4 developing the concept plan

4.1 CONCEPT PLAN PRINCIPLES

SOCIAL:

- Creating a sense of community and belonging
- Creating connections between the past, the present and the future
- Accessible to public transport and local facilities
- Creating a clear street network which is easy to navigate
- Establishing quality streets and spaces
- Ensuring safety and security with passive surveillance and active use of public domain
- Wide housing range allowing people to move within the area and providing choice beyond traditional detached housing
- Incorporating open spaces and public domain areas to create a sense of place and to provide a local recreational facilities

ECONOMIC:

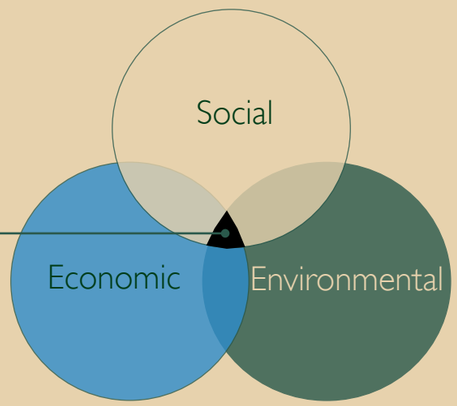
- Creating housing choices that are marketable and viable
- Providing a wide range of dwelling options
- Promoting a design which has the opportunity for flexible future uses
- Incorporating denser built forms that allow the efficient use of land
- Considering management and aftercare of public domain including management of significant conservation areas.
- Providing a standard of building and development that ensures that the area sustains long term economic value

ENVIRONMENTAL:

- Incorporating a walkable neighbourhood to reduce the usage of private vehicles
- Conserving and protecting existing flora and fauna where possible
- Incorporating water sensitive urban design and water management solutions that are valuable to the community
- Creating an urban layout and built form that incorporates passive solar design and based on "Design for Coastal Settlement"
- Street layout and subdivision pattern that relates to topography and minimises cut and fill
- Environmentally conscious building practices
- Unique community title management plan.
- Care taken to retain indigenous vegetation species within development areas.

THE SUSTAINABLE OUTCOME

The achievement of these Social, Economic and Environmental principles will result in a fully sustainable outcome, otherwise known as the 'Triple Bottom Line'. This relies on the interpretation and implementation of the outlined principles into the creation of a vibrant, diverse and sustainable development that is integrated into a its ridgetop setting and into the existing urban structure.



. . . a vibrant, diverse and sustainable development that is integrated into its natural setting and into the existing structure of the area . . .

4.2 WHAT IS A COASTAL VILLAGE ?

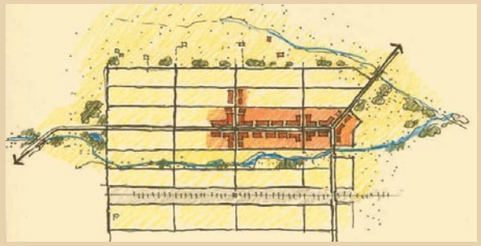
Living on the coast is a different experience from living in a more urbanised environment. This Concept Plan tries to reflect characteristics that will make the evolving place feel like a coastal village?

VILLAGE STREETS AND SPACES
Residential streets will be provided in either grid form or a distorted grid following topography.
A predominance of landscape is proposed both in areas of retained bush and on streets and lots.
Mostly indigenous landscape is proposed with new planting appropriate to a harsh coastal climate.
An informal approach to streets is proposed often without kerbs and gutters and incorporating drainage swales.
A range of housing types is suggested with typically denser forms in and around amenity.

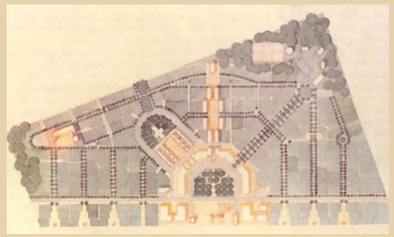
BUILT FORM
Simple built forms are proposed with emphasis on traditional architectural elements.
Emphasis on shade through trees and verandahs/awnings/shutters
Use of lightweight materials and simple detailing
Houses expressive of coastal life in indoor /outdoor areas, decks and verandahs.

Bush edge houses will incorporate fire protection in their design.

EXAMPLE OF A TRADITIONAL SOUTH COAST VILLAGE
- BERRY, NSW



EXAMPLE OF A NEW COASTAL VILLAGE
- SEASIDE, FLORIDA, USA



4.3 COASTAL DESIGN GUIDELINES FOR NSW (By The Coastal Council Of NSW)

The Coastal Design Guidelines recommend design principles for coastal settlements which include:

- Defining the footprint and boundary of the settlement
- Connecting open spaces
- Protecting the natural edges
- Reinforcing the local street pattern
- Appropriate buildings for a coastal context

This process forms the basis of the Concept Plan with extensive site and locational analysis to develop and define the "development footprint".

The Concept Plan creates two compact villages which are essentially infill development between Moonee Beach and Sapphire Beach.

Design criteria include:

- Responding to environmental constraints
- Maintaining water quality
- Retaining trees and vegetation where possible
- Providing a permeable street system
- Making provision for denser development (small lots with potential for some ancillary dwellings, some terraces)

4.3.1 Connecting Open Spaces

Development has been guided by retention of EECs and major wildlife corridors. Thus the villages are set in a framework of open space which:

- Creates, conserves and manages continuous corridors
- Provides appropriate setbacks to hazards
- Builds on special attributes
- Manages water quality
- Edges open space with streets
- Provides appropriate pedestrian access
- Provides some smaller open space areas for local use

4.3.2 Protecting the Natural Edges

The previous section of this report has dealt in detail with protecting the edges:

- Foreshore areas are public
- EECs protected with limited points of access to be defined and generally 20-50m buffers of Blackbutt, Turpentine forest
- Limited and controlled pedestrian access proposed
- Edge roads provided
- Facilities outside EECs
- Ecological integrity of foreshore and headland vegetation maintained
- Areas adjoining freshwater, estuary and coastal habitats managed
- Coastal erosion hazards addressed
- SEPP14 wetlands protected
- Foreshore setbacks behind the wetlands
- 100 year planning timeframe considered
- Coastal estuaries not affected
- Frontal dunes avoided
- Building design addressed to create coastal character
- Conservation areas proposed in Community Title with limited and controlled public access to protect environment

4.3.3 Reinforcing the Street Pattern

The street pattern for the villages is essentially a spine road into each village connected to the proposed local collector joining the highway at Moonee Beach and Sapphire Beach. Temporary access may be required to the highway as an interim measure.

The street pattern is based on:

- A simple grid system adjusted to the topography
- Edge roads adjacent to conservation areas
- Limited road crossings over watercourses
- Use of swales extensively
- Establishing pedestrian pathways to the beach and headland, etc (to future detail)

4.3.4 Appropriate Buildings

Built form will be controlled by "Design Guidelines" to future approval and will cover the following issues:

- Response to local hazard (fire, noise predominantly)
- Reinforce clarity of settlement character
- Built to an agreed coastal character
- Maintenance of consistent setback
- Buildings to address the street
- Reduced car dominance on-site
- Protection of public views in and out
- Guidelines to include height, envelope, separation, setbacks, design elements, colour and materials
- Guidelines will protect adjacent amenity

In this context Coastal Design Guidelines contribute to the Urban Design Principles of the project.

4.4 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

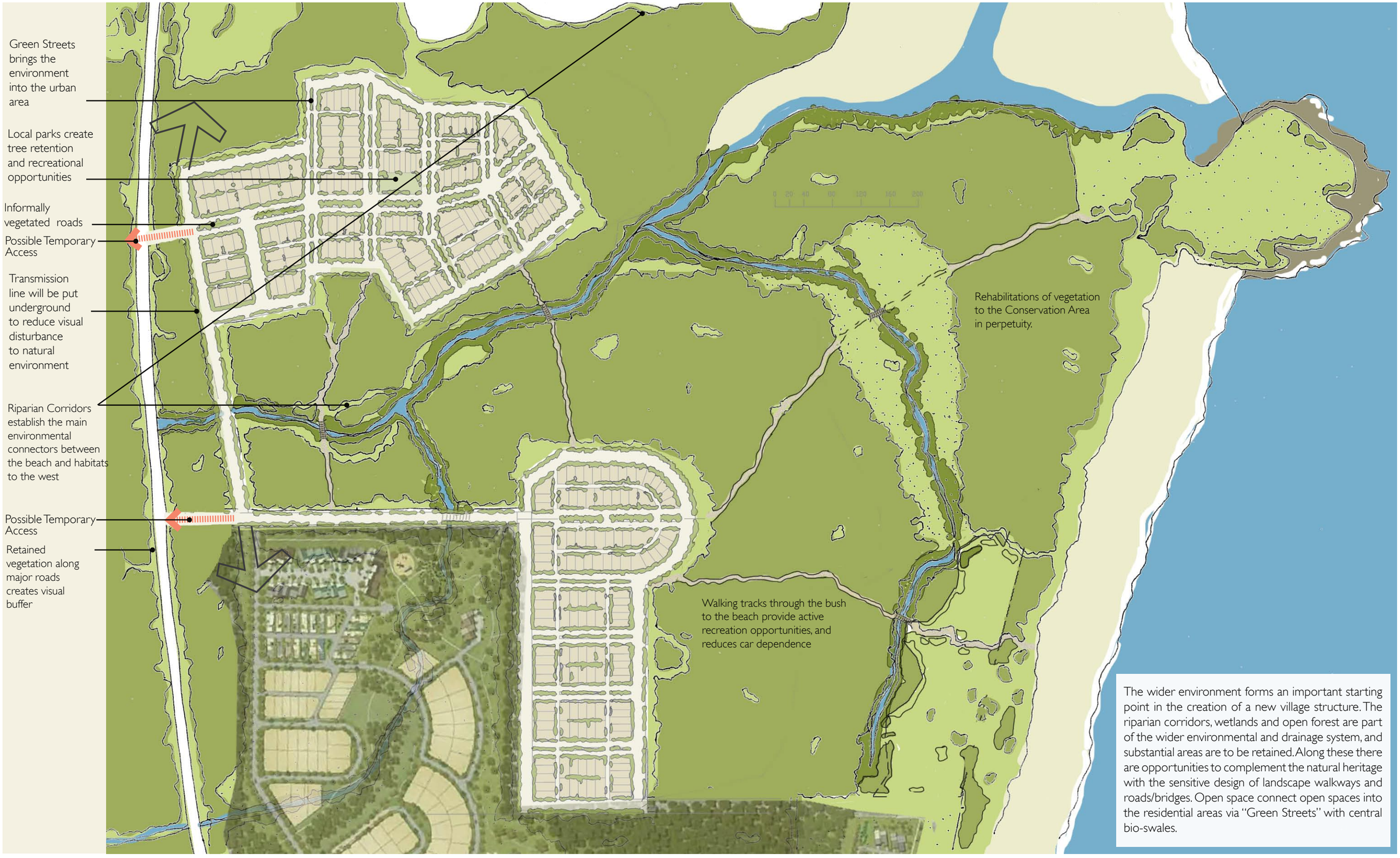
The Concept Plan is to address the principles of Crime Prevention through Environmental Design (CPTED). The plan has been designed with safety and security as a key concern. To enhance safety in the area:

- Open space areas are to be edged by streets and housing, providing clear sight lines from private residences to public domain areas;
- Lots edging open spaces are identified as suitable for increased densities, thereby maximising the number of dwellings which overlook open spaces. Passive open space surveillance is to be incorporated;
- Open spaces are edged by public streets in order to manage the interface between development and the public domain. The local park in the north has a footpath edging a number of dwellings and front fences and porches are to be incorporated to add to the definition and overlook of the interface;
- Parking for open spaces is to be provided along illuminated public streets edging parks rather than consolidating car parking within the parks themselves. This is designed to increase casual surveillance of parked vehicles and their occupants;
- Public streets edging open spaces are designed to provide safe, well lit pedestrian routes eliminating the need to circulate across parks at night;
- Adequate lighting is to be provided in recreational areas, parklands, cycleways, and pedestrian thoroughfares;
- Street furniture and amenities are to be vandal resistant;
- Landscaping will maintain view corridors and clear sight lines except in conservation areas;
- Parking areas at recreational locations should be designed to avoid loitering; and
- The length of car courts accessing rear garages is to be minimised, with clear sight lines provided to/from the public road. In some places, mews dwellings above rear garages will increase the potential for passive surveillance. Sensor lighting mounted at appropriate locations is to be provided within the car courts.

It is recognised that well used and valued public open spaces reduce opportunities for crime and increase risk for potential offenders. Public open spaces are provided with a strong physical connection to the housing form, the site and its features so as to achieve a clear ownership of public space.

4.5 CONNECTING TO THE ENVIRONMENT

Fig 4-1: *Connections to the environment*



4.6 INCORPORATION OF NATIVE VEGETATION

An important guiding principle in the development of this Concept Plan is the focus on the preservation of native vegetation and bushland. The retention of mature trees is of importance in maintaining the unique natural landscape of the area and in creating a suitable residential environment. In order to achieve this goal, special consideration must be made for existing trees and vegetation on a lot by lot basis. Guidelines that prescribe how to realise this aim will be detailed in future Housing Design Guidelines' document. The following illustrations show how the retention of native vegetation will be achieved.

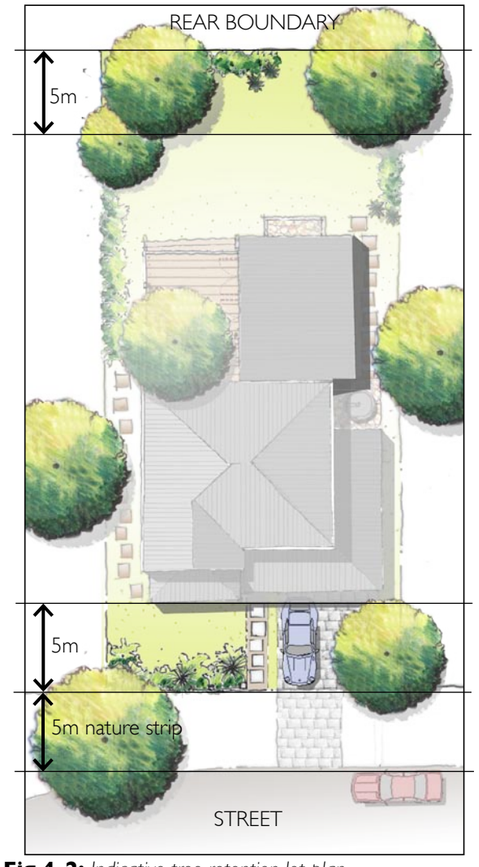


Fig 4-2: *Indicative tree retention lot plan.*

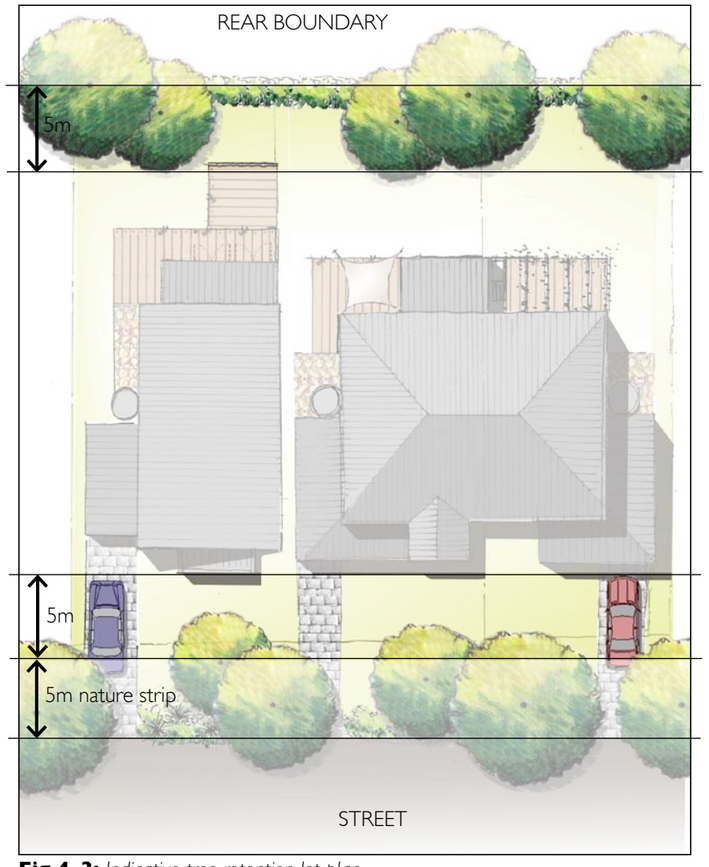


Fig 4-3: *Indicative tree retention lot plan.*

4.7 RESPONDING TO SITE TOPOGRAPHY

The site has a strongly defined topography with two low ridges projecting into the wetland areas. The watercourses / wetlands provide environmental linkages which allow for the retention and enhancement of natural habitats through the site towards the wetlands and further into Moonee Creek and into the Pacific Ocean. The ridges are used as key links through the residential areas and create legible structure by being the memorable roads at high points. The local street structure runs perpendicular to the ridges and creates views and natural drainage down to the riparian corridors.

Fig 4-4: *Site topography*

The principal vegetation patches on the sites (the wetlands, dunes and floodplains) are proposed for conservation purposes. These areas will be connected back into residential areas by fingers of woodland. Woodland species will be preserved where possible in the road reservations and on individual lots retaining habitat for birds and other "nimble" species. A number of small pocket parks and green fingers will, with trees maintained in road reserves, provide a desirable open woodland landscape for the villages.

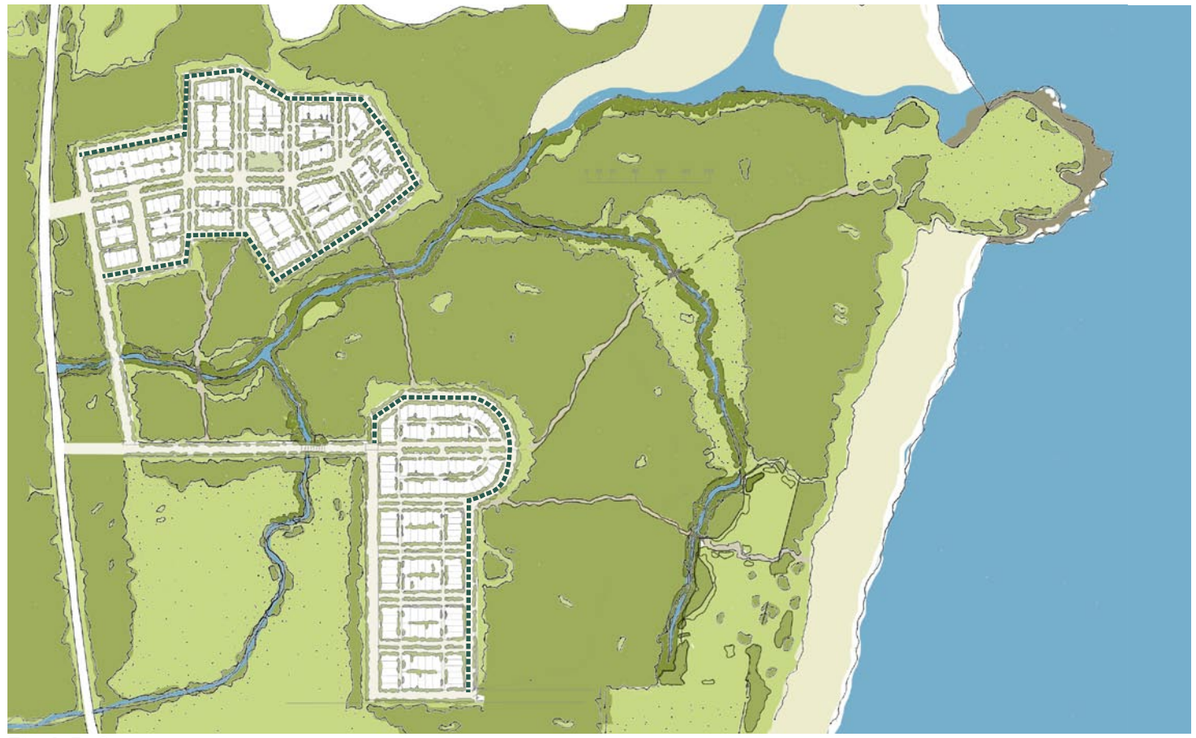


Fig 4-5: *Open space system*

4.8 CONNECTING TO THE SURROUNDINGS

For the evolving village to function properly it needs multiple connections to it's context. These are both walking / cycling links and road links. Traditional villages have a strong and often seamless connectivity with their surroundings, and the Moonee Waters Coastal Village will create strong links to the existing road network, and to the surrounding bushland and beach.

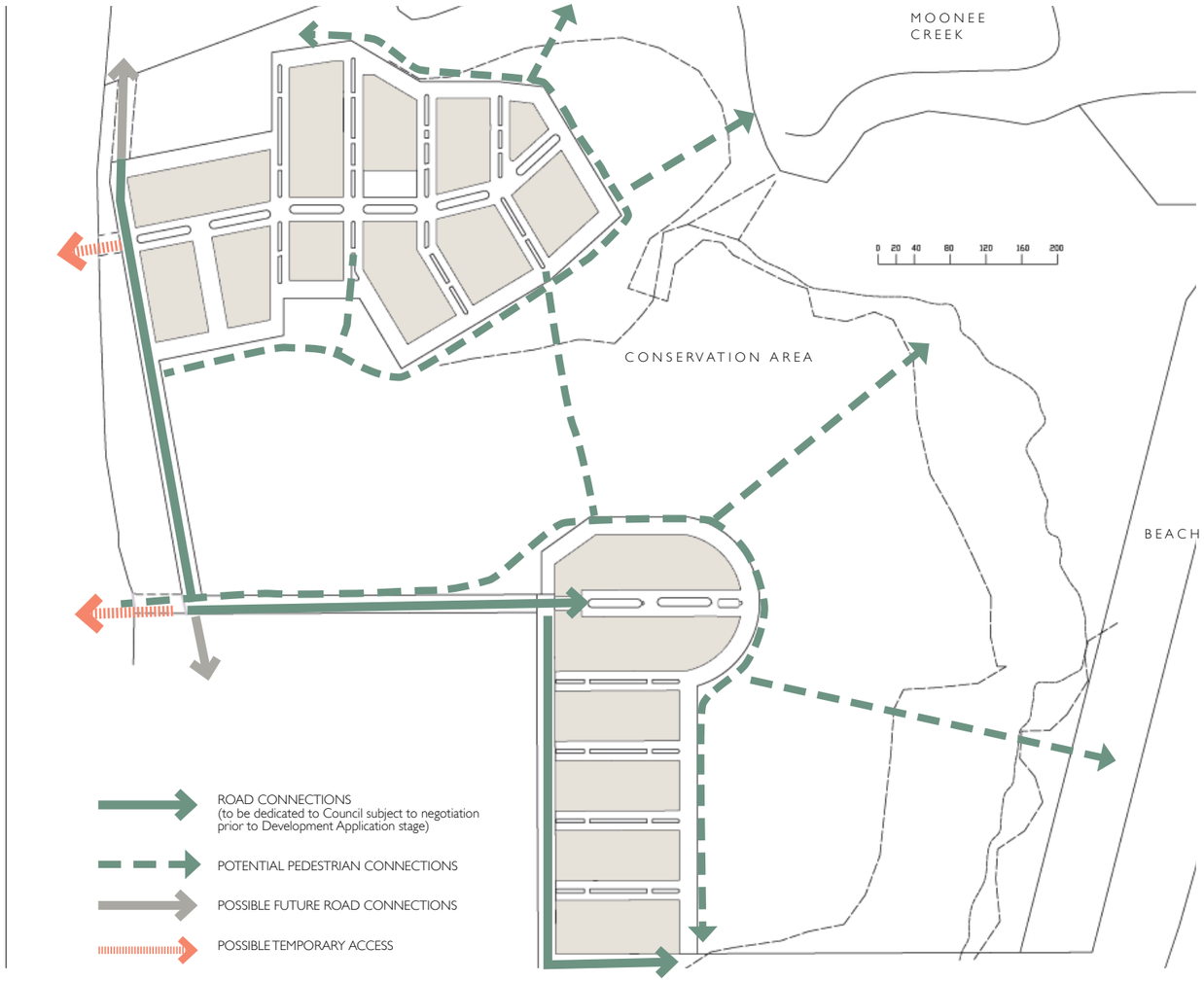


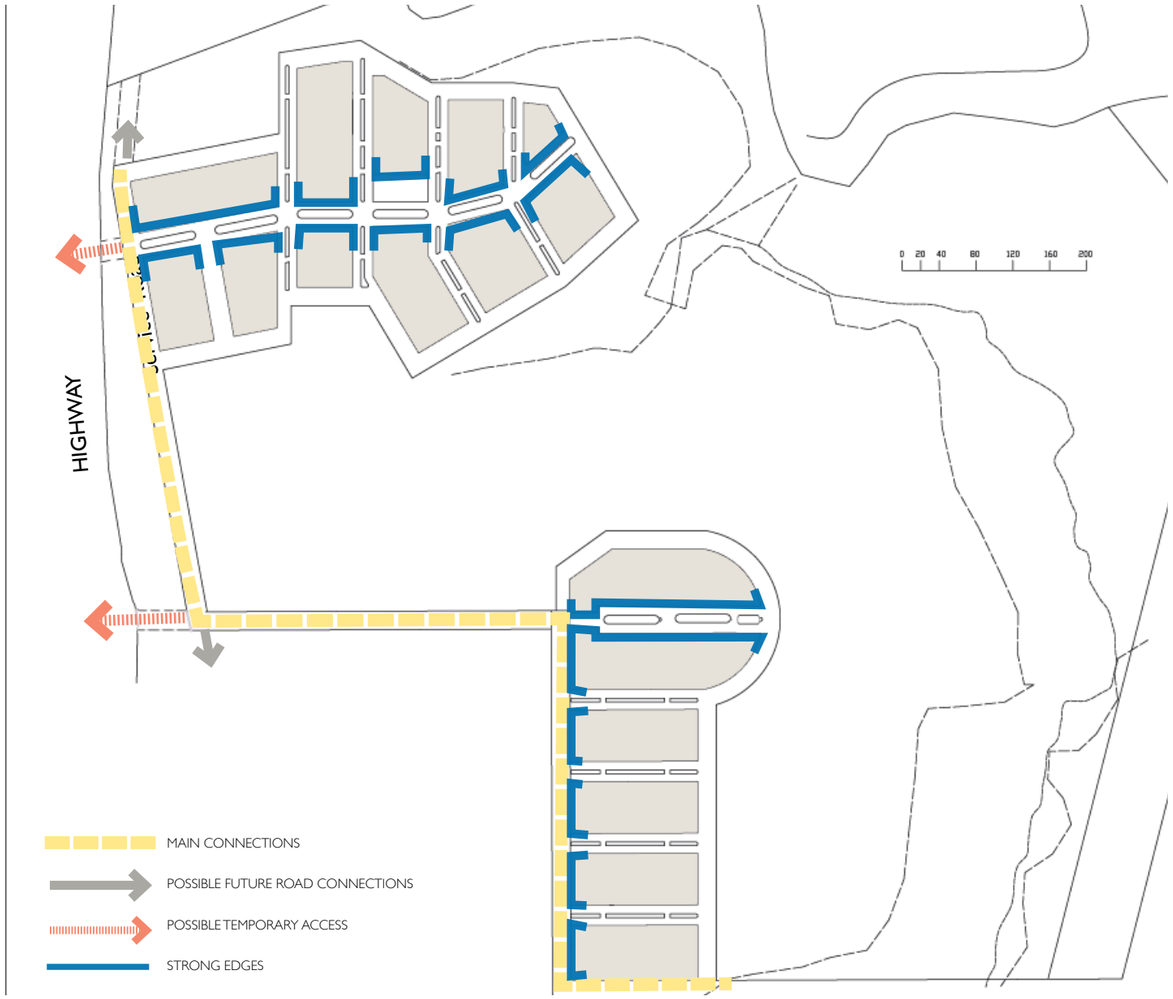
Fig 4-6: *Connections*

4.9 A CLEAR URBAN STRUCTURE

New suburbs and villages need a strong structure or 'skeleton' to create easy movement routes and to help people to find their way around. The main route parallel to the Pacific Highway is linked to internal connecting roads which give access to local streets. The main movement system creates a clear pattern which links key places within the residential and village areas with the wider local community.

CONVENTIONAL SUBURBAN PATTERN
Based on looping collector roads and cul-de-sacs. These produce a disorientating urban structure in which it is easy to get lost. This also concentrates traffic on a few major roads with resultant degraded environments.

TRADITIONAL CONNECTED PATTERN
Based on a connected street system with clear main routes linking to local streets. This pattern is efficient and gives choice of routes while allowing the main streets to be memorable and clearly understood.

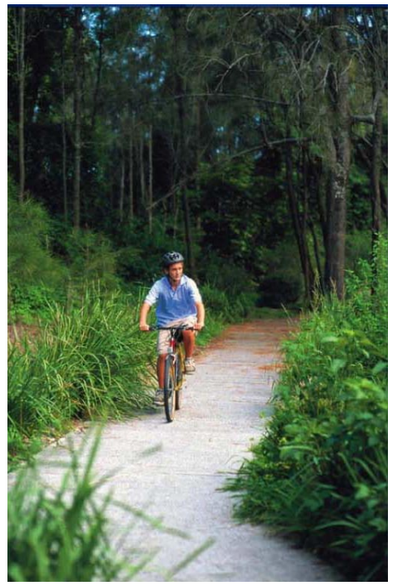


4-7: *Urban structure*

4.10 PROMOTING WALKING & CYCLING

Pedestrian and cycle routes have been located to allow for and encourage easy movement within the residential precinct and to promote linkages to the beach and other environmental attributes. Precise Routes subject to detailed survey and consultation with appropriate authorities. To be defined in Development Application.

All Streets will be traffic calmed and will facilitate pedestrian and cycle movement. Pedestrian and cycle areas will be carefully selected and managed to prevent wider impacts on the areas to be conserved.



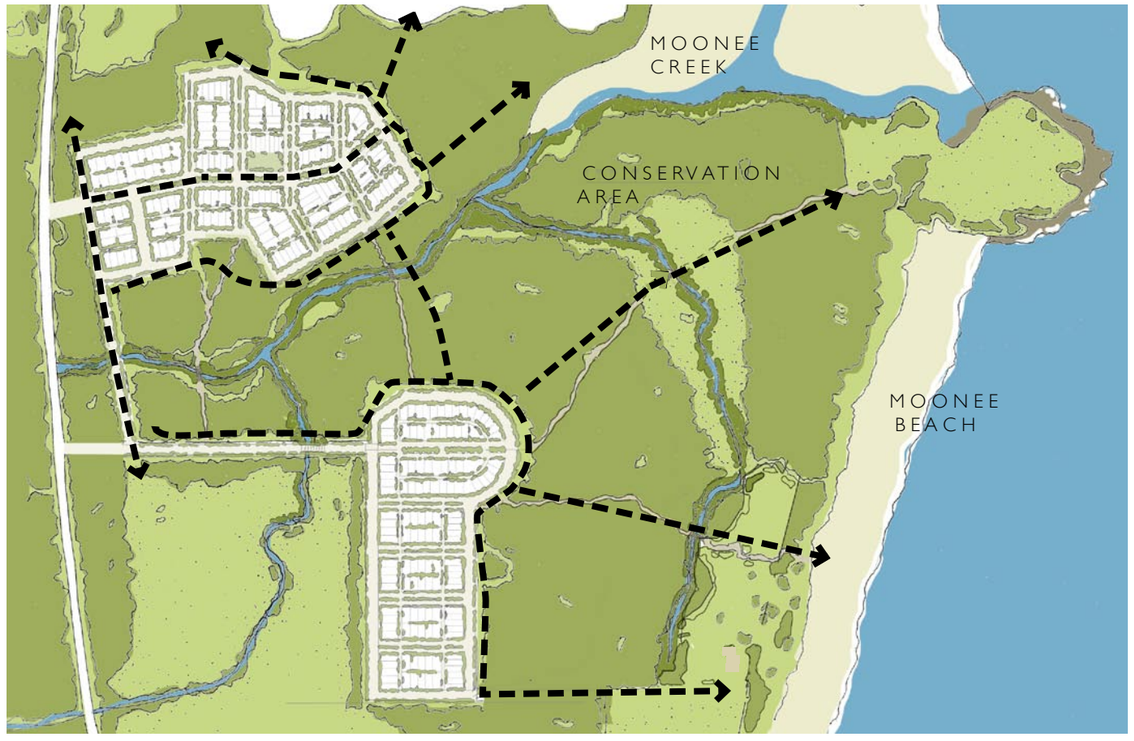


Fig 4-8: *Pedestrian network*

4.11 MANAGING WATER

The water management approach has followed a 'total catchment management' philosophy using
On-lot detention (tanks for water harvesting);
On-street / detention (Bio-swale cleansing);
Cleansing ponds at the interface with conservation areas. (see Appendix D)

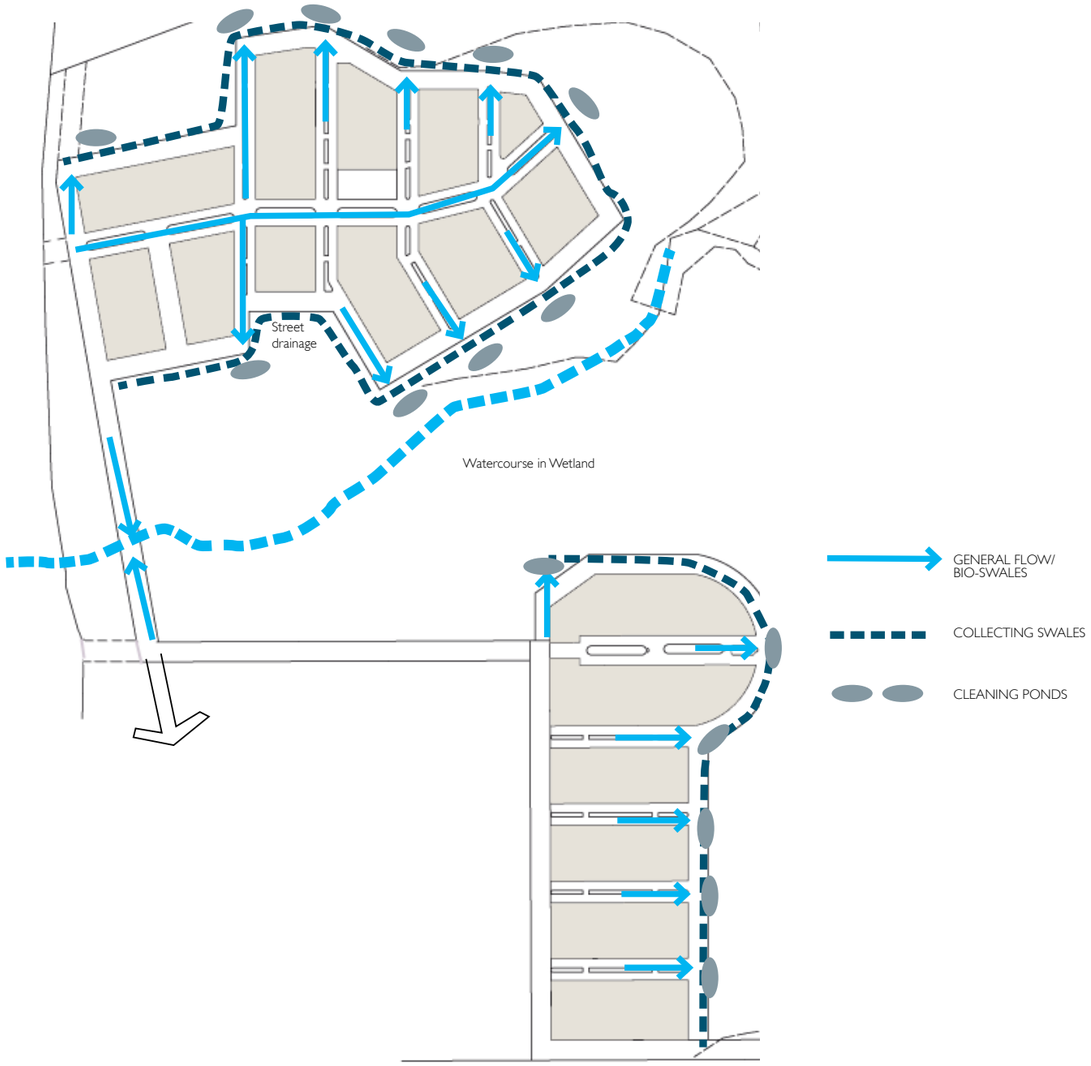


Fig 4-9: *Water management*

4.12 MANAGING FIRE

There is a possible fire threat principally from the west of the site. To manage risk Asset Protection Zones as shown have been established. Within these zones understorey planting will be removed, tree canopy thinned and edge roads to the perimeter of the development zones used to allow access for firefighting. (see Appendix G).

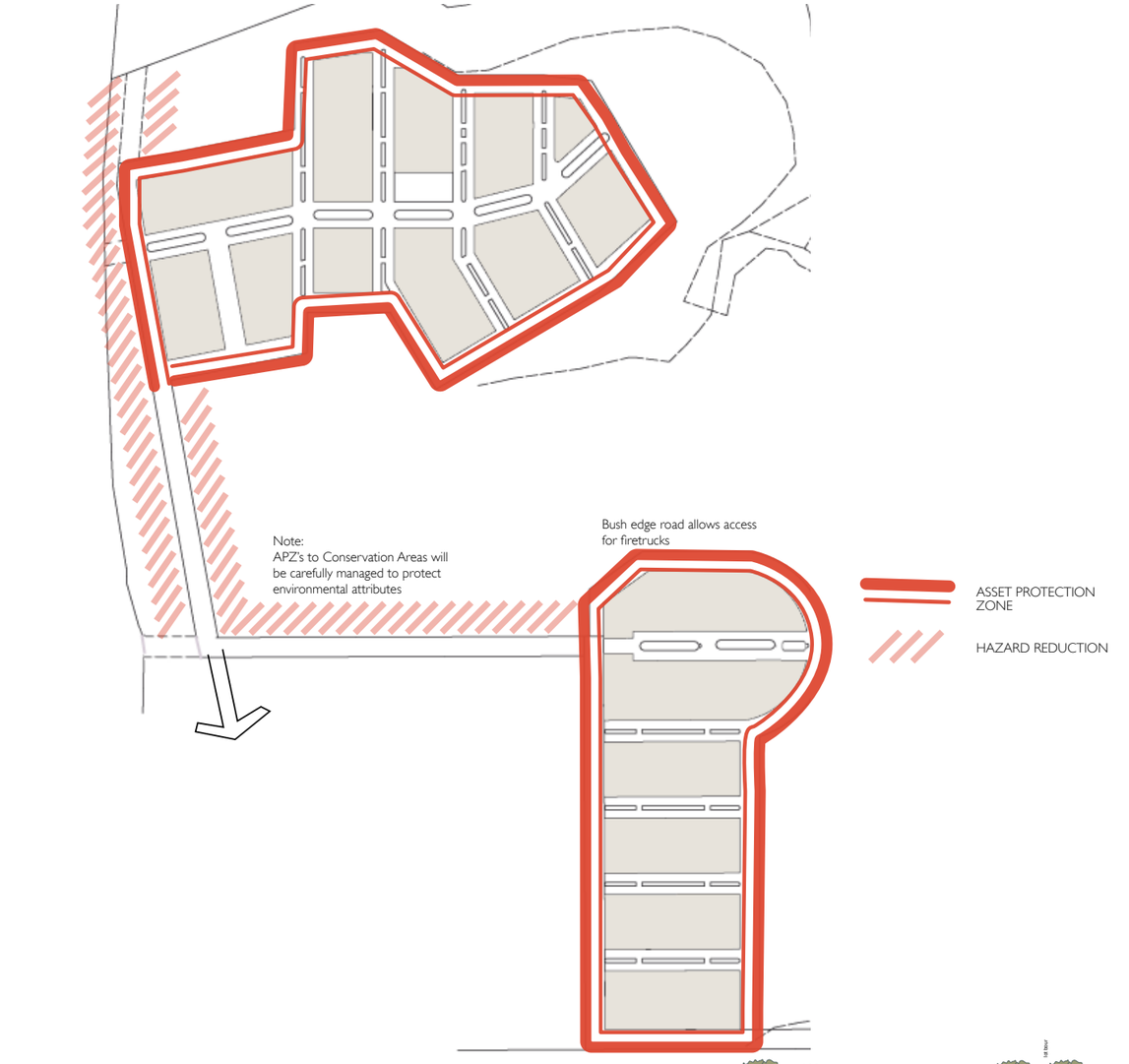


Fig 4-10: *Fire management*