



Coal & Allied Southern Lands

Appendix A: Concept Plan Principles for Nords Wharf

January 2013
06_061_I

Appendix A: Concept Plan Principles for Nords Wharf accompanies the Environmental Assessment. It embodies the ideas and principles that underpin the Concept Plan. The concept plan represents an integrated approach to site planning that incorporates the urban structure with the landscape.

The structure of this document is as follows:

- **A1 Concept Plan** - this summarises the key elements of the design. The concept plan will describe the boundaries of the development footprint, street and block layout and future desired character of the landscape and built form.
- **A2 Design Principles** - this comprises of urban structure, built form, open space and landscaping, access and movement and the visual impact design principles that support the Concept Plan.
- **A3 Staging** - this will describe the intended development staging for the estate.

Appendix B: Urban Design Guidelines for Nords Wharf provides detailed information on the public domain and built form. It describes how to achieve the principles of Appendix A: Concept Plan Principles for Nords Wharf.

LIST OF FIGURES

Figure A1.1.1:	Nords Wharf conservation and development area	4
Figure A1.2.1:	Illustrative concept plan	5
Figure A1.3.1:	Indicative lot layout	6
Figure A1.4.1:	Informal street tree planting with native grasses in the verge	7
Figure A1.4.2:	Interpret and recreate the surrounding bushland	7
Figure A1.4.3 :	Maintain the asymmetrical streetscape of Branter Road through a landscape buffer	7
Figure A1.5.1:	Existing character of shady vegetation on the site	8
Figure A1.5.2 :	Simple skillion roof for maximum natural lighting & bright colour accentuation on building details	8
Figure A1.5.3 :	Use of natural timbers and brighter colours to contrast with the shade of the surrounding forest	8
Figure A1.5.4:	Verandahs and decks located on upper levels overlooking bush or water.	8
Figure A1.5.5:	Colour palettes of brighter lighter colours to contrast with the shade of the surrounding bush.	8
Figure A1.5.6 :	Generous outdoor rooms contiguous with living spaces are located over car spaces	8
Figure A1.5.7:	House composed of lightweight materials on a masonry plinth	8
Figure A1.5.8 :	Louvres and screens that provide privacy and are responsive to the climate	8
Figure A1.5.9:	Colour Palettes	8
Figure A1.5.10:	Illustrative streetscape character	8
Figure A2.1.1:	Urban Structure	9
Figure A2.2.1 :	Built Form	10
Figure A2.3.1:	Open space diagram	11
Figure A2.3.2 :	Local context plan	11
Figure A2.4.1:	Pedestrian movement	12
Figure A2.4.2:	Stormwater treatment	12
Figure A2.4.3 :	Street hierarchy	12
Figure A2.4.4:	Street lighting	12
Figure A2.5.1:	Visual impact	13
Figure A2.5.2 :	Nords Wharf Estate is setback from the foreshore and retains the existing trees and character of Crangan Bay	13
Figure A2.5.3:	Existing trees screening Branter Road	13
Figure A2.5.4 :	Typical east-west section	13
Figure A3.1.1:	Development staging	14

TABLE OF CONTENTS

Introduction

A1 Concept plan and landscape concept plan

A1.1	Development footprint	4
A1.2	Concept Plan	5
A1.3	Indicative lot layout	6
A1.4	Desired future character: Landscape	7
A1.5	Desired future character: Built form	8

A2 Design principles

A2.1	Urban structure	9
A2.2	Built form	10
A2.3	Public domain landscape	11
A2.4	Access and movement	12
A2.5	Visual impact	13

A3 Development staging

A3.1	Development staging	14
------	---------------------	----

A1.1 Development footprint

Coal & Allied's landholdings at Nords Wharf includes 126.78 hectares of land that is currently contiguous with Munmorah State Forest.

A development footprint of 10.18 hectares has been defined following an analysis process that is based on McHargian principles of site design. Detailed attributes of ecological and cultural landscape systems were overlaid to determine constraints and opportunities for development.

By consolidating development in one self-contained area contiguous with the existing development in Nords Wharf. The remaining undeveloped Coal & Allied land is proposed for conservation areas. The proposed conservation areas will be connected with other conservation lands, forming large tracts that are easily managed and sustainable.

The irregular development footprint is proposed to:

- Protect the foreshore zone with aboriginal archaeological significance and cultural values. This will ensure that the public foreshore is part of the conservation lands, thus maintaining a network of bushland along the foreshore of Crangan Bay. The existing trees along the foreshore will screen the development from Crangan Bay.
- Conserve the ecologically significant Swamp Mahogany Forest and its associated buffer zone which occurs at the confluence of drainage lines and avoids slopes steeper than 20%. The swamp mahogany forest and sensitive steep sloping areas will be in the conservation lands.
- Accommodate development related infrastructure such as road batters and bio-retention/detention basins.

The new development footprint is defined by the blue area on the plan opposite and sits in a natural amphitheatre setback from the foreshore. It has the following boundaries:

- Branter Road and a paper road to the north,
- Steep topography to the east,
- The Swamp Mahogany Forest to the south, and
- A paper road to the west that separates and defines the foreshore zone.



KEY

- Concept Plan Area
- Proposed Conservation Area
- Proposed Development Area

Figure A1.1.1 - Nords Wharf conservation and development area

A1.2 Concept Plan



Figure A1.2.1 - Illustrative concept plan

A1.3 Indicative lot layout

The Nords Wharf community has expressed a desire for a range of lot sizes. The Concept Plan provides for a range of lot sizes and housing types to be provided in the estate:

- Lots are a minimum of 450m² with a minimum 15m street frontage.
- Corner lots are a minimum of 600m²

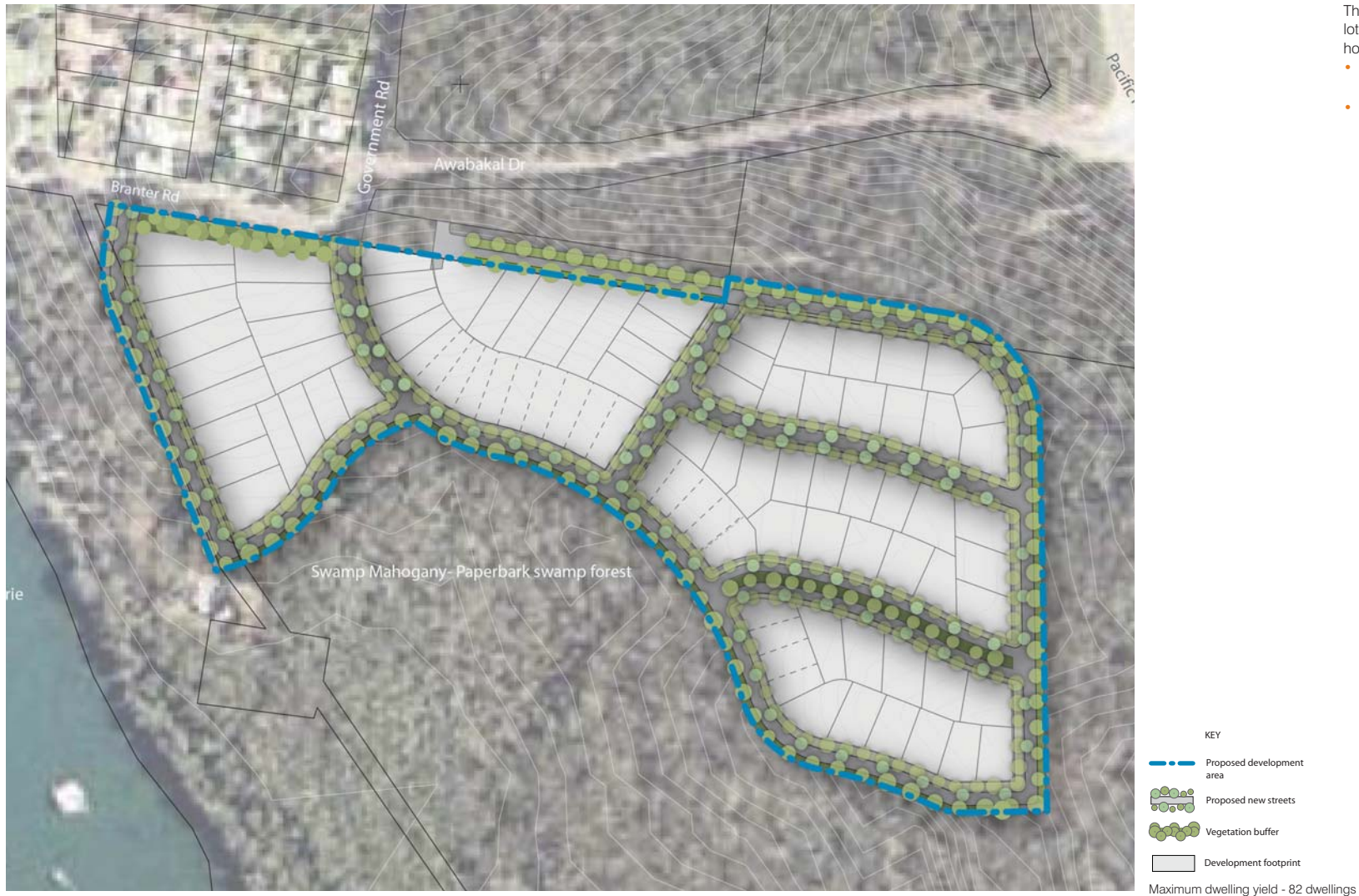


Figure A1.3.1 - Indicative lot layout

A1.4 Desired Future Character: Landscape

The Concept Plan includes a plan for the future landscape of the proposed development.

Existing Landscape character

- The existing bushland setting is characterised by a tall closed forest on a rolling topography with minimal understorey, creating a park like character. Only in the drainage lines is there dense understorey.

Desired future landscape character

- The desired future character of the public domain interprets the existing landscape character and responds to the bushland park qualities of the site and the casual and informal character of the existing settlement at Nords Wharf. They will provide a setting that is dominated by the landscape of trees and serpentine streets with bushland vistas. This will create a sense of 'housing set in forest parkland' with streets that meander around the natural topography.

Streets

- Streets will create simple connections around the site. They will have a strong landscape presence generated by the sympathetic response to the site's landform and the dominance of tall trees. Long blocks will run parallel to the contours. Short blocks will run up and down the site and terminate in views of bushland. Streets will have an informal but consistent layout of street tree planting in the verges and in the parking lanes. The landscape of the streets will be enhanced by ground plane planting, a consistent palette of paving material and minimal furniture. Details of street landscapes are included in the Public Domain Plan.

Private domain

- The landscape of privately owned residences will be controlled so as to reinforce the setting of the desired future landscape character type. Paved areas will be minimised, giving preference to natural ground planes. Fences will be restricted to areas behind the front building line. Plant species will be dominated by endemic species. Trees will be retained wherever possible, and supplemented by planting of same or similar species.



Figure A1.4.1 - Informal street tree planting with native grasses in the verge



Figure A1.4.2 - Interpret and recreate the surrounding bushland



Figure A1.4.3 - Maintain the asymmetrical streetscape of Branter Road through a landscape buffer

A1.5 Desired Future Character: Built Form



Figure A1.5.1 - Existing character of shady vegetation on the site



Figure A1.5.5 - Colour palettes of brighter lighter colours to contrast with the shade of the surrounding bush.



Figure A1.5.2 - Simple skillion roof for maximum natural lighting & bright colour accentuation on building details



Figure A1.5.6 - Generous outdoor rooms contiguous with living spaces are located over car spaces



Figure A1.5.3 - Use of natural timbers and brighter colours to contrast with the shade of the surrounding forest



Figure A1.5.4 - Verandahs and decks located on upper levels overlooking bush or water.



Figure A1.5.7 - House composed of lightweight materials on a masonry plinth



Figure A1.5.8 - Louvres and screens that provide privacy and are responsive to the climate



Figure A1.5.9 - Colour Palettes



Figure A1.5.10 - Illustrative streetscape character

Built form desired future character

Nords Wharf will have the following housing types:

- Village houses
- Lakeview and Hillside houses, and
- Bush lots

Character Elements:

The built form future desired character responds to the topography and bushland setting with:

- Built form that generally reinforces the curvilinear streets, with specific variations in response to the retention of existing trees in individual lots.
- One or two storey houses built over car spaces or carports with simple forms and pitched roofs.
- Living areas typically on the second storey with generous balconies and verandahs, creating outdoor rooms that activate the streets and provide passive surveillance over the bush or Crangan Bay.
- Minimise cut and fill by stepping the buildings to follow the topography and to express the hillside and the amphitheatre shaped topography.
- The use of poles and slender columns that reflect the verticality of the existing forest and respond to the landform minimising cut and fill.
- Brighter colours and natural timber in the detail, playing against the dark trunks and shade of the surrounding forest.
- Predominantly lightweight cladding, louvres, and screens that are responsive to the climate and complement the bush character.
- Limited use of masonry materials as a plinth or base to houses with lightweight materials for the upper storey.
- Pitched and skillion roofs that open up to let in indirect southern light and capture views.

A2.1 Urban Structure



Figure A2.1.1 - Urban Structure

Key principles of the proposed urban structure are:

- A main entry that is an extension of Government Road from its intersection with Branter Road. Government Road is the major north-south road of the existing settlement and connects the two settlements. There is a secondary access from Branter Road, near the foreshore.
- Irregular development footprint (sited to protect Swamp Mahogany Forest and aboriginal heritage on the foreshore) generates a street pattern that meanders through the forest, generated by the irregular edge of the development footprint.
- A curvilinear street pattern that responds to the landform of the site with a loose permeable grid.
- A simple street hierarchy of local roads with a typology that relates to the landscape character
- Definition between public and private lands created by public streets, thus ensuring that conservation areas do not become privatised.
- Predominance of perimeter streets that will have one edge that adjoins the forest. Majority of houses will thus also have a bush outlook.
- Long street blocks that run parallel with the contours, thus minimising cut and fill
- Internal street blocks that cut down the slopes. Internal streets terminate in a bushland vista.
- Streets with consistent landscape of tree planting.
- Bushfire Asset Protection Zones (APZs) that are provided on the perimeter of the development footprint. APZs are included in the perimeter streets and in housing setbacks. Lots addressing the foreshore are longer to accommodate APZ's.
- Larger lots located on steeper slopes, smaller lots located on flatter slopes.
- To ensure passive surveillance all streets and parks addressed by housing lots.
- Lot layout that will facilitate deep-soil mid-block tree planting to ameliorate climate extremes in housing and to provide a thread of landscape through the private lots
- Stormwater detention basins that will be integrated into the conservation areas outside the development footprint.

A2.2 Built Form

The Concept Plan provides for 82 lots of varying sizes. Key principles of the built form are:

- 3 types of housing – Village houses, Bush houses, Lakeview & Hillside houses.
- Maximum 2 storey buildings for the majority of the site. One storey houses where there are mining constraints of 20-50m cover.
- Medium and large lots suitable for detached housing.
- Larger lots on steeper slopes.
- Minimum lot frontages of 15m.
- Housing sited so as to retain vegetation, which will provide scale to the built form.
- Setbacks vary to allow retention of trees and to accommodate bushfire Asset Protection Zones.
- External areas include lawns and native plantings.
- On lots, no fences forward of building line allowing the private domain landscape to contribute to the streetscape.



Figure A2.2.1 - Built Form

KEY

- 2 storey houses
- 1 storey houses
- landscape buffer

A2.3 Public Domain Landscape

The Concept plan provides for landscape in the swales, medians and verges of the streets and in private lots. Key principles of the landscape are:

- A landscape screen to Branter Road in recognition of green outlook that these residents currently enjoy.
- Street typology based on landscape character, landscape design and water sensitive urban design.
- Landscape that enhances biodiversity and character through the predominant use of endemic species. Proposed landscape will build on the existing natural vegetation systems, including peppermint/smooth barked apple forest. These dominant species will form the landscape framework and will be reinforced by plantings of similar and compatible species. Introduction of endemic species will enhance biodiversity in the streets and provide cross linking corridors through the site.
- Landscape to the front of lots will be controlled so that it becomes part of the street landscape. This will be implemented through setback requirements and guidelines for no fencing, limited paving and native planting species.



Figure A2.3.1 - Open space diagram

KEY

Land dedicated to conservation

Existing public park and boat ramp

Council owned land

Landscape buffer to Branter Road

Street setbacks / front gardens

1

Ecologically endangered community and buffer zone

2

Foreshore reserve to protect Aboriginal archaeology

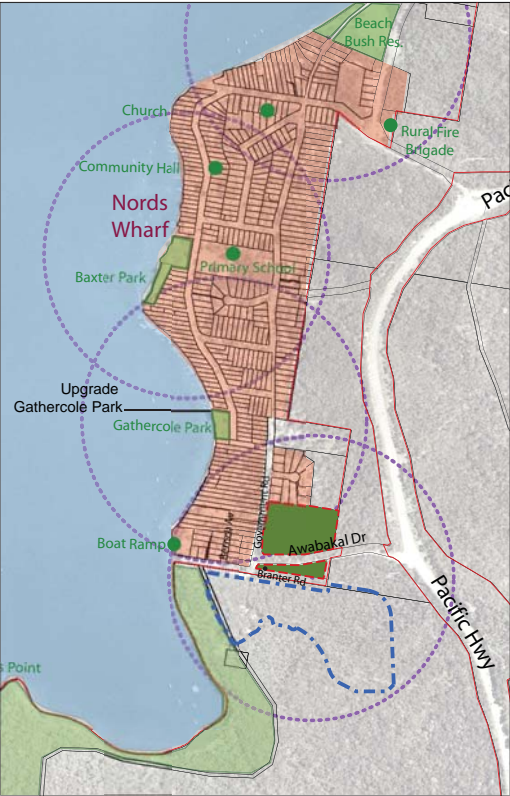


Figure A2.3.2 - Local context plan.

KEY

Future Development Area

Existing Residential

Parks

Council owned land

400m Walking Distance

A2.4 Access & Movement

- The street pattern is set up to facilitate legible, safe and permeable pedestrian and bicycle movement and access around the site, linking the site with its foreshore and the existing services and facilities in Nords Wharf.
- Street hierarchy is made legible by extending Government Road, the main north-south road of the existing settlement of Nords Wharf, through the estate creating a primary loop street. These streets will have street lighting.
 - Secondary roads provide links to the loop road.
 - A cul-de-sac is located on the northern paper road to avoid creating a dangerous intersection with Government Road, Branter Road and Awabakal Drive.
 - All streets will include street tree planting in verges and medians, low ground plane planting
 - Footpaths will be provided on all streets, on one verge
 - Cycle ways will be on street, in recognition of low traffic volumes
 - Parallel on-street parking will occur on all streets.
 - Kerbs and gutters are to be provided on all internal streets. Swales will occur on the uphill edge of perimeter streets to redirect surface stormwater. Bioswales will occur on the downhill edge of perimeter streets to cleanse and filter site stormwater run-off.



Figure A2.4.1 - Pedestrian Movement



Figure A2.4.2 - Stormwater Treatment

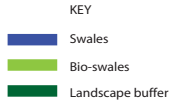


Figure A2.4.3 - Street Hierarchy

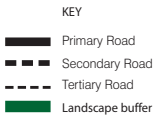


Figure A2.4.4 - Street Lighting



A2.5 Visual Impact



Figure A2.5.1 - Visual impact

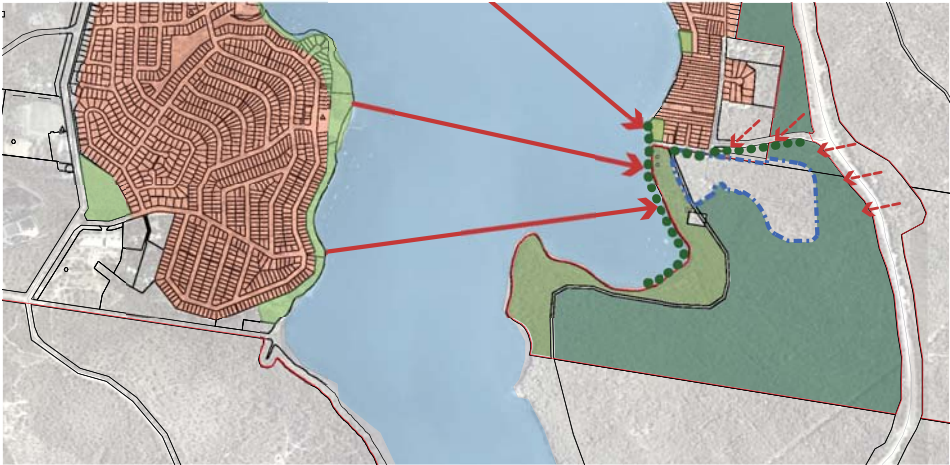


Figure A2.5.2 - Nords Wharf Estate is setback from the foreshore and retains the existing trees and character of Crangan Bay

- Views of site screened by trees
- > View of trees and tree canopies from Pacific Highway
- View of site from across Crangan Bay
- Continuous foreshore reserve
- Conservation area



Figure A2.5.3 - Existing trees screening Branter Road

- The development footprint is set in a south facing amphitheatre. This minimises its visibility from the main road and other developments. The surrounding bushland further reduces the visibility.
- The development footprint is set back from the water's edge and has a buffer of trees between it and the water. The change in level and extent of existing trees will ensure that there is a layering of existing vegetation that minimises visibility of the proposed development from the foreshore or from the water body.
- A 10m landscape buffer of trees and shrubs will screen development from residences on Branter Road.

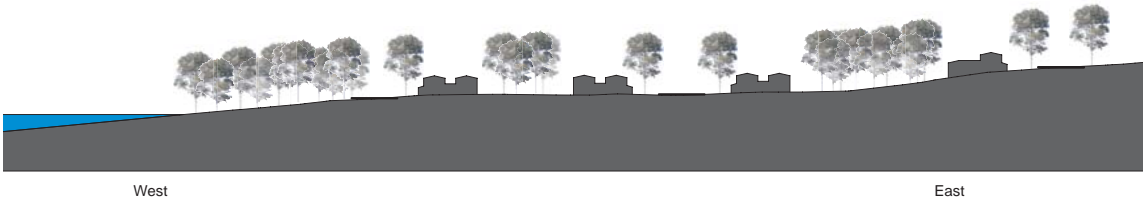


Figure A2.5.4 - Typical east-west section

A3.1 Development Staging

- Stage 1 for the Nords Wharf Estate is for the entire 10.18 hectares. Stage 1 works will include all roads, public domain and services infrastructure.
- Separate approvals will need to be sought for individual houses which will be built on an as-required basis, responding to market forces.



Figure A3.1.1 - Development staging