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VOLUME ONE

LOT 14 MURRAY RIVER DRIVE
OUTLINE DEVELOPMENT PLAN

LOT 14 MURRAY RIVER DRIVE - OUTLINE DEVELOPMENT PLAN

Prepared by:

Town Planning & Urban Design

PO Box 796

Subiaco WA 6904

Tel: 9382 1233

Fax: 9382 1127

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PART 1 - BACKGROUND

1.1 Introduction

The Lot 14 Murray River Drive Outline Development Plan is lodged pursuant to clause 6.5 of the Shire of Murray's Town Planning Scheme No.4, where an approved Outline Development Plan (ODP) is required prior to development in the 'Residential Development' zone.

The ODP covers all of Lot 14 Murray River Drive (Lot 14). Lot 14 is located within the Shire of Murray, approximately 72 kilometres from the Perth CBD, 9 kilometres north-west of the Pinjarra Town Site, and approximately 12 kilometres south-east of the Mandurah City Centre.

Lot 14 is 3.09ha in size, and is bounded by Murray River Drive to the south and west, a Regional Reserve (Parks and Recreation) to the east, and existing residential lots fronting Banksia Terrace to the north. A location plan and aerial photo are included as Figure 1.

Lot 14 is currently in the ownership of Mr Russell Woods. The land is legally described as Lot 14 on plan P14523. Title details are set out in table 1 below:

Table 1 – Lot 14 Legal Description

Lot Number	Plan Number	Volume	Folio	Lot Area
14	P14523	1675	575	3.0932ha

The Lot 14 ODP will guide future comprehensive development of Lot 14, including subdivision and subsequent development of the newly created lots.

The Lot 14 ODP consists of Volume One – Outline Development Plan Report and Volume Two – Technical Appendices.

1.2 Statutory Planning Framework

Peel Region Scheme

Under the provisions of the Peel Region Scheme (PRS), the site is currently zoned 'Rural' refer Figure 2a. Surrounding land use to the north of the site is zoned 'Urban', and there is a Parks and Recreation reserve (drainage) to the east.

A request to amend the PRS to rezone Lot 14 to 'Urban' was submitted to the Western Australian Planning Commission (WAPC) on 1 April 2010. The Peel Region Planning Committee resolved to initiate the PRS amendment on 16 September 2010. This ODP is prepared on the basis that the amendment to the PRS will be gazetted by the WAPC, refer Figure 2b.

Shire of Murray Town Planning Scheme No. 4

The site is currently zoned 'Special Rural' under the provisions of the Shire of Murray Town Planning Scheme No.4 (TPS4), refer Figure 3a. Adjoining the site to the north are Residential R12.5 lots, with Special Rural lots on the southern and western sides of South Yunderup Road.

The Shire of Murray initiated an amendment to the Town Planning Scheme No. 4 to rezone Lot 14 from 'Special Rural' to 'Residential R20' at its meeting held on the 25th May 2006 (Amendment 219). The amendment was referred to the EPA for consent to advertise, who advised in correspondence dated 28 August 2006 that the level of assessment was deemed to be 'Scheme not Assessed'. Amendment 219 was deferred by the WAPC pending an amendment to the PRS.

Following submission of the PRS amendment request, the Shire of Murray requested that the WAPC consider a concurrent amendment to the TPS4 by virtue of s126 of the Planning and Development Act 2005 to rezone Lot 14 from Special Rural to Residential Development, refer Figure 3b. This ODP has been prepared on the basis of clause 6.5 of TPS4, which requires the endorsement of an ODP to guide future development in the Residential Development zone.

1.3 Liveable Neighbourhoods

Liveable Neighbourhoods has been adopted by the State Government as an operational policy to guide structure planning and subdivision of greenfields and large infill sites. The Plan has been prepared to ensure consistency with Liveable Neighbourhoods principles.

PART 2 - ENVIRONMENTAL MANAGEMENT

2.1 Previous Environmental Assessments

Following the initiation of amendment 219 to TPS4 in 2006, the amendment was referred to the Environmental Protection Authority (EPA) for consent to advertise. The EPA responded, setting the level of assessment as 'Scheme not Assessed' and provided advice and recommendations on environmental considerations that may affect the subject land, refer Appendix 1. The EPA determined that the proposed rezoning did not raise any fundamental environmental issues that could not be dealt with as part of standard subdivision and development processes.

A comprehensive environmental report prepared by Bayley Environmental Services was submitted to the WAPC in support of the PRS amendment request, demonstrating that Lot 14 is capable of urban development and is not overly constrained by environmental factors. The Bayley Environmental Services report is included as Appendix 1.

A District Water Management Strategy (DWMS) was also submitted as an appendix to the PRS amendment request. The DWMS is consistent with the WAPC's Better Urban Water Management guidelines, and was endorsed by the Department of Water in January 2010.

In October 2010 the EPA considered the current proposal to amend the Peel Region Scheme to rezone the site to Urban. The EPA again set the level of assessment as 'Scheme not Assessed'.

2.2 Existing Environment

Topography

Lot 14 is flat and low lying, with ground elevations at the site ranging between 1.25-3 metres above the Australian Height Datum (AHD). The highest elevation of 3m AHD occurs at the existing residential dwelling where a raised building platform has been constructed. The lowest elevation of 1.25m AHD occurs along the site's south-eastern corner, aligned with the Murray River floodway.

Vegetation

The site and surrounding area has been historically cleared of native vegetation for agricultural purposes. Planted eucalypts are spread intermittently across the site, with some denser planted areas in the south-eastern and north-eastern corners of the site.

The Department of Environment and Conservation has confirmed previously that a Class 1 flora assessment is not required.

Surface Hydrology

The site is within the catchment of the Murray River, which is located approximately 80 metres north of the site. A floodway of the Murray River directly borders the site to the east, and encroaches across the south-eastern corner of Lot 14. This floodway provides additional capacity for flood flow from the Murray River between Ravenswood and the Peel Inlet.

Groundwater

Ground water levels and water quality have been monitored on a monthly basis by RPS Environmental Services since January 2006. Average annual maximum groundwater levels vary across the site from 0.25 metres at the southern boundary to 0.75 metres below natural ground level at the northern end of the site.

2.3 Environmental Response

Flora and Vegetation

The Plan provides opportunities for established trees and vegetation to be retained where possible as part of the landscaping of the POS reserve in the south-eastern corner of the site.

Due to the requirement to fill Lot 14 to a minimum of 3.25m AHD to satisfy development requirements within the flood fringe, it will not be possible to retain vegetation within the development area.

Acid Sulfate Soils

Like nearby Austin Cove, Lot 14 is mapped as high risk for Acid Sulfate Soils (ASS) by the WAPC and DEC.

Investigations at Austin Cove in 2006 by RPS found that ASS was less widespread than suggested by the mapping. The DEC accepted the RPS ASS investigation report in 2006.

Like Austin Cove, development at Lot 14 will substantially avoid intersecting ASS through the placement of a significant amount of fill. Nevertheless, an ASS investigation is expected to be required at the time of subdivision, with possible preparation of an Acid Sulphate Soil and Dewatering Management Plan (ASSDMP) for any areas of excavation or dewatering (such as sewers).

Mosquito Management

Due to the close proximity of the site to potential mosquito breeding areas, a mosquito management plan may be required in order to address management and control issues associated with mosquitoes. This management plan can be provided at the subdivision stage, and approved prior to final subdivision approval.

2.4 Water and Drainage Management

Floodway

As noted previously, a floodway of the Murray River directly borders the site to the east, and encroaches across the south-eastern corner of Lot 14. This floodway provides additional capacity for flood flow from the Murray River between Ravenswood and the Peel Inlet.

The Plan ensures that the ground levels within the floodway area will be retained, ensuring that the flow levels remain unchanged during periods of high flow. The portion of Lot 14 that is located within the floodway is to be designated as public open space, with existing vegetation retained to allow predevelopment flow rates to continue.

Drainage

The Plan's drainage design incorporates water sensitive urban design techniques (WSUD) and best management practices (BMPs) to ensure that the flood levels and surface water quality are not detrimentally impacted post development. Stormwater management measures including the use of soak wells, and bottomless side entry pits will capture and infiltrate 1 in 1 year rainfall as close to the source as possible.

The final drainage design and construction standards will conform to the Department of Water and Shire of Murray requirements. This can be resolved at subdivision construction stage through the implementation of an Urban Water Management Plan. All stormwater flows within the proposed development will enter a 'treatment train' prior to being discharged to the surrounding environment, with no direct flows entering the floodplain, Murray River or Conservation Category Wetland (CCW).

Detention of 1 in 5 year stormwater events can occur on site through the use of a landscaped detention basin located in the south east corner of the site within the public open space area, with the remainder of the floodwaters ultimately being discharged from the detention basin to the adjacent floodplain. The landscaped detention basin is consistent with the provisions of liveable neighbourhoods, and is classified as 'restricted use open space' in accordance with Element 4.

The soils within drainage infiltration areas will be amended to minimise leaching of nutrients within the soil profile and where appropriate will incorporate 'filter strip' vegetation to facilitate biological entrapment and uptake of nutrients, particularly nitrogen, prior to discharge into the surrounding environment. Flush edged kerbing will be used adjacent to the public open space which will contain local native species and low sparsely planted shrubs to prevent obstruction of floodwaters within this zone.

To provide pedestrian access to lots fronting Murray River Drive, the open table drain adjacent to Murray River Drive will be piped. Flows will continue to discharge downstream of the site, with the outfall location being vegetated to maintain water quality. The hydrological regime of the CCW will be maintained as per pre-development by maintaining the flow of water to the two culverts located beneath Murray River Drive.

Local Water Management Strategy

Further details regarding the urban water management strategy are and outlined in the Local Water Management Strategy (LWMS) which is included as Appendix 2 to this report. The LWMS details the proposed stormwater management strategy, water conservation options and provides details regarding the landscaping and irrigation at the site. The project hydrologists, RPS, have been in constant contact with the Department of Water (DOW) during the preparation of the LWMS, and the approach to stormwater management outlined in the LWMS is supported by the DOW in principle.

PART 3 – OUTLINE DEVELOPMENT PLAN

3.1 Land Use Summary

The Lot 14 ODP will ultimately allow for the creation of approximately 45-50 single residential lots over the site, and a public open space reserve in the south-eastern corner of Lot 14, coinciding with the Murray River floodway. The Lot 14 ODP is shown as Plan 1.

The ODP does not propose any commercial or non residential land uses within Lot 14.

3.2 Residential Densities and Housing Types

In recognition of the traditional rural-residential nature of the locality, residential lots fronting Murray River Drive are set back a suitable distance, and are accessed via a rear laneway in order to ensure a consistent, high amenity streetscape. Lots fronting Murray River Drive will be characterised by uniform retaining and fencing that is commensurate with the rural context of the area, and individual pedestrian access to Murray River Drive for each lot.

Internal to the site, the plan allows for the creation of a mix of residential lots, providing opportunities for both narrow frontage, rear loaded 'cottage' lots, and traditional front loaded lots on the north and east sides of the internal road. The plan provides the northernmost lots with additional depth to create a suitable separation between the existing dwellings to the north, and the dwellings constructed within these lots.

The indicative subdivision concept plan (Figure 4) proposes to create a variety of front and rear loaded single lots, with frontages ranging from 10 metres to 15 metres, and sizes ranging from 340sqm to 660sqm. A summary of the indicative lot types and features is provided in Table 2 below.

Table 2 – Lot and Housing Typologies

Lot Type	lot frontage	Lot depth	Front/rear access	Location
Rear Load Traditional Cottage	12m-13m	30m-34m	Rear	Fronting Murray River Drive
Front Load Traditional	14m-15m	36m-45m	Front	North of internal road
Rear Load Traditional/Contemporary Cottage	10m-12m	33m-34m	Rear	South of internal road
Front Load Cottage	12m	30m-37m	Front	East of internal road

Based on the indicative concept plan, housing density is proposed at approximately 15 dwellings per urban hectare, and approximately 22 dwellings per site hectare. Liveable Neighbourhoods provides aspirational density targets of 15 dwellings per urban hectare, and an average of 22 dwellings per site hectare. The concept plan achieves density targets prescribed by Liveable Neighbourhoods and Directions 2031 and Beyond.

The indicative concept plan at Figure 4 achieves a reasonable balance between providing an interface to the rural land on the southern side of Murray River Drive, and the residential land on the northern side, whilst meeting State Government density targets.

The Plan provides a residential density of R25 across the entire site, consistent with Austin Cove and other new residential development in the locality.

3.3 Variations to Residential Design Codes

The Statutory Section of the ODP includes a responsive and tailored set of R-Code variations focused on addressing the built form requirements within he estate.

The provisions recognise and respond to the following key driving forces:

- Solar responsive design outcomes are to be encouraged through the inclusion of development control incentives.
- Smaller lots demand greater flexibility for some design components, including walls on boundaries, site cover, overshadowing and overlooking, in order to achieve practical building envelopes and affordable outcomes.
- Reduced front setbacks to lots improve flexibility in building design, while also reinforcing engagement with the public realm.
- Demographic changes increase the need for flexible living arrangements such as ancillary accommodation (studios over garages or 'granny flats').
- Greenfield development provides the opportunity for greater flexibility of design controls as the site represents a 'blank slate', with all purchasers acquiring land with a clear understanding of amenity expectations. The R-Code variations provide certainty for landowners as to permissible variations and possible development outcomes for both themselves and adjoining landowners, minimising conflict and concern.

Similar provisions currently operate effectively within the nearby Austin Cove estate, and CLE has successfully implemented these provisions via the Structure Plan / ODP process in a number of other local authorities in the Perth metropolitan area.

The additional / modified provisions to the R-Codes relate to:

- Design Element 2 - Streetscape
- Design Element 3 – Boundary Setbacks
- Design Element 4 – Open Space
- Design Element 5 - Access and Car Parking
- Part 7.1 - Ancillary Accommodation.

These R Code variations apply to all lots, as designated by the first column in table 4. The provisions can be supplemented with more specific building design controls through developer administered design guidelines or Detailed Area Plans if required. The following provides an overview of the R-Code variations.

- Setbacks - Reduced setbacks to the primary street for Rear Load B and Front Load B lots internal to the subdivision, providing a 1.5m minimum setback and a 3m average;

At present the R-Codes require an average 6m setback from the primary street with a minimum of 3m to the dwelling in areas coded R25.

Primary street setbacks are generally required in order to 'protect' the streetscape from a continuous facade of garage roller doors. Given that the Rear Load B lots have laneway access for the parking of vehicles, this issue is avoided. An additional requirement has been included for the Front Load B lots to set the garage back in line with, or behind the main building line, ensuring that there is ample opportunity for dwellings to move forward and engage with the street in a traditional manner.

The variations propose a minor relaxation to the front setback requirements to facilitate flexibility in building design, as well as reinforcing engagement with the public realm. In particular, the reduced setback will:

- bring the dwellings forward to address and engage with the street in a more interactive manner than a traditional street setback;
- allow 'tight' urban streetscapes, consistent with the urban context this style of development;
- allow efficient siting and sizing of the private open space/outdoor living areas at the rear of the dwelling, maximising the use of land, and reducing unusable open space.

- Boundary Walls - Permitted boundary walls on one side boundary with no restriction on length for single storey walls, and up to 12m in length for two storey walls.

The R Codes currently allow as of right a single storey wall for up to nine metres in length of one boundary within R25 coded areas, with no second storey boundary walls. This precludes terrace style development and restricts design options on smaller lots where efficient use of space is critical, and discourages two storey development. Greater flexibility is needed if housing forms are to respond to density and solar imperatives.

Allowance has been made for a boundary wall on one side boundary, with no restrictions on the length of the wall for single storey development. The provisions recognise the increased impact of a double storey wall and as such, restrict the wall length to a maximum of 12m. This allowance provides sufficient flexibility to encourage two storey built form, while achieving a reasonable level of amenity protection for adjoining properties.

- Private Open Space - Minimum open space provided reduced to a minimum of 30% of the site area.

The R Codes currently require 50% of the site to be retained as open space in R25 coded areas, which severely limits single storey dwelling design on smaller lots, undermining affordability imperatives.

A variation in the minimum open space provision to 30% is necessary to successfully achieve and implement terrace housing, facilitating the delivery of affordable and diverse dwellings. This variation is tempered by the requirement to provide a 30sqm outdoor living area, meaning that the open space variation does not compromise the liveability or amenity of the dwelling.

- Ancillary Accommodation – Permitted on lots less than 450m^2.

The R-Codes preclude ancillary accommodation on lots under 450m^2 as of right, restricting the capacity for studios / granny flats on smaller lots. This undermines the ability to deliver alternative affordable housing options.

The R- Codes require an additional car parking bay for ancillary accommodation. An additional car parking bay is unnecessary for ancillary accommodation in this location, with sufficient on street parking available throughout the development. As such, the requirement for an additional parking bay to accompany ancillary accommodation has been removed, as a further incentive to provide this type of accommodation. Any perceived disadvantages of this are more than compensated for by the diversity of housing choice and affordability.

3.4 Public Open Space

Public Open Space Provision

The Plan provides approximately 2808m^2 of public open space across the site, comprising of passive open space within the 1 in 100 year floodway, a small portion serving a dual drainage / open space function to accommodate the 1 in 5 year ARI.

A breakdown of the public open space provision is shown in Table 3 below.

Table 3 – Public Open Space Schedule

Total Lot Area	Gross Subdividable Area	POS Required	POS Provided			Shortfall
			Restricted Use 1:5 year drainage	Other	Total	
3.0932ha	3.0932ha	3093 m^2 (10%)	450 m^2 (1.4%)	2358 m^2 (7.7%)	2808 m^2 (9.1%)	285 m^2 (0.9%)

The open space complements the extensive network of public open space in the locality. The proposed public open space in the south east corner will retain the existing mature vegetation and existing ground levels will not be altered within the floodway – thereby ensuring that the floodway will continue to function is it does currently. As demonstrated in the LWMS at Appendix 2, the open space within the floodway does not

accommodate any drainage from the 1 in 1 year or 1 in 5 year rainfall events, and is therefore unrestricted open space in accordance with Liveable Neighbourhoods.

The Plan ensures that less than 20% of the total public open space area serves a drainage function to accommodate the 1 in 5 year ARI, thereby ensuring that the restricted use public open space can achieve a full credit in accordance with Liveable Neighbourhoods.

There is an existing comprehensive active and passive open space network in South Yunderup, including:

- The nearby South Yunderup Oval, which provides a district level active open space area;
- The Murray River foreshore reserve to the north of the site; and
- The private recreation area between South Yunderup Road and the new Austin Cove community.

The proposed public open space is complementary to the existing network of district and regional open space in the locality, providing a passive local park for the local community. The local park assists to provide a sense of place for the new community, and allows for the retention of existing mature trees on the site.

The interface between the public open space and the adjoining Parks and Recreation Reserve to the east can be controlled through fencing and access arrangements at subdivision stage.

The 0.9% shortfall in public open space can be justified in accordance with element R34 of Liveable Neighbourhoods, which permits a reduction in the amount of public open space to a minimum of 5%, subject to a number of criteria including:

- *The public open space is designed, developed and located for the widest possible use of the community, including meeting, recreation, leisure, entertainment;*
- *The public open space is developed to a minimum standard including full earthworks, basic reticulation, grassing of key areas, pathways that form part of the overall pedestrian and/or cycle network and maintenance for two summers, in accordance with a landscape plan approved by the local government;*
- *Adequate areas provided elsewhere for drainage and flooding, particularly overland flow;*
- *Public open space is readily available in the community that can be used at all hours of the day or night;*

The design of the proposed public open space area will ensure that the space is accessible and available to the entire community, with a range of amenities provided that are commensurate with the public open space function as a local park.

The public open space will be designed and developed in accordance with an approved design, prepared in consultation with the Shire of Murray. The design will recognise the function of the public open space as a local park, and will ensure that it is developed to a high standard of amenity without compromising the function of the 1 in 100 year floodway. Maintenance of the public open space will be in accordance with the requirements of Liveable Neighbourhoods.

As noted previously, the proposed public open space is complimentary to a range of local, district, and regional open space in the area, which provide a full range of services and amenities to the local communities, and are available at all hours of the day and night.

Public Open Space Design Principles

The public open space will be developed as a passive local park, with retention of natural ground levels and mature vegetation throughout in order to ensure that the floodway is not altered. The existing vegetation will be complemented with planted low level native vegetation to ensure that a high level of amenity is provided, while the function of the floodway is not compromised.

The 1 in 5 year drainage detention area will be grassed and landscaped to ensure that it remains a useable open space area that compliments the surrounding open space.

A detailed landscape design of all open space areas will be provided as part of the subdivision approval process.

3.5 Servicing and Infrastructure

To demonstrate the serviceability of Lot 14, Cossill and Webley Consulting Engineers have prepared a summary technical note, refer Appendix 3.

Water

There is an existing DN250 AC water reticulation pipe within Murray River Drive. The project engineers have liaised with the Water Corporation, and have advised that the capacity of the existing water main is sufficient to service the development of Lot 14.

Connection of the development site to the reticulated water network can be undertaken as part of the subdivision process.

Wastewater

The Water Corporation's Bunbury office has indicated that the development can be serviced by gravity sewers. The Water Corporation has advised that Lot 14 is within a

small gravity sewer catchment area served by a future permanent type 10 wastewater pumping station located within lot 17 or 18 Blue Gum Way. Until the permanent pumping station is constructed, a temporary pumping station for Lot 14 can be established within a proposed gravity manhole at the intersection of Murray River Drive and Blue Gum Way. Discharge would be to an existing wastewater pumping station in Delta Drive.

Electricity and Telephone Supply

There is sufficient capacity within South Yunderup to cater for electrical and telecommunications needs for development of lot 14 Murray River Drive, as part of the subdivision process. Electrical services can be undergrounded as required by Western Power at subdivision stage.

Gas Supply

A reticulated gas supply is currently under construction in the area and will service Austin Cove estate to the south of Lot 14. There are opportunities to connect Lot 14 to the gas main via Banksia Drive at the time of construction.

3.6 Roadworks

Access and Road Standards

Access to the development site is provided via a 16m wide cul de sac road reserve, with direct access to Murray River Drive at the south-eastern corner of Lot 14. All of the proposed lots will obtain direct vehicle access from the proposed road.

The proposed road layout and access/egress to Murray River Drive has been reviewed by Transcore to ensure that it can operate in a safe and functional manner. Transcore's traffic analysis and recommendations are provided in the attached technical note, refer Appendix 4. Transcore's analysis concludes that:

- The existing road network can easily accommodate the traffic generated by the proposed development of Lot 14, with minimal local upgrades to Murray River Drive.
- The proposed intersection to Murray River Drive can provide safe lines of sight and acceptable stopping distances from both directions.

Transcore have made the following recommendations to be included as part of the statutory provisions of the ODP:

- The westbound lane of Murray River Drive adjacent to the proposed intersection is to be widened to allow for westbound traffic to bypass right turning traffic.
- A Safe Intersection Sight Distance (SISD) of 141 metres is to be provided to the west of the proposed intersection in accordance with Austroads 4A Guidelines.

Any necessary truncations or building restrictions required in order to maintain the SISD are to be determined at subdivision stage following detailed design of road carriageway, intersection, and site levels.

- Whilst not an essential requirement for this development, consideration should be given to reducing the speed limit on Murray River Drive to 50km/h.

Pedestrian access is provided via a shared path connecting the proposed intersection to Murray River Drive with the Banksia Terrace foreshore reserve. In addition, a discontinued access way at the western end of the internal 16m road provides a second pedestrian connection to Murray River Drive and Banksia Terrace. Access to the foreshore reserve can also be achieved via the proposed public open space and adjacent floodway.

Road Drainage

The existing open table drain on the north side of Murray River Drive will be replaced with piped drainage and side entry pits, and will retain pre-development flows to ensure that the Conservation Category Wetlands located to the south of Murray River Drive are not affected. Stormwater runoff from the 1 in 5 year event (and above) can be detained in an infiltration basin located adjacent to the floodway. Further information relating to drainage is provided in the LWMS, refer Appendix 2.

Detailed drainage design will be provided as part of the subdivision works and Urban Water Management Plan.

3.7 Siteworks

The site is located adjacent to a designated floodway and can be subject to surface flooding from the Murray River during high rainfall events. Previous advice from Department of Environment dated August 2006 recommended a minimum habitable floor level of RL 3.50m AHD for flood protection. Following the completion of the Murray River Flood Study by the DOW in 2010, it was determined that the minimum habitable floor level can be reduced to RL 3.25m AHD. This floor level has been determined on the basis of the recently released Murray River Flood Study and the draft Murray River Drainage and Water Management Plan, and has been confirmed by the Department of Water.

Other factors such as sea level rise have also been considered in accordance with the Department of Environment and Environmental Protection Authority advice. The proposed floor level of 3.25m AHD is sufficient to mitigate any impact from sea level rise and tidal surge in accordance with the WAPC's position statement on climate change and coastal setbacks.

Preliminary site grading proposals show the site raised with imported fill to approximately RL 3.25m AHD. A retaining wall of 0.8m-1.2m will be constructed on the northern boundary of Lot 14 to retain the fill.

The fill and retaining are a necessary design response for the following reasons:

1. It is a DEC/DoW requirement to elevate the finished floor levels at least 500mm above the 1 in100 year flood level.

2. The fill cannot be battered to the northern boundary as it would reduce the effective area of the new lots, and it would result in stormwater runoff draining into the northern lots instead of the newly created road reserve.

The fill and retaining will not have any significant impact on the existing properties to the north for the following reasons:

1. The existing properties to the north have a density code of R12.5 and have extensive passive private open space to the rear of the dwellings, providing suitable separation between the new lots and the existing dwellings. This will mitigate any detrimental impact that the retaining walls/boundary fence will have on the amenity of the existing properties.

2. The existing lots are not capable of being subdivided based on the current density coding, meaning that infill development is highly unlikely.

3. In the event that the lots are re-zoned and infill development occurs, the new development on these lots will be required to have similar finished ground levels to those proposed on Lot 14 to satisfy the flood level requirements.

4. The proposed retaining wall and boundary fence are located on the southern boundary of the adjoining lots, and as such will not have any detrimental impact on solar access to the existing properties.

5. The Residential Design Codes provide strict visual privacy controls to elevated sites to ensure that amenity of existing properties is protected.

To demonstrate how the proposed finished site levels and retaining may occur, and to demonstrate the relationship with existing site levels on surrounding properties, Cossill and Webley have prepared indicative siteworks plans including cross sections, which are included as Appendix 5.

PART 4 STATUTORY PROVISIONS

4.1 Residential Density

4.1.1 Residential densities are to be in accordance with the approved ODP.

4.2 Development Standards

4.2.1 Residential development shall be in accordance with the Shire of Murray TPS4, and State Planning Policy 3.1 – Residential Design Codes, with the exception of the variations and additional criteria set out in Table 4, Figure 4, and the approved ODP, which are deemed to constitute Acceptable Development within the ODP area.

4.2.2 Uniform fencing shall be provided on the northern boundary of Lot 14 prior to final subdivision approval (clearances). Fencing shall be located on top of retaining walls, made of impermeable (solid) materials, and not less than 1.8 metres above finished ground level as measured from Lot 14.

4.2.3 Boundary fencing adjoining public open space shall be visually permeable to the satisfaction of the Shire of Murray.

4.2.4 A 6 metre minimum rear boundary setback applies to all habitable buildings on lots adjoining the northern boundary of the ODP area with northern boundaries less than 20 metres in length.

4.3 Public Open Space

4.3.1 Public open space is to be provided in accordance with the ODP.

4.4 Road Infrastructure

4.4.1 Contributions for any upgrading of Murray River Drive are to be established at the time of subdivision. Any upgrading requirements will be subject to agreement between the proponent and the Shire of Murray. Formalisation of this agreement shall be reflected as a condition of subdivision approval.

4.4.2 The westbound lane of Murray River Drive adjacent to the proposed intersection is to be widened to allow for westbound traffic to bypass right turning traffic into Lot 14. The detailed design of such road widening is to be determined at the time of subdivision, and shall take into account any upgrading that may be required as part of Cl 4.4.1.

4.4.3 A Safe Intersection Sight Distance (SISD) of 141 metres is to be provided to the west of the proposed intersection in accordance with Austroads 4A Guidelines.

Any necessary truncations or building restrictions required in order to maintain the SISD are to be determined at the time of subdivision following detailed design of road carriageway and site levels.

TABLE 4: ACCEPTABLE R-CODE VARIATIONS / ADDITIONAL DEVELOPMENT REQUIREMENTS

	Applicable Lots (refer Figures 1 & 2)	Relevant R/Code Clause	Additional Requirement
Public Open Space Interface	Lots fronting public open space and floodway.	Additional Requirement	All dwellings shall have a minimum of one habitable room with a major opening facing toward the public open space.
		6.2.5 A5	All lots shall have visually permeable fencing to the public open space boundary, as constructed by the developer.
		6.3.2 A2	Boundary walls are not permitted abutting a public open space boundary.
		6.2.1 A1.1 (i)	Buildings on public open space lots shall be setback a minimum of 1 metre from the public open space boundary.
Setbacks	Rear Load B Front Load B	6.2.1 A1.1 (i) & 6.2.2 A2 (i)	Buildings shall be setback from the primary street as follows: • Minimum Setback – 1.5m • Average Setback – 3.0m
	Front Load A	6.2.3 A3	Garages and carports set back in accordance with Clause 6.2.3 of the R-Codes
	Front Load B	6.2.3 A3 (i)	Garages shall be setback behind the main building line of the dwelling.
	All Lots		Buildings shall be setback a minimmum of 1 metre from the secondary street.
			Garages are permitted to have a nil setback to the laneway boundary.
Boundary Walls	Rear Load B	6.3.2 A2 6.3.2 A2 (iii)	Boundary walls to the dwelling shall be located on the westernmost boundary to maximise solar passive design, and located behind the minimum front setback, within the following limits: <u>Single Storey</u> • Maximum height - 3m* • Maximum length – No limit <u>Two Storey & Above</u> • Maximum height – 6m* • Maximum length – Up to 12m in length Not withstanding the above, garages on laneway lots are permitted to have a nil setback to one side boundary in addition to the boundary wall of dwelling, excluding a secondary street boundary (subject to compliance with vehicular access restrictions).
Private Open Space	All lots	6.4.1 A1 & 6.4.2 A2 – Table 1	The minimum open space requirement will be reduced to a minimum of 30% of the site subject to the provision of an Outdoor Living Area with: a) A minimum useable space of 30m² (excluding clothes drying areas and hot water systems); and b) A minimum length and width dimension of 4m; and c) Located adjoining the northernmost or easternmost boundary (with the exception of laneway, corner or irregular shaped lots and where it can be demonstrated that (a) and (b) can be achieved).
Studio Unit	All lots	7.1.1 A1 (ii) & (iv)	A studio unit comprises an additional dwelling or independent accommodation associated with a dwelling on the same lot where the accommodation can be separate to the main dwelling, occupied by persons unrelated to the occupants of the main dwelling, there is a maximum floorspace of 60m², there are no additional driveways or letter boxes and the accommodation may be utilised for home occupation, subject to Council approval. The studio until shall not be created as a separate lot by subdivision or strata titling.
			A studio unit does not require an additional car parking bay on site.
			A studio unit is permitted on all lots, including those less than 450m².
Front Elevation	Rear Load A Rear Load B	Additional Requirement	A verandah shall be provided on the front elevation. Verandahs shall be a minimum 2.4m in depth and have a length of at least 50% of the width of the front of the dwelling, or a minimum of 4.0m, whichever is lesser.

* This table is to be read in conjunction with the R-Code Plan, refer Figure 5.
** Residential development is to be in accordance with the R25 provisions of the Residential Design Codes unless specified above.

4.5 Environmental Management Plans

The following section sets out the requirements of the Environmental Management Plans which are to be prepared and submitted, and links each Plan to the corresponding stage in the planning process.

Local Water Management Strategy

4.5.1 Prior to adoption of the Outline Development Plan, a Local Water Management Strategy (LWMS) shall be prepared in accordance with the WAPC's Better Urban Water Management Guidelines (October 2008). The LWMS shall be to the satisfaction of the Shire of Murray, on advice from the Department of Water. The LWMS will be endorsed as part of the adoption of this Outline Development Plan by the Shire of Murray and WAPC.

Urban Water Management Plan

4.5.2 Prior to final subdivision approval (issue of clearances), an Urban Water Management Plan (UWMP) shall be prepared and implemented in accordance with the WAPC's Better Urban Water Management Guidelines (October 2008) to the satisfaction of the Shire of Murray, on advice from the Department of Water.

Mosquito Management Plan

4.5.3 Prior to final subdivision approval (issue of clearances), a Mosquito Management Plan shall be prepared to the satisfaction of the Shire of Murray, on advice from the DEC, to adequately identify mosquito nuisance, public health risks and management strategies.

Acid Sulfate Soils and Dewatering Management Plan

4.5.4 Prior to commencement of subdivision works, an Acid Sulfate Soils and Dewatering Management Plan shall be prepared to the satisfaction of the Shire of Murray, on advice from the DEC for the subject land, to adequately identify 'actual' and 'potential' acid sulfate soils and to determine appropriate management strategies for these.

LEGEND

- Outline Development Plan Boundary
- Uniform Fencing
- Restricted Access
- Residential (R25)
- Public Open Space
- Floodway

Residential Density

1. Residential densities are to be in accordance with the approved ODP.

Development Standards

2. Residential development shall be in accordance with the Residential Design Codes and the additional acceptable development criteria set out in Table 4 of the ODP Report.

3. Uniform fencing shall be provided on the northern boundary of Lot 14 prior to final subdivision approval (clearances). Fencing shall be located on top of retaining walls, made of impermeable (solid) materials, and not less than 1.8 metres above finished ground level (as measured from Lot 14).

4. Boundary fencing adjoining floodway or public open space shall be visually permeable above 1.2 metres.

5. A 6 metre minimum rear boundary setback applies to all habitable buildings on lots adjoining the northern boundary of the ODP area with boundaries less than 20 metres in length.

Public Open Space

6. The public open space is to be provided generally in accordance with the ODP.

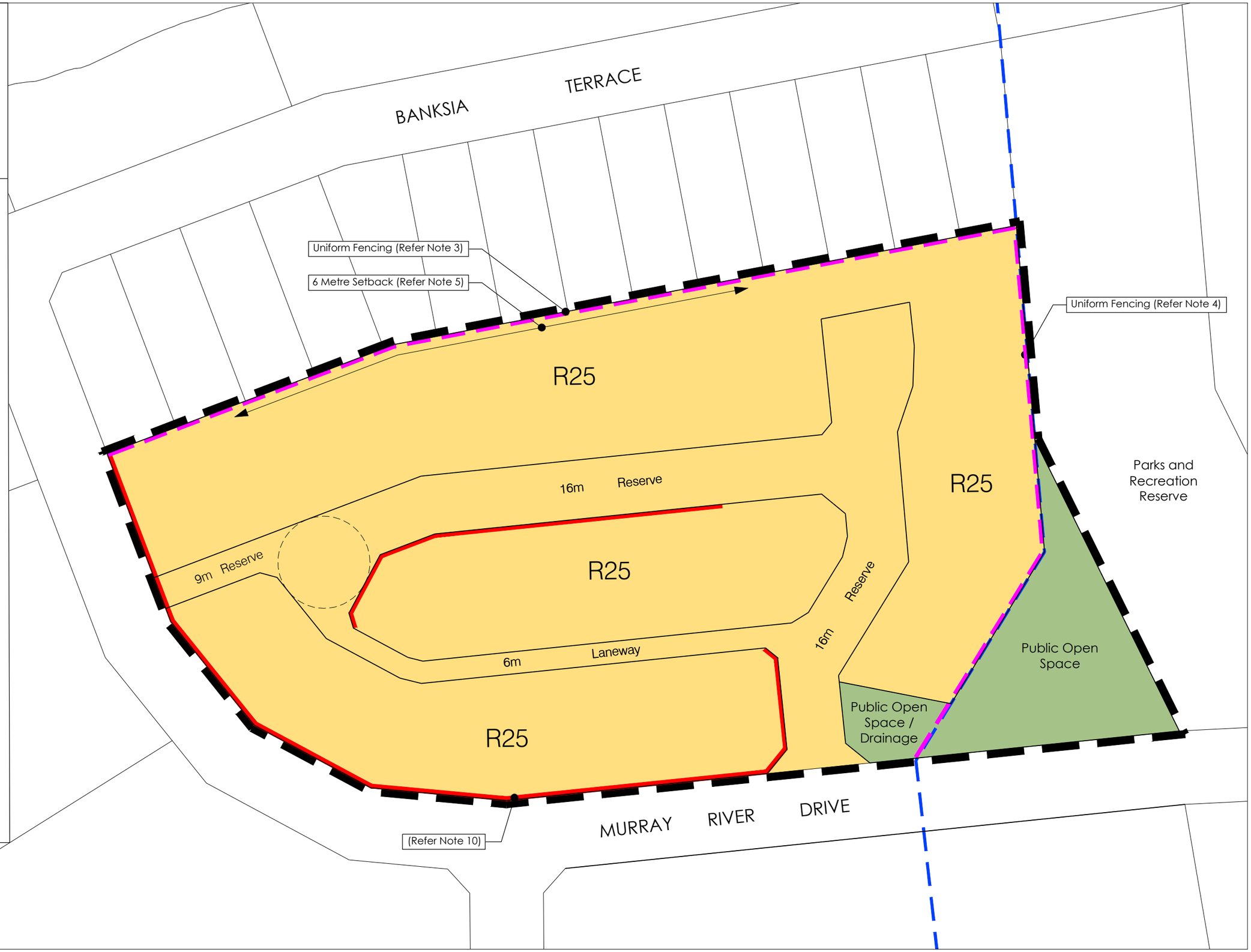
General

7. The road layout, intersection treatment and public open space boundaries are indicative only and are subject to detailed design at subdivision stage and relevant approvals.

8. The approved Outline Development Plan report outlines the statutory provisions that apply to the subject land, including Environmental Management Plans required to be prepared, approved, and implemented.

9. The finished habitable floor levels of the development will be constructed to a minimum of 3.25m AHD.

10. Vehicular access to the lots shall be in accordance with the vehicular access restrictions as shown on the plan.



CLE TOWN PLANNING + DESIGN

OUTLINE DEVELOPMENT PLAN

Lot 14 Murray River Drive, South Yunderup
Shire of Murray

plan no: 2163-12F-01
scale: 1:1000 @ A3
date: 01.07.2011

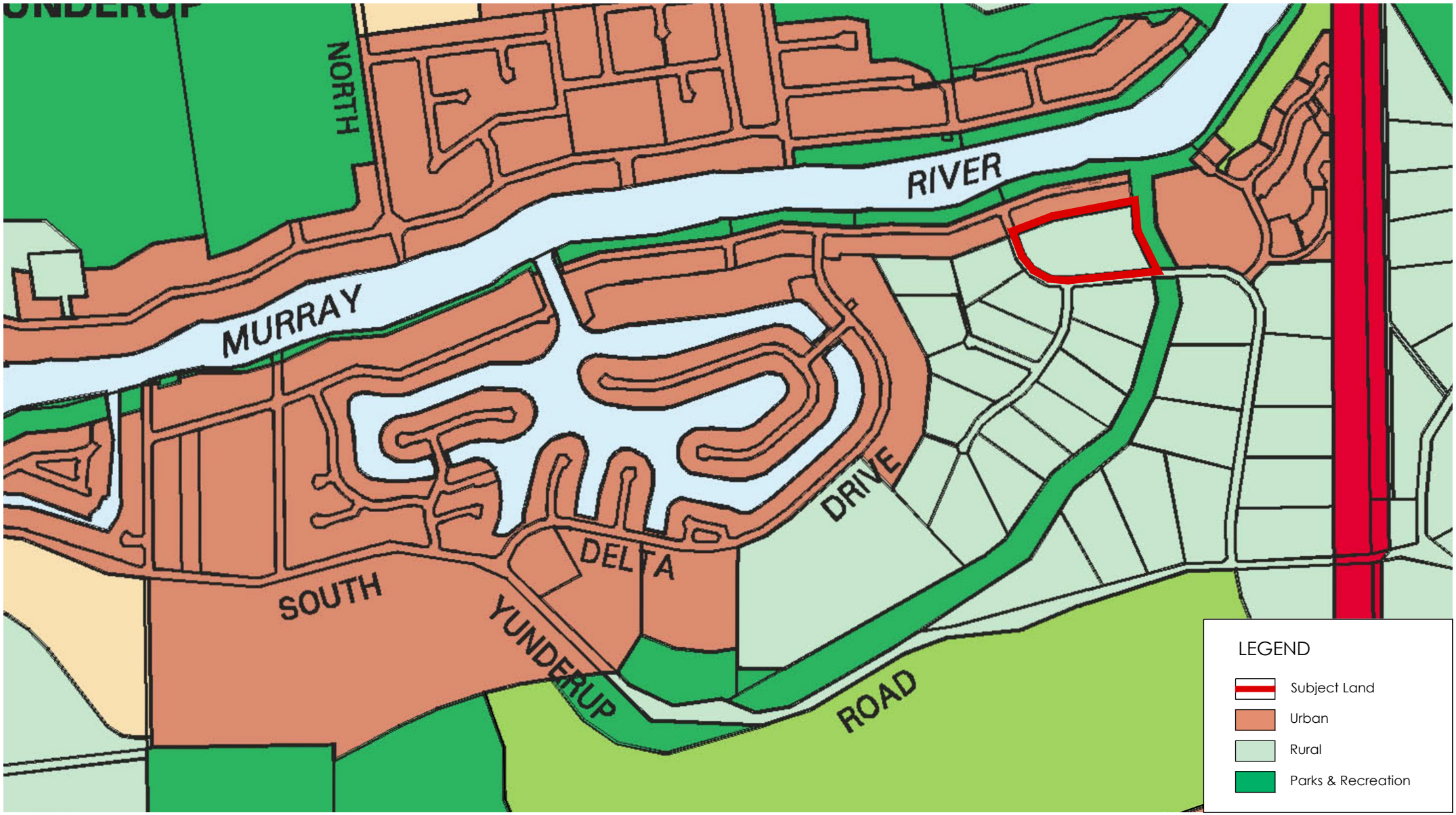
T:(+618) 9382 1233 F:(+618) 9382 1127
E: admin@cleplan.com.au
www.cleplan.com.au
L2-36 ROWLAND STREET SUBIACO WA 6008
PO BOX 796 SUBIACO WA 6904

FIGURES

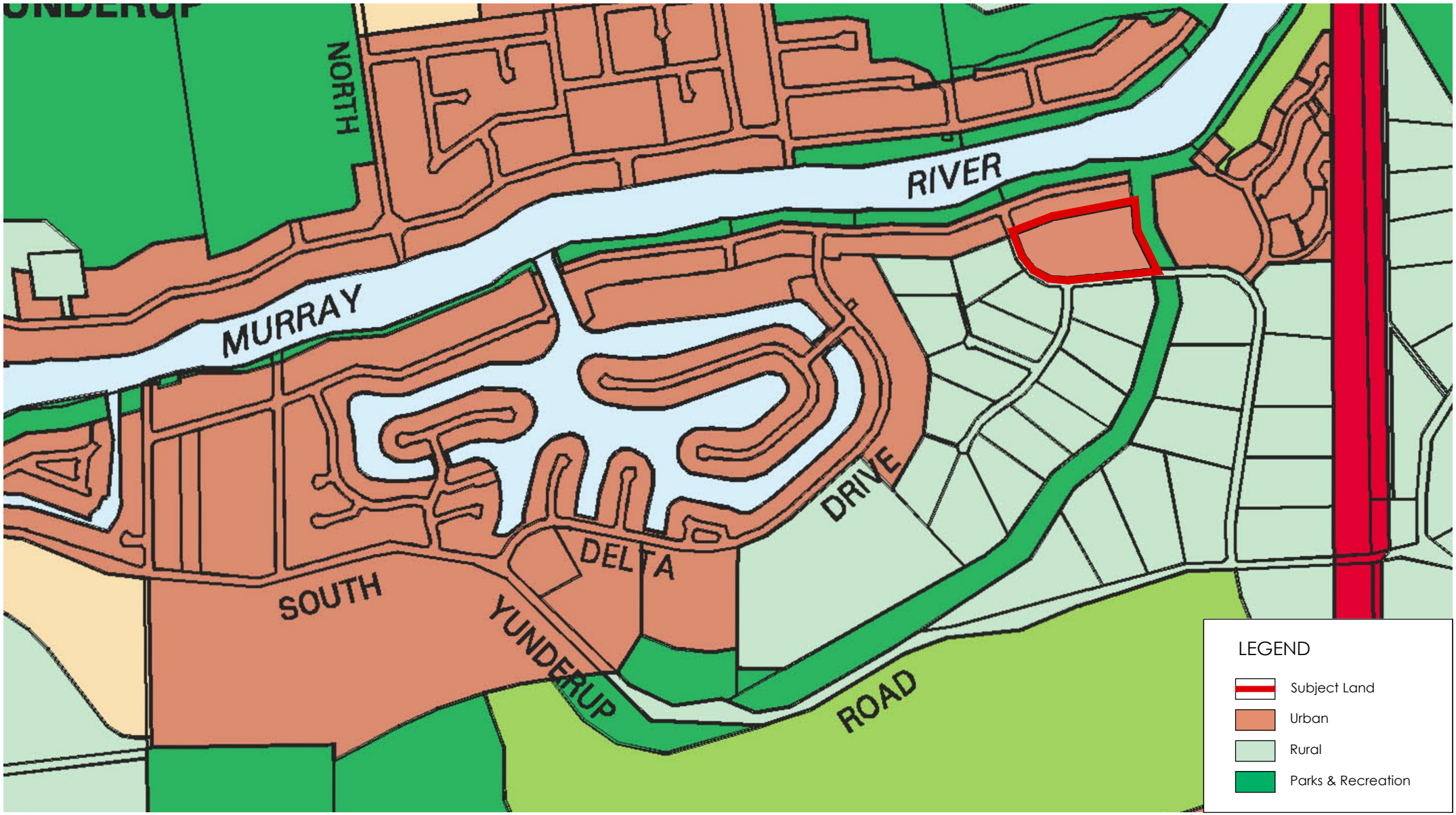
LOCATION PLAN / AERIAL PHOTO

2163-01A-01 (14.07.2011), 1:7500 @ A4

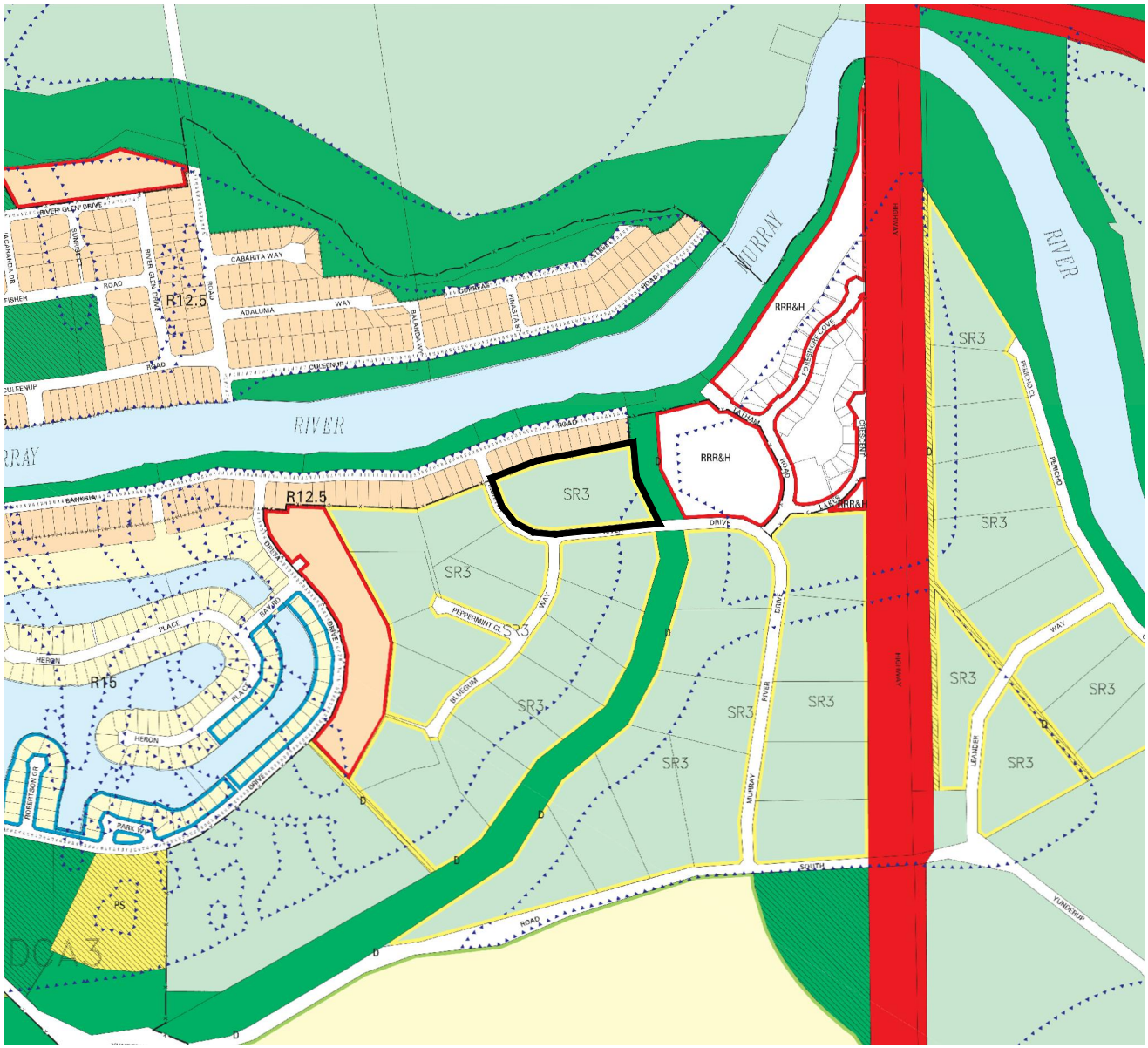
Lot 14 Murray River Drive, South Yunderup : Figure 1



CURRENT PEEL REGION SCHEME ZONING



PROPOSED PEEL REGION SCHEME ZONING



LEGEND

PEEL REGION SCHEME RESERVES

- REGIONAL OPEN SPACE
- RAILWAYS
- STATE FORESTS
- WATERWAYS
- PRIMARY REGIONAL ROADS
- OTHER REGIONAL ROADS
- PUBLIC PURPOSES - DENOTED AS FOLLOWS:
  - H HOSPITAL
  - HS HIGH SCHOOL
  - PU PUBLIC UTILITIES
  - SU SPECIAL USES
  - U UNIVERSITY

LOCAL SCHEME RESERVES

- CIVIC / CULTURAL
- MAJOR HIGHWAY
- PRIMARY REGIONAL ROADS (PEEL REGIONAL SCHEME)
- PUBLIC PURPOSES
- PUBLIC PURPOSES DENOTED AS FOLLOWS:
  - A AMBULANCE DEPOT
  - AC ABORIGINAL CENTRE
  - AHS AGRICULTURAL HALL SITE
  - C CEMETERY
  - CS CHURCH SITE
  - D DRAIN
- PUBLIC PURPOSES DENOTED AS FOLLOWS:
  - E EDUCATION ENDOWMENT
  - F FLOODWAY
  - FF FIRE FIGHTING FACILITY
  - GR GOVERNMENT REQUIREMENTS
  - H HOSPITAL
  - HA HALL SITE
  - HC HEALTH CENTRE
  - HS HIGH SCHOOL
  - OS OFFICE AND STABLES
  - P POLICE
  - PS PRIMARY SCHOOL
  - PSC PRE-SCHOOL
  - PU PUBLIC UTILITY
  - PWD PUBLIC WORKS DEPARTMENT
  - RS RACE COURSE & SHOW GROUND
- PUBLIC PURPOSES DENOTED AS FOLLOWS:
  - RSL RETURN SERVICE LEAGUE
  - S SEWAGE PUMPING STATION
  - SEC SEC DEPOT
  - T TELECOM
  - W WATER TOWER
  - WSD WATER SUPPLY
  - WT WATER TREATMENT
- PUBLIC RECREATION / CONSERVATION
- RAILWAY
- ROAD TO BE CLOSED
- STATE FOREST

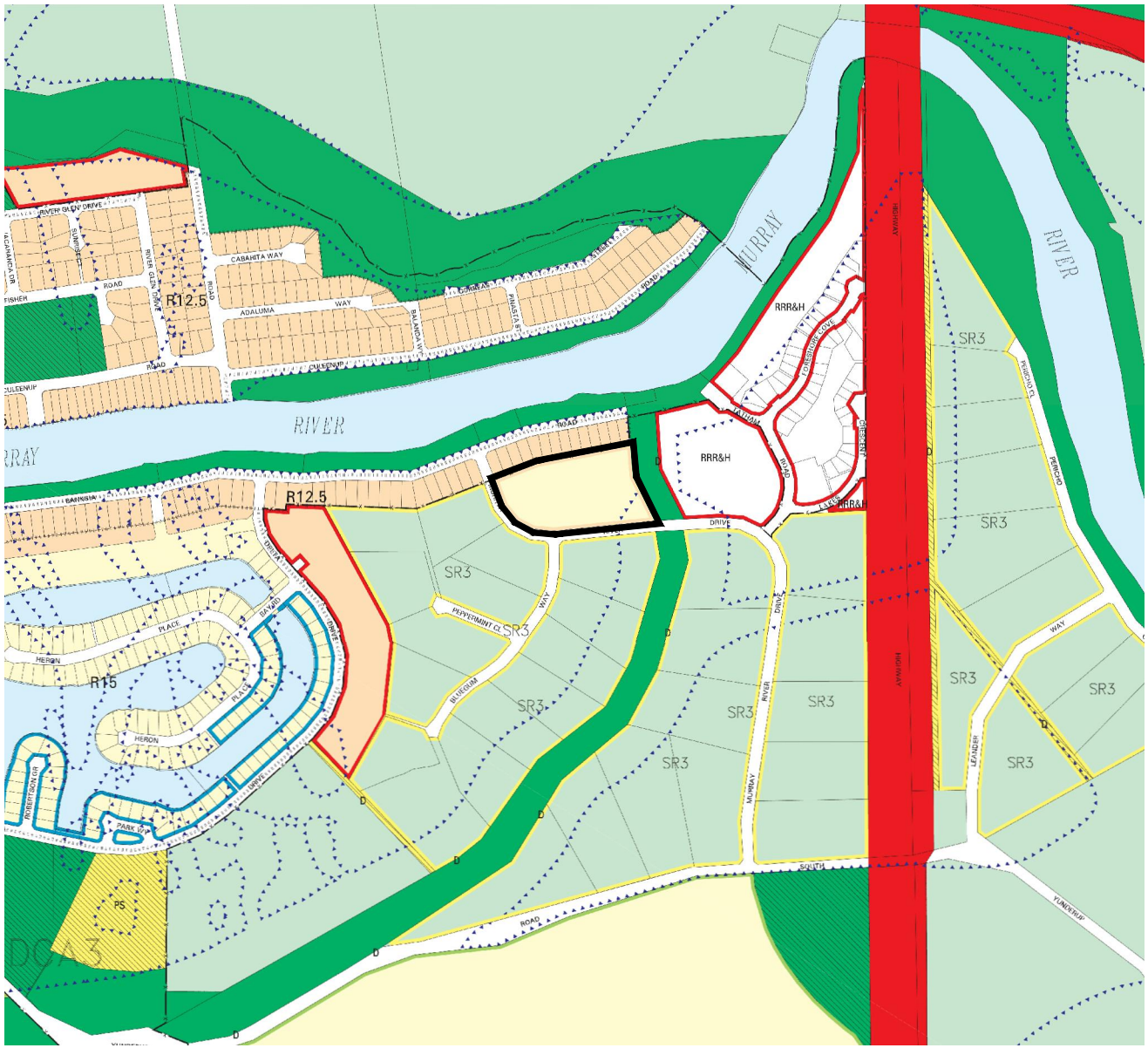
ZONES

- CANAL DEVELOPMENT
- RESIDENTIAL
- RESIDENTIAL DEVELOPMENT
- SPECIAL DEVELOPMENT DENOTED AS FOLLOWS:
  - SD SPECIAL DEVELOPMENT
- SPECIAL RESIDENTIAL
- COMMERCIAL
- HOTEL / MOTEL
- SPECIAL USE DENOTED AS FOLLOWS:
  - SSS SERVICE STATION & SHOP
  - TD TOURIST DEVELOPMENT
  - V VARIOUS - SEE SCHEME TEXT
  - W PLACE OF WORSHIP
- PRIVATE CLUBS AND INSTITUTIONS
- PRIVATE RECREATION DENOTED AS FOLLOWS:
  - PR PRIVATE RECREATION
- INDUSTRIAL DEVELOPMENT
- INDUSTRY
- SERVICE COMMERCIAL
- TOWN CENTRE
- CARAVAN / CHALET PARK DENOTED AS FOLLOWS:
  - CCP CARAVAN / CHALET PARK
- SPECIAL USE
- SPECIAL USE DENOTED AS FOLLOWS:
  - A ABATTOIR
  - ACV ART/CRAFT VILLAGE
  - AGC PROCESSING OF AGRICULTURAL CHEMICALS
  - ETC EMPLOYMENT AND TRAINING CENTRE
- FARMLET
- HILLS LANDSCAPE PROTECTION
- RURAL
- SPECIAL RURAL
- CLUSTER FARM
- SPECIAL USE DENOTED AS FOLLOWS:
  - FSC FREEWAY SERVICE CENTRE
  - G GARDEN CENTRE
  - HB HOME BUSINESS
  - K KENNEL
  - MLFC MASONIC LODGE AND FUNCTION CENTRE
  - R ROADHOUSE
  - RC RECREATIONAL CLUBROOMS
  - RH RECREATION HALL
  - RRR&H RESIDENTIAL,RESORT,RETIREMENT & HIRE ACCOM.
  - RTTS RESIDENTIAL/HORSE TRAINING,TROTTING,STABLING
  - S STABLE
  - SR SINGLE RESIDENTIAL
  - SS SERVICE STATION
  - SS&B SERVICE STATION & BOAT DISPLAY

OTHER

- R20 R CODES
- A1 ADDITIONAL USES
- SCHEME BOUNDARY
- LOCAL GOVERNMENT BOUNDARY
- TOWNSITE -- LAND ACT
- L3 PLACES OF LANDSCAPE VALUE (SEE SCHEME TEXT)
- FLOODPRONE AREAS (100 YEAR FLOOD)
- SR11 SPECIAL RURAL AREA (SEE SCHEME TEXT)
- 1 PEEL-HARVEY COASTAL PLAIN CATCHMENT AREA (SEE SCHEME TEXT)
- HLP3 HILLS LANDSCAPE PROTECTION AREA (SEE SCHEME TEXT)
- DCA 1 SCA-DEVELOPMENT CONTRIBUTION AREA (SEE SCHEME TEXT)
- PLACES OF HERITAGE VALUE (SEE SCHEME TEXT)
- NO ZONE

CURRENT SHIRE OF MURRAY TOWN PLANNING SCHEME NO. 4



LEGEND

PEEL REGION SCHEME RESERVES

- REGIONAL OPEN SPACE
- RAILWAYS
- STATE FORESTS
- WATERWAYS
- PRIMARY REGIONAL ROADS
- OTHER REGIONAL ROADS
- PUBLIC PURPOSES - DENOTED AS FOLLOWS:
  - H HOSPITAL
  - HS HIGH SCHOOL
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  - U UNIVERSITY

LOCAL SCHEME RESERVES

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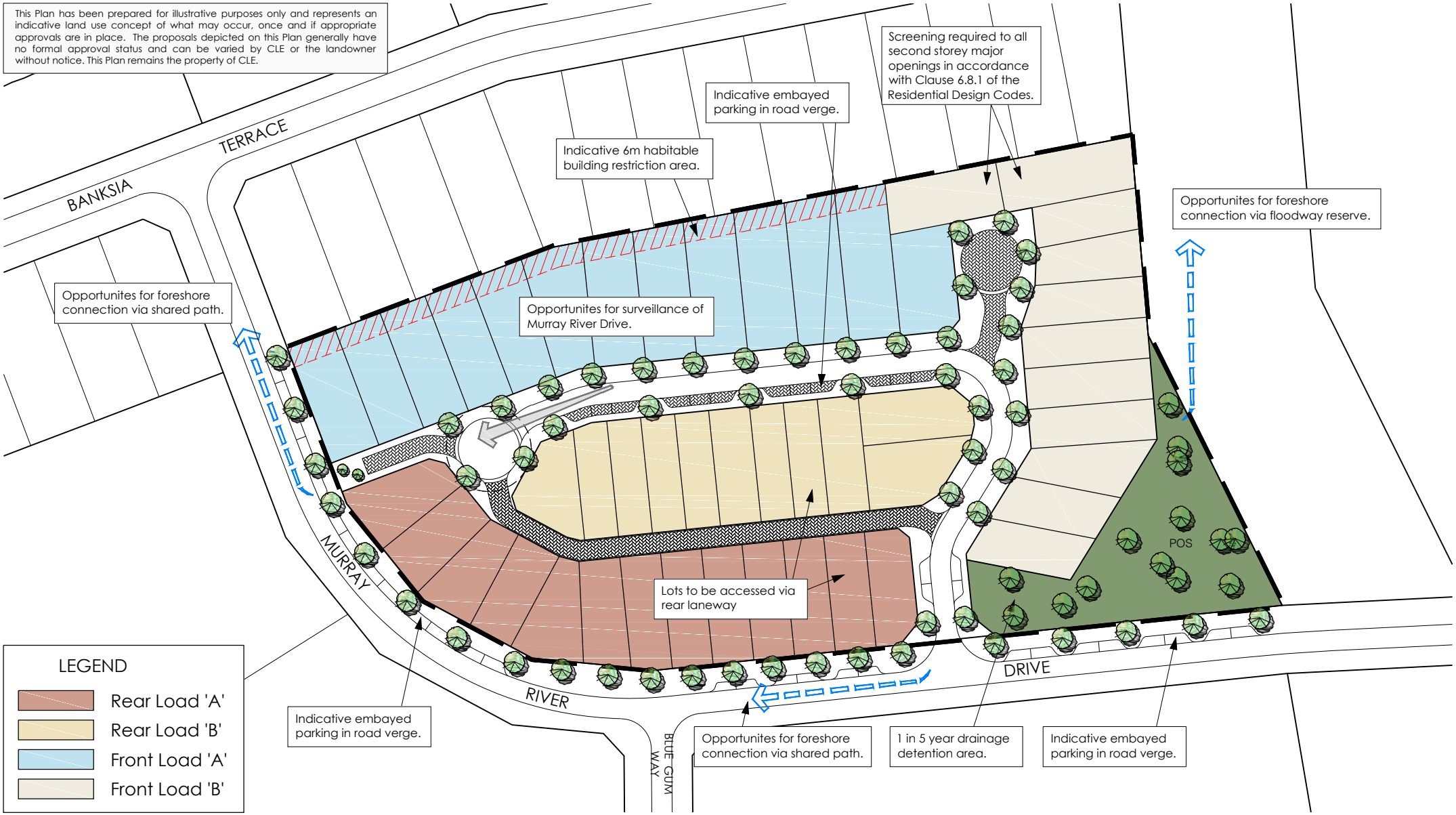
- PLACES OF HERITAGE VALUE (SEE SCHEME TEXT)
- NO ZONE

PROPOSED SHIRE OF MURRAY TOWN PLANNING SCHEME NO. 4

2163-43A-01 (14.07.2011), nts

Lot 14 Murray River Drive, South Yunderup : Figure 3B



INDICATIVE CONCEPT PLAN