



RESIDENTIAL DESIGN GUIDELINES, PETERBOROUGH, VICTORIA

**Prepared by MGS Architects for
Moyne Shire Council**

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1. INTRODUCTION

The Urban Design Guidelines (UDG) for Peterborough have been developed for the Moyne Shire Council. The Guidelines draw on the recommendations and limits of the UDF and the Planning Panel report which reviewed this, prior to its adoption by council in 2003. They further respond to the direction given in *Design of Structures on the Victorian Coast*. A vision for the town is outlined in the UDF and the key vision is stated below:

‘Peterborough will maintain and enhance its role as a peaceful small coastal village on the Great Ocean Road set within the dramatic scenery of the renown Port Campbell National Park, Bay of Islands Coastal Park and lesser known Curdies estuary. The growth of the township and scale of development, including commercial development, will be limited to ensure the character, serenity and functioning of the township is protected for the enjoyment of permanent and semi-permanent residents and visitors.’

A number of key characteristics and issues have been identified which give greater detail to this vision. These are outlined and the following guidelines developed to direct the subdivision and built-form of residential areas of the town. This document applies to land within the Residential 1 Zone, as specified by the Moyne Shire Council. Subsequently the Guidelines have also taken into account the preference of DSE that the special and open character of Peterborough be maintained through mechanisms other than minimum lot size.

The diagram below (fig 1.1) explains the structure of the document. A number of overarching guidelines direct town character, interfaces and setbacks. The town is further divided into two ‘Neighbourhood Character Zones’ to control density and size of built form, responding to the area location within the town and its relationship with the landscape. Every development application should respond to these overarching town guides as well as to the appropriate Neighbourhood Character Zone. Development should also be guided by its role as either ‘infill’ of existing residential areas or subdivision of ‘greenfield sites’- areas defined in the UDF. Further guidelines apply to sites that occupy specific locations within the town, and should be applied to designs where appropriate.

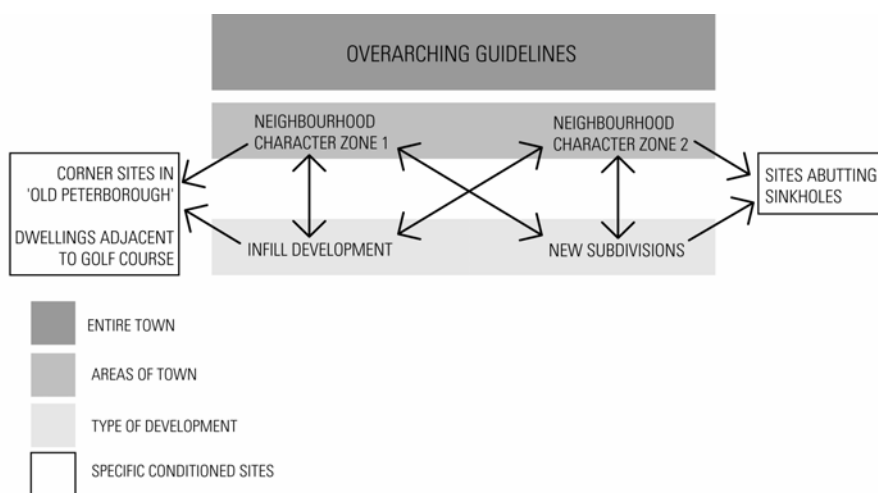


fig 1.1, Structure of Residential Design Guidelines



2. OVERARCHING GUIDELINES

The following guidelines apply to all new residential construction within Peterborough.

Street Interface and Siting

Objectives:

- To encourage open and informal streetscapes which reflect the coastal character of the town.
- To encourage open front yards with houses informally addressing streets.
- To prevent dense streetscapes, with a suburban feel and features including concrete kerbs, channels and garages.
- To develop habitable outdoor areas with good solar access and weather protection, by controlling the size and siting of built form.
- To encourage the use of indigenous plants and landscape while minimizing other barriers and fencing.
- To maintain the spaces and views between built form in residential streets.

Strategies:

Street Interface

- | | |
|-----------------------------------|--|
| ▪ Road Reserve | Grassed fringes should continue to the road surface without kerbs or crossovers. |
| ▪ Fences | <p>Fences should not be erected in front of buildings where they would break the open streetscape. Where possible, organisation of buildings and landscape rather than fences should form the basis of a response to prevailing weather conditions. Fences can only be built behind the front line of dwellings, in circumstances where extreme weather conditions or significant privacy issues warrant a barrier. Fences to public walkways, linkages and habitat corridors are also discouraged.</p> <p>Where fences are required, they should be permeable, designed with a minimum of 50% openings. To further establish a visual barrier or weather break, fencing should be accompanied by indigenous planting.</p> |
| ▪ Driveways and Crossovers | <p>Driveways should be informal and unpaved. Acceptable treatments may include grass, loose stone or crushed rock. Paved or concrete crossovers are not permitted within Old Peterborough or Little Peterborough areas except in Macs Street and other commercial/high traffic areas of the town.</p> <p>In the "new" area of Peterborough subdivisions and development can be constructed with paved or concrete crossovers, rollover kerb, and footpaths.</p> |
| ▪ Carports and Garages | Any covered carport or garage should be located beside, behind or integrated into the ground floor of a dwelling. No significant proportion may be constructed in front of the main built form of a dwelling. |

<p>Siting</p>	<p>New dwellings should be detached, without shared party walls to adjoining dwellings. Side setbacks are outlined in the relevant NCZ, directing spacing between dwellings.</p>
<p>▪ Building Address</p>	<p>Building should be sited to address all streets and all public open space they abut. Transitional terrace, verandah and balcony zones to these public abutments are encouraged. Blank, unbroken walls are discouraged.</p>
<p>▪ Weather Protection</p>	<p>Developments should use landscaping or built form decisions to enable the protection of outdoor zones from weather. Fencing will only be supported in extreme circumstances where weather and privacy issues are significant concerns.</p>
<p>▪ Passive Solar Access</p>	<p>Orientation for good thermal comfort within dwellings is encouraged.</p>

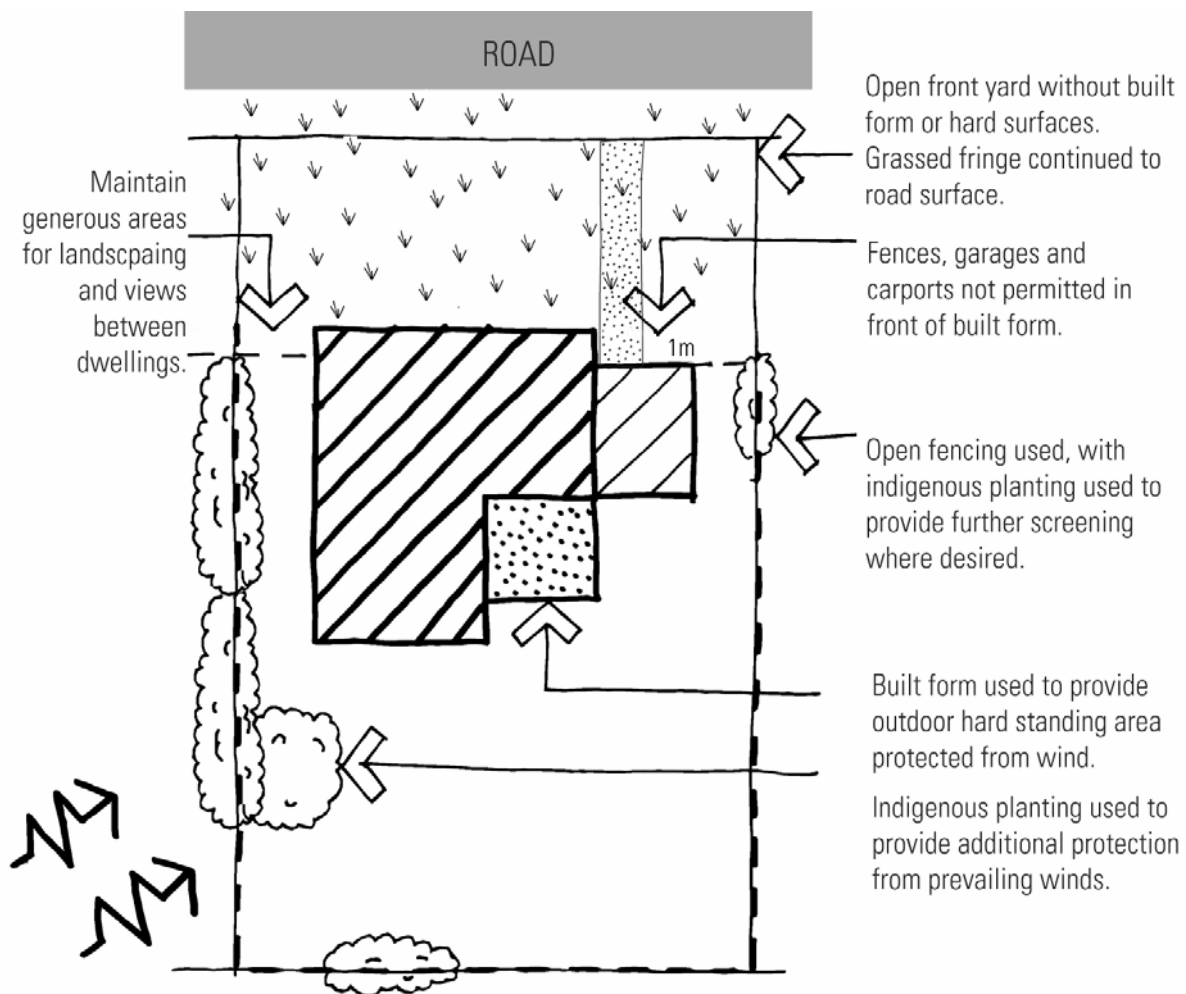


fig 2.1, Siting and Front Interface

Built Form and Upper Level Development

Objectives:

- To encourage a cluster of modest and sensitive dwellings to maintain the coastal and rural characteristics of the town.
- To maintain the dominance of the landscape over built form, minimizing the impact of built form on views of the surrounding landscape.
- To encourage views from and between dwellings to the surrounding landscape.
- To minimise the visual bulk of upper-storey development, with differentiated massing between ground and upper storeys.

Strategies:

Height	A maximum height is set to 8m to restrict dwellings to two storeys .
Built Form	Built form should reflect the scale of that around it. Dwellings should be detached, without shared party walls between adjoining properties.
▪ Building footprint	Maximum footprint sizes for dwellings are outlined in the relevant NCZ. An application to subdivide land that seeks to create a lot less than the neighbourhood character average must be accompanied by a building envelope in accordance with the site coverage provisions of the NCZ on each of those lots less in area than the neighbourhood character area.
Upper Level Development	Guidelines for the size of upper level development vary according to NCZ. It is always to be smaller in floor area to the ground floor. Key directions include: <ul style="list-style-type: none"> ▪ Massing should be arranged to minimize visual impact from the surrounding landscape and streetscape. From key views, including the street front, upper floor massing should be seen to step in from the lower level. ▪ View corridors are to be enhanced. Any upper level development should have regard for adjacent existing development, with the aim of maximising the distance between upper level built form to highlight openness and views.

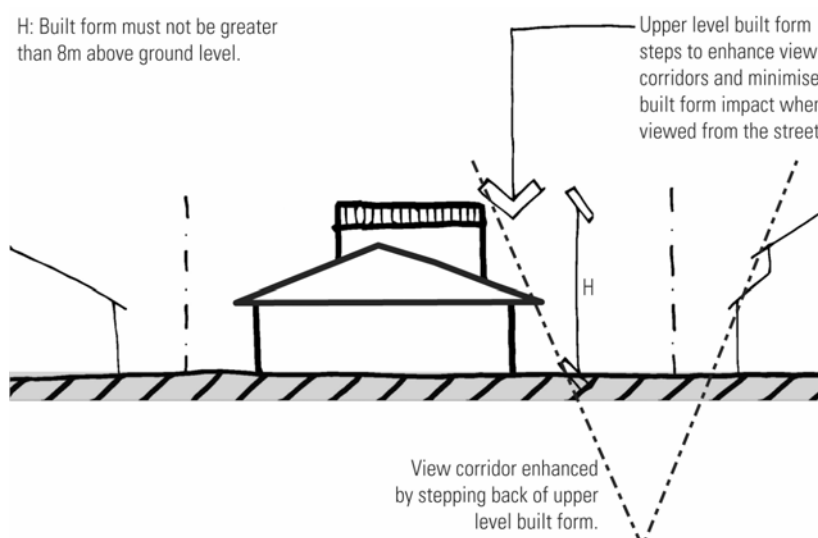


fig 2.2, Elevation showing height and upper level development

Environmentally Sensitive and Sustainable Design

Objectives:

- To minimize the impact of buildings and built form on the surrounding landscape and environment.
- To protect the water quality of surrounding catchments, including the Curdies Estuary.
- To encourage the planting of indigenous species to promote planting in the area.
- To encourage buildings which visually complement the features of the surrounding environment.

Strategies:

Roof Form	A diversity of roof forms is encouraged. Roofs should be designed to enable: <ul style="list-style-type: none"> ▪ the natural washing of salt and sea spray, ▪ the harvest and reuse of rainwater.
Colours	Light and pale colours are dominant in the buildings of the town and are perceived as sympathetic to the landscape and setting. An equally acceptable solution can be achieved through the use of natural materials and finishes that 'age' with the landscape and incorporate colours and textures that are typical of the local natural environment. It should be demonstrated that they directly complement local landscape and flora.
Stormwater Harvesting	Dwellings should conform to the strategies and standards developed by Moyne Shire Council, Wannon Water and DSE to reduce stormwater runoff and reuse rainwater to designated levels.
Indigenous Landscaping	Properties should use in an integrated manner planting guidelines developed by Moyne Shire Council with Parks Victoria. These include lists of preferred plants and pest plants, as well as suggestions for size and height (refer Appendix 2). All new development should incorporate substantial provision of indigenous planting to foster rehabilitation of the coastal flora and fauna.
Energy Performance	New dwellings are required to achieve a 5-star energy rating. Design for good solar orientation, shading of windows and appropriate materials will assist to achieve this. Solar panels to be integrated where possible and practical.
Plant & Equipment	Visible roofscapes should be free of mechanical plant and equipment. Any new plant should be integrated with the design. Refer planning scheme, clause 19.03

3. NEIGHBOURHOOD CHARACTER ZONES

The UDF and Panel Report go into detailed discussion of the character of neighbourhoods in Peterborough. They outline three stages for expansion of residential areas of the town.

In order to better define central, settled areas of Peterborough from the rural fringe, two Neighbourhood Character Zones (NCZ's) have been established. Guidelines are developed for each of these with relevance to their location and role within the village and landscape. Key building attributes, interfaces and treatments are limited in each zone as appropriate.

NCZ specific guidelines outline provisions governing:

- Site Coverage
- Hard Standing Area
- Upper Level Built Form and Massing
- Front and Side Setbacks

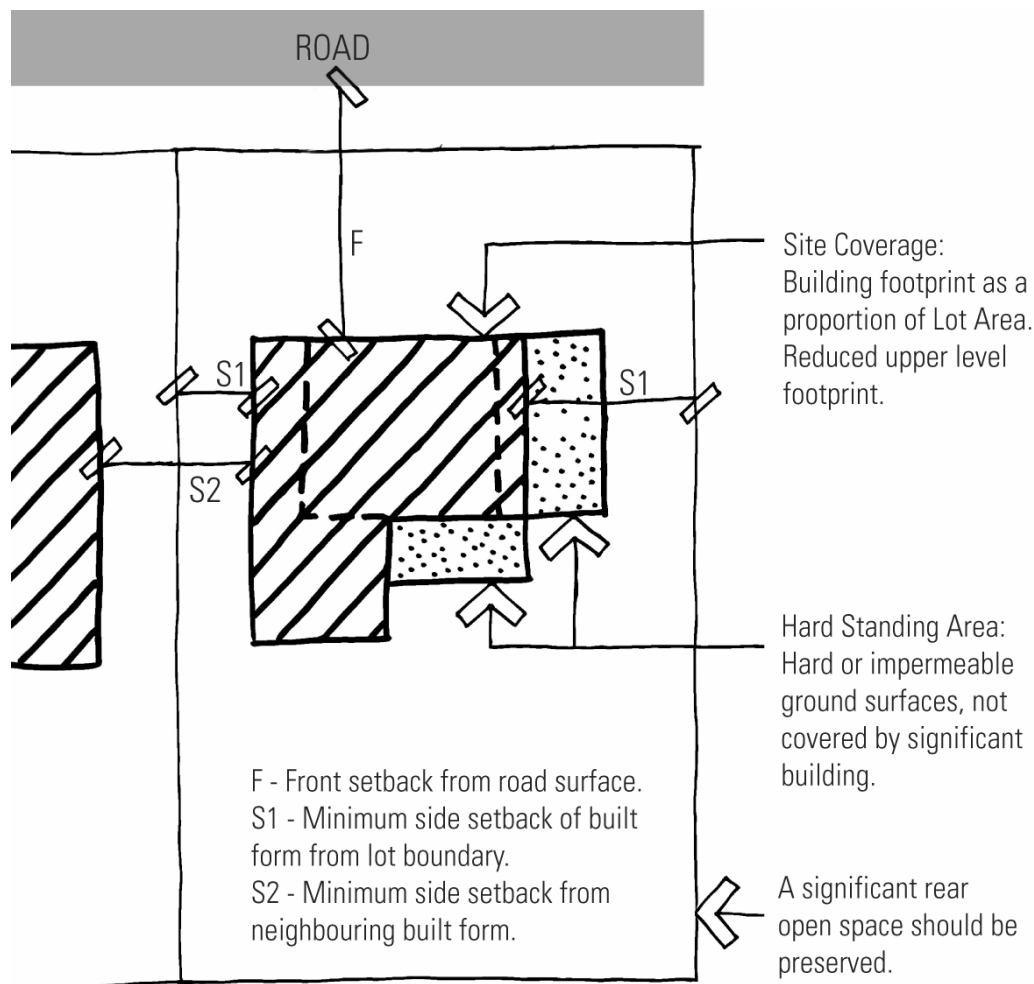


fig 3.1, Issues covered by NCZ guidelines

Neighbourhood Character Zone 1 [NCZ1 - Central]

NCZ1 covers the parts of the town that are seen as becoming the central areas of settlement. These are in 'Old Peterborough', 'Little Peterborough' and along the Great Ocean Road.

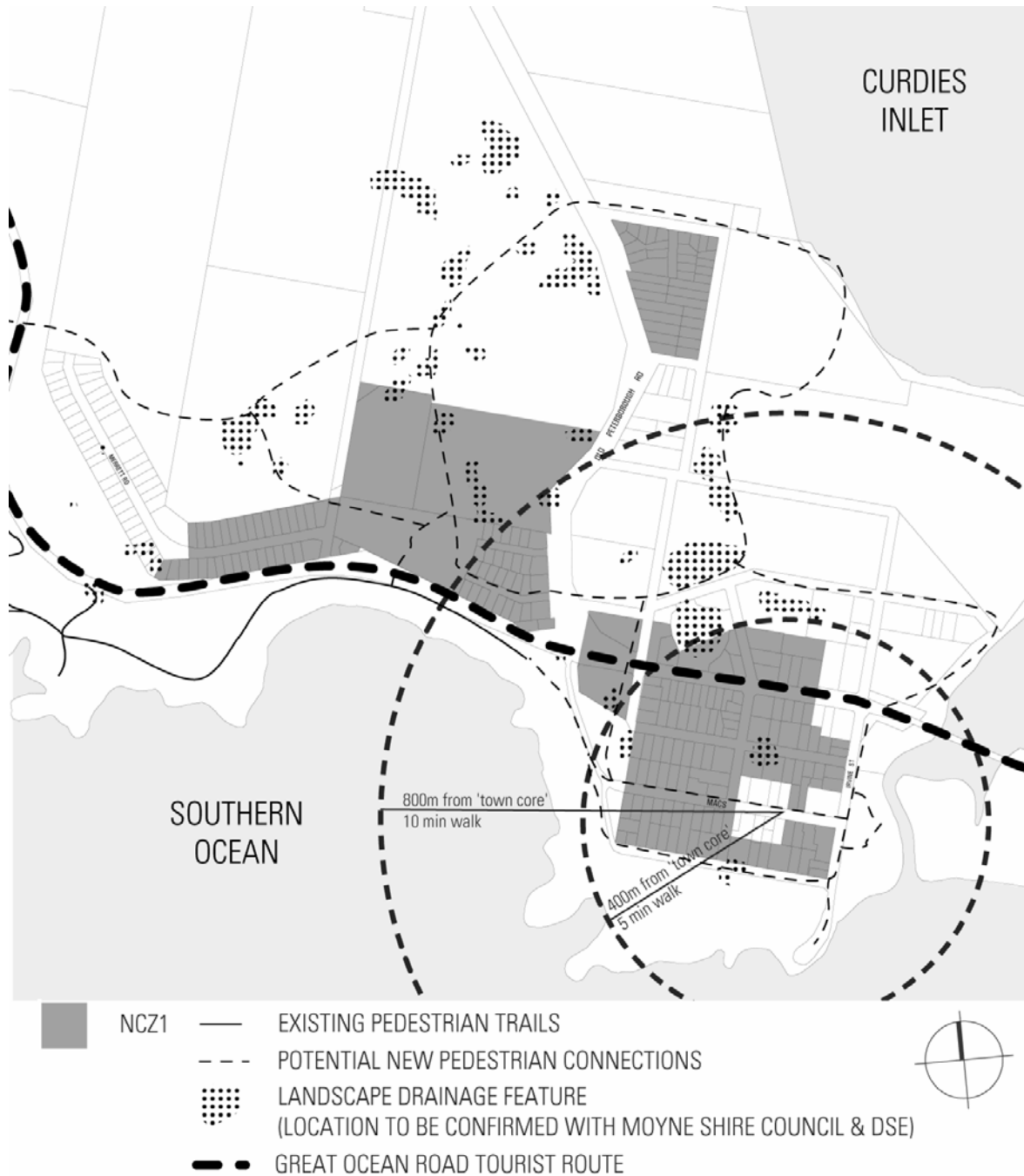


fig 3.2 Neighbourhood Character Zone 1



NCZ 1 (Central)

Objectives:

- To encourage the retention of an informal coastal ensemble of buildings, occupying small footprints.
- To define central settled areas of town to enhance cohesion and identity of the town.
- Incorporate and enhance the natural and indigenous landscape.
- To support a unique coastal village character in design response and streetscape treatments, discouraging a suburban aesthetic and environment.
- To provide for the incorporation of small-scale commercial accommodation facilities in and around the commercial centre.
- To provide for housing close to business and community facilities appropriate for elderly and special needs persons.
- To encourage environmentally sensitive design approaches, including the control of paved areas for site permeability.

Strategies:

Lot Size	Whilst a minimum lot size cannot be prescribed, average lot sizes that define existing character generally exceed 700m ² .
Site Coverage	The site coverage of a building should not exceed 40% of the lot or 300m², whichever is the lesser.
▪ Hard Standing Area	Hard standing area should be a maximum of 10% of the lot area or 80m², whichever is the lesser and should wherever possible be permeable.
Upper Level Built Form	Where a two-storey residence is designed, the footprint of second storey should not exceed 75% of that of the ground floor.
Front Setback	A minimum of 10m from the road surface or to match the average setback of adjacent existing development, whichever is the greater.
Side Setback	A minimum side setback of 3m should be observed with a minimum distance of 5m to neighbouring buildings to ensure a dispersed built form character is retained.

Neighbourhood Character Zone 2 [NCZ2 - Fringe]

NCZ2 covers the 'fringe' residential areas in close interface with the natural environment. It forms the interface between the central areas of town settlement and the natural landscape and significant features.

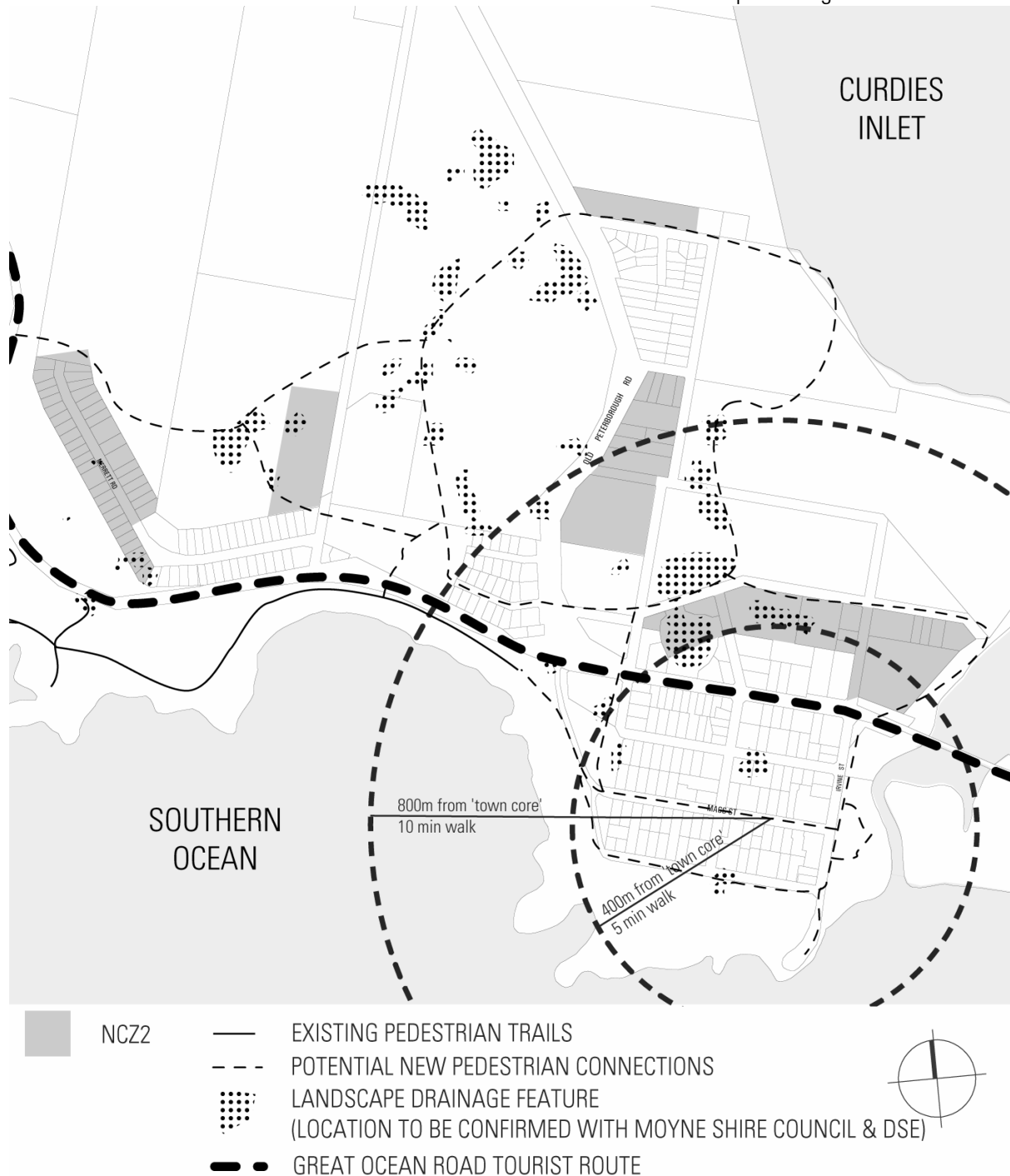


fig 3.3 Neighbourhood Character Zone 2



NCZ 2 (Fringe)

Objectives:

- To provide a transition from built form to the sensitive coastal landscape.
- To encourage the retention of an informal coastal ensemble of buildings, occupying small footprints.
- To provide a low density of built form in the fringe areas of town, such that the impact of built form as seen from the surrounding landscape is minimized.
- To provide an aesthetic and character where the natural landscape continues to dominate built form.
- To utilize and enhance views towards the agricultural hinterland [north], surrounding estuary [east] and national parks.
- To allow informal and open streets, with views from these out into the landscape.
- To encourage environmentally sensitive design approaches, including the control of paved areas for site permeability.

Strategies:

Lot Size	Whilst a minimum lot size cannot be prescribed, average lot sizes that define existing character generally exceed 800m ² .
Site Coverage	The site coverage of a building should be a maximum of 30% of the lot or 260m², whichever is the lesser.
▪ Hard Standing Area	Hard standing area should be a maximum of 10% of the lot area or 80m², whichever is lesser and should wherever possible be permeable.
Upper Level Built Form	Where a two-storey residence is designed, the footprint of second storey should not exceed 50% of that of the ground floor.
Front Setback	A minimum of 15m from the road surface or to match the average setback of adjacent existing development, whichever is the greater.
Side Setback	A minimum side setback of 4m should be observed with a minimum distance of 8m from neighbouring buildings to ensure a dispersed built form character is retained with a greater dominance of the natural environment.

3. DEVELOPMENT TYPE AND CONTEXT

Infill Development

As part of 'Stage 1' of the residential expansion for Peterborough outlined in the UDF, lots with existing dwellings as well as unoccupied lots within the existing town fabric can be developed. This infill of existing residential area applies to the lots shown below.

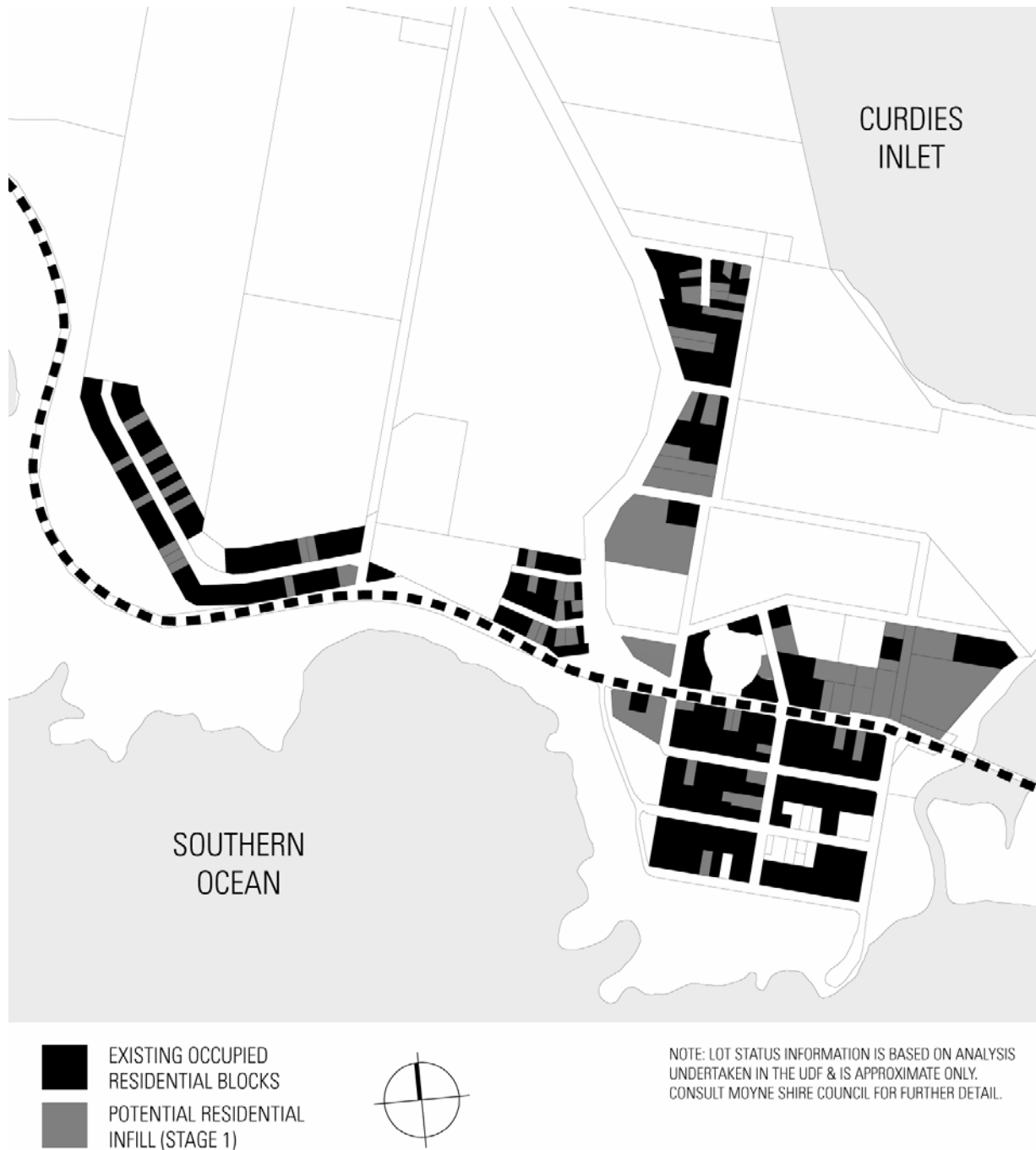


fig 4.1 Infill Development Zone

Infill Development

Objectives:

- To integrate new built form into the existing fabric of the town without compromising character.
- To integrate new dwellings into existing streetscapes with appropriate dwelling frontages without compromising existing open spaces and views.
- To maintain the spaces and views between built form in residential streets.
- To encourage built form that is of appropriate size and density to the existing residential area.

Strategies:

<p>Lot Size</p> <ul style="list-style-type: none"> ▪ 'Old Peterborough' 	<p>Existing lot sizes vary greatly through the town. Limits on new subdivided lots are defined under the relevant NCZ. Where surrounding lots are larger than NCZ limits, new subdivided lots should be of a similar order.</p> <p>As an example, a number of blocks from the original town survey remain which are around 2000m² in size. These original blocks have generally been subdivided into two parts, of around 1000 m² each. Where original lots are proposed for division in 'Old Peterborough' this strategy should be continued to provide two large residential lots (of approx. 1000m²).</p>
<p>Lot Subdivision</p>	<p>Subdivision of land in existing residential areas should be perpendicular to the street they abut, so that all lots have significant street frontage, with corner sites addressing both streets.</p>
<p>Street Setback</p>	<p>In contributing to a homogenous streetscape, front setbacks of new buildings should also strongly relate to those surrounding them. Hence, street setbacks of infill development may vary from the NCZ limit where those of adjacent properties are less.</p>
<p>Street Frontage</p>	<p>All new dwellings should address the street on which they are located. Where division of built form occurs, this should occur perpendicular to the street of open space which they abut.</p>
<p>Side Setbacks</p>	<p>Where existing adjacent properties significantly infringe upon side setbacks, the width of a new built form may be compromised. Here, new dwellings should aim at providing at least one significant view corridor of minimum 5m to one side of the new built form with 3m to the other.</p>

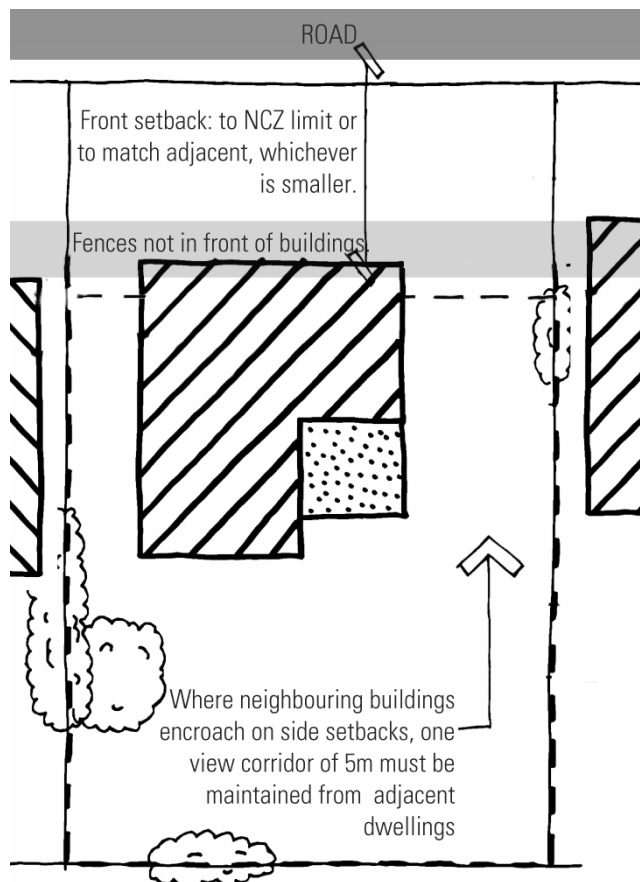
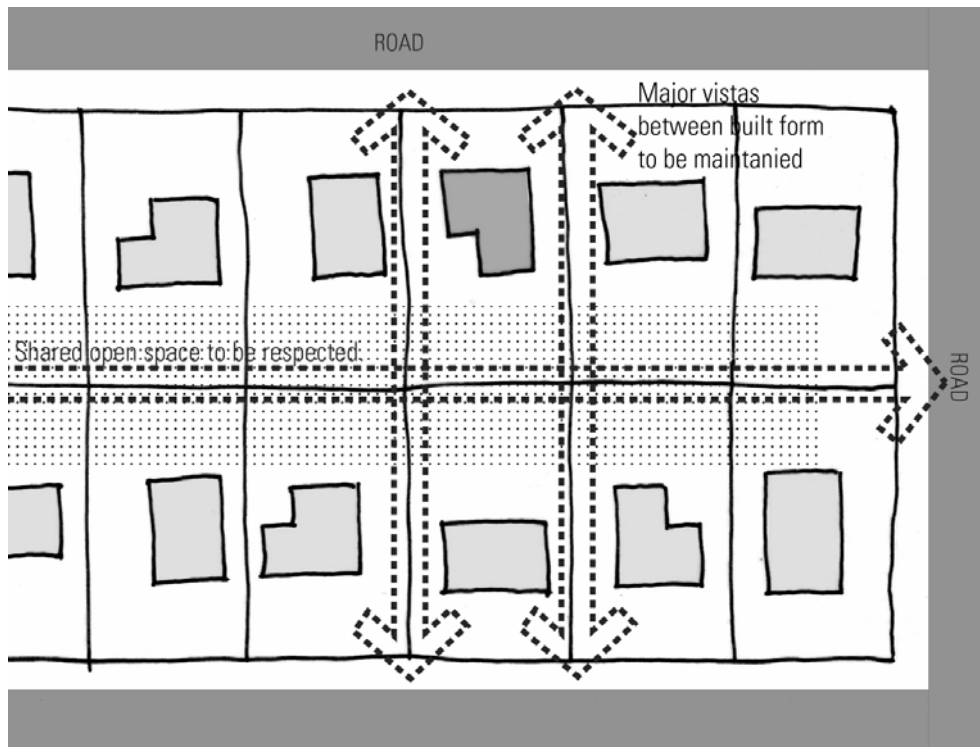


fig 4.2, Infill Development Principles

New Subdivision on 'Greenfield Sites'

As an expansion to the existing residential areas of Peterborough, land outside the existing built fabric is identified for expansion of residential areas. These 'Greenfield Sites' are located between the three existing areas of development in the town and are divided into three areas for a staged development and expansion of the town. 'Stage 1' can occur simultaneous to Infill Development.

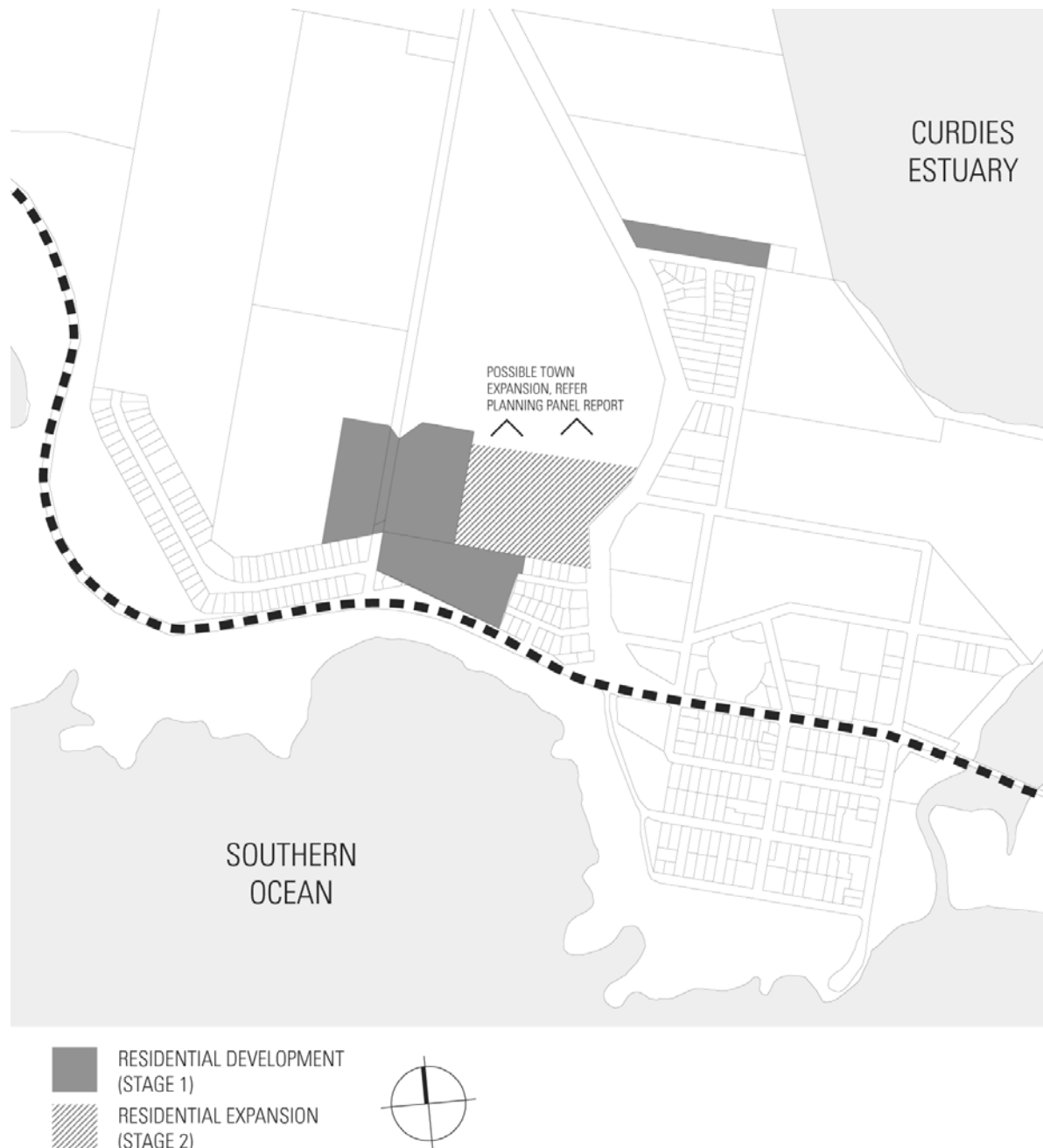


fig 4.3, Greenfield Subdivision Zone



New Subdivision on 'Greenfield Sites'

Objectives:

- To guide new development that reflects the existing character of the town.
- To encourage open and informal streetscapes which reflect the coastal character of the town.
- To connect new developments with the existing street and pedestrian networks of the town.
- To protect natural landscape features through the development of habitat zones and generous public open space networks that serve pedestrian networks.
- To utilize and enhance views towards the agricultural hinterland [north], surrounding estuary [east] and state and national parks.
- To allow informal and open streets, with views from these out into the landscape.
- To maintain the spaces and views between built form in residential streets.

Strategies:

Street and Pedestrian Network	<ul style="list-style-type: none"> ▪ An open layout and interconnected network of streets should be provided, without cul-de-sacs. ▪ Streets should be well integrated with the existing street network. ▪ Where appropriate, streets should be laid out parallel and perpendicular to views to the estuary (primarily to the north-east). This will enable streetscapes to frame views and multiple houses to benefit from these vistas. ▪ Where sinkholes exist, streets should be laid out to provide for a maximum number of lots to abut these. ▪ Development should acknowledge future growth by providing for pedestrian and habitat linkages that align with key landscape features.
Public Open Space	<ul style="list-style-type: none"> ▪ Habitat Corridors should be developed within all new developments, with the use of indigenous landscape guides defined by Moyne Shire Council. ▪ Limestone sinkholes and other significant landscape features defined by Moyne Shire Council should be maintained and utilized as public open space and habitat zones. ▪ Habitat zones and open space corridors should be developed to accommodate key desire lines for pedestrian movement and should ensure new and existing areas of the town are well connected.
Lot Division <ul style="list-style-type: none"> ▪ Lot Size 	<p>The arrangement of streets and blocks in new subdivisions should respond to landscape features and highlight views from and towards the surrounding rural and coastal areas. These should focus on the agricultural hinterland [north], surrounding estuary [east] and national parks.</p> <p>In developments where public open space and habitat zones exceed 5% of the development area this area in excess of 5% can be included as dispensation to average lot sizes.</p>

5. SITE SPECIFIC GUIDELINES

Properties Abutting Sinkholes

Where possible, subdivision should occur so that numerous properties abut sinkholes, generally at the property's rear. The sinkhole will act as a natural 'habitat zone' encouraging native flora and fauna and will be a shared feature for all properties around it. Existing examples of this can be seen around the town.

Buildings should address both the street they are on and the landscape feature. This address should be open and informal. Buildings should have **a minimum setback of 15m from the sinkhole's edge**. Fences are discouraged and should not block views between dwellings and the feature. Instead developments should use landscaping or built form decisions to enable the protection of outdoor zones from weather. Fencing will only be supported in extreme circumstances.

Where included as part of a town trail network, adequate informal reserve should be provided so that pedestrians can access the sinkholes and walk around one side of them. For this purpose, **a strip of at least 5m should be maintained around a sinkhole's edge**.

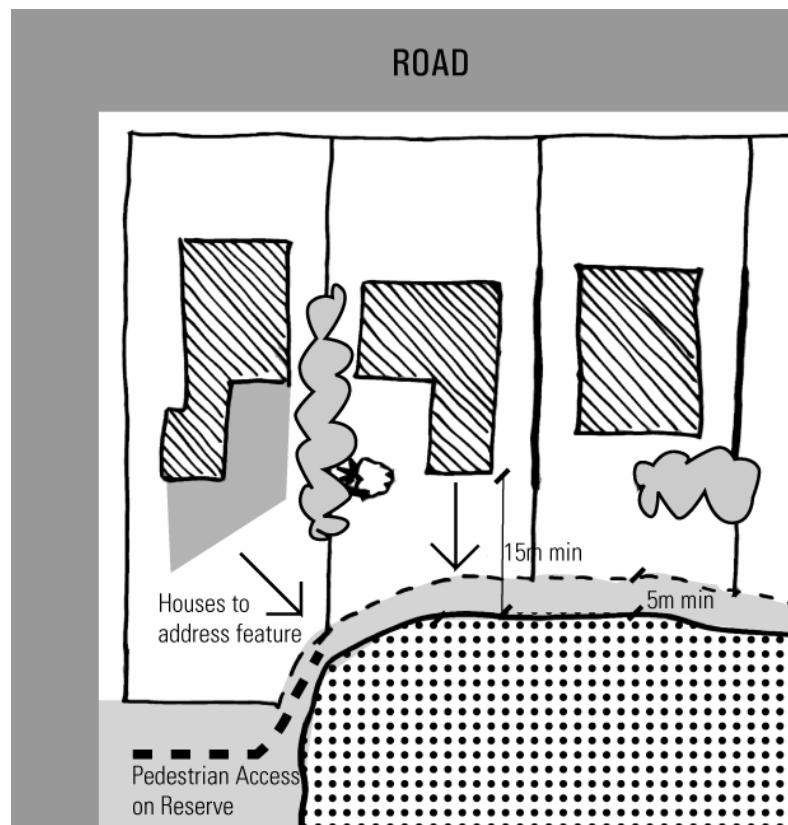


fig 5.1, Treatment of Sites Abutting Sinkholes

Corner Sites in 'Old Peterborough'

A number of residential lots from the original Peterborough town survey remain. These lots are large, around 2000m² in size and a number of these occur on corner sites. Where subdivision of these lots occurs, it should be into two, in accordance with infill development guidelines.

The division of these blocks should be done so as to address the streets on both sides. Where possible, **the new boundary line should run perpendicular to the short side of the block**, so that each new lot fronts this street. This will maintain a wide frontage to the street running east-west. It will further activate the street running north-south.

Street setbacks should be consistent around both blocks. **Two-storey dwellings are encouraged on the resulting corner blocks.** These will act as visual focal points within the central residential area of the town.

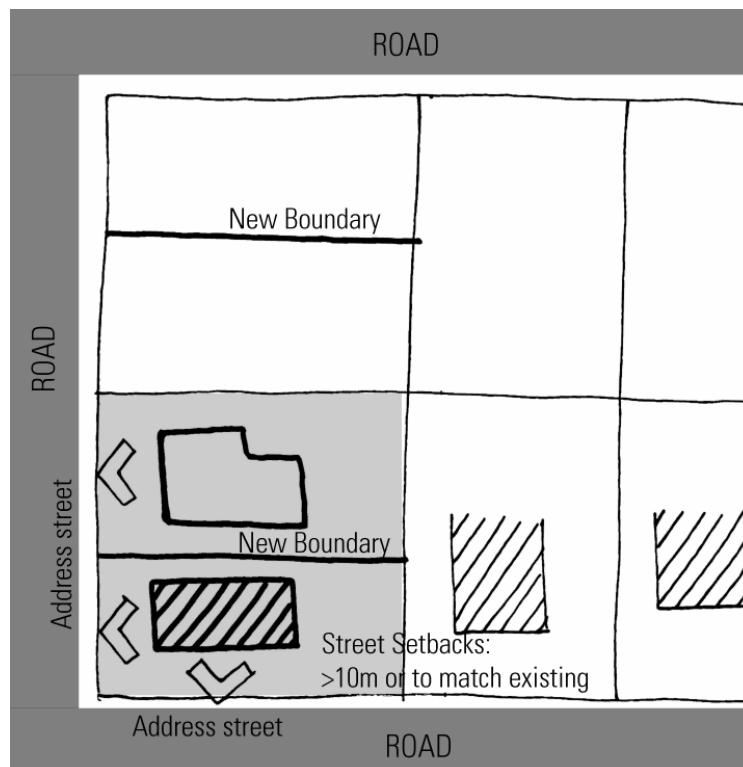


fig 5.2, Treatment of Corner Sites in Old Peterborough



Dwellings Abutting the Golf Course

Some dwellings on Schomberg Road, Mac's Street and Halladale Road face the Peterborough Golf Course and may be hit by wayward golf balls.

Dwellings in this area may wish to consider the installation of safety glazing material.

Sites Abutting 'The Great Ocean Road'

The 'Great Ocean Road' tourist route runs through Peterborough, the road surface surrounded by reserve of indigenous landscaping. Where residential properties abut this, the planting strategy should be fully integrated with the lots through the continuation of plant types and heights onto private properties. Fences are not permitted along this interface, and planting should be used as a visual and acoustic screen from the traffic on this route.

Building should be sited to address the road and reserve. Transitional terrace, verandah and balcony zones to these public abutments are encouraged. Blank, unbroken walls will not be permitted.



APPENDIX 1.

Urban Morphology of Peterborough

Background

The Planning Panel Report, following the UDF, recommended that the unique urban character of Peterborough justified a town specific set of residential guidelines for future development. These guidelines were to ensure that the modest scale and footprint of built form within the landscape and special coastal setting vernacular were retained.

Methodology

The approach of MGS has been to map the characteristics of existing settlements as a basis for determining appropriate characteristics for new dwellings. Where the relationship of building footprint to site context has been a key determinant of character, as is the case at Peterborough, this has been a key consideration. Other characteristics include the scale of footprint, street frontage and street setback. New guidelines have a stated goal of maintaining character while enabling the township to increase densities and develop greater housing diversity.

Findings

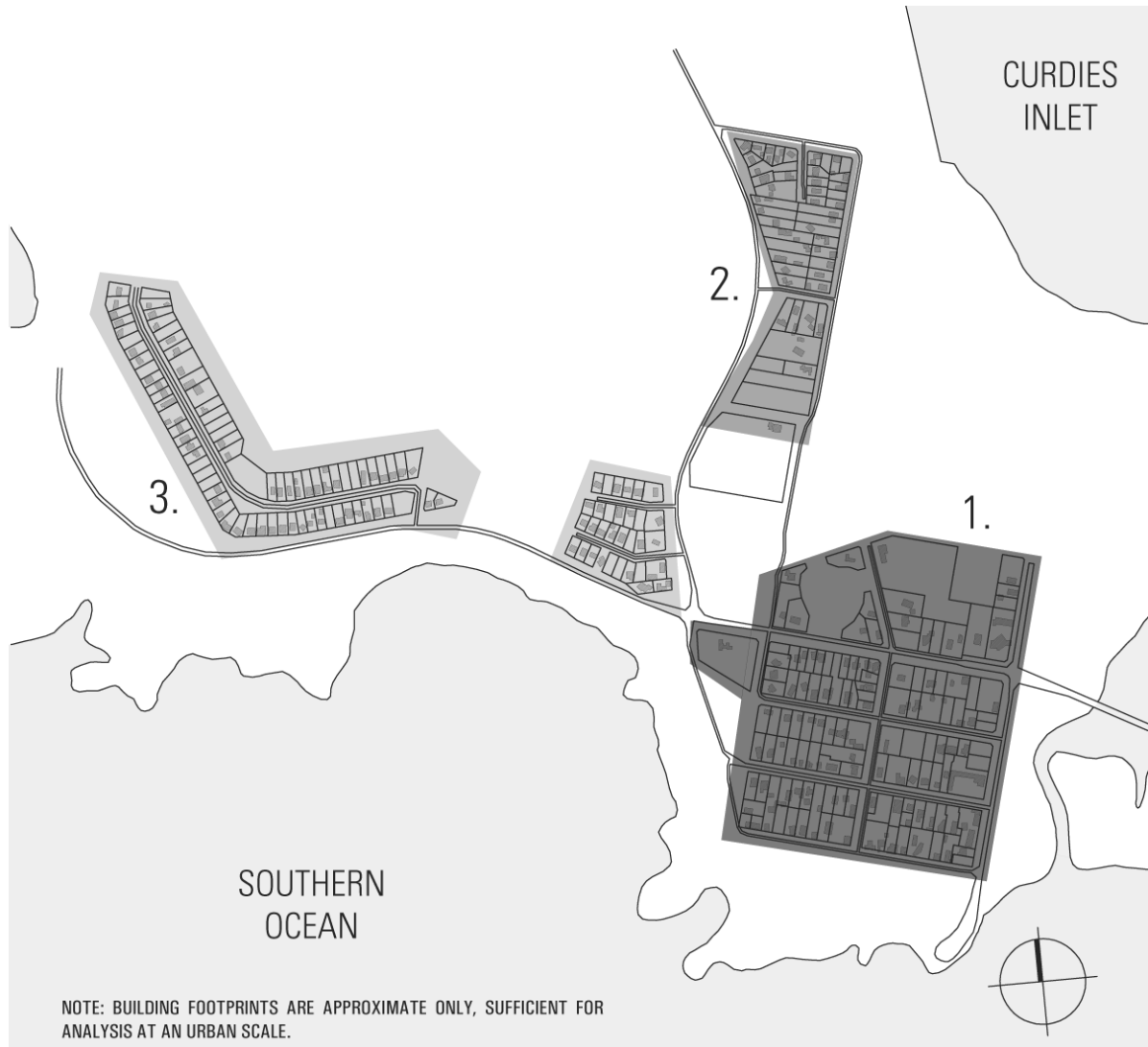
The urban form of the town was analysed with regard to existing patterns of settlement. This has seen three major stages of development outlined in the UDF (pg. 27):

- The 'old' township of Peterborough, on either side of the Great Ocean Road east of Old Peterborough Road,
- 'Little Peterborough' extending north of the Great Ocean Road and Irvine Reserve between Old Peterborough and Halladale Roads, and
- Linear development along the Great Ocean Road west of the Old Peterborough Road, including Childers, Casino and Merrett Streets.

The findings are tabulated in Figure 6.1.

Conclusion

The analysis indicates very low levels of site coverage that have enabled the natural landscape and streetscape pattern to remain dominant. The guidelines have been prepared to facilitate an additional 150 lots within the existing town fabric, with additional land to the north of approximately 12 hectares. This represents the potential to approximately double the housing stock of 254 in the town, thereby addressing both DSE objectives for facilitating growth and diversity whilst also managing the equally important objective of maintaining an appropriate township character and interface with an environment of high national significance.



	Built form coverage of residential area	Ave. dwelling footprint	Dwelling setback from street	Ave. street frontage of dwelling	Ave. break in built form on adjacent blocks
1. 'Old' town settlement	20%	Up to 25%	10m	10-12m	7-8m
2. 'Little Peterborough'	25%	Up to 30%	10-14m	10-12m	6-8m
3. Linear development along Great Ocean Road	25%	30%	10-25m	12m	5-6m

APPENDIX 2.

Recommended Landscape Plants for Peterborough & Common Environmental Weeds.

Prepared by Bartholomew Gane (Moyne Shire Council), with reference to Sparrow and Pritchard (2004) *Plants of the Great South West*, Society for Growing Australian Plants Warrnambool and District Group Inc, and *The Indigenous Plants of Moyne Shire*, Moyne Shire Council.

NOTES

Use local provenance material

Local provenances from specialist nurseries should be selected to prevent cross-pollination of 'commercial' varieties with local remnant vegetation. Specialist propagators require a lead time of around 6 months for most tube stock orders.

Check the quality of nursery stock

Always check nursery stock for evidence of excessive root spiraling. (Simply tap out the plant root-ball and look for evidence of excessive matting.) This is particularly important for trees. Trees will fail if there is excessive canopy growth in comparison to the root system area. These plants cannot obtain enough water to supply the canopy and consequently remain stunted or die of drought stress.

Maintenance of new plantings

New plantings require a prepared planting bed, regular deep watering and a soil area free from root competition. Before planting remove grass from a wide area around the base of young plants and apply a layer of varied diameter mulch to the bare soil (around 70 mm in depth). Keep the root zone mulched and weed free until new plantings are mature.

RECOMMENDED TREES

BOTANICAL NAME	COMMON NAME	HABIT	COMMENTS
<i>Acacia melanoxylon</i>	Blackwood	Locally, a stubby upright, irregular broad headed tree, 3 – 20 m	Highly variable, but generally scrubby near the coast. Green phyllodes with rough dark bark and pale yellow ball flowers.
<i>Allocasuarina verticillata</i>	Drooping Sheoak	Ungainly when young, but maturing to an elegant broad headed pendulous form, 6 – 12 M	Fine blue-grey branchlets with rusty orange flower stems and decorative prickly cones. Tolerates extreme exposure.
<i>Banksia marginata</i>	Silver Banksia	Mounding, with a spreading canopy, prostrate to 7m	Fine foliage with silver undersides and slight serrations. Golden, stubby cylindrical –candles. Slow growing, but a fine small

			tree with high salt wind tolerance.
<i>Eucalyptus obliqua</i>	Messmate Stringybark	Mallee-form near the coast and locally 6 to 30m	Fissured fibrous bark with strongly scented foliage and creamy flowers.
<i>Eucalyptus ovata</i> var. <i>ovata</i>	Swamp Gum	Upright, pendulous and often multi-trunked locally, 8 – 25 m	Smooth light bark, peeling near base. Slightly pendulous with scented wavy- edged foliage. Tolerates wet soils.

RECOMMENDED SHRUBS

BOTANICAL NAME	COMMON NAME	HABIT	COMMENTS
<i>Acacia verticillata</i>	Prickly Moses	Rambling loose horizontal form, stiffening with age to 1 – 5 m	Fine needle-like foliage along branchlets. Off-yellow tubular flower heads. Attracts ground-dwelling birds.
<i>Acacia myrtifolia</i>	Myrtle Wattle	Upright stiff form, sprawling with age, 0.5 – 2m	Decorative thick sickle-shaped foliage with reddish new growth and bright yellow clusters of ball flowers.
<i>Atriplex cinerea</i>	Coast Saltbush	Upright and rounded to 2 m	Fast growing with silvery colouring and purple-red terminal flower clusters. Extremely tolerant of front-line coastal exposure.
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	Upright narrow form with a spreading crown to 2 -6 m	Thrives in wet soils. Soft, fine, bluish-green foliage with cotton-like masses of white flower heads.
<i>Leptospermum continentale</i>	Prickly Tea-tree	Horizontal woody shrub to 1 – 4 m	Papery upright stems, with scented prickly foliage and masses of white flowers.
<i>Leucopogon parviflorus</i>	Coast Beard Heath	Stunted woody heath to 1 – 4 m	Brittle dark fissured trunk with branching stems, fine foliage and masses of creamy-white flowers.
<i>Goodenia ovata</i>	Hop Goodenia	Rounded form up to 2m	Glossy bright green foliage with yellow flowers throughout spring-summer, and occasionally throughout the year. Best with some protection. Very fast growing.
<i>Solanum laciniatum</i>	Kangaroo Apple	Rounded upright shrub	Fast growing colonizer with dissected dark green leaves, purple stems, blue flowers and orange egg-shaped fruit.
<i>Olearia axillaris</i>	Coast Daisy-bush	Rounded, stiffening with age to 2 m	Silvery grey foliage with pale yellow flowers. Fine foliage and extreme coastal tolerance.
<i>Melaleuca squarrosa</i>	Scented Paperbark	Erect shrub to 2 – 4 m	Scrubby paperbark, with a strong myrtle scent and creamy, honey-scented bottlebrush flowers.

RECOMMENDED GROUNDCOVERS AND GRASSES

BOTANICAL NAME	COMMON NAME	HABIT	COMMENTS
<i>Acaena novae-zelandiae</i>	Bidgee Widgee	Dense mat	Dark glossy green foliage with spherical spiny seed-heads.
<i>Carpobrotus rossii</i>	Karkalla	Mat forming	Succulent with vivid magenta to lemon daisy flowers.
<i>Clematis microphylla</i>	Small-leafed Clematis	Loose clumping climber	Lime green shiny foliage with delicate feathery seed-heads. Tolerates extreme exposure.
<i>Correa alba</i> var. <i>pannosa</i>	White Correa compact form	Dense and compact to less than 1 m	Greyish green hairy foliage with a compact form and rusty brown stems. White star-shaped flowers with a pink form sometimes available.
<i>Correa reflexa</i> subsp. <i>reflexa</i>	Common Correa	Mounding low shrub to 1 m	Light green foliage with green bells.
<i>Dianella tasmanica</i>	Tasman Flax-lily	Strappy clump with rhizomes to 1 m	Linear, sword-like foliage with small purple lily flowers and lapis lazuli berries.
<i>Isopogon ceratophyllus</i>	Horny Cone-bush	Spiny clump to 1 m	Unusual sculptural form with a cone-like inflorescence.
<i>Kennedia prostrata</i>	Running Postman	Vigorous rambling mat or climber	Trifoliate dull green foliage with wiry stems and red pea flowers.
<i>Leucophyta brownii</i>	Cushion Bush	Mounding form to less than 1 m	A vivid silver 'cushion' of fine compact branchlets with pale globular flower heads. Tolerates extreme exposure.
<i>Ozmanthus turbinatus</i>	Coast Everlasting	Dense, upright rounded form to 2 m	Erect branchlets with crowded clusters of creamy flowers. Tolerates extreme coastal exposure.
<i>Patersonia occidentalis</i>	Long Purple-flag	Strappy clump to 0.8 m	Fine blade-like foliage with many heads of mauve iris flowers.
<i>Poa labillardierei</i>	Common Tussock Grass	Clump forming tussock to 1.8 m	Blue-green fine foliage with spectacular long purple tinged seed heads.
<i>Poa poiformis</i>	Coast Tussock Grass	Clump forming to tussock to 1 m	Blue-green waxy foliage. Tolerant of extreme exposure.
<i>Rhagodia candolleana</i> subsp. <i>candolleana</i>	Seaberry Saltbush	Sprawling, vigorous, matting shrub or climber	Rampant growing small off-green foliated shrub with succulent red fruit. Effective for covering large areas.
<i>Rubus parvifolius</i>	Native Raspberry	Wiry bramble	Twining and barbed native rose with small edible raspberries.
<i>Stylidium graminifolium</i>	Grass Trigger-plant	Small clumping rosette	Glossy, fine strappy leaves aging to red in autumn with a delicate spire of mauve-pink 'trigger' flowers. Highly ornamental.

<i>Themeda triandra</i>	Kangaroo Grass	Small clumping tussock grass	Rusty foliage in winter with green luxuriant summer growth. Purple-green to rusty triangular seed heads.
<i>Viola hederacea</i>	Native Violet	Low clump	Kidney-shaped foliage with purple to white violets on emergent stems.
<i>Xanthorrhoea australis</i>	Austral Grasstree	Fine tussock on a short stump with extreme age	Blue-green, fine needle-like foliage with a tall, woody spear-like flower spike of small creamy flowers.

RECOMMENDED WETLAND PLANTS

BOTANICAL NAME	COMMON NAME	HABIT	COMMENTS
<i>Carex appressa</i>	Tall Sedge	Spiny tussock to 0.6 m	Spiky textural seed heads with fine foliage.
<i>Ficinia nodosa</i>	Nobby Club-rush	Spiny tussock to 0.8 m	Vivid deep-green graceful needle-like foliage with decorative cream and brown globular flower heads. Tolerates sand soils and extreme exposure.
<i>Gahnia clarkei</i>	Tall Saw-sedge	Sprawling multi-stemmed clump to 1.5 – 4 m	Pendulous linear foliage with sharp edges. Charcoal pampas-like flower-heads interspersed with shiny bright red visible seeds. Dramatic architectural form.
<i>Gahnia radula</i>	Thatch Saw-sedge	Rhizomatous tussock to 1 – 2 m	Fine spreading kaki foliage with clumping stems of rusty seed-heads.
<i>Juncus pallidus</i>	Pale Rush	Stiff clump to 2.2 m	Long rounded sharp stems from a central clump with rusty brown textured seed-heads. Dramatic architectural form.
<i>Lepidosperma gladiatum</i>	Coast Saw-sedge	Rhizomatous tussock to 1 m	Flattened sword-like glossy green foliage with large brown seed-heads.
<i>Lomandra longifolia</i> subsp. <i>longifolia</i>	Spiny-headed Mat-rush	Strappy tussock to 0.3 m – 0.7 m	Strappy pale green foliage with attractive spiny green flower stems. Widely used by the landscape industry.
<i>Schoenoplectus pungens</i>	Sharp Club-rush	Rhizomatous tuft to 0.6 m	Robust stout stems with bluish leaf bases.
<i>Triglochin procera</i>	Water Ribbons	Emergent strappy aquatic	Glossy green rounded straps with attractive emergent flower-heads. Foliage floats on the surface of still or moving water.

COMMON ENVIRONMENTAL WEEDS OF MOYNE SHIRE

Common Name	Species Name
Cootamundra Wattle	<i>Acacia baileyana</i>
Cape Wattle	<i>Paraserianthes lophantha</i>
Radiata Pine	<i>Pinus radiata</i>
Sweet Pittosporum	<i>Pittosporum undulatum</i>
Willow	<i>Salix species</i>
Mirror Bush	<i>Coprosma repens</i>
Cotoneaster	<i>Cotoneaster glaucophyllus</i>
Hawthorn	<i>Crataegus monogyna</i>
Common Broom	<i>Cytisus scoparius</i>
Spanish Heath	<i>Erica lusitanica</i>
African Boxthorn	<i>Lycium ferocissimum</i>
Cape Honey-flower	<i>Melianthus major</i>
Myrtle-leaf milkwort	<i>Polygala myrtifolia</i>
Italian Buckthorn	<i>Rhamnus alaternus</i>
Sweet Briar	<i>Rosa rubiginosa</i>
Blackberry	<i>Rubus fruticosus species</i>
Gorse	<i>Ulex europaeus</i>
Cape Broom	<i>Genista monospeulana</i>
Flax-leaf Broom	<i>Genista linifolia</i>
Asparagus Fern	<i>Asparagus scandens</i>
Cape Ivy	<i>Delairea odorata</i>
English Ivy	<i>Hedera helix</i>
Blue Periwinkle	<i>Vinca major</i>
Montbretia	<i>Crocsmia x crocosmiiflora</i>
Harlequin Flower	<i>Sparaxis bulbifera varieties</i>
Bulbil Watsonia	<i>Watsonia meriana var. bulbifera</i>
Agapanthus	<i>Agapanthus praecox ssp. orientalis</i>
Agave	<i>Agave americana</i>
Fennel	<i>Foeniculum vulgare</i>
Freesia	<i>Freesia alba x Freesia leichtlinii</i>
Gazania	<i>Gazania species</i>



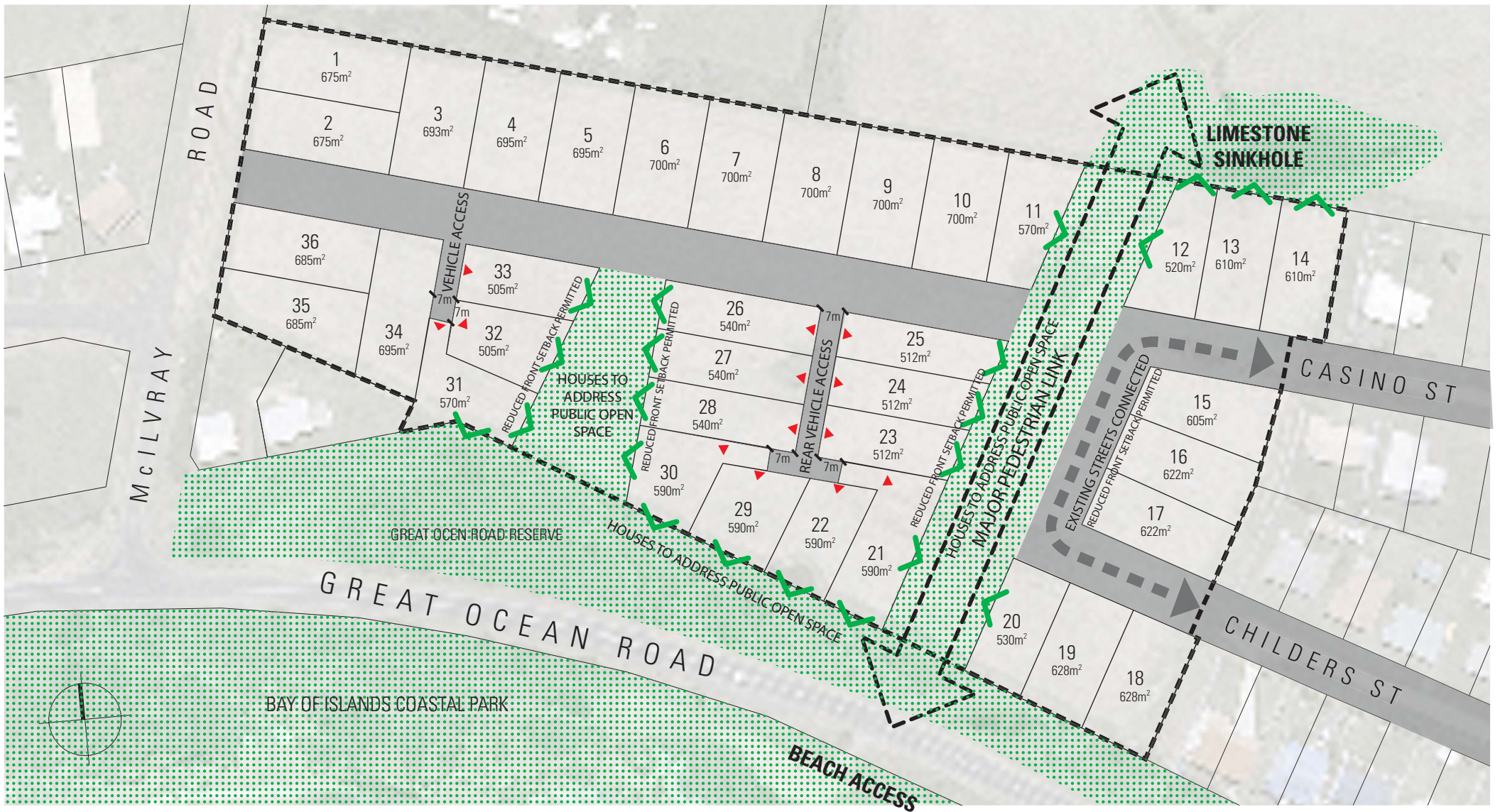
Ixia	<i>Ixia maculata</i>
Purple Groundsel	<i>Senecio elegans</i>
Ragwort	<i>Senecio jacobaea</i>
Marram Grass	<i>Ammophila arenaria</i>
Pampas Grass	<i>Cortaderia selloana & Cortaderia jubata</i>
Chilean Needle-grass	<i>Nassella neesiana</i>
Fountain Grass	<i>Pennisetum setaceum</i>



APPENDIX 3.

Antares Estate Subdivision – Indicative Schematic Design

A schematic design for the Antares Estate has been developed by MGS Architects. This applies strategies from the UDG to develop existing proposals to comply with the vision and direction of the guidelines. This should be considered as an indicative approach for future 'greenfield subdivision'.



- PROPOSED ROADWAY
- PUBLIC OPEN SPACE (P.O.S.)
- HOUSE ADDRESS TO P.O.S.
- REAR VEHICLE ACCESS TO DWELLING

KEY DESIGN PRINCIPLES:

- (1) THE CONSOLIDATION OF OPEN SPACE.
- (2) TO INTEGRATE LANDSCAPE FEATURES WITH PUBLIC OPEN SPACE AND INTEGRATE WALKING NETWORKS WITH KEY PEDESTRIAN DESIRE LINES.
- (3) TO LINK AND CONNECT NEW ROADS WITH EXISTING ROAD NETWORKS
- (4) AN AVERAGE LOT SIZE OF NOT LESS THAN 500 SQ.M.
- (5) TO APPORTION CREDIT FOR PUBLIC OPEN SPACE IN HABITAT CORRIDORS EXCEEDING 5% OF SITE AREA WITH SMALLER LOT REQUIREMENTS AT ABUTMENTS.
- (6) REDUCED FRONT SETBACK PERMITTED TO DWELLINGS ABUTTING PUBLIC OPEN SPACE.

TOTAL SITE AREA: 32270 m²
 TOTAL ROADWAY AREA: 5750 m² (18% OF SITE)
 NEW PUBLIC OPEN SPACE: 4728 m² (14.5% OF SITE)
 EXCESS PUBLIC OPEN SPACE (> 5% OF TOTAL SITE): 3114 m²

TOTAL LOTS: 36
 TOTAL AREA RESIDENTIAL LOTS: 21174 m²
 AVERAGE LOT SIZE: 594 m²
 AVERAGE LOT SIZE INCLUDING EXCESS P.O.S.: 681 m²



APPENDIX 4.




Key Sites for the Development of the Public Realm

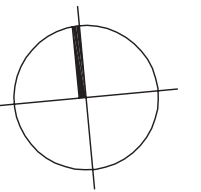
Schematic design direction has been directed for key sites around Peterborough. This is intended to provide a framework for the improvement of the public realm, including the development of a pedestrian network and community facilities, while allowing the expansion and diversification of commercial facilities in Peterborough as desired.



KEY SITES FOR PEDESTRIAN CONNECTIONS:

1. A CONNECTION THROUGH NEW 'GREENFIELD SITES' CONNECTING SIGNIFICANT SINKHOLES AND NEW STREET NETWORKS.
2. THE CURDIES ESTUARY WITH THE POTENTIAL TO UPGRADE AND IMPROVE INDIGENOUS, HISTORICAL AND MARITIME INFORMATION. TO BE COORDINATED WITH THE CURDIES CATCHMENT AUTHORITY.
3. THE BOAT RAMP, DOREY STREET.
4. 'TOWN CORE, MACS STREET AND FORESHORE AREAS. CONNECTION IN TOWN WILL OCCUR AROUND STREETS.
5. BAY OF ISLANDS NATIONAL PARK. A CONNECTION WITH THE EXISTING TRAILS IN THE PARK.

-  SITE FOR IMPROVED PEDESTRIAN ROAD CROSSING
-  EXISTING PEDESTRIAN PATHWAY
-  POTENTIAL PEDESTRIAN PATHWAY
-  GREAT OCEAN ROAD TOURIST ROUTE
-  AREAS FOR FOR COORDINATION WITH PARKS VICTORIA AND CATCHMENT AUTHORITY.



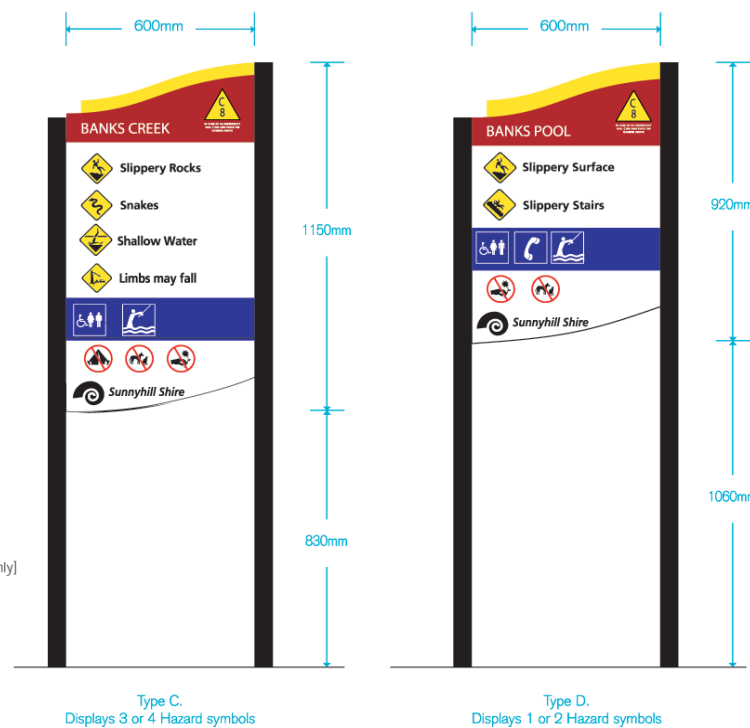


TRAILS above: Examples of informal dirt tracks straddled by indigenous planting. Track surface is loose stone or soil.



left: Stone bench located at 'The Lookout' in Peterborough.
above: Example of historic stone bench from the local area.

STONE BENCHES



Level 3
Access Signs

[Dimensions shown are a guide only]



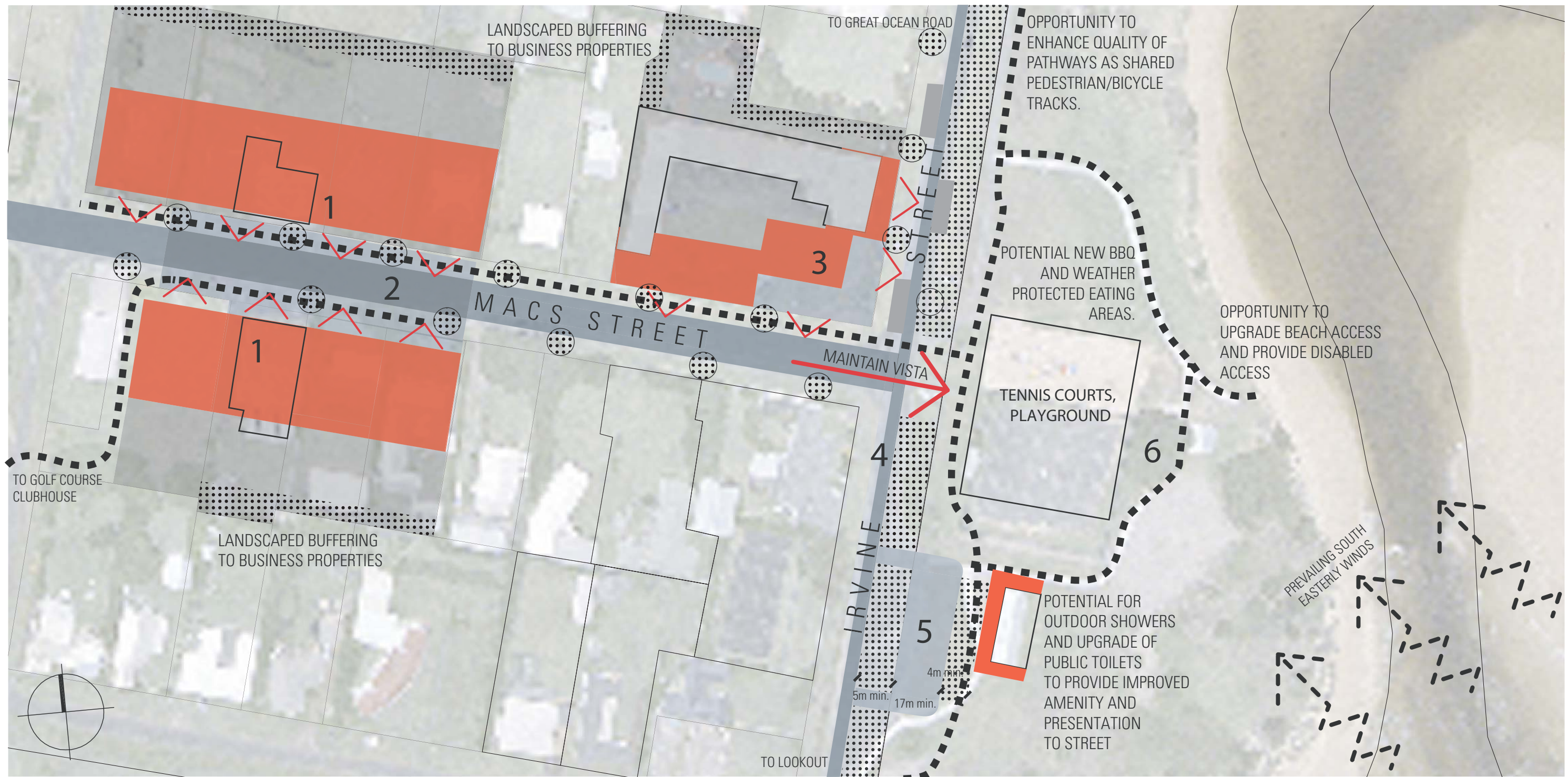
Level 4
Individual Hazard
and Regulation Signs



Examples of timber routed signs and timber post place markers. Historically widely used types by Parks Victoria, currently in use in low yield Parks Victoria sites around Peterborough.

SIGNAGE above: Examples of risk and aquatic signage standards used by Surf Living Saving Victoria and Parks Victoria. Double-post signs around Peterborough to have straight top and bottom edges. (source: Aquatic and Recreational Signage Guide, Style Manual, Surf Life Saving Victoria, 2001)

TRAILS, STONE BENCH AND SIGNAGE STANDARDS

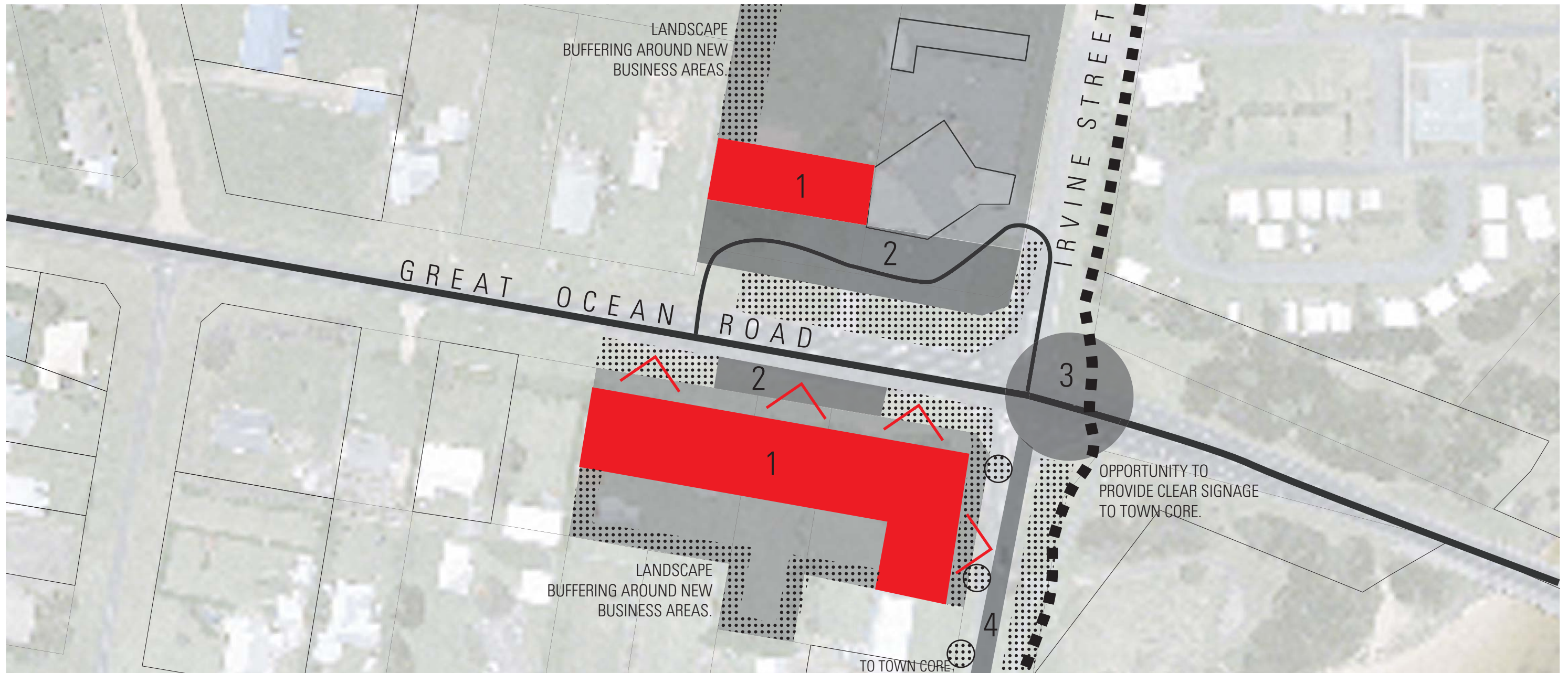


1. **MACS STREET SHOPS.** THE UPGRADE AND DIVERSIFICATION OF SHOPS & COMMUNITY SERVICES TO ENHANCE PRESENTATION & INTERACTION WITH STREETS & STRENGTHEN TOWN CORE IDENTITY. NEW SHOPS TO INCLUDE AWNINGS, SHOPFRONTS AND PEDESTRIAN PROTECTION..
2. **MACS STREET TREATMENT.** THE TREATMENT OF THE ROAD SURFACE & LANDSCAPING TO MARK THE TOWN BUSINESS CORE. FOOTPATHS AND ANGLE PARKING TO BE PROVIDED TO SHOPS AND PROVIDE LINKS TO IRVINE STREET.
3. **CAFE ON MOTEL SITE.** THE DEVELOPMENT OF A CAFE TENANCY ON THE CORNER OF MACS AND IRVINE STREET. CAFE TO OPEN ONTO BOTH STREETS AND OVERLOOK 'THE GAP' FORESHORE RESERVE.
4. **IRVINE STREET.** THE IMPROVEMENT OF STREET AMENITY THROUGH WIND PROTECTION ENHANCEMENT ON AVENUE QUALITY PROVIDED BY IMPROVED LANDSCAPING. ENHANCEMENT OF PEDESTRIAN ACCESS AND REALM THROUGH THE UPGRADE OF PATHWAYS AND KEY CROSSING POINTS THE SLOWING OF VEHICULAR TRAFFIC THROUGH THE NARROWING AND RAISING OF THE ROAD SURFACE AT KEY POINTS. LIMITED LOCAL CARPARKING PROVIDED AT KEY POINTS.
5. **FORESHORE CARPARKING.** THE REDEVELOPMENT OF EXISTING CARPARKING TO BE DOUBLE LOADED & INCLUDE DISBALED PARKS. NEW LANDSCAPING TO SOFTEN THIS FROM THE ROADWAY.
6. **UPGRADED FORESHORE FACILITIES.** IMPROVEMENTS TO BEACH AMENITY INCLUDING WEATHER PROTECTED SEATING AREAS, BBQ AND DISABLED ACCESS TO THE BEACH.

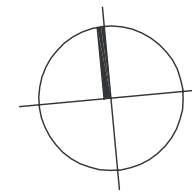
- BUSINESS 1 ZONES
- NEW ROAD / CARPARK TREATMENT
- NEW LANDSCAPE AREAS
- EXISTING BUILDINGS & FACILITIES
- PROPOSED BUILDINGS & FACILITIES
- PEDESTRIAN ROUTE

KEY SITES FOR DEVELOPMENT - TOWN CORE & FORESHORE





1. **GREAT OCEAN ROAD / TOURIST CARPARKING.**
UPGRADE EXISTING CARPARKING TO SCHOMBERG INN TO INCLUDE TOURIST BUS STOP. LANDSCAPING TO SOFTEN AND BREAK CARPARK EDGES FROM ROAD. NEW ANGLE PARKING TO BE INCORPORATED IN FRONT OF SHOPS SOUTH OF THE GREAT OCEAN ROAD.
2. **NEW GREAT OCEAN ROAD / TOURIST SHOPS.**
THE ESTABLISHMENT OF NEW BUSINESS ACTIVITY IN ONE & TWO LEVEL CONFIGURATION TO MAXIMUM 8m HEIGHT.
3. **TOWN ENTRY.**
TOWN ENTRY SIGNAGE AND IMPROVED PEDESTRIAN CROSSING OF THE GREAT OCEAN ROAD.
4. **IRVINE STREET.**
THE IMPROVEMENT OF PEDESTRIAN AMENITY AND AVENUE QUALITY THROUGH LANDSCAPING AND NARROWING OF ROAD SURFACE



- BUSINESS 1 ZONES
- NEW ROAD / CARPARK TREATMENT
- NEW LANDSCAPE AREAS
- EXISTING BUILDINGS & FACILITIES
- PROPOSED BUILDINGS & FACILITIES
- PEDESTRIAN ROUTE

KEY SITES FOR DEVELOPMENT - GREAT OCEAN ROAD

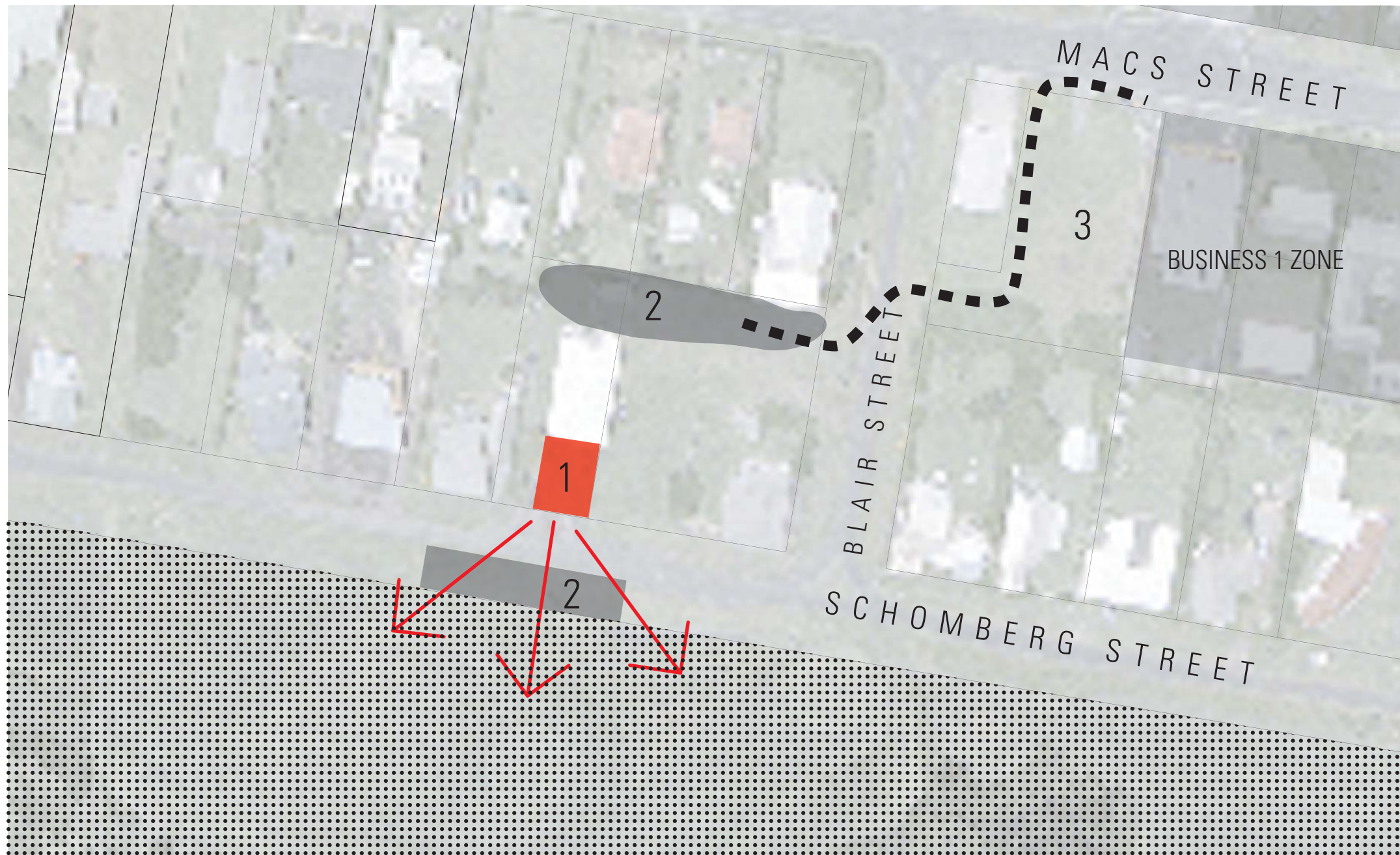
PETERBOROUGH UDG

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MAY '06

Moyne Shire Council

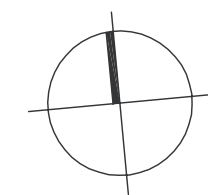




1. REDEVELOPMENT OF GOLF COURSE CLUBHOUSE AS A COMMUNITY FOCUS INCLUDING CLUB FACILITIES. POTENTIAL TO UPGRADE EXISTING GOLF CLUB FACILITIES WITH THE INCORPORATION OF AN UPPER-LEVEL MEETING & RECEPTION HALL FOR 100 PEOPLE, WITH IMPROVED PRESENTATION TO GOLF COURSE.

2. IMPROVEMENT OF CARPARKING FACILITIES. OPPORTUNITY TO PROVIDE LAND AS SHARED COMMUNITY AND GOLF COURSE CARPARK. POTENTIAL TO LOCATE THIS FACILITY BEHIND NEW CLUBHOUSE WITH CONNECTION TO BLAIR STREET. TOGETHER WITH THIS IS THE OPPORTUNITY FOR THE PROVISION OF SOME ANGLE PARKING TO BE FORMALISED ALONG SCHOMBERG STREET.

3. UTILISATION OF VACANT LAND. OPPORTUNITY TO UTILISE VACANT LAND ADJACENT TO CFA HALL. PRIMARY USE TO REMAIN AS CARPARKING WITH THE POTENTIAL FOR PUBLIC USE FOR KEY PURPOSES AND EVENTS.



1. EXAMPLE OF BUILDING TYPE: HOOPERS KIOSK, CHANDLERY AND SAILING CLASSROOM, ALBERT PARK. MGS ARCHITECTS

- BUSINESS 1 ZONES
- NEW ROAD / CARPARK TREATMENT
- NEW LANDSCAPE AREAS
- EXISTING BUILDINGS & FACILITIES
- PROPOSED BUILDINGS & FACILITIES
- PEDESTRIAN ROUTE

KEY SITES FOR DEVELOPMENT - GOLF COURSE CLUBHOUSE

PETERBOROUGH UDG

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MAY '06

Moyne Shire Council

