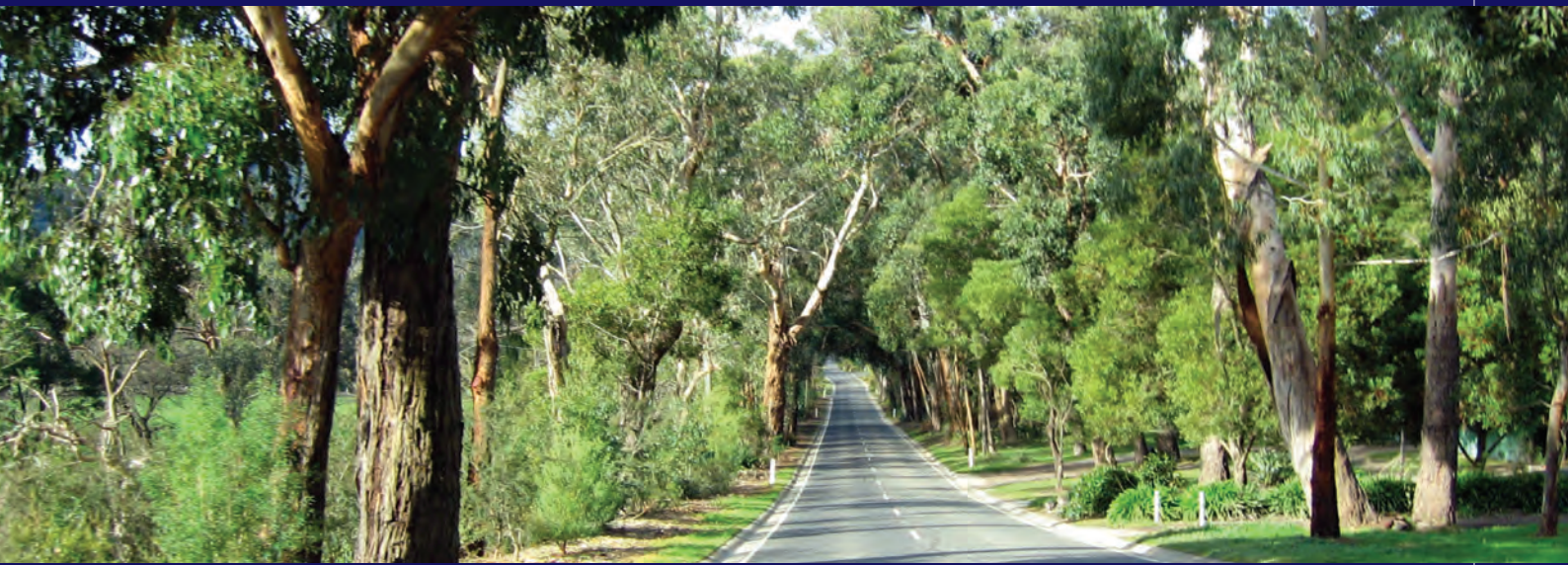


# KNOX

# Liveable Streets Plan

2012-2022



# ACKNOWLEDGEMENTS

This plan has been written by ASPECT Studios in association with Context Pty Ltd and in partnership with the Knox City Council.

# KNOX

## Liveable Streets Plan

2012-2022



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# 1

## SUMMARY

The *Knox Liveable Streets Plan* is a document which is visionary in its aspirations. It recognises and responds to the key challenges in creating liveable streets across Knox. It builds on, rather than replaces, other Council plans and strategies.

This *Plan* has been created through research, community and officer consultation and a thorough investigation of the streets of Knox.

# 1.1 VISION

*Knox Liveable Streets Plan* is designed to help achieve *Vision 2025* through a combination of policies and actions.

This *Plan* will make a major contribution to achieving the *Vision 2025* goals of healthy and connected communities, creating accessible transport choices and sustaining the natural environment.

The *Plan* offers a vision of liveable streets in Knox.

Liveable streets provide social, economic and environmental sustainability – the triple bottom line approach.

## SOCIAL SUSTAINABILITY

It is about community health, social interaction, local identity and sense of place. There are many ways in which streets contribute to social sustainability.

## ENVIRONMENTAL SUSTAINABILITY

It is about protecting and enhancing the ecological systems that are vital for life, and living in a way that does not compromise the future. Liveable streets create habitat, support biodiversity, improve the quality of stormwater, and reduce the effects of climate change.

## ECONOMIC SUSTAINABILITY

It emphasises the ways liveable streets can significantly contribute to the attractiveness of commercial and industrial areas for businesses, their customers and employees. Liveable streets encourage people to increase their walking and cycling, and so decrease the costs of health care across the community. Liveable streets also increase property values.



Social sustainability:  
rock warming party in Knox



Environmental sustainability:  
significant road-side vegetation



Economic sustainability:  
mountain gate shopping strip



## 1.2 KEY OPPORTUNITIES & CHALLENGES

Knox is an established community. Most of its street infrastructure reflects approaches and aspirations of past design. Today, Knox seeks to be more than a dormitory suburb. Knox wants to develop a vibrant employment economy, with strong activity centres and local jobs.

In addition, Knox wants the community's travel options to shift from car-dominated, to a more sustainable and healthy mix of walking, cycling, public transport and car travel.

The Knox community appears ready for this change. Consultation revealed that traffic in local streets is a real issue, and that people want their streets to be well-designed, treed, and safe community spaces.

Recent community and Council initiatives in Knox have demonstrated the interest in making local streets friendlier, attractive and used public spaces. The concept of liveable streets is likely to strongly engage the community and encourage local initiatives, especially if barriers to that engagement can be removed.

Changing the quality of the existing street infrastructure across the whole city is a long-term project. Some actions will be easier to implement than others. Partnerships between Council and other key players such as VicRoads, infrastructure providers, the community and local businesses, will be essential if the vision is to be achieved.

On the other hand, some of Knox's infrastructure is aging and will soon need upgrading, and this offers an opportunity to incrementally enhance the liveability of Knox's streets.

Streets are also highly regulated spaces. This is important given the many roles that streets are expected to play including travel, infrastructure services, habitat, greenery and trees, community and play spaces. Each type of street – from major highways to local streets – supports a different mix of these roles.

In creating liveable streets, risks still need to be carefully managed. Likewise, safety is a critical issue. Negotiating the regulatory requirements and the community's expectations is a major challenge for Council on the parts of the road network that it manages.

VicRoads manages the major roads. Achieving change in this part of the road network often involves extended negotiations, and both Council and the community can end up feeling powerless and frustrated. Finding new ways to work in partnership with VicRoads is a significant challenge.

Streets are an interdependent network. Streets need to be designed and managed as a system not as independent entities: this offers an opportunity to strengthen the connectivity of streets. But, isolated actions can appear small in scale against the scale of the street network, and are hence less likely to create substantial community benefits. In consequence, more comprehensive and coordinated approaches will be needed.

Streets have been seen as 'roads for cars' for many years. Attitudes are changing, and streets are increasingly being seen as multi-purposed public spaces. It will take time for all of the regulations and standard approaches to street design, construction and maintenance to catch up to current attitudes.

This *Plan* seeks to lead the way on all of these challenges and to take up the key opportunities that offer greatest potential for change.

## 1.3 THIS PLAN

This *Plan* promotes and provides tools for Council and the community to create change in attitudes by increasing pride, public use and ownership of their streets.

The *Plan* seeks to recognise all the benefits of more liveable streets, including:

- more use of streets and an increase in health and wellbeing of residents;
- less reliance on car travel for short and medium length journeys;
- more nature in our streets, healthier ecologies;
- more attractive streets to promote business opportunities and local street use;
- safer streets;
- more pedestrian use in activity and retail hubs and subsequent rise in retail activity; and,
- streets for services and infrastructure.

This *Plan* can be used to advocate for change in policy, standards and legislative requirements that run counter to the concept of liveable streets.



This photograph shows 'Streets as places', a street illustrating a distinct character



Knox City Council staff working towards an 'Integrated design approach' in designing streets

## KEY STRATEGIC DIRECTIONS

In summary, the *Plan* embodies four key strategic directions.

### Streets as places

Change the perception and management of streets that are dominated by vehicles to places that integrate multiple forms of activity by:

- balancing the needs of movement and place in street design;
- putting people and pedestrians as the priority in street design;
- delivering sustainable streets; and,
- ensuring street design is adaptable to changing needs and future aspirations.

### Integrated design approach

Implement a coordinated design approach to the planning, design and maintenance of Knox streets by:

- coordinating with VicRoads to provide best value streets for the community;
- achieving a whole of Council coordinated approach to streets; and,
- engaging with local communities.

### Integrated strategic approach

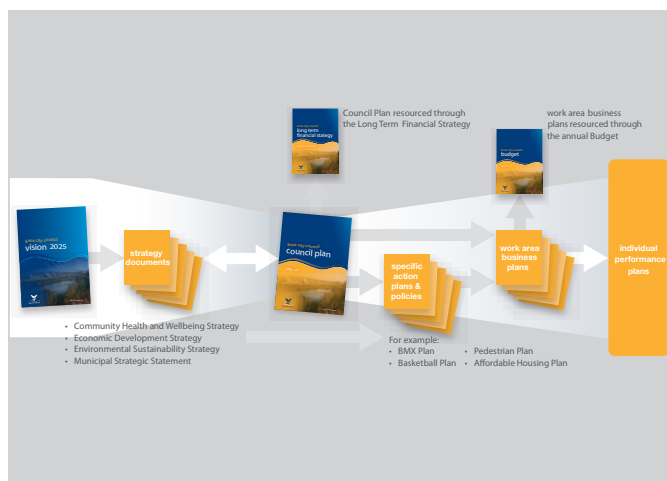
Coordinate, create and update the following key strategies and policies in accordance with the *Knox Liveable Streets Plan* so as to strengthen Council's capacity to deliver liveable streets:

- Knox City Council Streetscape Policy (2003);
- Knox City Council Road Management Plan (2006);
- Footpaths and Shared Path Asset Management Plan (2005); and,
- Indented Carparking Policy (2010).

### Community action and initiatives

Support the ability of Knox's communities, residents and businesses to take positive and creative actions to enhance the liveability of local and commercial streets by:

- removing barriers to community initiatives and activities; and,
- involving communities in street design.



'Integrated strategic approach' to the streets of Knox – understanding how the system works



'Community action and initiatives' An example of a community workshop in designing their street

## 1.3 THIS PLAN

### THEMES

The *Plan* is structured around 7 themes. In each theme, the challenges and opportunities identified for Knox are briefly described. Looking forward, a goal is proposed, and approaches and actions are defined. Some actions are for Council alone, some are for the community, and many are in partnership.

The goals for each theme – and therefore for the *Plan* as a whole – are summarised below.

THEME	GOAL
1. STREETS AS PLACES	To create and strengthen Knox's distinct sense of place through high quality streets
2. STREETS FOR TRAVEL	To improve the ability of streets to cater for an increase in sustainable transport options in Knox
3. STREETS FOR THE ENVIRONMENT	To improve environmental sustainability of streets in Knox
4. STREETS AND THE ECONOMY	To build and advocate for quality streets that attract, retain and enhance business and workers, families and communities
5. SAFE STREETS	To improve the safety of Knox's streets for pedestrians, cyclists and motorists
6. STREETS FOR THE COMMUNITY	To increase community pride and action in Knox streets
7. STREETS FOR INFRASTRUCTURE	Coordinate street design and maintenance to balance infrastructure and community needs

## LIVEABLE STREETS DESIGN GUIDELINES

The *liveable streets design guidelines* contained in section 5, cover all the streets in Knox. Each type of street has a design guideline.

The types of streets include those managed by VicRoads and Council.

### VicRoads streets include:

#### Declared highways:

- Burwood Highway;
- Dandenong Valley Highway (Stud Road);
- Burwood Highway to Dandenong Creek; and,
- Monash Highway (Wellington Road)  
–Dandenong Creek to Stud Road.

#### Declared Main Roads within the City of Knox are as follows:

- Stud Road;
- Croydon Scoresby Road;
- Dorset Road;
- Boronia Road;
- Ferntree Gully Road;
- High Street Road;
- Kelletts Road;
- Lysterfield Road;
- Napoleon Road;
- Wantirna Road;
- Wantirna-Sassafras Road (Mountain Hwy.); and,
- Wellington Road

The streets managed by the City of Knox can be described as all streets within the municipality other than privately owned roads and those managed by VicRoads.

A street typology for Knox has been developed based on the classification of roads in the *Knox Road Asset Management Plan* (2007) and builds on the *Knox Urban Design Framework* (2020).

### The Knox Urban Design Framework 2020 recommends major street types:

- Bush Boulevards;
- Gateway Routes;
- Principle Avenues; and
- Paths into the Hills

### This *Plan* builds on these types by including:

- Community link streets;
- Neighbourhood green streets;
- Industrial streets;
- Shopping streets;
- Residential foothill streets;
- Residential bush suburb streets;
- Residential garden suburb streets;
- Residential garden court or villa court streets; and
- Residential home zones streets.

Each design guideline addresses the design of new and existing streets. It considers community involvement, material selection and maintenance, service and infrastructure requirements, vegetation and environmentally sensitive design amongst other things.

Refer to Section 5.1 for the proposed street hierarchy table.



## 1.3 THIS PLAN

### LIVEABLE STREETS ACTION PLAN

A four year action plan has been developed to guide the implementation of this *Plan*.

This *Plan* contains many initiatives. Of these, the eight listed below are the most important.

1. Develop pilot projects to test various themes within existing capital works programs, other community programs and based on community support.
2. Implement planting and design of Knox's key streets:
  - Dandenong Creek Gateways
  - Bush Boulevards
  - Principal Avenues
  - Paths into the Hills
3. Review the existing StreetScape Policy (2003) .
  - Develop a Street Tree Management Plan
  - Develop a Street Tree Selection Tool
  - Conduct a Street Tree Audit to feed into the plans above
  - Develop a Nature Strip Planting Application form and process
4. Adopt and implement green neighbourhood streets as a priority street type for improving neighbourhood character.
5. Work with community groups to facilitate community involvement in streetscape design and maintenance. Possibly as an extension of Gardens for Wildlife.
6. Improve pedestrian and cyclist connections to public transport nodes, by improving the safety and comfort of the journey and facilities at waiting points – for example, at bus stops, road crossings – through increased seating, shelter, safety, shade.
7. Provide seats with backs and arm rests along streets and at pedestrian pause points.
8. Targeted street tree planting to link bushland areas.






# 2

## INTRODUCTION

The *Knox Liveable Streets Plan* is visionary in its aspirations.

A blue-tinted photograph of a residential street. The street is lined with trees and houses. A car is visible in the distance on the left side of the road. The overall scene is peaceful and suburban.

# 2.1 THIS PLAN

The *Plan* presents a coordinated approach to enhancing the liveability of all of the streets in Knox. It is based on understanding the attributes of Knox’s streets today, and the opportunities available to create positive change. It also looks at the barriers to change and recognises practical limitations.

Achieving the aspirations of the *Plan* will mean bringing together the concepts and strategic directions described in this report with other relevant Council strategies and policies through the *Liveable Streets Action Plan* see section 6, Implementation.

Community views have had an important influence on the shape and content of this *Plan*. Through an on-line survey, stalls, meetings and round table discussions, people had an opportunity to identify what they value about their street, and the preferred future character for Knox’s streets.

Council officers and other stakeholders have also played an important role in shaping an achievable vision of how Knox can make its streets more liveable.

This *Plan* covers all the streets in Knox. These include both Council owned and managed streets and those streets managed by VicRoads. The recommendations in this *Plan* will be used by Council to negotiate quality outcomes for those streets under VicRoads management.

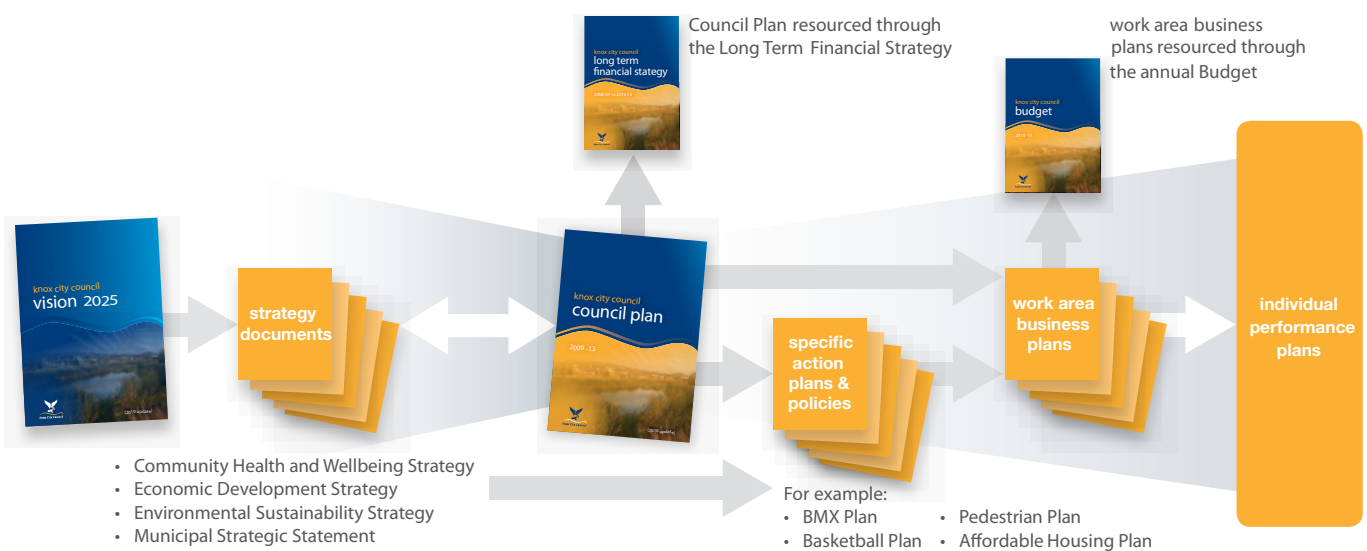


Figure 1: Policy Context Diagram



Vision 2025 describes the Knox community's hopes and aspirations for the future. It seeks to express what people want Knox to look and feel like in the future – and how best to make those changes.

Creating liveable streets will help achieve this vision.

*Vision 2025* describes a community and Council working in partnership to create a safe, healthy and connected community that has access to high quality services, transport options, facilities and culturally rich experiences, while protecting the green, leafy neighbourhoods that are so highly valued.

*Vision 2025* is shaped around seven themes:

- healthy, connected communities;
- culturally rich and active communities;
- dynamic services and facilities;
- accessible transport choices;
- sustainable natural environment;
- balanced quality urban development; and,
- a prosperous, modern economy.

Each of these important themes have helped shape the *Liveable Streets Plan*. There is a strong alignment between the *Vision 2025* themes and those in Section 4 of this *Plan*. For example, the *Liveable Streets Plan* supports healthy connected communities, by making streets safer and improving people's sense of connection to their local neighbourhood.

Care has been paid to aligning this *Plan* with other key Council strategies and policies such as the *Knox Sustainable Environment Strategy 2008-2018*, *Knox Integrated Transport Plan (2004)*, *Neighbourhood Character Study (1999)*, and the *Knox Pedestrian Plan (2005)*. A summary of these key strategies and plans is in the Appendix.

The *Plan* is based on research and analysis. The project team has undertaken a careful analysis of Knox and its current street infrastructure.

They have considered best practice from around Australia and overseas, and have sought to explore new ideas and test their application in Knox.

If the vision in this *Plan* can be achieved, the future streets of Knox will look and function in ways that make them more liveable – more connected, safer and greener – and more valued.

Through effective urban design, and with sufficient time, resources and community commitment, Knox's streets can be transformed.

The goals, actions and indicators in this *Plan* can be used to guide this progressive change.

## 2.2

# CREATING LIVEABLE STREETS

The streets of Knox are valued public spaces. They are the prime facilitators of traffic, pedestrian and cyclist movements.

They provide habitat, help clean stormwater, create shade, provide play space, create delight and colour in users' daily lives and form the character of the neighbourhood. Streets are infrastructure corridors, containing power, gas and phone lines as well as water, sewerage and drainage systems.

A liveable street must also be a great place to be – safe, well-designed, attractive and sustainable.

The *Plan* examines the role of streets across the municipality and recognises that streets have many roles to play in creating a sustainable urban environment. It is these multiple roles that create many of the challenges that need to be resolved through this *Plan*.

For example, there is competition for space within and below the street, with many different users each with their own needs and perspectives, and different authorities managing different parts of the street infrastructure.

Vehicles, especially cars, tend to dominate our streets today. This wasn't true in the past. Many communities are looking for a better balance in their residential streets so that they can become neighbourhood spaces for play, meeting the neighbours and planting of trees.

Of course we all use streets to move around our local areas and to get from one place to another. So streets also need to be effective 'movement corridors' for pedestrians, bicycles, cars, and buses.

This *Plan* recognises the importance of transport in its many forms, and looks ahead to a more connected environment where walking and cycling are preferred modes of transport, public transport options are more accessible and desirable, where children and parents can walk to local schools, play grounds and open space and where local businesses thrive in their unique place.

## 2.3

# ISSUES AND CHALLENGES

Achieving liveable street design in urban environments is a challenge everywhere. Learning from experience elsewhere can be a vital step in establishing appropriate principles and design guidelines for the streets of Knox.

### SOME OF THE MAJOR CHALLENGES FACING KNOX IN ACHIEVING LIVEABLE STREETS

- Responding to changing community attitudes and expectations about the quality of the urban environment and residential areas;
- Engaging communities in finding solutions, resolving differences and caring for local streets;
- Managing risks and ensuring safety;
- Negotiating the stringent standards and legislation that govern the design of road environments and that at times run counter to the concept of liveable streets;
- Recognising streets as an interconnected network that require integrated design and management solutions; and,
- Providing for an aging community that is likely to become increasingly reliant on walking and public transport.

### SPECIFIC ISSUES IDENTIFIED BY COUNCIL AND THE COMMUNITY

- Most streets are dominated by cars;
- Many streets are bland and unattractive and do not contribute positively to neighbourhood character;
- Some streets are unsafe and unwelcoming to pedestrians and cyclists;
- Many streets lack an established tree canopy cover, with other street plantings lacking in species diversity and visual interest;
- Traffic volumes and vehicle speeds associated with declared state highways and main roads are barriers to local connectivity within suburbs and neighbourhoods;
- Shopping streets often lack the good design and amenities desired by shoppers and businesses;
- Water sensitive urban design is not built into the design of most streets;
- Footpaths are often too narrow, and do not form an interconnected system, with some areas particularly lacking; and,
- Overhead powerlines limit tree planting opportunities and add to visual clutter.

To achieve success, the *Plan* needs to respond to all of these issues. But as well there are three major overarching challenges.

## 2.3 ISSUES AND CHALLENGES

### OPPORTUNITIES

#### MAJOR OVER-ARCHING CHALLENGES

##### 1. Co-operation and co-ordination

Streets are multi-functional spaces, managed by either Council or VicRoads, and containing infrastructure services managed by a plethora of agencies. Streets are subject to specific legislation (eg. *Road Management Act 2004*) and associated regulations, codes of practice and guidelines (see the Appendix).

Within Council, many departments are involved. Achieving a cooperative and coordinated approach that meets all legal requirements is a challenge.

##### 2. Transforming existing streets

Knox has an established street network. Relatively few new streets are built each year. The challenge is to create liveable streets through the transformation of existing streets.

##### 3. Divergent community views

The Knox community is diverse, and Knox has many diverse neighbourhoods. While there are many shared views about what makes a street liveable, there are issues of concern and areas of disagreement. Achieving a shared vision that is sensitive to local issues and values is a challenge.

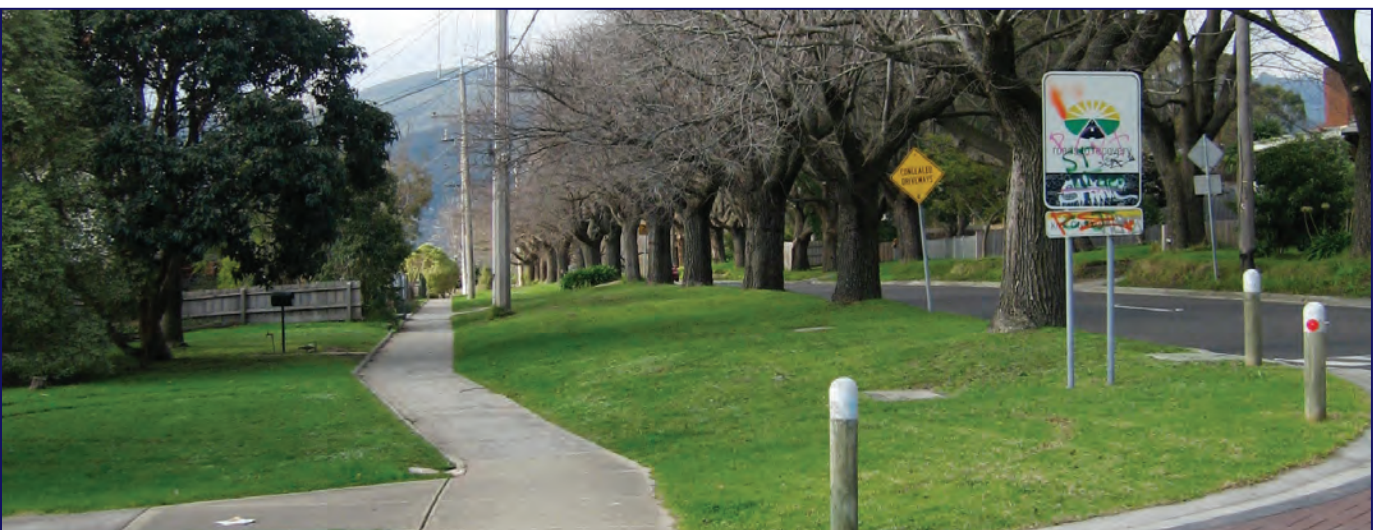




View east along Burwood Highway showing an established municipality



Recent street projects in Knox have used water sensitive urban design to improve water quality in Knox's waterways. Photograph in Boronia



View of footpath along Blackwood Park Road, Ferntree Gully, with mature exotic trees. A well known street in Knox



## 2.4

# TAKING ACTION FOR LIVEABLE STREETS

Through this *Plan*, the City of Knox has set itself the task of increasing the 'liveability' of all its streets. This is an ambitious goal and will be achieved incrementally.

Close coordination will be required across all the Council departments that play a role in the design, management and maintenance of street environments.

Partnership with the community will help deliver the *Plan*, and opportunities for community action are listed under each theme in Section 4.

Partnerships with other government agencies will also be critical, given the many agencies that have responsibilities for infrastructure within streets. For example, VicRoads is the key State Government road traffic agency, and is responsible for highways, arterial roads and main roads across the State.

Other government agencies have responsibilities that contribute to the liveability of our streets including, urban planning, public health, community development, water infrastructure, public transport and more. Private companies are also involved, especially in relation to power and telecommunications infrastructure.

Through *Vision 2025* and other Council policies many positive directions towards achieving liveable streets are underway, and there is strong community interest in improving local streets. This *Plan* will build on those successes.

Legend

- City of Knox Boundary
- Dandenong Creek open space along corridor
- East Link
- Highways
- Major Roads
- Foothills of Mt. Dandenong

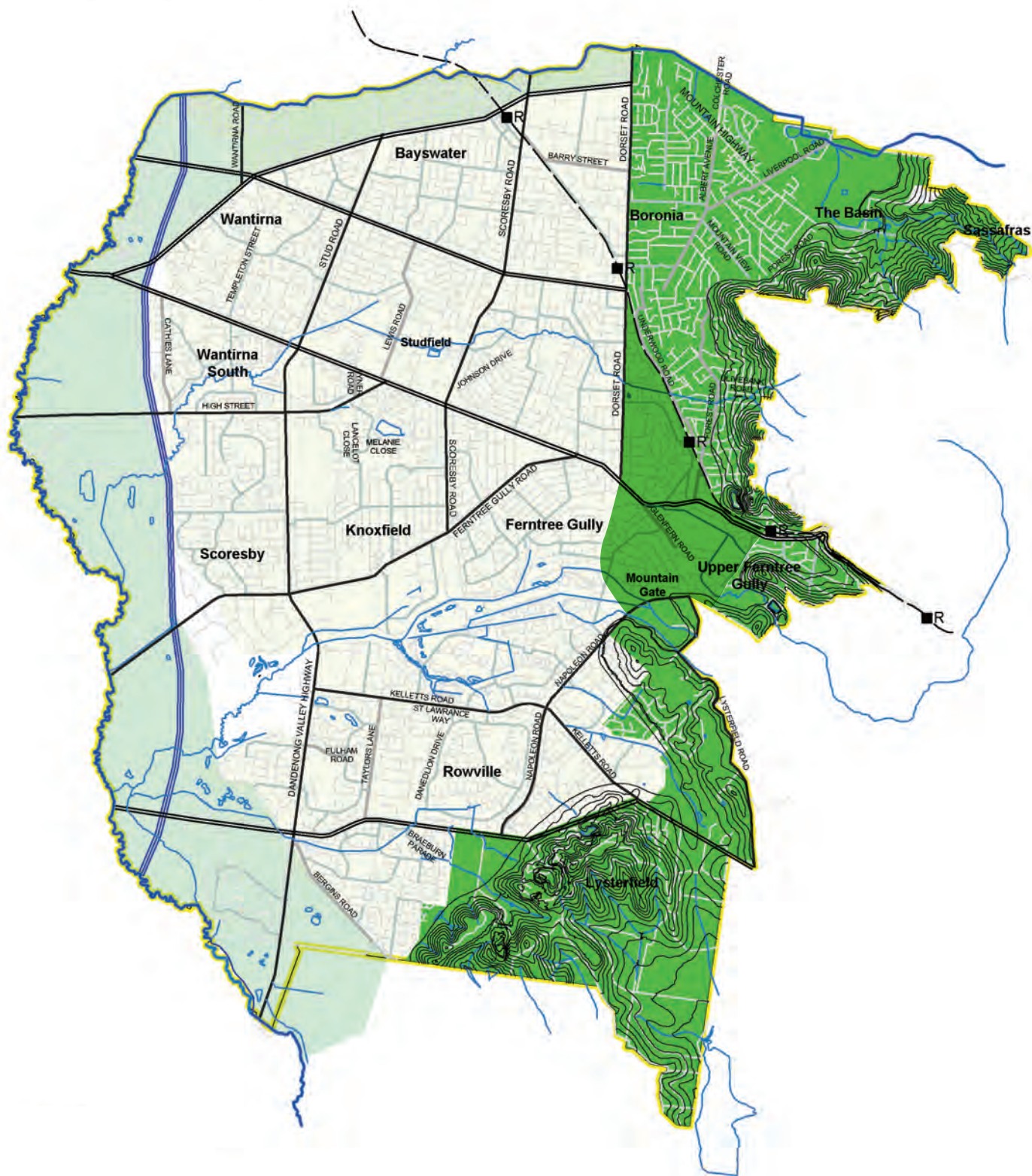


Figure 2: The key natural characteristics bounding the City of Knox

## 2.5

# HOW TO USE THIS DOCUMENT

This document contains four key sections, these are:  
Liveable streets design principles;  
Liveable streets plan;  
Liveable streets design guidelines; and,  
Liveable streets action plan.

Together these provide the guidance needed by Knox to implement a liveable streets approach

### LIVEABLE STREETS DESIGN PRINCIPLES

The *liveable streets design principles* provide the key concepts that underpin good design for liveable streets.

These principles in Section 4.4 should be used to guide the planning, design, implementation and maintenance of streets in Knox.

### LIVEABLE STREETS PLAN

Sections 4.5-4.12 provide the overall plan, structured around seven themes. Under each theme, the context, opportunities and challenges are described and the goal and actions are defined. There are actions for Council and the community.

A summary of the themes, goals and approaches can be found in Section 4.5.

KEY SECTION	SECTION NO.	PAGE
Liveable streets design principles	4.4	45
Liveable streets plan	4.5-4.12	46-145
Liveable streets design guidelines	5	147
Liveable streets action plan	6	229

## LIVEABLE STREETS DESIGN GUIDELINES

Section 5 contains design guidelines for each street type in Knox.

Each guideline describes the street type, shows their locations on a map, defines the objectives to be achieved, and establishes design guidelines for a range of key design factors including:

- pedestrian safety and amenity;
- crossovers;
- cycle infrastructure;
- signage;
- lighting and power infrastructure;
- vegetation;
- commercial development;
- residential areas and development; and,
- water sensitive urban design.

The *liveable street design guidelines* provide information for the design and construction of streets.

## LIVEABLE STREETS ACTION PLAN

The *liveable streets action plan* in Section 6 provides a four year program for Council actions. The *Action Plan* presents the specific actions, the resources required, partnerships needed (internal and external) and the proposed measures of success.

The *action plan* will be reviewed annually throughout the implementation of the *Plan*. Many of the actions represent a substantial investment of time and energy by Council and community and will require a long-term commitment to enable their completion.

Pilot projects are underway as a method to test and improve on this *Plan*. These findings will be built back into the *Plan* annually. Further projects will be identified as an ongoing process of testing and reflection. Selected pilot projects will be chosen based on ranking in priorities plan, existing programs and community support.

The *action plan* provides the basis for the setting of annual budgets and work programs, and for monitoring achievements.