

LANDSCAPE REPORT

PROPOSED MIXED USE SUB DIVISION WEST CULBURRA

November 2012

FOR

REALTY REALISATIONS PTY LTD

Peter Phillips Landscape Architecture

4 Bindon Close Bomaderry NSW 2541

Ph: 0410040507 Fax: 02 44221310

Email: bindoncl@smartchat.net.au

ABN 32650344546

REV	DATE	REVISION DESCRIPTION	BY	CHK	APPD
A	03/12/2012	Issued for Comment		PP	PP
B	30/03/2013	Issued for Consent		PP/JT	PP

TABLE OF CONTENTS

1.0 INTRODUCTION.....	3
2.0 STREET AND AVENUE PLANTING.....	3
2.1 CULBURRA ROAD.....	4
2.2 COLLECTOR ROAD.....	4
2.3 VISTA AVENUES.....	7
2.4 RESIDENTIAL STREETS.....	7
3.0 FORESHORE RESERVE.....	9
4.0 BIO RETENTION BASINS AND SWALES.....	10
5.0 PUBLIC PARKS.....	12
6.0 LANDSCAPE PLAN.....	13

LIST OF FIGURES

1.0 CULBURRA ROAD	5
2.0 COLLECTOR ROAD.....	6
3.0 VISTA AVENUES.....	8
4.0 VISTA WALK CONCEPT.....	11
5.0 BIO RETENTION SWALES.....	14
6.0 TOWN PARK CONCEPT.....	15
7.0 NEIGHBOURHOOD PARK CONCEPT.....	16

1.0 INTRODUCTION

This Landscape Report has been prepared in conjunction with the plan of subdivision prepared by Allen Price and Associates (Plan 24505.30) reports by Mr John Toon, Martens and Associates Water Cycle Management Report and SLR Consulting Ecological and Riparian Issues and Assessment Report.

It is to support a Concept Plan to be submitted to the New South Wales Department of Planning for a Mixed Use Sub division located at Lot 61 DP 755971, and Lots 5,6 and 7 DP 1065111 Culburra Road West Culburra.

The report provides descriptions and conceptual themes for the landscape treatments to the proposed development and possible species selection for the concept plans. It is a result of the Director Generals Environmental Assessment Requirements.

It has been compiled with the information supplied by all other consultants at the time of writing.

Planting themes within the Culburra Township are a mixture of retained coastal vegetation and trees mixed with a variety of exotic tree species planting haphazardly. The township has no formal Street tree planting scheme with West Crescent being the only street with street tree planting. The species used here are *Araucaria heterophylla* (Norfolk Island Pines) which are planted extensively throughout the townships of the Shoalhaven region.

2.0 STREET AND AVENUE PLANTING

It has been recommended in the Ecological and Riparian Issues and Assessment Report, that due to the nature of the development and the existing flora, that the site will be cleared of all existing vegetation. When looking at the intended street layout, it would seem advantageous for this to occur and revegetate the site with appropriate plant species.

Native vegetation will envelope the site; with the coastal protection zone on the Crookhaven River banks being retained and protected, and the existing woodland

around the perimeter of the site will be retained. The landscape setting for the proposed sub division will reflect the coastal riverine character of the Culburra area. This will be reinforced by the strong vistas to the river from the development. Planting themes will be hardy yet vibrant native and exotic species to provide a coastal resort feeling to the development.

The streetscape of the sub division, due to the lot sizes and street widths, will allow for the planting of species that will not overly dominate the streets; but will enhance and define the building allotments providing a sense of community and balance with nature.

2.1 CULBURRA ROAD

This will provide the entry to the West Culburra sub division as well as the Culburra Township itself. At present there is no real sense of arrival into the town centre. The existing road meanders through bushland, and opens up at the industrial area of Culburra and moves into the town centre.

The section of Culburra Road from the intended roundabout to Canal Street will become an entrance boulevard. It will be planted with a species of tree that will provide a regal entrance to a coastal town. This tree species would be tall enough to provide an avenue planting to screen the intended buildings either side of the road in the medium density area of the development; a height of 25 metres is ideal for this. Species for consideration for this entry road could be:

- *Araucaria heterophylla* Norfolk Island Pine. This is an iconic tree seen in coastal towns in the Shoalhaven region and the South Coast. They are already present in Culburra in West Crescent. These would be the preferred species.
- *Corymbia maculate* Spotted Gum. The spotted Gum is a distinctive tree in the Shoalhaven and grows to 20-30 metres. It is an attractive and adaptive tree with spring flowers and a mottled trunk.
- *Lophostemon confertus* Brush Box. This would be an appropriate tree for this usage with the space to grow. It is common in many streetscapes in the Shoalhaven growing to 20 metres.

The intended roundabout has the potential to become an entry feature to the West Culburra site and to Culburra Township. There is ample space to create an entry that relates to the area not only with planting, but with sculpture and cultural articles that relate the nature and culture of the Culburra area. The roundabout will be planted with tree, shrub and groundcover species that indicate the cultural diversity of the township, with a mix of native and exotic species; similar to the township with local residents and “exotic” tourists and newer residents.

2.2 THE COLLECTOR ROAD

This will be the connecting artery of the sub division, and will be located on or near the ridge line; therefore it will be quite prominent. The intention will be to make this a tree lined avenue, which will become the major access route for both motor vehicles and pedestrians through a cycleway pathway situated on the southern side of the road. This cycleway will link the neighbourhood and the oval with the township of Culburra. It is intended to be reasonably wide (25 metres) to allow for planting to

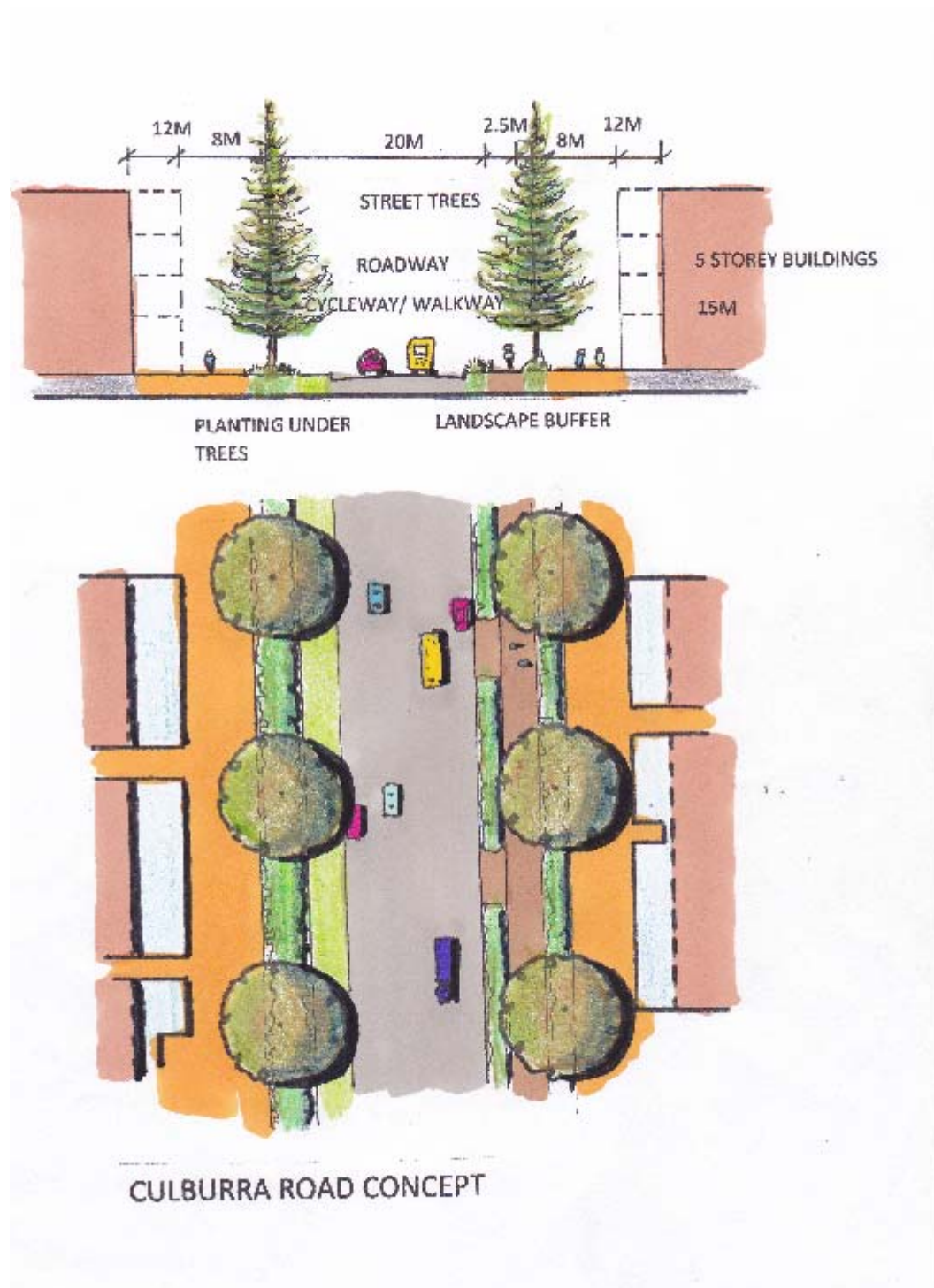


Figure 1. Culburra Road Concept Sketch

both sides of the road providing a canopy over the road and pathway for the length of the road. Planting beds would act as buffers to the road between the road and cycleway filled with native shrubs and groundcovers giving a structured lineage to the roadway. A grassed verge will be present on the northern side of the road to allow clear views from the intended houses.

Potential species for the avenue planting would be:

- *Platanus acerifolia* London Plane Cultivars Liberty or Yarwood. Both of these are a slightly smaller cultivar of the original London Plane and grow to 15 – 20 metres with a width of 10-11 metres. They will provide a good cover over the road without causing problems with services or structures.
- *Ulmus parvifolia* Chinese Elm. This is a spreading tree which will provide a continuous crown attaining 12 metres in height and 10-11 metres in width. They have, like the planes, an attractive trunk and are semi deciduous; allowing for some foliage cover in the winter months.
- *Calodendron capense* Cape Chestnut
- An evergreen option could again be the Brush Box (*Lophostemon confertus*) which would provide the necessary properties for this use.

2.3 VISTA AVENUES

The purpose of these avenues is to connect the neighbourhood with the natural settings. They will provide views of the Crookhaven River and Curleys Bay into the structured sub division, emphasising the relationship with the water and the landforms beyond (eg Coolangatta Mountain) to the estate. These avenues will be wide and open, giving unobstructed views to the water. They will be 25 metres wide. The selected tree species for these avenues will need to create a framework for the views and be aesthetically pleasing for much of the year. They must not be too large as to cause obstruction as well.

Potential species for these streets could be:

- *Angophora hispida* Dwarf Argyle Apple. This is a smaller species of angophora which grows to 6-7 metres. It is a small irregular tree with an unusual picturesque form which would relate to the coastal settings.
- *Hymenosporum flavum* Native Frangipani. This is an attractive evergreen tree to 10-12 metres with an open branching habit and fragrant tubular flowers, which are a spectacle in early summer/ late spring.
- *Elaeocarpus reticulatus* Blueberry Ash. An attractive native tree to 9 metres with flowers in early summer followed by small blue berries. It is native to the area and provides year round interest.

A deciduous alternative to these could be the ornamental pears *Pyrus calleryana* cultivars of Chanticleer and Valiant. These have an upright narrowly conical habit to 9 metres; ideal for planting where lateral space is limited. They both have masses of white flowers in spring and are spectacular in autumn with foliage colours of gold and crimson red.

2.4 RESIDENTIAL STREETS

These streets will be narrower than the vista avenues and will need to be treated differently; especially on the northern or lower sides of the roadway, where the bio retention swales will be located as outlined in the Martens and Associates Water Cycle Management Report, street trees will be planted in the bio-retention swales, one for each dwelling.

The southern verges of these streets will be grassed. This will provide a walkable section of the verge without interruption and allow for the location of services. It also allows for the location of lot driveways without interference to the tree roots in the future. Vistas to the water will still be present with the trees acting as a framework for these views. Garden planting will soften the street profile on the southern side of the street.

Trees on the northern side of the streets could be evergreen and again be small to medium trees with non- invasive root systems to be able to grow on the edge of the bio-swales. Potential species could be:

Banksia integrifolia Coastal Banksia;

Callistemon salignus Pink Tips Bottlebrush;

Corymbia citriodora Scentuous Dwarf Lemon Scented Gum;

Corymbia ficifolia cultivars Red Flowering Gums;

Elaeocarpus reticulatus Blueberry Ash;

Tristania laurina Luscious Water Gum;

Waterhousia floribunda Sweeper Weeping Lilly Pilly;

and some of the *Syzygium* cultivars Brush Cherries.

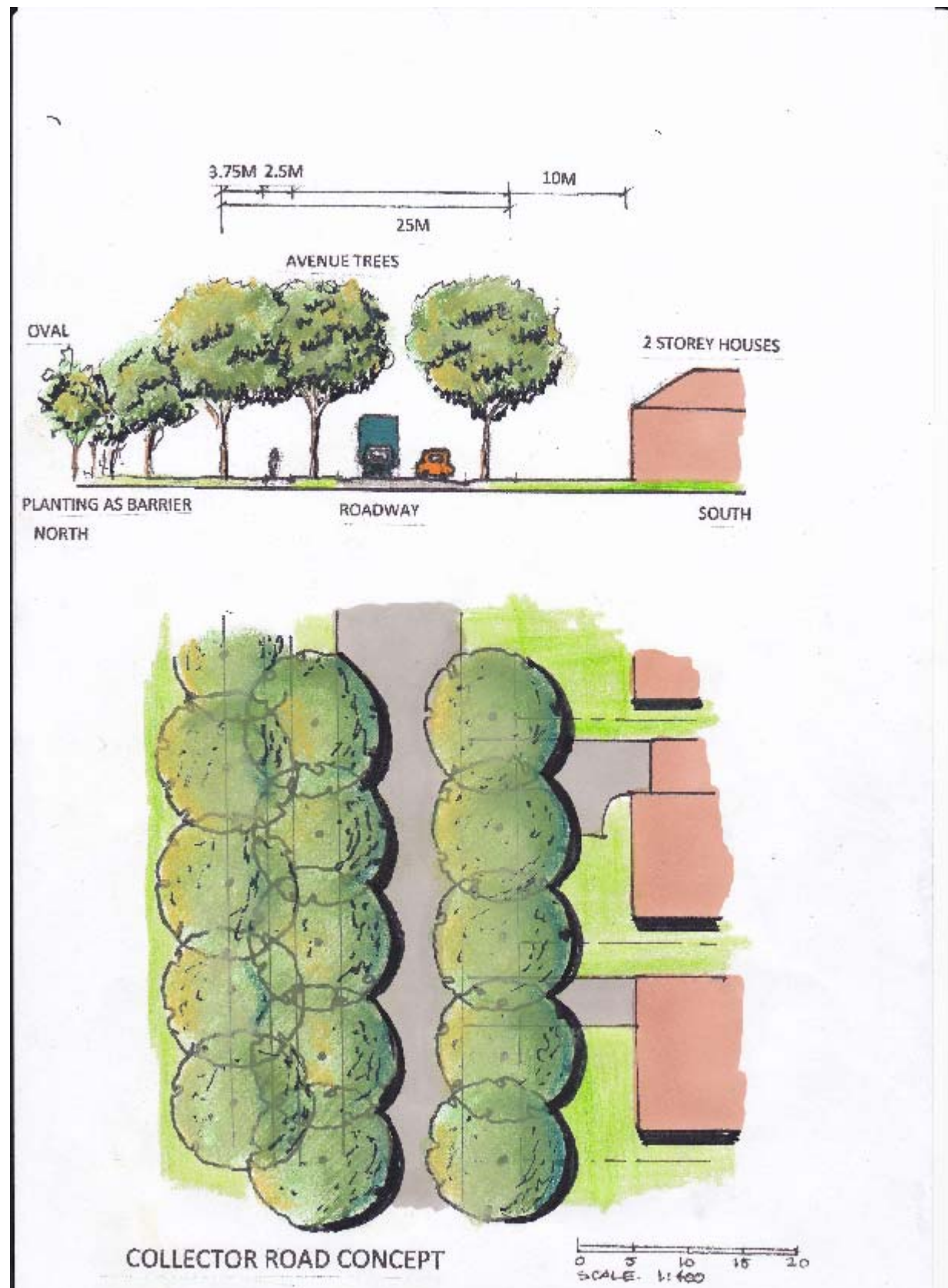


Figure 2. Collector Road Concept

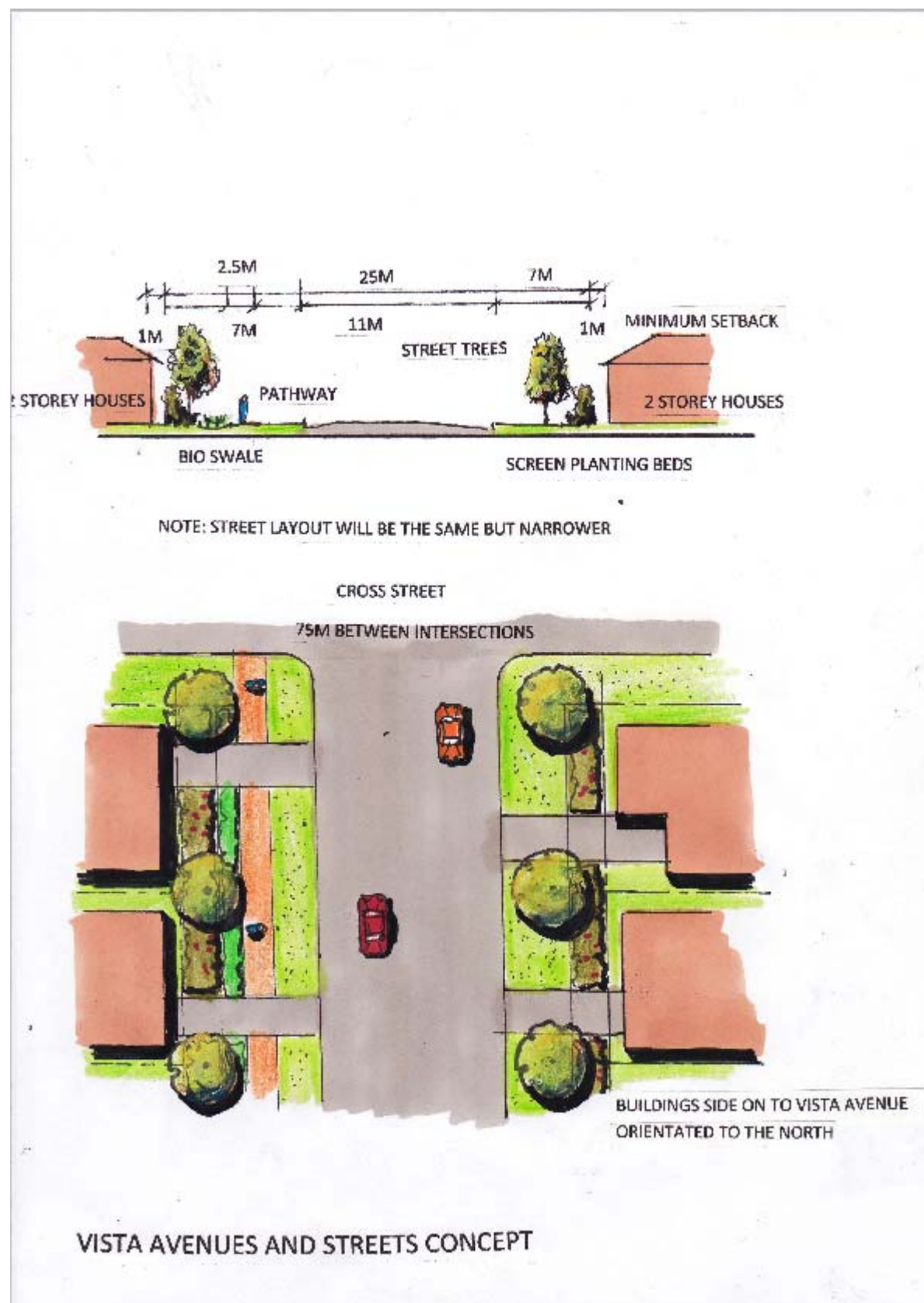


Figure 3. Vista Avenues and Street Concept

3.0 FORESHORE RESERVE

This area is the foreshore area of the Crookhaven River and Curleys Bay and is zoned 7(a) in the LEP and is classified as coastal protection. It will be retained as natural vegetation; but will be an integral part of a cultural and active waterfront. A walkway/ cycleway is planned from Canal Street to the western most perimeter of the sub division; a total length of approximately 3.7 kilometres. This pathway will become not only a walkway between the two end stations; but will be an informative pathway and an active exercise pathway for all who are interested. It is planned for an integrated system of informational plaques and boards interpreting aboriginal cultural and historical information. Included along the pathway will be fitness stations for the more active users to utilise.

Facilities will be included along the route for tourist use and local use; these will include cafes, restaurants Barbeque shelters and motels in the tourist allocated areas.

These facilities, and the walkway, will be carefully sited to prevent disturbance to the coastal zone planting and the cultural sites along the way; but still allowing access to the perimeter of the zone for regulated human use. Where space permits, open grassland spaces will be provided for passive and active recreation.

Part of this foreshore reserve will be the vista corridor and walk through the business zone of the development area. It will provide views of Curley's Bay from Culburra Road. It will be the beginning of the Foreshore Reserve pathway and will provide an open grassed corridor all the way to Curley's Bay. It will incorporate the pathway and open grassed areas into the natural existing vegetation which will be retained on the western side of the corridor. The eastern side will be flared and planted with limited tree and shrub species to provide a false perspective to Curley's Bay; creating a link between the town centre and the waters of the Crookhaven River.

4.0 BIO RETENTION SWALES AND BASINS

Water management will be a major design issue with the proposed sub division development. The Water Cycle Management Report by Marten and Associates details a system of bio retention swales and basins throughout the development area. These swales are used to both slow down and treat the flow of stormwater. This stormwater carries particulates from the roadways and house sites into the water system. The purpose of the bio retention swales is to help remove these particulates before they reach the Crookhaven River with its swamp forests and mangroves; and hence make the development more sustainable.

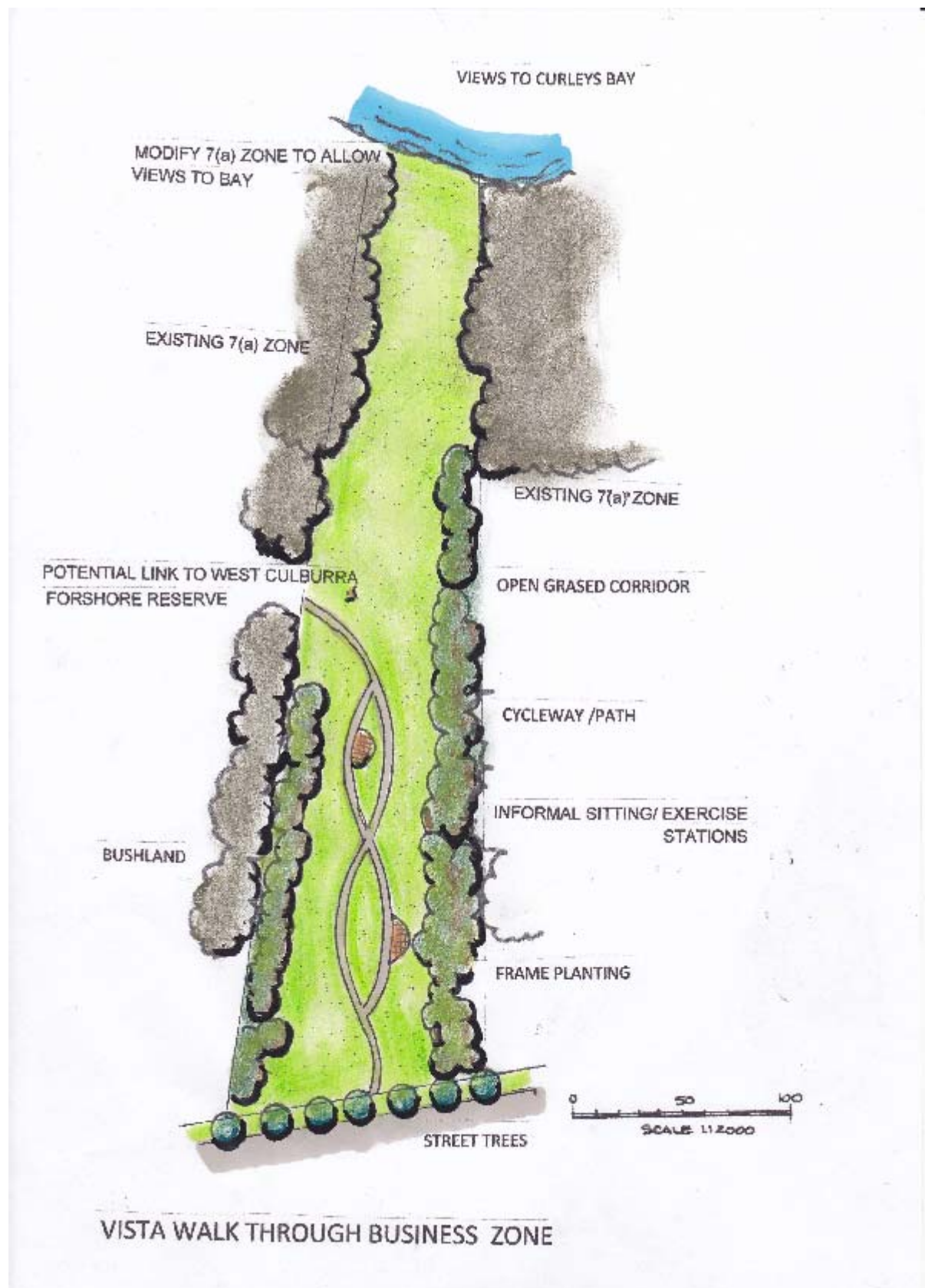


Figure 4. Vista Walk Concept

Vegetation within these swales will include a palette of plant material chosen for its aesthetic value as well as its performance value. These swales can become rain

gardens in the sense that they will carry out water filtration as well as create an aesthetic value to the streetscapes of the proposal area.

A possible species list for these swales could include the following plants:

Shrubs

Banksia robur Swamp Banksia

Banksia spinulosa Hairpin Banksia

Callistemon Captain Cook Cooks Bottlebrush

Crinum pendunculatum Swamp Lily

Crocea exaltata Crowea

Doryanthes excelsa Gynea lily

Eriostemon myoporoides Wax Flower

Melaleuca thymifolia

Groundcovers and Grasses

Banksia Birthday Candles Dwarf Banksia

Carex appressa Tall sedge

Dianella caerulea Little Jess Flax Lily

Juncus usitatus Common Rush

Lomandra Tanika Dwarf Mat Rush

The bio retention basins and wetland areas will have similar design considerations and planting particulars. They will be planted out to provide an essential yet aesthetic part of the stormwater system.

5.0 PUBLIC PARKS

Space has been provided within the sub division for public open space in the form of public parks, in addition to the oval and its surrounding open space. These public parks will be for passive recreational activities and children's play. These are located within easy access of most of the residential lots, and are therefore ideal for some form of children's play. They are within good view corridors throughout the development and will provide passive seating areas with a play structure and some open grassed areas, shaded by a tree cover of small to medium trees.

The park area within Vista Avenue East, which has mixed use, will form a small town square. Space would be designed to allow for passive seating for residents and visitors. The space would be utilised by a number of users and will need to be designed with this in mind. There is a possibility of flow over café type uses from the commercial part of the mixed use development.

The oval will be the centre for most active recreational uses. It will be accessible from the sub division as well as the neighbourhoods by pathways and cycle ways. It could in future be the site for a much needed skate park in the Culburra area, since it is within riding and walking distance from the town itself. There is opportunity to install future walking trails within the perimeter bushland for those people who prefer a more passive walking mode.

The plan provides three linear park areas within the sub division; these would be used as access arteries through the neighbourhoods. They are of a sufficient width to allow for the bio retention swales and pathways to link the various parts of the development. These spaces would allow for some low scale planting, but would be primarily free from too much planting, to allow for clear viewing lines within the park areas.

6.0 THE LANDSCAPE PLAN

The Landscape Plan demonstrates the main features of the plan (see Plan 25405-X)

It shows that the area covered by the Part 3A proposal is surrounded by large tracts of woodland. This reinforces the conclusion of the Visual Impact Analysis that the project is largely screened from view from public places by existing woodland; the only public place from which it will be seen in the southern tip of Greenwell Point.

The plan also shows how the proposed landscaping reinforces the distinctive form of the street layout, emphasising by the key structural elements by the use of avenue planting which is to have distinctive form and colour; the form of the residential streets is also emphasised by adopting distinctive tree types.

The principal urban places are distinguished by specimen trees which are intended to become associated with the particular place, emphasising the sense of place and creating memorable images.

The centrepiece of the entire plan will be the foreshore park which will be accessed from the vista avenues, the foreshore drives and the 3.75km long cycle/walkway. The land/water interface is always attractive; here the conservation of significant ecologies and important cultural items is a land/water interface comprising retained woodland and coastal eco-systems is designed to create an important landscape feature for the use of the Culburra Beach residents.

The Visual Impact Analysis contains several computer generated images of the principal elements of the landscape plan.

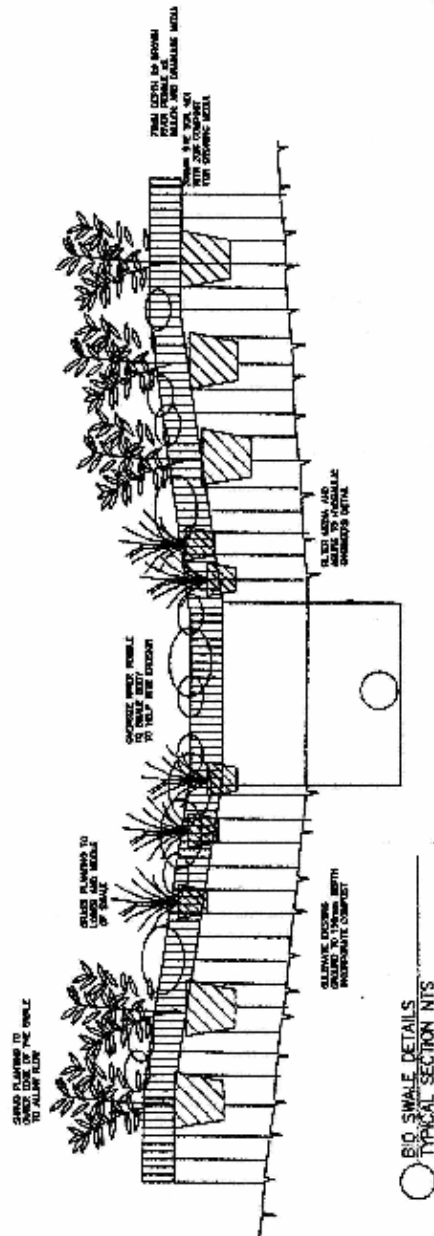


Figure 5. Bio Swale Details

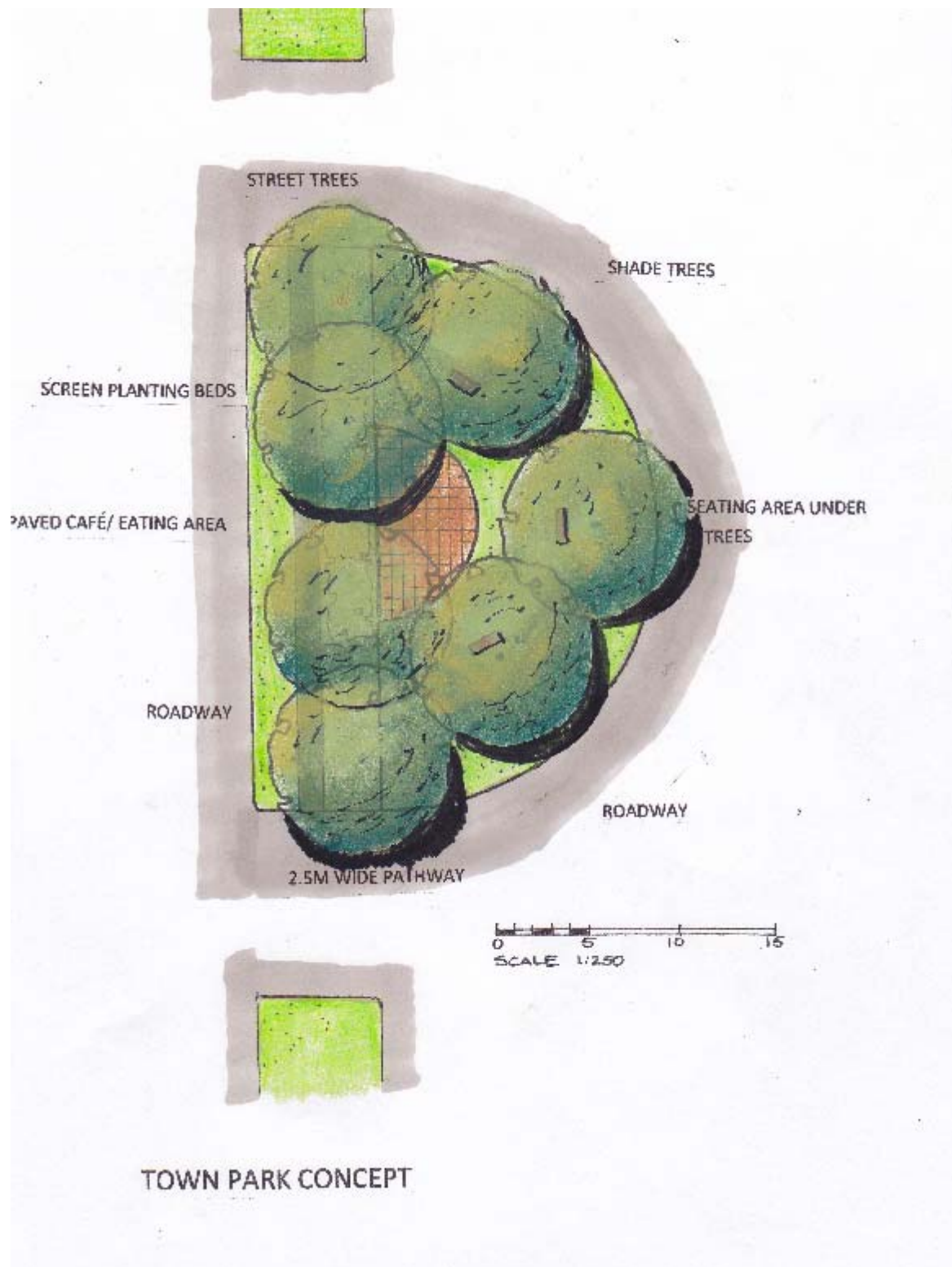


Figure 5. TOWN PARK CONCEPT

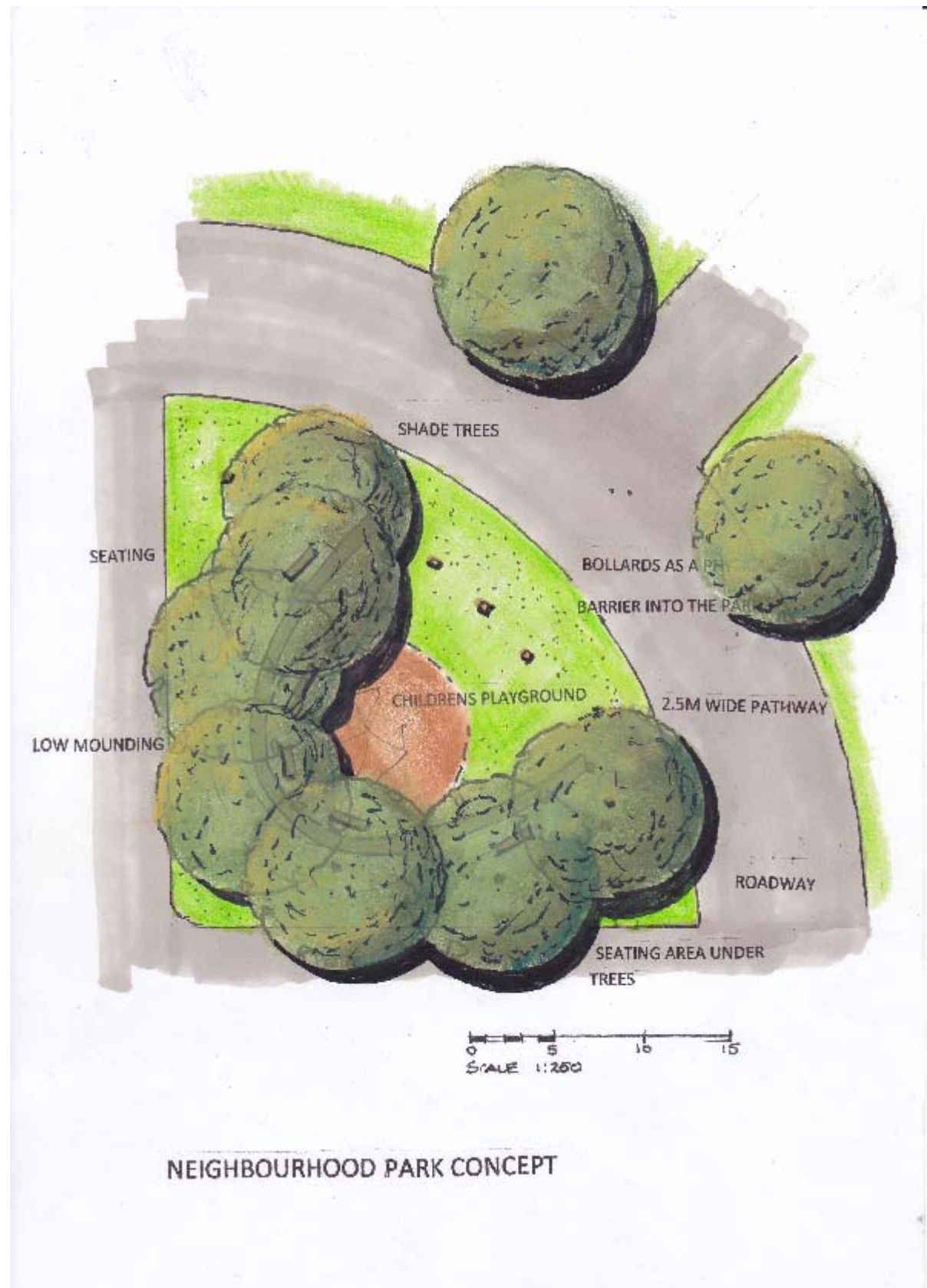


Figure 6. Neighbourhood Park Concept

REFERENCES

Martens and Associates, 2012, Water Cycle Management Report

SLR Consulting, 2012, Ecological and Riparian Issues and Assessment Report.

Toon, John. 2012. West Culburra Development Project, A Project Submitted under Part 3A of the Environmental Assessment Act

Bain,L.; Gray, B; Rodgers,D. 2012. Living Streets. Strategies for Crafting Public Space, Wiley and Sons Inc

Shoalhaven City Council. July 2008 Preferred Species List

Flemings Nurseries, 2012. Flemings Urban Tree Guide