

Catherine Hill Bay (South) Development Control Plan



Planning &
Infrastructure

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CONTENTS

1	INTRODUCTION.....	1
1.1	Purpose.....	1
1.2	Where Does the Plan Apply	1
1.3	Relationship with other Planning Instruments.....	2
1.3.1	State Environmental Planning Policy (Major Development) 2005.....	2
1.3.2	Lake Macquarie DCP No. 1	2
1.3.3	Variations to development controls	2
2	SITE CONTEXT	3
2.1	Catherine Hill Bay (South)	3
2.2	Site History	3
2.3	Heritage Areas	5
2.3.1	Catherine Hill Bay Cultural Precinct	5
2.3.2	Major Development SEPP Heritage Conservation Area.....	5
2.4	Site Analysis	6
2.4.1	Topography and slope	6
2.4.2	Geology	6
2.4.3	Contamination	6
2.4.4	Mine subsidence.....	6
2.4.5	Bushfire	7
2.4.6	Flora and fauna	7
3	DEVELOPMENT VISION AND CHARACTER	8
3.1	Regional Context.....	8
3.2	Development Principles	8
3.3	Structure Plan.....	9
3.4	Development Precincts	9
3.4.1	Wallarah House Heritage Precinct	9
3.4.2	Washery Heritage Precinct	9
3.4.3	Moonee Beach Precinct.....	11
3.4.4	North and South Montefiore Street Precincts	11
3.4.5	Neighbourhood Shops	11
4	DEVELOPMENT CONTROLS.....	12
4.1	Neighbourhood and Subdivision Design.....	12
4.2	Landscape and Open Space.....	13
4.2.1	Overall landscape layout.....	13
4.2.2	Village Reserve	15
4.2.3	Coastal reserve and coastal walk	16
4.3	Transport, Parking and Access	17
4.3.1	Road network	17
4.3.2	Pedestrian paths and cycleway.....	19

4.4	Infrastructure and Services	20
4.4.1	Stormwater	20
4.4.2	Utilities and services	21
4.5	Heritage Conservation	21
4.6	Flora and Fauna.....	22
4.6.1	Management and restoration	22
4.6.2	Impact on conservation lands	24
4.7	Bushfire.....	25
4.8	Environmental Management.....	25
4.8.1	Contamination	25
4.8.2	Mine subsidence and slope stability.....	26
4.8.3	Cut and fill.....	27
4.8.4	Soils.....	28
4.9	Development staging	30
5	RESIDENTIAL DEVELOPMENT	31
5.1	Neighbourhood Character	31
5.2	Site planning.....	32
5.2.1	Site analysis	32
5.2.2	Dual frontage lots.....	33
5.2.3	Corner lots	33
5.2.4	Sloping sites	34
5.2.5	Private open space	35
5.3	Dwelling Design.....	36
5.3.1	Dwelling controls.....	36
5.3.2	Building elements	38
5.3.3	Roof forms.....	39
5.3.4	Colours and materials.....	39
5.3.5	Garages and driveways	40
5.3.6	Fencing.....	40
5.3.7	Solar access and ventilation	41
5.3.8	Ecologically sustainable development.....	41
5.4	Special Precinct Controls	42
5.4.1	Washery Heritage Precinct	42
5.4.2	Wallarah House Heritage Precinct	42
6	NEIGHBOURHOOD SHOPS	44
6.1	Neighbourhood Shop Controls	44
6.1.1	Shop frontages	44
6.1.2	Awnings.....	45
6.1.3	Advertising and signage.....	45
6.1.4	Lighting.....	46
6.1.5	Servicing.....	46
6.1.6	Car parking area.....	46
	APPENDIX A: DEFINITIONS.....	47

APPENDIX B: LANDSCAPE PLANS.....	48
APPENDIX C: PLANTING SCHEDULES.....	61
APPENDIX D: ROAD CROSS SECTIONS.....	64

Figures

Figure 1: Location plan	1
Figure 2: Existing views of the site from Middle Camp Beach	3
Figure 3: Former site uses	4
Figure 4: Heritage Areas.....	5
Figure 5: Former layout of the Moonee Colliery	7
Figure 6: Structure Plan.....	10
Figure 7: Overall landscape plan	13
Figure 8: Road hierarchy plan.....	17
Figure 9: Cut and fill.....	28
Figure 10: Staging plan.....	30
Figure 11: Colours and materials	31
Figure 12: Dual frontage and corner lots.....	34
Figure 13: Sloping site	35
Figure 14: Height control map.....	38
Figure 15: Colour palette	40
Figure 16: Wallarah House Curtilage	43

Tables

Table 1: Street character	18
Table 2: General residential controls.....	37
Table 3: Preferred street tree species	61
Table 4: Preferred open space plantings.....	63

1 INTRODUCTION

1.1 Purpose

This is the Development Control Plan (DCP) for an area in the south of Catherine Hill Bay within the Lake Macquarie Local Government Area. It has been prepared pursuant to the provisions of Section 74C of the Environmental Planning & Assessment Act 1979.

The DCP was adopted by the Director General of the Department of Planning and Infrastructure on 18 July 2012.

The purpose of this DCP is to set out the vision, objectives and development controls for the future development of Catherine Hill Bay (South). It identifies the planning, design and environmental objectives and controls against which the consent authority will assess future applications.

This DCP intends to protect the aesthetic and cultural heritage qualities of the existing village and its landscape setting and ensure that development does not adversely impact these qualities. This DCP is intended to promote high quality urban design outcomes for the development area within the context of environmental, social and economic sustainability.

1.2 Where Does the Plan Apply

Catherine Hill Bay (South), the area subject to this DCP, is shown in Figure 1 below as the area within the red boundary.



Figure 1: Location plan

1.3 Relationship with other Planning Instruments

1.3.1 State Environmental Planning Policy (Major Development) 2005

On 5 November 2010, State Environmental Planning Policy (Major Development) 2005 ("Major Development SEPP") was amended to add the South Wallarah Peninsula site, including the Catherine Hill Bay (South) area, as a State Significant Site.

The Major Development SEPP zones the site part R2 Low Density Residential and part E2 Environmental Conservation.

Clause 29(3) of Part 14 Schedule 3 of the Major Development SEPP requires a development control plan to be prepared for the site.

1.3.2 Lake Macquarie DCP No. 1

In addition to the controls contained in this DCP, the following sections of Lake Macquarie DCP No. 1 apply to development (except as amended by this DCP):

- Section 1.9 – Development Notification Requirements
- Volume 1 – Tree Preservation Guidelines
- Volume 1 – Waste Management Guidelines
- Volume 1 – Landscaping Guidelines
- Volume 1 – Water Cycle Management Guidelines
- Volume 2 – Engineering Guidelines

1.3.3 Variations to development controls

Council may grant consent to a proposal that does not comply with the controls in this DCP, providing the intent of the controls is achieved. Similarly, Council may grant consent to a proposal that varies from the Structure Plan (Figure 6), where the variation is considered to be minor and the proposal remains generally consistent with the Plan. As such, each DA will be considered on its merits.

Where variation from the Structure Plan is proposed, the applicant is to demonstrate that the proposal is generally consistent with the design principles contained in Section 3.2 of the DCP.

Where a variation is sought it must be justified in writing indicating how the development is meeting the intention of the objectives of the relevant control and/or is generally consistent with the Structure Plan.

2 SITE CONTEXT

2.1 Catherine Hill Bay (South)

Catherine Hill Bay (South) is a 72 ha site located to the east of the Pacific Highway and to the south and south west of the existing Catherine Hill Bay village. The site lies to the north of the Munmorah State Conservation Area and north west of Moonee Beach. It is a coastal location forming part of the Wallarah Peninsula.

The site is located within the Lake Macquarie local government area and the Lower Hunter Region. It is situated approximately 100 kilometres north of Sydney and 26 kilometres south of Newcastle.



Figure 2: Existing views of the site from Middle Camp Beach

2.2 Site History

Catherine Hill Bay and the surrounding area have been subject to coal mining operations over the last 130 years. A large part of the Catherine Hill Bay (South) site comprises disused mining lands. Most recent operations were associated with the Moonee Colliery, the Coal Preparation Plant and former coal stockpile areas as shown in Figure 3.



Figure 3: Former site uses

While most of the structures associated with past mining uses have been removed as part of the mines closure and rehabilitation, evidence of coal mining remains on the site and further rehabilitation works may be required prior to redevelopment.

Heritage buildings located on the site are associated with this mining history and include:

- **Wallahah House** - located to the east of the existing village, Wallarah House was constructed in 1887 as the mine manager's residence. Its location on the side of the hill overlooking the village is symbolic of the mine managers role and importance within the community. Wallarah House is listed a local heritage item.
- **Jetty Masters Cottage** - located to the north of Wallarah House, the Jetty Master's Cottage was built later in the 1940's and was to allow a view of the coal loader wharf. It is identified as having heritage significance but is not listed as a heritage item.
- **Bin Building** - located on the eastern boundary of the site over looking the beach, the bin building formed part of the coal preparation plant operations and was used for sorting coal before transportation to the jetty. The bin building is identified as having heritage significance but is not listed as a heritage item.

The coal loading jetty and remnants of the colliery railway adjoin the site to the east. The jetty formed part of the loading facilities for the colliery railway that previously existed at the site. The railway connected the early coal workings in the north of Catherine Hill Bay with the jetty and was used by steam locomotives to haul coal in wagons to be emptied onto ships. The jetty and remnants of the Colliery railway are listed as a local heritage items.

Other local heritage items within the vicinity of the site include the, local police station, local hotel and weatherboard miners cottages located within the Catherine Hill Bay village.

2.3 Heritage Areas

The Catherine Hill Bay (South) site includes areas within the Catherine Hill Bay Heritage Precinct and Major Development SEPP Conservation Area the as shown in Figure 4.

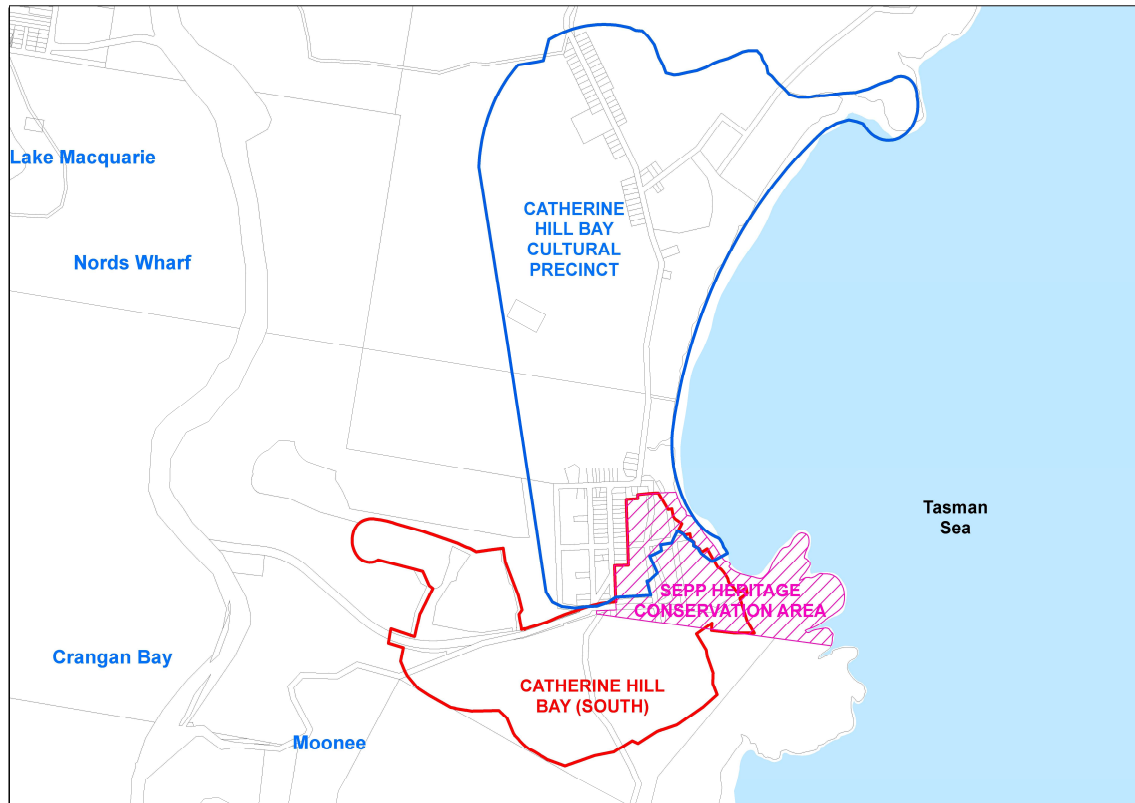


Figure 4: Heritage Areas

2.3.1 Catherine Hill Bay Cultural Precinct

The Catherine Hill Bay Cultural Precinct is listed as a heritage item of State significance on the State Heritage Register. It includes the villages of Catherine Hill Bay and Middle Camp as well as Wallarah House and significant landscape elements.

The Precinct is identified as a landscape item and “comprises picturesque and distinctive historic townscapes forming the oldest group of buildings in Lake Macquarie, set in land / seascapes of exceptional aesthetic and technical significance, both visually and as an archaeological resource for industrial heritage”.

A portion of the Catherine Hill Bay (South) site which includes Wallarah House and the Jetty Master’s Cottage is included within the Precinct.

2.3.2 Major Development SEPP Heritage Conservation Area

The Major Development SEPP identifies part of the subject land as a Conservation Area (land generally within the visual catchment of the existing Catherine Hill Bay village) and identifies Wallarah House and the Catherine Hill Bay Colliery Railway as individual heritage items.

2.4 Site Analysis

2.4.1 Topography and slope

Generally the site can be described as undulating low coastal hills rising to the headland then dropping down to the ocean. A dominant ridgeline runs east-west extending from the old Pacific Highway to the headland. Montefiore Street runs along the ridgeline separating the main parts of the development site from the existing Catherine Hill Bay village. A secondary ridge runs to the east of the existing village and separates it from the development precinct to the north of Montefiore Street. Past mining operations have resulted in modifications to the natural landform.

2.4.2 Geology

In general the natural soils encountered on the site comprise aeolian sands overlying residual soils weathered in situ from the underlying rock strata. Soils typically comprise:

- Clean Pleistocene age quartz and overlying silty and clayey quartz sands
- A mixture of sand, gravel, clay and silt overlying extremely to highly weathered rock over most of the site.
- Higher plasticity clay soils exist across the site at depth near the interface of bedrock.
- Triassic and late Permian Age bedrock

2.4.3 Contamination

The four main areas of potential contamination on the site are:

- The former coal preparation plant
- The former Moonee Colliery
- Two coal stockpile area, referred to as the former coal stockpile area and Snakes Gully (also known as Possums Gully); and
- Undeveloped land outside of the above areas.

The site has been the subject of a range of contamination assessments including those prepared for the mine closure plan. The contamination investigations undertaken conclude that the site can be remediated to allow for residential use subject to the implementation of a Remedial Action Plan.

2.4.4 Mine subsidence

The site is located within the Swansea North Entrance Mine Subsidence District and accordingly approval will be required from the Mine Subsidence Board prior to subdivision.

Residential dwellings should not be located over the old drift or shaft of former Moonee Colliery (outlined in red below) unless all risk of mine subsidence has been eliminated. The past layout of the former Moonee Colliery is shown in Figure 5.

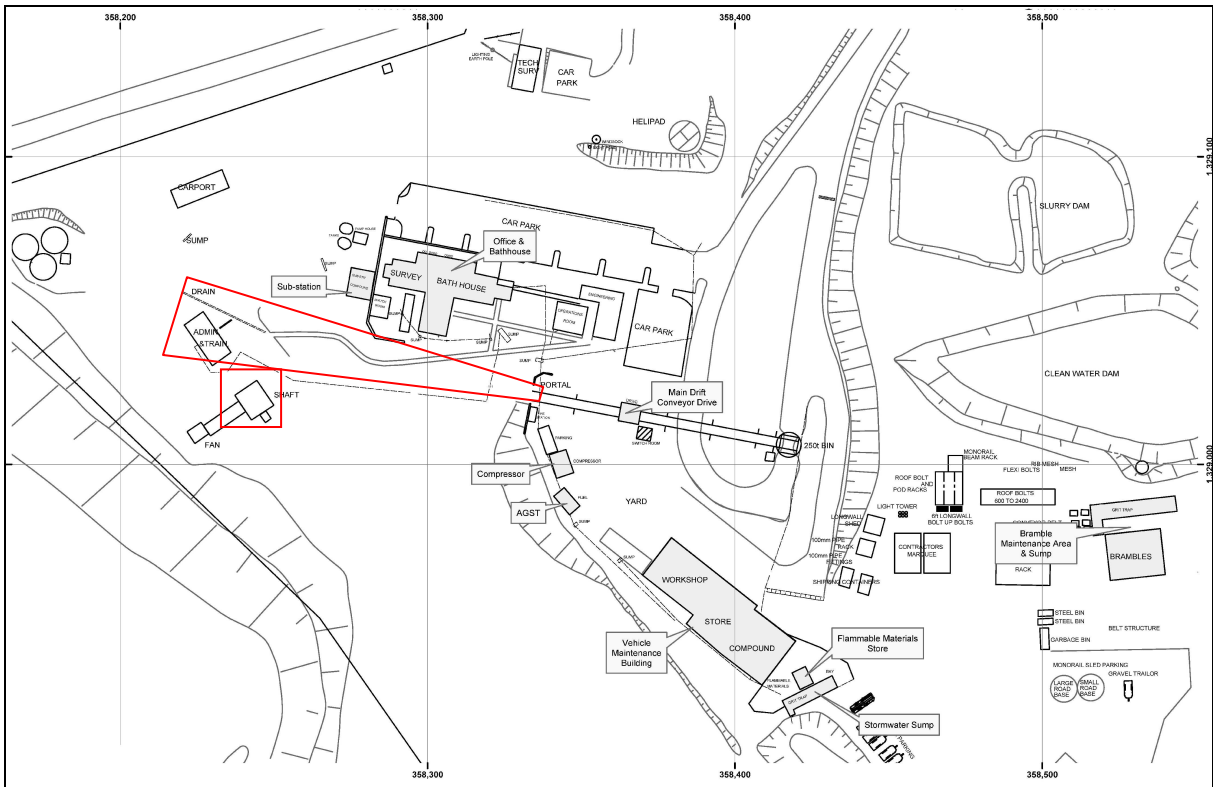


Figure 5: Former layout of the Moonee Colliery

2.4.5 Bushfire

The site is identified on the Lake Macquarie City Council's Bushfire Prone Lands Map as Bush Fire Vegetation Category 1. The site is bushfire prone and any development should be consistent with the requirements of *Planning for Bushfire Protection 2006*.

2.4.6 Flora and fauna

The majority of the site has been subject to high levels of disturbance associated with coal mining operations and therefore most of the significant vegetation has been removed. High quality native vegetation does occur within small areas on the fringes of the site. These high quality native remnants contain a variety of shrub and groundcover that is likely to support small terrestrial mammals and reptiles.

Two threatened flora species (*Tetratheca juncea* and *Cryptostylis hunteriana*) and two endangered ecological communities - Swamp Sclerophyll Forest EEC and Freshwater Wetlands on Coastal Floodplains EEC are located within the site.

Threatened fauna species that were recorded or considered likely to occur within the site include Wallum Froglet, Glossy Black Cockatoo, Regent Honeyeater, Swift Parrot, Powerful Owl, Masked Owl, Eastern Pygmy Possum, Grey-headed Flying Fox, Little Bentwing-Bat, Eastern Bentwing-Bat, Eastern Freetail Bat, Yellow Bellied Sheathtailed Bat, Eastern False Pipistrelle, Large-footed Myotis and Greater Broad-noised bat.

3 DEVELOPMENT VISION AND CHARACTER

3.1 Regional Context

The Lower Hunter Regional Strategy 2006 aims to ensure that adequate land is available and appropriately located to sustainably accommodate the project housing and employment needs of the region over a time frame of 25 years to 2031. It also works with regional Conservation Plans to ensure that future growth makes a positive contribution to the protection of sensitive environments and biodiversity.

The Strategy estimates growth in the region of 160,000 people, 115,000 homes and 66,000 jobs to 2031 and identifies the Catherine Hill Bay (South) site as a “proposed urban area”.

3.2 Development Principles

The key development principles for the Catherine Hill Bay (South) site are:

1. Reflect and be sensitive to the coastal location and surrounding natural environment.
 - Catherine Hill Bay(South) should be an attractive residential community set against a natural coastal landscape backdrop;
 - The landscaping, bulk, scale, materials and finishes must harmonise with the natural environment and minimise visual impacts from all publicly accessible areas;
 - The buildings should be designed to minimise impacts on and preserve the appearance of the eastern ridge line overlooking Moonee Beach; and
 - Protect and enhance adjacent conservation lands.
2. Complement the aesthetic and cultural heritage qualities of the site and surrounding area.
 - Development should complement the scale and form of the Catherine Hill Bay village but should not mimic the old miner’s cottages;
 - The curtilage of Wallarah House and the Jetty Master’s cottage should be protected and maintained;
 - Historic connections to the existing Catherine Hill Bay village and former Moonee Colliery should provide cues in establishing the character of the future residential community; and
 - The impacts of development on significant views to and from the existing village of Catherine Hill Bay and its approaches are to be minimised as far as possible.
3. Respond to the needs of the new community.
 - Provide small scale retail development to meet the needs of the local community;
 - Create walkable neighbourhoods and maximise opportunities for public access to the coastal foreshore and Moonee Beach; and
 - Ensure development complies with requirements in relation to bushfire risk.
4. Achieve high quality design:
 - Establish a unique coastal beachside village identity;

- Ensure all development achieves a high standard of architectural design quality and residential amenity;
- Ensure high quality landscaping, particularly within streetscapes;
- Minimise the appearance of garage doors from the primary street frontage; and
- Minimise the extent of cut and fill and retaining walls wherever possible.

3.3 Structure Plan

The Structure Plan shown in the Figure 6 illustrates the development structure for the Catherine Hill Bay (South). It outlines the development footprint and precincts, land uses, road layout, subdivision pattern, public open space and drainage corridors.

The Structure Plan, objectives and development controls set out in this DCP aim to minimise the visual impact of new urban development when viewed from significant vantage points including Flowers Drive, Catherine Hill Bay village, Middle Camp Beach, Moonee Beach and Flat Rock Point.

The Catherine Hill Bay development will provide for low density residential development primarily to the south of the existing ridgeline which follows the alignment of Montefiore Street.

3.4 Development Precincts

As shown in the Structure Plan in Figure 6, the site includes the following six precincts.

3.4.1 Wallarah House Heritage Precinct

The Wallarah House Heritage Precinct includes the curtilage of the historic Wallarah House and Jetty Masters Cottage. It includes the spatial relationship between Wallarah House and the existing village of Catherine Hill Bay.

In order to preserve the heritage values of this precinct, residential development is limited. Works to be undertaken are those associated with protection, maintenance and enhancement of the heritage items including landscaping.

Detailed development controls for the Wallarah House Heritage Precinct are provided in Section 5.4 of the DCP.

3.4.2 Washery Heritage Precinct

The Washery Heritage Precinct is located to the east of the existing village and adjoins the coastal reserve. It is the area of the site with the most potential to impact on the visual curtilage of the existing Catherine Hill Bay village. It includes significant vegetation to be retained and provides access to the coastal walk.

Residential development within the Washery Heritage Precinct will be low in scale and will have simple and uncomplicated roof forms to respond to the existing character of the Catherine Hill Bay Village.

Detailed development controls for the Washery Heritage Precinct are provided in Section 5.4 of the DCP.

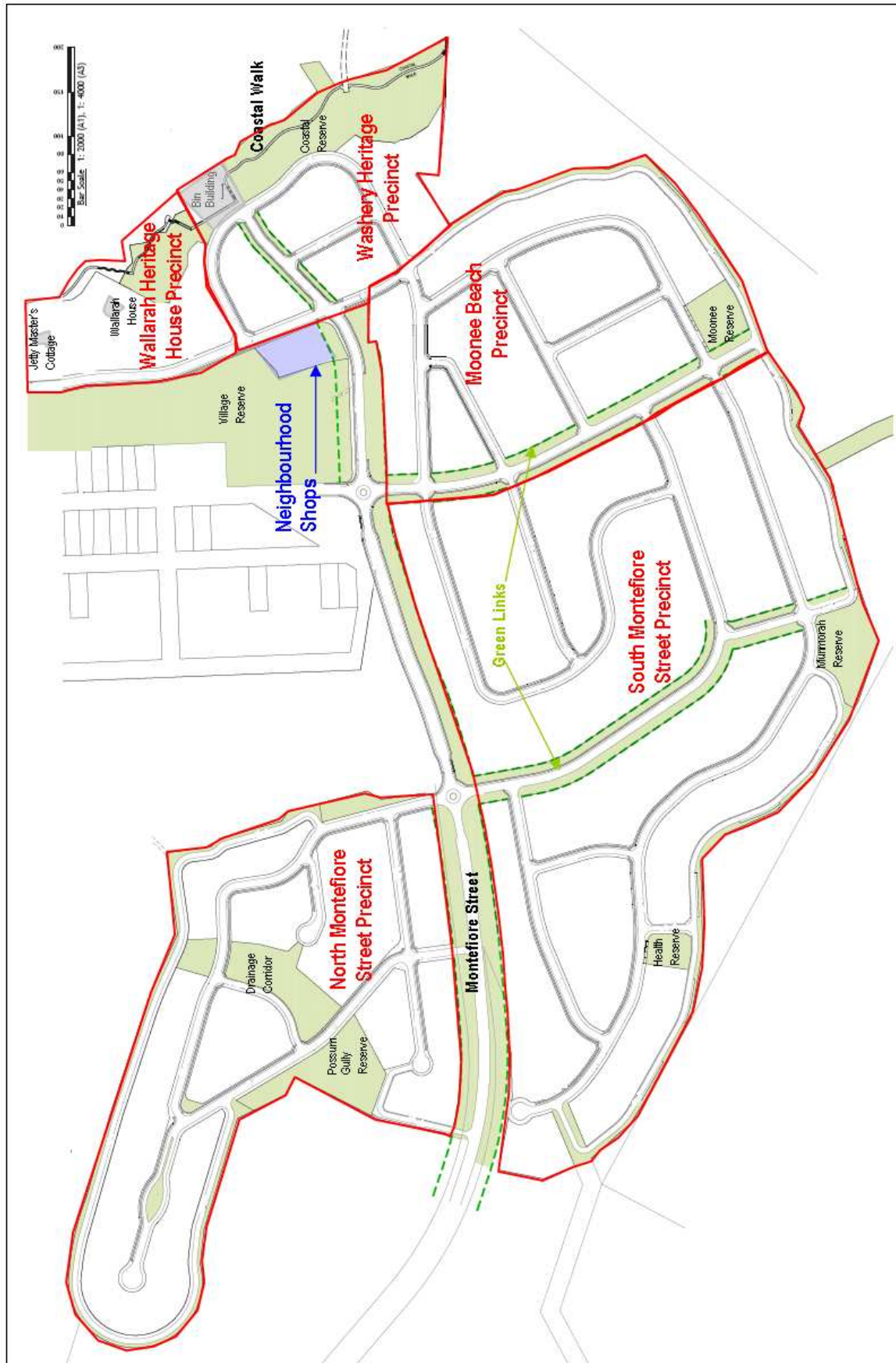


Figure 6: Structure Plan

3.4.3 Moonee Beach Precinct

The Moonee Beach Precinct adjoins the Headland Reserve to the south of Montefiore Road. It is the closest part of the site to Moonee Beach. Due to the proximity of this precinct to the coast and Moonee Beach particular regard to the scale, form and extent of development will be required to protect views inland from the beach.

Residential development within the Moonee Beach Precinct will be constructed from natural materials and neutral colours to harmonise with the coastal environment. Dwellings will be located so that potential for view sharing to Moonee Beach will be maximised.

3.4.4 North and South Montefiore Street Precincts

The North and South Montefiore Street Precincts form the western portion of the site, inland from the coastal areas of the site. Both precincts are surrounded by the Munmorah State Conservation Area, which provides a buffer from these areas to the existing Catherine Hill Bay Village. Particular regard to the protection and enhancement of the surrounding bushland areas will be required in these precincts.

Residential development within the North and South Montefiore Street Precincts is to correspond to the surrounding bushland. Dwellings are to be constructed from natural materials and neutral colours to harmonise with the surrounding environment and are to be low in scale to allow surrounding bush to be a dominate feature of the neighbourhood.

3.4.5 Neighbourhood Shops

Neighbourhood shops are to be located on the corner of Hale and Montefiore Streets adjacent to the new Village Park. The neighbourhood shops are to be centrally located on cleared land between the existing village of Catherine Hill Bay and the new development. The neighbourhood centre will provide local shops and services for the new and existing community and will act as a focus for community activities.

4 DEVELOPMENT CONTROLS

4.1 Neighbourhood and Subdivision Design

Objectives

- Establish a subdivision layout that utilises the development areas efficiently, maximises the natural attributes of the site and clearly defines and reinforces the public domain.
- Ensure lots are orientated to achieve appropriate solar access.
- Ensure that subdivision responds to the physical characteristics of the land, its landscape setting, orientation, landmarks and key vistas to and from that land.
- Adequate walking and cycling networks are in place to ensure that subdivision promotes walking and cycling as a mode of travel.

Controls

1. All development is to be undertaken generally in accordance with the Structure Plan at Figure 6 and the objectives and development controls set out in this DCP.
2. Where a variation from the Structure Plan is proposed, the applicant must consult Council first and demonstrate that the proposed development is consistent with the development principles and vision for the precincts set out in Section 3 of this DCP.
3. The subdivision layout is to provide:
 - A 50m wide “green ridge” for the full extent of Montefiore Street;
 - Two 32m wide green links with extensive landscape planning running north-south through the site located with the public road reserve,
 - A coastal walkway / coastal reserve fronted by a public road. The reserve is to be 40m wide south of the “Bin Building” and 20m wide to its north;
 - Perimeter roads abutting conservation lands;
 - A reserve to the north of Montefiore Street between the existing Catherine Hill Bay village and the new development;
 - Low scale development only, screened from view, within the view shed of the existing Catherine Hill Bay village;
 - New development generally to the south of the existing ridgeline running along Montefiore Street or to the west of the north-south running ridge to the west of the existing village;
 - Neighbourhood shops and car parking comprising not more than 750m² of retail / office development on cleared land on the corner of Montefiore and Hale Streets with dual frontage to the Village Reserve; and
 - Asset protection zones on land within 100m of unmanaged vegetation in accordance with Planning for Bushfire Protection and AS 3959-2009.

- Subdivision of the land shall not create more than 550 residential allotments and no allotment proposed for residential development shall have an allotment size of less than 450m².

4.2 Landscape and Open Space

4.2.1 Overall landscape layout



Figure 7: Overall landscape plan

Objectives

- Create a network of open spaces and recreation areas (including the coastal walkway and coastal reserve), focal points and recreation facilities which meet the needs of the existing and future residents and provide improved access to the coastal foreshore.
- Establish quality public domain spaces which add to the visual and environmental amenity of the site, and which are designed to maximise safety and security, incorporating crime prevention through environmental design principles.
- Incorporate water sensitive urban design and other sustainable development practices in the creation of the public domain.
- Build on the existing character of Catherine Hill Bay and its surrounds to create a distinctive and high quality public domain.
- Provide for dual use of drainage reserves for low impact recreation activities such as parks and walking.

Controls

1. Development applications for subdivision must ensure open space is provided generally in accordance with the Structure Plan at Figure 6 and the Landscape Plan at Figure 7.
2. Prior to the issue of a Construction Certificate for subdivision infrastructure works, a landscape master plan and design report, landscape construction plan and vegetation management plan, prepared by a qualified landscape architect, for the subject area or stage is to be submitted to Council for approval.
3. The landscape master plan and design report is to demonstrate:
 - That open space is provided generally in accordance with the Structure Plan at Figure 6, the Landscape Plan at Figure 7 and the landscape plans included in Appendix B.
 - Details of any drainage function provided by reserves and where appropriate, how the reserves are linked to and integrated with riparian / drainage corridors.
 - Reserves have been located and designed to retain existing trees and vegetation, where practical.
 - Management of stormwater runoff to minimise impact on vegetated areas.
 - Reserves are highly accessible and linked by pedestrian and / or cycle routes.
 - How areas of the public domain are designed to maximise safety and security, incorporating crime prevention through environmental design principles.
 - All reserves and areas of open space including the road reserves are to be rehabilitated and revegetated with appropriate native vegetation.
4. The proposed rehabilitation and revegetation is to have regard to:
 - Planting that is appropriate for the drainage function and recreation use of the reserves.
 - Species selected should be drought tolerant, low maintenance and fire retardant.
 - Reducing water usage by using low water tolerant species where appropriate, as well as efficient irrigation systems.
5. Detailed landscape plans submitted with the landscape master plan are to:
 - Identify existing trees to be retained.
 - Indicate the location, type and size and all new plant species.
 - Contain details of all retaining walls.
 - Be consistent with any relevant NSW Office of Environment and Heritage guidelines, and

6. The landscape construction plan is to include a report prepared by a suitably qualified arborist detailing measures to be taken to ensure tree protection during construction.
7. The landscape management plan is to be consistent with the requirements of the weed management and monitoring plan and is to include:
 - On-going maintenance requirements ensuring the care and maintenance of the landscaping and vegetated areas.
 - Details of weed control.
 - Vegetation management for bushfire protection.

4.2.2 Village Reserve

Objectives

- To create a new Village Reserve that will provide a visual buffer between existing and new development.

Controls

1. The detailed design of the Village Reserve shall be in accordance with the plans in Appendix B and the Landscaping Guidelines contained in Lake Macquarie DCP No. 1 and should include the following elements:
 - The relevant requirements of the riparian zone management plan.
 - Areas of flat and banked open space suitable for picnicking and passive recreation.
 - Buffer planting and landscape interface with the existing residential allotments whilst maintaining views to Catherine Hill Bay Beach.
 - Pedestrian link between Montefiore Street and Flowers Drive.
 - Physical and visual connections between the Village Park and the adjacent Neighbourhood Shops.
 - A pedestrian / cycle path along the Hale Street boundary from Flowers Drive to the neighbourhood shops.
 - Retention and protection of significant existing trees.
 - Removal of existing weeds and exotic trees and turfing as necessary.
 - Planting of local native trees on the upper slopes south of the Usher Street alignment.
 - Integrated stormwater and water sensitive urban design detention basins
 - Bank stabilisation, revegetation and fencing (if required) around drainage ponds.

4.2.3 Coastal reserve and coastal walk

Objectives

- Create a new coastal walkway and coastal reserve adjacent to the cliff edge and connecting from Middle Camp Beach to the Moonee Headland across the existing Bin Building.
- Provide for an appropriate future use of the Bin Building consistent with its location within the coastal walkway / reserve and which promotes public access.

Controls

1. Detailed design of the coastal walkway and reserve is to ensure public safety and having regard to accessibility, coastal processes, cliff stability and mine subsidence, hazards and the potential impacts of sea level rise.
2. The coastal reserve design shall be natural in its context and is to be appropriately landscaped and provided with park furniture.
3. The detailed design and landscape plans for the coastal reserve and walkway and connecting roads are to be prepared in accordance with the plans in Appendix B and the Landscaping Guidelines contained in Lake Macquarie DCP No. 1 and should include the following elements:
 - Spot levels and contours,
 - Walkway design, alignment and long sections;
 - Include details of all retaining walls;
 - Details of materials selection and finishes;
 - Details of seating and park furniture;
 - Identify existing trees and vegetation to be retained;
 - Vegetation rehabilitation and planting indicating the location, type and size and all new plant species; and
 - A schema for the re-use of the Bin Building.
4. The future use of the Bin Building is to be limited to a low intensity, publicly accessible use, consistent with its location within the future coastal walkway / reserve, such as a viewing platform on the roof.
5. Prior to approval of any future use for the Bin Building, evidence is to be provided to the approval authority that the building has been stabilised and made safe.
6. All necessary remediation works must be undertaken to ensure the coastal reserve is fit for public use.

4.3 Transport, Parking and Access

4.3.1 Road network



Figure 8: Road hierarchy plan

Objectives

- Create a “green ridge” along Montifiore Street with an extensive landscape buffer on both sides of the carriageway.
- Create two “green link” roads through the southern part of the development site which will form defining elements within the development.
- Hale Street and Montifiore Parkway are to provide the main north-south connection to the neighbourhood centre and the Pacific Highway.
- Discourage traffic from the development using Clarke Street as a main access road.
- Create a hierarchy of streets, each street type having a distinctive character based on street tree planting.
- Create a legible and functional road network that provides good connections with the surrounding areas and optimises public access.
- Use streets to define the edges between development and natural areas and to provide bushfire buffers.

Controls

1. Development applications for subdivision incorporating roads should generally comply with the road hierarchy plan at Figure 8 and the relevant streetscape character in Table 1.
2. Individual road design, construction and landscaping are to be in accordance with the tree planting schedule and street cross sections in Appendix C and D of the DCP.
3. Street planting is to be coordinated with subdivision layout and services layouts to ensure appropriate configuration with vehicle crossovers, sight lines, drainage swales, lighting and other.
4. A Landscaping Plan is to be submitted for approval prior commencement of construction of road works. This plan is to detail proposed streetscape planting and signage to direct pedestrians to walking tracks.

Table 1: Street character

Road type	Streetscape character	Controls
Montefiore Street	<p>Landsaped with local native vegetation.</p> <p>Landsaped zone on each side of the street will provide a visual buffer to Catherine Hill Bay Village and the proposed residential lots to the south.</p>	<p>Densely plant native trees in the verge between the residential lots and footpath to provide a visual screen to Catherine Hill Bay Village.</p> <p>Group and space trees to ensure passive surveillance and safety.</p> <p>Plant macrophytes in the stormwater swales on the western verge of Montefiore Street to assist in storm water uptake and nutrient removal.</p> <p>Create a signature gateway landscape at the intersection of Hale Street.</p>
Primary Road – Hale Street	<p>Hale Street is to provide the main north-south connection to the neighbourhood centre.</p> <p>Local native trees should be undertaken along Hale Street and mixed native and exotic trees species to the Village Park interface.</p>	<p>Local native trees on the western (park side) of the street to augment the tree groups in the Village Park.</p>
Primary Road – Green Links	<p>A pair of North South green link streets will extend from Montefiore Street to the conservation area.</p> <p>The landscape character is defined by informal groups of local native trees, colourful native shrubs and native grasses,</p>	<p>A landscape buffer is to be provided within the road reserve.</p> <p>Landsaped verges are to be provided in accordance with the requirements of Lake Macquarie DCP No.1.</p> <p>Pedestrian footpath is to be</p>

Road type	Streetscape character	Controls
	planted in wide verges on both sides of the street.	located on one side of the street. Mix of small, medium and large indigenous trees in informal groups, supplemented by native shrubs ground covers and grasses, adjacent to site boundaries and fences. Occasional informal seating areas are to be provided. Driveways are to be co-located or where possible provided off side streets to minimise the number of kerb and gutter crossings.
Perimeter Road	The Perimeter Road acts as a buffer to the Conservation area and is located within the Asset Protection Zone. It will have an informal bushland character and will visually complement the heath landscape of the conservation area. The landscape verge on the side of the residential lots will be planted with informal groups native street trees in lawn. Local native trees and shrubs, will be installed as a buffer on the side of the conservation area.	Mix of small, medium trees in informal groups supplemented by native shrubs adjacent to site boundaries and fences (refer street cross section). All planting is to meet with requirements of the Bushfire Management Plan. A parking lane shall be provided to the Perimeter Road within the South Montefiore Street and Moonee Beach precinct. The parking lane shall be located on the southern side of the road within an informal verge with landscaping at regular intervals with a minimum space of 50m.
Local Road	Local streets will have an informal character characterised by local native trees, shrubs and turf in the landscaped verges.	Pedestrian footpath is to be located on one side of the street. Mix of small, medium trees in informal groups supplemented by native shrubs adjacent to site boundaries and fences. Driveways to house lots will be paired to maximise street tree plantings and landscape continuity.

4.3.2 Pedestrian paths and cycleway

Objectives

- Provide a convenient, efficient and safe network of pedestrian paths and cycleways for the use of the community, within and beyond the site.
- Encourage residents to walk or cycle, in preference to using motor vehicles, as a way of gaining access to local beaches and the coastal foreshore, shops, and other local community and recreation facilities.

- Promote the efficient use of land by allowing pedestrian paths and cycleways to be located within parks and corridors wherever practical.
- To provide a low traffic environment to encourage cycling on the road.
- Ensure a high standard of public domain and pedestrian and cycleway amenity.

Controls

1. A 2m wide on-road cycleway is to be provided along Montefiore Street and shall be marked by appropriate line marking and/or pavement treatment.
2. The minimum width of pedestrian paths is to be 1.2m.
3. All pedestrian paths and cycleway routes and facilities are to be designed and constructed in accordance with the requirements of Lake Macquarie DCP No.1.
4. Pedestrian paths and cycleways are to be constructed as part of the infrastructure works for each residential stage prior to issue of the subdivision certificate.

4.4 Infrastructure and Services

4.4.1 Stormwater

Objectives

- Development is to be carefully designed, constructed, and maintained so as to minimise impacts on the natural water cycle.
- To integrate stormwater management systems into the landscape for multiple benefits including water quality protection, stormwater retention and detention.
- Sustainable solutions to water cycle management should be used, this may include where possible:
 - Reuse of roof water for appropriate purposes;
 - Reuse of runoff for landscape irrigation;
 - Minimisation of impermeable surfaces;
 - Specially designed landscaping for filtering runoff and conserving water; and
 - Infiltration of stormwater into underground aquifers where ground conditions allow.

Controls

1. The drainage design for all shall be prepared by a certified qualified civil engineer and should comply with Lake Macquarie Council's DCP No. 1 Volume 2 Engineering Guidelines.
2. No drainage from allotments within the development is to be directed to the adjacent conservation lands.

3. The drainage design shall ensure that stormwater discharged from the site is in accordance with the recommendations of the suitably qualified wetland / hydrologist engaged where necessary to provide advice in respect of potential impacts on the SEPP 14 wetland and habitat of threatened species.
4. The stormwater drainage system shall be designed to provide access for easy maintenance, and use materials and methods that are suitable, durable and cost effective to maintain.
5. All development is to incorporate water sensitive urban design (WSUD).

4.4.2 Utilities and services

Objectives

- Services and utilities shall be provided as part of the development of each stage.
- Services and utilities are to be provided to all development in a manner that minimises environmental impacts in the short and long term.
- Services and utilities should not have an adverse impact on the scenic, aesthetic, historic or cultural heritage qualities of the area.

Controls

1. The design and location of all utilities and services shall comply with Lake Macquarie Council's DCP No. 1 Volume 2 Engineering Guidelines.
2. Services and utilities are to be designed and located to:
 - Avoid areas of ecological or scenic value;
 - Minimise the impact on areas of native vegetation;
 - Be suitably screened from public places or streets;
 - Is co-located in shared underground trenching where compatible;
 - Ensure transportation, treatment and disposal of sewage wastes minimise environmental impacts.

4.5 Heritage Conservation

Objectives

- Ensure that new development is undertaken in a manner that is sympathetic to, and does not detract from, the heritage significance of any heritage items, conservation areas and their settings.
- Ensure the impacts of development on significant views to and from the existing village of Catherine Hill Bay and its approaches are minimised as far as possible.
- Control the bulk, massing and roof form of new buildings within the view shed of the existing village of Catherine Hill Bay.

Controls

1. A heritage impact statement is required for all new development within the Major Development SEPP Conservation Area or within the vicinity of a heritage item or the conservation area.
2. The heritage impact statement is to assess the extent to which the carrying out of the proposed development would affect the heritage significance of the Catherine Hill Bay Cultural Precinct State Heritage Item, Major Development SEPP Heritage Conservation Area and other local heritage items.
3. Development within the heritage conservation area shall comply with other development controls specified throughout this DCP as relevant.
4. New buildings within the conservation area identified in the State Environmental Planning Policy (Major Development) 2005 (refer Plan at Figure 4) shall:
 - be screened by landscape planting from the existing village and when viewed from the north: Flowers Drive and Middle Camp Beach, and
 - be designed to be sympathetic with the form, scale and character within the existing Catherine Hill Bay village.
5. Any proposed development within the Wallarah House Heritage Precinct and Washery Heritage Precinct shall also comply with specific controls given in Section 5.4 of this DCP.

4.6 Flora and Fauna

4.6.1 Management and restoration

Objectives

- Conserve and enhance biodiversity values, over time, throughout Catherine Hill Bay.
- Ensure examples of native/indigenous vegetation communities found on site are included in the open space network and landscaped areas.
- Protect and enhance the environmental qualities of adjacent conservation lands.
- Ensure runoff from the development site does not impact on the SEPP 14 wetland located to the south of the site.
- Provide for dual use of drainage corridors / lands for low impact recreation activities such as parks and walking.

Controls

1. Development applications for subdivision, bulk earthworks, and infrastructure works shall include:
 - A flora and fauna management plan to guide the development of the site. This should include an outline of revegetation planting, restoration, maintenance and weed control for these areas.

- A weed management and monitoring plan (consistent with relevant management strategies for the adjacent Munmorah State Conservation Area) outlining strategies to minimise the potential for weed invasion into the SEPP 14 wetland and buffer zones.
2. Prior to the commencement of subdivision works, a riparian zone management plan shall be prepared to the satisfaction of the NSW Office of Water (or its successor) for the stream forming the drainage corridor between Stages 6 and 7, and for the Village Reserve. The plan should include:
 - Detailed design of the stormwater treatments, demonstrating consistency with NSW Office of Water guidelines for controlled activities,
 - A riparian zone assessment and rehabilitation plan for the watercourse, and
 - Management responsibility and requirement details.
 3. Prior to the commencement of subdivision works, a habitat restoration plan shall be prepared by a suitably qualified and experienced ecologist and for the habitat protection areas and buffers to the development. The plan should include:
 - A suitably qualified and experienced professional bush regeneration contractor is to be engaged to carry out any revegetation planting, restoration and maintenance weed control specified in the Habitat Restoration Plan, and
 - The minimum qualifications and experience required for the bush regeneration contractor are a TAFE Certificate 2 in Bushland Regeneration and two years demonstrated experience (for site supervisor) and a TAFE Certificate 2 in Bushland Regeneration and one year demonstrated experience (for other personnel). In addition the site supervisor is to be eligible for full professional membership of the Australian Association of Bush Regenerators (AABR).
 - The mulch/tubgrindings generated from the removal and thinning of native trees associated with the development is/are to be re-used in restoring the habitat protection areas as required.
 - Any natural hollows removed by the development are to be placed wherever possible as ground hollows within retained bushland under the supervision of the consulting ecologist.
 - Restoration areas are to be maintained for a minimum of three (3) years. Reports are to be submitted to Council detailing the progress of the bush regeneration works twice per year, with a final report certifying the completion of the works at the end of the three year period.
 - Any plant stock used in revegetation (if required) will be supplied from provenance specific seed/material collected from within the Tuggerah Lakes catchment area. Non-provenance specific material is prohibited.
 4. Prior to the commencement of subdivision works, a Wildlife Management Strategy (WMS) shall be prepared to show how mitigation against native animal welfare issues will be achieved. The WMS is to include the following protocols:
 - The consultant ecologist is to identify fauna likely to occur on site and advise on management actions to mitigate any native animal welfare issues,

- The consultant ecologist is to clearly mark each potential habitat tree required to be removed
- The consultant ecologist is to inspect all potential habitat trees prior to removal and identify evidence of fauna use. All clearing of habitat trees is to be done under the direct supervision of a consulting ecologist and/or DEC licensed wildlife carer. When fauna are present, the animals are to be removed and relocated to the adjacent bushland/nest boxes prior to felling or the tree shall be dismantled in sections under the supervision of the ecologist or wildlife carer before relocating animals to the adjacent bushland/nest boxes,
- Clearing will commence with the most distant vegetation from secure habitat and progressively work toward the retained bushland in order to allow fauna to disperse,
- Trees should be slowly lowered or dismantled in sections using an excavator or similar technique,
- Any natural hollows removed by the development are to be placed wherever possible as ground hollows within retained bushland under the supervision of the consulting ecologist, and
- Nest boxes are to be provided on a one for one basis for any natural hollow removed by the development and are to be constructed of appropriate durable materials. All nest boxes are to be erected prior to the issue of a Construction Certificate and at least one month prior to vegetation clearance on the site.
- The monitoring of nest boxes to determine their usage and to carry out repairs or replacement (as required) every six (6) months for a minimum period of three (3) years following erection. Monitoring reports are to be forwarded to Council after each monitoring event.

4.6.2 Impact on conservation lands

Objectives

- Protect and enhance the environmental qualities of adjoining conservation lands.
- Ensure runoff from the development site does not impact on the SEPP 14 wetland located to the south of the site.

Controls

1. No drainage from allotments within the development is to be directed to the adjacent conservation lands.
2. Allotments adjacent to conservation lands are to be fenced (with 0.9m high open chain mesh) with no access provided to the conservation lands.
3. A section 88B instrument (under the Conveyancing Act 1919) shall be established for all residential lots within the development prohibiting the keeping of cats and dogs, with the Council having the benefit of this covenant and having sole authority to release vary or modify the covenant.

4. A landscape plan prepared by a Landscape Architect or accredited Landscape Designer shall be submitted with Development Applications for allotments adjoining the conservation lands.
5. Private gardens in lots adjoining the adjacent conservation lands shall:
 - be planted with at least 70% endemic plant species.
 - not be planted with invasive plant species that have the potential to infest adjacent conservation lands.
 - be designed to ensure that no runoff is discharged into the conservation lands.
6. Light generated from dwellings adjoining conservation lands shall as far as practical not create any light spill onto the conservation lands.

4.7 Bushfire

Objectives

- Prevent loss of life and property due to bushfires by providing for development compatible with bushfire hazard.
- Encourage sound management of bushfire-prone areas.

Controls

1. All development, including plant species selection, shall satisfy the requirements of *Planning for Bushfire Protection 2006*, as produced by the NSW Rural Fire Service and be constructed to comply with AS3959-2009.
2. Asset Protection Zones (APZs) are to be provided on lots within 100m of unmanaged vegetation. Final APZs will be determined depending on subdivision design to the satisfaction of the NSW Rural Fire Service.
3. Where an allotment fronts and partially incorporates an APZ it shall have an appropriate depth to accommodate a dwelling with private open space and the minimum required APZ. The APZ will be identified through a Section 88B instrument (under the Conveyancing Act 1919).
4. Fencing between allotments and adjacent conservation lands is to be capable of withstanding bushfire attack.

4.8 Environmental Management

4.8.1 Contamination

Objectives

- To ensure that changes to land use do not increase the risk to public health or the biophysical environment.
- To avoid inappropriate restrictions on land use.

- To provide advice to support decision making and inform the community.
- To consider the likelihood of land contamination as early as possible in the planning process.
- To link decisions about the development of the land with the information available about contamination possibilities.

Controls

1. Prior to the commencement of works, the site is to be remediated in accordance with a Remedial Action Plan endorsed by a nominated NSW EPA accredited Site Auditor.
2. Assessment of potential contamination and identification of remediation is to be undertaken in accordance with State Environmental Planning Policy No 55—Remediation of Land.
3. Any remediation works undertaken within proposed drainage, open space or road reserves must be completed prior to the dedication to Council. An accredited site auditor must certify that the land is suitable for its intended purpose.

4.8.2 Mine subsidence

Objectives

- To mitigate potential impacts of mine subsidence resulting from former mining operations.

Controls

1. Abandoned mine workings exist beneath parts of the proposed development site. Under Section 15 of the Mines Subsidence Compensation Act, approval must be sought from the Mine Subsidence Board prior to subdivision.
2. Prior to the release of a subdivision certificate a qualified structural engineer is to certify that the subsidence potential and load bearing capacity of the site have been appropriately addressed and the requirements of the Mine Subsidence Board can be met.
3. Residential development is not to be located over the drift or shaft of former mining operations (refer to Figure 5) unless all risk of mine subsidence has been eliminated to the satisfaction of the Mine Subsidence Board.
4. Consultation should be undertaken with the Mine Subsidence Board where other areas at risk of mine subsidence have been identified.
5. Any risk of mine subsidence identified shall be removed by a suitable means, such as grouting. Alternatively, geotechnical investigations shall be undertaken to the satisfaction of the Mine Subsidence Board confirming that the workings are long term stable and there is no risk of mine subsidence affecting the site.

4.8.3 Cut and fill

Objectives

- To provide a consistent treatment for the provision of retaining walls.
- To accommodate proposed development on site without the need for excessive cut and fill or construction of high retaining walls.
- To encourage designs conforming to natural land forms.
- To ensure that building design is appropriate.

Controls

1. Development Applications involving site disturbance, excavation or filling (other than for minor building modifications) are to include:
 - Site plans showing existing and proposed finished contours, location of structures (proposed and existing), all services including drainage, effluent disposal systems water supply and sewerage pipelines, and trees.
 - Quantum of excavation and fill required.
 - Plans and details of all retaining walls.
 - A Construction Management Plan detailing management of construction impacts.
2. All cut and fill should not exceed 1.0m in height measured from the ground level (existing) adjacent to the building and must include the area of any structure in the articulation zone (refer to Figure 9).
3. Landscaped embankments are encouraged as an alternative to retaining walls.
4. An unprotected embankment must not extend beyond the boundaries of the allotment.
5. Retaining walls should be:
 - No higher than 0.5m in height where possible and where they are not contained within the building footprint.
 - Designed in accordance with AS4678 Earth Retaining Structures.
 - Fully located within the boundaries of the subject property.
 - Constructed in consistent, visually recessive materials and colours.
6. Approved silencing measures shall be provided and maintained on all power-operated plant used in demolition, excavation, earthworks, and construction.

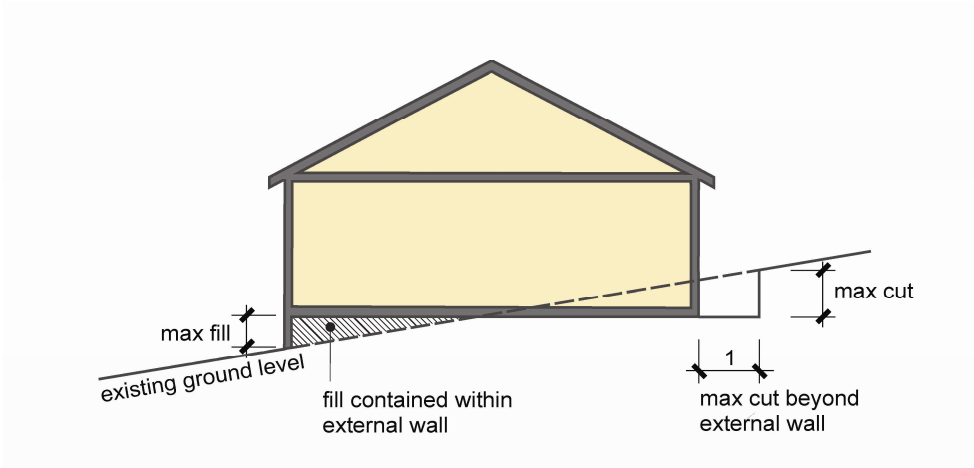


Figure 9: Cut and fill

4.8.4 Soils

Objectives

- To implement measures as part of development to prevent any degradation of the existing soil and groundwater environment.
- To minimise erosion and sediment loss during and after construction.
- To minimise water pollution from erosion siltation and sedimentation.
- To ensure that development does not contribute to environmental damage of water-courses and vegetation.
- To minimise air and water pollution due to soil loss either through erosion or poor site practices.

Controls

1. Development should be designed and constructed to effectively integrate with the natural topography of the site, minimising the need for excessive sediment disturbance.
2. Soil loss from a development site should be prevented through the installation and maintenance of effective site management practices.
3. An erosion and sediment control plan (ESC Plan) is required to be submitted with all development applications where the proposal involves site disturbance, excavation or filling (other than for minor building modifications) including, demolition, excavation, trenching and building.
4. The ESC Plan must make reference to the entire construction and post construction period. All devices must be installed prior to commencement of any other demolition or construction works on-site.
5. The ESC Plan is to be prepared according to the requirements of the NSW Department of Housing, Managing Urban Storm water: Soils and Construction, 2004, and Lake Macquarie Development Control No 1 Volume 2 – Engineering Guidelines.

6. Suspended solid concentrations in storm-water leaving the site shall not exceed more than 50mg/l.
7. All controls are to be maintained through the life of the works and shall be inspected and repaired at the end of each working day.
8. Dust control measures should be applied to reduce surface or airborne movement of sediment from exposed areas of the site.
9. A detailed acid sulphate soil investigation shall be undertaken and an acid sulphate management plan prepared where proposed development will impact on any acid sulphate soils in accordance with Acid Sulphate Soil Assessment Guidelines (Acid Sulphate Soil Advisory Committee 1998).

4.8.5 Geotechnical investigations

Objectives

- To ensure geotechnical matters are appropriately investigated and documented by applicants prior to the lodgement of any development application.
- To avoid risk to property and/or life posed by slope instability.

Controls

1. Development applications for site disturbance, excavation or filling (other than for minor building modifications) including, demolition, excavation, trenching and building should include details of geotechnical conditions at the site and any proposed measures to ensure the site is suitable for the development proposed.
2. Development applications involving a site with potential slope instability issues must include a geotechnical assessment to confirm the site is suitable for the development proposed.
3. Prior to the commencement of construction, detailed drawings shall be prepared and certified by a qualified structural engineer to demonstrate that any improvements, services and/or civil works will be safe, serviceable and repairable taking into account the geotechnical conditions at the site.

4.9 Development staging

Objectives

- Ensure the development is undertaken in a logical manner with timely delivery of required infrastructure provided for each stage.
- Appropriate infrastructure services, utilities, public domain and landscaping to support each stage shall be provided as part of the development of each stage.

Controls

1. Ensure the development of the site is undertaken in a logical manner with key roads, facilities and open space areas forming part of the initial stage of development.
2. The public domain and landscaping (including weed management and revegetation works) for the Village Park and Montefiore Parkway shall be included in the first stage of the development.
3. The landscaping and public domain works for the coastal walkway and reserve shall be undertaken prior to the completion of Stage 2.
4. Where variation from the Staging Plan (Figure 10) is proposed, the applicant is to demonstrate that the revised staging is generally consistent with the objectives and controls of Section 4.9 of the DCP.



Figure 10: Staging plan

5 RESIDENTIAL DEVELOPMENT

5.1 Neighbourhood Character

Objectives

- Promote well-designed buildings that make a positive contribution to the streetscape and amenity of the neighbourhood.
- Encourage a form of housing that is low in scale and complements the coastal and bushland character of the site and neighbourhood.
- Ensure development makes the best use of a site's natural and other positive features, and considers amenity, streetscape and energy efficiency at the outset.
- The materials and finishes selected for dwellings should harmonise with the natural environment and respond to the existing character of the Catherine Hill Bay Village.



Figure 11: Colours and materials

Controls

1. Residential development is to be consistent with the character of each of the Catherine Hill Bay precincts as outlined in Section 3.4.
2. The scale of new development is to be compatible with existing village structures and of a residential scale that allows the natural environment to visually dominate.
3. The scale, form and extent of development should not intrude on views inland from the beach.
4. Buildings are to address the public domain and to reinforce a sense of security and community. In particular, main entry doors and windows of habitable rooms should face the street.
5. Dwellings adjacent to drainage reserve or conservation lands should overlook the reserve.
6. Site planning should be designed to provide reasonable opportunity for tree planting within both private lots and the public domain.

5.2 Site planning

Objectives

- To achieve a coherent site layout that provides a pleasant, attractive, manageable and resource efficient living environment.
- To ensure that development accommodates adequate open space, car parking, amenity, setbacks and landscaping that is consistent with the requirements of this DCP.
- To maximise solar access and natural ventilation and minimise cut and fill, overshadowing and privacy impacts.
- Provide definition and passive surveillance of the public domain by ensuring development addresses the streets and open spaces.

5.2.1 Site analysis

Controls

1. A site analysis should support the Development Application to assist in design decisions based on site conditions and surrounding context and assess the impacts of the development on the site and its surroundings.
2. The key issues to be considered in the site planning and layout include:
 - Privacy for occupants and the maintenance of neighbours' privacy and amenity.
 - Sufficient solar access and natural ventilation to provide a comfortable and energy efficient living environment for residents and neighbours.

- Location and design of dwellings to avoid adverse impacts on adjoining properties in terms of overshadowing.
- Well located and useable private outdoor areas for residents.
- The existing street character is maintained through setbacks, separation and height, driveway and car parking location.
- Opportunities for view sharing are maximised. Views from the site are optimised for both the development and neighbours.
- Circulation and access is suitably located for the development and the locality.
- The design and construction of the proposal is suitable to the slope of the land, minimises the need for cut and fill and considers any geotechnical constraints or mine subsidence.
- Cost effective development connection to services and existing land uses.
- Minimising tree removal by locating the development to retain existing vegetation.
- Safety and surveillance of the development and the locality is maximised.
- Location of bush fire asset protection zones.
- Minimising impact on heritage items and the heritage conservation area.

5.2.2 Dual frontage lots

Controls

1. Allotments that have a dual frontage are to address both frontages (refer to Figure 12).
2. Houses on dual frontage lots are to be designed to address both frontages, locating habitable rooms and generous windows on each frontage.
3. No vehicular access is permitted from perimeter roads or Montefiore Street.

5.2.3 Corner lots

Controls

1. Dwellings on corner lots are to address both the street frontages through house design and landscaping (refer to Figure 12).
2. Suitable corner expression should include the continuation of elevational elements such as windows and wall finishes on both corner facades.
3. Landscape features and planting must continue around the corner.
4. The façade facing the secondary street frontage should be articulated to avoid long walls and provide a variety of materials.

5. Setbacks on corner lots should be consistent with front setbacks for adjoining lots where space permits.
6. On corner lots the garage is to face and be accessed from the secondary road frontage.

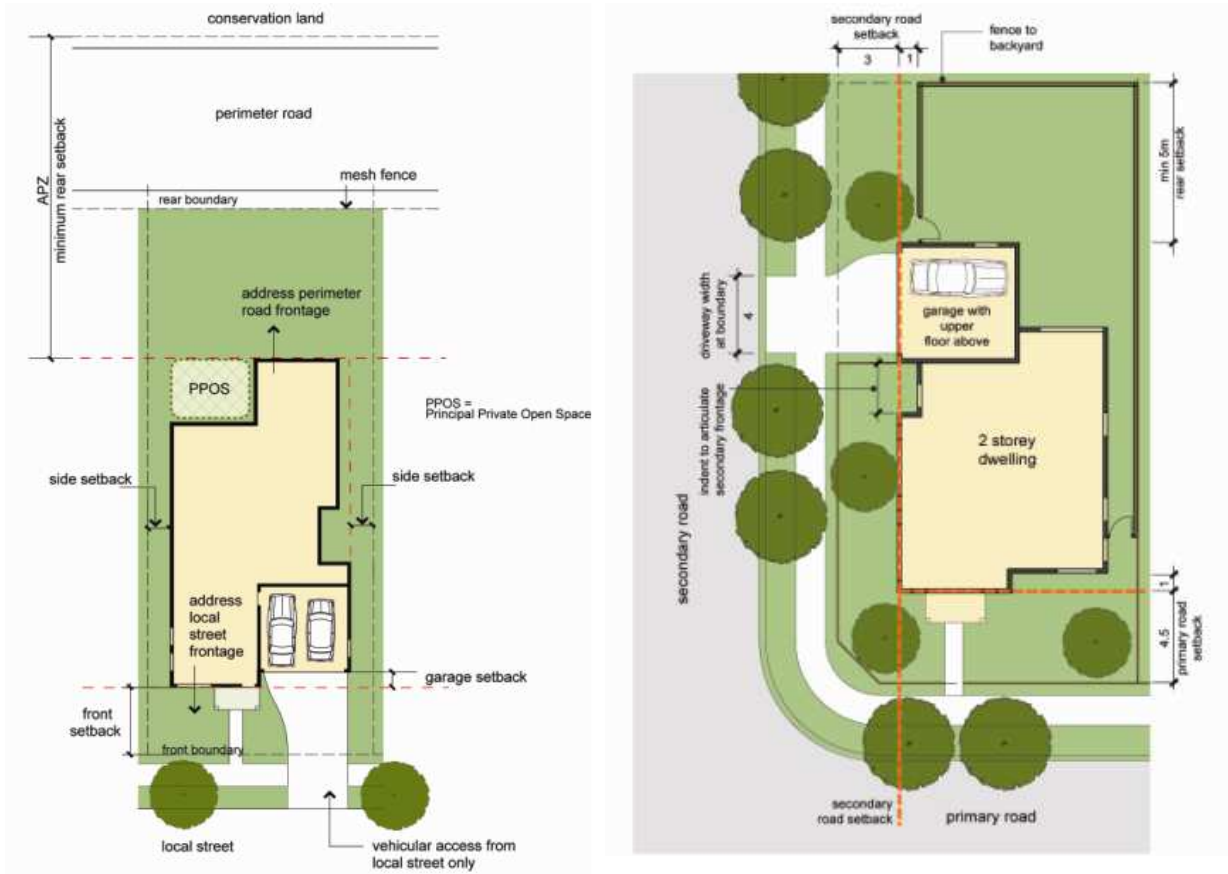


Figure 12: Dual frontage and corner lots

5.2.4 Sloping sites

Controls

1. Slab-on-ground construction is not suitable for steeply sloping sites because of the extensive excavation required and difficulties resolving waterproofing from ground water.
2. On sloping sites, the footprint of the building should be broken into smaller pavilions to reduce the extent of cut and fill required.
3. Excavation or fill should be limited to 1m in height /depth from the natural level of the land. Where this is impracticable on steep sites the building should be split level forms that follow the topography (refer Figure 13).

4. Undercroft spaces are to be designed and constructed so that:
 - They are finished with even grades.
 - Services, storage areas and cut/fill surfaces should be concealed from view by battens or other screening.
 - Lightweight pier on beam construction with open undercrofts should be used.

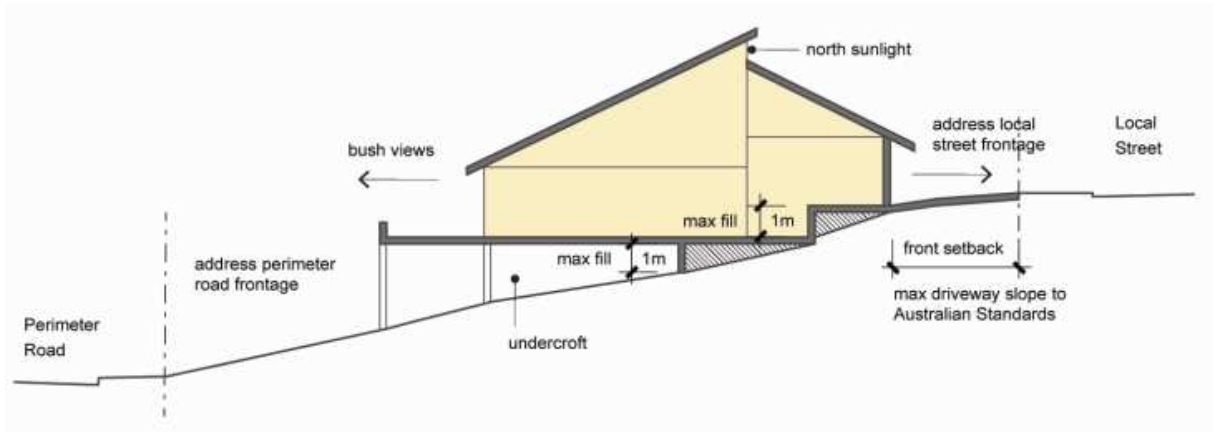


Figure 13: Sloping site

5.2.5 Private open space

Controls

1. Each dwelling is to be provided with an area of Private Open Space that contains an area of Principal Private Open Space (PPOS).
2. The location of the PPOS is to be determined having regard to dwelling design, allotment orientation, adjoining dwellings, landscape features and topography.
3. The PPOS should be directly accessible from living rooms and be located behind the building line. The PPOS shall have minimum dimensions of 4m and minimum total area of 24m².
4. 50% of the area of the required PPOS should receive at least 2 hours of sunlight between 9am and 3pm at the winter solstice (21 June).

5.3 Dwelling Design

Objectives

To ensure that development on land at Catherine Hill Bay:

- Has a distinctive Australian coastal village appearance and character.
- Complements existing development in terms of bulk and scale while providing a clear distinction between the old and the new development.
- Protect the natural character of all ridgelines by ensuring the visual impact of development is minimised.
- Protect the natural character of the coastline by minimising the visual impacts of development.
- To maintain a sense of openness and coastal character in areas proposed for residential development.

5.3.1 Dwelling controls

Controls

1. The following table summarises the key controls that apply to residential development.
2. The key controls should be read in conjunction with the site planning controls in Section 5.2 and where applicable, the special precinct controls in Section 5.4. In the event of an inconsistency between the two, the special precinct controls prevail.

Table 2: General residential controls

Element	Control
Lot size (min)	450m ²
Building height	Refer to height control map at Figure 14
Allotment width (min)	
450m ² - 900m ²	12m
900m ² - 1500m ²	15m
>1500m ²	18m
Front setback (min)	
Primary road	4.5m
Secondary road (for corner lots)	3.0m
Side setback (min)	
Single storey	900mm
Two storey	1.5m
Site coverage (max)	40%
Landscaped area (min)	
450m ² - 600m ²	20%
600m ² - 900m ²	25%
900m ² - 1500m ²	35%
>1500m ²	45%
Principal Private Open Space (min)	24m ² (min dimension 4m)
Car parking spaces (max)	2 spaces
Garages setback (min)	1m behind front façade
Garage door width (max)	5.0m or 50% of width of front façade (whichever is less)
Garage floor area (max)	60m ²
Outbuilding floor area (max)	40m ²
Outbuilding side/rear setback (min)	900mm
Outbuilding height (max)	4.8m

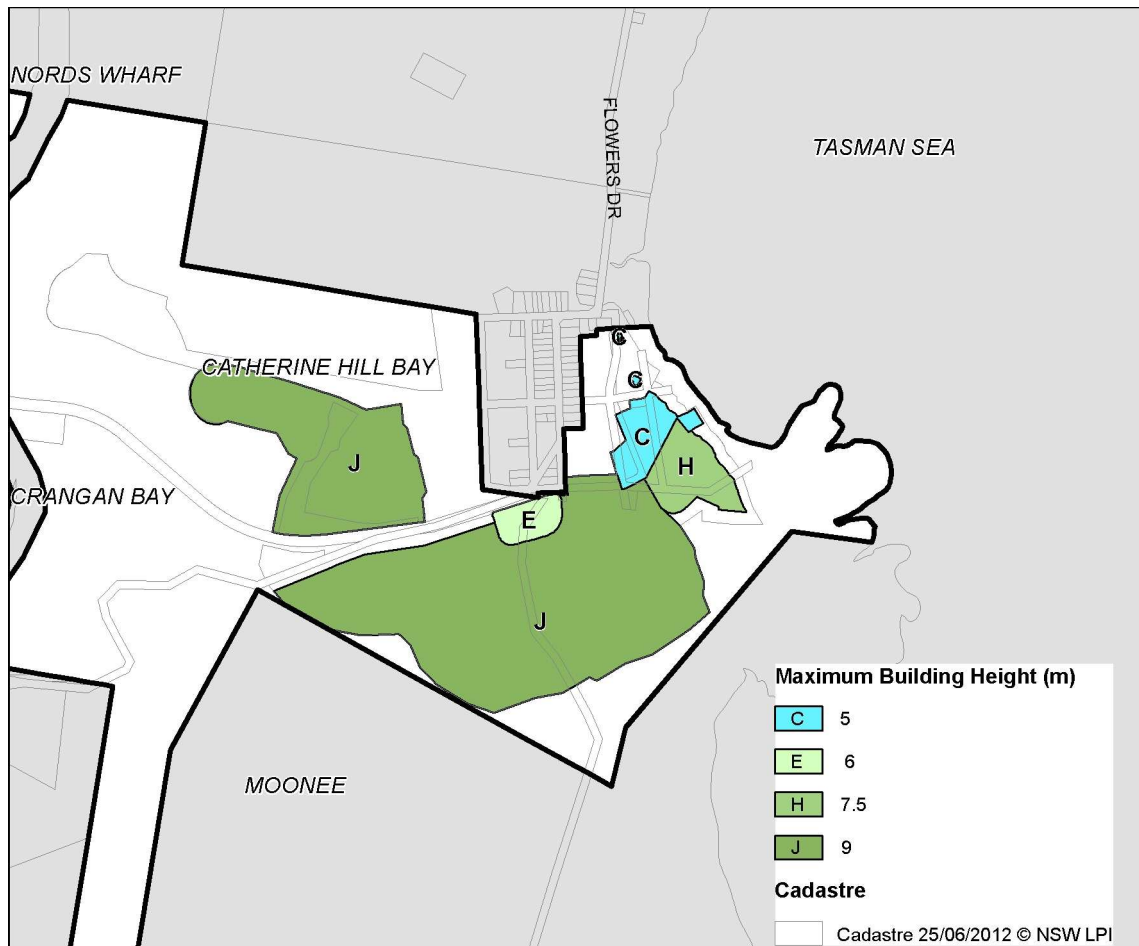


Figure 14: Height control map

5.3.2 Building elements

Controls

1. The house entry is to be visible from the street and clearly defined in built form.
2. Buildings are to include elements such as sun hoods, louvres, shutters, pergolas, verandahs, balconies, balustrades, porticos. These structures may encroach up to 2m into the front setback area.
3. Communication devices, including antennae, satellite dishes and similar elements are not to be visible from the street or public reserves.
4. For facades longer than 14.0m, the upper wall must be broken up by a stepped area. The roof line and eaves must follow the line of the step. The stepped area must remain within the building envelope as defined by minimum setbacks.

5.3.3 Roof forms

Controls

1. Roofs are to be low scale, simple and uncomplicated with a pitch or raked form between 15-30 degrees. Flat roofs are not permitted.
2. All rooftop services, vents and lights are to be integrated into roof design.
3. Roofs are not to include structures for advertising or dormer windows.
4. Eaves are required on all pitched roofs and are to project a minimum of 450mm from walls.

5.3.4 Colours and materials

Controls

1. The materials and finishes selected for dwellings should be from a neutral colour palette, be low-reflective and age well to harmonise with the natural environment and respond to the existing character of the Catherine Hill Bay Village. Very dark colours and large expanses of white are to be avoided.
2. Paint and rendered colours should be generally in accordance with the indicative colour palette in Figure 15. Other colours selected close to the colour palette will be considered based on merit.
3. Background and accent colours as specified on the indicative colour palette are to be used for large expanses such as walls and roofs.
4. Indicative materials and finishes are to include: metal roof sheeting with low reflectivity, exposed timber beams and rafters, timber hardwood, painted weatherboard shutters.
5. Wall finishes should be predominantly painted weatherboards or unit sheet cladding with expressed jointing in plywood, compressed fibre cement or metal. Stone is not appropriate.
6. Rendered walls should not be a dominant element and should not exceed 30% of the wall area. Face brick work is not to be used.
7. A mix of different wall materials or treatments, excluding windows, is encouraged on each elevation to create architectural interest. Consideration should be given to defining the upper floor from the lower floor using a change of materials.
8. External posts, balustrades and beams must be small section elements in timber or metal. Large box section columns and beams are discouraged.
9. All built elements (fences, garden and retaining walls etc) are to be designed to blend into the landscape or be consistent with the colour scheme and/or design of the main building to minimise visual intrusiveness.



Figure 15: Colour palette

5.3.5 Garages and driveways

Controls

1. Carports and garages should be constructed of materials that complement the colour and finishes of the main dwelling.
2. Garages are to be set back a minimum 1.0m behind the building line.
3. On corner lots the garage is to face and be accessed from the secondary road frontage.
4. Driveway crossings are not permitted along Montefiore Street.
5. Driveways should be a maximum of 4.0m wide at the front boundary and located a minimum of 1.0m from the side boundary.
6. Single file parking in front of the garage is permitted where all the parking is on the driveway and located within the property boundary.
7. Triple garages are not permitted.
8. Driveway materials between the street and property boundary must be plain, uncoloured concrete, located to suit layback location and be a minimum of 1.6m from any street trees.

5.3.6 Fencing

Controls

1. No fences are permitted in the front setback. The front boundary is to be defined by landscaping. Side fences are to return against the building at least 1m behind the front building line.

2. Side and rear fencing is to be a maximum height of 1.8m high. Side fencing is to start 1.0m behind the building line.
3. Fencing along Montefiore Street and the Green Link roads is to be located outside of the landscape buffer zone as specified.
4. Fencing on corner lots is permitted on a maximum of 50% of the secondary street frontage and is to be located at least 1m behind the front building line.
5. No sheet metal fencing or panels are permitted.
6. For allotments adjacent to conservation lands rear fences are to be open chain mesh with no access provided to the conservation lands.

5.3.7 Solar access and ventilation

Controls

1. The location, planning and orientation of buildings are to maximise solar access, natural light and privacy to dwellings and assist with the achievement of BASIX requirements.
2. Houses are to be designed to have good natural cross ventilation with well considered placement of windows to draw breezes through the house

5.3.8 Ecologically sustainable development

Controls

1. ESD principles shall be incorporated into the design and construction of dwellings. Measures to re-use water and minimise waste, energy use and car dependency are encouraged.

5.4 Special Precinct Controls

5.4.1 Washery Heritage Precinct

Objectives

- Minimise visual impacts from publicly accessible areas and ensure the impacts of development on significant views to and from the existing village of Catherine Hill Bay and its approaches are minimised as far as possible.
- Retain significant trees and enhance the tree buffer between Wallarah House and residential development.
- Provide and maximise opportunities for public access to the coastal reserve.
- Provide for the adaptive reuse of the former Bin Building structure.

Controls

1. All housing in the Washery Heritage Precinct is to comply with the general controls for residential development as outlined above with the exception of the following:
 - 1 storey dwellings are encouraged and should have a 1 storey appearance to the street.
 - The minimum lot size in the Washery Precinct 600m².
 - Minimum landscaped area on allotments within the Washery Heritage Precinct is 50%.
- New dwellings in the Washery Precinct should be located and designed to maximise the retention of existing trees.
- Development on lots adjoining southern boundary Wallarah Heritage Precinct must provide a rear setback of at least 25% of lot depth, new planting of local native trees in the rear setback area, and windows of habitable rooms overlooking the rear setback area.

5.4.2 Wallarah House Heritage Precinct

The key objectives of works in the Wallarah House Heritage Precinct are to:

- To ensure that an appropriate curtilage is maintained around the existing Wallarah House.
- Preserve the historic spatial relationship between Wallarah House and the Jetty Master Cottage.
- Provide built form controls for alterations and additions to Wallarah House and Jetty Masters Cottage which are sympathetic to their heritage significance.
- Preserve the heritage and scenic qualities of the Precinct.

Controls

1. Development applications applying to land within the Wallarah House Precinct shall include a heritage impact statement that assesses the impact of the proposed development on the heritage significance of the heritage items and heritage conservation area.
6. Any proposed development within the Wallarah House Heritage Precinct shall:
 - Retain and enhance the heritage curtilage around the existing Wallarah House (Figure 16).
 - The curtilage includes Wallarah House, the Jetty Master's Cottage and the surrounding landscape generally bounded by the proposed Hale Street to west, the access road from Lindsley Street to the surf club to the south, the cliff to the east and the property boundary to the north.
 - Include details of any proposed new buildings / additions within the Precinct and assess the impact of these on the heritage significance of the Precinct.
2. Ensure the views from the north veranda of Wallarah House are not obscured.
3. Enhance the dominant landmark quality of Wallarah House by avoiding the over planting of trees to the north and west.
4. The existing Norfolk Island Pines at the Jetty Masters Cottage should be retained. All other planting or seedling Norfolk Island Pine trees should be removed.

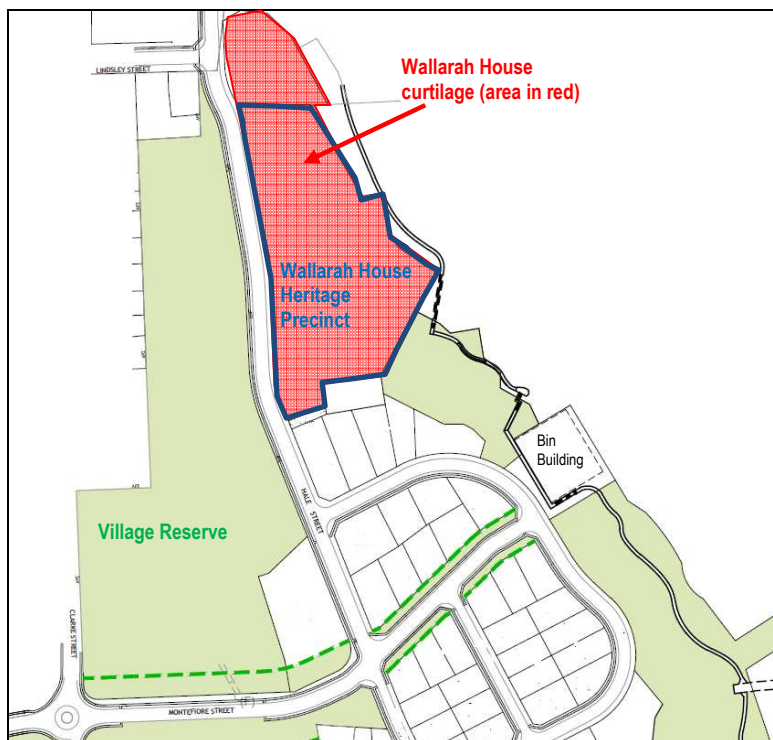


Figure 16: Wallarah House curtilage

6 NEIGHBOURHOOD SHOPS

This section includes controls for the small neighbourhood shops to be located on the corner of Hale and Montefiore Streets adjacent to the new Village Park.

Objectives

- The neighbourhood shops are to provide local shops and services for the new and existing community.
- Create a small neighbourhood shopping centre with a maximum floor space of 750m² (retail and office) to serve the needs of both the existing and new local community.
- Ensure that the detailed design of the neighbourhood shops provides for an appropriate frontage to Hale Street, Montefiore Street and the new Village Park.
- The neighbourhood shops are to provide appropriate frontage to Hale Street, Montefiore Street and the new Village Park.
- Ensure a high standard of public domain and pedestrian amenity.
- Provide for a car parking area as part of the neighbourhood shops that services both the centre and the adjacent Village Park.
- To provide shelter for public streets where most pedestrian activity occurs.

6.1 Neighbourhood Shop Controls

6.1.1 Shop frontages

Controls

1. The detailed design of the Neighbourhood Shops is to provide appropriate frontage to Hale Street, Montefiore Street and the new Village Reserve.
2. The detailed design should be prepared in conjunction with a heritage architect to ensure that it is sympathetic to the character of the existing Catherine Hill Bay village.
3. Development within the neighbourhood shops area should address the potential heritage impacts on the State heritage conservation area and any heritage items on the site or in the vicinity of the site
4. The frontages of all the shop buildings on Hale Street are to be built to the front property boundary (ie. a zero front setback) to define the street edge.
5. Front windows shall be designed to promote an active street level frontage and have a display function. The use of obscured glazing is generally not supported.
6. The materials and finishes selected for the shops should be from a neutral colour palette and be non-reflective to harmonise with the natural environment and respond to the existing character of the Catherine Hill Bay Village.

7. The neighbourhood shops shall not exceed a maximum floor space of 750m² (retail and office).
8. A car parking area shall be provided as part of the neighbourhood shops area and shall be designed so that it does not detract from the Village Reserve.
9. The neighbourhood shops should provide:
 - o An active frontage to Hale Street,
 - o A landscaping buffer to Montefiore Street
 - o High quality façade with glazing on the northern boundary with the village reserve
 - o Outdoor seating at the north east corner of the neighbourhood shops and overlooking the village reserve.

6.1.2 Awnings

Controls

1. Provide continuous street frontage awnings to all new buildings within the neighbourhood centre.
2. Wrap awnings around corners on street corner buildings.
3. Cantilever awnings from buildings are to have a minimum soffit height of 3.2m and a maximum of 4m.
4. Low profile awnings with slim vertical fascias and/or eaves (not to exceed 300 mm) are encouraged.
5. Awnings are to be a minimum of 3m deep (dependant on street width) and setback from the kerb a minimum of 1.2m to allow clearance for street furniture, trees etc.
6. Awnings must be complementary to each other and maintain continuity.
7. Steps for design articulation or to accommodate sloping streets are to be integrated with the building design and should not exceed 700mm.
8. Vertical canvas drop blinds are permissible along the street edge, but they are not to carry advertising or signage.

6.1.3 Advertising and signage

Controls

1. All signage proposed on the façade shall be submitted to Council for approval prior to construction.
2. Signage on buildings in the neighbourhood shops should be limited and should not be of a size or proportion which significantly affects the facade.
3. Signs shall not exceed 1.0m x 1.5m.

4. Signage should only contain information relating to the use of the subject site.
5. The colour used in the design of an advertising sign or structure should reflect the colour scheme of the building to which it will be attached.
6. Signs are not to be illuminated.
7. Any under awning signage is to maintain a minimum clearance of 2.8m from the level of the pavement.
8. Bunting, banners, canvas or fabric signs, or inflatable signs and the like, will not be permitted.
9. A-Board (sandwich boards) signage is generally not permitted on public footpaths or roadways.

6.1.4 Lighting

1. Under awning lighting should to facilitate night use and improve public safety. Lighting is to be recessed into the soffit of the awning.
2. Illumination from premises must have regard to the following:
 - The intensity, colour, period of intermittency and hours of illumination of premises shall be varied if, at any time in the opinion of Council, adverse impact is being caused to the amenity of the area. The use of fluorescent lighting is discouraged.
 - Details are to be provided which demonstrate that light is not directed toward the public domain.
 - Proposed lighting, including ceiling lighting must be included in a development application for establishing and/or operating retail or commercial premises.

6.1.5 Servicing

Controls

1. Services and structures such as transformers, waste collection, storage and deposit areas, and loading bays are to be located to the rear of the property.
2. Adequate space should be provided for the unloading and loading of service vehicles.

6.1.6 Car parking area

Controls

1. The detailed design of the car parking area shall be submitted to Council for approval prior to construction.
2. The design of the car parking area is to ensure pedestrian safety.
3. Car parking should be screened from the street and Village Reserve by landscaping along the southern and western boundaries and should contain shade trees.

APPENDIX A: DEFINITIONS

In addition to the definitions given below the definitions of the Standard Instrument—Principal Local Environmental Plan apply to the interpretation of this DCP.

Building height means the vertical distance between ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

Dual frontage lot means a lot which has frontage to both the local road and the perimeter road.

Corner lot means a lot which has more than one frontage to, and predominantly visible from a road, reserve or other public space.

Landscaped area means all areas available for deep soil planting that are great than 2m in width.

Secondary road frontage means the shortest frontage where a corner allotment has two or more frontages to the street.

Site coverage means the proportion of a site area covered by buildings. However, the following are not included for the purpose of calculating site coverage:

- any basement,
- any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary,
- any eaves,
- unenclosed balconies, decks, pergolas and the like.

Storey means a space within a building that is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but does not include:

- a space that contains only a lift shaft, stairway or meter room, or
- a mezzanine, or
- an attic.

APPENDIX B: LANDSCAPE PLANS



Village Reserve

LEGEND

- EXISTING TREES
- PROPOSED FEATURE TREES
- PROPOSED NATIVE TREES
- SHRUB / HEALTH PLANTING
- MACROPHYTE PLANTING IN BASIN
- DRY CREEK BED
- TURF
- FOOTPATHS & DRIVEWAYS
- CONCRETE SERVICE PATHS
- PICNIC TABLES & BBQ

1:500 @ A1

PRELIMINARY

NOTES:
 VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORKS.
 CONSIDER ALL CONSTRAINTS TO PROPOSED AND EXISTING TREES TO CONSTRUCTION.
 COORDINATE ALL PLANTING SCHEDULES WITH OTHER AUTHORITY REQUIREMENTS AND REGULATIONS.
 DIMENSIONS SHOWN TO LARGER SCALES AND THOSE SHOWING PARTICULAR PARTS OF THE WORK SHALL HAVE PRECEDENCE OVER DIMENSIONS SHOWN TO SMALLER SCALES AND FOR GENERAL PURPOSES.
 ALL WORK IS TO CONFORM TO THE RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER AUTHORITY REQUIREMENTS AND REGULATIONS.
 LANDSCAPE ARCHITECT
 4/188 Wilson Street, East Sydney NSW 1511
 P: 02 9389 9000
 F: 02 9389 9888
 E: info@context.com.au
 www.context.com.au



PROJECT APPLICATION
 Project: Catherine Hill Bay, NSW
 Client: Rose Property Group Pty Ltd

Title: Village Park and Detention Basin
 Date: February 2011
 Draw No: 10625-L-301
 Issue: A



Moonee Reserve

LEGEND

- EXISTING TREES
- PROPOSED FEATURE TREES
- PROPOSED NATIVE TREES
- SHRUB / HEATH PLANTING
- MACROPHYTE PLANTING IN BASIN
- DRY CREEK BED
- TURF
- FOOTPATHS & DRIVEWAYS
- CONCRETE SERVICE PATHS
- PICNIC TABLES & BBQ

1:200 @ A1



PRELIMINARY

Date	Attachment	Issue
28.02.11	Project Application	A

NOTE:
 VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 VERIFY ALL DIMENSIONS TO BE PROVIDED TO CONTRACTOR TO CONSTRUCTION.
 USE FOUR-DIGIT DIMENSIONS IN PREFERENCE TO SCALED DIMENSIONS.
 DIMENSIONS MADE TO LARGER SCALES AND THOSE SHOWING PARTICULAR PARTS OF THE SITE SHALL TAKE PRECEDENCE OVER DIMENSIONS MADE TO SMALLER SCALES AND FOR GENERAL PURPOSES.

ALL WORK IS TO CONFORM TO RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER APPLICABLE REQUIREMENTS AND REGULATIONS.



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PROJECT APPLICATION

Project Catharine Hill Bay, NSW
 Client Rose Property Group Pty Ltd

Moonee Reserve

Date February 2011
 Draw No 10629-L-302
 Issue A



Munmorah Reserve

LEGEND

- EXISTING TREES
- PROPOSED FEATURE TREES
- PROPOSED NATIVE TREES
- SHRUB / HEATH PLANTING
- MACROPHYTE PLANTING IN BASIN
- DRY CREEK BED
- TURF
- FOOTPATHS & DRIVEWAYS
- CONCRETE SERVICE PATHS
- PICNIC TABLES & BBQ

1:200 @ A1



PRELIMINARY

Date	Amendment	Issue
28.02.11	Project Application	B
03.02.11	Draft Issue for Client Review	A

NOTES:
 VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 VERIFY ALL COORDINATES TO AVOID CONFLICTS FROM CONSTRUCTION.
 USE FOLLOWING DIMENSIONS IN PREFERENCE TO SCALE DIMENSIONS.
 DIMENSIONS MADE TO LARGER SCALES AND THOSE SHOWN PARTICULAR PARTS OF THE DRAWING, TAKE PRECEDENCE OVER DIMENSIONS MADE TO SMALLER SCALES AND FOR CLARITY PURPOSES.

ALL WORK IS TO CONFORM TO RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER APPLICABLE REQUIREMENTS AND REGULATIONS.



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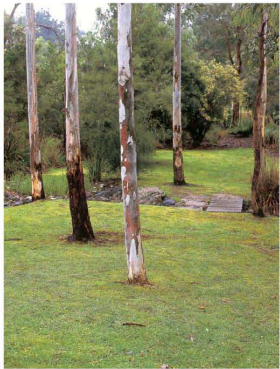


PROJECT APPLICATION

Project: Catherine Hill Bay, NSW
 Client: Rose Property Group Pty Ltd

Title: Munmorah Reserve

Date: February 2011
 Draw No: 10629-L-303
 Issue: B



Heath Reserve

- LEGEND**
- EXISTING TREES
 - PROPOSED FEATURE TREES
 - PROPOSED NATIVE TREES
 - SHRUB / HEATH PLANTING
 - MACROPHYTE PLANTING IN BASIN
 - DRY CREEK BED
 - TURF
 - FOOTPATHS & DRIVEWAYS
 - CONCRETE SERVICE PATHS
 - PICNIC TABLES & BBQ

1:200 @ A1



PRELIMINARY

28.02.11	Project Application	A
Date	Amendment	Issue

NOTE: ALL DIMENSIONS ON SITE MUST BE COMPLETED PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO ARCHITECT PRIOR TO CONSTRUCTION. THE NUMBER OF DIMENSIONS REFERENCED TO LOCAL DIMENSIONS.

ALL WORK IS TO COMPLY TO ALL APPLICABLE AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER APPLICABLE REGULATIONS AND RELEVANT.

DRAWINGS MADE TO LARGER SCALES AND THESE SHOWING PARTICULAR PARTS OF THE WORK SHALL BE PROPORTIONED OVER DRAWINGS MADE TO SMALLER SCALE AND FOR GENERAL PURPOSES.



LANDSCAPE ARCHITECT
20-08 Whalan Street, East Sydney NSW 2011
23-25 New South Street, NSW 2000
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www.context.com.au A24 066 872 284



PROJECT APPLICATION
 Project: Catherine Hill Bay, NSW
 Client: Rose Property Group Pty Ltd

Title: Heath Reserve
 Date: February 2011
 Draw No: 10629-L-304
 Drawn: JR/JDK/BJ
 Issue: A

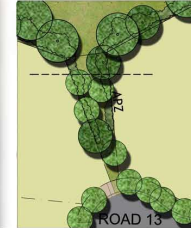
Possum Gully Reserve & the Drainage Corridor



LEGEND

- EXISTING TREES
- PROPOSED FEATURE TREES
- PROPOSED NATIVE TREES
- SHRUB / HEATH PLANTING
- MACROPHYTE PLANTING IN BASIN
- DRY CREEK BED
- TURF
- FOOTPATHS & DRIVEWAYS
- CONCRETE SERVICE PATHS
- PICNIC TABLES & BBQ

REFER INSET A



PRELIMINARY

28.02.11	Project Application	A
Date	Amendment	Issue

NOTE: VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. VERIFY ALL DIMENSIONS TO BE PROVIDED TO CONTRACTORS FROM TO CONSTRUCTION. USE FOUR-DIGIT DIMENSIONS IN PREFERENCE TO SCALED DIMENSIONS. DIMENSIONS MADE TO LARGER SCALES AND THOSE SHOWING PARTICULAR PARTS OF THE SCHEME SHALL TAKE PRECEDENCE OVER DIMENSIONS MADE TO SMALLER SCALES AND FOR GENERAL PURPOSES.

ALL WORK IS TO CONFORM TO THE LATEST AUSTRALIAN STANDARDS AND OTHER CODES OF PRACTICE, TOGETHER WITH OTHER APPLICABLE REQUIREMENTS AND REGULATIONS.



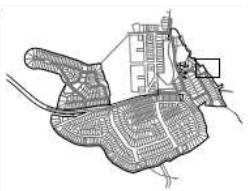
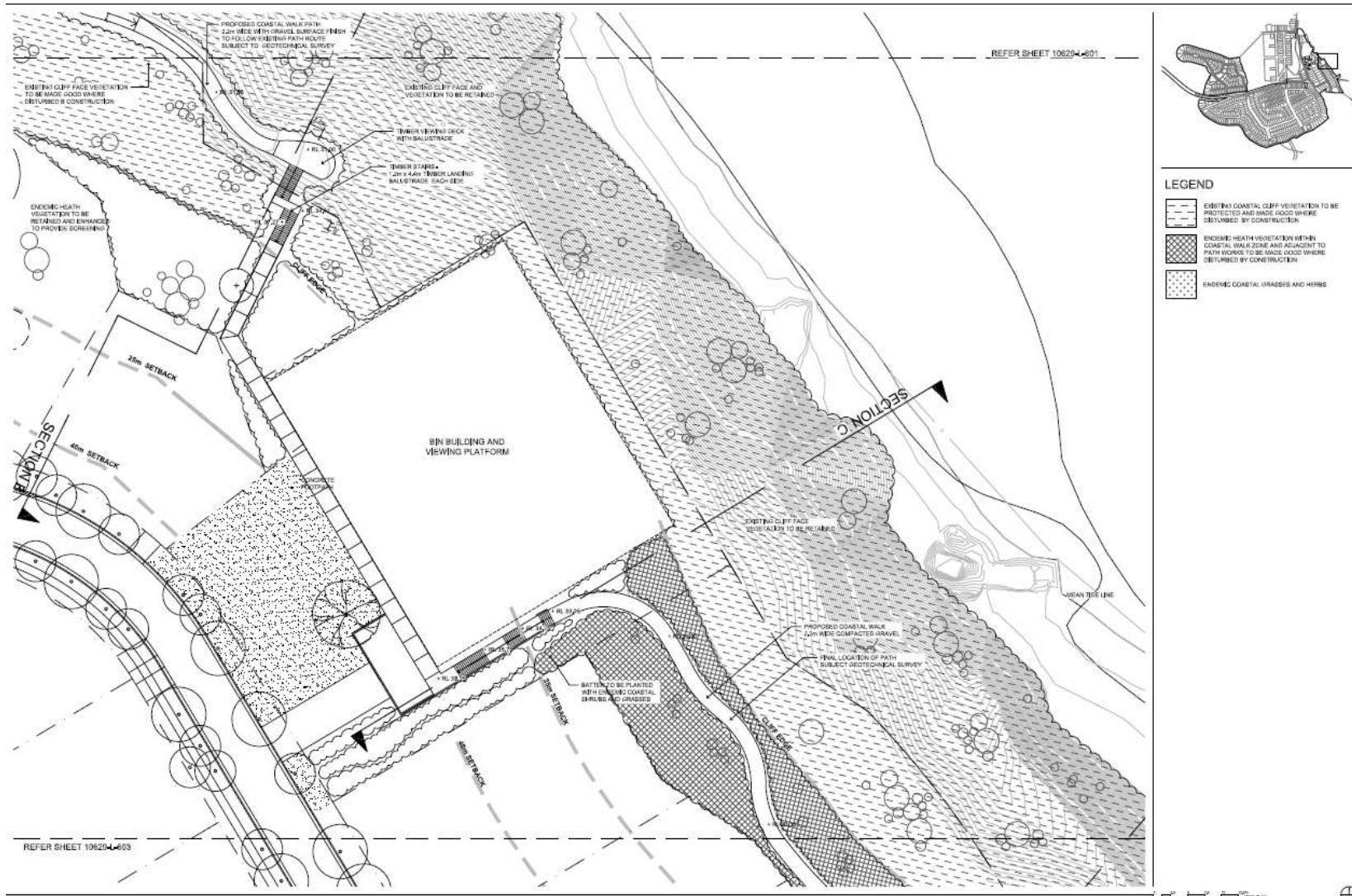
LANDSCAPE ARCHITECT
 20/08/2010 (Issue 1) - 28/02/2011 (Issue 2)
 28/02/2011 (Issue 3) - 28/02/2011 (Issue 4)
 28/02/2011 (Issue 5) - 28/02/2011 (Issue 6)



PROJECT APPLICATION
 Project: Catherine Hill Bay, NSW
 Client: Rose Property Group Pty Ltd

Title: Possum Gully Reserve and Drainage Corridor
 Date: February 2011
 Draw No: 10629-L-305
 Issue: A





- LEGEND**
- EXISTING COASTAL CLIFF VEGETATION TO BE PROTECTED AND MADE GOOD WHERE DISTURBED BY CONSTRUCTION
 - ENDEMIC HEATH VEGETATION WITHIN COASTAL WALK ZONE AND ADJACENT TO PATH INsofar AS TO BE MADE GOOD WHERE DISTURBED BY CONSTRUCTION
 - ENDEMIC COASTAL SHRUBS AND HERBS

PRELIMINARY

PROJECT NO.	106294-001	DATE	10/02/2011
PROJECT NAME	Catherine Hill Bay, South	DATE	10/02/2011
SITE	106294-001	DATE	10/02/2011
SCALE	1:1000	DATE	10/02/2011



PROJECT APPLICATION	106294-001
DATE	10/02/2011
SCALE	1:1000

PROJECT APPLICATION	106294-001
DATE	10/02/2011
SCALE	1:1000



PRELIMINARY

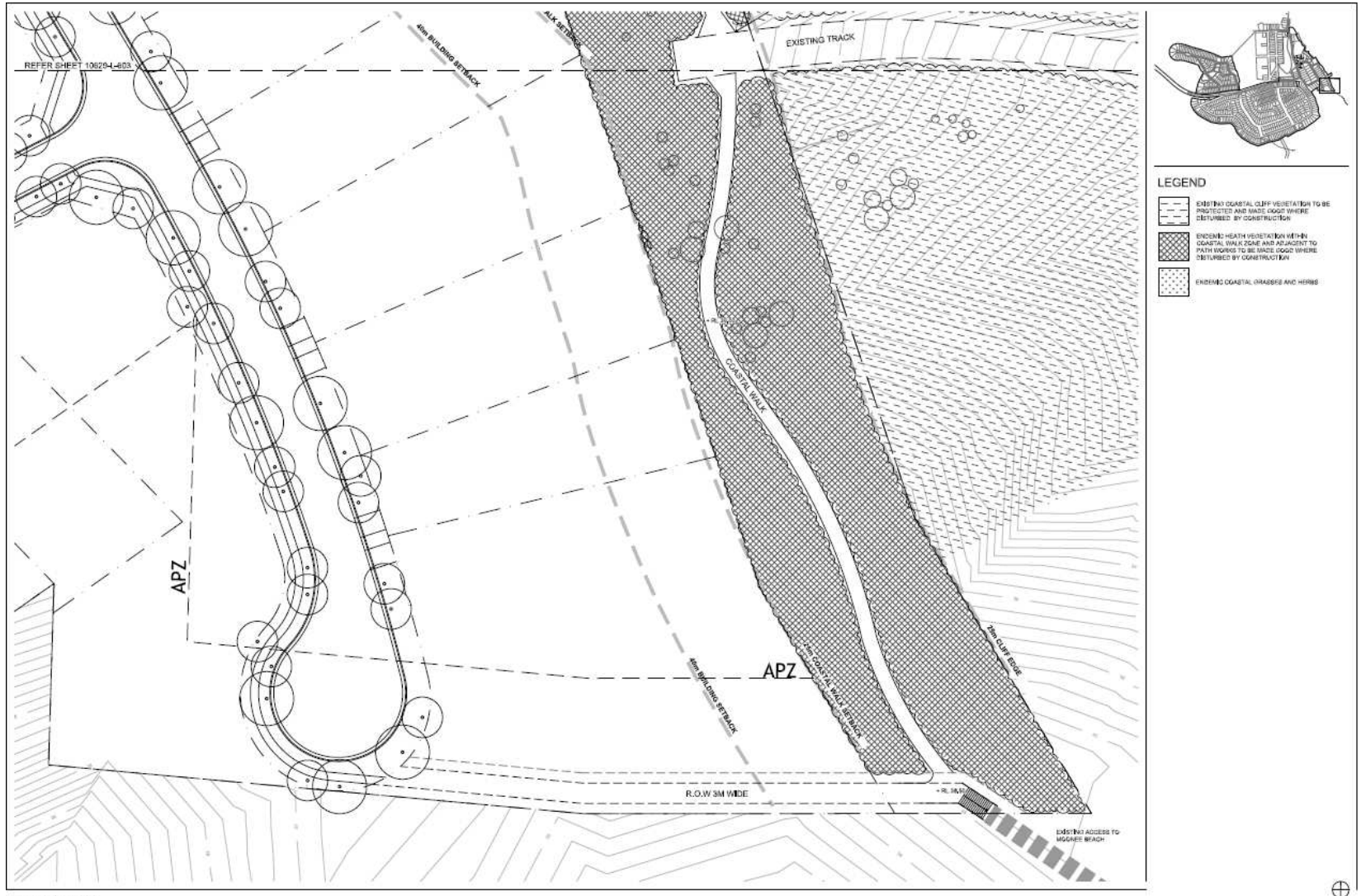
NO. 106204-L-003	Project Application	4
DATE	Approved	








PROJECT APPLICATION	
Address	Catherine Hill Bay, 106204
Client	Rose Property Group Pty Ltd

Coastal Walk Plan 03	
Date	February 2011
Scale	1:500



LEGEND

-  EXISTING COASTAL CLIFF VEGETATION TO BE PROTECTED AND MADE GOOD WHERE DISTURBED BY CONSTRUCTION
-  EXISTING HEATH VEGETATION WITHIN COASTAL WALK ZONE AND ADJACENT TO PATHS TO BE MADE GOOD WHERE DISTURBED BY CONSTRUCTION
-  EXISTING COASTAL GRASSES AND HERBS

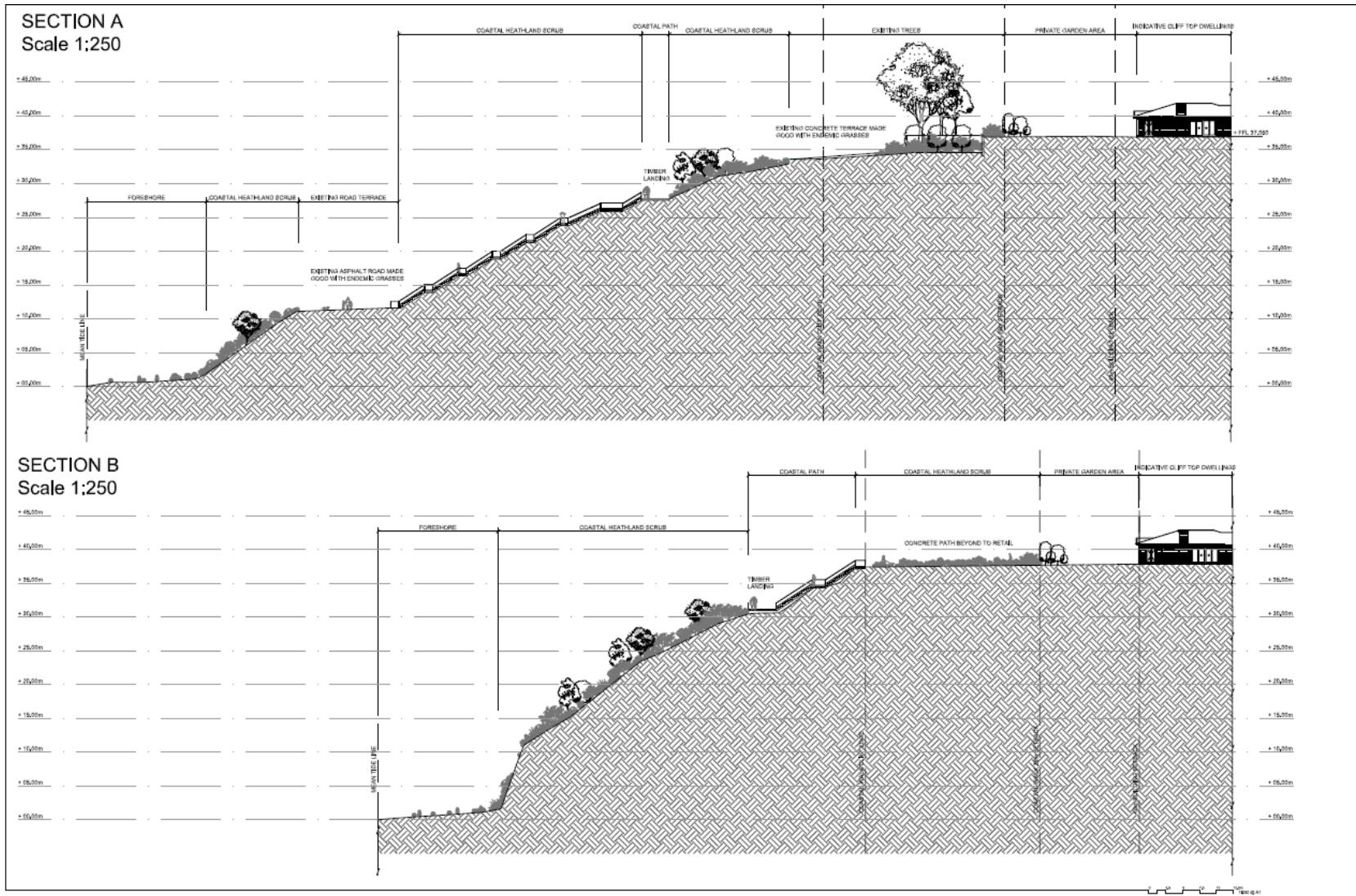
PRELIMINARY

DATE:	APPROVED:	ISSUED:



PROJECT APPLICATION	
Project:	Catherine Hill Bay, NSW
Client:	Rose Property Group Pty Ltd

33 Coastal Walk Plan 04	
Date:	February 2011
Drawn by:	1102714-0104

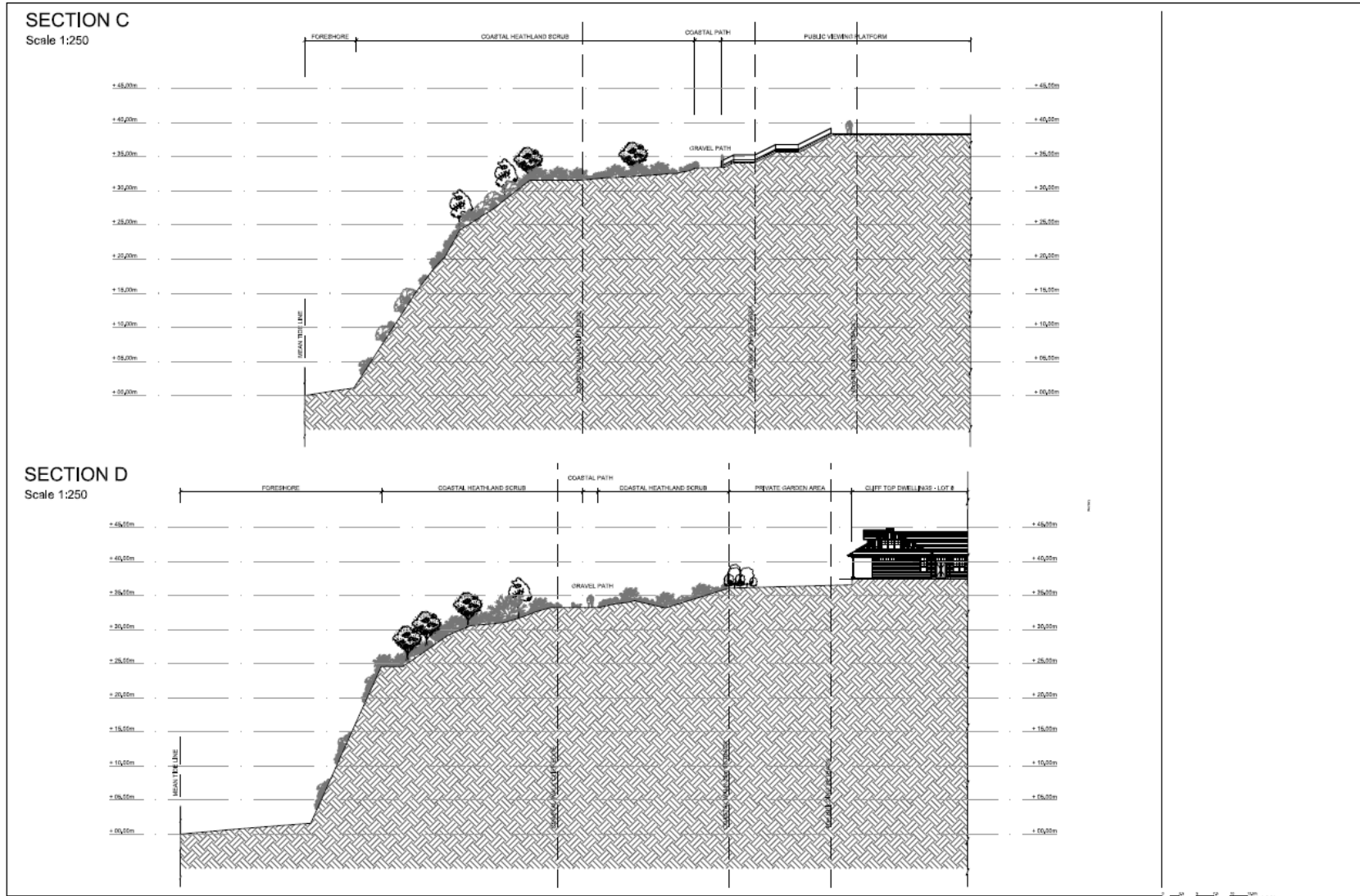


PRELIMINARY

16/03/2011	Project Approval	A
	Date	Approved



PROJECT APPLICATION		16 Coastal Walk Sections A and B	
Project	Catherine Hill Bay, NSW	Date	February 2011
Client	Rose Property Group Pty Ltd	Drawn by	1062704-0511



PRELIMINARY

DATE	DESCRIPTION	BY	CHECKED
2007/01/11	Project Application	A	
Date:	Approved:	Issue:	



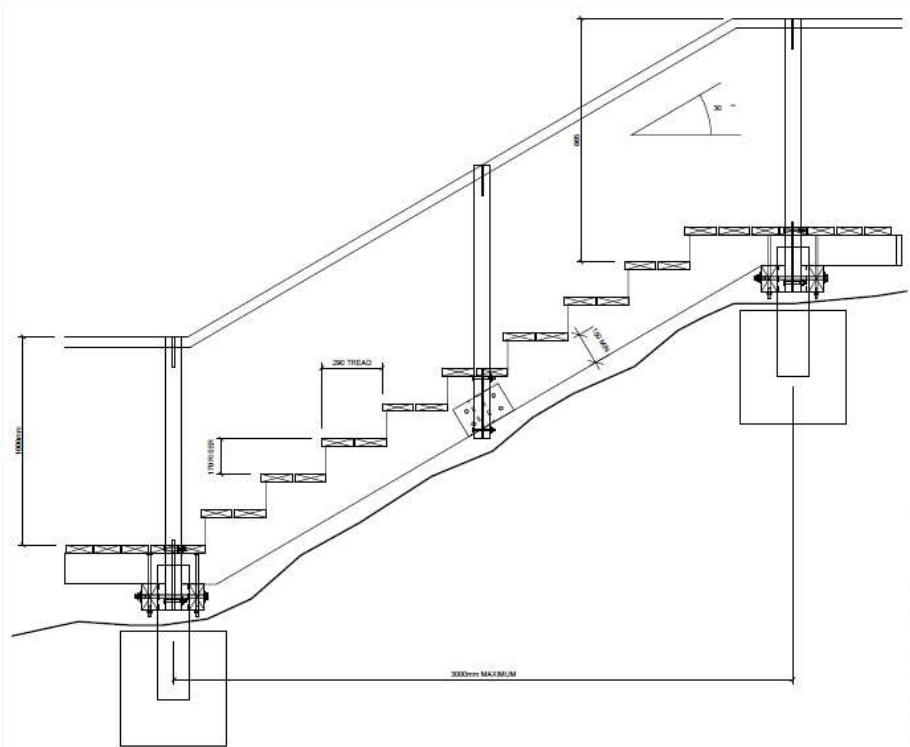
LABORATORY
2008/01/01
1/11/2008
1/11/2008
1/11/2008



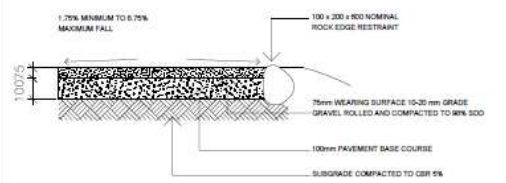
PROJECT APPLICATION	
Project:	Catherine Hill Bay, NSW
Client:	Rose Property Group Pty Ltd

34	Coastal Walk Sections C and D
Date:	February 2011
Drawn by:	108/214-01/12

DESIGN IMAGES



1 - TYPICAL TIMBER STAIR AND LANDING
Scale 1:10



2 - TYPICAL GRAVEL PATH
Scale 1:10

HEATH SPECIES	COMMON NAME	SIZE
<i>Acacia longifolia</i> subsp. <i>longifolia</i>	Sydney Golden Wattle	All plants in the Schedule will be planted as tubestock, and with protective covers where appropriate.
<i>Acacia longifolia</i> subsp. <i>sophorae</i>	Coastal wattle	
<i>Acacia suaveolens</i>	Sweet wattle	
<i>Allocasuarina distyla</i>	Scrub she oak	
<i>Banksia ericifolia</i>	Heath banksia	
<i>Banksia integrifolia</i>	Coast banksia	
<i>Banksia serrata</i>	Old man banksias	
<i>Leucopogon parvifolius</i>	Coastal beard heath	
<i>Leptospermum laevigatum</i>	Coastal tea tree	
<i>Melaleuca nodosa</i>	Ball honey myrtle	
<i>Westringia fruticosa</i>	Coastal rosemary	
<i>Apium prostratum</i>	Sea oxtley	
<i>Carax pumila</i>	Dune sedge	
<i>Carpobrotus galuascens</i>	Pig face	
<i>Hibbertia scandens</i>	Guinea Flower	
<i>Isoetes nodosa</i>	Knotby club rush	
<i>Juncus kraussii</i>	Sea rush	
<i>Lomandra longifolia</i>	Spiny headed Mat rush	
<i>Sporobolus virginicus</i>	Sand couch	
<i>Themada australis</i>	Kangaroo grass	

HEATH REVEGETATION
Where disturbed by construction of the coastal walkway, the heathland slopes will be revegetated with endemic species including the species listed in the above. Where possible, plants will be grown - on from locally sourced seeds. Removal of weeds will be undertaken as part of a longer term Weed Management programme to be outlined in the Coastal Walk Management Plan.

COASTAL PATH AND STAIR CONSTRUCTION
Below are some indicative images of possible construction and finishes for the completed walkway. All structures and paths are subject to geotechnical survey requirements.

PRELIMINARY

DATE	DESCRIPTION	BY	CHECKED
2012/02/01	Project Application	A	
DATE	DESCRIPTION	BY	CHECKED

ROSE
Creating a world worth living in

PROJECT APPLICATION

Project: Catherine Hill Bay NSW
Client: River Properties Group Pty Ltd

The Coastal Walk Details
Date: February 2012
Drawn by: TUESCH-221

APPENDIX C: PLANTING SCHEDULES

Table 3: Preferred street tree species

Road Type	Indicative species
Montefiore Street	Angophora costata (Smooth Bark Apple)
	Corymbia gummifera (Red Bloodwood)
	Eucalyptus acmenoides (White Mahogany)
	Eucalyptus capitellata (Brown Stringybark)
	Eucalyptus haemastoma (Scribbly Gum)
	Eucalyptus piperita (Sydney Peppermint)
	Glochidion ferdinandi (Cheese Tree)
Hale Street	Angophora costata (Smooth bark Apple)
	Eucalyptus capitellata (Brown Stringybark)
	Eucalyptus acmenoides (White Mahogany)
Green Link Roads	Angophora costata (Smooth bark Apple)
	Banksia serrata (Coastal banksia)
	Banksia integrifolia (Old Man Banksia)
	Corymbia gummifera (Red Bloodwood)
	Corymbia maculata (Spotted Gum)
	Cupaniopsis anacardioides (Tuckeroo)
	Eucalyptus botryoides (Southern Mahogany)
	Eucalyptus capitellata (Brown Stringybark)
	Eucalyptus haemastoma (Scribbly gum)
	Eucalyptus piperita (Sydney peppermint)
	Indicative understory species
	Acacia longifolia var. longifolia (Sydney Golden Wattle)
	Banksia oblongifolia
Green Link Roads (continued)	Banksia spinulosa var. collina
	Dodonea triquetra (Hop bush)

Road Type	Indicative species
	Melaleuca nodosa (Ball Everlasting)
	Lambertia formosa (Mountain Devil).
	Leptospermum laevigatum (Tea tree)
	Lomandra obliqua (Fish Bones)
	Patersonia sericea (Purple Flag Flower)
	Pultenaea elliptica
	Themeda australis (Kangaroo Grass).
	Westringia fruticosa (Coastal rosemary)
	Xanthorrhoea latifolia subsp. latifolia (Grass Tree)
Perimeter roads	Angophora costata (Smooth bark Apple)
	Corymbia maculata (Spotted Gum)
	Eucalyptus botryoides (Southern Mahogany)
	Eucalyptus capitellata (Brown Stringybark)
	Eucalyptus haemastoma (Scribbly gum)
Local roads	Angophora costata (Smooth bark Apple)
	Corymbia maculata (Spotted Gum)
	Cupaniopsis anacardioides (Tuckeroo)
	Eucalyptus botryoides (Southern Mahogany)
	Eucalyptus capitellata (Brown Stringybark)
	Eucalyptus haemastoma (Scribbly gum)
	Eucalyptus piperita (Sydney peppermint)

Table 4: Preferred open space plantings

Open space

Indicative species

Angophora costata (Smooth bark Apple)

Banksia serrata (Coastal banksia)

Banksia integrifolia (Old Man Banksia)

Corymbia gummifera (Red Bloodwood)

Corymbia maculata (Spotted Gum)

Cupaniopsis anacardioides (Tuckeroo)

Eucalyptus botryoides (Southern Mahogany)

Eucalyptus capitellata (Brown Stringybark)

Eucalyptus haemastoma (Scribbly gum)

Eucalyptus piperita (Sydney peppermint)

Indicative understorey species

Acacia longifolia var. longifolia (Sydney Golden Wattle)

Banksia oblongifolia

Banksia spinulosa var. collina

Dodonea triquetra (Hop bush)

Melaleuca nodosa (Ball Everlasting)

Lambertia formosa (Mountain Devil).

Leptospermum laevigatum (Tea tree)

Lomandra obliqua (Fish Bones)

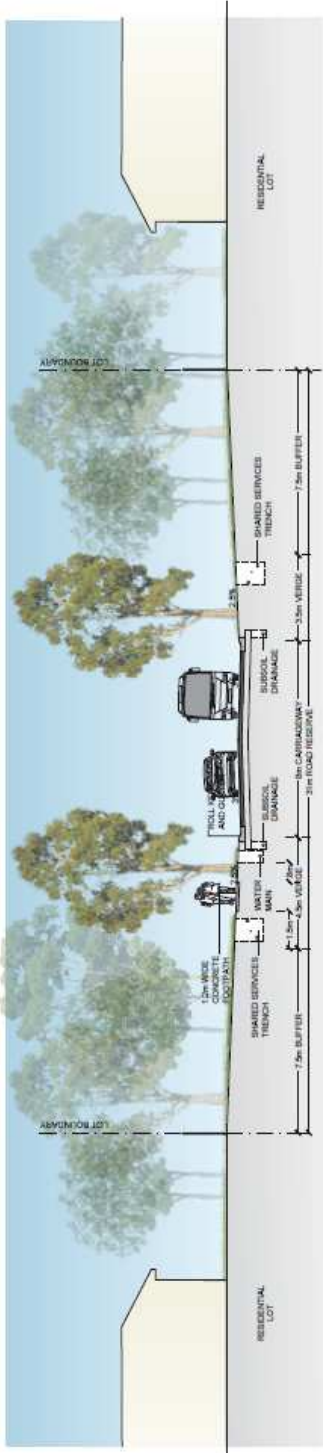
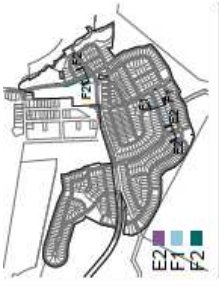
Patersonia sericea (Purple Flag Flower)

Pultenaea elliptica

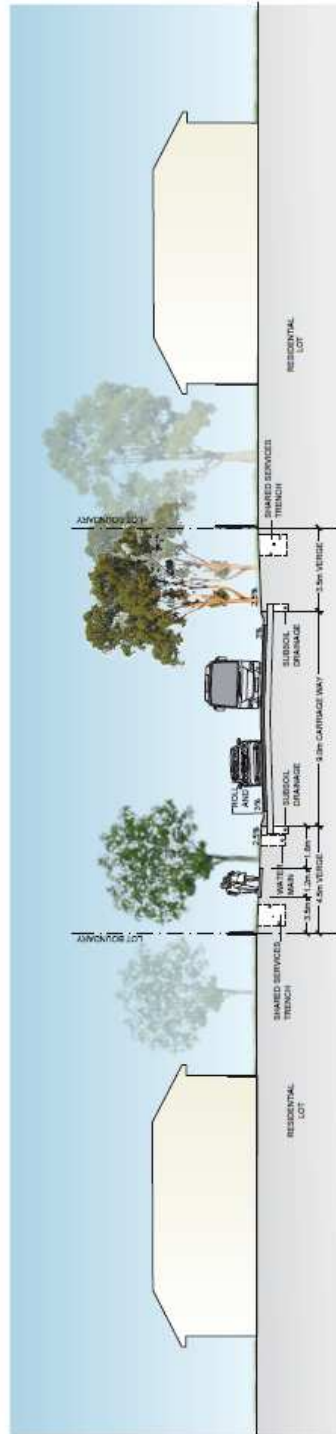
Themeda australis (Kangaroo Grass).

Westringia fruticosa (Coastal rosemary)

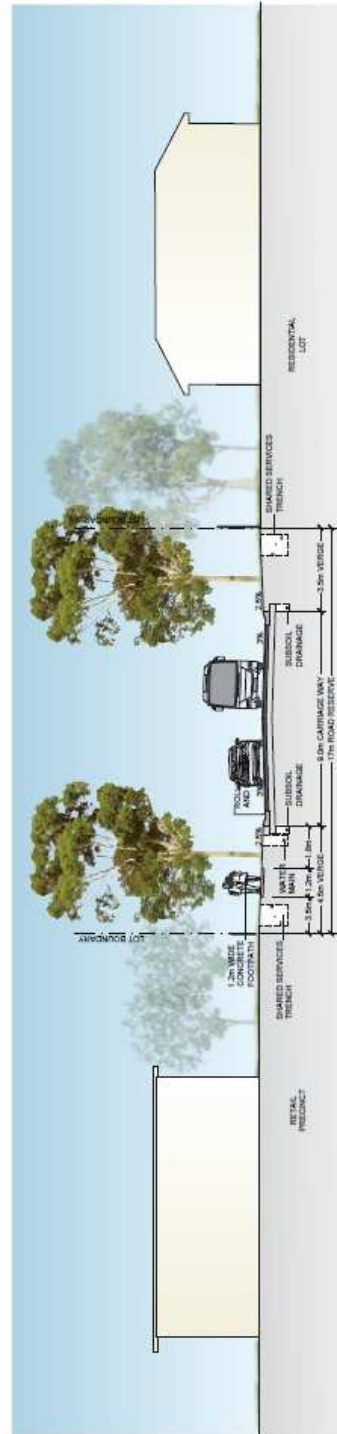
APPENDIX D: ROAD CROSS SECTIONS



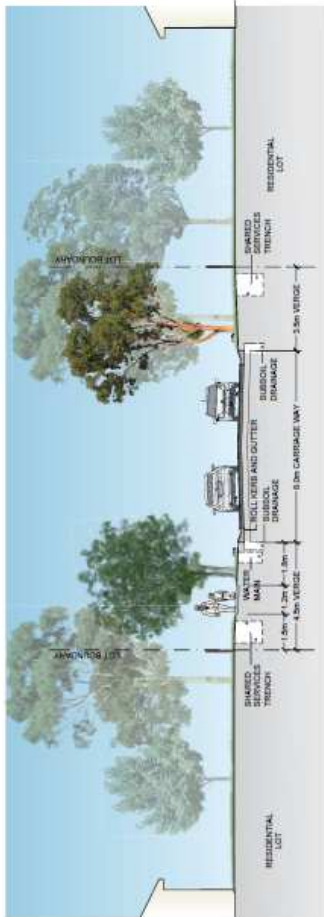
Section E2 - Primary Road - 31m Road Reserve with Buffer (Road 10)
Scale 1:100



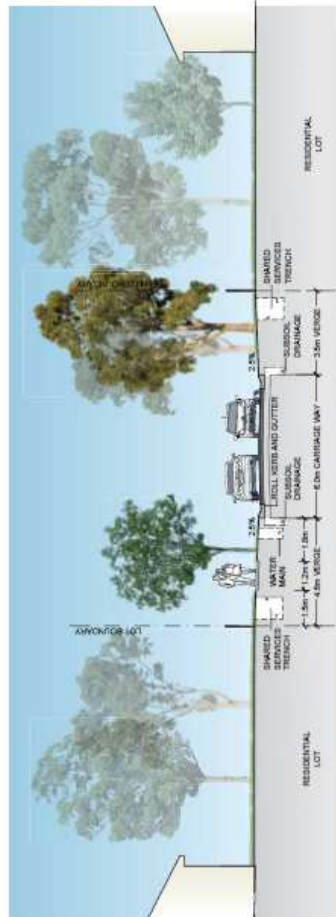
Section F1 - Primary Road - 17m Road Reserve (Road 28 East)
Scale 1:100



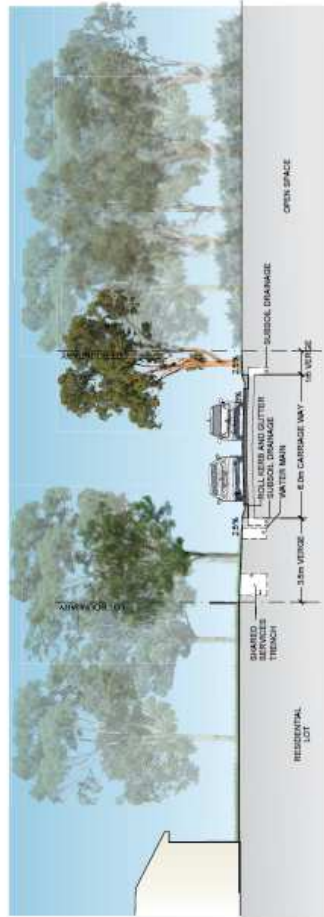
Section F2 - Primary Road - 17m Road Reserve (Hale Street)
Scale 1:100



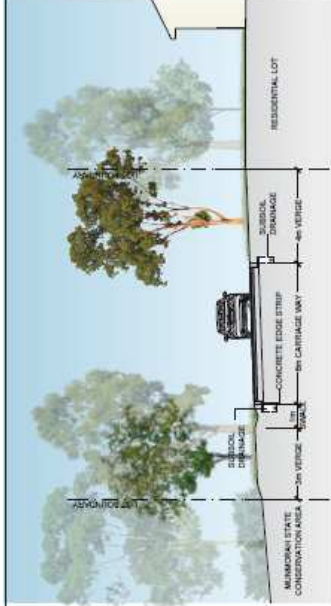
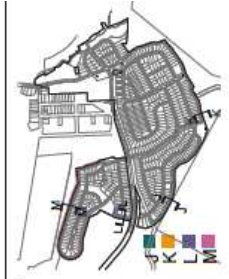
Section G - Local Road - 10m Road Reserve (Roads 1,3,7,10,12,14,17,19)
Scale 1:100



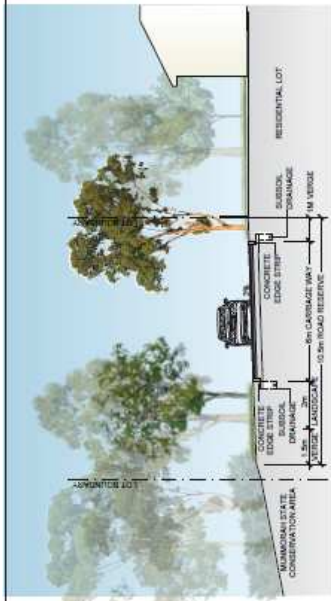
Section H - Local Road - 14m Wide Road Reserve (Roads 4,5,8,9,13,16,18,20)
Scale 1:100



Section I - Local Road - 10.5m Road Reserve (Road 16, 27)
Scale 1:100



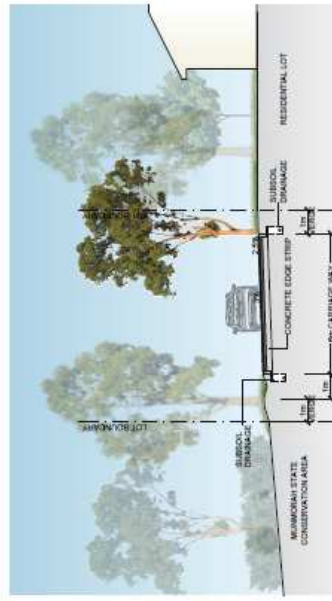
Section M - Perimeter Road - 14m Road Reserve (Road 26)
Scale 1:100



Section J - Perimeter Road - 10.5m Road Reserve without parking (Road 20, 22, 23)
Scale 1:100



Section K - Perimeter Road - 10.5m Road Reserve with Parking (Road 20, 22, 23)
Scale 1:100



Section L - Perimeter Road - 9m Road Reserve (Road 25)
Scale 1:100