



February 2013
Final report

Capital City Planning Framework

a vision for Central Perth



Department of
Planning



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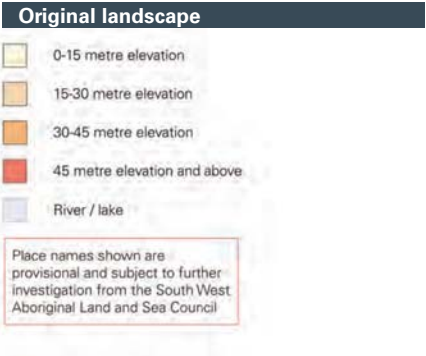
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Perth and the Nyoongar nation

At the time of European settlement in 1829, areas surrounding what is now central Perth were known as Mooro, Beeloo and Beeliar by the Nyoongar nation – the indigenous people of the south-west of Western Australia. The Whadjuk Nyoongar, as the traditional owners of these lands, overlaid a rich culture into these places, which provided for everyday life.







Hon John Day, MLA
Minister for Planning

A handwritten signature in black ink, appearing to read 'John Day'.

The State Government has long recognised community enthusiasm for a dedicated vision and leadership to guide the future of Perth.

While the Government's vision for the metropolitan Perth and Peel region is outlined in *Directions 2031 and Beyond*, the Capital City Planning Framework provides a more detailed vision for the city centre and its surrounding localities.

Over the next 20 years and beyond, Perth will be influenced by local, regional and global forces, and the framework aims to guide future planning by presenting a broad structure to build on opportunities and provide resilience to future challenges.

The first of its kind, the Capital City Planning Framework provides insight into the place that central Perth is now; the challenges and expected drivers for change over coming generations; and a vision to guide its progress.

Central Perth is experiencing a once-in-a-generation period of growth and development that is set to advance its standing as a world class liveable city – one that is green, vibrant, compact and accessible, with a unique sense of place.

Given the relationship between its built form, the river and its landscapes, the setting of Perth city is an asset that is fundamental to its identity. In exploring the proposed future of central Perth the framework proposes a multifunctional green network to build on this magnificent setting.

In exploring the meaning of Perth as our State capital, the framework highlights the key city precincts that contain our most important institutions, and places that characterise our capital. Each of these places reflects aspects of what it means to be Western Australian, allowing residents and visitors to feel engaged with the city and the wider State.

I welcome the Capital City Planning Framework as a collective roadmap to a socially and economically sustainable future for our city and its people.

***Central Perth will be a world class liveable central city;
green, vibrant, compact and accessible with a unique sense of place.***

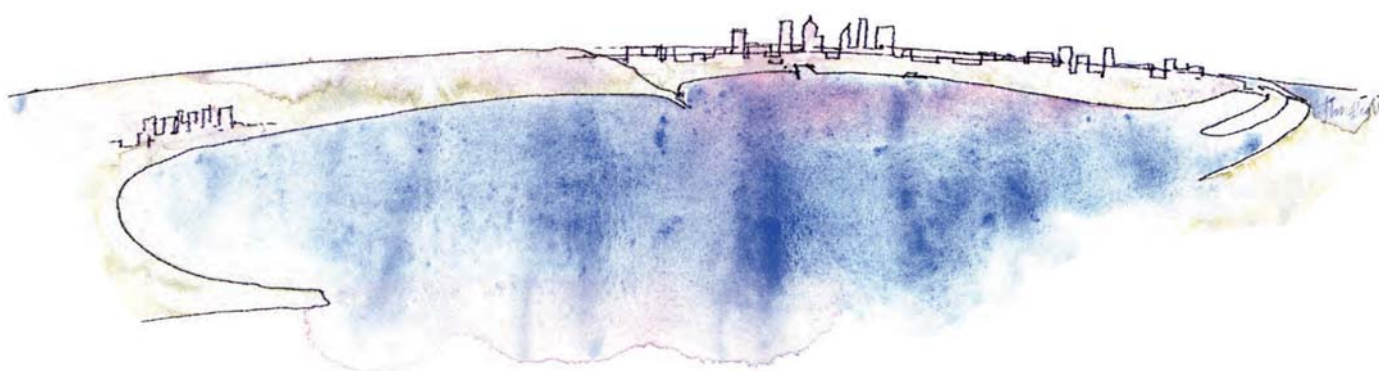
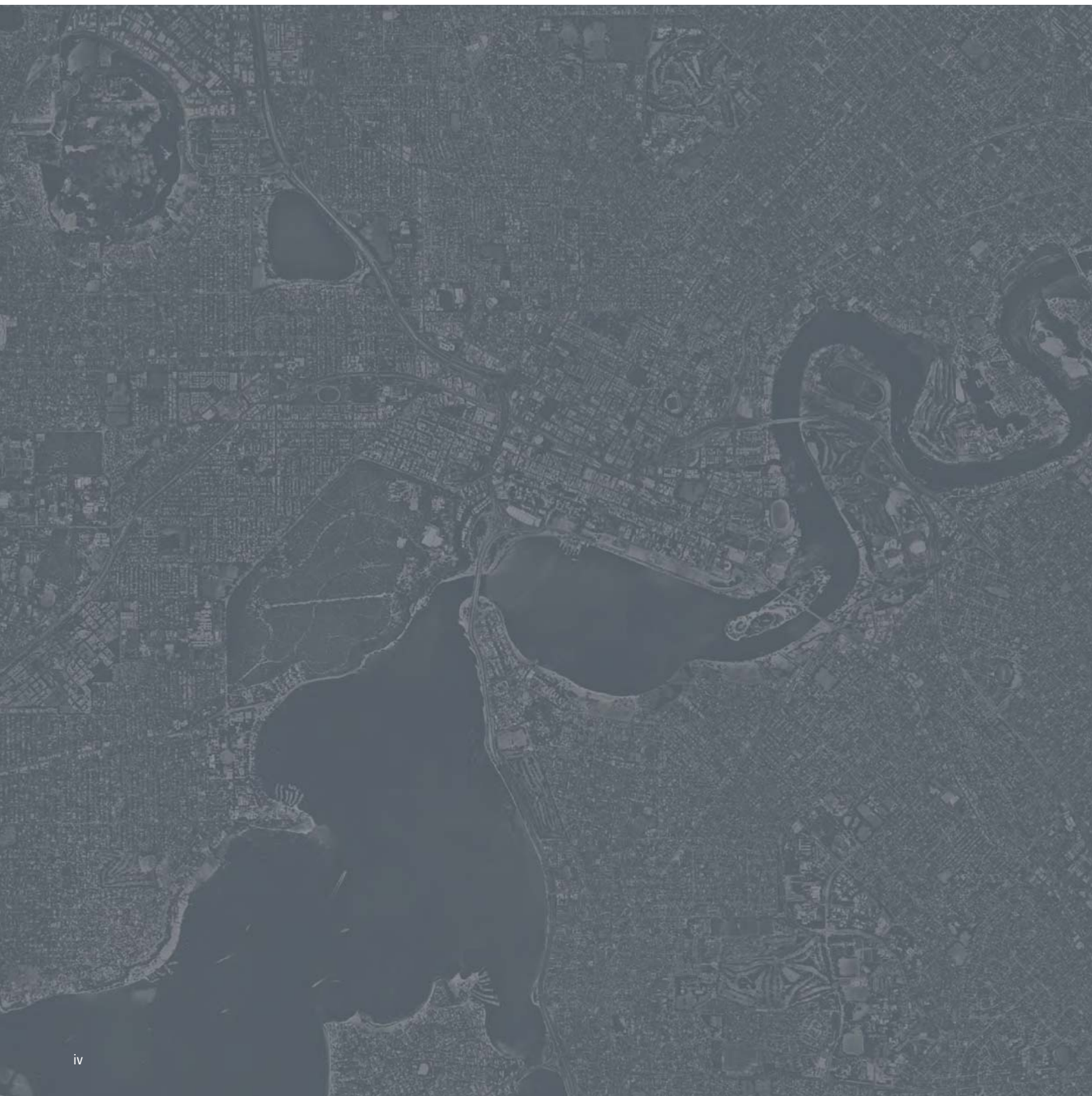
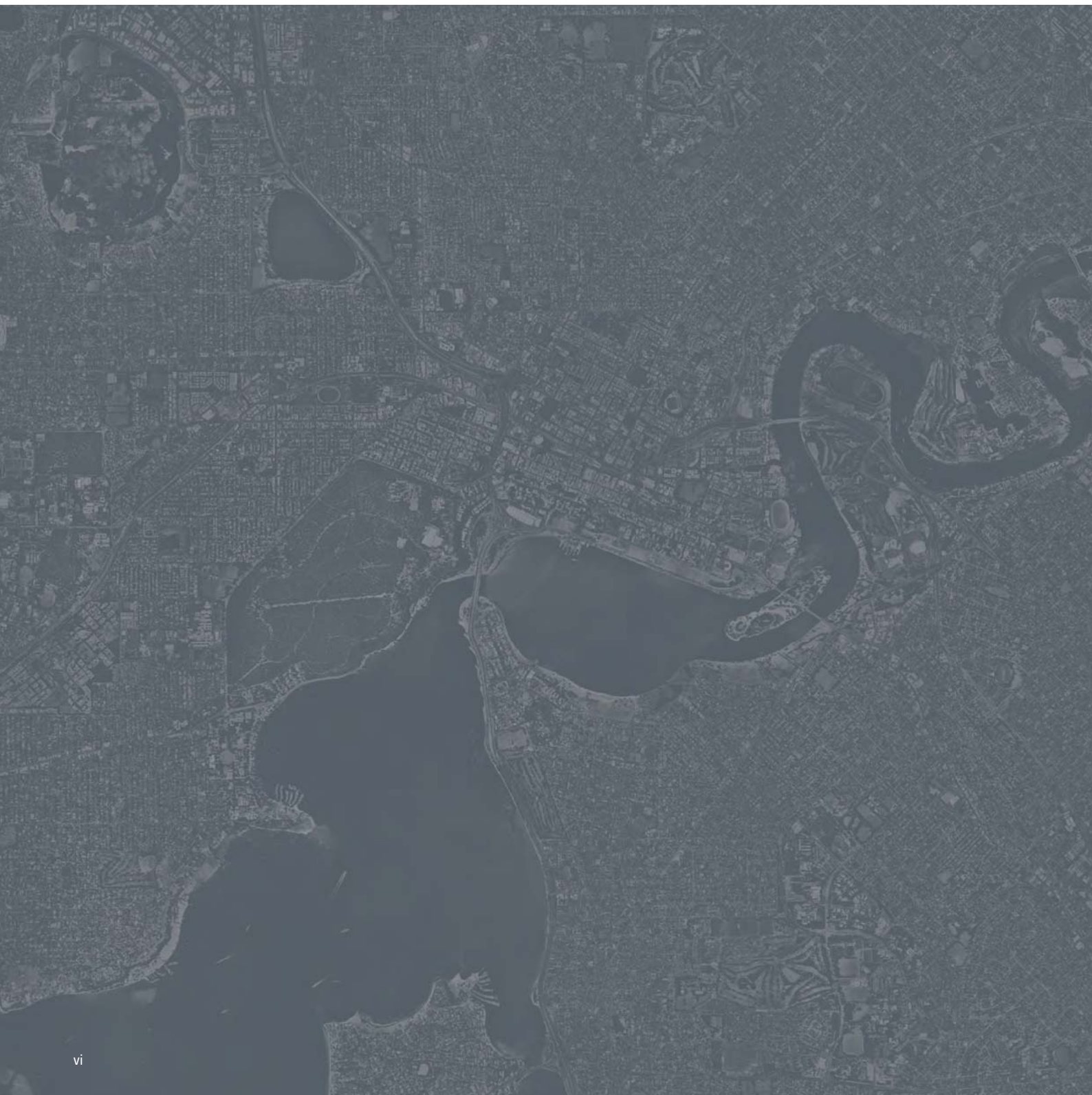


Illustration by Steve Woodland



Perth Capital City Planning Framework



Summary

from 1. Preface

The Capital City Planning Framework sets out a spatial framework for central Perth, the 12 kilometre by 12 kilometre area around the city centre. The framework indicates how the objectives of *Directions 2031 and Beyond* can be delivered in this focus area and is guided by several *Directions 2031 and Beyond* implementation elements.

The anticipated changes over the next phase of Western Australia's history will present as many opportunities and be as challenging as those that have formed central Perth in the past. This framework aims to deliver a robust strategy to meet these opportunities and challenges in a positive way.

from 2. Central Perth today

Central Perth is the government, business, cultural, retail and educational centre of Western Australia. It is the symbolic heart of the State and home to great icons, including Kings Park, the Swan River and the city skyline.

The alluvial sand plain on which central Perth is built has supported a unique system of immense biological diversity for millennia. Although much-modified today, this environment still supports large areas of indigenous ecosystems within its rivers, lakes, bushland, coastal areas, and parklands. These natural places embody the city's unique qualities that are at the heart of Perth's place identity.

Starting with the walking paths of the Noongar people, the city has evolved to a series of winding main transport corridors infilled with patchwork-like street grids that respond to the plain's rivers and lakes.

More recently, the residential population of central Perth has begun to grow, a change accompanied by a shift towards more diverse housing types. While 14 per cent of the metropolitan population live in central Perth, it is home to 39 per cent of the Perth region's jobs. Most of these are concentrated in the city centre and the surrounding smaller activity centres. The fringe activity centres around the University of Western Australia and Curtin University are important, delivering high-level education, medical and research functions. Other centres such as Subiaco, Mt Lawley and Burswood specialise in a range of retail and entertainment-based services.

from 3. Drivers

Numerous forces will influence the transformation of central Perth over the coming generation. The incentives and challenges resulting from these stimuli are pivotal to the strategies proposed in this document.

Globalisation will continue to influence the city. Tourism, migration, trade, education, technological innovation and social connections will strengthen the bonds with the rest of the world, leading to greater global awareness, and increasing trade of goods, knowledge and culture.

A growing metropolitan population will compel central Perth to accommodate an increasing share of the State's residents as changing demographics and lifestyles demand more urban living, and as the drive for sustainability puts limits on car use and the expansion of the metropolitan periphery.

Perth will need to be a creative hub to become a more internationally competitive city; to attract and retain skilled workers and to provide synergy with our natural resource-based economy.

Continuing advances in communications technology will redefine the relationship of Perth to the world. Non-spatial 'communities of interest' will become increasingly prevalent, and the combination of unique lifestyle and global connectivity could give Perth a competitive edge as a place to live and work.

Innovations in infrastructure will be required to adapt to growing urbanism, especially transportation and services. More efficient consumption of water, energy and other resources will become increasingly essential, affecting more and more aspects of our lives.

Response to climate change will be an increasing challenge. Leadership on the minimisation of greenhouse gas generation, and adaptation to climatic change are likely to define a successful city. Reduced rainfall and increasing heat, storms and sea levels will challenge the liveability, economy and ecosystems of central Perth.

Ongoing social change will have a strong bearing on planning of our city, including more diversity of household composition, increased longevity and disparity of incomes. Overcoming defensiveness to change, maintaining tolerance and perception of urban safety are some of the challenges to social cohesion. Cultivating a sense of place is where planning can contribute significantly to positive community identity and engagement.



from **4.Vision, objectives and principles**

Adapting a common vision with *Directions 2031 and Beyond*, the Capital City Planning Framework establishes the following statement as the overarching vision for central Perth:

Central Perth will be a world class liveable central city; green, vibrant, compact and accessible with a unique sense of place.

To achieve this vision, the following key objectives and their related principles have been identified:

Become a more liveable city

- Build a compact city to make the city more accessible for all people.
- Encourage a sense of community ownership, participation and an awareness of the city.
- Deliver a diversity of quality places and cultural experiences.
- Provide a range of housing choices, in both form and cost.
- Improve the quality of design and vitality of the city's public spaces.

Enhance our sense of place

- Continue to identify, protect and promote elements that contribute to Perth's unique sense of place and use this to inform planning and design.
- Connect the central Perth landscape setting to our urban development, especially the Swan River and Kings Park.
- Make the built environment more responsive to the opportunities and challenges of the Perth climate, to support sustainable urban lifestyles.
- Safeguard and enhance on our indigenous and endemic flora and fauna to provide character and uniqueness.
- Celebrate the diversity of cultures from around the world that make Perth a global city.

Reconnect with our indigenous heritage

- Show appropriate recognition of our indigenous cultural foundation.
- Promote creative expression of indigenous culture and its interplay with other elements of culture.

Provide for a growing residential population

- Provide adequate places with the capacity for higher density residential accommodation.
- Design and create flexible social infrastructure to meet the growing needs of higher density residential areas.
- Create a planning environment and regulatory framework that encourages and facilitates residential and commercial development for a more intense urban environment.

Provide for a diverse residential population

- Provide for an increasing diversity of housing choices.
- Create a regulatory framework that allows for a wide range of housing types and values.
- Establish incentives to provide diverse and affordable accommodation types.
- Allow for a sufficient supply of redevelopment opportunities to ensure that housing remains relatively affordable.
- Encourage the construction of housing that is suitable and affordable for a range of household incomes including students and the aged.
- Utilise the value of quality design in providing diversity, choice, dignity and quality of life.



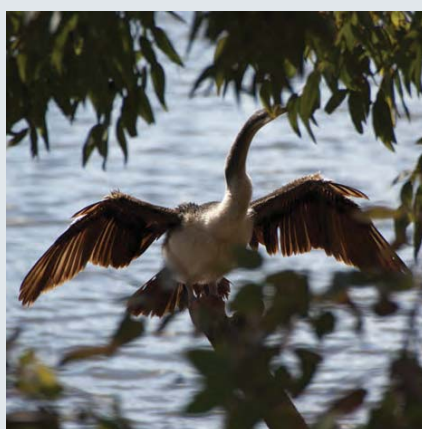
Reduce the city's resource footprint

- Encourage holistic solutions that integrate infrastructure, open space, vegetation and buildings to improve sustainability performance.
- Reduce energy and water consumption in buildings, including through the incorporation of environmentally sustainable design principles.
- Reduce transport-related energy consumption by decreasing travel distances and encouraging travel by walking, bicycle and public transport.
- Manage urban water through water-sensitive urban design to encourage water conservation, to maintain or enhance water quality and to protect the water regimes of natural systems.
- Recognise waste as a resource and develop systems and infrastructure to re-use it.
- Employ programs to inform community attitudes and support lifestyle changes.
- Encourage re-use and adaptation of existing infrastructure, spaces and buildings.



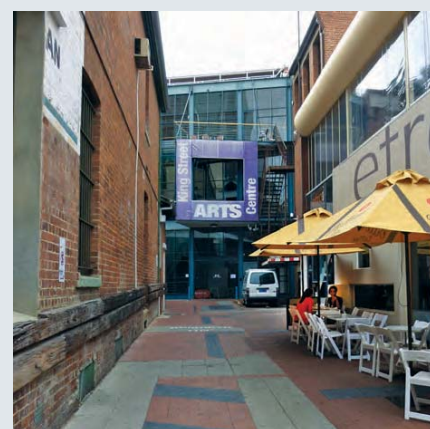
Build robustness against climate change

- Provide for greater protection from storms and increasing temperatures, including improved design of the built form and landscape.
- Use native plants with the capacity to adapt to expected climatic change including reduced water consumption.
- Identify which areas can be protected and which areas could be allowed to become rivers, lakes, or ecological wetlands to compensate for those lost elsewhere.
- Build appropriate elevation into buildings and streets in anticipation of rising sea-levels and the likelihood of future flooding.
- Establish or maintain ownership structures for lower-lying areas that allow flexibility for land-use changes over time.



Build our knowledge and cultural economy

- Facilitate interaction between the business, research, education, health and administration sectors to help build prosperity and wellbeing through knowledge, including through supporting location for well-connected clusters of knowledge industries.
- Reinforce the Perth Cultural Centre's role as a primary place of cultural knowledge and education.
- Build and support places that will attract and retain creative people to live and work.
- Provide opportunities for people and industries to pursue innovative and creative ideas and celebrate this creativity publicly.
- Locate our cultural institutions as centrepieces of central Perth.
- Integrate our cultural institutions into metropolitan Perth's everyday cultural life.
- Build on our cultural institutions' strengths and take them to the world.
- Use our cultural institutions as places for reflection on the state's people and identity.



Become less dependent on private cars

- Recognise that streets are places for activity as well as movement.
- Establish a network of high-frequency public transport routes that coincide with places of intensive activity.
- Ensure that the design of the urban environment encourages walking and cycling.
- Prioritise public transport provision.
- Develop higher standards for public transport infrastructure to make it a more appealing way to travel.
- Provide for an equitable balance in road infrastructure to cater for a mix of transport modes.



Build a compact central Perth

- Create a mix of activities in most areas.
- Create higher densities of development so that more activities can be located closer together.
- Encourage a better balance between residential and commercial activity.
- Recognise the importance of design quality in ensuring that a more compact city retains and supports high-quality spaces and experiences for working, living and recreating.



from **5. Physical framework**

The physical framework sets out the key spatial proposals of the Capital City Planning Framework.

Setting

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.

The natural setting in which urban metropolitan Perth and central Perth sit is an essential element to the identity, liveability and ecology of the city. These natural environments should be conceived and planned as a green infrastructure network, delivering a wide range of ecosystem services. As central Perth regional parklands will weave between urban buildings and along streets, connecting the city with the river, parklands and beaches. By enhancing our sense of place this will make central Perth even more memorable for residents and visitors alike.



Setting

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.

The primary symbolic places that define Perth as the capital of Western Australia are located in three precincts of central Perth. They are the Kings Park-Parliamentary Precinct, the Perth Cultural Centre-Forrest Place Precinct and the Perth Waterfront-Civic Precinct. Together, these precincts are home to the main political, cultural and legal institutions of the State. The careful design of these precincts and their integration with the larger city is paramount to Perth as a capital city and these places as key civic precincts.



Activity and built form

Key concept 3: A city for growth

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

Central Perth needs to accommodate growth in the scale of activity occurring within the area. With good planning, central Perth can adjust relatively easily to the social, environmental and economic challenges over the next 50 years. Thoughtful planning and good-quality design will present many opportunities and positive changes for the residents and other users of central Perth.



Activity and built form

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.

A place conducive to energy-efficient lifestyles while adapting to a changing climate can be supported through aligning growth with the original structure of central Perth. This structure has many characteristics associated with interaction between people and reduced energy use, however much of the infrastructure built in the late twentieth century facilitated primary access by car. The next generation of buildings and infrastructure should restore some of these more sustainable and resilient characteristics.



Activity and built form

Key concept 5: A city for living in

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

A key challenge for central Perth includes accommodating an increased population, reducing car dependency, achieving greater diversity of activity in its commercial areas, and increasing housing diversity and affordability. To achieve this major increase in residential population there needs to be a focus of intensification within selected areas while preserving and enhancing the city's overall liveability.



Activity and built form

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.

Knowledge and cultural industries can support the future economic development of Perth and Western Australia. Central Perth has a distinctive structure of clustered knowledge and cultural industries, and further emphasis should be placed on developing these locations and activities. The university-based centres at Nedlands-Crawley, Bentley and Mount Lawley, with the city centre at the core, can be seen as the foundation of a knowledge triangle for the cultural and innovative industries in central Perth.



Activity and built form

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.

High-quality architecture and urban design is critical to the future economy, liveability, sustainability and cultural identity of central Perth. Better design outcomes must be a shared goal for all city stakeholders, including the public, and need to be championed from the highest level. Good design includes not just the appearance of the built environment, but also functionality, performance, resource efficiency, sustainability, building quality, innovation and creativity.



Activity and built form

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

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

The Perth city centre is bounded by several man-made and natural features that have constrained the form and function of the city centre. In central Perth, the freeways, interchanges, eastern rail reserve, some major roads and the River separate the city centre from surrounding locations. These edge conditions could provide opportunities to improve connections between different places of attraction and activity.



Movement

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

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

An essential aspect for central Perth is its creation as a place for all people to use and enjoy. Streets should be designed to have both a local place function and a movement function. This shift towards multiple uses, while still prioritising efficient movement, points towards greater public transport, bike and walking priorities.

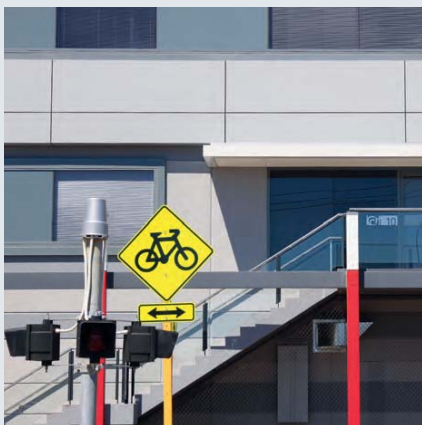


Movement

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.

The promotion towards a better balance in transport methods between walking, cycling, and public transport will lead central Perth towards greater efficiency and sustainability and contribute to improved safety. Integrated networks will allow for prioritising particular streets for various types of movement while improving street comfort and attractiveness for all.

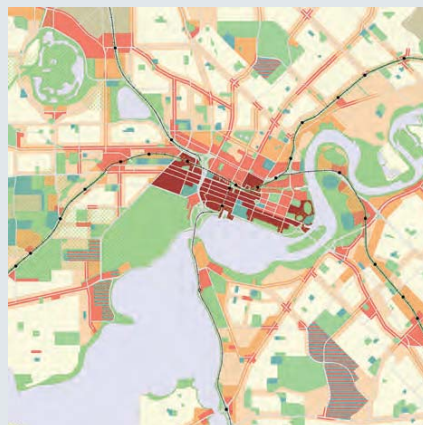


Spatial form

Key concept 11: A city with an evolving spatial form

Central Perth's form is to evolve to respond to the framework's key concepts for setting, activity, built form and movement.

Collectively the first ten key concepts provide direction for an evolving spatial form for central Perth. Application of these key concepts to the existing form of central Perth has resulted in a plan that is aligned with the objectives of the Directions 2031 Plan for Urban Consolidation in Metropolitan Perth and Peel, encompassing central Perth.



from 6. Implementation

The Capital City Planning Framework's long-term strategic objectives are addressed in the Implementation section. The success of the framework's objectives is embedded in the success of these processes and in the community's support for the objectives and outcomes.

State Government in the Perth and Peel Region

In 2010 the Western Australian Planning Commission (WAPC) released the high-level spatial framework and strategic plan for the metropolitan Perth and Peel region, *Directions 2031 and Beyond*. This document sets out an implementation strategy that identifies lead agencies and associated partnerships responsible for actions in recommended timeframes.

State Government in central Perth

The city centre is a place where State and local governments must work together to administer planning in a coordinated manner to achieve optimal outcomes. The central Perth Planning Committee is delegated to administer the majority of the WAPC planning powers for land in the city centre. The decisions made by this committee are not confined to the WAPC's statutory powers, but also relate to the general planning directions of the city centre and its interface with surrounding areas.

Recently, the State has led the revival of central Perth places, through an intensive redevelopment approach and strategic partnerships with other authorities. There are areas nominated in this framework as being of strategic State importance and various State planning agencies are likely to seek partnerships to develop plans for these locations. These include the three capital city precincts, precincts at the northern, eastern, southern and western edges of the city centre; the central Perth regional parklands links; Bentley-Curtin activity centre; Mt Lawley-ECU activity centre; UWA-QEII activity centre; and the State's main sports arenas.

Local government

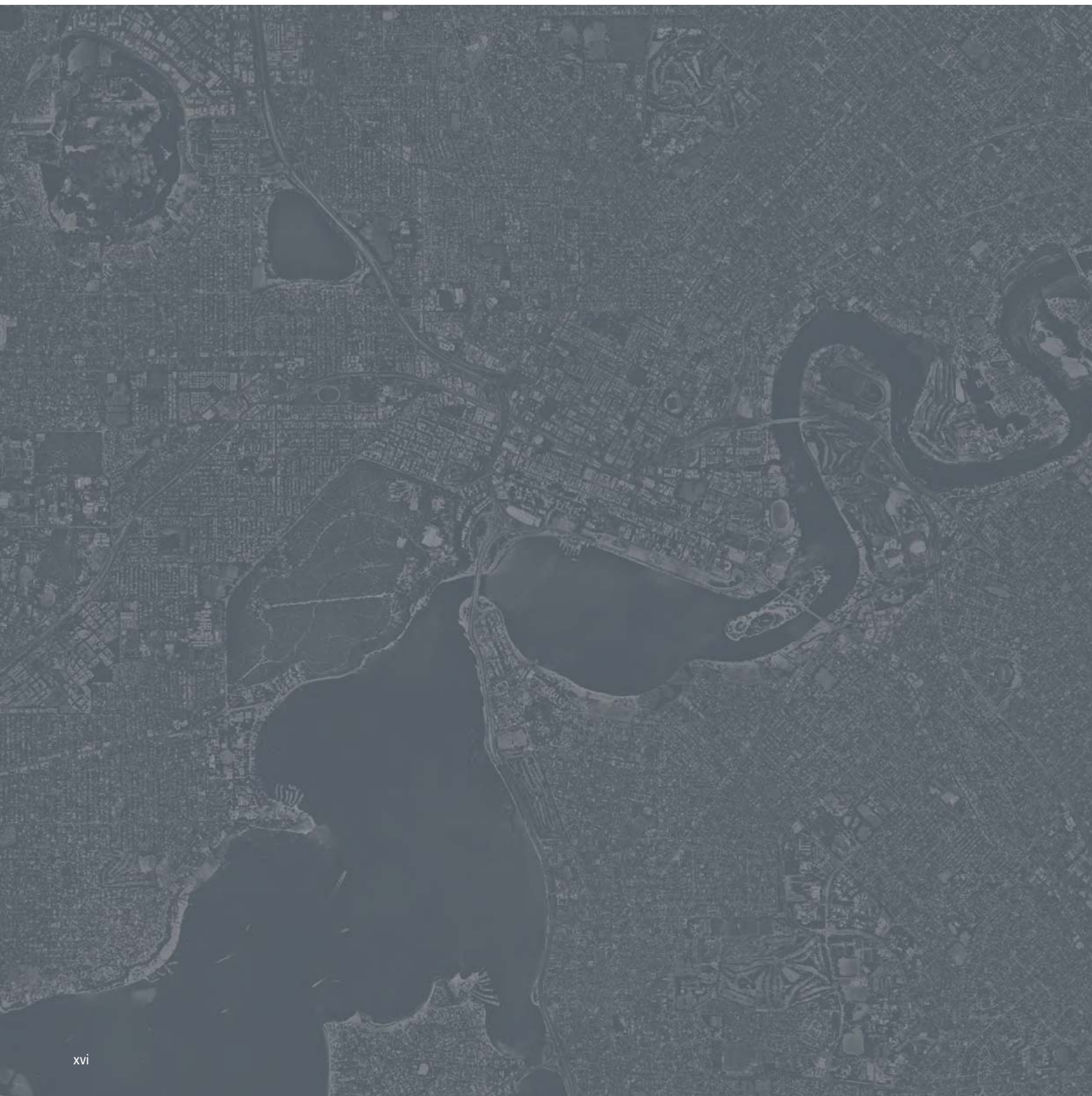
There are twelve local governments that have all or part of their area within central Perth. These authorities have the means to implement many of the propositions of the Capital City Planning Framework. A partnership of State planning and infrastructure agencies with these local governments, as part of a larger community partnership, will be essential to achieve a better coordinated future for central Perth. There are also four administrative authorities that manage local planning within special areas of central Perth, which are outside of local government control.

Proposed State Government Actions

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

Further State government commitments will be considered as part of 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.





1 Preface

A generous proportion of Australians choose to live in cities and in Western Australia more than 75 per cent of the population live in the metropolitan Perth and Peel region¹. With a projection of between 2.32 and 2.56 million people likely to be living in the region by 2026², Perth is set to continue on a path of major change.

To accommodate this growth in a sustainable way, it is fundamental that guiding principles and their high-level design quality and spatial implications be articulated to provide a vision and ensure a positive legacy for future generations.

This document sets out key directions for the development of central Perth, a place home to a vast assortment of institutions, endeavours and enterprises that contribute to it being the heart and the capital of Western Australia.

The area referred to in this framework as central Perth covers an area of 12 kilometres by 12 kilometres with the city centre at its core. This nominal area is large enough to encompass most of the near-city institutions intrinsic to Perth's capital city role, but not include the inner ring of strategic metropolitan centres at Morley, Stirling, Cannington and Fremantle. These centres are sufficiently diverse to be subjects of their own detailed planning informed by *Directions 2031* and *Beyond* implementation elements.

The development of the Capital City Planning Framework was overseen by a project steering group with representatives from local and state government organisations. Consultation consisted primarily of input from a technical advisory group, a reference group and a movement working group. A public consultation process also occurred as part of the framework's evolution.

A genuine community commitment to and passion for central Perth has been evident throughout the development of the document. Also apparent was a strong desire for some articulation of a common city identity, the city's sense of place, and aspirations for its future.

The goal of the Capital City Planning Framework is to achieve this brief while continuing to cover the more traditional elements of a planning document related to transport and land-use planning.

To this end all the document's text and images have been formulated to help define a future for central Perth, and to capture and illuminate many of its current qualities that the framework seeks to build upon. Consequently all the photos used are positive illustrations of places within the framework's focus area, and provide a baseline on which even better examples of central Perth places can be built in the future.

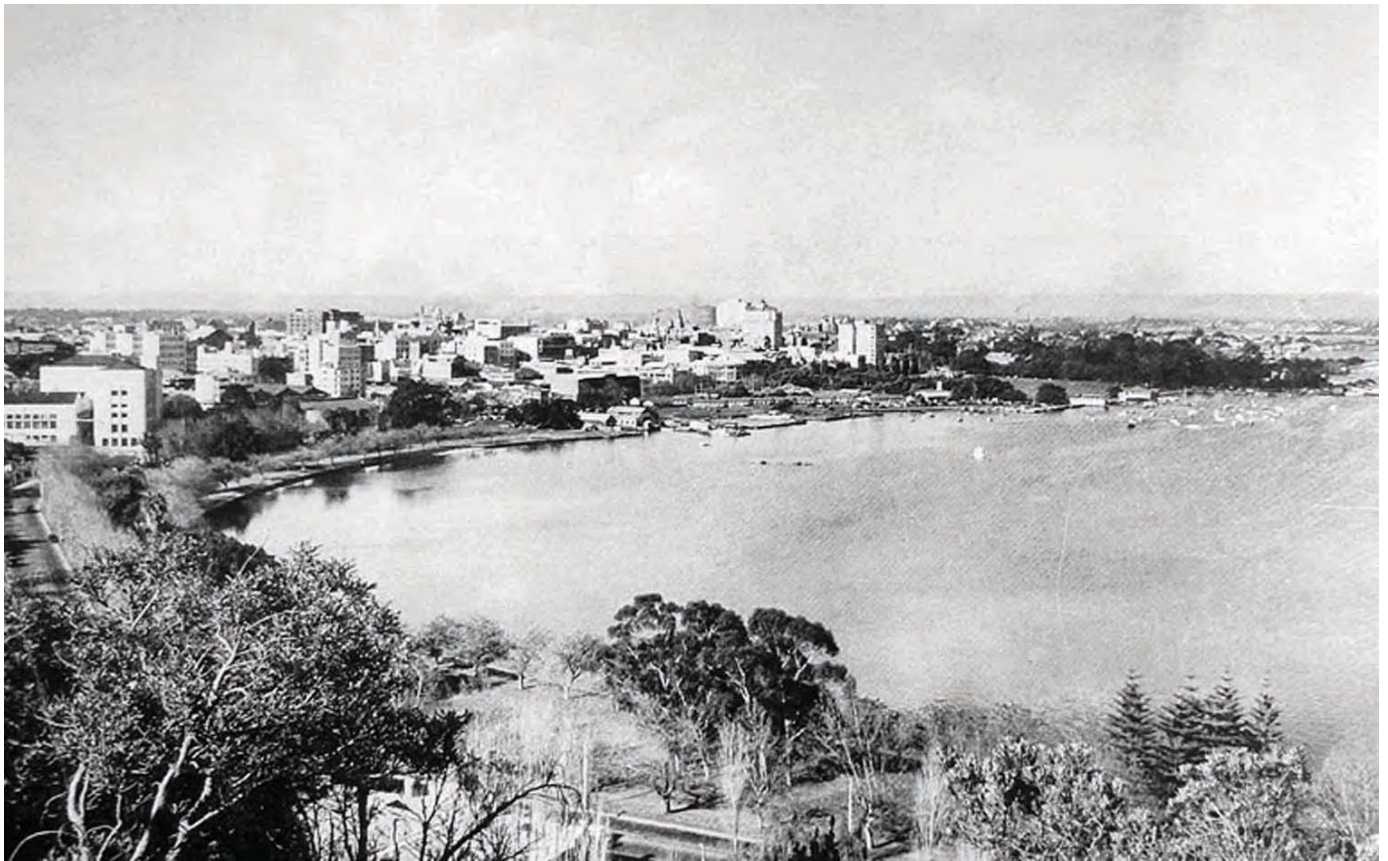


1.1

Sixty four years of change

The same view of Perth city from Kings Park, 1948 and 2012

The geographic, environmental, social, economic and technological changes experienced by central Perth in the last 64 years give some insight into future trends and challenges. The Capital City Planning Framework identifies the likely challenges for central Perth and surrounding areas during the coming 20 to 40 years and proposes ways to prepare for this next generation of change.



1948



2012

1.2 Defining 'Perth'

The broad use of the name 'Perth' has various meanings depending on the context in which it is used. For the purpose of this policy, a number of terms are used to describe specific aspects of what is generally referred to as 'Perth'. These are:

Perth and Peel Region or the metropolitan area:

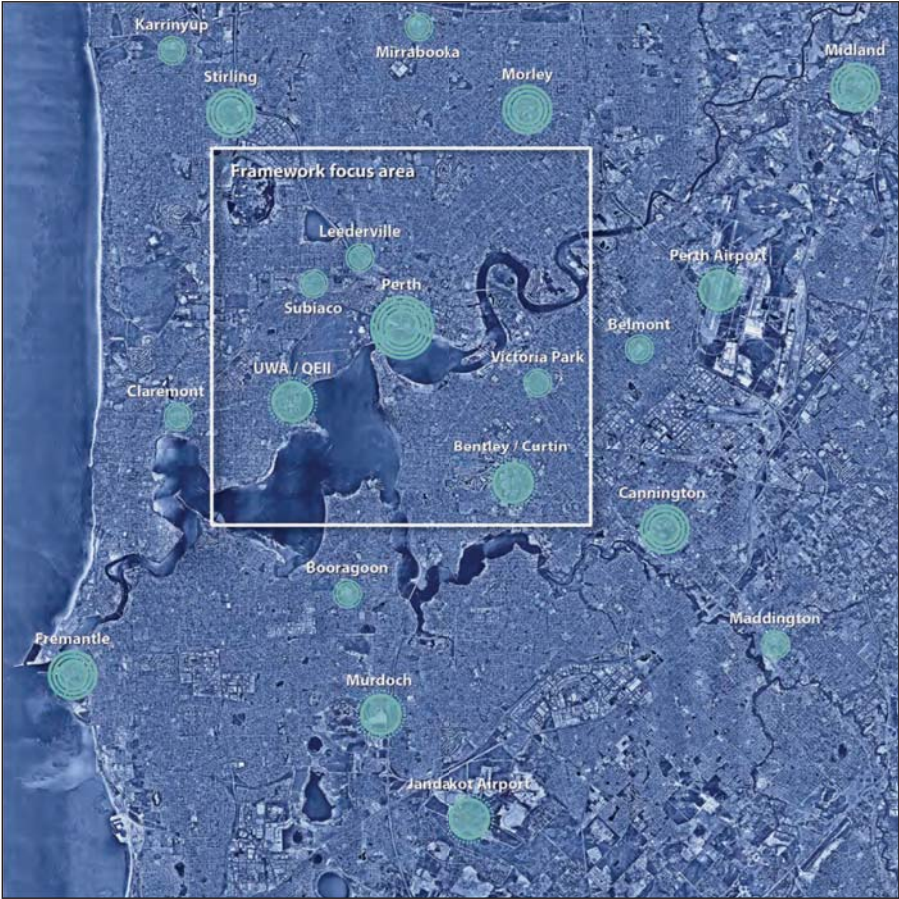
The larger area of Perth, home to around 1.9 million people in 2012.³

Central Perth: A nominal area of 12 km by 12 km including Perth city and its frame. This area is the primary focus of the Capital City Planning Framework.

Inner city: The localities of Perth, West Perth, East Perth and Northbridge.

City centre or Perth city: The city grid between Perth Station and the Swan River.

Capital city: The role of Perth as the official seat of the State of Western Australia. Central Perth includes the main functional and symbolic components that contribute to the notion of capital city.



CCPF regional context



1.3

The purpose of the Capital City Planning Framework and how it relates to other policies

The Capital City Planning Framework fits into a series of interrelated and complementary policies that have a focus ranging in scale from the entire state of Western Australia, to the broad metropolitan area, to specific local places.

State Planning Strategy

The State Planning Strategy articulates an aspiration of sustained prosperity towards 2050 through a vision of a diverse, connected, liveable State, built on collaboration. It gives a State-wide context for decision-making and investment and frames potential opportunities the future is likely to offer the community of Western Australia.

Directions 2031 and Beyond and its implementation elements

At the metropolitan scale *Directions 2031 and Beyond - Metropolitan Planning Beyond the Horizon* as the high-level spatial framework and strategic plan for the metropolitan Perth and Peel regions, sets the broad framework for the Perth and Peel region to 2031 and establishes a vision for a population of 3.5 million, whenever that may occur.

Directions 2031 and Beyond has several implementation elements which fit into this series of complementary policies. These include *State Planning Policy 4.2: Activity Centres for Perth and Peel*. This State planning policy specifies the broad planning and development of new activity centres and the redevelopment and renewal of existing centres throughout Perth and Peel. Additional implementation elements include the *Directions* strategy for a city of 3.5 million final report, and the *Directions 2031 Plan for Urban Consolidation* in Metropolitan Perth and Peel.

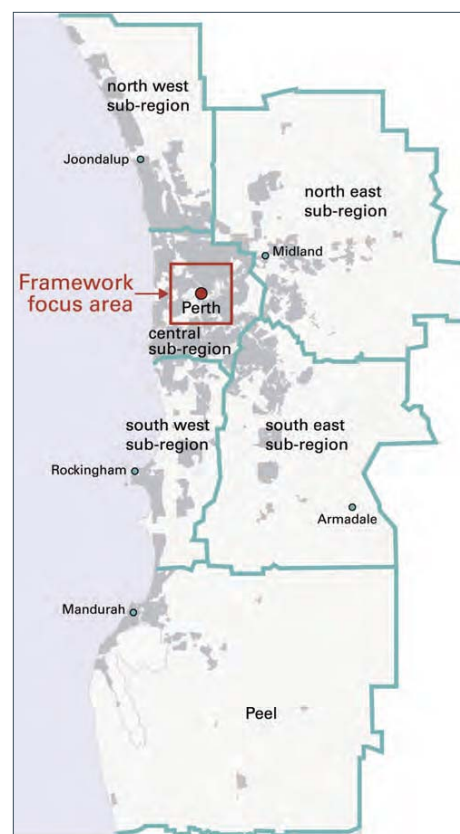
Capital City Planning Framework

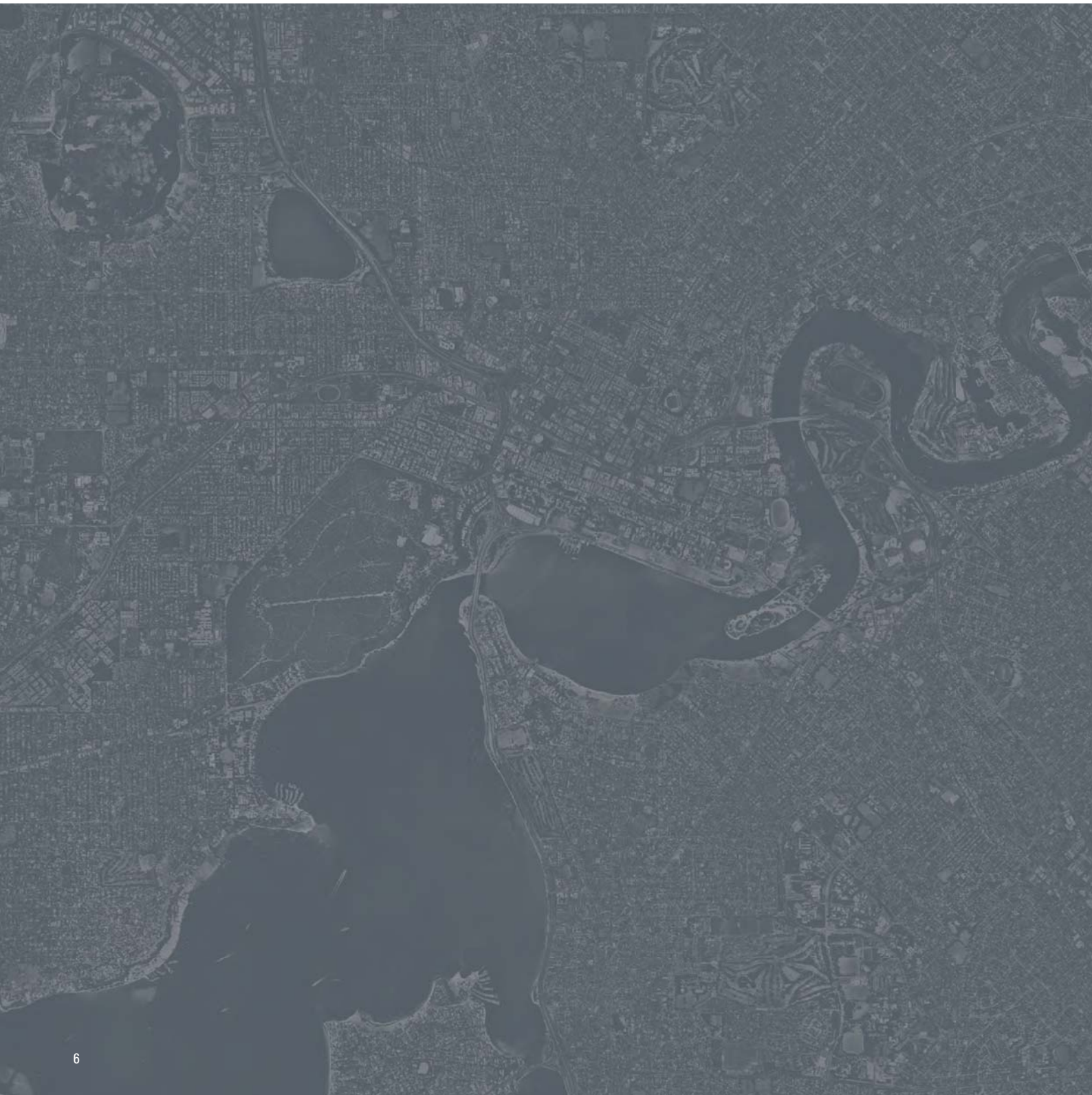
The Capital City Planning Framework provides a long-term vision and overarching framework for central Perth while addressing the themes in *Directions 2031 and Beyond*. The framework provides a strategic direction for central Perth to 2031 and in a more general way to 2050.

This framework is intended to provide guidance and to complement more detailed planning at the local scale. Preserving flexibility so that this detailed planning can respond to local conditions, the framework is not the final blueprint. It proposes key spatial elements to set a broad direction and it contains principles that support an inclusive approach to the planning of all of central Perth. As a result, it does not feature existing administrative boundaries, in the expectation that its principles and elements will be considered in local planning during the preparation of strategies and policies and ultimately span these boundaries through an integrated and collaborative approach. The City of Perth *Urban Design Framework: A Vision for Perth 2029* is an example of detailed guidance for a specific locality.

Transport Policy

Transport policy complements the range of policies described above, supporting the integration of transport with land use and accommodating major changes and development. This includes *Public Transport for Perth in 2031*, which defines how the transit system for the metropolitan region is planned to evolve. The CBD Transport Plan seeks to ensure a sustainable, integrated and more balanced transport system in the short-to-medium term which can accommodate and complement major city development. The Moving People Network Plan supports future integrated land use policy, focusing on regionally significant transport corridors and travel patterns.





2 Central Perth today

The Perth metropolitan area is built on an ancient alluvial coastal plain, with tens of thousands of years of indigenous cultural heritage. In the past two centuries of European settlement, it has grown from bushland into a city of world importance.

The Capital City Planning Framework considers an area of 144 square kilometres at the geographic centre of this metropolitan area. This constitutes around two per cent of the Perth and Peel region, yet it contains an array of functions that are central to the identity and daily operations of the larger city and of Western Australia.

Central Perth contains most of the key institutions that govern Western Australia, as well as the head offices of major businesses, cultural institutions and large organisations of the State. It is home to the principal campuses of three of the State's major universities, the largest technical college, the two main hospitals and a significant range of community support non-profit organisations. It contains the largest sporting stadiums, the most prestigious retail areas, and is the location for many community gatherings, celebrations and significant cultural events.

A range of highly visited attractions are hosted by central Perth. Images of iconic features including the city centre, Kings Park and the Swan River contribute significantly to the world identity of Perth and Western Australia.

Accommodating the hub of the metropolitan area's transport networks, central Perth is highly accessible by an array of modalities. It is also a local place for a large number of people. Approximately 14 per cent of the metropolitan area's residents⁴ and 39 per cent of its employment is located in the area⁵. In addition, the majority of Western Australia's university students attend campuses within central Perth.

Central Perth contains a quarter of the key activity centres in Perth and Peel, including the significant centres at Perth city, Nedlands-Crawley (UWA/QEII), and Bentley (Curtin University). There are also numerous clusters of local shops, businesses and community facilities, all of which deliver a rich texture to life and provide identity to communities within the area.

Central Perth has not remained static. It has evolved over recent decades as a result of local and global influences to a place that is highly connected to the world and offers an enviable lifestyle. With significant growth in commercial and residential development and the provision of services, it is a tremendously liveable place. The residential population grew by approximately 3.8 per cent between 2001 and 2006⁶ after many

decades of shrinkage. Projections suggest that the larger central sub-region, which includes central Perth, will grow by 29 per cent and deliver at least 121,000 new dwellings by 2031.⁷

An element of this liveability can be attributed to an increase in the diversity and sophistication of entertainment venues, food and beverage establishments and events oriented to recreation and leisure.

A greater foreign influence has led central Perth to become more international in character. This is due in part to estimated visitor numbers which rose by 20 per cent between 2003 and 2009⁸, with most international visitors spending at least part of their stay in central Perth.

Significant growth and diversification in education and training facilities is associated with an increasingly professional, skilled and well-connected work force, which has grown to approximately 216,000 people⁹. Accordingly, there is considerable investment in new commercial buildings in central Perth.

This evolution will continue into the future. Globalisation, innovation, population change and environmental considerations promise to provide opportunities and set the pace and direction of transformation. This will be most dramatic in central Perth and needs to be purposefully managed to ensure the continued leadership and success of Perth as the capital of Western Australia.

The following sub-sections provide some insight into how and why central Perth is currently structured, and how people use it.



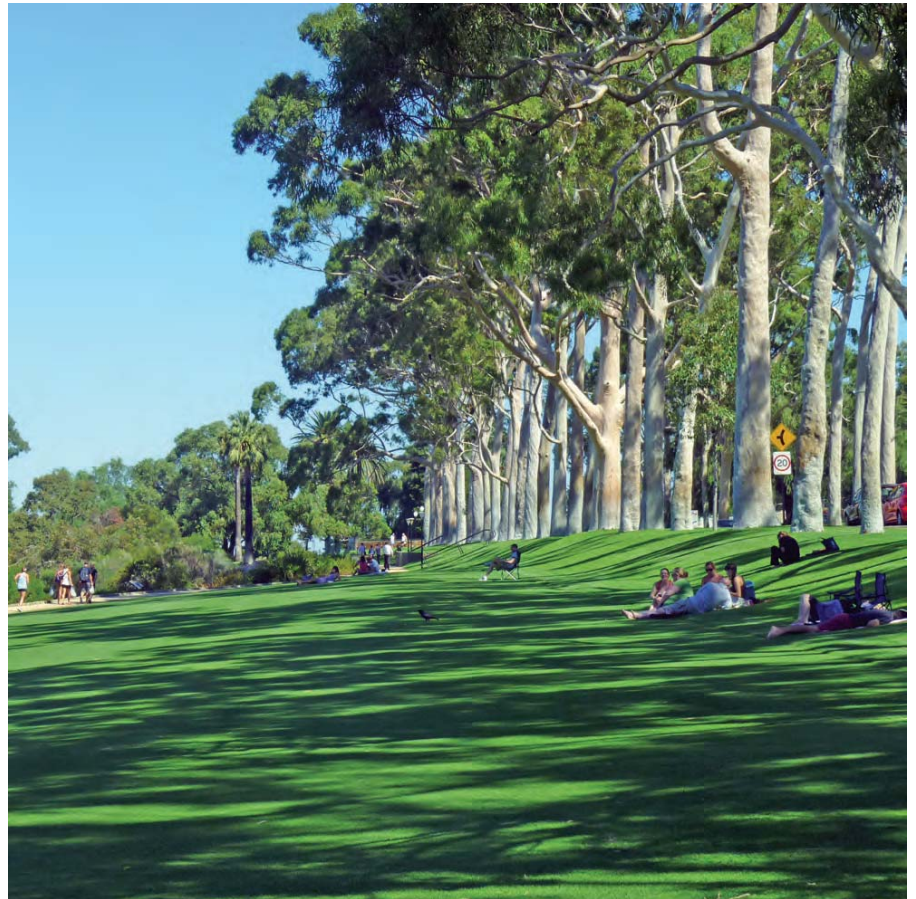
2.1 Place

2.1.1 Sense of place

Places with a strong 'sense of place' have a clear identity and character that is deeply felt by local inhabitants and by many visitors. The identity of any place is a unique combination of tangible elements such as geology, geography, built form, wildlife and landscapes, and less tangible factors such as social culture, historical associations, sense of belonging and memories. Our experiences encompass all of the primary senses - extensive views or glimpses of the city, beach and river; the sound of iconic bird calls and the characteristic aroma of warm, native bushland.

Key physical elements of central Perth's sense of place are shaped around the iconic heritage, biodiversity and landscapes of Kings Park and the Swan River. The dense urban tree canopy in many parts of Perth is a reflection of historical development patterns and decisions to set aside natural areas and parks. The human patterns represented by particular buildings and infrastructure illustrate our history of creating new culture in an ancient land and also contribute to our sense of place.

Many buildings and precincts in central Perth have cultural heritage significance. There are also neighbourhoods where buildings and public places contribute to a particular urban character identified as worthy of conservation.



2.1.2 Geology

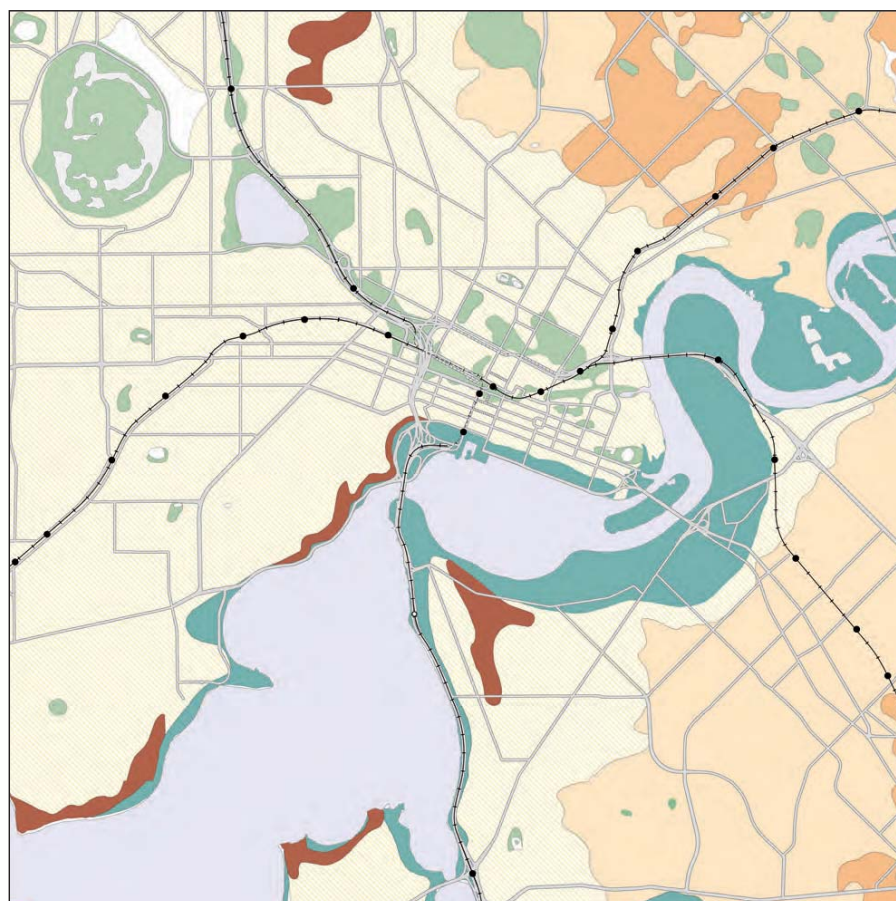
The sandy alluvial plain on which central Perth sits is millions of years old. Through this plain the Swan and Canning rivers have meandered over time and deposited trails of much newer and less stable river deposits. Cutting across the plain are the rich soils of the Claisebrook Valley - evidence of the chain of long-drained lakes from Lake Monger to Claisebrook Cove that once edged the place that is now Perth city centre. The alignment of railways, parks and freeways provides further clues to the former location of these lakes.

Within the alluvial soils, ground water flows from underground mounds into the rivers. Lake Monger and Herdsman Lake are the main places where this ground water still meets the surface to form lakes and wetlands.

An understanding of the underlying geology provides valuable clues as to how we can build the city's sense of place, and how we can direct development.

2.1.3 Climate

Perth is renowned for sunny days and blue skies for most of the year, even in the short, mild winter months. With an annual average of 8.8 hours of sunshine per day¹⁰, it has the distinction of being the sunniest Australian city. Rainfall occurs mostly in winter and is characterised by short, heavy showers. Commonly known as the 'Fremantle Doctor', a regular strong breeze from the south-west provides relief on most hot summer afternoons and is an iconic part of the local climate. High temperatures for many months of the year make our beaches and rivers popular for leisure activity. Our climate inspires lifestyle choices, attracts tourists, shapes our economy and unique natural environments and is a fundamental part of the history and identity of central Perth.



Geological units

- Bassendean Sand
- Thin Bassendean Sand over Guildford Formation
- Sand derived from Tamala Limestone
- Tamala Limestone
- Swamp deposits
- Alluvium and fill

2.1.4 Green spaces and trails

The dominant green spaces of central Perth are the Swan and Canning rivers, the river foreshore parks, Kings Park, Herdsman Lake and Lake Monger. Together, they form an almost continuous system of land and water environments that cover approximately 25 per cent of central Perth. From these places people can enjoy spectacular views of central Perth in its setting. Beyond central Perth, these spaces are part of a larger green network of parks and open spaces, extending westwards to Bold Park and the coastal foreshores, north and south to inland parks, lakes and wetlands, and to the upper reaches of the Swan River and Darling Ranges in the east.

This large green space system, which includes public open space and green spaces around institutions, lies at the heart of Perth's culture and identity and plays an important role in Perth's liveability. It provides places for recreation, sport and enjoyment of Perth's unique heritage and biodiversity. It helps improve human comfort and well-being by ameliorating the effects of climate extremes, and air, water and noise pollution.

Some green spaces are relatively isolated but others are connected by trails, leafy suburbs and vegetated infrastructure corridors. A system of regional and local trails connects major features such as wetlands, Kings Park, Bold Park, the Swan River, beaches and dunes.



2.1.5 Biodiversity

Perth's biodiversity is a reflection of its unique combination of climate, geology and settlement history, and is a core part of its cultural heritage, governing the Noongar way of life. Perth sits within the south-west of Western Australia, one of the most biodiverse regions of the world, and Australia's only international biodiversity hotspot, where many of our unique species and habitats are threatened.

Today, Perth's biodiversity and associated landscapes are important elements of the city's sense of place and its international image. Visitors and residents identify with iconic species, such as the banksia woodlands, flowering gums, black swans and Carnaby's cockatoos that signify 'this is Perth'.

Although much of central Perth's natural environment has been lost, remnant bushland, wetlands and waterways combine with the extensive urban tree canopy to form an ecological network. This system connects to the wider ecological network: to the east along the Swan River, and to habitats at Perth Airport; southwards to the Canning River and Beeliar wetlands; northwards along coastal habitats and the wetland chain towards Yanchep.

The diversity of flora across the central Perth region is evident in remnant vegetation assemblages, ranging from the young coastal communities of the Quindalup dune system at Swanbourne, to the sedges and paperbarks of the river edges, and the older communities of Banksia dry lands at Kings Park and Bold Park. Much of this remnant vegetation is identified in Bush Forever sites, locations identified as containing regionally significant bushland recommended for protection¹¹.

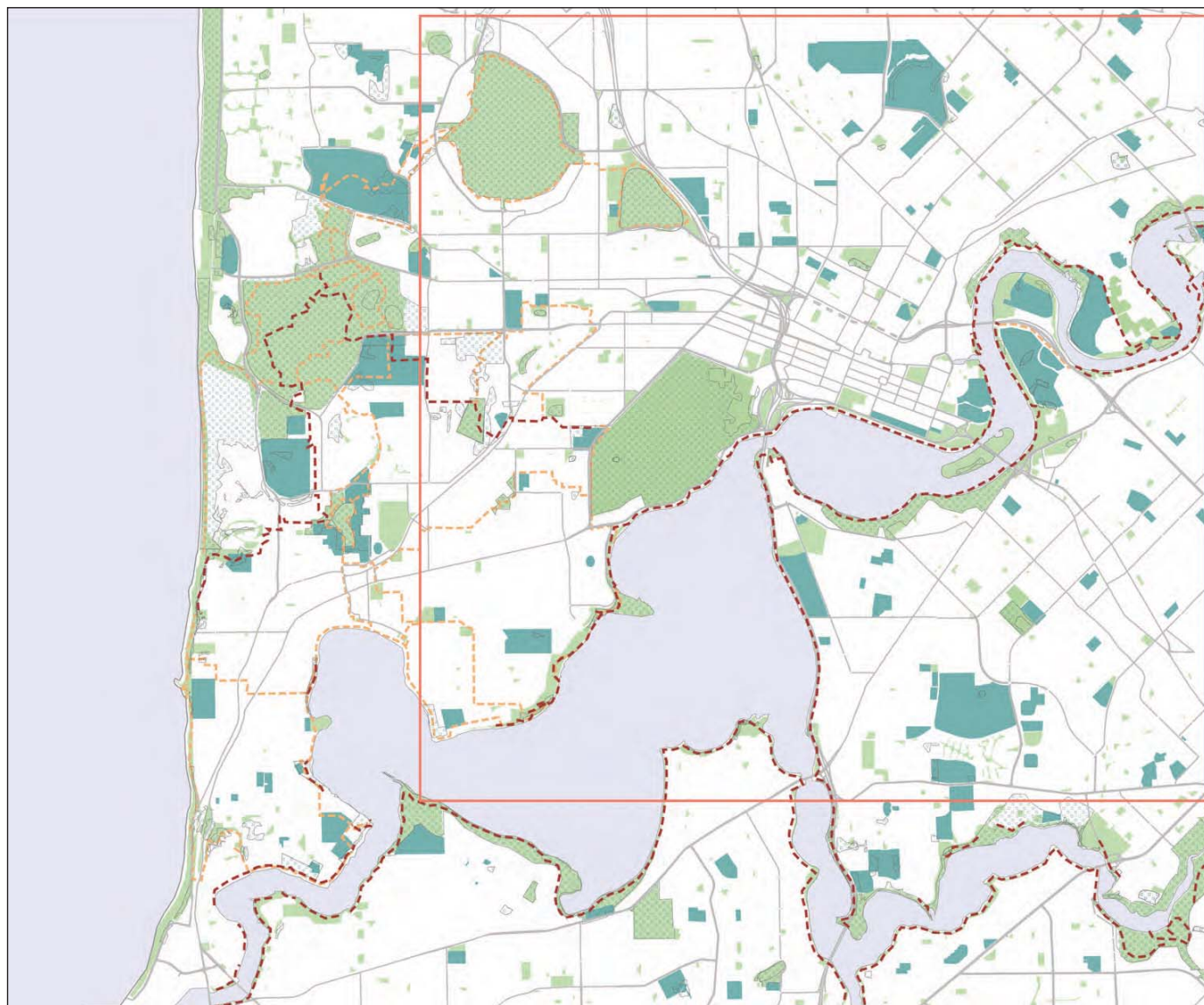
Wetlands play a critical role in supporting the lifecycles and ecology of flora and fauna. Remnant wetlands are found at Herdsman Lake, Lake Monger and Lake Claremont and in many local parks. Despite modifications, the Swan–Canning estuary remains one of the most important wetland systems in the region and the river foreshore is an important breeding ground for black swans. The Swan Estuary Marine Park protects areas of the Swan River which are internationally significant for migratory wading birds.

2.1.6 Urban tree canopy

Trees are located in streets, verges, yards and on other private land, and collectively they are referred to as an urban tree canopy. They are a hallmark of central Perth's character and the most evident aspect of our green fabric outside of parks, open spaces and reserves.


The tree canopy varies considerably across Perth. In places it is exceptionally dense for a city, for example in older suburbs with large lots and wide verges, and in the city's well-vegetated parks and tree-lined boulevards. In more dense urban parts of the city and in commercial areas trees are restricted to streets, parks and roof gardens, or are absent. The undergrounding of electricity cables has a profound effect on the development of tree coverage over time.







Green spaces and trails


 Recreation space
(Open space mainly used for recreational activities)

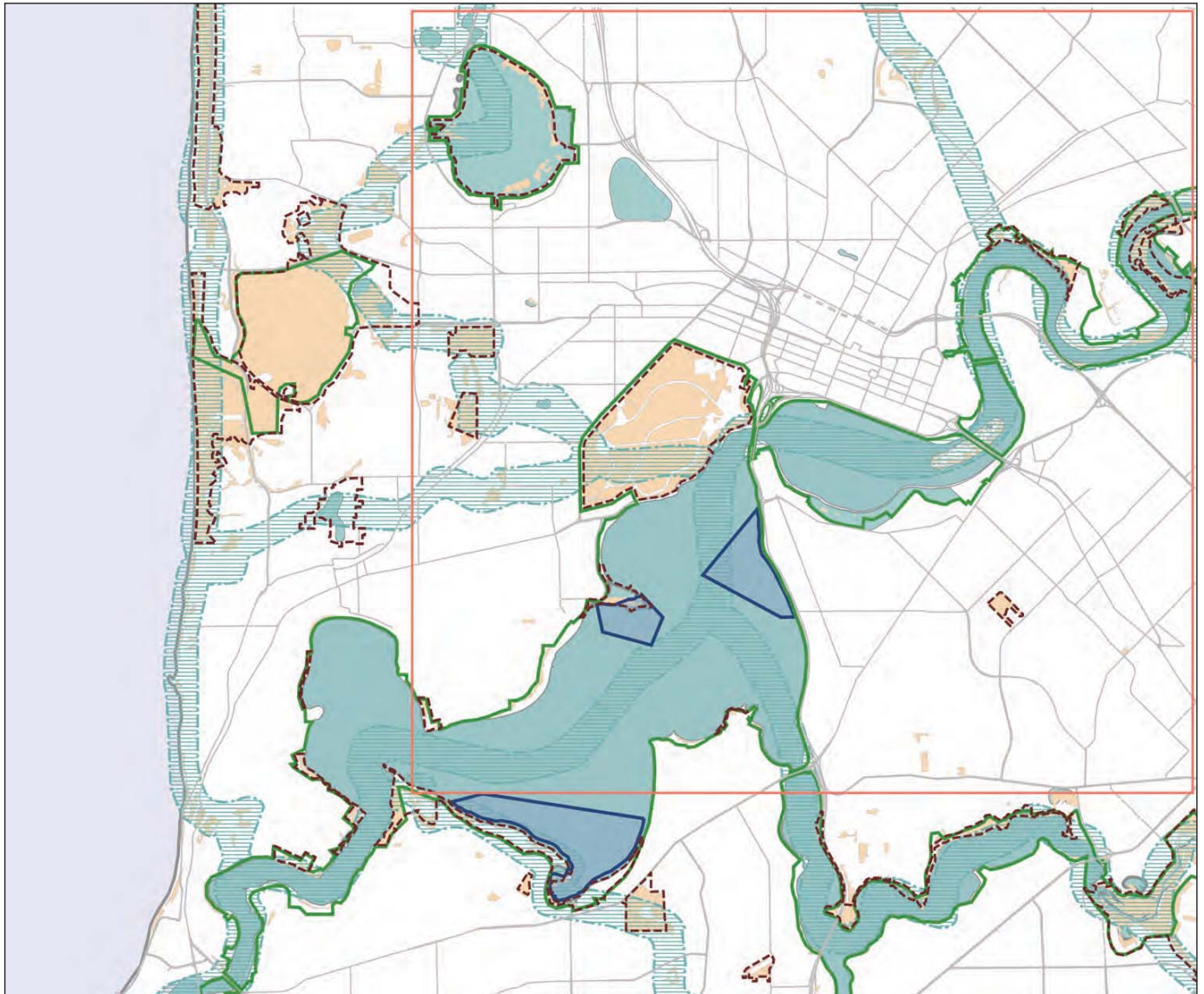
 Sports space and facilities
(Open space mainly used for sports activities including schools with significant sports facilities)

 Nature space - simplified
(Bush Forever sites, remnant native vegetation and wetlands)

 Framework focus area

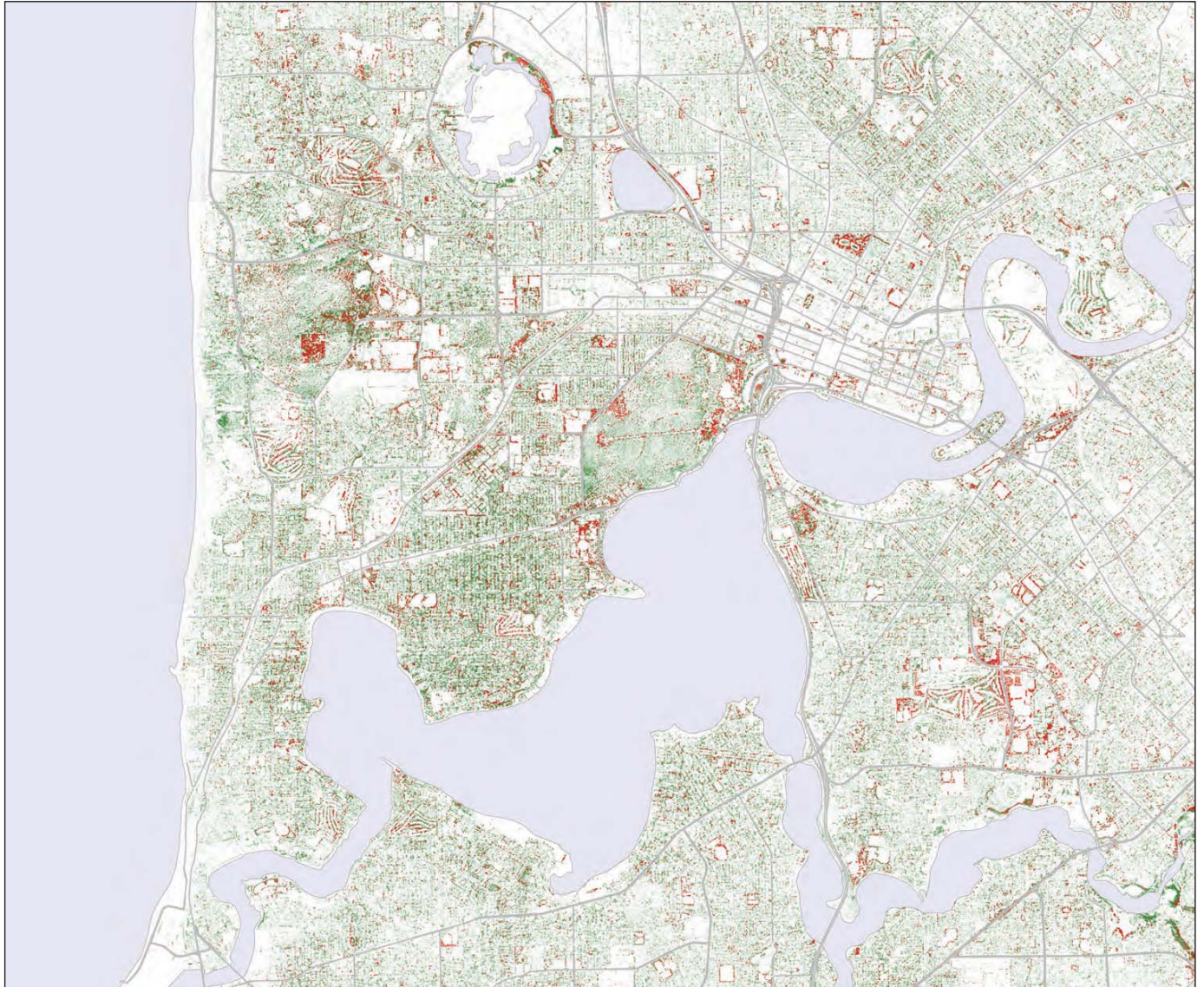
 Existing regional trails (simplified)

 Regional trails: proposed or under investigation (simplified)



Biodiversity

- | | | | |
|--|---|---|--|
| Wetlands, including:
- Swan-Canning Estuary and Hardsman Lake
- Nationally Important Wetlands
- Environmental Protection
(Swan Coastal Plain Lakes) Policy 1992
- Geomorphic Wetlands - Conservation and
Resource Enhancement categories | Designated Park
- Bold Park
- Kings Park
- Herdsman Regional Park
- Canning River Regional Park
- Swan Canning Riverpark | Swan estuary marine park
Bush Forever site (WAPC 2009)
Remnant vegetation | Regional ecological linkages
<i>(Perth Biodiversity Project 2003)</i>
Framework focus area |
|--|---|---|--|



Urban tree canopy

Vegetation Height

- 2-10 metres
- More than 10 metres

Source: CSIRO Urban Monitor (digital aerial image 2007)

2.1.7 Streets

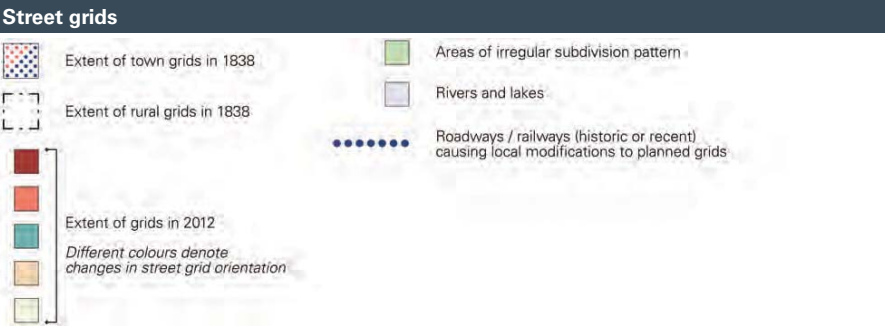
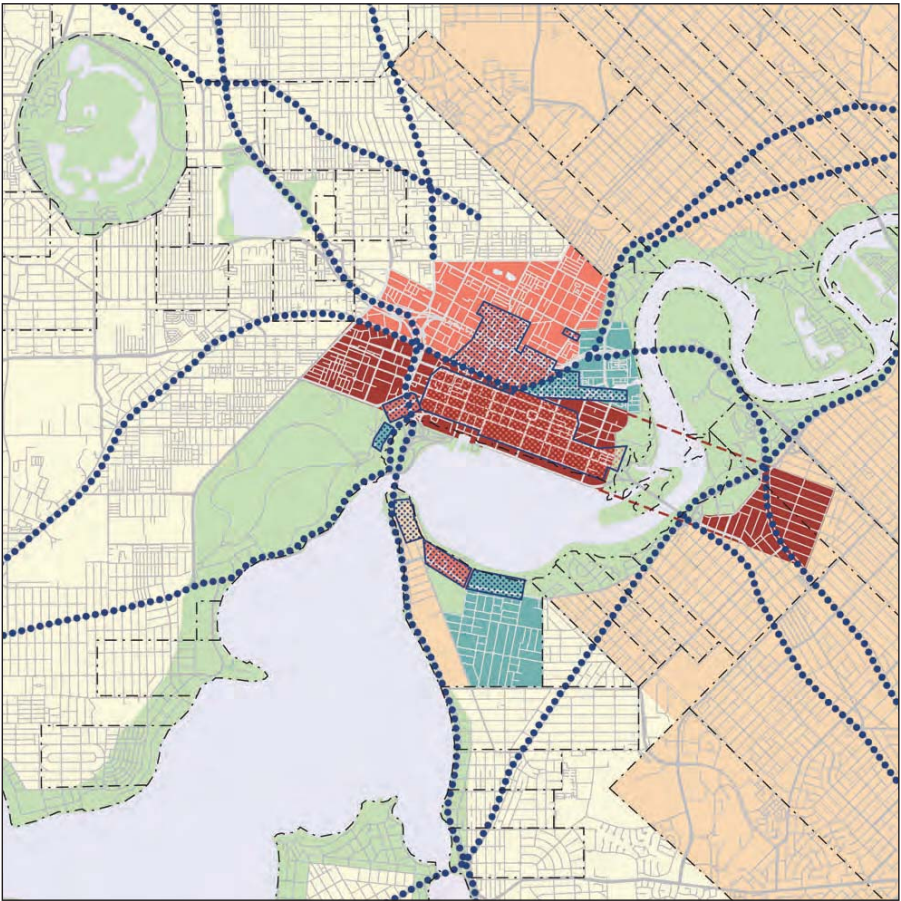
Some of the original Noongar walking paths of central Perth remain etched in the landscape as meandering main roads, such as Stirling Highway, Guildford Road and Albany Highway. Having been appropriated for use as rural tracks by European settlers, they have been incrementally developed into what we see today. Later construction of rail and freeway infrastructure has created other winding routes. These tend to follow geographic elements such as the Claisebrook Valley and river edges rather than the old walking paths. The edges and flood plains of the Swan River and Canning rivers have also influenced local streets that respond to the original landscape.

Between these wandering streets, European settlement led to the cultivation of a series of rectangular street grids as the main form of land organisation.

The city centre, with its own grid, is oriented to fit between the Swan River and the now drained Claisebrook Valley wetlands. Two other parts of Perth city (Northbridge and beyond, and around Claisebrook Cove) have their own grids that respond to the original landscape and complete the key elements of the geographic identity of the city.

Surrounding the city grids are the two great suburban grids of Perth. One orthogonally oriented following the line of the coast, the other rotated 45 degrees to follow the Swan and Canning rivers to the Darling Range.

Central Perth's organically organised skeleton of main routes and river edges lined with a patchwork quilt of grid-like streets, provides the principal structure to central Perth's pattern and sense of place, and will continue to do so as the city evolves.



2.1.8 Buildings

The predominant built form of central Perth is suburban, with only localised areas of distinctly urban form. The main area is defined by low single buildings on individual lots, mostly dating from the early to mid-twentieth century. The prevailing belief was that the future of the city would be continued outward growth, fuelled by increasing reliance on the motor vehicle.

The resultant horizontal landscape emphasises the soaring heights of the office and apartment buildings that mark the city centre and accentuates the pockets of more intense development such as those in Burswood and South Perth.

Between the two polar conditions of suburban housing and city towers lies a range of urban buildings. Reinforcing the edges of the adjacent streets, these are of a modest scale and range from three to five storeys. Recent examples of these building forms can be found in places such as Northbridge, East Perth and Subiaco, which are formative steps towards creating attractive, lively, and comfortable urban places in central Perth.



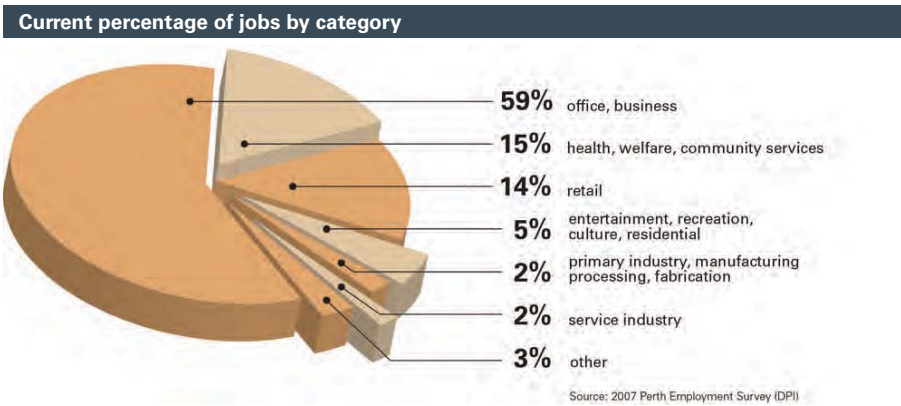
2.2
People

2.2.1 Employment places: where we work

In central Perth, locations for work tend to be highly concentrated. The office towers of Perth city contain a peak concentration of jobs with a reduction in employment intensity further out from the city centre.

The surrounding urban areas display a clear pattern of employment in local activity centres and along former tram streets, such as Beaufort Street, Albany Highway and Stirling Highway. These streets still show a linear employment distribution 50 years after the removal of trams, as businesses continue to be sustained by exposure to car and bus movement.

The framework focus area includes a number of significant activity centres beyond the central core that display high levels of employment, including Subiaco, Leederville, Osborne Park, Burswood and Victoria Park. Significant employment clusters can also be seen in the vicinity of the UWA-QEII health campus and Curtin University. This is partly as a result of employment within these institutions and other organisations and businesses that benefit from close links to major education and health facilities.



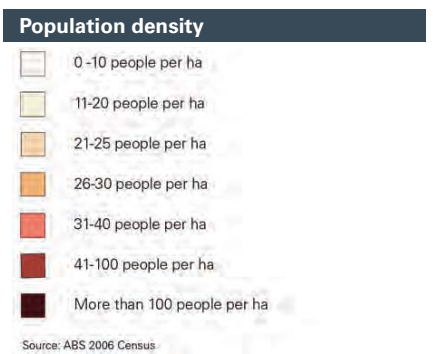
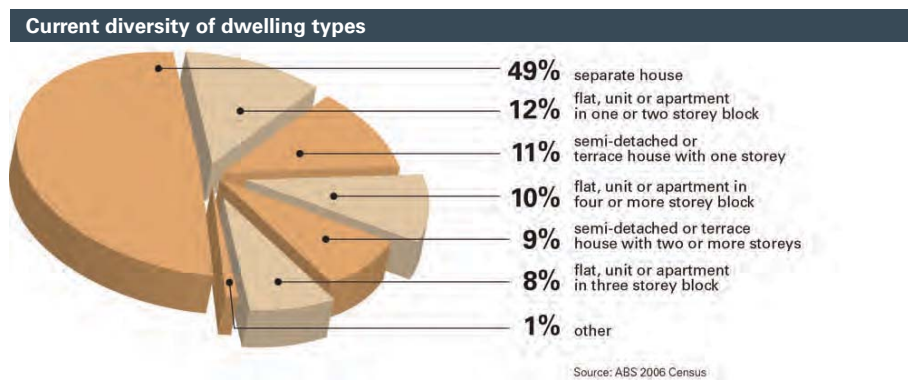
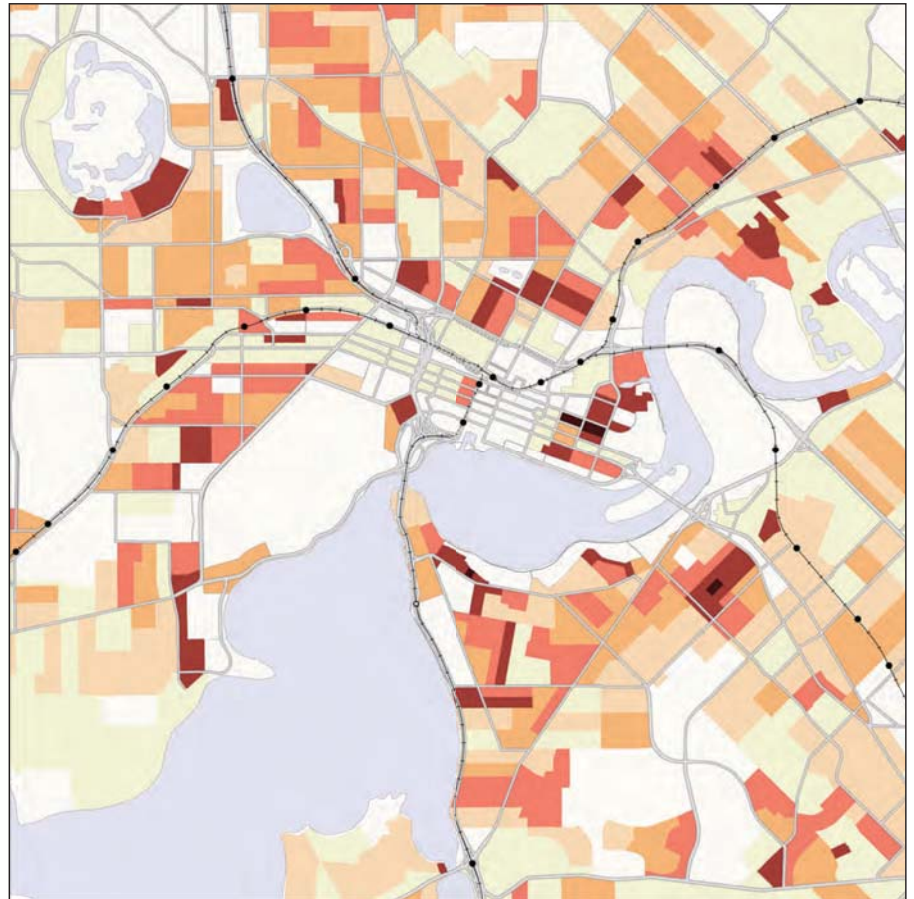
2.2.2 Home: where we live

Although the average residential density of central Perth is greater than that of the Perth metropolitan area, it is still predominantly a suburban residential place. Forty nine per cent of dwellings are single houses and a further 20 per cent are semi-detached¹². The higher residential density in this area is generally the result of historically smaller lot sizes and residential infill over the past generation.

There has been a major burst of growth in the number of residential dwellings in the inner city over the past 15 years. This rapid growth has taken the average residential density of the city centre from almost zero to similar to that of the surrounding urban areas.

This change can be attributed to a number of factors. These include greater sophistication and awareness of urban living (Perth residents gaining and appreciating urban experiences overseas), changing demographics (shrinking household sizes and an ageing population), and a desire to reclaim the hours spent commuting and maintaining a suburban life.

Although there has been a modest shift towards city centre living as an alternative to the suburban lifestyle, there is significant potential for growth and diversification of urban dwellings in central Perth. The anticipated benefits of increased inner-city living for sustainability and place forming are compelling, but it also presents challenges to existing communities.



2.2.3 Education places: where we study

Tertiary education is a core function of central Perth. It is the location for the main campuses of the University of Western Australia, Curtin University and Edith Cowan University, as well as six campuses of the Central Institute of Technology and two campuses of Polytechnic West. Combined, these institutions have more than 90,000 students¹³. There are also many smaller educational institutions, such as business and English language colleges.

Within central Perth, a range of colleges, secondary and primary schools provide education for the area's younger residents. In addition, there are private and specialised schools that serve a broad catchment of students from outside central Perth.

The role of education, particularly tertiary, is a vital component of the area and is highly dependent on access by public transport services. Educational architecture and associated landscapes often provide highly valued, quality spaces in the city's green network. Furthermore, the student population makes a significant contribution to the vitality of the urban environment.



Education activity

Surveyed distribution of destinations associated with education activity.

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

2.2.4 Social and recreational places: where we play

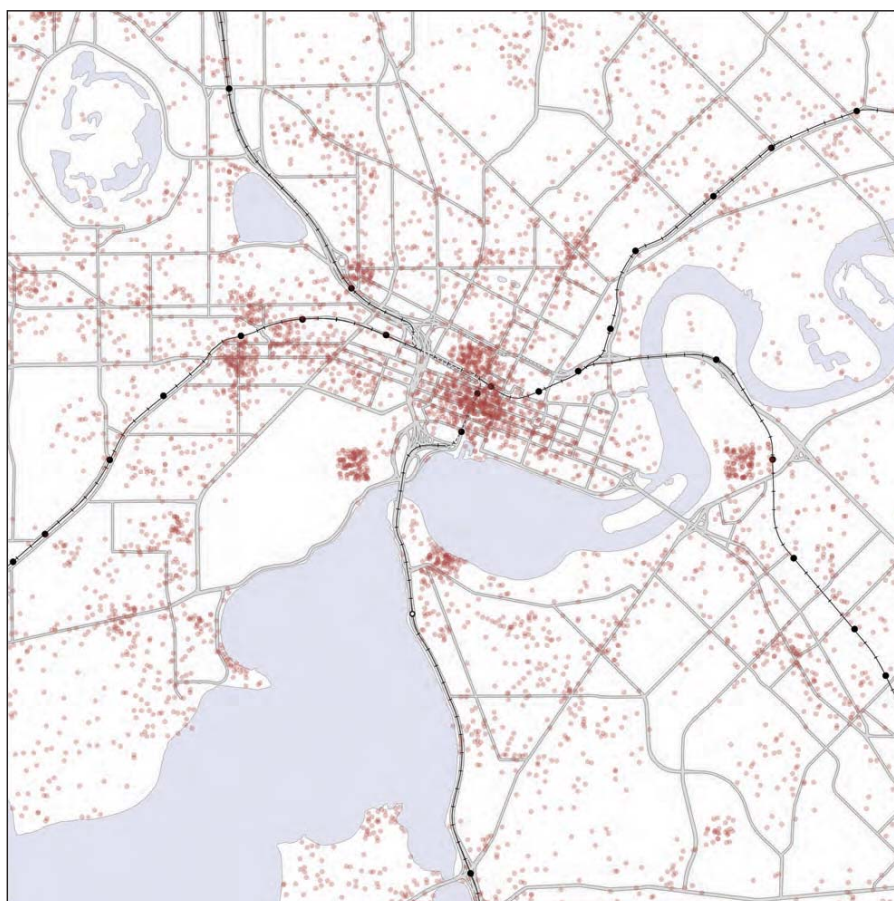
Analysis of where we go in our personal time demonstrates the diverse attractions of activity centres¹⁴. Whether meeting a friend, going to a café, walking, playing tennis, or visiting a doctor, many of the elements of our personal life take place in the same activity centres that accommodate our working and home lives.

The city centre and Northbridge attract the greatest intensity of recreational and social visits. This defines their role as both the principal commercial and social centres of the State.

The popularity of other activity centres in central Perth as places for social interaction is also evident. Areas such as Subiaco, Leederville, Mt Lawley and South Perth have been rejuvenated to become key places in which to live and enjoy social activity.

The popularity of Kings Park, the Crown Perth complex and Subiaco Oval demonstrates the importance of having places for specialised recreational facilities for activities such as relaxing in an attractive landscape setting, entertainment or sporting events.

The array of parklands between our activity centres shows a much lower intensity of visits. However, they provide an engaging destination for visitors and remain fundamental to fostering the sporting and outdoor recreational activities that make Perth so liveable.



Personal, social and recreation activity

Surveyed distribution of destinations associated with personal, social & recreation activities.

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

2.2.5 Retail places: where we shop

Despite competition from suburban centres, the traditional trip into the city to shop has enduring popularity. Perth city remains the premier shopping location for the State and is easily accessible by public transport from most of the broader metropolitan area. Many activity centres are becoming increasingly popular as shopping destinations. Places such as Subiaco, Victoria Park, Mt Hawthorn, Leederville and a myriad of smaller activity centres provide a range of retail services to the local population as well as drawing patronage from outside central Perth. Many of these shoppers are in search of a particular experience related to the character and ambience provided by these reinvigorated traditional main-street precincts.

Some activity centres within central Perth are developing specialist roles that effectively broaden the centre's catchment. In addition, places such as Osborne Park, Stirling Highway and Albany Highway, at the periphery of central Perth, provide opportunities for the retailing of larger goods and are oriented toward a car-borne catchment much bigger than that of central Perth.



Shopping activity

Surveyed distribution of destinations associated with shopping activity.

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

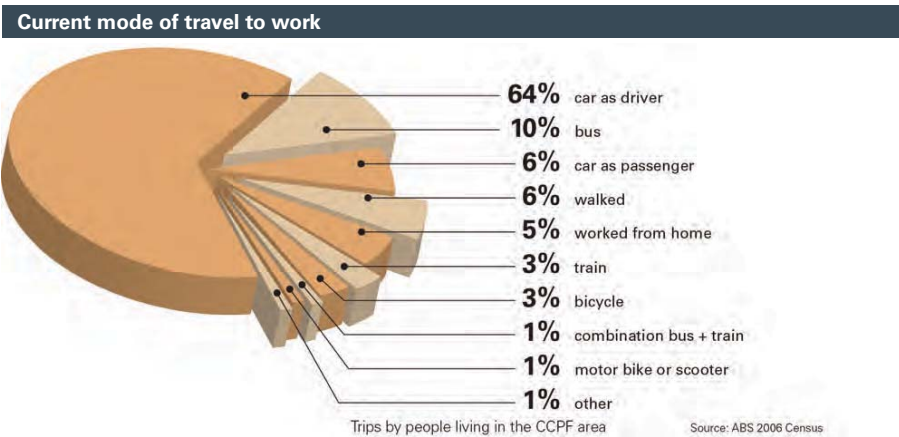
2.2.6 Transport: how we move

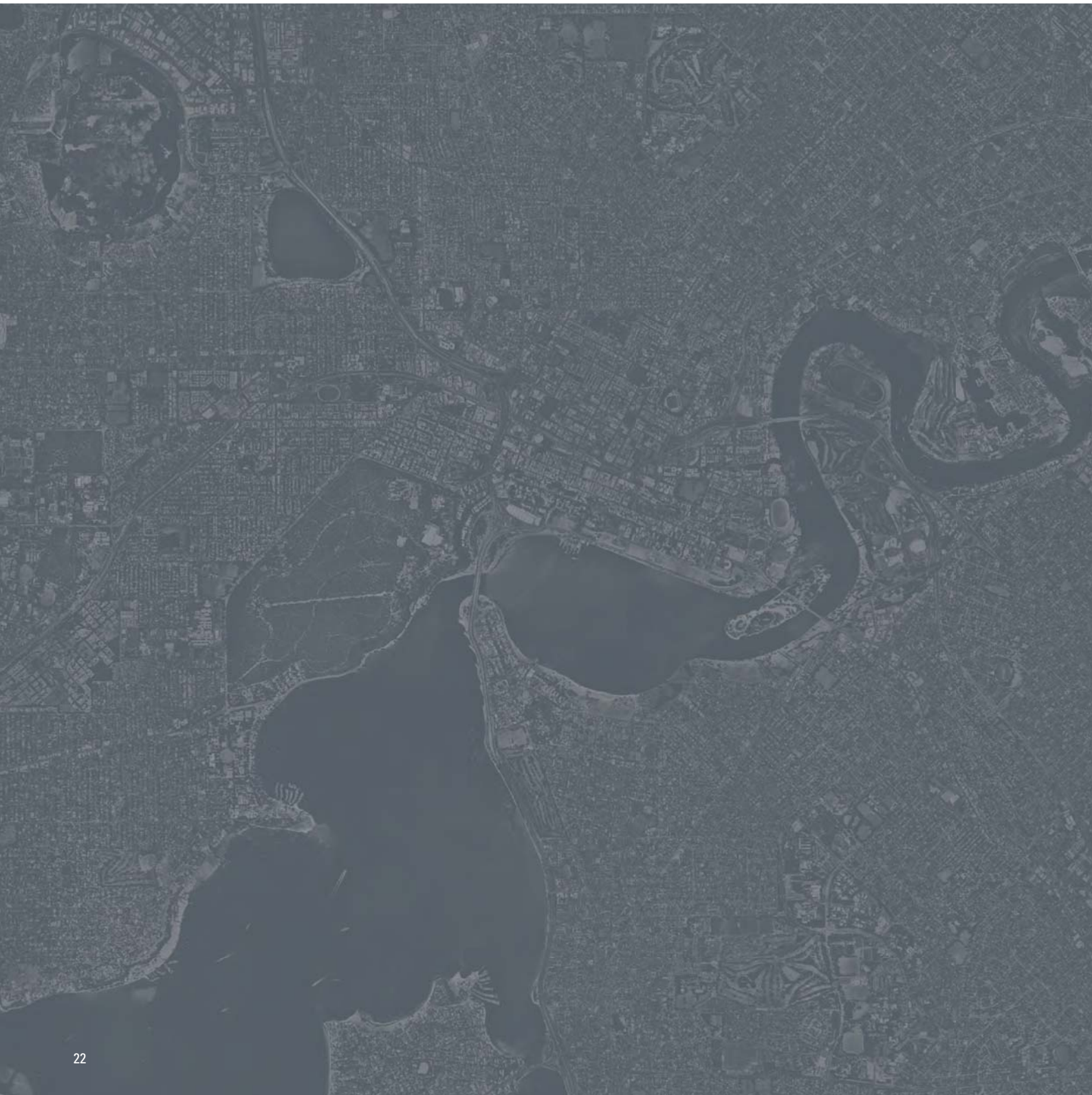
Central Perth contains the hub of the transport network for the Perth and Peel region, providing high accessibility by walking, cycling, train, bus, ferry and car. This includes the meeting point of the city's passenger railway system, a considerable street network and a network of paths and routes for cycling and walking.

The high level of public transport infrastructure supports an improved balance in the use of transport modes in comparison to some other parts of Perth and Peel. The greater density and close proximity of amenities contributes to more walking between facilities and activities. There is however a need to accommodate substantial vehicle use: similar to other localities, the majority of residents of central Perth use a car to travel to work. A far smaller proportion utilise the bus or train or walk to work.



Image: Kevin Utting





3 Drivers

Numerous forces will influence the transformation of central Perth over the coming generation. Certain primary drivers will inspire substantial change while others may encourage slow and more moderate effects. Some influences will be global and concern all cities while others will be distinct to Perth.

Central Perth must directly respond to some of these influences and seek opportunities provided by others. It will also need to prepare and become resilient to the uncertainty created when collective effects or outcomes are more difficult to determine.

The incentives and challenges resulting from these stimuli are many, and remain pivotal to the strategies proposed in this document. Planning has a vital role in helping us to be proactive, and to use our collective wisdom to effectively respond to these drivers of transformation. It also enables the future to be treated as an opportunity to improve our city, rather than as a threat to what we have now. Understanding the major forces that are likely to inspire this direction is therefore essential.



3.1 Incentives for change

3.1.1 Globalisation

The forces of globalisation have already transformed Perth and the local economy and promise great potential for guiding progress within the twenty-first century. Below are some issues associated with globalisation.

Local robustness

The effect of world events demonstrates the need to maintain urban structures that promote diversity and robustness, for instance in the local economy, built form and transport systems. Major events such as terrorism in urban areas and global financial instability have yielded profound effects in some urban regions. It is possible to learn from the past and be mindful that major events are unpredictable but feasible within the lifespan of urban projects. Appropriate contingency and adaptability of plans should be considered.

Global awareness

Migration, tourism, trade and education connect and integrate us with the world. Approximately 27 per cent of Western Australians were born overseas¹⁵, and thousands settle here each year. The number of Western Australians travelling is increasing. The State attracts many international visitors and educational institutions cater to many overseas students. As a result, an increasing proportion of Perth residents are aware of how other cities operate and are creating a demand for a range of urban lifestyles.

A shift in global power

There was a shift in global power from Europe in the nineteenth century to America in the twentieth century. There is now a greater Asian sphere of influence in the twenty-first century. With China and India growing economically, there will be an increased focus on the Indian Ocean Rim (IOR) for trade, immigration, tourism and cultural ties. Perth is already a major centre and the largest city on the IOR in which the English language predominates. Australia's growing integration with its neighbours is likely to see an increasing role for Perth as an influential hub of the region.



Increased trade

Recent Asian economic growth has resulted in a fast-growing demand for the natural resources of Western Australia, a condition that is likely to continue for some time. Consequently, Perth is becoming a global headquarters for the energy and mining sectors. Demand for office and industrial floor space is increasing, newly arrived workers are seeking accommodation and there is increased competition for skilled workers.

Responding to this may include creating additional commercial and residential accommodation and enabling educational facilities to increase the skills pool to service the resource sector.

Population growth

Through a reduction in the constraints on movement, globalisation has assisted the ability of people to more easily relocate from place to place, nationally, internationally, or from rural to urban. Along with natural population increases, this presents the challenge of catering for more people in the city.

Metropolitan Perth's population grew by approximately 15 per cent between the census years of 1996 and 2006¹⁶. The publication *Western Australia Tomorrow* (2012) forecasts that the population of metropolitan Perth and Peel will grow from the estimated current 1.9 million to between 2.32 and 2.56 million people by 2026¹⁷, and *Directions 2031 and Beyond* establishes a

vision for a city of 3.5 million people¹⁸ whenever that may occur.

There are several reasons why population growth within central Perth needs to be at a higher rate than the rest of the Perth and Peel region:

- growth on the city fringe is less sustainable due to the effects of increased travel distances, increased costs of energy and infrastructure, and the loss of natural habitat and farmland;
- changing demographics through an older population, smaller households and lifestyle expectations lead to demand for better access to recreational and social amenities without cars;
- central Perth has a surplus of jobs over working residents and of student places over student housing. Reducing and balancing travel demand points to a greater inner-city population; and
- the amenity of public places is seen by many to be reliant on establishing a balance of activity that only a large and diverse inner-city residential population can provide.

Creativity and innovation as an economic force

There is increasing recognition of the value of creativity as a commodity in its own right. As a product of the shifting composition of the global economy, ideas and creativity can enhance economic enterprise, such as through value-adding and finding solutions to problems, thus adding to community wellbeing. Cities are recognised as being potential hubs of creativity and innovation, processes which are stimulated by people meeting together and exchanging ideas. This in turn can invigorate cities, particularly in an era of transformation.

Perth needs to be a creative hub to become more internationally competitive, to attract and retain skilled workers and to provide synergy with our resource-based economy. This can be through the establishment of conditions in which creativity can flourish in business, education, research and broader culture. Significant components in developing Western Australia's knowledge economy include highly liveable, attractive and healthy urban environments with abundant vitality and culture, and solid links between tertiary education institutions and knowledge industries.

3.1.2 Technological innovation

Inevitably, future challenges will require innovation in regard to the way we live and work and in which the city's infrastructure operates.

Recent technologies such as the internet, mobile telephones and biotechnology have been rapidly assimilated into everyday life. Current and future advances such as in broadband, nanotechnology, robotics, and medicine may lead to innovations in energy management, transport systems, resource extraction and use, agricultural practices, environmental restoration and wellness programs, as well as in many other applications – all of which can potentially influence the urban condition.

Digital connectivity

The internet and other communication advances have brought widespread real-time connection with the world, changing the way in which we work and interact. Digital connectivity is liberating many of us, allowing work at home or in public places. It is also reinforcing the growth of 'communities of interest' (people who share a common interest) as opposed to 'communities of place' (people who share a common neighbourhood). As a result, social engagement is increasingly occurring at a regional level. Central Perth is the place where such regional interaction can be more easily achieved due to aspects such as its central location and high levels of transport access, amenity and facilities.

Infrastructure

To support population growth, additional or upgraded service infrastructure will be required. Emerging technologies will enable efficiency, especially in an era of increasing energy costs, environmental concerns, and diminishing resources.

Improvements in mass-transit technologies are likely to see the introduction of alternative forms of street-based vehicles, while electric and alternatively fuelled cars will create demand for new infrastructure.

Enhanced monitoring and information systems will enable more efficient use of our existing infrastructure and reduce the need to build additional networks to match demand. This is likely to be relevant to the city's road and rail systems.

Emerging technologies will influence the collection of waste, recycling and the infrastructure needed to deliver essential urban services such as power, water and

telecommunications. This will have a direct bearing on the extent and location of land and the funding required for servicing the city. Importantly, future planning needs to be aware of how emerging technologies can be incorporated and must not assume that service delivery will always be business-as-usual.

Drainage infrastructure will need to be adapted to manage the water cycle in a way that better supports and reflects the natural water cycle, and provides additional benefits such as habitats for wildlife and features in parklands.



Image: Andrew Pritchard/IPH

3.1.3 Resources

An abundant supply of natural resources over past generations has sustained economic and population growth and facilitated the development of infrastructure in Western Australia. These resources have provided the opportunity for more people to lead prosperous lives. They are however, not inexhaustible, and using resources with improved efficiency and effectiveness will become increasingly essential.

Water

Water supply will be increasingly precious in many global regions in a future of growing populations and changing climate patterns. Within the Perth region future water demand from urban use is expected to increase significantly because of a larger population. Combined with a changing climate (for instance around a 15 per cent decline in rainfall from the mid 1970s to late in the first decade of the twenty-first century)¹⁹, this will place extra pressure on accessible water supplies.

Within central Perth and the larger metropolitan region the challenge will be to make sizeable improvements in water-use efficiency, and for clean fresh water to be recognised for its true value. This will be accompanied by the need to utilise alternative water sources and other measures such as reusing water supplies.

Energy

Over the past 60 years, Perth has developed substantially through the plentiful supply of oil. Oil has provided for all the needs of the modern city. It has been instrumental for transport systems, and is relatively inexpensive, rich in energy and abundantly available. As such, the city has become highly reliant on this form of energy for many aspects of its day-to-day functioning, particularly for transport.

As we proceed into the twenty-first century there is growing evidence that oil will not be so readily available to meet increasing global demand. The challenges will be to secure affordable and sustainable forms of energy, to reduce levels of energy consumption and to ensure that the city is robust enough to withstand the trials that changes in energy supply bring.

3.1.4 Environment and climate change

Society and the human economy cannot be detached from the natural world, even in highly urbanised locations such as central Perth. Human wellbeing relies on healthy, functioning natural systems for a wide range of services, including the provision of food, materials, clean water and air, energy and climate regulation. Biodiverse systems provide sources for scientific discovery, medicines and the control of pest and diseases. Natural environments provide places for inspiration and reflection, quiet enjoyment, recreation and active travel. Open spaces encourage outdoor activity, improve wellbeing, moderate the climate, and so reduce public health costs. Biodiversity and attractive landscapes support our economy as places to visit, maintain property values, and assist with the marketing of Perth as a place for migration and businesses to locate.

In the twenty-first century, local, regional and global issues will result in an expanding focus on this interdependence. The large per-capita environmental footprint of our industry and lifestyles requires a change in our relationship with the natural environment. The social economic and environmental costs of not doing so will be high.

Natural environment

In an era of growing concern about the global and regional welfare of the environment and its functions for supporting human life, we need to better manage the relationship between human activity and natural systems. The south-west of Western Australia is the most biodiverse zone of the State and the Swan Coastal Plain is the place in which the environment is under the most stress. Since European settlement, 21 of the 33 species of mammals originally believed to occupy the Swan Coastal Plain have become locally extinct, and it is estimated that 70 to 80 per cent of the original 326,000 hectares of wetlands on the Plain have been lost²⁰. Even in large areas like Kings Park, major extinctions of insectivorous birds have occurred in the last 50 years²¹.

The underlying causes of these environmental stresses on the Swan Coastal Plain are dispersed human population growth, consumption of natural resources, and climate change. Improvements to the long-term wellbeing of ecological systems will be one of the main challenges for the city's future. One of the key threatening processes to biodiversity conservation in urban landscapes is habitat fragmentation. Increasing the capacity of natural areas to retain biodiversity requires a range of responses, such as the provision of a more representative mosaic of habitats, enabling greater genetic diversity and helping species to disperse and migrate. Improving landscape connectivity through management and establishing ecological linkages will help to achieve this.



Urban trees

Urban trees have been shown to add value to properties, and provide other tangible economic benefits such as reduced building heating and cooling costs. A well-treed environment is good for human health, providing contact with the natural environment and filtering and deflecting urban noise. The shade provided by trees is important for safe outdoor activity, protecting people from extreme temperatures and ultra-violet light. Trees help to clean the air by absorbing pollutants, ameliorate the extremes of temperature, surface water run-off and erosion.

Where the relationship between trees and buildings is well designed, this enhances places for people and wildlife and limits the environmental footprint of the city. Indigenous street trees, and some non-native trees, support local biodiversity by providing roosting and nesting sites, and act as important stepping stones for birdlife between parks and reserves.

Evidence suggests that the urban tree canopy is under threat from lack of protection, removal, damage, disease and a changing climate. Expected increases in the density of urban form will increasingly affect mature trees in yards and verges. Even in areas where density is unchanged, the practice of clearing entire lots prior to redevelopment can result in the unnecessary loss of significant trees. Loss of tree canopy is an incremental process which often goes unnoticed until it is too late to undertake preventative actions.

Efforts to counteract these changes are hampered by a lack of data and of a strategic, linked approach guided by common principles. Some advances are being made, for example some local governments have adopted tree strategies and the undergrounding of power lines provides an excellent opportunity to retain and plant trees.

Perth climate

Climate profoundly influences the local culture and urban conditions of Perth. Formidable temperatures and extreme ultra-violet (UV) radiation for many months of the year are a major factor in how we inhabit the city. For instance, many workers choose to travel to work in the cool of the morning and reserve time in the early evening for outdoor activity after the heat of the day. This creates strong commuter peaks early in the mornings and afternoons, and contributes to lower levels of retail and leisure activities before and after the working day. A challenge for central Perth is to attract and sustain more activity before and after work, with a larger central residential population being an important factor.

High temperatures and UV indices also often deter walking and other physical travel methods. Pedestrian movement is fundamental to active urban environments, and planning and design of streetscapes must prioritise climate-responsive walking networks. In this respect, a healthy urban tree canopy is valuable for reducing solar gain and temperatures and providing protection from the sun.

Climate change

Climate change has been identified as a significant environmental, social and economic issue that poses local challenges to all nations and cities, regardless of their contribution to the problem. Responding to climate change, through both mitigation and adaptation, has become a key driver of change.

Likely environmental consequences of climate change for central Perth may include:

- Higher temperatures and lower rainfall, which may have an impact on our health, comfort, vulnerability to fires, and on water and food supplies, as well as impacting on the urban tree canopy, and the biodiversity and stability of ecological systems.
- Increased instability of climate, including the intensity and frequency of storms, leading to the potential requirement for greater robustness of our building stock and urban infrastructure and innovative responses to flood management.
- Sea-level rise, which when combined with storm surges could result in more areas becoming vulnerable to inundation. Future planning is likely to require greater margins of safety for infrastructure in the vicinity of the river systems.
- Salt intrusion into the water table, which could be a threat to natural habitats, urban trees and irrigated lawns in riverside suburbs, and may require a new approach to the management of parklands and gardens.
- Diminished health of our river systems, because of issues such as algae, due to a combination of increased temperatures, high concentrations of compounds entering the river, and longer periods of low water flow. Greater emphasis will need to be placed on the management of the river system, including controlling dewatering and targeting nutrient and pollutant sources in the river catchments.

We will need to continue to address our contribution to climate change and adapt to changes. Some of the major preventive challenges that will have an impact on future planning including lowering building and travel energy use, general resource consumption and working with valuable natural systems to provide multiple functions.



3.1.5 Social change

Society is constantly changing, and planning needs to recognise and respond to these changes. Examples of the key trends that are likely to inform the planning of central Perth follow.

Household diversity

The current trend of more diverse households will continue as our population ages and economic circumstances change. For example, family patterns are leading to increasing numbers of people living alone, while economic pressures necessitate others sharing a home, as either a family or non-family group. Planning can respond by promoting and facilitating a greater diversity and affordability of housing types, including for key workers, students and older people.

Urban pastimes

As we become more cosmopolitan through exposure to other world cities, we are increasingly demanding a wider range of recreation and cultural services. Furthermore, as the population ages and becomes more efficient at work, we are likely to have more time for recreational pastimes. In central Perth, consideration will need to be given to where people will engage in these pursuits.



Health, wellbeing and longevity

With issues such as an ageing population, a changing climate and increasing concerns about poor physical and psychological health, and their personal and social impacts, we need to create a healthier urban environment. There is a correlation between urban structure, environmental quality and health patterns. A healthier city should include opportunities to live where walking and cycling are viable alternatives to car use; where there is provision of easily accessible health facilities and a range of housing types and affordability; where the city's climate is ameliorated by natural spaces, a tree canopy and innovative building design; where there is better governance to control noise issues; where there are places for people to meet and enough high-quality public space for social interaction, sport and quiet enjoyment; where there is good access to public transport; and where there is attention to the perception and reality of safety and security.

Disparity of income

Economic deregulation and rapid change have led to a wider disparity of incomes. Further globalisation appears to be reinforcing this trend. To address this challenge measures that build social inclusion, such as maintaining a diversity of housing, will be beneficial.

3.1.6 Growing pains

The uncertainty of change might make many people apprehensive of what the future holds.

Defensiveness

Accommodating growth within central Perth will result in new residents, employees and public services. The prospect of structural change or an influx of new people may cause some anxiety to people already established in an area. This could be a reluctance to consider significant change or be based on concerns about additional traffic, loss of visual and historic amenity or crowding of community facilities.

One of the greatest challenges in future planning is likely to be working with local communities to ensure that growth mainly results in improvement for the whole community. This means determining that the wishes of the established community are balanced with those who aspire to join the central Perth community.

Tolerance

In recent times, Perth residents have had the opportunity to travel more, participate in extended education, and be exposed to world cultures through communication and media. This has seen a growing diversity and tolerance for varied ethnicities, sexual orientations, gender and religious beliefs. These societal qualities help to cultivate liveability, innovation and community robustness and should be built upon.

Tolerance also extends to our ability to live together in close proximity. Compact urban living requires enhanced sharing of public and private space compared to suburban living, be it streets, parks, buses, cafes or stairwells. For this, we need to develop a culture of spatial tolerance. Residents and visitors will need to understand that desirable amenity and vitality in animated urban locations can also be associated with activity, lights, noises or aromas that are not the same as in more subdued locations.

Perceptions of safety

There may be a perception that compact urban places are less safe than quieter suburbs. This is generally not supported by statistics. As places within central Perth become more urban in their scale and character, it will be important to ensure that new developments incorporate crime prevention through environmental design principles. These principles can contribute to the activation and vibrancy of streets and places and

help to diminish the possible perceptions that urban environments are unsafe.

Sense of place

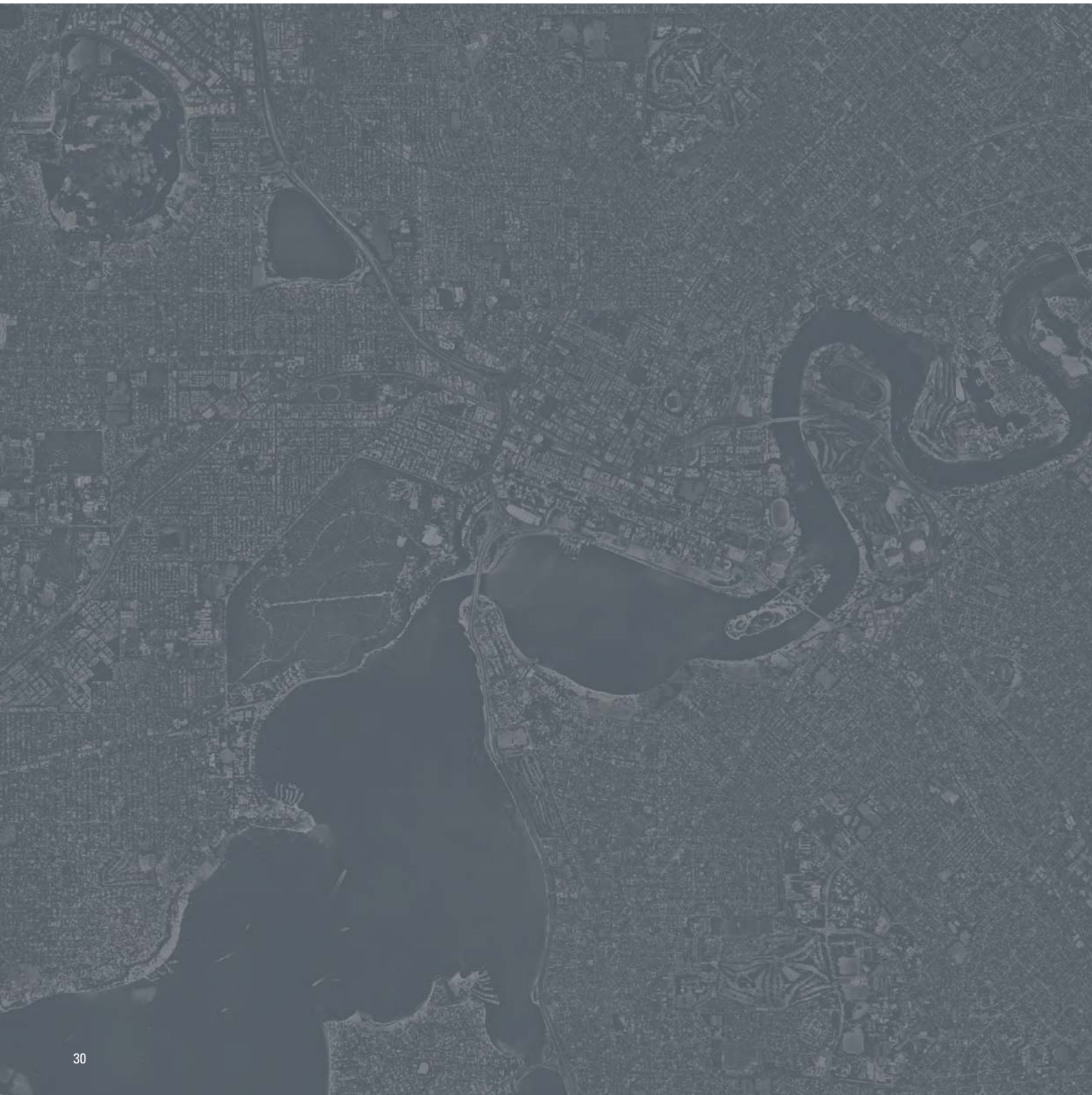
Sense of place in central Perth can be thought of as the distinctive landscapes, local practices, patterns of development and natural elements, heritage and cultural associations that are unique and enhance the character of the area. Many of these attributes have long been ingrained in the familiarity of people's daily lives, and are often taken for granted, valued sub-consciously and poorly articulated. Often people first notice less tangible characteristics when they are lost or threatened. To pre-empt this, we need to identify what makes a place special to people, and enhance it through planning and design.

As global changes make us more international, these distinctively Perth factors become ever more valid and fundamental to the identity of our city. Local distinctiveness of place is a key quality for liveability, community engagement and important in attracting residents, businesses and visitors. Erosion of 'sense of place' and loss of characteristic features leads to homogeneous environments. Lack of distinctiveness can easily be a by-product of poorly planned growth and change, and standardised design, which reflects little of the surroundings.

One of the major challenges in the future planning of central Perth is to balance the need to accommodate the conservation of identified cultural heritage and desirable urban character and also provide amenity for growth. New approaches to urban planning seek to establish the essential characteristics of local distinctiveness. This acts as a platform for design solutions that reflect and enhance the sense of place. This includes a combination of preserving and enhancing existing distinctive natural and built features and views, and designing complementary new built forms and spaces.



Image: Colin York



4 Vision, Objectives and Principles

Section 3 identifies many of the expected drivers for the evolution of central Perth over the future generations. There will however be many events and forces that we cannot effectively predict. Committing to a shared direction for the future of central Perth will help guide decisions about the city's planning as that future unfolds.

At the highest level of these objectives should be a common vision statement. *Directions 2031 and Beyond*, the central document defining the planning future for Perth and Peel, states:

By 2031, Perth and Peel people will have created a world class liveable city; green, vibrant, more compact and accessible with a unique sense of place.

Applied specifically to the Capital City Planning Framework this vision becomes:

Central Perth will be a world class liveable central city; green, vibrant, compact and accessible with a unique sense of place.

Underpinning this vision is a suite of key objectives and specific principles derived from the ambitions of *Directions 2031 and Beyond* and expanded in collaboration with the local authorities of central Perth. These objectives and principles are outlined in the following pages.

A vision for a city needs to be grounded in community values to achieve lasting relevance. As part of the framework consultation process, a group of Perth citizens from a range of sectors have come together to formulate a vision for Perth in 2050. Facilitated by the Committee for Perth, the group outlined key statements for a vision for Perth with a population of 3.5 million. These statements have been used as a reference for community values in the development of this framework and the text is included in Appendix 7.3 as a demonstration of community ownership of Perth's positive future.



4.1 Objectives

4.1.1 Become a more liveable city

Liveability can be defined as the capacity of a place to deliver the everyday qualities of life to which most of us aspire. This includes qualities such as accessibility to amenities; a safe and healthy living environment; a sense of community; vibrancy; and choice.

Principles:

- Build a compact city to make it more accessible to all people.
- Encourage a sense of community ownership, participation and an awareness of the city.
- Deliver a diversity of quality places and cultural experiences.
- Provide a range of housing choices, in both form and cost.
- Improve the quality of design and vitality of the city's public spaces.

4.1.2 Enhance our sense of place

Enhancing central Perth's sense of place can be thought of as nurturing the distinctive characteristics and features that are unique to Perth, including the landscapes, views, local practices, patterns of development, heritage and natural elements.

Principles:

- Continue to identify, protect and promote elements that contribute to Perth's unique sense of place and use this to inform planning and design.
- Connect the central Perth landscape setting to our urban development, especially the Swan River and Kings Park.
- Make the built environment more responsive to the opportunities and challenges of the Perth climate, to support sustainable urban lifestyles.
- Celebrate and safeguard our indigenous and endemic flora and fauna to provide character and uniqueness.
- Celebrate the diversity of cultures from around the world that make Perth a global city.

4.1.3 Reconnect with our indigenous heritage

The Noongar people were the original custodians of the region, developing a culture that is a direct response to the natural environment. In an era when the relationship between urban places within their ecological setting will become increasingly important, it would be of great benefit to ensure significant reference to Noongar culture in the planning of the Perth metropolitan region, including central Perth.

Principles:

- Show appropriate recognition of our indigenous cultural foundation.
- Promote creative expression of indigenous culture and its interplay with other elements of culture.

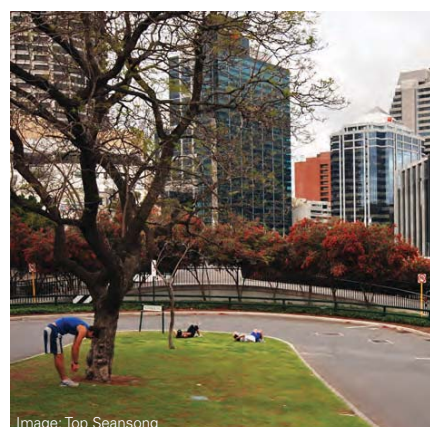


4.1.4 Provide for a growing residential population

The population of Perth and Peel is projected to grow, and more people will want to live in central Perth, which has vitality, jobs and the widest variety of dwelling types. More people living in central Perth will optimise the use of existing infrastructure and alleviate pressure to locate development on the metropolitan fringes.

Principles:

- Provide adequate places with the capacity for higher density residential accommodation.
- Design and create flexible social infrastructure to meet the growing needs of higher density residential areas.
- Create a planning environment and regulatory framework that encourages and facilitates residential and commercial development for a more intense urban environment.



4.1.5 Provide for a diverse residential population

Recently there has been a substantial increase in the number of inner city dwellings. However many cater to the higher cost segment of the market. To maintain a diversity of housing, greater attention needs to be given to delivering affordability for people with low-to-middle incomes. An appropriate supply of development opportunities will help to ensure that housing is delivered with greater efficiency and at lower costs.

Principles:

- Provide for an increasing diversity of housing choices.
- Create a regulatory framework that allows for the delivery of a wide range of housing types and values.
- Establish incentives to provide diverse and affordable accommodation types.
- Allow for a sufficient supply of redevelopment opportunities to ensure that housing remains relatively affordable.
- Encourage the construction of housing that is suitable and affordable for a range of household incomes including students and the aged.
- Utilise the value of quality design in providing diversity, choice, dignity and quality of life.



4.1.6 Reduce the city's resource footprint, including greenhouse gas emissions

Australians are some of the highest resource consumers and greenhouse gas emitters per capita in the world. Planning policy will need to make central Perth conducive to reducing contributions to greenhouse gas emissions and modifying the use of water and sources of energy.

Principles:

- Encourage holistic solutions that integrate infrastructure, open space, vegetation and buildings to improve sustainability performance.
- Reduce energy and water consumption in buildings, including through the incorporation of environmentally sustainable design principles.
- Reduce transport-related energy consumption by encouraging travel by walking, bicycle and public transport.
- Manage urban water through water-sensitive urban design to encourage water conservation, to maintain or enhance water quality and to protect the water regimes of natural systems.
- Recognise waste as a resource and develop systems and infrastructure to re-use it.
- Employ programs to inform community attitudes and support lifestyle changes.
- Encourage re-use and adaptation of existing infrastructure, spaces and buildings.



4.1.7 Build robustness against climate change

Climate change impacts have the potential to cause serious economic, social and environmental costs. Well-designed early adaptation can build robustness against these changes and help avoid or minimise these effects. To build robustness, the planning of central Perth will need to incorporate consideration of climate-change risks and vulnerabilities into future decision-making.

Principles:

- Provide for greater protection from storms and increasing heat, including improved design of the built form and landscape.
- Design to reduce water consumption. Use native plants with the capacity to adapt to expected climatic change.
- Identify what areas can be protected and what areas could be allowed to become river, lakes, or ecological wetlands to compensate for those lost elsewhere.
- Build appropriate elevation into buildings and streets in anticipation of rising sea-levels and the likelihood of future flooding.
- Establish or maintain ownership structures for lower-lying areas that allow flexibility for land-use changes over time.



4.1.8 Build our knowledge and cultural economy

Knowledge industries are vital to Perth's role as a capital city, and the creative thinkers of these industries are at the cutting edge of the knowledge economy. The connection between them and with the world will attract other creative people and investment. As an emerging world-class city, a good quality environment and lifestyle will make us highly competitive as a location for innovative industries of international stature.

Perth has a great endowment of cultural institutions, from visual and performing arts, to small community groups. Many institutions have international reputations that form a powerful part of the city's identity while others have had periods of great creativity mixed with minimal visibility in the larger community.

Principles:

- Facilitate interaction between the business, research, education, health and administration sectors to help build prosperity and wellbeing through knowledge, including through supporting location for well-connected clusters of knowledge industries.
- Reinforce the Perth Cultural Centre's role as a primary place of cultural knowledge and education.
- Build and support places that will attract and retain creative people to live and work.
- Provide opportunities for people and industries to pursue innovative and creative ideas and celebrate this creativity publicly.
- Locate our cultural institutions as centrepieces of central Perth.
- Integrate our cultural institutions into metropolitan Perth's everyday cultural life.
- Build on our cultural institutions' strengths and take them to the world.
- Use our cultural institutions as places for reflection on the State's people and identity.

4.1.9 Become less dependent on private cars

Cars have been an essential part of Perth's recent suburban history, however energy constraints, a growing population and a trend towards the creation of more urban environments will demand that we become less dependent on car travel.

Principles:

- Recognise that streets are places for activity as well as movement.
- Establish a network of high-frequency public transport routes that coincide with places of intensive activity.
- Ensure that the design of the urban environment encourages walking and cycling.
- Prioritise public transport provision.
- Develop higher standards for public transport infrastructure to make it a more appealing way to travel.
- Provide for an equitable balance in road infrastructure to cater for a mix of transport modes.



4.1.10 Build a compact central Perth

If we lived in places where we needed to travel less often and for shorter distances, there would be a subsequent reduction in the demand for additional road space and a reduction in energy use. Short trips also enable other modes of travel to become an attractive alternative to private car use.

Principles:

- Create a mix of different activities in most areas.
- Create higher densities of development so that more activities can be located closer together.
- Encourage a better balance between residential and commercial activity.
- Recognise the importance of design quality in ensuring that a more compact city retains and supports high-quality spaces and experiences for working, living and recreating.



