

CASEY'S SOUTHERN URBAN RURAL INTERFACE DESIGN GUIDE

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Acknowledgement

The City of Casey would like to acknowledge the Bunurong and Wurundjeri people as Traditional Owners of the land and would like to pay their respects to their Elders, past and present.

This Draft Casey's Southern Urban Rural Interface Design Guide prepared by the City of Casey's City Design & Construction department in collaboration with Growths & Investment, Building and Planning, City & Asset Planning, Sustainability & Waste and Connected Communities departments.

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1.Introduction

Casey's Southern Urban Rural Interface Design Guide (the Guide) is an immediate action arising from Casey's Western Port Green Wedge Management Plan 2019 (WPGWMP).

Casey's Urban Growth Boundary (UGB) has been moved four times over the last 10 years, due to the pressure of urban development. As a result of diminished agricultural land, there has been increased negative impacts on the ecology and hydrology of the land area, that is a vital part of Melbourne's food bowl.

WPGWMP identified a need to prepare a design framework that will recognize the urban rural interface as an attractive and meaningful permanent edge to the city, instead of traditional approach of having residential back fences. The study area (Image 2) covers approximately 22km of the stretch along the UGB.

The purpose of this Guide is to provide design guidance for the area interfacing the southern UGB in Casey. The guide provides a series of design principles and options that will assist Council's advocacy during the future Precinct Structure Planning of the urban areas and green wedge areas. The design solutions laid out in this document are high level design vision only. This document is not a statutory plan and does not provide guidance on land use.

This document will be used by planners and designers as a guiding tool whilst planning the future development along the area interfacing the southern UGB of Casey. It builds upon, and should be read in conjunction with the following documents:

- City of Casey Western Port Green Wedge Management Plan 2019
- Vision for Remaining Growth Areas 2019
- Southern UGB Corridor Analysis Report

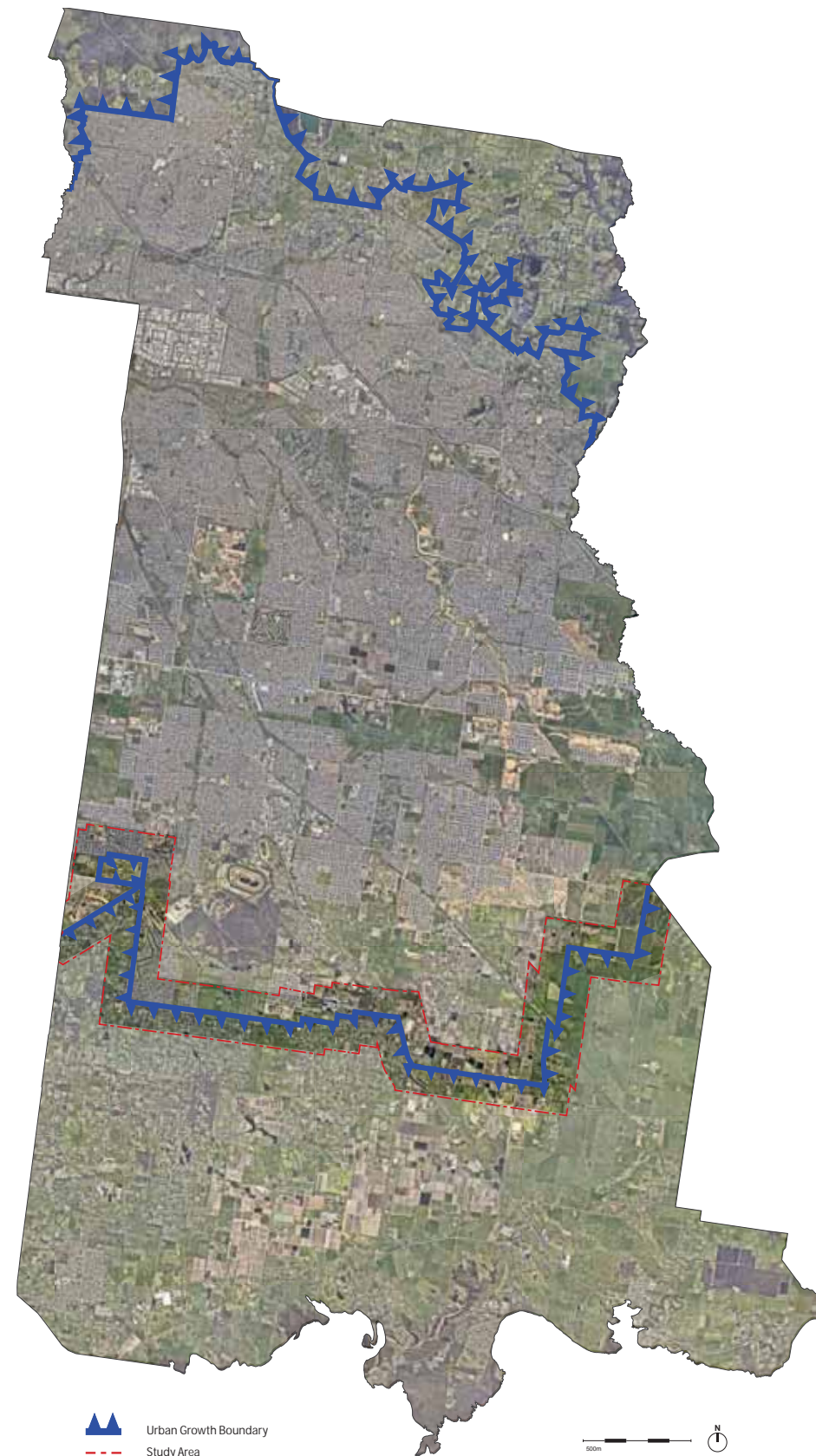


Image 2: City of Casey's Urban Growth Boundary (UGB)



Image 3: Drone view - Cranbourne-Frankston Rd and Dandenong-Hastings Rd



Image 4: Drone view - Browns Rd from Craig Rd intersection



Image 5: Drone view - Manks Rd

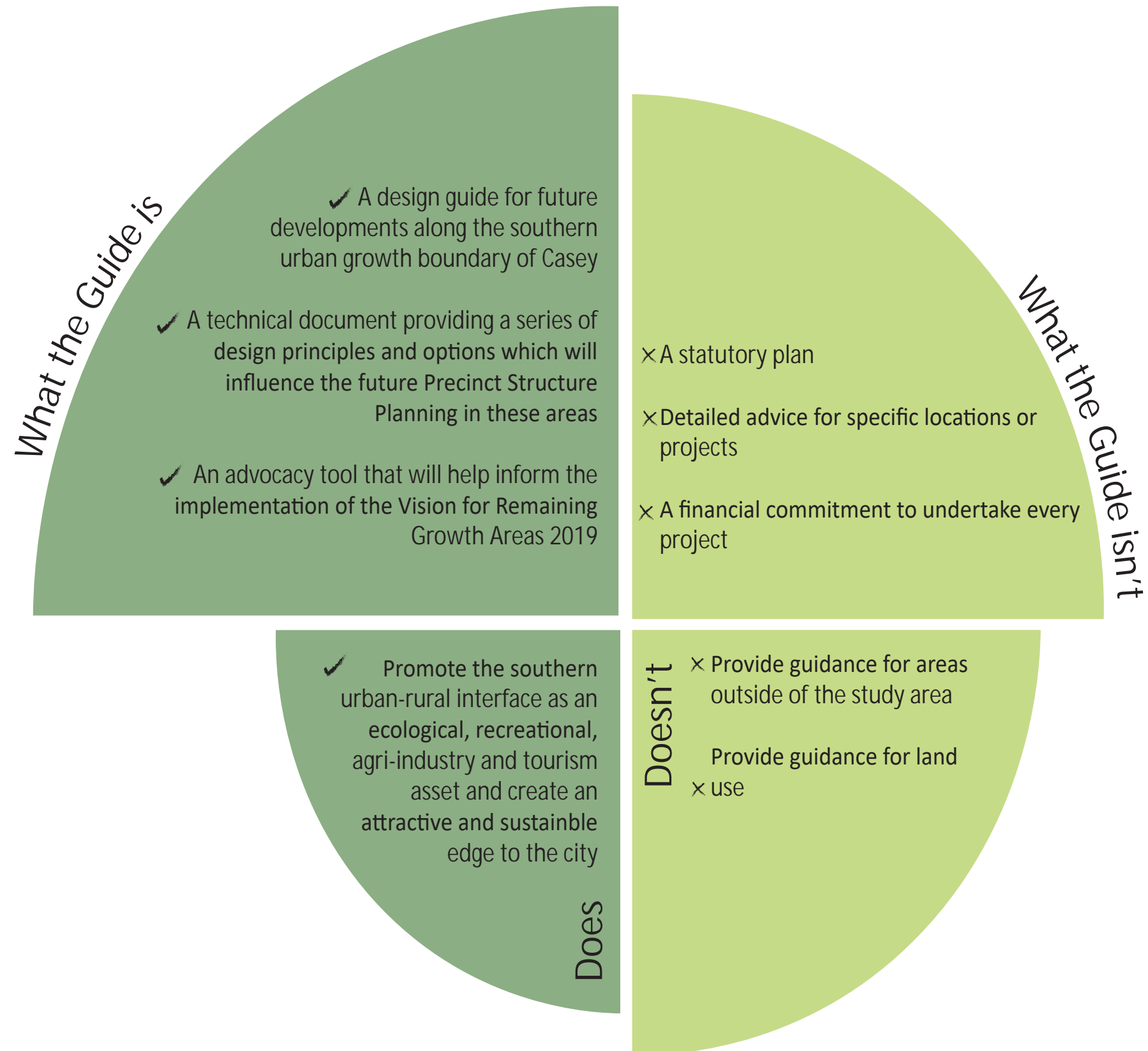


Image 6: Drone view - Muddy Gates Lane

2.Strategic Context

Below is a summary of the key issues along the UGB interface identified in the Southern UGB Corridor Analysis Report.

Key Issues

1. Urban development inside the Western Port catchment requires management to ensure stormwater outflows are managed to avoid negative impacts downstream.
2. Lack of transitional areas along the interface causes conflicts between intensive residential and intensive agricultural land.
3. Potential Health issues for residents due to spraying of chemicals in the agricultural areas. Whereas there are issues of animal disturbances in agricultural areas.
4. Expanse of abrupt and inactive back fences of properties along the UGB.
5. Lack of aesthetic value and visual interest along this interface to the rural edge.
6. Major safety concerns along unconnected, unsurveillanced and unused recreation trails.
7. Uncertainty of UGB being moved again in future, resulting in the loss of agricultural land which is a vital part of Melbourne's food bowl.
8. Fragmented and private land ownership along the UGB, posing major hindrance to establishing and maintaining connectivity for the green corridors.
9. Negative impacts on aquatic species such as Dwarf Galaxias due to changes in the hydrology of wetland areas and high nutrient runoff as a result of future development.
10. Lack of habitat connectivity of significant indigenous biodiversity such as the threatened Southern Brown Bandicoot and the Growling Grass Frog.
11. Land within the study area is identified as a Bushfire Prone Area (BPA) and also affected in parts by the Bushfire Management Overlay (BMO).



STORM-WATER MANAGEMENT



BACK FENCES



TRANSITIONAL AREA



BIODIVERSITY

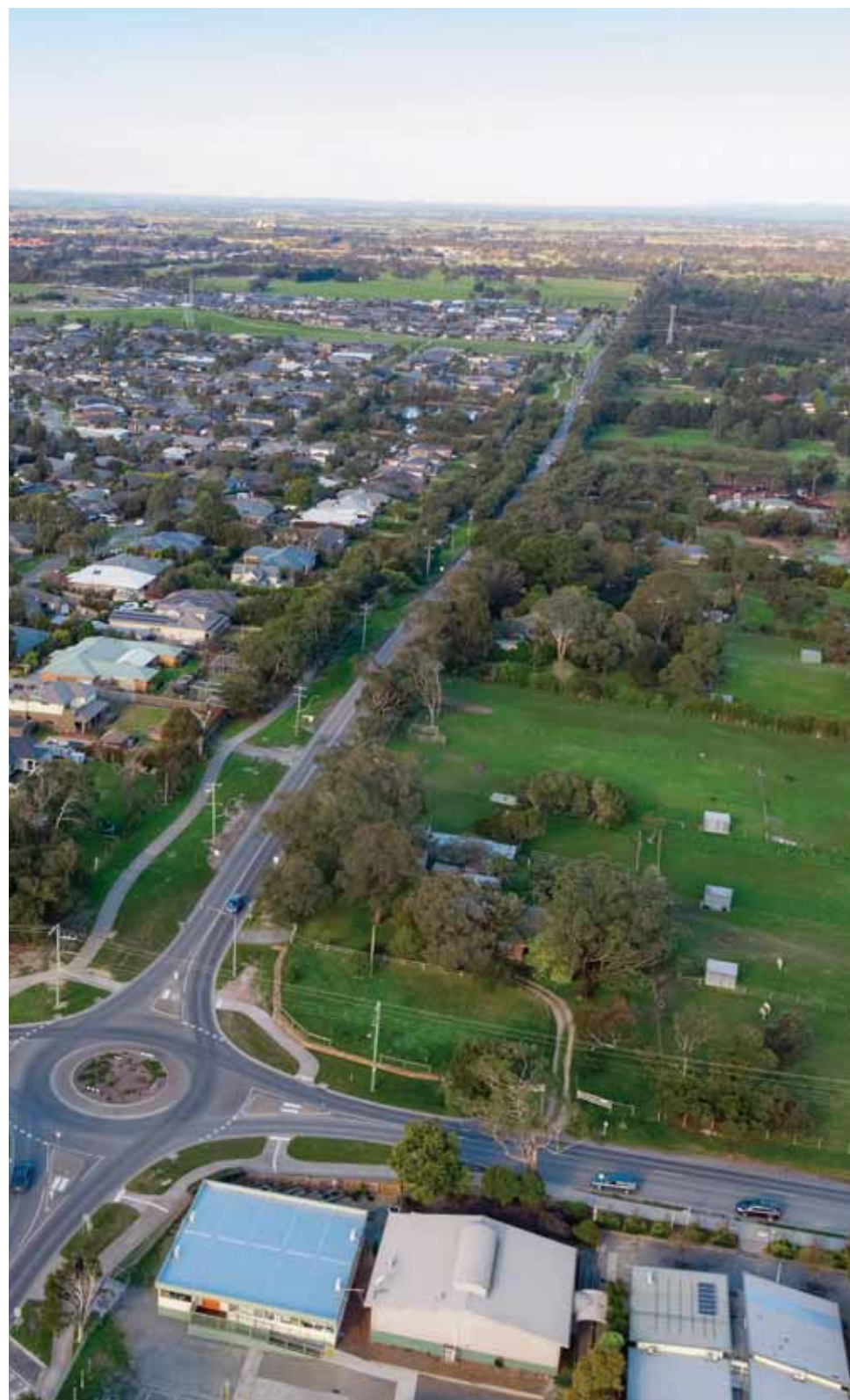


AMENITY & HEALTH



AESTHETICS

Image 7: Key Issues along the UGB



WESTERN SIDE OF UGB - BROWNS RD



JUNCTION OF CRAIG RD AND BROWNS RD



EASTERN SIDE OF UGB - YALLAMBEE RD

Image 8: Drone views along the UGB

3.Vision

“To create a permanent and sustainable urban-rural interface by transforming the Southern UGB from an abrupt edge to a dynamic place that celebrates the meeting of the urban and the rural settings”



Image 9: Urban Design Principles Plan

The guide aims to deliver strong economic opportunities focusing on agri-industry, enhancing rich landscape and habitat areas and improving livability outcomes for residents within the interface area of the UGB.

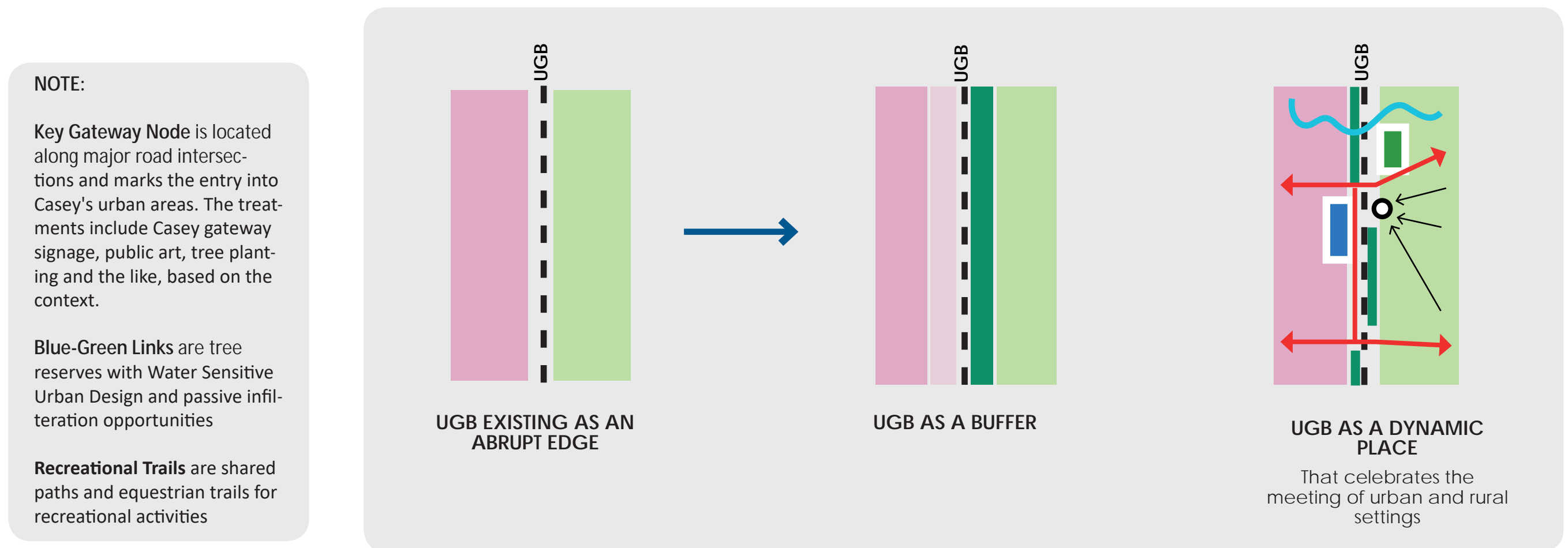


Image 10: Vision Diagram illustrating the aim to transform the UGB from an abrupt edge to a dynamic place

The Western Port Green Wedge has an internationally-recognised environment, fertile soils, established equestrian and agriculture and horticulture industries. The Urban-Rural Interface aims to become an attractive and meaningful edge by enhancing these existing features of the area. The interface would limit development within the UGB, act as a buffer for agricultural uses, protect natural habitat, and offer passive recreational opportunities.

- Western Port Green Wedge Management Plan 2019

4.Opportunities

This section explores the possibility of an appropriate and considerable buffer between the urban development and green wedge that could help mitigate some key issues. Existing development, accessibility, connectivity, ecology, hydrology, open spaces, land subdivision patterns and a myriad of localised constraints and settings combine to offer a varied range of opportunities for change and intervention making the southern urban-rural interface a sustainable and attractive edge to the city.

There are varying level of opportunities from west towards the east along the UGB. The high and medium opportunity areas are identified as priority areas for public realm design treatment and are illustrated graphically in the diagram below.



Image 11: Key Opportunities along the Southern Urban-Rural Interface

Key opportunities along the UGB

1. Create significant blue-green links between the metropolitan public open spaces, Cranbourne Gardens, future Clyde Regional Park and Clyde Park Sports Precinct, and Cardinia Creek, by promoting re-vegetation and landscaped areas along the public realm and council owned land.
2. Improve connections for ecological habitat, recreation and active transport along the blue-green link as a continuous landscaped path, safe and attractive equestrian trails and off-road shared paths
3. Introduce wetlands and implement WSUD initiatives along the blue-green links connecting to the Melbourne Water Retarding Basin.
4. Introduce filtration systems, water features and permeable surfaces to retain/collect water in the landscape and treat storm-water that can be reused.
5. Connect existing trails and paths to the blue-green links.
6. Support and facilitate market gardens where feasible.
7. Explore the future viability of agri-industries and agri-tourism to strengthen local economies by creating destinations for regional catchment.
8. Explore the future viability and support the existing and future equine industry.
9. Connect the existing equestrian facilities with safe and attractive equestrian trails creating a network to enhance equestrian movement.
10. Facilitate areas to support farmers market and community gardens where possible.
11. Improve visual and physical connections from the future Clyde Regional Park precinct to the surrounding areas.
12. Investigate indigenous cultural heritage along the UGB to ensure significant heritage is preserved and managed well.
13. Enhance key gateway sites that are major entry points to the city.
14. Ensure development within study area addresses bushfire planning policy in relation to Clause 13.02-1S of the Casey Planning Scheme including bushfire responsive elements.

The above mentioned opportunities can create a well planned and designed buffer which will provide a series of social, ecological, recreational, economical and environmental benefits for both urban and rural side areas. It will improve connections, protect the ecological habitat, boost local economies, improve storm-water management and enhance overall wellbeing of the people and the environment.



Image 12: Drone view - Manks Rd looking towards South Gippsland Hwy

5. Urban Design Principles

Southern Urban Rural Interface plays an important role as forming the edge for urban development and a transitional area for different lifestyle areas beyond the UGB. A broad range of forces shape the way in which the interface is treated along the UGB. Four overarching themes have been identified that acknowledge these many influences and capture our perceptions, interactions and aspirations. These themes establish an organised guidance for more specific principles which address key outcomes sought for reinvigorating the interface and for making it a dynamic place to celebrate the meeting of urban and rural settings.



A place with abundant landscape and canopy cover, habitat corridors and drainage waterways



A thriving next-generation agriculture and farming industry destination.



A liveable mixed-use neighbourhood underpinned by strategic principles around 20-minute neighbourhoods, sustainable land use and economic growth



Optimised outdoor lifestyle benefits, aesthetic quality and a strong sense of recreational amenity for the community.

Image 13: Urban Design Principles



5.1 ECOLOGICAL

Create a place with strong environmental sustainability that delivers diversified habitat values, continuous canopy cover and landscape qualities, and integrated water management solutions.



Image 14: Ensure new vegetation plantings retain an appropriate setback for defendable space around dwellings.

PRINCIPLE 1: NATIVE VEGETATION

Strengthen native vegetation and increase the canopy cover along the corridor and within the urban area.

Guidelines

1. Align with the goals and actions set out within the City of Casey Urban Forest Strategy.
2. Support the City of Casey Revegetation Strategy.
3. Protect and retain existing native vegetation and focus on native planting for introduced plant species.
4. Ensure new vegetation plantings retain an appropriate setback for defendable space around dwellings.
5. Ensure new native plantings in ecological corridors are of local provenance.

PRINCIPLE 2: BIODIVERSITY

Connect habitat areas through linear landscape linkages that provide safe havens for native fauna and work to restore and enhance the natural environment.

Guidelines

1. Ensure the width and nature of habitat areas and corridors are appropriate to support threatened species such as the Southern Brown Bandicoot and Growling Grass Frog.
2. Provide and strengthen ecological connections to Royal Botanic Gardens Cranbourne and the future Clyde Regional Park .
3. Manage pest animals and weeds and their impact on native flora and fauna.



Image 15: Protect and retain existing native vegetation

4. Support the City of Casey Biodiversity Strategy.
5. Provide road underpasses and roadside fencing, at each roadway along the interface, to facilitate the movement of land-based native animals along the proposed green links.
6. Along-side the Water Sensitive Urban Design (WSUD) initiatives, provide a separate habitat corridor that is not subject to inundation during storm events.

PRINCIPLE 3 : CONNECTION TO NATURE



Image 16: Strengthen ecological habitat network



Image 17: Signage to educate and tell a holistic story

Support eco-tourism by creating a strong emotional and physical connection to nature, strengthening environmental interpretation and educational experiences linked to the habitat areas and celebrating the natural environment.

Guidelines

1. Support eco-tourism of the area by promoting key messaging around the environmental values of the area.
2. Introduce signage and education aspects in specific locations that tie together to tell a holistic story around ecology along the interface.
3. Consider the ongoing management of ecology and biodiversity areas and access to these important sites through path and trail connections and supporting infrastructure, whilst maintaining focus on protection.

PRINCIPLE 4 : INTEGRATED WATER MANAGEMENT

Implement integrated water management and water sensitive Urban Design (WSUD) initiatives to enhance community liveability, reduce the negative impact of stormwater runoff on environment and promote sustainable water usage practices.

Guidelines

1. Support provision for tree reserve with WSUD and passive infiltration (drainage assets) opportunities where necessary and practical along the edge of the UGB. This blue-green link can be a destination place for the wider community whilst supporting water management.
2. Consider aspects of landscape design to support passive infiltration and integrated water management including filtration systems, water features and permeable surfaces to reduce surface runoff and assist in treating stormwater.
3. Retain natural drainage systems and waterways, particularly those feeding into the rural area.
4. Encourage sustainable water use practices within future development through inclusion of stormwater storage and reuse opportunities.
5. Support the objectives of the City of Casey Integrated Water Management Plan.
6. Utilise treated storm water runoff for any uses that are fit for purposes.



Image 18: Stormwater management with shared paths



5.2 AGRI-INDUSTRY

A thriving next-generation agriculture and farming industry destination.



Image 19: Organic farm produce

PRINCIPLE 1: STRENGTHEN FARMING

Strengthen the role of farming in the local area and elevate the quality of the productive landscape through technologies and partnerships, enhancing the use of high quality soil in the green wedge.

Guidelines

1. Encourage high tech greenhouse / farming technologies that are viable.
2. Investigate solar initiatives that can be linked to more sustainable farming approaches.
3. Investigate diversified water supply opportunities to support irrigation demands.
4. Foster organic farming principles.
5. Consider clean farming industries / light farming uses where viable.

PRINCIPLE 2: ACTIVITY CENTRES

Ensure that activity centres within or along the UGB service the rural community as well as the urban.

Guidelines

1. Ensure that activity centres near the southern UGB have strong physical links to the urban rural interface to improve accessibility for the rural community.
2. All interfaces to road 1 category, open spaces and key landscape features should provide active frontages.
3. Subject to market opportunity consider the potential to include:
 - Retailers with a focus on selling local produce
 - Destination farm to table restaurants in key locations with high amenity
 - Provisions for farmers market and swap and sell uses.



Image 20: Greenhouses in or near Urban Areas



Image 21: Farmers to sell directly to public

PRINCIPLE 3 : FARM TO CONSUMER

Promote a sustainable farming community by optimising the farm to consumer process and encouraging farmers to sell produce direct to the consumer, removing the 'middleman' and associated costs, financial and environmental.

Guidelines

1. Reintroduce / reinforce the existing market culture.
2. Provide opportunity for pop up farm to consumer sales by offering space for:
 - Farmers markets
 - A roadside stalls destination proving opportunity to buy off the truck
3. Encourage direct farm to consumer delivery operations.
4. Work with Economic Development Team to investigate the potential for hospitality industry like restaurants etc, that will encourage farm to table concept.

PRINCIPLE 4 : AGRI-TOURISM

Celebrate farming as a cultural icon within the area to showcase farming and develop a positive culture of Agriculture in the area through programs, events and information.

Guidelines

1. Celebrate farming history by creating heritage walks. Farms to be identified through engagement with landowners or business group.

PRINCIPLE 5 : EQUINE OPPORTUNITIES

Explore opportunities to strenghten links to Equestrian facilities and uses where appropriate.



Image 22: Fruit picking and farm stay experiences



Image 23: Encourage farmers market culture



Image 24: Equestrian Trail connections

Guidelines

1. Consider equestrian trails and facilities within the overall active trail network however noting that the health and longevity of the agricultural industry is the primary focus.
2. Provide equine trails, potentially dedicated as per Casey's Equestrian Strategy that connect to existing trails and future regional trail along Cardinia Creek Parklands.



5.3 LIVEABILITY

A liveable mixed-use neighbourhood, underpinned by good design and planning, creating walkable and safe neighbourhoods with sustainable land use and economic opportunities.

PRINCIPLE 1: TRANSITIONAL LANDUSES AND BUILT FORM

Use transitional land uses and built form to ease the abrupt interface between urban development and traditional green wedge uses.

Guidelines

1. Subdivision of land along the UGB interface should consider options for appropriate and gentle density transitions from medium to low density.
2. All development along the interfaces to road 1 category, open spaces and key landscape features should provide active frontages and path connectivity.

PRINCIPLE 2: AGRIHOOD COMMUNITIES

Leverage 'agrihood' opportunities benefitting residents from the proximity of farming and agriculture activities, connecting urban communities through shared interest, where possible.



Image 25: Agrihood opportunities connecting urban communities - Rooftop farm and cafe in Burwood Brickworks



Image 26: Agricultural theme within public realm and landscape. Burwood Brickworks - first rooftop farm in Australia

Guidelines

1. Include productive landscapes where appropriate in landscape design (noting a preference for native vegetation overall).
2. Adopt agricultural theming within the public realm and in landscape architecture.
3. Investigate the development of community gardens where possible during subdivision stages.

PRINCIPLE 3 : WALKABLE AND SAFE

Employ principles of walkability, accessibility and good neighbourhood design along the southern urban rural interface and the surrounding precincts to ensure the area is well connected, liveable and feels safe.



Image 27: Walkable and safe streets with passive surveillance.

Guidelines

1. Provide an appropriate urban density and well-designed streets that provide Crime Prevention Through Environmental Design, passive surveillance and safe public areas.
2. Create nodes of activity as focal points within the public realm.
3. Ensure streets are walkable streets with positive edge interfaces and adequate walking paths.
4. Ensure that children's independent mobility is catered for within neighbourhoods to strengthen the sense of community.
5. Avoid development backing onto the corridor to prevent any orientation issues.

PRINCIPLE 4 : URBAN-RURAL PARTICIPATION

Encourage community and industry participation in neighbourhood activities to build a sense of belonging and promote a unique and locally relevant identity and sense of community

Guidelines

1. Establish a business owners group, if there is no existing group and facilitate road side stalls precinct where possible. Farmers and fishermen can park their trucks and sell their produce and people from urban area have easy and direct access to fresh produce.
2. Consider use of car parks for community markets over the weekend.



Image 28: Streets with positive edge interfaces and walking paths



Image 29: Community markets



Image 30: Road side stalls with truck parking



5.4 RECREATION AND AMENITY

Optimise outdoor lifestyle benefits, aesthetic quality and a strong sense of recreational amenity for the community.



Image 31: Bicycle facilities along the shared path network



Image 33: Leverage disused South Gippsland rail line for increased recreational amenity

PRINCIPLE 1: LANDSCAPE & HERITAGE CHARACTER

Celebrate the green character, rural feel, scenic amenity within the setting and Indigenous and European heritage along the corridor.

Guidelines

1. Identify significant vegetation and its merit for retention
2. Create a continuous tree canopy along the corridor to reduce the impact of climate change by introducing 'drought tolerant' street tree planting plan to supplement existing trees where appropriate.
3. Include greenery within open spaces including shrubs and canopy trees to enhance the green character
4. Retain long views and vistas to the wider rural setting where possible including views to the Dandenongs at the eastern edge of the corridor.
5. Include listed heritage structures during design interventions
6. Investigate ways to promote and preserve the indigenous cultural heritage of the area through interpretation, design reference and other means to be determined in consultation with the traditional owners of the land.



Image 32: Integrated active shared path network

PRINCIPLE 2: OPEN SPACES

Provide a diversity of open spaces to meet a range of recreation and environmental needs and create a range of activities to support community health and wellbeing.

Guidelines

1. Include different types of open space including passive, active and linear open space.
2. Develop, manage and program parkland to provide unique offerings and target a broad range of the community to connect socially and be active, including spaces for children and elderly to enjoy the outdoors.
3. Maximise opportunities for residents and visitors by creating destinations that celebrate and incorporate water features, bushland, nature, recreation, sport, and historical uses of land.
4. Support the objectives and strategies contained within the City of Casey Open Space Strategy and Victorian Government's Metropolitan Open Space Strategy.
5. Leverage existing and future waterways, disused railways etc for increased recreational amenity.



Image 34: Active and passive open spaces



Image 35: Outdoor trails linking key precincts and natural areas

PRINCIPLE 3 : OUTDOOR TRAILS

Encourage outdoor, healthy lifestyles that capitalise on the location and its inherent amenity and support connectivity through walking, cycling and equestrian use.

Guidelines

1. Develop an integrated active trail / shared user path network that provides numerous route opportunities including loop systems that link key precincts, land uses and natural areas. Provision of bicycle facilities along this network.
2. Provide paths, potentially dedicated as per Casey's Walk & Ride Strategy that connect to existing trails and the future regional trail along Cardinia Creek.
3. Lifestyle related land uses – golf, bushwalking, orienteering and trail running and riding.
4. Consider heritage walks celebrating farming history.

PRINCIPLE 4 : GATEWAYS & MARKERS

Use gateway treatments and markers to enrich the public realm and assist with wayfinding

Guidelines

1. Delineate key intersections and celebrate the transition between the urban and rural communities through public realm treatments, public art and landscape statements.
2. Reference heritage within the public realm statement pieces including a potential avenue of honour, the history of agriculture in the area and indigenous cultural heritage.



Image 36: Public art and landscape statements

PRINCIPLE 5 : BUFFERS

Utilise roadways and linear open space to provide a sense of separation where land uses are not complementary.

Guidelines

1. Buffer planting that exists along the corridor should be retained.
2. Additional buffer planting should be introduced where required.

6.Design Concepts

This Design Concepts section provides a palette of design options to guide the future development along the UGB interface. The following drawings provide general and best practice design solutions for identified typical interfaces along the UGB. The interface street cross sections are high level design concepts that are subject to future detailed assessment and can change and adapt to their context and recommendations.

Identified interface types are:

- **Interface 1:** Green Wedge Area and Botanic Ridge
- **Interface 2:** Key Gateway- South Gippsland Highway and Future Clyde South PSP
- **Interface 3:** Future Clyde South PSP and Green Wedge Area
- **Interface 4:** Future Clyde South PSP and Green Wedge Area
- **Interface 5:** Future Clyde South PSP and Future Clyde Regional Park
- **Interface 6:** Cardinia Creek South PSP and Future Clyde Regional Park
- **Interface 7:** Bandicoot corridor intersection on Browns Road

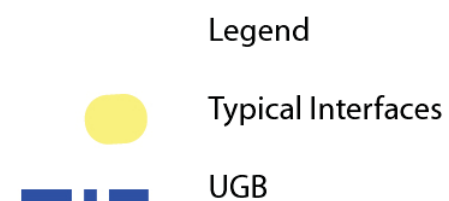


Image 37: Typical interfaces along the Southern UGB

Note: These street section concepts are subject to change based on detailed traffic and drainage assessments in the future.

Interface 1: Green Wedge Area and Botanic Ridge

This cross section shows the existing Pearcedale Road alignment.

Key elements include:

- Retention of existing shared path along the urban side of the carriageway and retention of trees within the nature strip.
- Street tree planting of a medium to large size appropriate for the width and function of the street.
- Retention of any large trees within the Green Wedge Zone within 8m of the front setback.
- BAL 12.5 requirement 19m bushfire defensible space setback achieved through the 31.5m cross section.
- The properties along the UGB to have good front setback, low front fences and wider lot boundaries.
- Raised treatment in accordance with Victorian Planning Authority (VPA) separated path guideline to be provided at local road crossing.

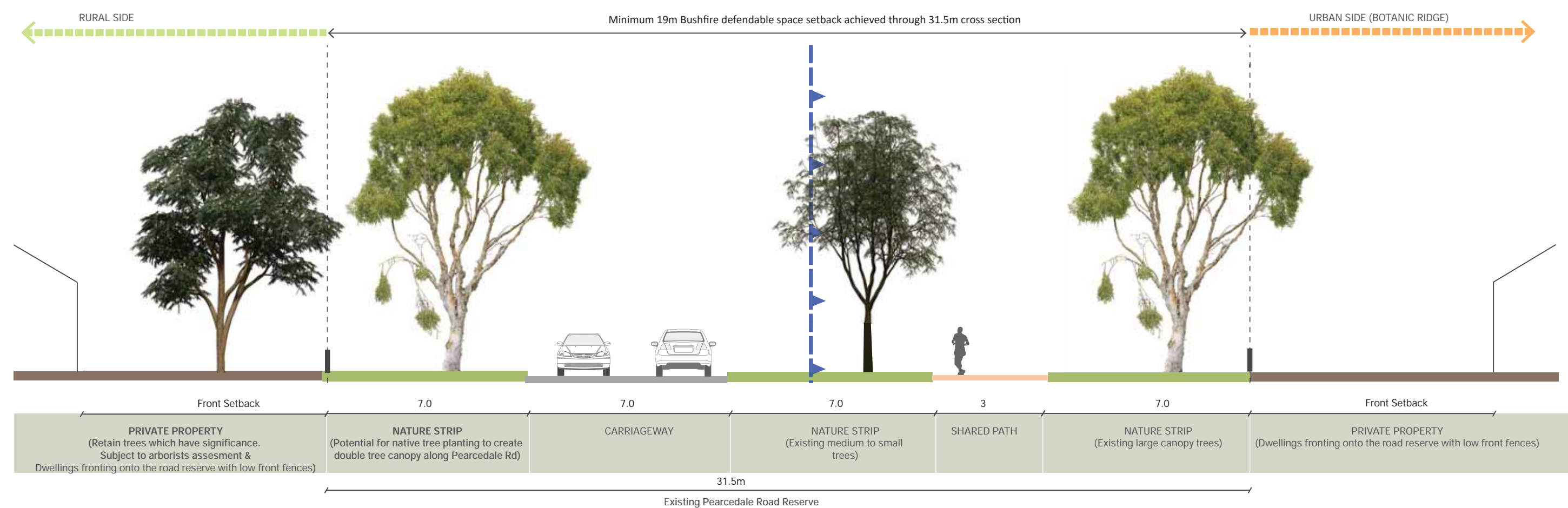


Image 38: Interface 01- Green Wedge Area and Botanic Ridge

Interface 2: Roadside stalls precinct along South Gippsland Highway and Future Clyde South PSP

This cross section shows an opportunity to utilise the wider road reserve and exposure gained from the highway to provide an identified location for farmers to sell direct to public via roadside stalls, where possible. This would be an informal arrangement and would provide for opportunistic purchase of produce. Providing a dedicated location will create consumer habit, will potentially encourage multiple vendors to sell at once, creating a critical mass and will promote farm to consumer activity.

Key elements include:

- Maintaining the Vic Roads requirements for South Gippsland Highway
- Utilising the unsealed section of road on the Green Wedge side of the highway as an informal roadside stall precinct, subject to access (as a short term option).
- Opportunity to upgrade the accessway into the future should be assessed based on the success of the precinct and how much it is used.



Image 39: Interface 02- Potential Roadside stalls precinct along South Gippsland Highway and Future Clyde South PSP

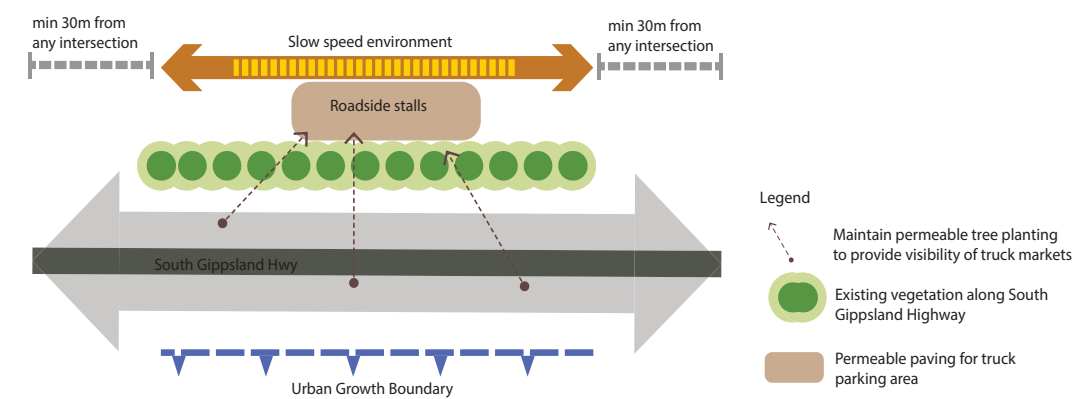


Image 40: Potential Roadside stalls precinct plan

Interface 3 : Future Clyde South PSP and in Green Wedge

This cross section shows the alignment along Manks Road between a proposed PSP area and the Green Wedge Zone.

Key elements include:

- Utilisation of the existing road reserve (20m) for the road carriageway, small scale swale treatments (urban side) and an equestrian trail (Green Wedge side).
- Retention of any large trees within the Green Wedge Zone within 10m of the property boundary.
- Equestrian trails with 4x4m clearance from vegetation and some sort of protection fencing depending on the proximity to road.
- Shared path required along the rural side with 1m separation (grass) from the Equestrian Trail. If site constraints exist in these locations then can look at having a 4m granitic shared trail (pedestrian, cycling and riding) on the rural side.
- Establishment of an edge road and linear park along the urban edge interface to provide a buffer between urban and rural uses to include:
 1. Edge road of 14.5m including a standard carriageway and extended nature strip to provide for canopy trees.
 2. A linear park including a shared path and generous nature strips providing a double run of large canopy trees.
 3. Swales and other stormwater management opportunities along the shared path.

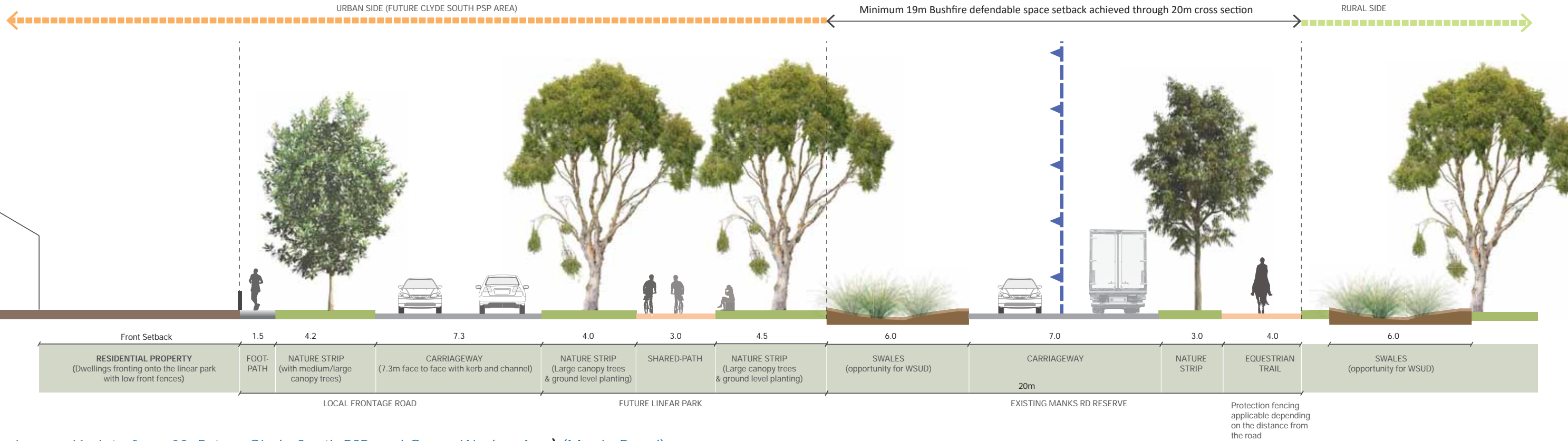


Image 41: Interface 03- Future Clyde South PSP and Green Wedge Area (Manks Road)

Note: Interface 3 is interchangeable with Interface 4 as required.

Interface 4 : Future Clyde South PSP and in Green Wedge

This cross section is an extension to the cross section for Interface 3 with an aim to create a linear buffer between the urban and rural area, by combining water and recreational trails.

Key elements include:

- Utilisation of the existing road reserve (20m) for the road carriageway, part of the drainage swale (urban side) and an equestrian trail (Green Wedge side).
- Retention of any large trees within the Green Wedge Zone within 10m of the property boundary.
- Establishment of a linear swale reserve alongside the road on the urban side providing for treatment of water runoff from the road way and urban area.
- Provision of seating, outdoor gym and meandering paths along the swale reserve creating a connected open space network for the community to enjoy the outdoors.
- Shared path required along the rural side with 1m separation (grass) from the Equestrian Trail. If site constraints exist in these locations then can look at having a 4m granitic shared trail (pedestrian, cycling and riding) on the rural side.

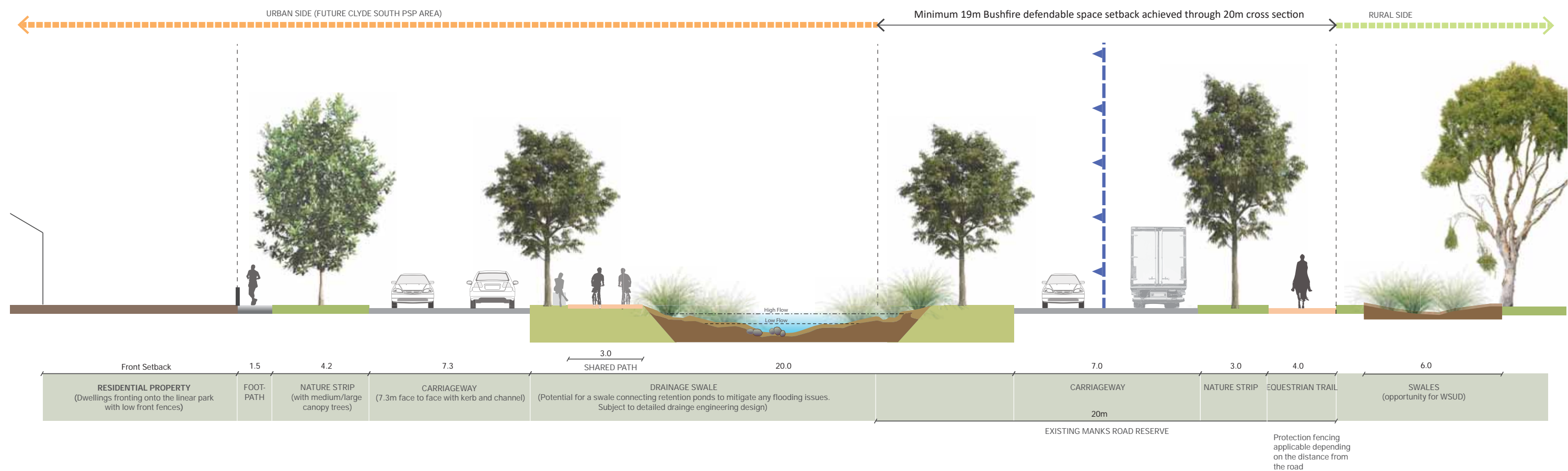


Image 42: Interface 04- Future Clyde South PSP and Green Wedge Area (Manks Road)

Note: Interface 4 is interchangeable with Interface 3 as required.

Interface 5: Future Clyde South PSP and Future Clyde Regional Park

This cross section provides an interface between the urban area and the future regional park.

Key elements include:

- Provision of a split carriageway boulevard road conveying traffic as required (lane configuration to be informed further by traffic engineering requirements).
- Generous centre median capable of accommodating double canopy trees.
- A local frontage road to the urban area providing opportunity for housing to front onto the UGB interface.
- A shared path providing access on the opposite side to the regional park.
- Integration with the design of the regional park including providing the proposed equestrian trail, drainage swale along the existing Clyde Creek and shared user path close to the western edge of the park.
- Built form within the urban area should consider providing passive surveillance over the park through 2 storey elements and a focus on providing windows orientated toward the park.

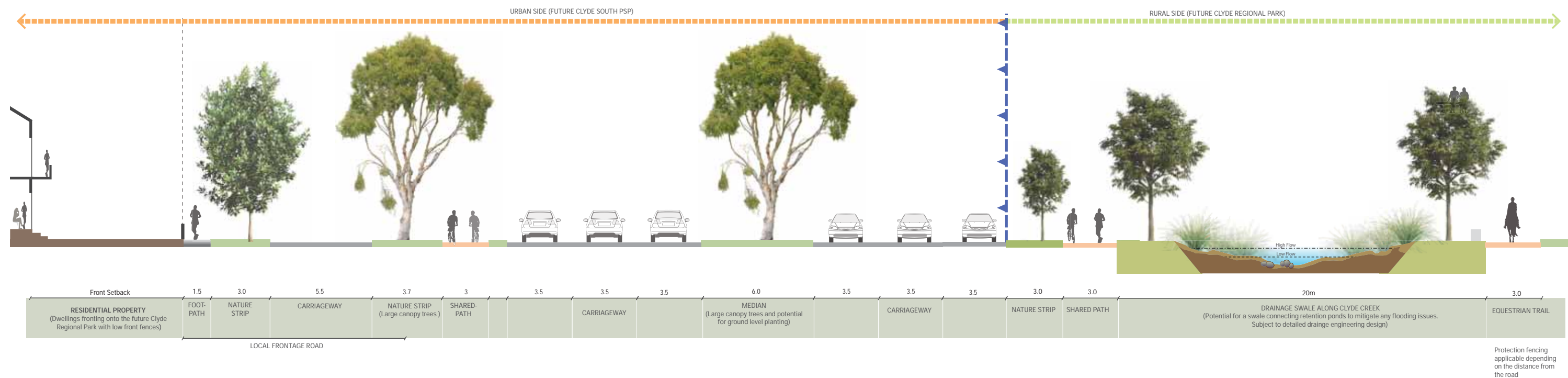


Image 43: Interface 05- Future Clyde South PSP and Future Clyde Regional Park

Note: The road width and number of lanes are conceptual and will be determined during detailed planning and design phases.

Interface 6: Cardinia Creek South PSP and Future Clyde Regional Park

This cross section provides an interface along the northern edge of the future regional park.

Key elements include:

- Secondary arterial road for through vehicle access.
- Local frontage road providing opportunity for urban development to interface with the corridor.
- Equestrian trail along the northern edge of the park connecting to the strategic equestrian trail network. The trail should have 4x4m clearance from vegetation and some sort of protection fencing depending on the proximity to road.

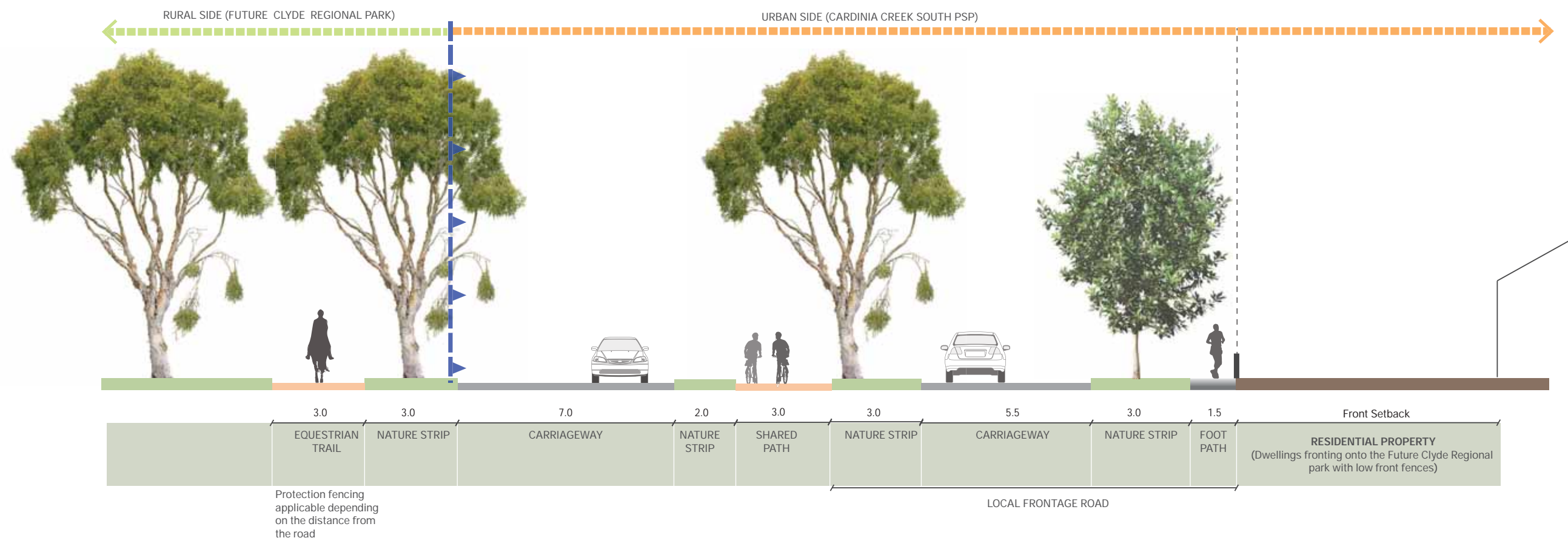


Image 44: Interface 06- Cardinia Creek South PSP and Future Clyde Regional Park

Interface 7: Bandicoot Re-vegetation Intersection

This cross section provides a solution for locations where a bandicoot trail crosses the UGB and the roads that intersect with the UGB interface. Such crossings are needed to facilitate the proposed migration of Southern Brown Bandicoots between the Royal Botanic Gardens Cranbourne and the Future Clyde Regional Park.

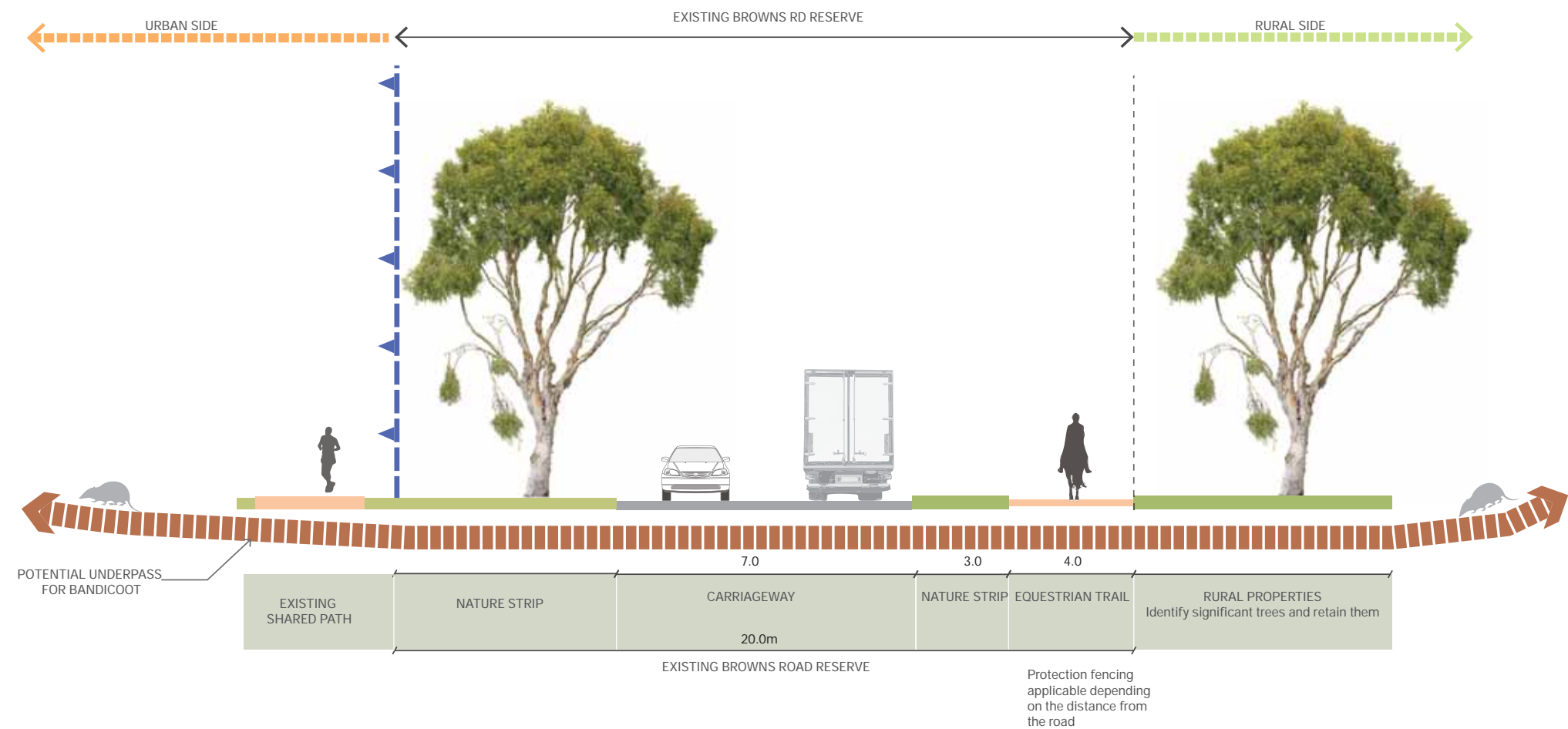


Image 45: Interface 07- Bandicoot Revegetation Intersection

Note: Mitigation measures for prevention of any potential flooding of the underpass must be considered in detailed design phase.

