizabeth Quay may improve the viability of ferries for tourism and commuting. There are however issues that may moderate the ferry system's development to match the capacity of land based mass-movement systems. These include the indirectness of river routes, the still modest number of major riverside activity places and the sensitivities of the foreshore to wave action. These opportunities and constraints require further investigation.
- Routes of high frequency and sections with public transport priority are shown on the diagram. A further arrangement of interconnected lines of varying frequency also exists to create a legible and quality network structure. This underlying network is not shown.
- In most instances, identified routes will be multi-functional, catering to public transport and regional vehicle traffic and, in some locations, other modes. This can be seen in the association between these identified routes and the road network classification.



Future high frequency and priority public transport routes

- High-frequency / high capacity public transport route (current & future)
- High-frequency route with public transport priority
- Potential extension to transit priority
- High-frequency / high-capacity passenger rail
- Potential alternative
- City core routes subject to fine grain planning
- Bus station
- Ferry terminal

5.3.7 The bicycle network

Central Perth has the potential to be a place that contributes substantially to improved participation in cycling, particularly for commuting but also as a recreational endeavour. The relatively flat terrain, the large number of medium-length trips, the density of destinations such as workplaces, businesses, educational campuses and social and recreational attractors all enable cycling to fill an important function between walking and other transport modes. Along with public transport it has potential to be a replacement for many private motor vehicle trips.

The prospect of increased cycling helps address issues of great relevance to central Perth. These include congestion, health improvement, vehicle-related pollution, transport and infrastructure costs, social interaction, energy use and robustness of the transport network.

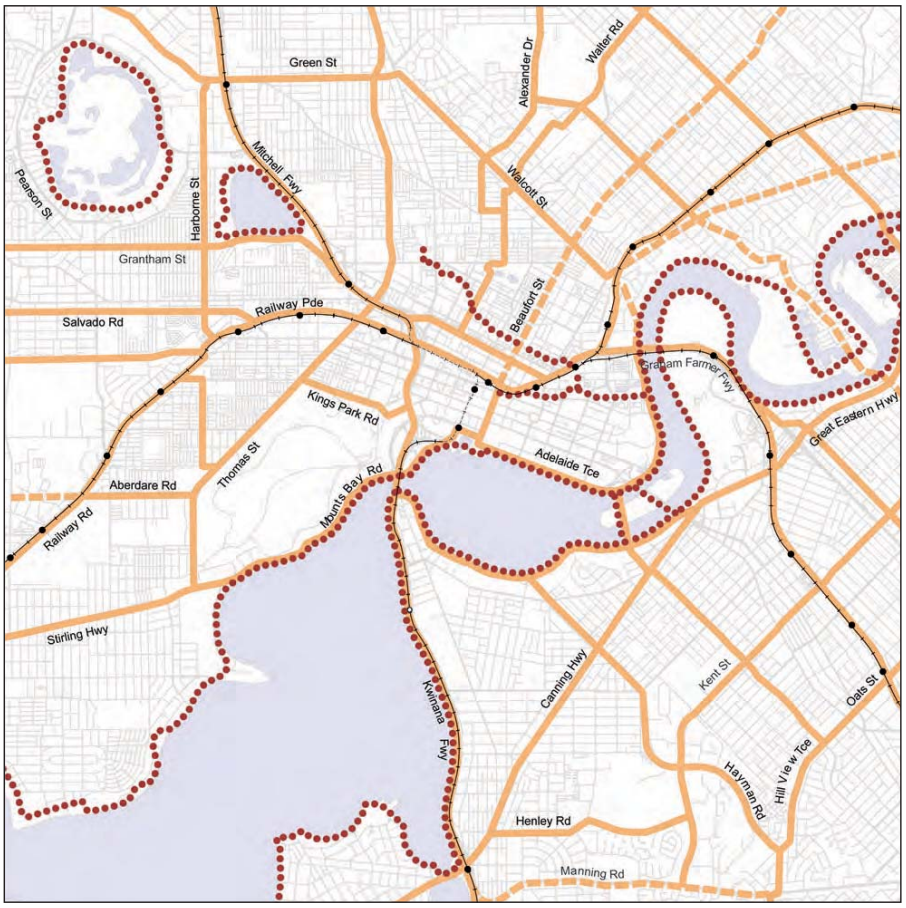
Despite these advantages, there are gaps in the cycling routes within central Perth. There are limited clear and direct connections between destinations for cyclists that allow travel with a degree of safety, priority and well-suited travel time. This includes between the city centre and the surrounding areas of central Perth.

Reflecting the multiple role of central Perth's streets, and to improve the balance in transport modes, a network of strategic bike connections is proposed here that fill the gap between the current principal shared path system (predominantly grade-separated off-road priority paths), and the current local bike routes. These local routes generally trace indirect streets with no continuous marking or priority.

The strategic bike routes form a regional network around central Perth and would generally consist of:

- clear, primary and direct routes between major destinations;
- a level of bike priority and continuous marking for users;
- dedicated on-road or off-road cycle lanes, paths or similar; and
- hospitable environments for cycling.

Examples of places considered important to link with these routes include the universities, activity centres, train stations, recreational attractions and the central city area, thus catering for commuter travel between home and these destinations, and between the destinations themselves.



Strategic bike routes

- Proposed strategic bike route
- Investigate alternative route
- Proposed recreational cycle routes
- Passenger railway / station

Strategic bike routes would integrate with the local routes on generally cycle-friendly local roads, where lower traffic speed creates a safer road environment. Collectively, these elements will make for a broad and flexible biking network.

Within central Perth, cycling for recreation is a popular activity along the designated recreational cycle routes. These paths are an off-road network of separate shared paths and follow areas of recreational interest such as the Swan River and Lake Monger. It is important that this system be preserved and enhanced to continue to allow for all skill levels. In areas where the highest demand exists there is likely to be justification for the duplication of parts of this system to avoid conflict between pedestrians and cyclists in crowded conditions.

In reading the strategic bike route plan, note that:

- The network of routes would cross local government jurisdictions and have some level of cycle priority and greater legibility. In some cases, such as along Canning Highway, they would be a long-term proposition.
- There are two proposed cycle routes north-south through the city that will significantly improve circulation into the city between the current principal shared path network and recreational paths.
- Finer cross-neighbourhood trips would continue to rely on the use of the local streets where it is hoped continued improvements in design will further encourage bike use. This plan shows only the routes where cycling should be given some level of priority.
- A new link is proposed that connects South Perth to the city centre via Heirisson Island. This would be a more direct link to and through the city centre for many people and would provide better cycling conditions than the narrow path that currently exists on the Causeway.
- The *Western Australian Bicycle Network Plan 2012-2021 Draft for Consultation* from the Department of Transport aims to refine and enhance these commuter-focused strategic routes within the larger network.

The wider recognition of cycling as a viable and safe mode of transport involves many aspects, not only a high-quality route network. The availability of appropriate end-of-trip facilities, is one of these, much the same as facilities beyond the road network are available for private vehicle users. Further supply of these amenities in central Perth should continue to be promoted, as outlined in the vision of the *The Australian National Cycling Strategy 2011-2016*.

5.4 Spatial form

The key concepts set out in the Physical Framework seek to guide the pattern of setting, activity, built form and movement in central Perth. Some of these key concepts have a spatial dimension and how they might be applied is shown through illustrative diagrams, while other concepts have been expressed more broadly. Collectively these concepts provide a multi-layered form to help direct the evolution of the urban structure of central Perth. This section assembles such a future form.

5.4.1 Key concept 11: A city with an evolving spatial form

The evolving form of central Perth is to be guided by the framework's key concepts for setting, activity and built form and movement.

Collectively the first ten key concepts provide the direction for an evolving spatial form for central Perth. Additionally, in places where significant intensification is proposed, particular characteristics need to be considered to assess an area's suitability for intensification. The following desired local characteristics were developed in consultation with stakeholders for this framework.

The application of the key concepts to the existing form along with an assessment of the outlined local characteristics has resulted in a plan for the future form of central Perth.

Local characteristic 1: Places with lesser heritage value

Heritage places and areas make a valuable contribution to the amenity of central Perth. It is recognised that extensive demolition of city buildings in the 1960s and 1970s has diminished the appeal of the city centre as a place in which to work, visit and live. A well-rounded and successful city is dependent upon the conservation and adaptation that gives life to the heritage buildings and precincts that remain.

Intensification of the built form in central Perth therefore requires a sensitive approach to development in areas of heritage significance. This entails careful targeting of locations suitable for growth while leaving significant areas where continuity of the existing built form is given high priority.

Local characteristic 2: Places with sufficient elevation above sea level

Numerous global cities have continually evolved over hundreds of years. During significant periods of constant renewal it would appear important to allow for continued habitation. Based on current projections, sea levels are likely to rise substantially and at an increased rate by the end of the present century. Additionally, sea-level rise in relation to climate change will have a considerable lag time and could continue for centuries beyond 2100.

Existing urban settlement and infrastructure will be increasingly vulnerable to events such as sea-level rise and other variables associated with climate change. It is important to increase the longevity of any future intensification and restrain future costs by recognising this sea-level rise and the need to build robustness for the longer term.

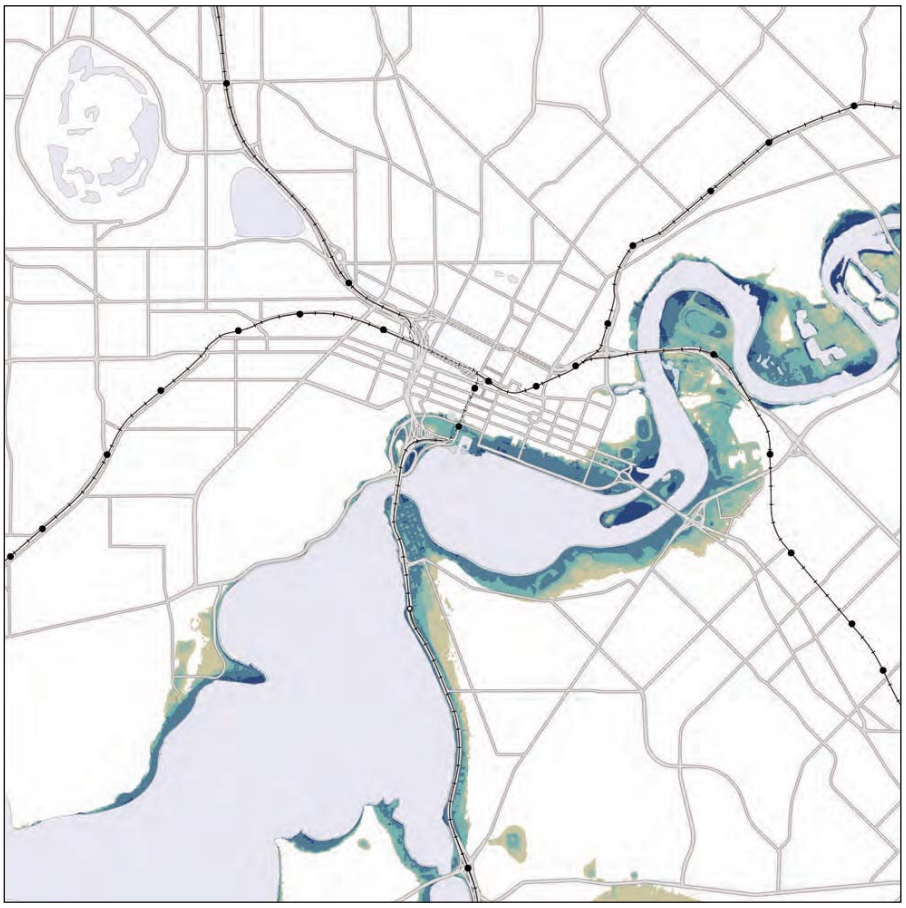


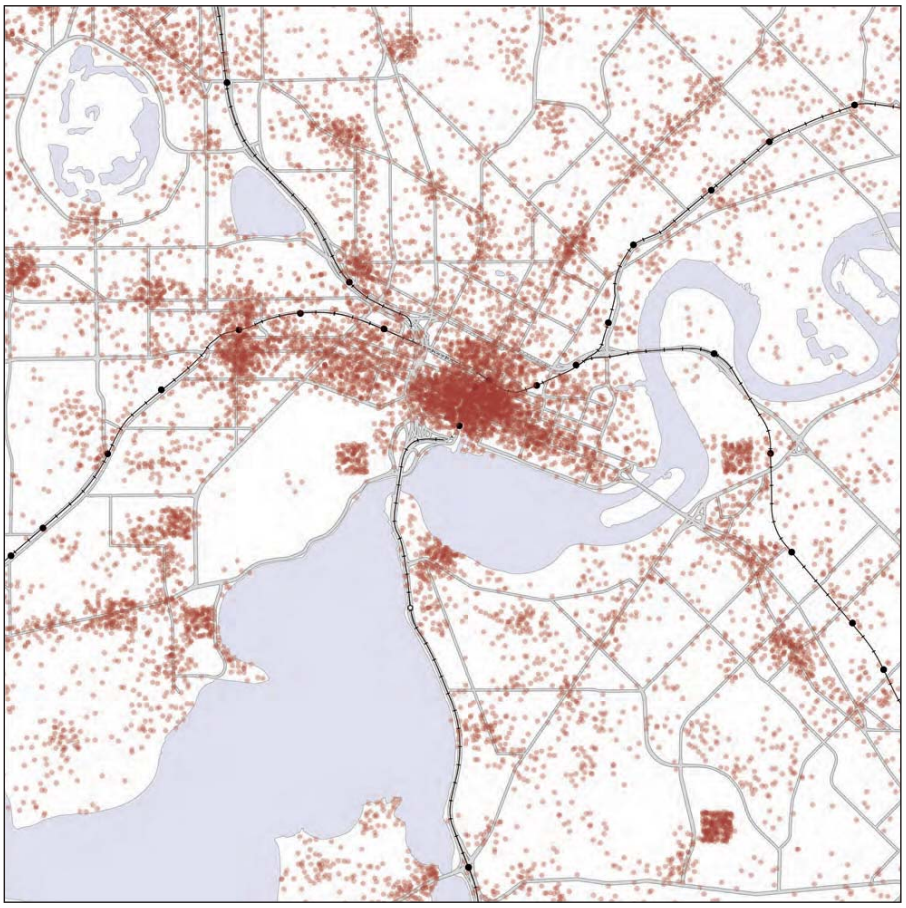
Image: Matt Eliot

Elevation above sea-level

- 0 metres
- 0-1 metres
- 1-2 metres
- 2-3 metres
- 3-4 metres
- 4-5 metres

Local characteristic 3: Places associated with activity away from home

Within central Perth there are locations at which more intense human activity occurs, places where people go to work, shop and play or carry out other important activities. Given that these are often already attractive and amenable destinations with employment opportunities, it would appear appropriate to further intensify the immediate vicinity of these locations. This may involve increasing the residential mix with corresponding improvements to amenity and opportunities.



Higher intensity activities

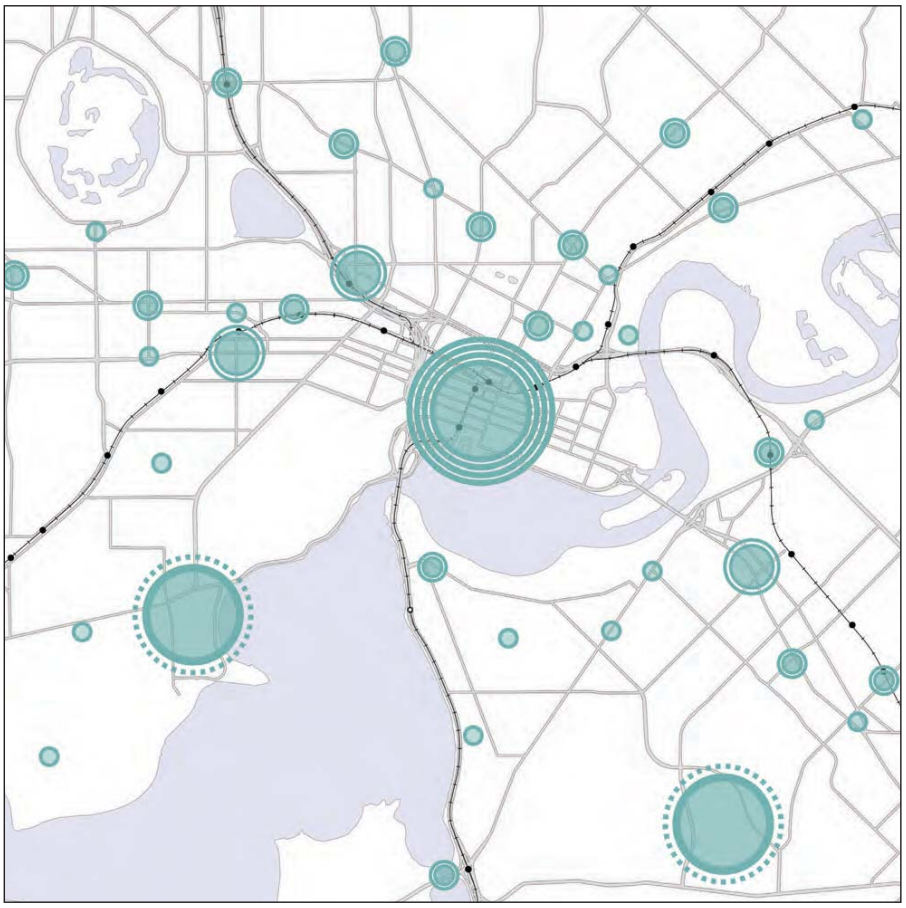
Surveyed distribution of destinations associated with shopping, education, work, personal, social and recreation activities.

Source: Perth and Regions Travel Survey (PARTS), DPI 2006

Local characteristic 4: Places near activity centres

There are 22 identified activity centres within central Perth and a number that are immediately adjacent to the boundary of the area. These activity centres could be places of higher intensity or in which intensity could emerge with future planning.

There are also a number of other centres in central Perth considered to be smaller and lower in the hierarchy of centres. These may have the capacity to accommodate an increased level of intensification of mixed-use or residential development and be located in high-amenity locations, provide services, be close to other significant attractors and be suitable precincts for communities. Given that some of these locations may contain older buildings, they may have the capacity to accommodate further intensification through a variety of options such as adaptive reuse or redevelopment.

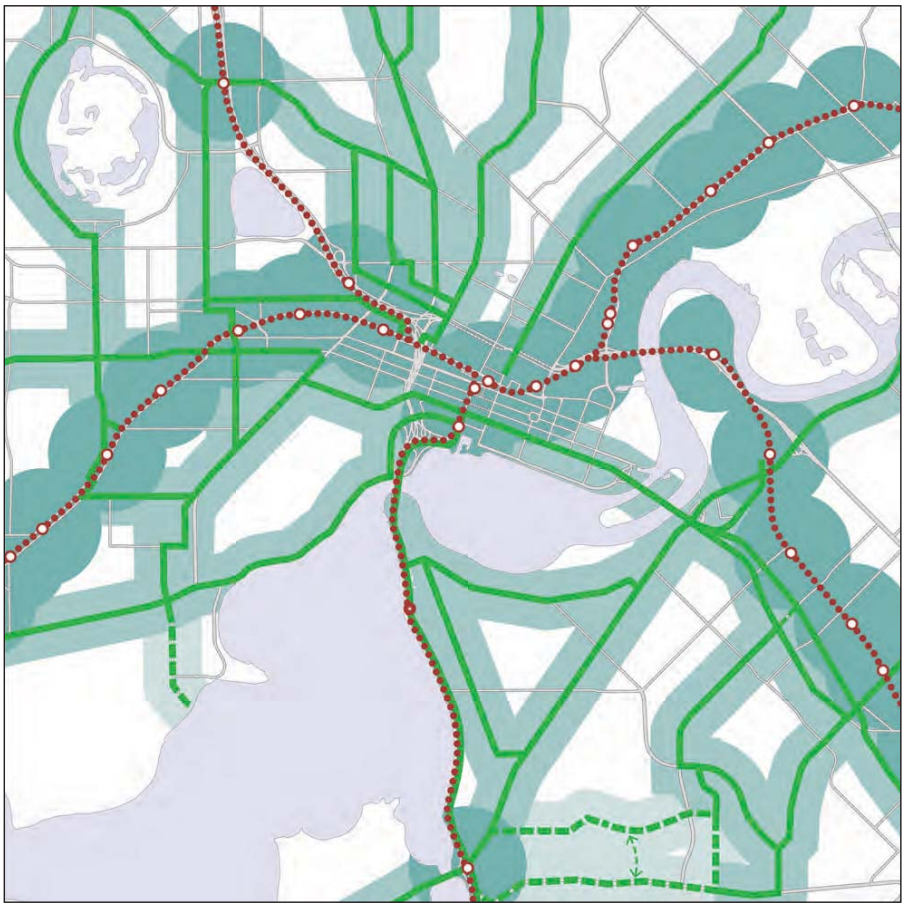


Activity centres

Local characteristic 5: Places with good access to public transport

The capacity for practical access to transport will have a significant influence on the experience residents have within central Perth; and on the economic and social fabric of the city. As the number of city residents increases, being able to easily move around by types of transport other than the car will become vitally important. Access to high-frequency public transport is potentially the most important criterion for the location of future density and intensity.

A network of high-frequency bus routes radiates out from central Perth as do the passenger rail lines. Individual bus routes are likely to change in the future; however, the major routes could be expected to remain the same and to be the backbone of the bus system. Bus and rail corridors have the potential to accommodate a significant proportion of the area's growth and to do so in a way that will help meet the needs of the population while enhancing the performance of existing infrastructure. These corridors generally have a high level of transport amenity and access to many surrounding services and significant locations.



Access to public transport

- Selected direct high frequency public transport routes
- Investigate alternative routes
- Passenger rail line
- Train station catchment (800m pedestrian access)
- Public transport route catchment (400m pedestrian access)
- Investigate public transport route catchment on alternative routes (400m pedestrian access)

Local characteristic 6: Places with good prospective views

In areas where development is intensified, one of the features that can make a location more appealing to live in is good distant views. In central Perth these could be views of the Swan and Canning rivers, the city centre, the ocean, significant landmarks or green areas such as golf courses, Kings Park, Lake Monger or smaller parks. In locations that provide good views there is potential for the development of quality design in built and urban forms that promote views for a maximum number of residents. For example, this could relate to building height or orientation.

The Swan coastal plain upon which Perth sits is relatively flat. There are, however, a number of ridgelines on the plain, and the faces of these and their adjacent elevated areas are potentially suitable to facilitate good views.

Using ridgelines and the suitably facing aspect as development areas for higher intensity housing minimises the potential for blocking views from neighbouring areas.

There are some areas that have already been developed according to this principle. The southern foreshore ridge of South Perth and the Victoria Park ridge both have extensive developments positioned to gain this amenity.

Prospective views

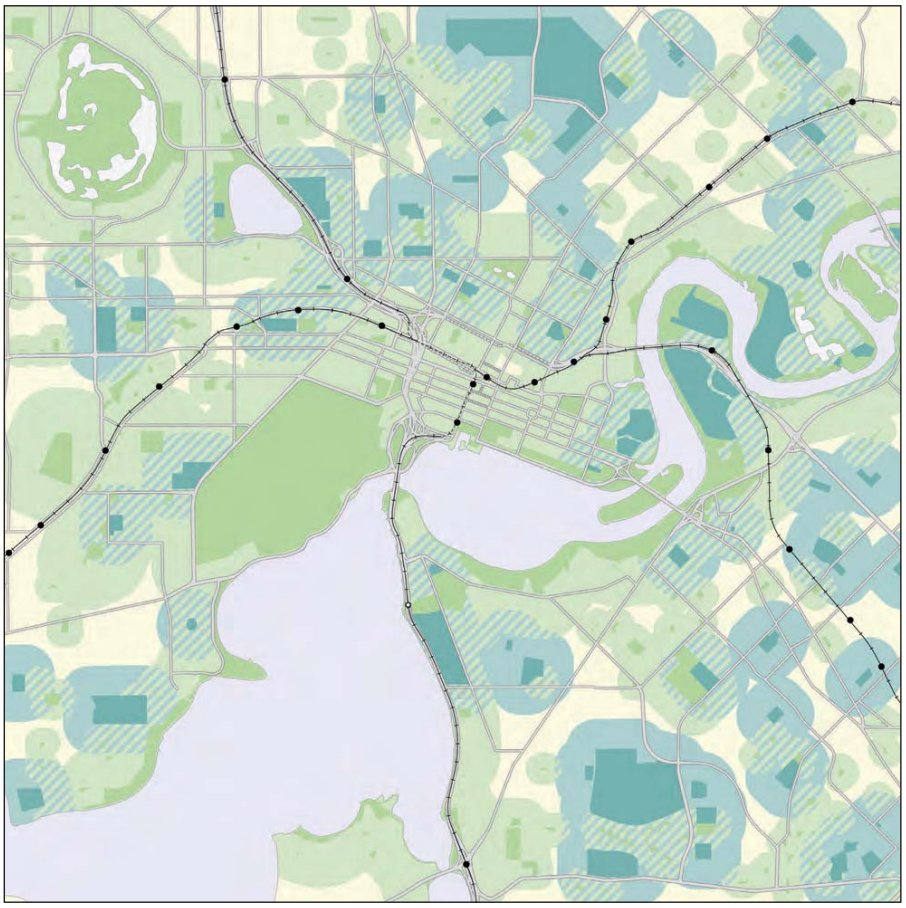
Ridgelines with potential for favourable aspect to views and sun

Open space

Local characteristic 7: Places with access to quality open space

As living arrangements change in central Perth and parts of the city become more active, access to some types of amenity may increase while access to others may be reduced. Proximity to private open space may be reduced for people in more intensified locations. This is a trend that is already occurring in some areas because of smaller block sizes and this in turn increases the need for close proximity to quality public open space. Along with transport, access to quality public space should be considered a primary requirement for areas of intensification.

Across central Perth there are numerous public open spaces, particularly the extensive areas of Kings Park and the Swan River foreshore. These spaces can accommodate a mix of organised or informal recreation; good access to both these types is a key consideration when determining areas for intensification. A well-planned green network, which is interwoven with the urban environment and connects existing open spaces, will effectively increase the amount and usability of the open space resource and make it more accessible.



Access to open space

- Open space used primarily for informal recreation
- Open space used primarily for organised sport
- Areas with good access to both sporting and recreation space
- Areas with good access to recreation space:
  <600m from regional reserve or <400m from district reserve or <200m from local park
- Areas with good access to sporting space:
  <400m from sporting facility
- Areas with poor access to open space

Local characteristic 8: Places with existing built-form boundaries

In central Perth, particularly nearer the city centre, there are street grid patterns that have evolved from the original grids of early Perth. There are also grids that are more irregular due to the local topography, such as water or escarpments, or because of the original rural roads and later freeways and railways. These grid-like patterns have developed over time, some with regular geometry and others more fluid in form.

Some boundaries of these grids are defined by local design qualities and many coincide with marked changes in the built form. Using these grids to guide future built form can greatly enhance legibility for those in the city. It can begin to define areas of different character around the city, giving quarters or places that are distinctly recognisable.

Local characteristic 9: Places that are reserved for intensification

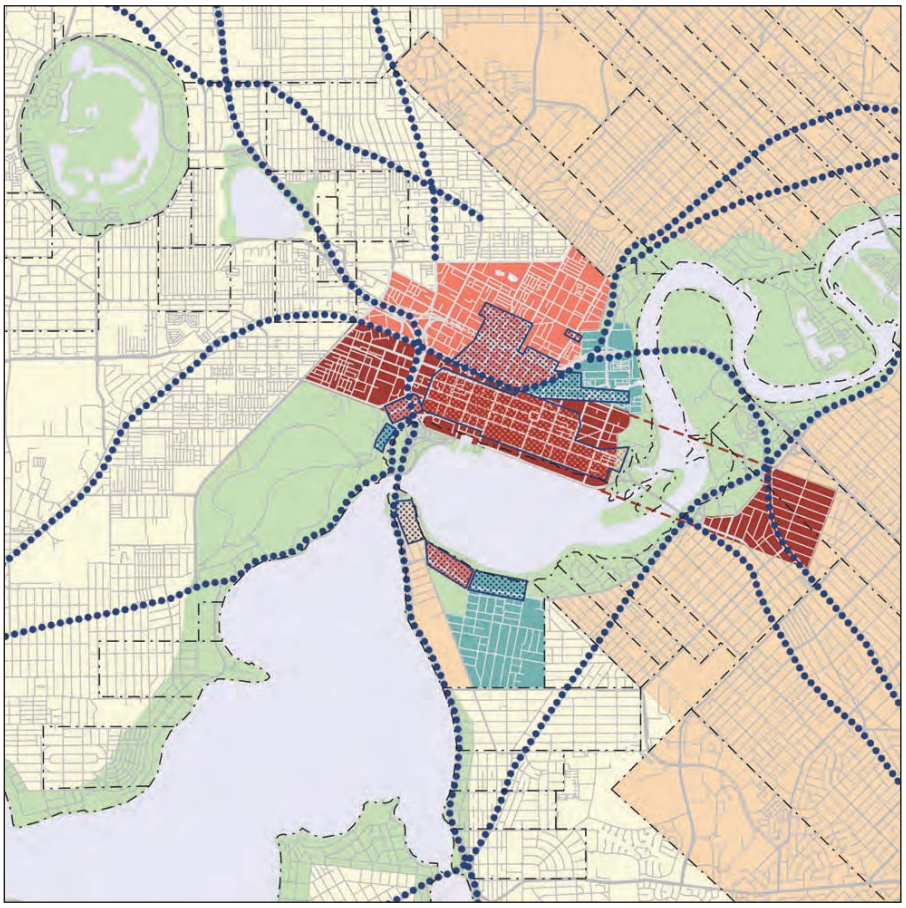
There are a number of places in central Perth which have been set aside for intensification in existing local planning schemes and strategies. More recently these places have assisted in progressively reviving central Perth, adding to the population, vitality and activity. These places are in areas that correlate well with the above mentioned local characteristics in support of suitability for intensification.

Local characteristic 10: Places with other local factors supporting urban intensification

Locations within central Perth can possess unique qualities or circumstances that may either encourage more intensive development in the future or make intensification undesirable to the community.

Circumstances of recent building and development could be considered to be one such local factor influencing urban intensification. Newly-completed development should be expected to have a sustainable lifespan that takes account of its material, energy and economic costs. Conversely, under-developed or dilapidated sites make for some of the best opportunities for strategic future growth.

These local factors can only be resolved with detailed planning consideration. The spatial plan will serve as a common reference for the many different agencies who will continue this process.



Street grids

Extent of town grids in 1838

Extent of rural grids in 1838

Extent of grids in 2012

Different colours denote changes in street grid orientation

Areas of irregular subdivision pattern

Rivers and lakes

Roadways / railways (historic or recent) causing local modifications to planned grids

5.4.2 Urban form for central Perth

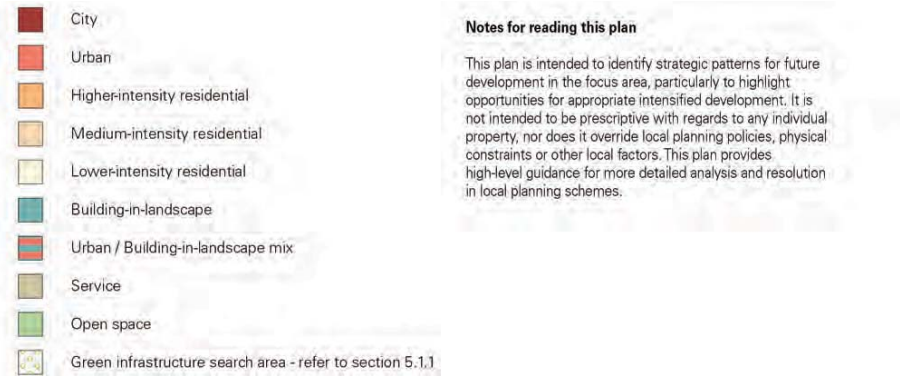
The following plan is derived from the values of the key concepts, and from analysis of the desired local characteristics of places for intensification. At an overall framework scale it is not always possible to respond to all local characteristics, however a broad analysis has revealed places with positive opportunities for intensification.

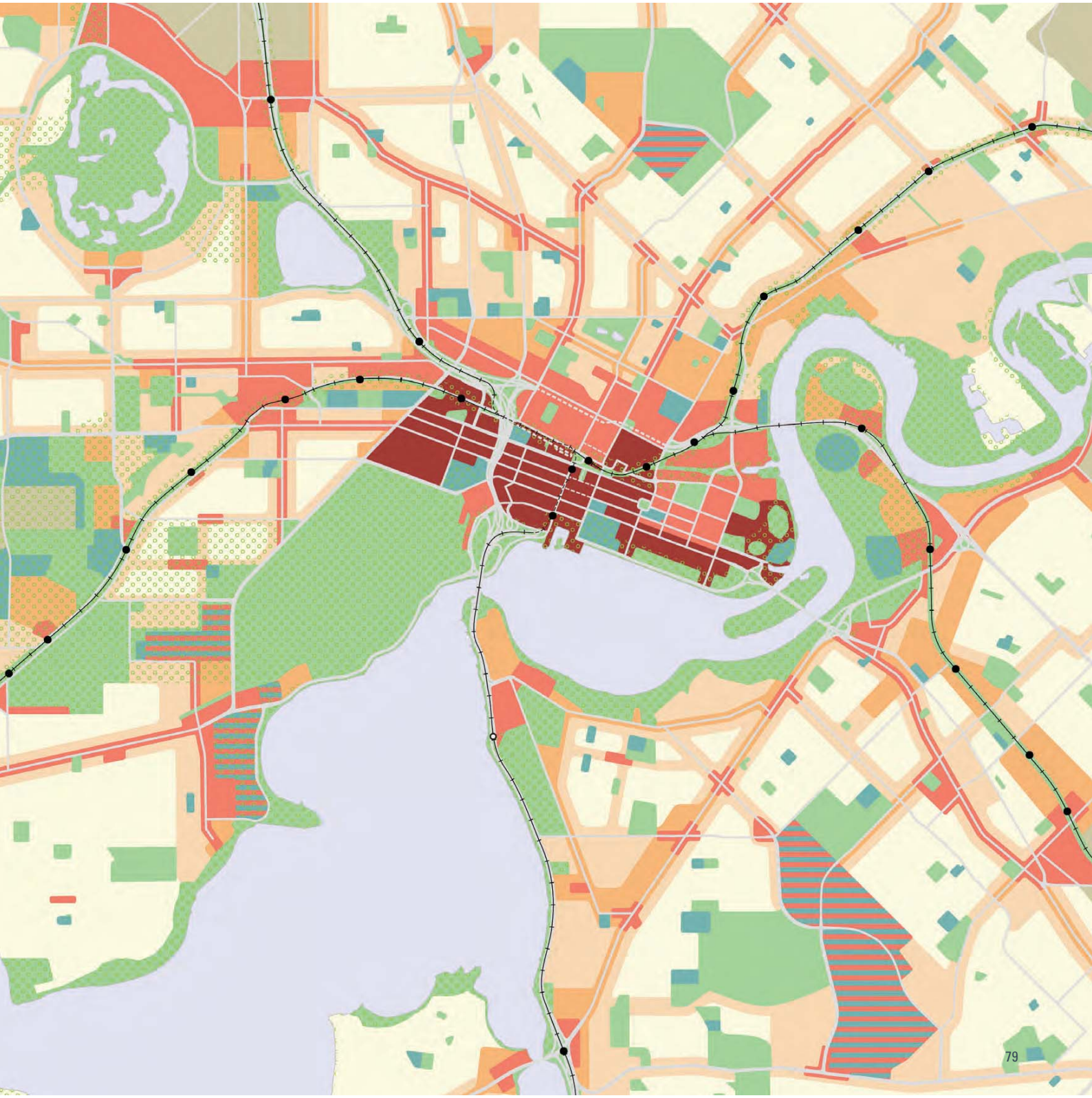
The plan has been deliberately simplified to focus on overall concepts rather than specific place implications at a fine scale. The synthesis of strategic values with local analysis aims to define a legible and logical city structure while allowing the inherent character of Perth to shine through.

This methodology and the resultant conceptual plan is intended to provide an overarching structure for central Perth for local statutory planning and all planning endeavours. The plan extends beyond a business-as-usual scenario to move towards a positive future for central Perth. It takes a long-term approach, seeking to guide local planning scheme reviews, activity centres and other planning over the next 20 to 40 years. This plan is aligned with the objectives of the Directions 2031 Plan for Urban Consolidation in Metropolitan Perth and Peel, encompassing central Perth.

As the many layers of the structure of a city cannot be resolved in a single plan, this will focus upon activity intensity and building typology factors, to be read in conjunction with the other written and illustrative material in the framework.

Proposed urban form for central Perth





Urban development typology

The plan demonstrates an urban structure by distributing a palette of defined urban development types. This urban development typology systematically groups urban features to establish a logical structure for a desirable city. The limited number of types and coarse steps between them reflects the high-level nature of the structure. More subtle and place-responsive outcomes will result from detailed local planning.

The terminology of **urban development intensity** as distinct from **residential density** seeks to differentiate the plan from statutory planning. These urban typologies are not intended to correlate to density codes, as this would circumvent the process of local planning scheme review. This distinction allows the plan sufficient objectivity to identify and shape urban patterns and structures based on mapping, analysis, investigation and consultation, yet understanding that not all local conditions will be resolved.

These types suggest development forms with a range of activity and development intensities that may apply to central Perth. Common features associated with each type are outlined to define their role in the urban form. Although the terminology overlaps with statutory planning, these typologies should not be interpreted as defining permitted elements or to imply that all features are uniformly applicable throughout the respective zones.

- **Land use:** Each typology has a range of land uses most suitable for their range of intensity. Although the growth of central Perth is likely to see a much greater mix of land uses, there will remain areas that are predominantly residential, commercial, civic or other use.
- **Public-realm characteristics:** How the public spaces should perform and the ways that development can contribute.
- **Building characteristics:** Certain combinations of land uses and intensity are associated with particular building types as either existing or emerging trends. Building type descriptors are noted to suggest possibilities for development but are not intended to prescribe allowable parameters. Local planning provisions should accommodate and encourage innovative departures from these typical forms.
- **Access:** Both the land use and the intensity of activity determine which characteristics of access are desirable for each typology. Intensely active places make good quality public transport or walking access highly desirable and viable. Lower-intensity areas often benefit from the flexibility of cars and bicycles.

City

Land uses

A wide range of mixed uses is generally suitable for areas designated city. This includes commercial, retail, civic and cultural uses in lower building floor levels, with commercial and residential uses in upper levels. Residential use is to be encouraged to reduce mono-functional planning and extend active hours.

Public-realm characteristics

Detailed and integrated design guidelines reinforce the significance of public spaces to the capital city identity. Intense usage necessitates high levels of amenity, design-quality and robustness. Ground-floor building frontages include verandahs, awnings or colonnades that support intensely active streetscapes. Street trees contribute to the pedestrian environment and the city's green infrastructure.

Building characteristics

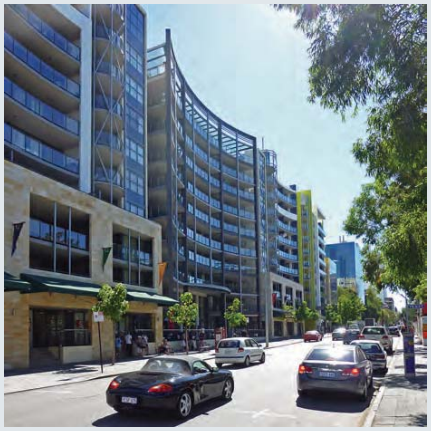
Development in the city attracts the highest level of investment, with corresponding sophistication and aspiration. Relatively complex site constraints and considerations can result in diverse built outcomes, but some typical forms can be noted:

Towers on podium: High-rise elements are balanced with a podium base that reinforces scale and setbacks of the adjacent streetscape, typically four to six storeys in the city centre. Height, proportion and spacing of high-rise elements above podiums adapt to the urban context and contribute to the overall cityscape. This type has evolved to accommodate human-scaled active frontages and mitigate some of the microclimate effects created by 'skyscrapers'.

Modulated urban frontage: Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to streetscapes and the green infrastructure of the city. Buildings generally rise to their full height at their front elevation, creating a strong but less-continuous street frontage.

Access

City areas have a high degree of integration with multi-modal public transit. Movement networks adapt to pedestrian and public transport priority. Parking and service access utilise laneways or minimal crossovers to reduce streetscape impact. Low car-parking provision is generally appropriate within developments.



Urban

Land uses

Predominantly mixed-use areas, with commercial and retail uses at lower building floor levels and commercial or residential uses at upper levels. Residential use is to be encouraged, to reduce mono-functional planning and to extend active hours, but may not be appropriate in some areas.

Public-realm characteristics

Development enhances the streetscapes with appropriately-scaled frontages, awnings or colonnades, and positive ground-floor activation. Well-integrated public open spaces are of a scale and nature to complement the site and land use. Major nodes of activity will include significant dedicated public spaces, while urban corridors concentrate on well-designed streetscape environments.

Building characteristics

The Urban category has been applied to diverse conditions, including the hinterland of the city centre, distinct urban nodes and urban corridors. Responding to these factors as well as topography, orientation and views will result in diverse built outcomes, but some typical forms can be noted:

Urban perimeter block: For areas with consistently high development intensity, strongly defined urban blocks create legible built form and streetscape. Primary frontages are built to the boundary at heights appropriate to pedestrian-scaled streetscapes, typically three to six storeys. Additional levels above may be acceptable according to urban context, with further setbacks to differentiate from the primary frontage. Restrained overall heights maintain contrast with the high-rise development of the city centre and reinforce a hierarchy of building form.

Modulated urban frontage: Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to green streetscapes. Buildings generally rise to their full height at their front elevation, creating a strong but less continuous street frontage.

Towers on podium: Although this type is generally associated with the city centre, it may be appropriate for larger amalgamated sites in other urban areas.

Access

Well-integrated public transit of one or more modes. Some adaptation of movement networks to pedestrian priority. Parking and service access utilise laneways or minimal crossovers to reduce streetscape impact. Lower car-parking provision is generally appropriate within developments.

Higher intensity residential

Land uses

Predominantly residential land use, with some mixed use at lower levels with residential use at upper levels.

Public-realm characteristics

Buildings with active ground floor uses directly address the street with well-designed streetscapes. Residential elements are generally set back from the street behind front gardens. Street trees add to the garden atmosphere and add protection for pedestrians. People-scaled elements such as windows and entrances are dominant in the streetscape.

Building characteristics

New buildings within these areas will be informed by the opportunities and constraints of urban context. Many areas with this designation extend existing patterns of higher intensity development, while others may introduce new forms to less developed areas with the capacity to sustain more residents. Local detailed planning will determine the appropriate scale and nature of new development. It should be noted that high-intensity residential development can be achieved without high-rise buildings. Typical examples include:

Urban perimeter block: Suitable for sites related to activity nodes or corridors. Strongly defined urban blocks with typically three-to-six storey primary street frontages, and capacity for additional levels above if their impact on adjacent streetscape and urban context is acceptable. The building form and active ground floors support pedestrian-scaled streetscapes. The limitation of overall height contrasts with higher urban centres and implies a hierarchy of built form.

Modulated urban frontage: Suitable for sites further from activity nodes or corridors as well as occasional less-urban areas with favourable attributes such as good views. Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to green infrastructure. Buildings generally rise to their full height at their front elevation, creating a modest-to-strong scale street frontage interspersed with landscaped spaces between buildings.

Access

Very walkable with a relationship to one or more nodes of higher frequency public transit. Lower car-parking provision is often appropriate. Car parking is away from streets and is serviced by crossovers or laneways.

Medium intensity residential

Land use

Predominantly residential land use, with possible mixed use at street level in appropriate locations.

Public-realm characteristics

Buildings are generally set back from the street behind front gardens. Streetscape amenity supports community interaction and street trees add to the garden atmosphere and add protection for pedestrians. Windows and entrances should be more prominent than garages and crossovers.

Building characteristics

These areas are transitional between sites of increasing population and the adjacent existing urban fabric, generally a suburban condition. There is rich scope for innovative design to cultivate new building types that can house growing communities and are sensitive to surroundings. Some current examples include:

Low urban perimeter block: Suitable for the outer extents of activity centres and corridors, as well as larger sites within predominantly suburban areas. Strongly defined urban blocks with typically three-storey primary street frontages and capacity for additional levels above if the impact on the adjacent streetscape and urban context is acceptable. Building forms and modestly active ground floors support pedestrian-scaled streetscapes. The limitation of overall height contrasts with higher urban centres.

Medium intensity residential

Low modulated frontage: Suitable for a select number of existing suburban areas close to activity centres. Required street setbacks allow for forecourts that encourage a stronger sense of garden landscaping. Height of development adapts to the location, constraints and the contribution to the preferred overall shape of the urban context. Modest street scale with some definition of street interspersed with landscape gaps between buildings.

Inner residential: Suitable where residential infill of higher intensity than background suburban densities can be sustained. Generally places of narrow lot and cottage housing where commercial uses are not desired as part of the land-use mix. Typically three-storey domestic urban scale with streetscapes defined by attached housing with limited setbacks.

Access

Very walkable with a relationship to one or more modes of higher frequency public transit. Lower car parking provision is often appropriate within developments.

Lower intensity residential

Land use

Almost entirely residential land use. This designation indicates minimal intervention to existing planning patterns.

Public-realm characteristics

Buildings are generally set back from the street behind front gardens. Streets trees add to the garden atmosphere and add protection for pedestrians. Windows and entrances should be more prominent than garages and crossovers. Development in these areas follows Liveable Neighbourhood principles.

Building characteristics

As a designation of minimal intervention, new buildings in this area will generally maintain or slightly modify existing built patterns. Some typical examples include:

Inner residential: Suitable where residential infill of higher intensity than background suburban densities can be sustained. Generally areas of narrow-lot and cottage housing where commercial is not desired as part of the land-use mix. Relatively small domestic urban scale up to three storeys, with streetscapes defined by attached housing with limited setbacks.

Suburban residential: Most suited to suburban areas of some heritage value and areas less connected to public transport. Generally areas of individual housing with sections of cluster and narrow-lot housing. Typically one or two-storey domestic-scaled streetscapes defined by individual houses.

Access

Lower density residential areas are often located in areas more removed from high-frequency public transit. This places more reliance on access by bicycles, walking and cars. All areas within central Perth are within a short bike ride of the city centre and are generally well serviced by on-site and street parking bays.

Building-in-landscape

Land uses

These areas are typically associated with civic, educational or other public uses, with some ancillary commercial use. Examples within central Perth include capital city precincts (such as the Kings Park-Parliamentary Precinct) and the city's stadiums. Major sites within this category, particularly university campuses and technology precincts, may intensify and diversify with mixed-use and residential uses as part of a planned precinct.

Public-realm characteristics

Predominantly detached buildings in a landscaped setting, this development form is generally distinct from surrounding urban areas. These areas contribute to the green infrastructure network due to their often generous open spaces and capacity for integrated landscape planning. Major sites within this category, particularly university campuses and technology precincts, are likely to adopt areas of Urban development type as part of a planned precinct, but will retain much of their campus-style characteristics. These sites are shown on the plan as a hatched combination of the Urban and Building-in-landscape types.

Building characteristics

Building types and scales vary significantly according to function. Examples of unique or iconic buildings are often associated with these areas. Appropriate building heights are determined according to the needs and constraints of each precinct. It is not usually intended to maximise yields of these sites.

Access

Civic institutions with a strong public interface and all major educational campuses require access to high-frequency public transport.

Service

Land uses
Service areas are suitable for storage, wholesale-retail and light-industrial uses that provide support services to the city.

Public-realm characteristics
Buildings and streetscapes should establish a working environment where vehicle access is facilitated. Streets are largely defined by widely spaced buildings set back behind forecourt car parks, thereby creating visually wide streets of mixed public and semi-public domain. Pedestrian spaces will generally be of modest amenity but basic standards of accessibility and safety should apply.

Building characteristics
Frontages provide a street address and identity for the businesses within, while the operational areas behind are of a utilitarian form and character. Building heights are typically up to three storeys or single storey of equivalent scale.

Access
The most important access for service areas tends to be by private vehicles, including large freight vehicles. Good access to regional road infrastructure is therefore a greater priority than high-frequency public transport, however public transport service is desirable for the working population of these areas.

Open space

Land uses
These spaces provide a range of services to people, providing attractive environments that support healthy activities. Their vegetation helps to minimise the effects of climate extremes. They are places for both passive and active recreational uses, and places for the protection and management of indigenous flora and fauna. These spaces also provide opportunities for urban water management in keeping with the landscape characteristics.

Public-realm characteristics
These spaces are part of the green infrastructure network. Generally places of low intensity use in contrast to surrounding urban places, although hosting of major public events can make such places the centre of city life for short periods. Landscape is generally dominated by vegetation, grassland, recreational and sporting infrastructure and often includes wetland, lakes and small car parks.

Building characteristics
Limited structures, typically of building-in-landscape urban form, complementing the open space uses. Generous spaces between structures and modest building heights contrasts with surrounding built areas.

Access
Diverse and flexible access is desirable, according to the local and regional roles performed by the open space.

Outcomes of the proposed urban form for central Perth

The main themes and patterns that this plan identifies for the planning of future growth in the city are summarised below.

- The proposed city structure evolves from current conditions. It recognises the distinctive existing patterns of central Perth and proposes patterns of future development that build on the qualities of existing places.
- The plan focuses on locations that rate highly according to the local characteristics supporting intensification. Concentrating development in locations most able to sustain it can accommodate significant urban growth and also alleviate pressure on established residential areas.
- The plan reinforces the city centre as the primary place for urban development of the highest intensity and diversity.
- A series of main streets around central Perth are identified as corridors suitable for higher intensity urban development. In most cases these corridors would concentrate on residential development with periodic nodes of commercial ground-floor use; however, in several corridors there is recognition of the historic continuous mixed-use nature of the streets.
- The overall pattern of corridors proposed for intensification relates mainly to radial routes from the city centre and cross-regional streets that would be serviced by higher-frequency public transport. These corridors are shown at regular intervals through suburban areas to enable an even distribution of transit and other services.
- Many existing smaller activity centres are identified as places suitable for greater intensification of urban development. Such nodes of intensification would ideally provide greater diversity of housing form, public transport access and local amenities within walking distance of communities. Generally these centres are based upon established local activity centres. There are also instances of centres proposed either in new locations or in areas of lower current activity where the strategic plan indicates a need or opportunity for a new local centre.
- The three university campuses have been identified for development towards more diverse activity centres that complement the roles of the campuses. Evolution of the campuses to be part of diverse living and working activity centres is a major ambition for the proposed structure.
- A green infrastructure network is shown encompassing green spaces, the river frontage, major transport corridors and connectivity zones. This network is interwoven with the urban fabric, complements the setting and amenity of central Perth and supports urban life.

An indicative sample of the proposed plan has been produced as a 3D visualisation of some of these outcomes. The image simulates one example of an approximate scale and distribution of new development using the urban-development typologies of the plan. The view is a notional snapshot in time, showing that implementation of the strategy happens gradually and organically, as private sites take up the opportunities that planning provides. The accessibility and amenity of major activity corridors provide significant impetus for development, and hence are represented as becoming more consistent streetscapes over time. Local factors constraining development such as heritage or civic buildings and recently developed sites are acknowledged by retaining existing buildings even in areas of highly-intense urban development.

Visualisation of proposed urban form principles

Indicative *urban* development

Indicative *higher-intensity residential* development

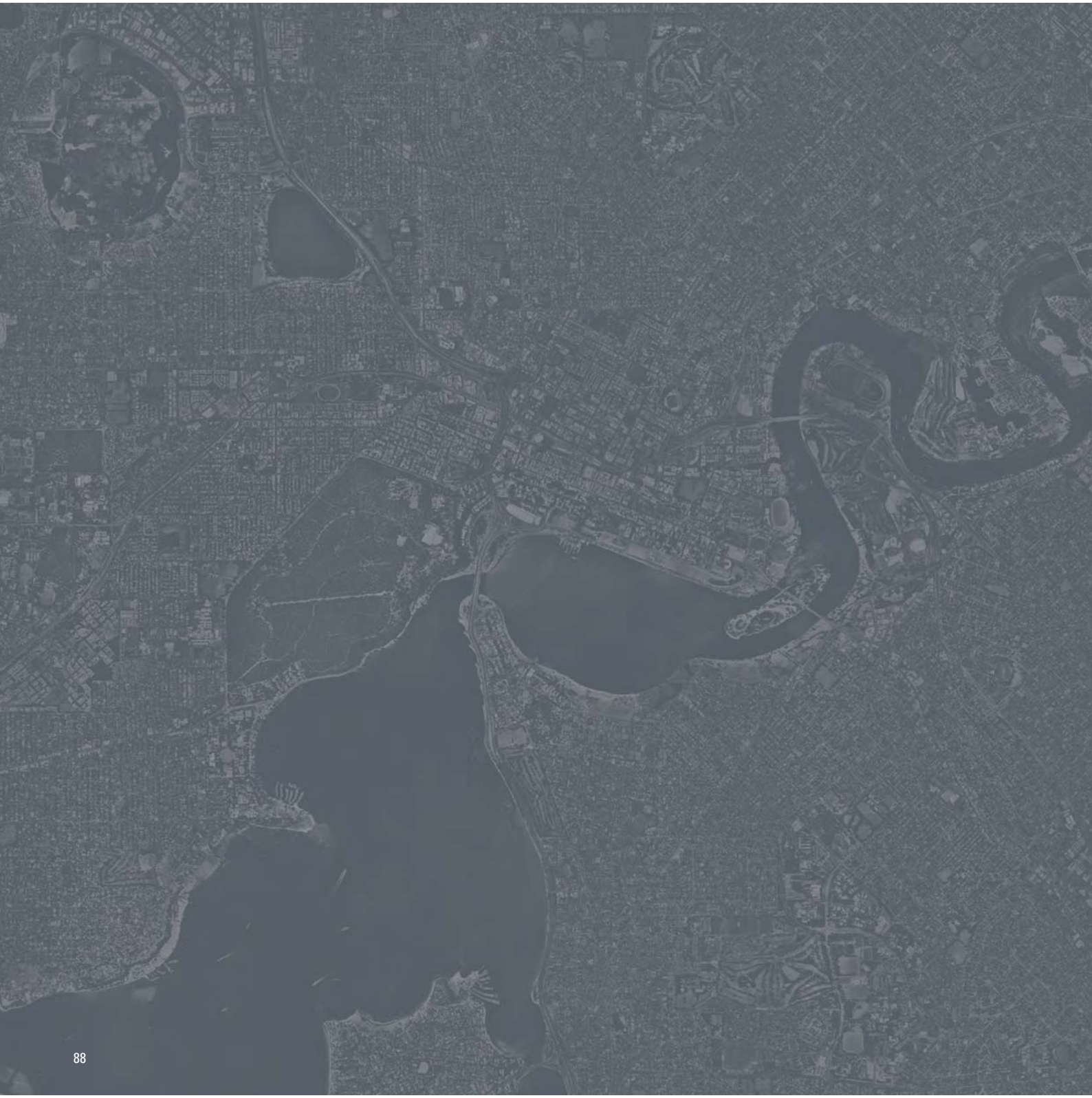
Indicative *medium-intensity residential* development

Indicative *lower-intensity residential* development

Existing buildings

Ground surface shaded with extract from proposed urban form plan

1. Highly intense development on main activity corridor frontages, tending towards more consistent streetscapes
2. Moderately intense development to sites with strong connection with activity corridors
3. Heirarchy of activity corridors derives from combination of city-network and local factors
4. Development at increased density where local impact is acceptable, particularly in proximity to transit
5. Extensive areas beyond intensified zones retain existing neighbourhood characteristics
6. Local nodes of activity give structure to future urban growth



6
Implementation

While the Capital City Planning Framework is an expression of the State Government's intent, it is envisaged that the framework's ownership will lie with the broader Western Australian community. It is only by means of this broad support that the Framework's implementation will be successful. The processes and actions outlined in this section are therefore only the start of a broader community uptake of the changes necessary to make the proposed outcomes possible.

The framework sets out a long-term strategic guide to the development of central Perth. Its propositions are designed to guide both the actual development of central Perth over the next twenty years, and the development of policy during this period that will determine how central Perth evolves for the generation after that.

The endurance of the framework will be challenged by inevitable and significant changes to the city's circumstances over the next decades. It is hoped that these directions will remain sufficiently relevant and robust to continue to make a worthwhile contribution to the betterment of central Perth over this timeframe.

6.1
State Government in the Perth and Peel Region

The State Government plays a lead role in strategic land use planning and infrastructure provision within Western Australia. The Western Australian Planning Commission (WAPC), with the support of the Department of Planning, takes a key role in leading the strategic guidance, coordination and administration of these services. For example the WAPC's *Directions 2031 and Beyond* provides the context for the Capital City Planning Framework. The highest level spatial framework and strategic plan for the metropolitan Perth and Peel region, this document guides the detailed planning and delivery of housing, infrastructure and services necessary to accommodate the expected growth of the metropolitan area.

Further information about the structure of planning within Western Australia and key metropolitan planning policies is available from the Planning WA website.

6.2
State Government in central Perth

Within central Perth and particularly in the city centre, the State has many interests that extend beyond its normal role in other parts of the State. These interests include the housing of key parts of the government's own transport infrastructure and major administrative functions. There is also an interest in the pivotal economic role of the city centre and a further interest in the multiple cultural roles it plays in the embodiment of much of the State's identity.

In recognition of these roles, a significant proportion of the city centre has been placed under the planning control of the WAPC under the Metropolitan Region Scheme (MRS). These are principally areas of the city where the transport, recreational, cultural and institutional roles of the State are strongly embedded. The city centre is therefore a place where local and State government must work together to administer planning in an especially coordinated manner to achieve the best outcomes.

In recognition of this special partnership, the WAPC has created a specific subcommittee for the Perth city centre called the Central Perth Planning Committee. The WAPC has delegated most of its planning powers to this committee, the membership of which comprises:

- Western Australian Planning Commission
- Department of Planning
- Department of Transport
- Metropolitan Redevelopment Authority
- LandCorp
- Office of the Government Architect
- Heritage Council of Western Australia
- Swan River Trust
- City of Perth
- Community representative.

The decisions made by this committee are not confined to the statutory powers of the WAPC, but also relate to the general planning directions of the city centre. These non-statutory decisions build connections and common directions between these key planning agencies, and have a great influence in guiding their actions in the application of their own statutory powers.

As the embodiment of the State's planning interest in the city centre, the Central Perth Planning Committee also has a role in ensuring that the planning of the broader central Perth area complements and supports the planning of the city centre. It is therefore the Central Perth Planning Committee that has taken the lead role within the WAPC in guiding the formulation of the Capital City Planning Framework.

Over the last couple of decades the State has taken a strong interest in leading the revival of specific places in central Perth. These places include East Perth, Northbridge and Subiaco, where redevelopment authorities have worked with large areas of underdeveloped land to create thriving inner-city communities. These projects are now largely complete, and demonstrate the value that can be achieved by an intensive and coordinated approach to planning.

The next generation of central Perth places where revival is being sought and where the State is currently taking a leadership role in planning and on-the-ground implementation include:

- Elizabeth Quay
- Perth City Link
- Perth Cultural Centre
- Riverside
- Burswood Peninsula.

In many cases it is more appropriate for the State planning agencies to take a coordinating or partnership role in recognition of the roles and capacities of other organisations. This has occurred for a number of projects around the metropolitan area and there are many other places where further partnerships could be of great value to advance both State and local strategic issues. The Department of Planning and other planning-focused State agencies will continue to seek such partnerships where it is apparent that State involvement is desirable, such as to support an indigenous cultural centre within the Elizabeth Quay project.

Some areas nominated in this framework as being of State strategic importance, and where various State planning agencies are likely to seek partnerships over the next generation include the following:

The three Capital City Precincts: The Perth Cultural Centre - Forrest Place Precinct; Perth Waterfront - Civic Precinct; and Kings Park - Parliamentary Precinct, are all currently under various forms of State and local government control. Their ongoing planning and management to meet the opportunities outlined in this framework will require the partnership of many agencies.

The western edge of the city centre: Further investigations are proposed to seek an improved relationship between the elements of the city centre, Kings Park and the Swan River and optimisation of the freeway system to current and future needs.

The northern edge of the city centre: The McIver - Claisebrook corridor east of Perth Station where the redevelopment of Royal Perth Hospital and the Moore Street West precincts requires the resolution of many issues, including the ongoing form of the railway corridor and the area's open space system.

The southern edge of the city centre: Planning and development of the city foreshore interface between Elizabeth Quay to Riverside will help improve the interface and meet the area's environmental challenges. This will require State and local government partnerships.

The eastern edge of the city centre: Planning for this precinct is needed beyond the stadium infrastructure. This includes the connection to the city centre and the opportunities for development given capacity of the transport network and the suitability of the filled land.

The corridors of land linking the city centre, Swan River, Kings Park, Bold Park and Herdsman Lake, Lake Monger and the coast: The recreational and biological linking of Perth's main green spaces to create a continuous park system between the Indian Ocean and the Swan River promises to be a major opportunity over the next generation, as the mainly State-owned land between them is redeveloped.

UWA-QEII and Bentley-Curtin activity centre: The continued development of UWA-QEII and Bentley-Curtin as specialised centres for the State's knowledge industries is a high priority. Their evolution to become a more urban centre with high-quality access will require close partnerships.

Mt Lawley Edith Cowan University (ECU) activity centre: The future of this centre must start with dialogue about its desired future form and function. Whatever the outcome of this process, the area of the ECU Campus will remain a key location for knowledge and cultural industries within central Perth.

Places housing the State's main sports arenas: Planning for the State's main multi-purpose stadiums will continue. Matters related to their redevelopment, access and management will require significant partnerships.

6.3 Local government

Local governments possess many of the critical means to implement the propositions of the Capital City Planning Framework. A partnership of State planning and infrastructure agencies and local governments, as part of a larger community partnership, will be essential to achieve a coordinated better future for central Perth.

Local planning in central Perth is overseen by twelve local governments:

- City of Bayswater
- City of Belmont
- Town of Cambridge
- City of Canning
- City of Melville
- City of Nedlands
- City of Perth
- City of Stirling
- City of Subiaco
- City of South Perth
- Town of Victoria Park
- City of Vincent.


Image: RA Forster

There are also four administrative authorities that engage in local planning within special areas of central Perth that are outside local government control:

- Botanic Gardens and Parks Authority, overseeing Kings Park;
- Swan River Trust, overseeing the Swan and Canning Rivers;
- Metropolitan Redevelopment Authority (MRA), overseeing local planning in metropolitan redevelopment areas that are outside local government control, for instance in Perth, East Perth and Subiaco; and
- Department of Racing Gaming and Liquor, overseeing Burswood Entertainment Complex, and surrounding parks and sports facilities.

Together, the local governments and administrative authorities develop local planning strategies, and deal with the majority of planning decisions in central Perth. Cooperation and coordination between local governments and local administrative authorities is clearly necessary to ensure cohesive delivery of local planning and other services. This generally occurs informally on a day-to-day basis; however there are also non-statutory groups of local governments that deal with planning issues that achieve these outcomes in a more formal way.

It is envisaged that local governments will support the implementation of this framework through having due regard to the vision, objectives, principles and key concepts in the preparation of local planning strategies, schemes and associated policies that current and future good practice is continued to be shared through an integrated and collaborative approach.

Coordination between local governments is facilitated by the Minister for Planning's provision of guidance and approval for each local government local planning schemes (LPS). By overseeing planning appeals, the State Administrative Tribunal (SAT) provides interpretation on issues related to the application of schemes, and ensures that planning scheme controls are administered fairly.

It is evident that there are a large number of local governments within central Perth. Consequently there are challenges associated with cross-border coordination as well as building expertise and efficiencies within local governments for strategic planning and service delivery. These challenges need to be balanced with the role of local government in community representation and local democracy and the key function of local governments as place-makers and place-managers. Subsequent to a statewide voluntary amalgamation process, the formation of an independent panel will consider the governance of the Perth metropolitan region and report to the Minister for Local Government.

6.4 Proposed State Government actions

The Capital City Planning Framework is a long-term strategic plan to guide decision about the evolution of central Perth. The key proposals of the framework are contained within its eleven Key Concepts, and due to their strategic and long-term character they are generally of a conceptual nature. These proposals are intended to be developed over time with community dialogue and input, with cooperation between State and local governments, and in the context of changing circumstances.

A selection of implementation actions and steps has been identified to support and advance these proposals. A number of these actions are being addressed through the implementation of planning policy linked to the framework, such as implementation elements of *Directions 2031 and Beyond*. These include:

- The development of a Directions 2031 Plan for Urban Consolidation in Metropolitan Perth and Peel, which will encompass central Perth. This plan is complemented by the Urban form for central Perth plan within the framework, and focuses attention on achieving the *Directions 2031 and Beyond* consolidation targets for metropolitan Perth and Peel, including central Perth in the long-term.
- The preparation of structure plans for the UWA-QEII specialised centre in Nedlands-Crawley, and for the Bentley-Curtin specialised centre in Bentley. Development of these plans will explore and develop the principles considered in the framework for these centres.
- The finalisation by the Department of Transport of the *Public Transport Plan for Perth in 2031*, which defines how the transit system for the metropolitan system is planned to evolve. The Department is also preparing a Moving People Network Plan to support future integrated land use policy, by focusing on regionally significant transport corridors and travel patterns. This policy will focus on moving people rather than vehicles. Additionally, the Department is preparing a CBD Transport Plan to ensure a sustainable, integrated and more balanced transport system in the short-to-medium term, which can accommodate and complement continuing major city development.

Further State government commitment to actions will be considered as part of the Department of Planning, the WAPC or other state government stakeholder's business planning processes, and within the context of the evolution of central Perth, particularly where there is State importance or specific leadership needed from state agencies.

6.5 Endnotes and Bibliography

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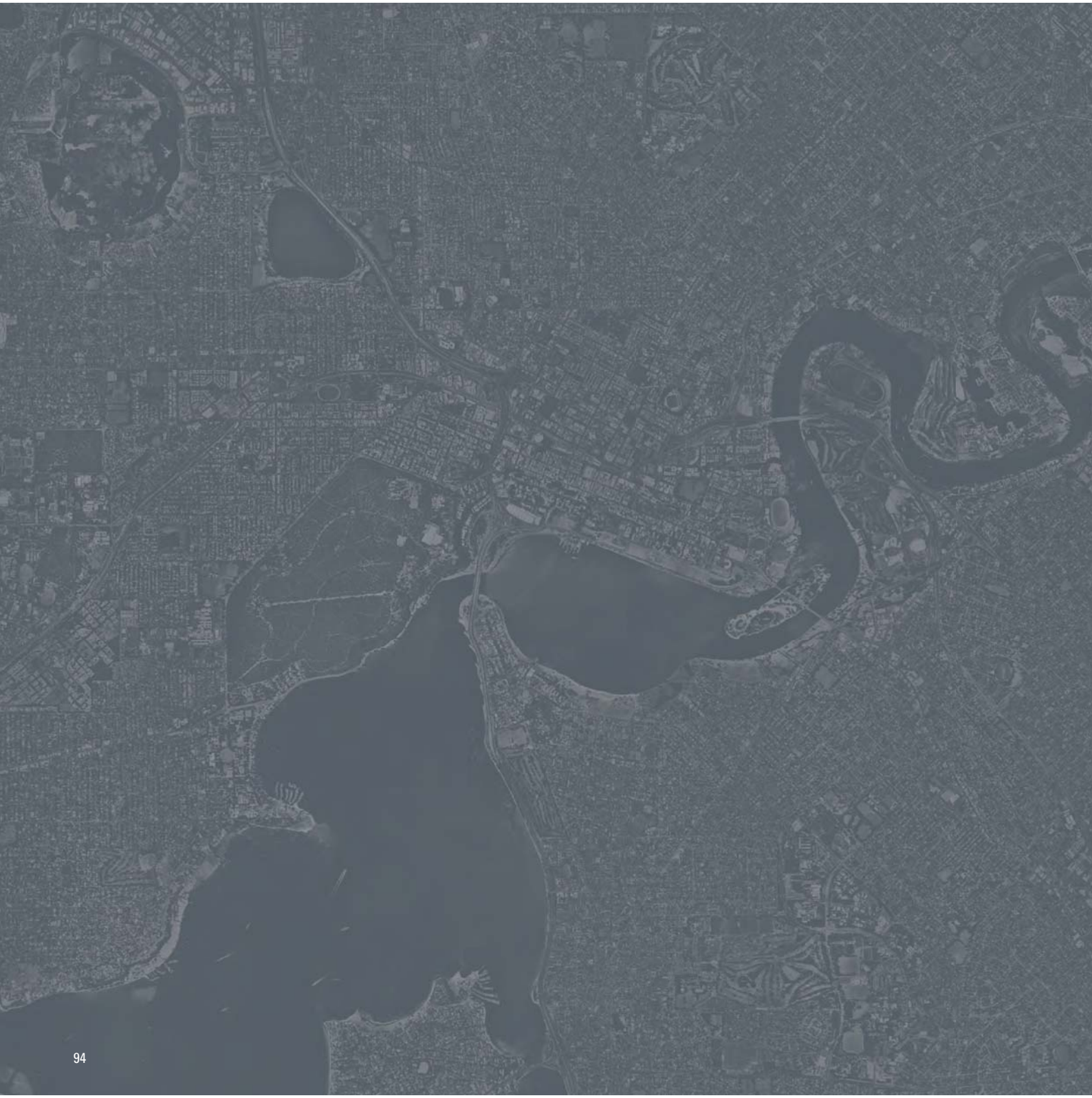

7
Appendix

7.1
Directions 2031 and Beyond and the Capital City Planning Framework

The Capital City Planning Framework fits into series of complementary policies. At the metropolitan scale, *Directions 2031 and Beyond* provides a high level framework for Perth and Peel, a vision for future growth and guidance for more detailed planning.

In some instances the objectives and strategies that support the themes of *Directions 2031 and Beyond* are not directly applicable in central Perth, such as promoting higher density in greenfield development or protecting agricultural land. At the more refined level, the key concepts of the Capital City Planning Framework are intended to apply the themes of *Directions 2031 and Beyond* in a manner in which each key concept can encompass more than one theme. For example, Key concept 10: A city with networks for all modes, contributes to the themes of a city that is sustainable, accessible and liveable.

The following table shows the association between themes, objectives and key concepts where there is principal alignment, with an understanding that there are inherent connections between the five themes of *Directions 2031 and Beyond* when applied at a more refined level of spatial planning.

Directions 2031 and Beyond	Capital City Planning Framework		
Themes and Objectives	**Objectives**	**Key concepts**	
Liveable: Living in or visiting our city should be a safe, comfortable and enjoyable experience.	• Enhance our sense of place. • Reconnect with our indigenous heritage. • Become a more liveable city. • Provide for a diverse residential population.	1: A city with a reconceived setting. 2: A city of capital city places. 5: A city for living in. 7: A city of well-designed places.	11: Perth's form is to evolve to respond to the framework's key concepts for setting, activity and built form and movement.
Prosperous: Our success as a global city will depend on building our current prosperity.	• Build our knowledge and cultural economy.	6: A city for knowledge and culture.	
Accessible: All people should be able to easily meet their education, employment, recreation, service and consumer needs within a reasonable distance of home.	• Build a more compact central Perth. • Become less dependent on private cars.	8: A city with a well-connected city centre. 9: A city with streets for movement and activity. 10: A city with networks for all modes.	
Sustainable: We should grow within the constraints placed on us by the environment we live in.	• Build robustness against climate change. • Reduce the city's resource footprint, including greenhouse gas emissions.	1: A city with a reconceived setting. 4: A city with resilient urban characteristics. 10: A city with networks for all modes.	
Responsible: We have a responsibility to manage urban growth and make the most efficient use of available land and infrastructure.	• Provide for a growing residential population.	3: A city for growth.	

7.2
Local government brief

The brief for the Capital City Planning Framework includes consideration of the local governments within the area. As part of the consultation process for the framework, representatives from five inner local government authorities came together to define their aspirations for central Perth. They were from the cities of Subiaco, Vincent and South Perth, and the towns of Cambridge and Victoria Park.

Below is the inner-city local governments' brief and broad aspirations for the framework.

Local government brief for Capital City Planning Framework

Working for a better central Perth

Each local government is at various stages of master planning for the new wave of growth and urban living demands. This is represented in the strategic plans and visions of the five inner city local government entities.

It is recognised that the wider good of the community needs to be served by planning, but not at the expense of our unique character and local accessibility. To achieve this, the inner-city local governments are working across their boundaries for the betterment of central Perth, looking at the bigger picture and providing for growth and prosperity.

Sense of place

The inner-city local governments are planning for the communities of today and tomorrow. In doing so, we are recognising the past by ensuring our individual, character, heritage and uniqueness remain.

The central Perth suburbs have (over a century of community building) blended the old with the new working class grit with new affluence. We have the same social and amenity benefits and problems affecting any major inner-city zone.

While seeking development, we do not want to become clones of each other, but rather to protect the unique character and cultural aspects that make a particular area attractive, not just in regard to its location. In the majority of cases we have good building stock on small lots, providing living choices, helping to define the urban form, and providing green lungs for the city.

Further development

Intensification of our urban fabric is occurring and will continue to do so. Some areas should be planned to reach for the sky while others should retain their more intimate character. We will see major growth on the river peninsulas, not only to take advantage of access to the city core, but also to capture spectacular views to the river, the city and our hinterland.

Intensification should be mainly within activity centres, and along main streets and transit corridors. In achieving this we should plan to add to the vibrancy of main streets and activity centres, with a mixture of commercial uses to service both the local and the wider community, while providing living areas above.

The places of tomorrow should be:

- child-friendly, safe and enticing to all ages;
- diverse in demographic makeup, housing choices, employment opportunities, entertainment, recreational and tourism pursuits;
- planned for local communities, knowledge communities, blended communities, real communities; and
- vibrant and diverse centres of activity.

Better connections

The inner-city local communities have well-defined traffic routes that lead to the city centre. We also have traffic congestion, ever-increasing parking demand, through roads, freeways and railway lines that connect (yet also divide) our communities.

We need:

- accessible, walkable and connected communities not divided by major infrastructure;
- integrated transport options;
- better mass transit systems that do not divide, but instead connect the major centres of activity, health, education and tourism with our town centres. For example, Crawley to Subiaco; Subiaco to Leederville; Curtin University to the Perth/Armadale line; a station at South Perth;
- utilisation of the river as a way of connecting communities and attractions; and
- better connections north of the city centre linking the east with the west, and West Leederville with Leederville.

Place implications of building a better central Perth

In determining how these aspirations for building a better central Perth could be assembled spatially, local governments have developed a number of concepts for the area. These could be best described as opportunities related to setting and identity, movement, and activity and built form.

Setting and identity

This involves the desire to maintain areas of character housing across certain zones that frame the Capital City Planning Framework focus area and surround the inner city. These character areas include parts of South Perth, Victoria Park, Subiaco and Shenton Park. The redevelopment plans for Subiaco and Perth ovals were seen as future opportunities in addition to those already being undertaken or investigated, such as in Leederville and West Leederville, West Perth, Subiaco, Burswood, the Causeway precinct and Canning Bridge. Additionally, there are major projects occurring in the inner city such as Perth Waterfront, Riverside, the East Perth Power Station, Cultural Centre and the Perth City Link and Perth Transit Hub.

Activity and built form

Local governments proposed that certain streets be activated or further encouraged to maintain and evolve with main street characteristics and activity. These streets were the southern portion of Scarborough Beach Road, Cambridge Street in Wembley, Albany Highway in Victoria Park and the northern part of Canning Highway in South Perth and Victoria Park.

Concepts also included redevelopment opportunities at the Water Corporation site in Leederville, the City West site and around the Department of Agriculture site in South Perth.

Movement

There are many potential transit-oriented development locations in central Perth including train stations close to the inner city such as Leederville, City West, East Perth, Burswood and Glendalough plus a potential station in South Perth.

The appeal for priority movement connections, particularly by transit, is important between the three universities in central Perth, with each other, with the city centre and with nearby train stations, strategic activity centres and residential areas. This included the concept of a light rail system through the City of Perth.

Other movement-related concepts include the expansion of current ferry route services to include such locations in Applecross/Canning Bridge, South Perth, around the UWA campus and around the Burswood Peninsula and Maylands.

Improved cross-linkages by public transport from east to west, north and south of the inner city, are seen to be as important as pedestrian and bike connections from Kings Park to areas north of the Mitchell Freeway in Leederville and West Perth.

7.3
A shared vision for Perth

As part of the framework consultation process, a group of citizens from a range of backgrounds but who shared a common commitment to the ongoing development of the city, met to formulate a shared vision for the future of Perth. Facilitated by the Committee for Perth in May 2009, the group developed the narrative and key ingredients for a vision for Perth as a city of 3.5 million, whenever that may occur. These statements have been used as a reference for community values in the development of this framework. The text is included here as a demonstration of community ownership of Perth's positive future.

Where we are

Perth is pivotally positioned in the twenty-first century, with enormous opportunities for strengthening our industrial, commercial, tourism and education sectors. Historically Australia has focused on the Pacific Rim; however, the potential of the Indian Ocean nations is the future. As the nation's Western Gateway to this opportunity, Perth needs to stake its claim and lead the way in establishing relationships and capitalising on opportunities.

We are a city well positioned at the edge -- the edge of the desert, of the river, of the country, of the Indian Ocean and of opportunity.

What we have

Living in Perth is a lifestyle choice. Our citizens have access to some of the best education, health, employment, cultural and commercial opportunities in the land. We have diversity of housing with nodes of urbanity balanced by suburban space. But this is only half of the story. We also have access to hundreds of kilometres of riverways and coastline, vast open spaces, parkland and natural bush all within the metropolitan area yet untamed by man. Our natural environment is abundant but also democratised; it is free and accessible to all regardless of wealth, culture or social position and stands as reminder of the time before white settlement.

We are a city for life – we have an unbeatable blend of striking, accessible, natural attributes mixed with commercial opportunity, economic leadership and personal stability.

Who we are

Attracted by the lifestyle on offer, the people who call Perth home are diverse, educated and innovative. Through hard work and by capitalising on our entrepreneurial spirit we achieve prosperity. We are an active community with real values. We are healthy, positive and confident, believing in a city for families that integrates sports and recreation into our lifestyle. We take pride in local community, and find a way to celebrate many histories and many futures to tell our stories in harmony.

The citizens of Perth choose to live here – finding opportunity, stability and confidence in our identity.

What we value

We value the uniqueness that comes from our geographical position; the opportunity and enterprise that comes from our resource-rich land; the sense of community that comes from our relative isolation and the rich cultural diversity that comes from our past, present and future cultural stories. We value the brightness of our city both in terms of natural light and space, and innovative leadership and educational excellence.

We are a city that values the richness of our life on the edge.

Where we are going

Perth of the future will have learned that we no longer need to apologise for our city but rather celebrate it because of its uniqueness – being quite simply without comparison. We will capitalise on the strength of our geographical position instead of using our isolation as an excuse. Citizens of Perth will have a confidence, without arrogance, that they are living in the best city in the world – a city with abundant natural offerings, thriving commercial and business opportunities, celebrated artistic incubation and achievement, and a cross cultural acceptance that allows for acknowledgement of both the history and future of every citizen.

We are going into the future with a commitment to ensure that our city will continue to develop as the best city in the world.

7.4 Acknowledgements

The Capital City Planning Framework project was progressed with the assistance of various local governments, State agencies and organisations with an interest in central Perth. Representatives of these organisations contributed via a number of groups, which are noted below. The WAPC and the Department of Planning thanks these groups for their valuable and well considered contributions.

Capital City Planning Framework Steering Group

The Capital City Planning Framework Steering Group assisted the Department of Planning with the main direction and content of the project. Organisations that contributed to this group were the City of Perth, the East Perth Redevelopment Authority, and the City of Subiaco representing inner local governments.

Capital City Planning Framework Technical Advisory Group

The Technical Advisory Group (TAG) was formed to consider the key planning relationships between the Perth central area and the surrounding local governments of Subiaco, Cambridge, Vincent, Victoria Park and South Perth. Representatives of local governments and State agencies formed the TAG. These were the City of Perth, City of South Perth, City of Subiaco, City of Vincent, Town of Victoria Park, Town of Cambridge, East Perth Redevelopment Authority, Main Roads WA, the Public Transport Authority, and the Department of Planning.

Capital City Planning Framework Network Working Group

The Network Working Group was formed by the Department of Planning to consider the transport linkages within the framework's focus area. Contributors to this group were Public Transport Authority, Main Roads WA, Department of Transport, East Perth Redevelopment Authority, City of Perth and Town of Victoria Park.

Capital City Planning Framework Reference Group Workshops

Reference Group Workshops were held to consult with stakeholders and organisations with an interest in central Perth. These were to gain input and provide information on the directions and themes of the developing framework. Organisations represented at these included the Australian Institute of Architects, Australian Institute of Landscape Architects, Botanic Gardens and Parks Authority, City of Bayswater, City of Belmont, City of Nedlands, City of Perth, City of South Perth, City of Stirling, City of Subiaco, City of Vincent, City Vision, Committee for Perth, Community Arts Network WA, Curtin University, Department of Education, Department of Health, Department of Housing, Department of Planning, Department of Premier and Cabinet, Department of Sport and Recreation, East Perth Redevelopment Authority, Future Perth, Heritage Council of Western Australia, Landcorp, Main Roads WA, Office of the Government Architect, Property Council, Roberts Day, Swan River Trust, Tourism WA, Town of Cambridge, Town of Victoria Park, University of Western Australia, Urban Design Centre of WA, Water Corporation, and Western Power.

Other Acknowledgements

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