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DEPARTMENT OF ENVIRONMENT REGULATION 1 0 MAY 2016

Corporate Information Section

Attention: Clearing Regulation Department of Environmental Regulation Locked Bag 33 Cloisters Square Perth WA 6850

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Dear Sir/ Madam.

# CLEARING PERMIT APPLICATION FOR SOUTH YUNDERUP ROAD AND PINJARRA ROAD INTERSECTION UPGRADE

Emerge Associates (Emerge) has been engaged by Satterley Property Group ('the applicant') to provide environmental consultancy services to support a proposed upgrade to the intersection of South Yunderup Road and Pinjarra Road, Ravenswood. Due to the presence of native vegetation within the intersection upgrade area, Emerge have prepared this letter to support an application for a clearing permit pursuant to the Environmental Protection Act 1986 (EP Act).

# Introduction

The intersection of South Yunderup Road and Pinjarra Road (referred to herein as 'the intersection'). is situated approximately 70 km south of the Perth Central Business District (CBD) in the Shire of Murray, as shown in Figure 1. The applicant is facilitating an upgrade to the intersection in accordance with a condition of subdivision approval for the nearby Austin Lakes residential development. A copy of the subdivision approval is provided in Attachment 1. The applicant has recently applied for a separate subdivision approval from the Western Australian Planning Commission to allow for the acquisition of land from private rural lots 10 and 12 Pinjarra Road, Ravenswood, in order to widen the road reserve.

The intersection is located within an area that is currently zoned 'rural' under the Peel Region Scheme (PRS) and 'rural' under the Shire of Murray Town Planning Scheme (TPS) No. 4. Pinjarra Road is zoned as a 'primary regional road' under both of these schemes. The upgrade involves widening the intersection to accommodate the increased traffic volumes that will result as development occurs in nearby areas such as Austin Lakes.

Excluding some isolated areas of the adjacent Murray River foreshore, the land surrounding the intersection has been subject to historical clearing for agricultural purposes. However, some remnant native trees and shrubs remain; and other native vegetation is present that has been planted as part of road side revegetation works. The proposed upgrade will require that some of this vegetation is cleared including vegetation on private land, and road reserves vested with the Shire of Murray and Main Roads WA. Permission received from the Shire of Murray to clear native vegetation within the

South Yunderup Road Reserve is provided in **Attachment 2**. Written permission is currently being sought from the landowners of Lot 10 and 12 Pinjarra Road, as well as Main Roads WA and will be provided to the Department of Environment Regulation (DER) as soon as these have been received by Satterley. Note that no clearing is required within the Murray River foreshore area.

A clearing permit is being sought to ensure that the native vegetation present within the various land holdings intersecting the construction footprint for the proposed upgrade is properly evaluated and accounted for prior to the commencement of works. The construction footprint proposed for the upgrade extends over 3.45 ha (including existing cleared areas and roads). This area, herein referred to as the 'clearing footprint, is shown in **Figure 1**.

The signed clearing permit application form for processing by the Department of Environment Regulation (DER) is provided in **Attachment 3**. The remainder of this letter contains supporting information to assist the DER in assessing the clearing permit application.

#### Clearing Footprint

#### Flora and vegetation values

The vegetation within and adjacent to the clearing footprint was assessed by Emerge senior ecologist Tom Atkinson on 21 April 2016.

Along the western side of Pinjarra Road, both sides of South Yunderup Road and within the adjacent rural Lots 10 and 12, the clearing footprint was found to contain 'parkland cleared' vegetation comprising of *Eucalyptus rudis* over *Melaleuca rhaphiophylla* and *Casuarina obesa* over introduced grasses and forbs, as shown in **Plate 1** below. According to the Keighery (1994) vegetation condition scale this vegetation would be considered to be in 'completely degraded' condition.

A total of six native tree and shrub species were recorded within these areas including:

- Eucalyptus rudis
- Melaleuca raphiophylla
- Hakea prostrata
- Acacia saligna
- Agonis flexuosa
- Casuarina obesa.

Note that due to their location within Pinjarra Road reserve the individuals of *Acacia saligna* and *Agonis flexuosa* may have been planted. A section of vegetation along the southern side of South Yunderup Road also includes areas of \*Corymbia citriodora over introduced grasses and forbs ("\*" denotes introduced to Western Australia), as shown in **Plate 2** below.

Along the road reserve on the eastern side of Pinjarra road, the clearing footprint contains vegetation that has been planted as part of historical revegetation works, as shown in **Plate 3** below. This vegetation included a variety of native flora species which were not formally identified. As far as we are aware this vegetation was not planted as a condition of a previous approval and therefore clearing would not require a permit under the EP Act.

The location of native trees, shrubs and revegetated areas within the clearing footprint are depicted in **Figure 2**.



Plate 1: E. rudis trees within road reserve and rural landholding



Plate 2: Introduced C. citriodora within South Yunderup Road reserve



Plate 3: Revegetated native plants within the Pinjarra Road reserve (eastern side)(Google Earth Imagery 2015)

# Flora survey limitations

The flora and vegetation assessment was undertaken outside of the optimal period for conducting flora surveys in the south west of Western Australia (spring). However, given the completely degraded condition of vegetation within and adjacent to the intersection upgrade area, the timing of the assessment was not considered a constraint on the validity of the survey results.

## Proposed clearing of native vegetation

Most of the vegetation within the clearing footprint comprises introduced grasses and forbes. To quantify the native vegetation within the clearing footprint each native tree or shrub was counted individually as shown in **Table 1**. Note that, while every effort was made to ensure the dataset is accurate, due to the spatial error inherent in locating the trees and shrubs using global positioning system (GPS) these values should be considered as approximate.

Table 1: Remnant native trees and shrubs identified within the clearing footprint

Species	Number of individuals
Acacia saligna	1
Agonis flexuosa	1
Casuarina obesa	11
Eucalyptus rudis	58
Hakea prostrata	
Melaleuca raphiophylla	15
Tota	1 87

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#### Response to EP Act Clearing Principles

Under Section 51C of the EP Act clearing of native vegetation is an offence unless a clearing permit has been obtained or an exemption applies. When assessing clearing permit applications, the DER have regard to the ten clearing principles contained in Schedule 5 of the EP Act so far as they are relevant to the matter under consideration.

In support of this clearing application, Emerge have considered and responded to the ten clearing principles, which are detailed below.

Principle (a) - Native vegetation should not be cleared if it comprises a high level of biological diversity.

The vegetation within the clearing footprint is in 'completely degraded' condition, comprising of parkland cleared land with scattered and planted trees. Only six native flora species were recorded within the clearing footprint and most of the vegetation present is planted and/or comprising introduced species.

A search of the Department of Parks and Wildlife (DPaW) *NatureMap* database was undertaken using a five kilometre radius of the sites centre point. This search indicated that a total of 512 flora species are known to occur nearby to the proposed intersection (DPaW 2016). Given the small number of native flora species and lack of understory species within clearing footprint, the vegetation represents a low level of biological diversity in comparison.

Therefore, the proposed clearing is not considered to be at variance with this principle.

<u>Principle (b) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.</u>

No formal fauna survey has been conducted within the clearing footprint. However, the vegetation within the clearing footprint includes scattered native trees with no understory species and is likely to provide only limited habitat value for native fauna.

A search of the DPaW *NatureMap* database was undertaken using a five kilometre radius of the sites centre point. This search indicated that a total of 140 fauna species are known to occur nearby to the proposed intersection (DPaW 2016). Those species that are conservation significant (that is protected under the *Wildlife Conservation Act 1950* or *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)) are listed in **Attachment 4**.

Most of the species listed generally inhabit wetland habitat and are likely to utilise the riparian vegetation and surface waters associated with the nearby Murray River and Buchanan Drain rather than the trees within the site. Other marsupial species which were returned have a preference for dense vegetative cover and would not favour the sparse and open habitat within the clearing footprint.

Of the conservation significant species returned by the NatureMap search, the following species are consider to potentially utilise the site:

- Calyptorhynchus banksii subsp. naso (forest red-tailed black-cockatoo; 'vulnerable')
- Calyptorhynchus baudinii (Baudin's cockatoo (long-billed black-cockatoo), 'vulnerable')
- Calyptorhynchus latirostris (Carnaby's cockatoo (short-billed black-cockatoo); 'threatened')
- Merops omatus (rainbow bee-eater; 'international agreement').

Given the degraded nature of the clearing footprint, only limited potential habitat for the three black cockatoo species exists within the site. Black cockatoos are known to utilise *E. rudis* for roosting and Carnaby's black cockatoo may occasionally use *E. rudis* for breeding purposes (Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) 2012, Department of Environment Conservation (DEC) 2011). Baudin's and Carnaby's black cockatoo are known to forage on *Acacia saligna and Agonis flexuosa* and also proteaceous species such as *H. prostrata*, (DSEWPAC 2012, DEC 2011).

Emerge noted that seven *E. rudis* trees had a diameter at breast height (DBH) greater than 500 mm making them potential habitat for black cockatoos. The clearing footprint is located outside of the known breeding distribution for Carnaby's black cockatoos which is the black cockatoo species expected to utilise *E. rudis* for nesting (DSEWPaC 2012). Moreover no hollows were noted, so the *E. rudis* present may if anything provide some value as roosting sites.

Mapping of Carnaby's black cockatoo habitat (Glossop et al. 2011) shows potential foraging habitat in the broader region surrounding the intersection upgrade area, with only a small area mapped within the clearing footprint (Figure 5). This surrounding habitat is mostly associated with nearby vegetated waterways and Conservation Category Wetlands (CCWs) and is not expected to be cleared in future given that clearing of quality riparian and wetland vegetation is generally not supported.

The clearing footprint may provide habitat for *Merops omatus* (rainbow bee-eater), which has a large distribution and is known to occur in a variety of habitats including cleared and disturbed areas (Morris 1976, 1977; Wolstenholme 1925). The only actual, identified threat to the rainbow bee-eater is the introduced cane toad (*Bufo marinus*) and the Rainbow Bee-eater is currently considered to be a low priority for management (DoE 2016). The vegetation proposed to be cleared is not considered necessary to maintain habitat for this species.

No regional ecological linkages have been mapped within the clearing footprint. A South-west Regional Ecological Linkage exists to the east of the clearing footprint associated with riparian vegetation along the Murray River (DEC 2009). No clearing is proposed in the Murray River foreshore on the eastern side of Pinjarra Road.

In conclusion, the clearing footprint does not contain significant habitat for fauna indigenous to Western Australia. Potential black cockatoo habitat within the clearing footprint is limited to scattered trees and shrubs within 'completely degraded' condition. This vegetation may provide some foraging and roosting value, but would not provide nesting sites and clearing would not be considered a 'matter of national environmental significance' under the EPBC Act. Given the relatively small number of larger trees within the clearing footprint, the clearing is not considered to be at variance with this principle.

Principle (c) – Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

A search of the Department of Parks and Wildlife NatureMap database was undertaken using a five kilometre radius and six DRF and 50 priority species are recorded as occurring nearby (DPaW 2016). A search for EPBC Act 'matters of national environmental significance' conducted on a five km radius of the site identified a total of nine conservation significant flora species that are likely to occur, or have habitat likely to occur in the surrounding area (DoE 2016a). A full list of conservation significant flora species potentially occurring in the area, is provided in Attachment 4 and Attachment 5.

No 'declared rare flora' (DRF) or 'priority' flora were recorded within the clearing footprint. The flora and vegetation assessment was undertaken outside of the optimal period for flora identification which reduces the ability to detect certain flora species. However, due to the completely degraded condition of the vegetation present it is extremely unlikely that DRF or priority flora exist within the clearing footprint. Thus clearing is not considered to be at variance with this principle.

Principle (d) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.

No vegetation within the clearing footrpint could be considered to represent any 'threatened ecological community' (TEC) or priority ecological community' (PEC). Furthermore, owing to the high level of weed species, low number of native flora species and lack of vegetative community structure within the clearing footprint, it is unlikely that assignment of a floristic community types (FCT) could reliably be performed allow comparison of the vegetation with known TEC or PEC.

In conclusion, no TECs or PECs are likely to occur within the clearing footprint, thus clearing is not considered to be at variance with this principle.

Principle (e) – native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Outside of defined constrained areas of the Perth Metropolitan, Peel and Greater Bunbury Region Schemes (urban, urban deferred and industrial areas), the retention target to achieve for pre-European vegetation extent, is at least 30 per cent representation (DER 2014). Given that the clearing footprint is located within a 'rural' zoned area it is unlikely to be considered a 'constrained area'

Regional vegetation mapping indicates that the site is located within an area mapped as containing vegetation association 'Pinjarra\_968' (Beard *et al.* 2013). In 2014 this association had 6.71% of its pre-European extent remaining in the Swan Coastal Plain IBRA Bioregion with 1.14% protected for conservation purposes (Government of Western Australia 2014). The 'Pinjarra 968' association is described as; medium woodland; jarrah, marri & wandoo. The clearing footprint was found to only contain six native flora species and none of these species were consistent with this description and therefore the proposed clearing will not further reducing the remaining extent of the 'Pinjarra 968' association.

The site is located within the Swan Complex as mapped by Heddle *et al.* (1986). According to the Perth Biodiversity Project (2013), this vegetation complex has been reduced to 13.84% of its precleared extent. This vegetation complex is described as; fringing woodland of *Eucalyptus rudis - Melaleuca rhaphiophylla* with localised occurrence of low open forest of *Casuarina obesa* and *Melaleuca cuticularis*. The location of the intersection is in a rural setting and is unlikely to be considered a 'constrained area'. Therefore the remaining pre-European extent of this complex is below the 30% threshold specified within DER guidance (DER 2014). Although species are present within the clearing footprint that are consistent with this complex, this vegetation within the clearing footprint is unlikely to be consistent with the Swan Complex given the lack of vegetative structure and 'completely degraded' condition of the vegetation.

Although the broader area has been extensively cleared consistent with rural land uses, areas of intact remnant native vegetation exist in close proximity to the site and are protected as 'environmentally sensitive areas' within surrounding conservation significant wetlands and waterways.

In conclusion, given only six native species were identified within the clearing footprint, the small scale of clearing proposed and the 'completely degraded' nature of the vegetation, the clearing area is not considered significant as a remnant of native vegetation in an area, and therefore clearing is not expected to be at variance with this principle.

Principle (f) – Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

The site is not located within close proximity to any RAMSARs sites (DPaW 2014). The nearest mapped RAMSAR site is located over 3 km west of the clearing footprint (DPaW 2014).

A series of 'geomorphic wetlands' exist across the broader area with one 'multiple use wetland' (MUW) occurring within the clearing footprint (UFI15802) which is in a highly degraded condition due to agricultural land uses, as shown in **Figure 4**. MUWs are wetlands that retain few wetland attributes but may still provide hydrological functions. The management objective of MUWs as noted by DoP (2005) is to 'to use, develop and manage wetlands in the context of water, town and environmental planning'. The proposed clearing will lead to the removal of a maximum of 87 native trees and shrubs within an MUW. However, vegetation within this wetland is in 'completely degraded' condition and contains limited native flora species or biological diversity.

A 'conservation category wetland' (CCW) exists 40 m to the east of the clearing footprint, which is associated with the Murray River. The Murray River flows into the RAMSAR listed Peel-Yalgorup system, which is also a 'nationally important wetland'. A small patch (approximately  $800m^2$ ) of planted native roadside vegetation is proposed to be cleared which is located only 10 m from the mapped Murray River CCW. This patch of vegetation is isolated from riparian vegetation by a concrete footpath and is elevated approximately 3 m from the Murray River as indicated by LIDAR derived topographic contours (DoW 2008). Given the difference in elevation between the vegetation and the Murray River, there is expected to be limited hydrological connectivity between these two areas and therefore minimal impact upon the CCW.

A second CCW is located approximately 90 m west of the clearing footprint which is associated with the Buchanan Drain. Given the considerable separation distance, no impacts are expected to occur to this CCW as a result of the proposed clearing.

The Buchanan Drain itself is an agricultural drain located to the west of the clearing footprint which discharges to the Murray River's lower reaches. Clearing of a small portion of riparian vegetation has been included within this permit application and may be required to facilitate installation of a rural fence along the future cadastral boundary of Lot 12, however this clearing would only comprise vegetation in a 'Completely Degraded' condition, and is not considered likely to impact upon water quality, and will only occur if deemed completely necessary at the time of construction.

Given the information above, clearing is not consider to be at variance with this principle.

Principle (g) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Landform and soil mapping for the Swan Coastal Plain as described by McArthur (1980) indicates that the clearing footprint is located within the following two soil associations:

- Vasse: poorly drained plains with variable undifferentiated estuarine and marine deposits.
- Swan: alluvial terraces with red earths and duplex soils.

Two soil units are mapped within the clearing footprint (Gozzard 1980) which are:

- Qpa: Sandy clay, mottled brown, yellow, grey and less commonly green.
- Qha: Grey and brown silt, and clayey sand, with minor black, peaty, sandy clay and shingle composed of laterite and Archaean rock fragments.

Sandy soils have a moderate to high risk of wind erosion without management measures in place. Given that the soils expected to occur within the clearing footprint have some sandy properties, construction during dry and windy weather will be avoided where possible as these conditions are likely to encourage dust generation and as such, wind erosion. During the construction of the intersection upgrade, water trucks (or similar) can operate to limit wind erosion and dust by dampening the soil is considered necessary.

The topography of the clearing footprint is generally flat with elevation ranging from 1 m Australian Height Datum (AHD) at the western clearing boundary to 3 m AHD at the eastern clearing boundary (DoW 2008). Stormwater is expected to infiltrate or travel overland to the Buchannan Drain during storm events.

The proposed clearing could potentially bring about some risk of land degradation, with the removal of vegetation. However, any land degradation is expected to be very minor, localised and will be managed during the design and construction process. The risk of wind erosion can be easily mitigated through the dust management actions proposed to support the construction process (i.e. the use of water trucks or similar to dampen dust prone areas if necessary). The expected presence of clay and peaty properties will limit wind and water erosion within the clearing footprint. The small scale of the proposed clearing will result in minimal exposed, erodible surfaces, with the surrounding areas dominated by introduced forbs and grasses which will assist in binding soil sediments and reducing erosion potential. Following construction, cleared areas will be developed as roads, footpaths and for drainage purposes.

As part of the intersection upgrade, landscaping works are proposed such as avenue planting of Tuart and River Red Gum trees which will assist in preventing land degradation by stabilising sediments.

Given the above, clearing is not considered to be at variance with this principle.

Principle (h) – Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

The site is not located within or adjacent to any DPaW managed lands, regional parks or 'Bush Forever' sites (DPaW 2016, DPaW 2014a, Department of Planning (DoP) 2014). The site is not located within or adjacent to any Environmental Protection Authority (EPA) Redbook Recommended Conservation Reserves (DPaW 2016a).

No regional ecological linkages have been mapped within the clearing footprint. A South-west Regional Ecological Linkage exists adjacent to the east of the clearing footprint associated with riparian vegetation along the Murray River (DEC 2009). Vegetation growing in association with the Murray River is not proposed to be cleared. The small patch of vegetation on the eastern side of Pinjarra Road within the clearing footprint is elevated and isolated from the Murray River riparian vegetation by way of a concrete footpath.

An environmentally sensitive area is mapped within the eastern portion of the clearing footprint (Figure 4). It is considered that this ESA is associated with the mapped CCW (Murray River). As

discussed earlier (under Principle (f)), the proposed clearing is not expected to impact upon the values of this wetland given the small scale of clearing proposed and degraded nature of the vegetation.

The extent of the proposed intersection upgrade area will be clearly marked using survey pegs and flagging tape to ensure clearing occurs within approved designated areas. As such, the proposed clearing will not impact on the environmental values associated with any conservation areas.

In conclusion, the proposed clearing of vegetation is unlikely to impact upon the environmental values of nearby conservation areas and clearing is not considered to be at variance with this principle.

<u>Principle (i) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause</u> deterioration in the quality of surface or underground water.

The site is not located within or nearby to priority drinking water source areas (DoW 2011).

Given the small scale of the clearing proposed and the degraded nature of the vegetation, this proposal is unlikely to affect the water balance or ecology of any natural lakes, swamps or wetlands with conservation values.

The entire clearing footprint is identified as having a 'high to moderate' risk of 'acid sulphate soils' (ASS) within three meters of the natural surface (DER 2015). DER (2015) guidance 'Identification and investigation of acid sulfate soils and acidic landscapes' identifies when there may be a risk of exposing ASS and outlines that an ASS investigation should be undertaken in the event of soil or sediment disturbance of 100 m³ or more in an area depicted on an ASS risk map as Class I 'high to moderate risk of ASS occurring within 3m of natural soil surface' (e.g. construction of roads, installation of underground infrastructure, drainage works). In the event that more than 100 m³ of soil disturbance is proposed, the proponent will consider any DER requirements for investigating ASS. No dewatering is proposed as part of the intersection upgrade.

Groundwater recharge within the site is not expected to increase as a result of clearing scattered trees within the intersection upgrade area. The site is largely composed of cleared paddocks, which have limited impact on the surrounding groundwater levels. Water infiltrating within the clearing footprint will be by direct rainfall run-off and is not expected to contain potential contaminants.

The Buchanan Drain is an agricultural drain located to the west of the clearing footprint (**Figure 4**) which discharges to the Murray River's lower reaches. Clearing of a small portion of riparian vegetation may be required for the installation of a rural fence along the proposed cadastral boundary of the Lot 12. However, clearing of this vegetation is not considered likely to impact upon water quality, and will only occur if deemed completely necessary at the time of construction. The drain services a catchment of approximately 17.8 km² (DoW 2011) and therefore it is expected that clearing of 87 trees and shrubs, and approximately 800m² of planted native vegetation, will have a negligible impact surface water quality within the drain given the extent of external influences within the catchment area.

Given the small scale of clearing within an area that is extensive cleared and used for agricultural purposes the clearing is not considered to be at variance with this principle.

<u>Principle (j) – native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.</u>

The site is located within a naturally low lowing area and is within the mapped 100 year 'average recurrence interval' (ARI) floodplain development control area (DoW 2014). Regional minimum

groundwater contour mapping (DoW 2003) and LIDAR topographic contour mapping indicates that the groundwater table is approximately 0 to 2 m below ground level and the presence of *Melaleuca* sp. further suggests a shallow groundwater table.

A series of geomorphic wetlands exist across the broader area with one MUW occurring within the site (UFI15802). This MUW is a palusplain which indicates that the area is flat and seasonally waterlogged.

Given the information above, it is expected that the upgrade area could be prone to flooding in winter and following large storm events. However, the small scale of the proposed clearing will not cause, or exacerbate the incidence of flooding. The naturally flat and low-lying landform, coupled with the relatively shallow groundwater table are dominant factors which would result in flooding of the area (if any) and therefore the proposed clearing is not considered to be at variance to this principle.

## Summary and closing

The proposed clearing footprint includes vegetation in a 'completely degraded' condition. In total 87 native trees or shrubs are proposed to be cleared within the 3.45 ha clearing footprint. Emerge believe that the proposed clearing is consistent with the clearing principles that have been addressed in detail within this letter.

#### In summary:

- The site has been historically cleared to support agricultural land uses and contains limited remnant vegetation and biodiversity values.
- A number of the tree and shrub species within the clearing footprint are considered to be
  potential foraging and roosting habitat for the three conservation significant black cockatoos
  However, the trees are unlikely to be utilised for nesting and clearing the trees or shrubs is
  unlikely to significantly impact available roosting or foraging resources.
- It is extremely unlikely that any threatened or priority flora exist within the clearing footprint due to the completely degraded condition of the vegetation present.
- The vegetation within the clearing footprint does not represent a TEC or PEC and is not necessary for the maintenance of a TEC or PEC.
- The vegetation within the clearing footprint is not a significant remnant.
- The vegetation within the clearing footprint is growing in association with a MUW wetland or area that retains few wetland values.
- The proposed management of the clearing will mitigate the potential for land degradation.
- An ESA is mapped within clearing footprint associated with the Murray River CCW. However, the proposed clearing is not expected to impact upon the values of any conservation area.
- The small scale of clearing proposed is expected to have negligible impacts on surface and groundwater quality or flooding due to dominant regional influences on surface and groundwater, such as the natural landform and surrounding land uses.

Should you have any questions regarding the content of this letter report please do not hesitate to contact the undersigned on 9380 4988.

# Yours sincerely

Jen Longstaff

SENIOR ENVIRONMENTAL CONSULTANT, TEAM LEADER - ENVIRONMENTAL PLANNING & MANAGEMENT

# Encl:

Figure 1: Locality and Intersection Upgrade Plan

Figure 2: Vegetation

Figure 3: Vegetation Condition

Figure 4: Surface Water Features

Figure 5: Carnaby's Black Cockatoo Habitat

Attachment 1 - Subdivision Approval

Attachment 2 - Shire of Murray authority to clear vegetation

Attachment 3 – Clearing Permit Application Form Attachment 4 – DPaW NatureMap Search Report Attachment 5 – DotE Protected Matters Search Report

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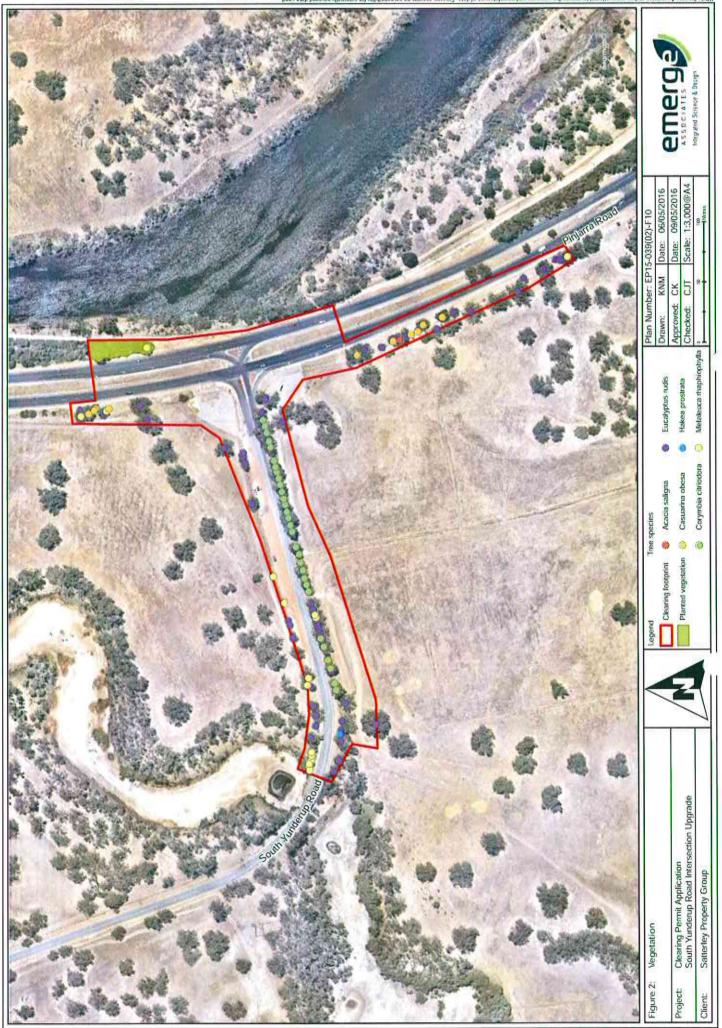
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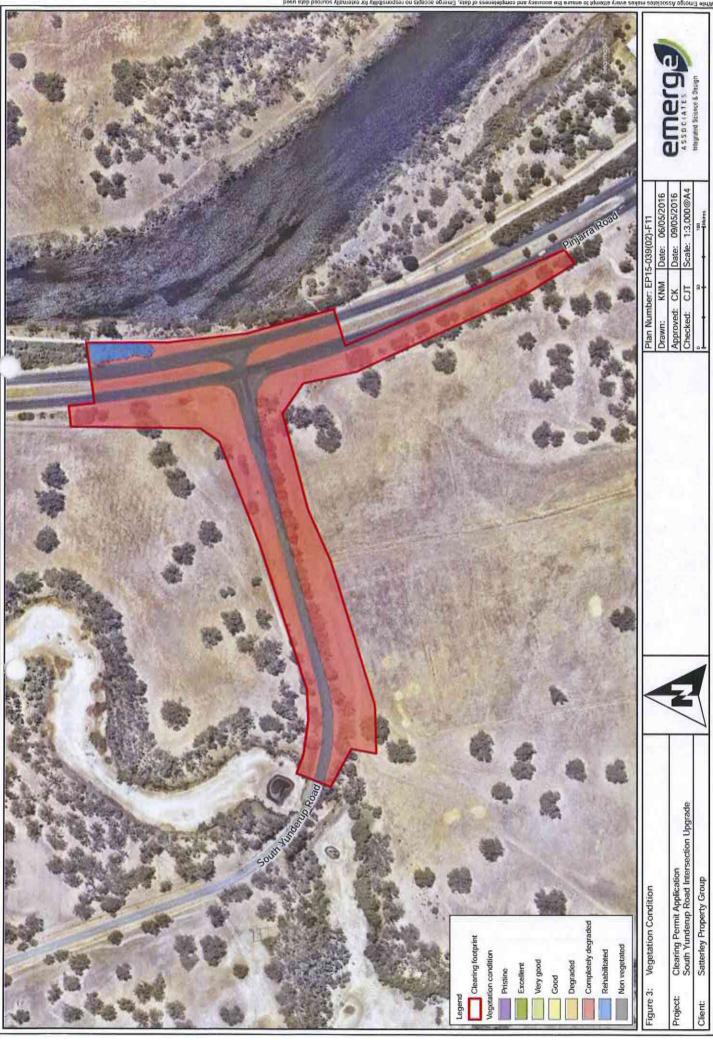
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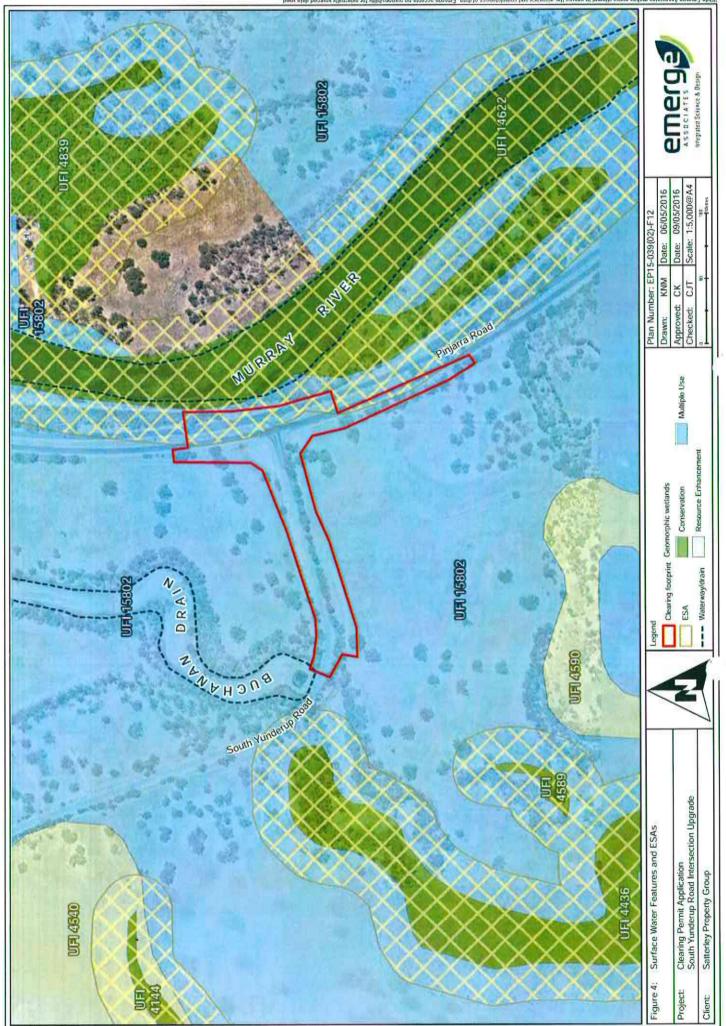
Department of Environment [DoE] 2016a, Protected Matters Search Tool, viewed April 2016, <a href="http://www.environment.gov.au/arcqis-framework/apps/pmst/pmst.jsf">http://www.environment.gov.au/arcqis-framework/apps/pmst/pmst.jsf</a>>

Department of Parks and Wildlife [DPaW] 2016, NatureMap, viewed April 2016, <a href="http://naturemap.dpaw.wa.gov.au/default.aspx">http://naturemap.dpaw.wa.gov.au/default.aspx</a> >

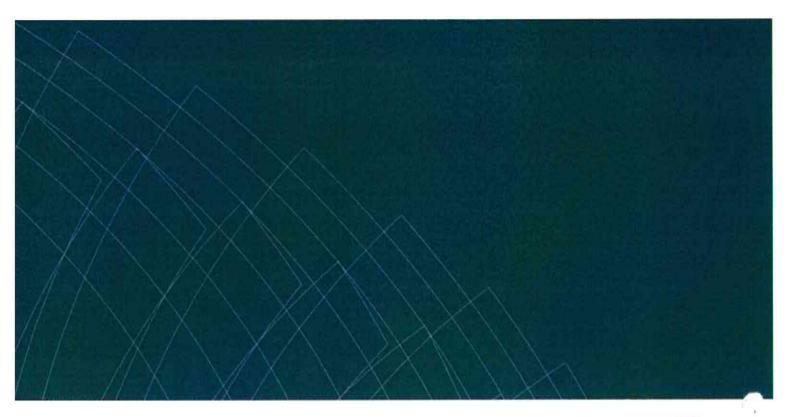
Figure 1:





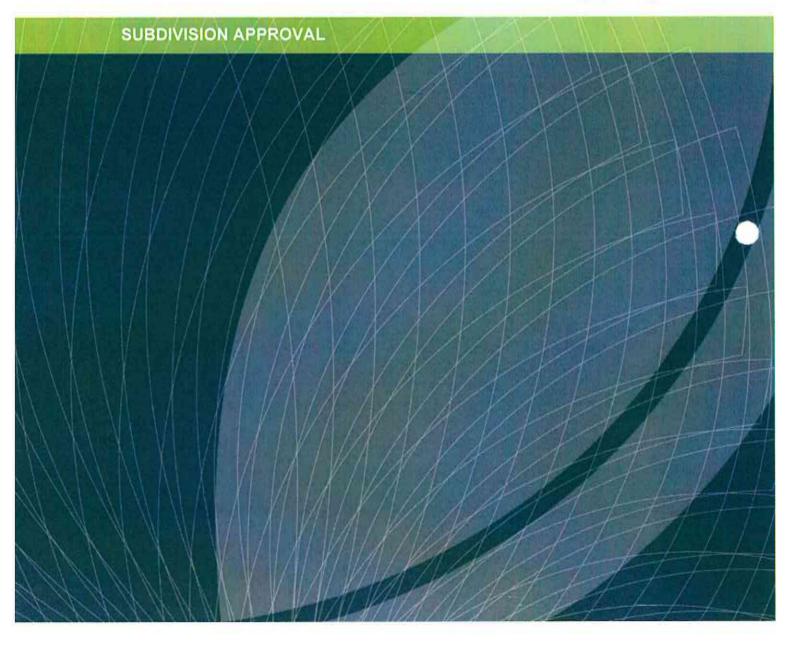


Project:



# **ATTACHMENT 1**







JOB NO: 2054 SUB JOB: 00P

DATE:

8 JUL 2015

Your Ref

Enquiries

: Lisa Hall (Ph (08) 9586 4690)

STATUS: APPROVED | SCAN/DB:

CC'S:

AMY NANCARROW-SPG PETER TONSETT - C+W MATT WEBB - MNQ

Cle Town Planning & Design Po Box 796 SUBIACO WA 6904

# Approval Subject To Condition(s) Freehold (Green Title) Subdivision

Application No: 151618

# Planning and Development Act 2005

Applicant

Cle Town Planning & Design Po Box 796 SUBIACO WA 6904

Owner

Bowman Waters Holdings Pty Ltd Level 2, 18 Bowman St SOUTH

PERTH WA 6151, Yunderup Holdings Pty Ltd Level 2, 18 Bowman

St SOUTH PERTH WA 6151

Application Receipt

20 March 2015

Lot Number

9012

Diagram / Plan

Plan 404170

Location

112

C/T Volume/Folio

2863/392

Street Address

Inlet Blvd, South Yunderup

Local Government

Shire of Murray

The Western Australian Planning Commission has considered the application referred to and is prepared to endorse a deposited plan in accordance with the plan date-stamped 20 March 2015 once the condition(s) set out have been fulfilled.

This decision is valid for four years from the date of this advice, which includes the lodgement of the deposited plan within this period.

The deposited plan for this approval and all required written advice confirming that the requirement(s) outlined in the condition(s) have been fulfilled must be submitted by **06** July **2019** or this approval no longer will remain valid.

# Reconsideration - 28 days

Under section 151(1) of the Planning and Development Act 2005, the applicant/owner may, within 28 days from the date of this decision, make a written request to the WAPC to



reconsider any condition(s) imposed in its decision. One of the matters to which the WAPC will have regard in reconsideration of its decision is whether there is compelling evidence by way of additional information or justification from the applicant/owner to warrant a reconsideration of the decision. A request for reconsideration is to be submitted to the WAPC on a Form 3A with appropriate fees. An application for reconsideration may be submitted to the WAPC prior to submission of an application for review. Form 3A and a schedule of fees are available on the WAPC website: http://www.planning.wa.gov.au

# Right to apply for a review - 28 days

Should the applicant/owner be aggrieved by this decision, there is a right to apply for a review under Part 14 of the *Planning and Development Act 2005*. The application for review must be submitted in accordance with part 2 of the *State Administrative Tribunal Rules 2004* and should be lodged within 28 days of the date of this decision to: the State Administrative Tribunal, 12 St Georges Terrace, Perth, WA 6000. It is recommended that you contact the tribunal for further details: telephone 9219 3111 or go to its website: http://www.sat.justice.wa.gov.au

# Deposited plan

The deposited plan is to be submitted to the Western Australian Land Information Authority (Landgate) for certification. Once certified, Landgate will forward it to the WAPC. In addition, the applicant/owner is responsible for submission of a Form 1C with appropriate fees to the WAPC requesting endorsement of the deposited plan. A copy of the deposited plan with confirmation of submission to Landgate is to be submitted with all required written advice confirming compliance with any condition(s) from the nominated agency/authority or local government. Form 1C and a schedule of fees are available on the WAPC website: http://www.planning.wa.gov.au

# Condition(s)

The WAPC is prepared to endorse a deposited plan in accordance with the plan submitted once the condition(s) set out have been fulfilled.

The condition(s) of this approval are to be fulfilled to the satisfaction of the WAPC.

The condition(s) must be fulfilled before submission of a copy of the deposited plan for endorsement.

The agency/authority or local government noted in brackets at the end of the condition(s) identify the body responsible for providing written advice confirming that the WAPC's requirement(s) outlined in the condition(s) have been fulfilled. The written advice of the agency/authority or local government is to be obtained by the applicant/owner. When the written advice of each identified agency/authority or local government has been obtained, it should be submitted to the WAPC with a Form 1C and appropriate fees and a copy of the deposited plan.

If there is no agency/authority or local government noted in brackets at the end of the condition(s), a written request for confirmation that the requirement(s) outlined in the condition(s) have been fulfilled should be submitted to the WAPC, prior to lodgement of the deposited plan for endorsement.



Prior to the commencement of any subdivision works or the implementation of any condition(s) in any other way, the applicant/owner is to liaise with the nominated agency/authority or local government on the requirement(s) it considers necessary to fulfil the condition(s).

The applicant/owner is to make reasonable enquiry to the nominated agency/authority or local government to obtain confirmation that the requirement(s) of the condition(s) have been fulfilled. This may include the provision of supplementary information. In the event that the nominated agency/authority or local government will not provide its written confirmation following reasonable enquiry, the applicant/owner then may approach the WAPC for confirmation that the condition(s) have been fulfilled.

In approaching the WAPC, the applicant/owner is to provide all necessary information, including proof of reasonable enquiry to the nominated agency/authority or local government.

The condition(s) of this approval, with accompanying advice, are:

# CONDITIONS:

- The existing emergency access road being realigned, generally in accordance with the plan dated 19 June 2015 (CLE Plan number 2054-567A-01) (attached) to the satisfaction of the Western Australian Planning Commission. (Local Government)
- The plan of subdivision is to be modified so that the road marked A on the approved plan dated 20 March 2015 (attached) is widened from 15m to 16m to the satisfaction of the Western Australian Planning Commission. (Local Government)
- The plan of subdivision is to be modified so that the road marked B on the approved plan dated 20 March 2015 (attached) is widened from 15m to 16m to the satisfaction of the Western Australian Planning Commission. (Local Government)
- The plan of subdivision is to be modified so that the road marked C on the approved plan dated 20 March 2015 (attached) is widened and tapered from 15m to 16m to the satisfaction of the Western Australian Planning Commission. (Local Government)
- The plan of subdivision is to be modified so that the roundabout marked D on the approved plan dated 20 March 2015 (attached) is removed and the abutting lots being modified to improve vehicular access to the satisfaction of the Western Australian Planning Commission. (Local Government)
- The plan of subdivision is to be modified so that no lot is less than 300m<sup>2</sup> in area. (Local Government)
- Uniform fencing being constructed along the boundaries of all the proposed lots abutting public open space and public access ways. (Local Government)
- Engineering drawings and specifications are to be submitted, approved, and works undertaken in accordance with the approved engineering drawings, specifications



and approved plan of subdivision, for grading and/or stabilisation of the site to ensure that:

- a) lots can accommodate their intended use; and
- b) finished ground levels at the boundaries of the lot(s) the subject of this approval match or otherwise coordinate with the existing and/or proposed finished ground levels of the land abutting. (Local Government)
- Prior to the commencement of subdivisional works, an urban water management plan is to be prepared and approved, in consultation with the Department of Water, consistent with any approved Local Water Management Strategy. (Local Government)
- 10. Engineering drawings and specifications are to be submitted and approved, and works undertaken in accordance with the approved engineering drawings and specifications and approved plan of subdivision, for the filting and/or draining of the land, including ensuring that stormwater is contained on-site, or appropriately treated and connected to the local drainage system. Engineering drawings and specifications are to be in accordance with an approved Urban Water Management Plan (UWMP) for the site, or where no UWMP exists, to the satisfaction of the Western Australian Planning Commission. (Local Government)
- 11. a) Prior to the commencement of subdivisional works, the landowner/applicant is to provide a pre-works geotechnical report certifying that the land is physically capable of development or advising how the land is to be remediated and compacted to ensure it is capable of development; and
  - b) In the event that remediation works are required, the landowner/applicant is to provide a post geotechnical report certifying that all subdivisional works have been carried out in accordance with the pre-works geotechnical report. (Local Government).
- 12. Engineering drawings and specifications are to be submitted, approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications, to ensure that those lots not fronting an existing road are provided with frontage to a constructed road(s) connected by a constructed road(s) to the local road system and such road(s) are constructed and drained at the landowner/applicant's cost.

As an alternative, and subject to the agreement of the Local Government the Western Australian Planning Commission (WAPC) is prepared to accept the landowner/applicant paying to the local government the cost of such road works as estimated by the local government and the local government providing formal assurance to the WAPC confirming that the works will be completed within a reasonable period as agreed by the WAPC. (Local Government)

- 13. Engineering drawings and specifications are to be submitted and approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications to ensure that:
  - a) street lighting is installed on all new subdivisional roads to the standards of the relevant licensed service provider and/or
  - roads that have been designed to connect with existing or proposed roads abutting the subject land are coordinated so the road reserve location and width



connect seamlessly and/or

 temporary turning areas are provided to those subdivisional roads that are subject to future extension and/or

 d) embayment parking is provided within the road reserves abutting the public open space and laneway lots;
 to the satisfaction of the Western Australian Planning Commission. (Local

Government)

- 14. All local streets within the subdivision being truncated in accordance with the Western Australian Planning Commission's Liveable Neighbourhoods policy. (Local Government)
- 15. Satisfactory arrangements being made with Main Roads Western Australia for the full cost of upgrading the intersection of South Yunderup Road and Pinjarra Road including traffic control signalisation, channelization and asphalt overlay of the Pinjarra Road carriageways. (Main Roads Western Australia)
- 16. Engineering drawings and specifications are to be submitted, approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications, for the provision of shared paths through and connecting to the application area to the satisfaction of the Western Australian Planning Commission. The approved shared paths are to be constructed by the landowner/applicant. (Local Government)
- 17. All pedestrian access ways within the subdivision being constructed and drained at the landowner/applicant's cost and shown on the diagram or plan of survey (deposited plan) as such and vested in the Crown under section 152 of the *Planning* and *Development Act 2005*, such land to be ceded free of cost and without any payment of compensation by the Crown. (Local Government)
- 18. The proposed reserve(s) shown on the approved plan of subdivision being shown on the diagram or plan of survey (deposited plan) as reserve(s) for recreation and vested in the Crown under Section 152 of the *Planning and Development Act 2005*, such land to be ceded free of cost and without any payment of compensation by the Crown. (Local Government)
- 19. Suitable arrangements being made with Main Roads Western Australia for the drainage of the land between the noise mitigation bund and the Primary Regional Road reservation for the Forrest Highway to ensure that:
  - a) no stormwater enters and/or ponds within the Primary Regional Road Reservation;
  - b) a drain is provided inside Lot 9010 to enable water to flow south from the northern culvert to the area of a multi-culvert, as shown on the plan dated 27 February 2015 (attached); and
  - c) fill is removed from Lot 9010 adjacent to the multi-culvert area, in order to allow water to flow into the subdivision area; to the satisfaction of the Western Australian Planning Commission. (Main Roads WA)
- 20. An acid sulphate soils self-assessment form and, if required as a result of the self-assessment, an acid sulphate soils report and an acid sulphate soils management



plan shall be submitted to and approved by the Department of Environment Regulation before any subdivision works or development are commenced. Where an acid sulphate soils management plan is required to be submitted, all subdivision works shall be carried out in accordance with the approved management plan. (Department of Environment Regulation)

- 21. The landowner/applicant making arrangements for the implementation of relevant provisions of an approved Fire Management Plan for the Austin Lakes estate to the specifications of Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 22. The landowner/applicant making arrangements for the implementation of relevant provisions of the approved Acid Sulphate Soils and Dewatering Management Pfan for the Austin Lakes estate to the specifications of Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 23. The landowner/applicant making arrangements for the implementation of relevant provisions of the approved Mosquito Management Plan for the Austin Lakes estate dated April 2010 to the specifications of Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 24. The landowner/applicant making arrangements for the implementation of relevant provisions of the approved Construction Management Plan for the Austin Lakes estate dated March 2010 to the specifications of Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 25. The landowner/applicant making arrangements for the implementation of relevant provisions of the approved Wetland Management Plan for the Austin Lakes estate dated June 2008 to the specifications of Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 26. The landowner/applicant making arrangements for the implementation of relevant provisions of the approved Conservation Area Management Plan for the Austin Lakes estate dated June 2008 to the specifications of Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 27. Arrangements being made for the proposed public open space to be developed by the landowner/applicant through the implementation of an approved Public Open Space Management Plan providing for the development and maintenance of the proposed public open space in accordance with the requirements of Liveable Neighbourhoods and to the specifications of the local government. (Local Government)
- 28. The landowner/applicant making arrangements for the implementation of relevant provisions of the approved Noise Management Plan (Reference: 606550-21a) for the Austin Lakes estate dated 19 May 2015 to the specifications of the Local Government and the satisfaction of the Western Australian Planning Commission. (Local Government)
- 29. A notification, pursuant to Section 70A of the Transfer of Land Act 1893 is to be placed on the certificate(s) of title of the proposed lot(s) impacted by the approved



Noise Management Plan (Reference: 606550-21a). Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows: 'The lot's is/are situated in the vicinity of a transport corridor and is currently affected, or may in the future be affected by transport noise.' (Local Government)

- 30. A notification, pursuant to Section 165 of the Planning and Development Act 2005 is to be placed on the certificates of title of the proposed lot(s) advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows: 'This lot is in close proximity to known mosquito breeding areas. The predominant mosquito species is known to carry viruses and other diseases.' (Western Australian Planning Commission)
- 31. Pursuant to Section 150 of the *Planning and Development Act 2005* and Division 3 of the *Planning and Development Regulations 2009* a covenant preventing vehicular access to and from the front and sides of all laneway lots being lodged on the certificate(s) of title of the proposed lot(s) at the full expense of the landowner/applicant. The covenant is to prevent access, to the benefit of local government, and the covenant is to specify: "No vehicular access is permitted from [INSERT street name/s]." (Local Government)
- 32. Arrangements being made to the satisfaction of the Western Australian Planning Commission and to the specification of Western Power for the provision of an underground electricity supply to the lot(s) shown on the approved plan of subdivision. (Western Power)
- The transfer of land as a Crown reserve free of cost to Western Power for the provision of electricity supply infrastructure. (Western Power)
- 34. Arrangements being made with the Water Corporation so that provision of a sultable water supply service will be available to the lots shown on the approved plan of subdivision. (Water Corporation)
- 35. Arrangements being made with the Water Corporation so that provision of a sewerage service will be available to the lots shown on the approved plan of subdivision. (Water Corporation)

# ADVICE:

- Condition 6 relates to the two lots marked E on the approved plan dated 20 March 2015 (attached).
- The landowner/applicant and the local government are advised to refer to the Institute of Public Works Engineering Australia Local Government Guidelines for Subdivisional Development (current edition). The guidelines set out the minimum best practice requirements recommended for subdivision construction and granting clearance of engineering conditions imposed.
- Condition 9 has been imposed in accordance with Better Urban Water Management Guidelines (WAPC 2008). Further guidance on the contents of urban water



management plans is provided in 'Urban Water Management Plans: Guidelines for preparing and complying with subdivision conditions' (Department of Water 2008).

- 4. The landowner/applicant is advised that the road reserves, including the constructed carriageways, laneways, truncations, footpaths/dual use paths and car embayments, are to be generally consistent with the approved plan of subdivision.
- 5. In regard to Condition 15, the timing for the upgrade is to be in accordance with the traffic report titled "South Yunderup Road/Pinjarra Road Intersection Technical Note No. 4: Timing of the Signalisation of the Intersection" (January 2013) as endorsed by Main Roads Western Australia.
- 6. Condition 20 makes reference to an 'acid sulphate soils self-assessment form'. This form can be downloaded from the Western Australian Planning Commission's website at: <a href="www.planning.wa.gov.au">www.planning.wa.gov.au</a> The 'acid sulphate soils self-assessment form' makes reference to the Department of Environment Regulation's 'Identification and Investigation of Acid Sulphate Soils' guideline. This guideline can be obtained from the Department of Environment Regulation's website at: <a href="www.der.wa.gov.au">www.der.wa.gov.au</a>
- In regard to Condition 32, Western Power provides only one underground point of electricity supply per freehold lot.
- 8. In regard to Conditions 34 and 35, the landowner/applicant shall make arrangements with the Water Corporation for the provision of the necessary services. On receipt of a request from the landowner/applicant, a Land Development Agreement under Section 83 of the Water Services Act 2012 will be prepared by the Water Corporation to document the specific requirements for the proposed subdivision.
- R-Code boundaries identified on the approved plan dated 20 March 2015 (CLE Plan 2054-576A-01) (attached) represent a modification to the Austin Cove Outline Development Plan, in accordance with Special Provision 3.4 of Schedule 7 in the Shire of Murray Town Planning Scheme No.4.

Tim Hillyard Secretary

Tillly .!

Western Australian Planning Commission

6 July 2015

