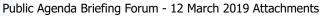
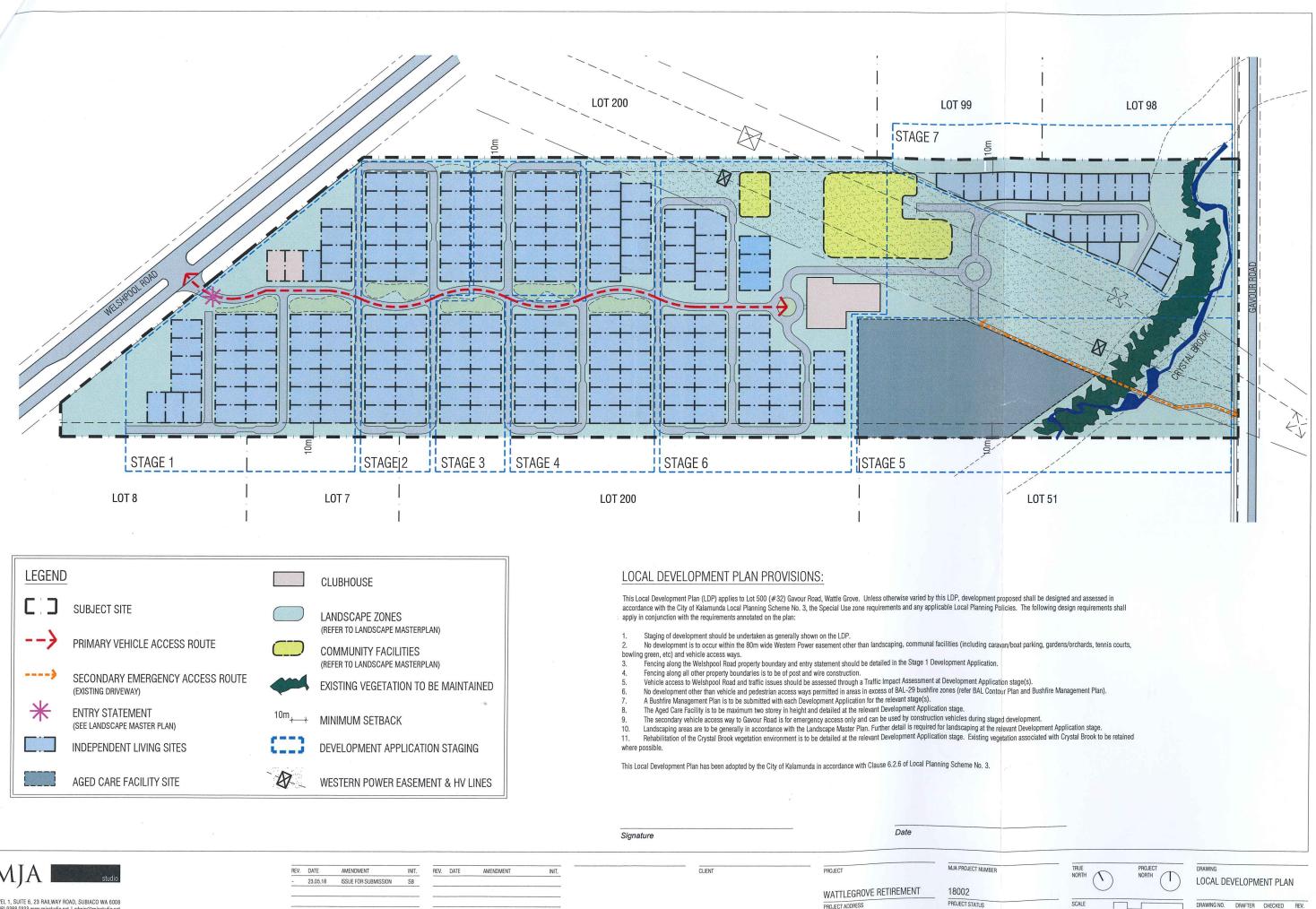
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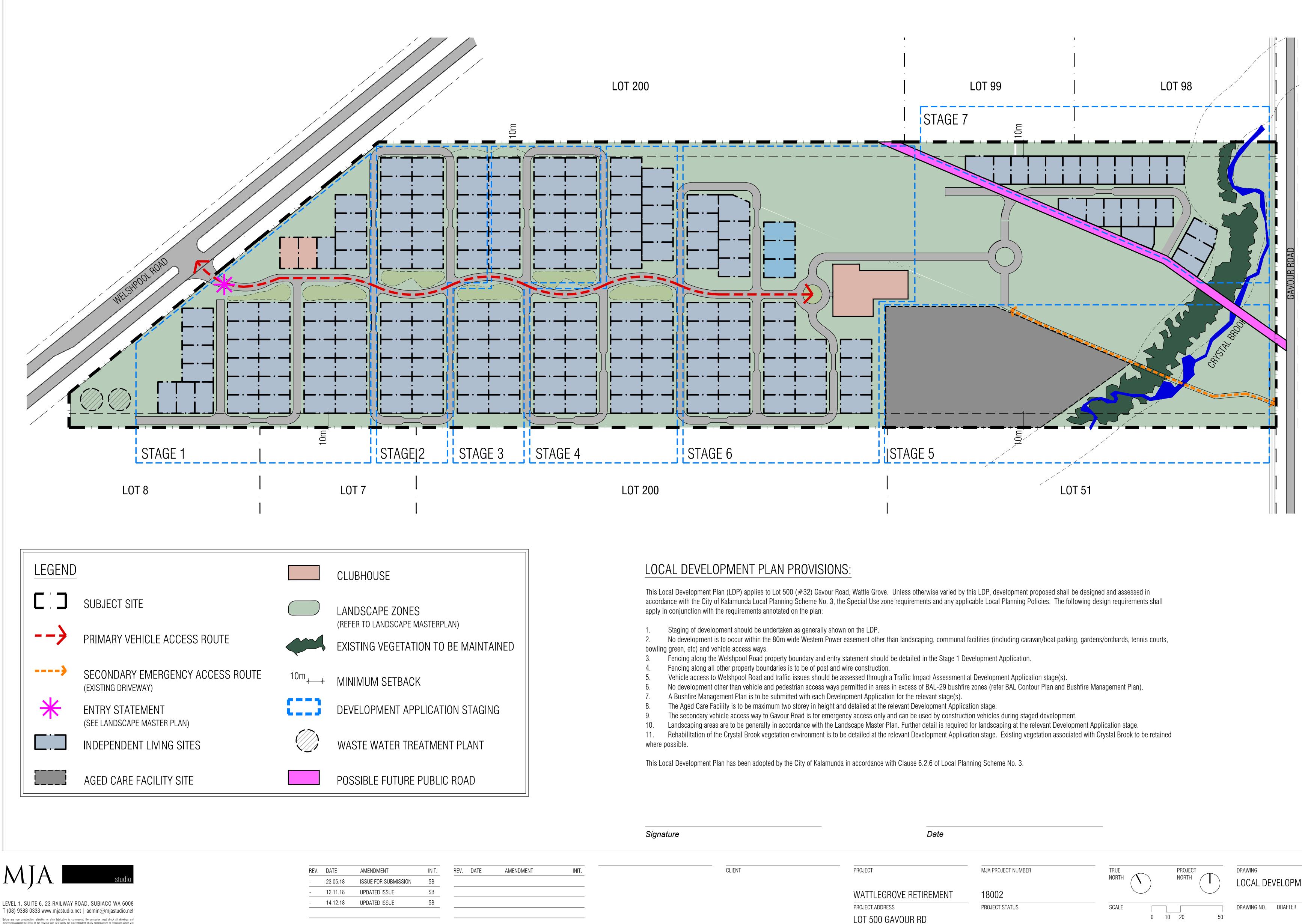
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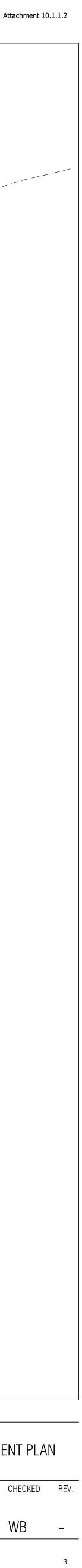


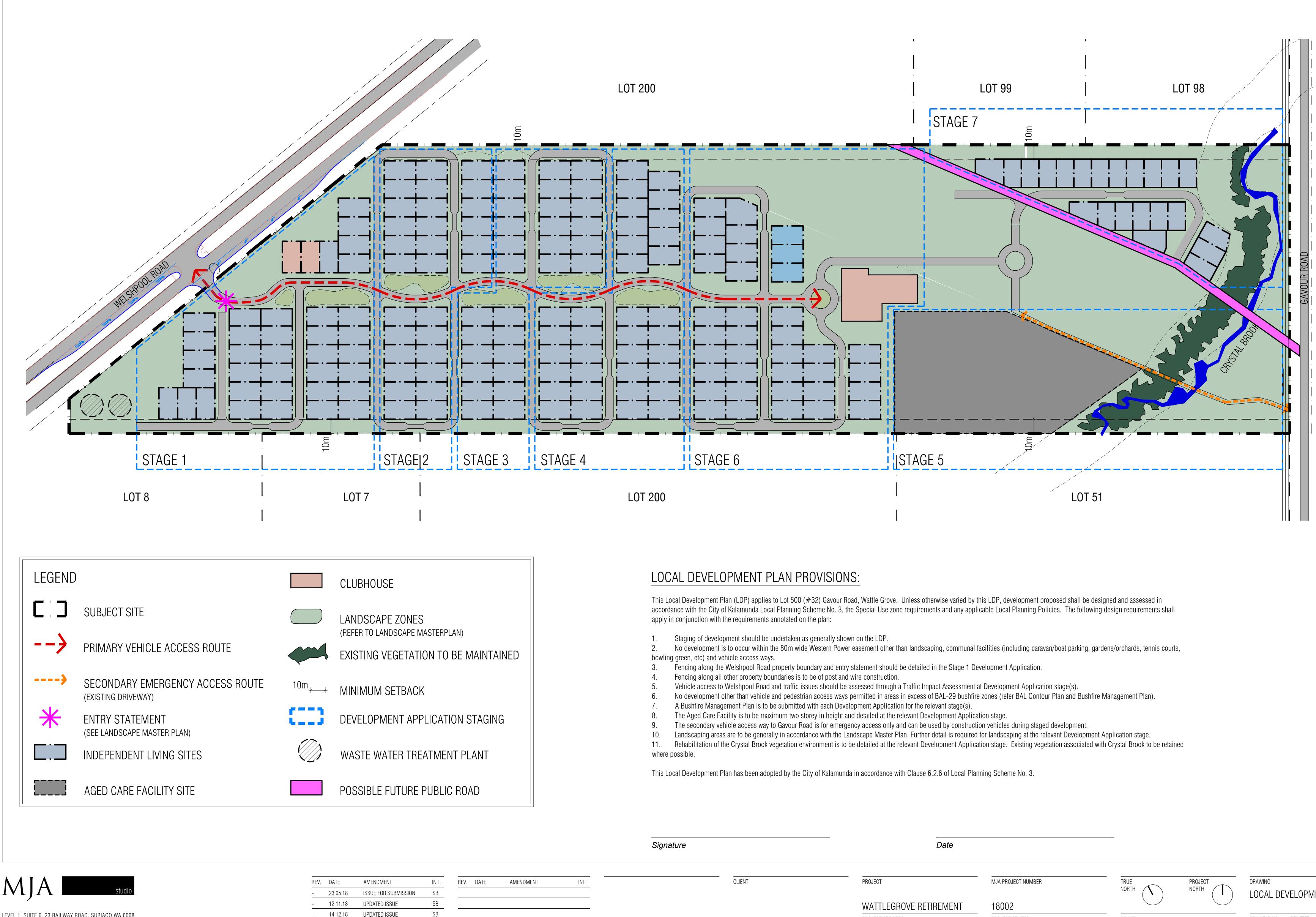
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-	12.11.18	UPDATED ISSUE
-	14.12.18	UPDATED ISSUE

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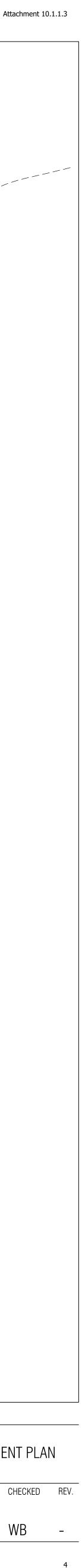
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-	12.11.18	UPDATED ISSUE
-	14.12.18	UPDATED ISSUE
-	07.02.19	UPDATED ISSUE

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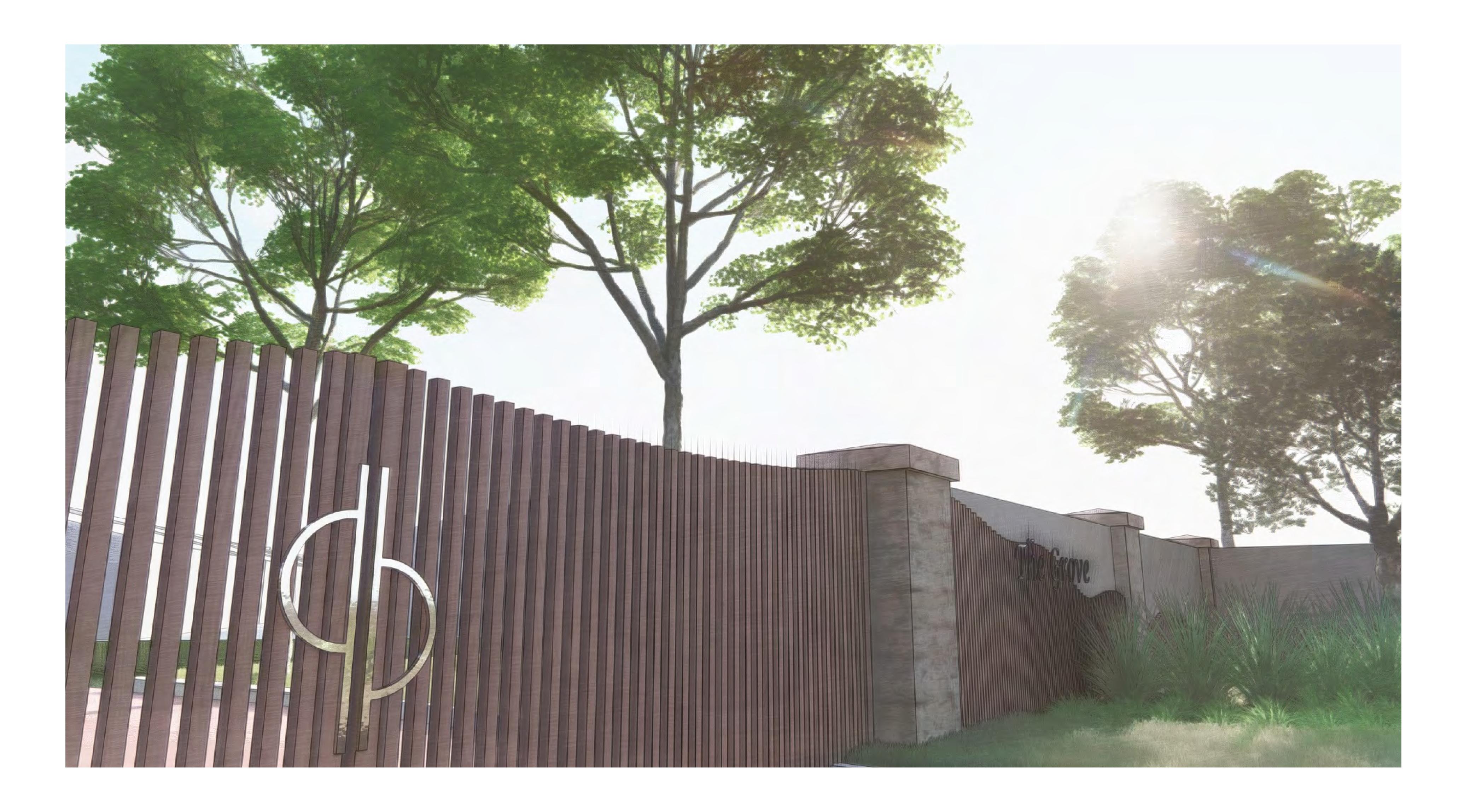
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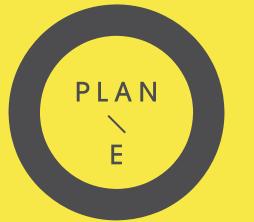
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CONCEPT NOVEMBER 2018

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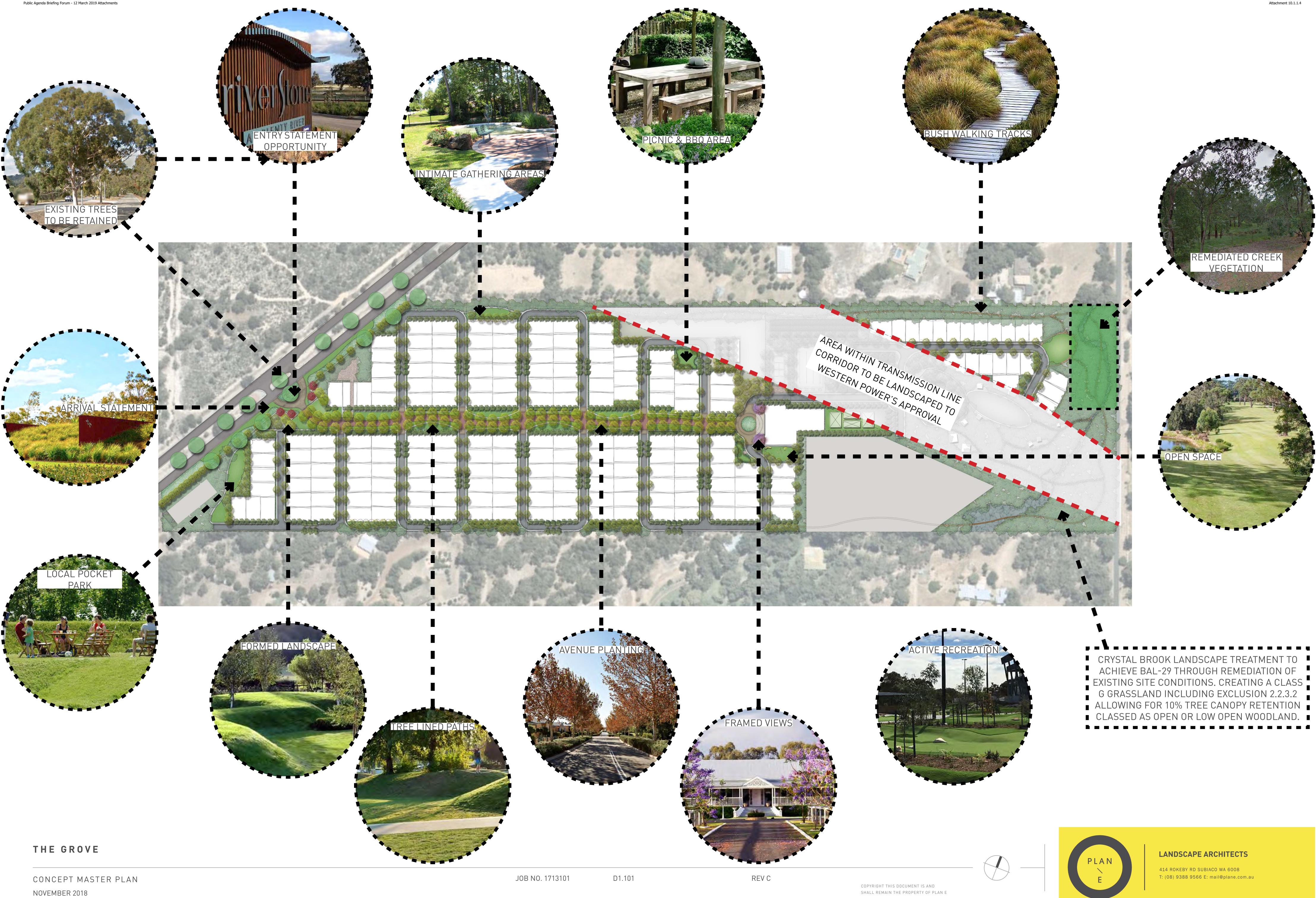




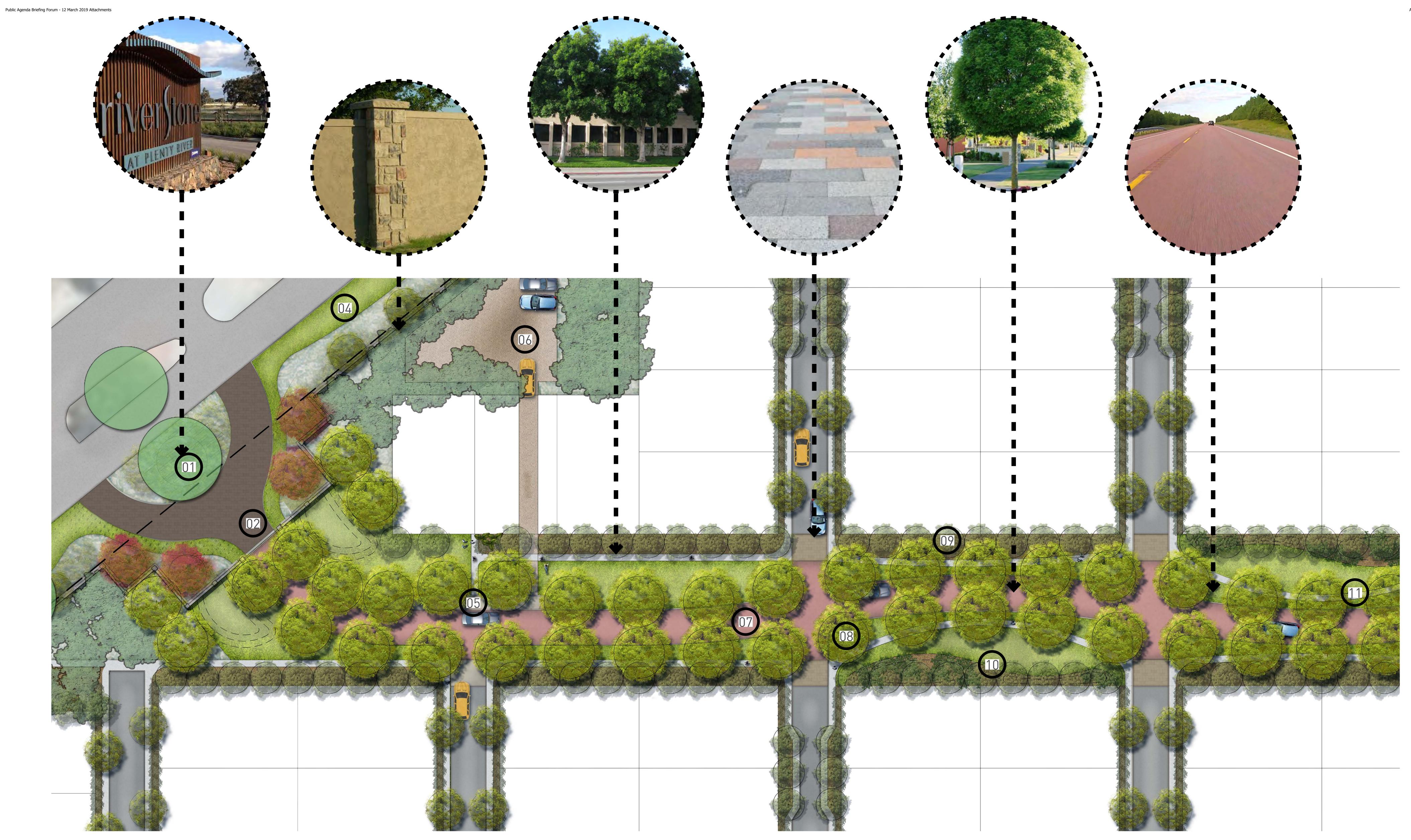
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CRYSTAL BROOK LANDSCAPE TREATMENT TO
ACHIEVE BAL-29 THROUGH REMEDIATION OF EXISTING SITE CONDITIONS. CREATING A CLASS
EXISTING SITE CONDITIONS. CREATING A CLASS G GRASSLAND INCLUDING EXCLUSION 2.2.3.2
<ul> <li>ALLOWING FOR 10% TREE CANOPY RETENTION</li> <li>CLASSED AS OPEN OR LOW OPEN WOODLAND.</li> </ul>
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LEGEND

1. ENTRY STATEMENT OPPORTUNITY 2. MAIN GATE WITH FORMAL PIERS & SIGNAGE 3. TURF MOUNDING

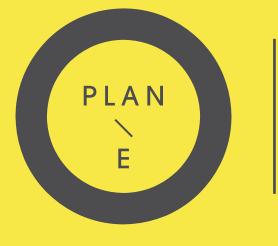
THE GROVE

DETAIL MASTER PLAN NOVEMBER 2018

## 4. FEATURE PAVING TO ACCESS DRIVE 5. DROPOFF LANE AT KEY LOCATIONS 6. TEMPORARY DRIVEWAY / CARPARK TO

CLUBHOUSE / SALES OFFICE

# 7. GRAND AVENUE WITH RED ASPHALT 8. AVENUE PLANTING - DECIDUOUS TREES - (PLANE / PEAR) 9. AVENUE SCREENING - EVERGREEN TREES - (MAGNOLIA / WATER



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GUM) 10. MOUNDED TURF AND DRAINAGE SWALE 11. MEANDERING PATHS LINK TO CLUBHOUSE AND COMMUNITY FACILITIES

THEMING NOVEMBER 2018

THE GROVE

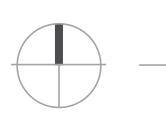
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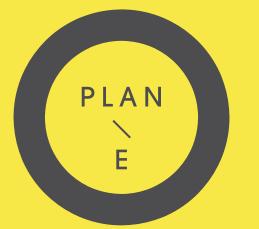


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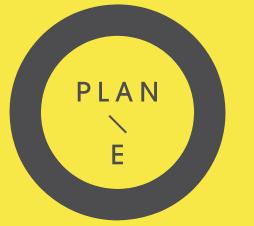
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CONCEPT VIEW - ENTRY NOVEMBER 2018

## THE GROVE





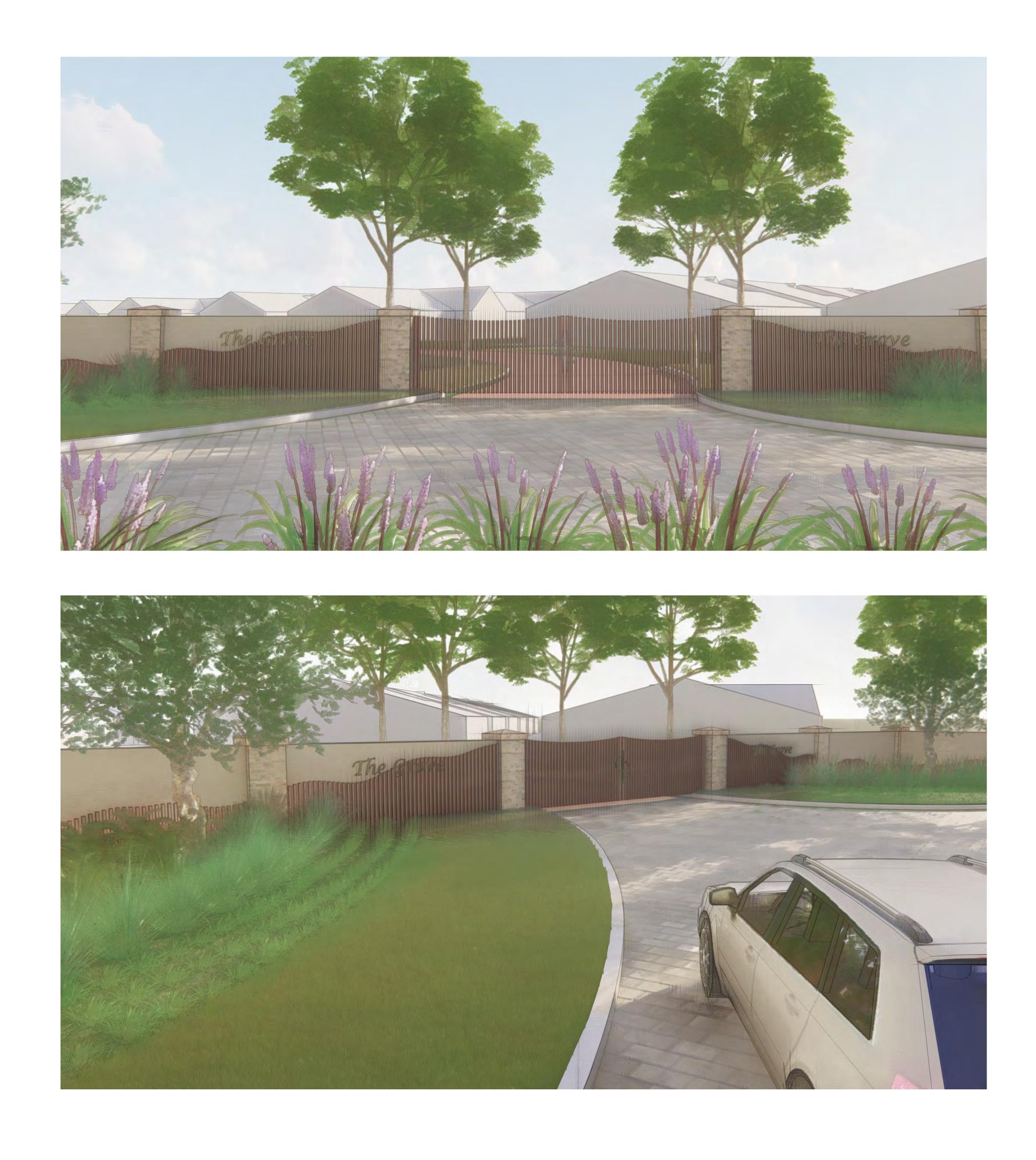
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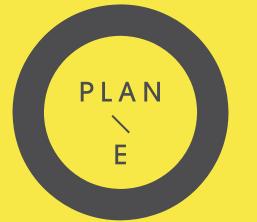












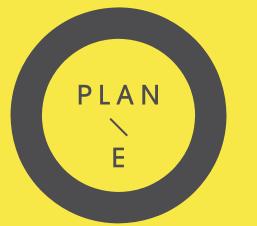
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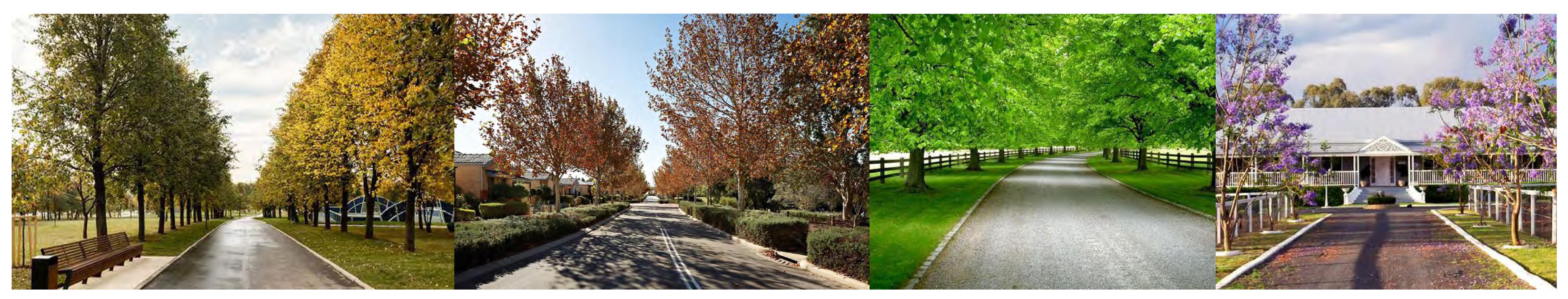
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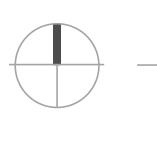
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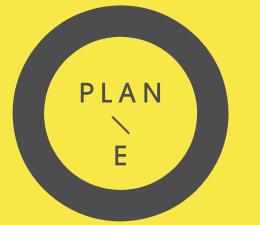
# PARKLAND + FORM



# AVENUE + SIGHTLINE







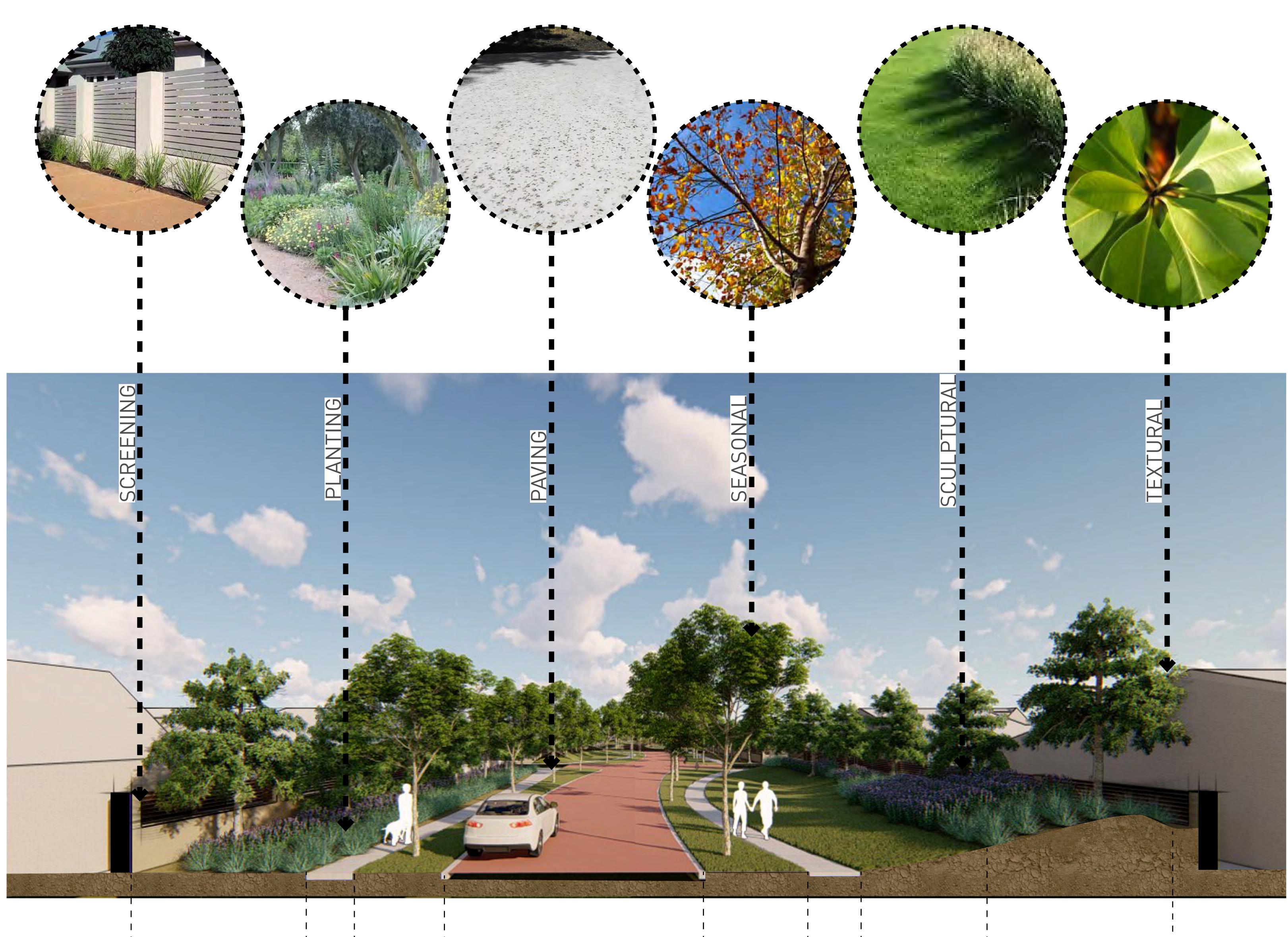
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CONCEPT SECTION NOVEMBER 2018





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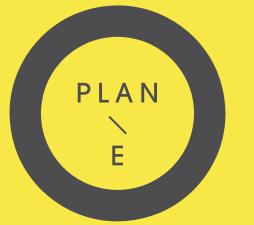
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CONCEPT VIEW - AVENUE NOVEMBER 2018

## THE GROVE





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## THE GROVE





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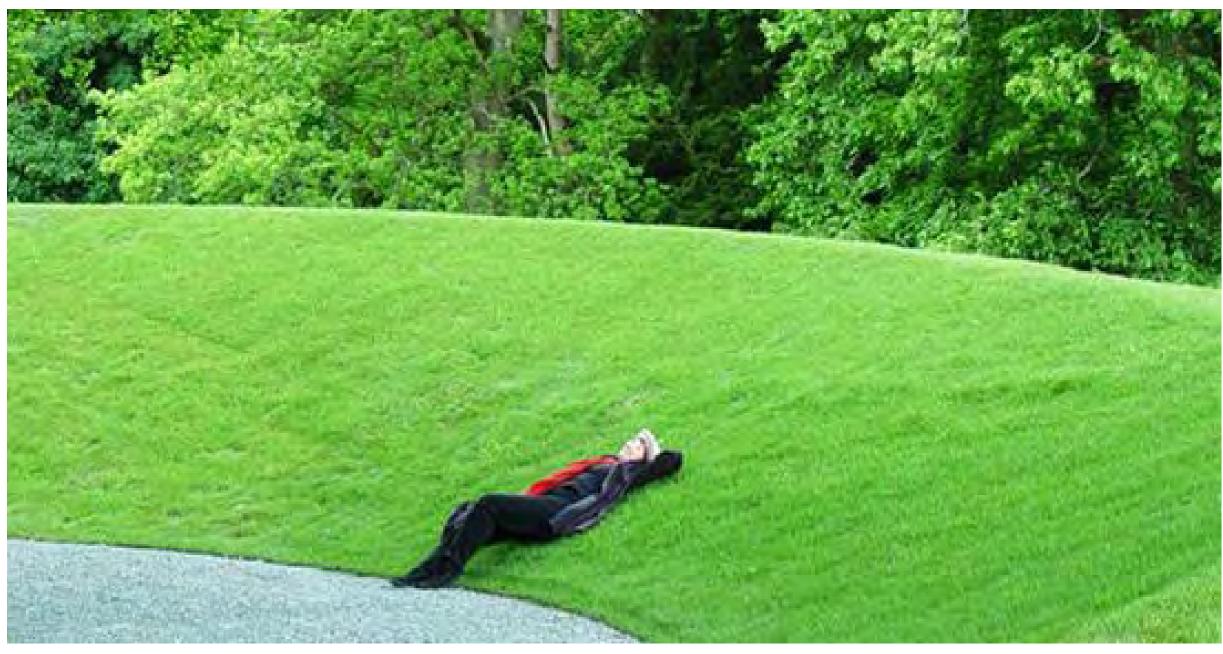




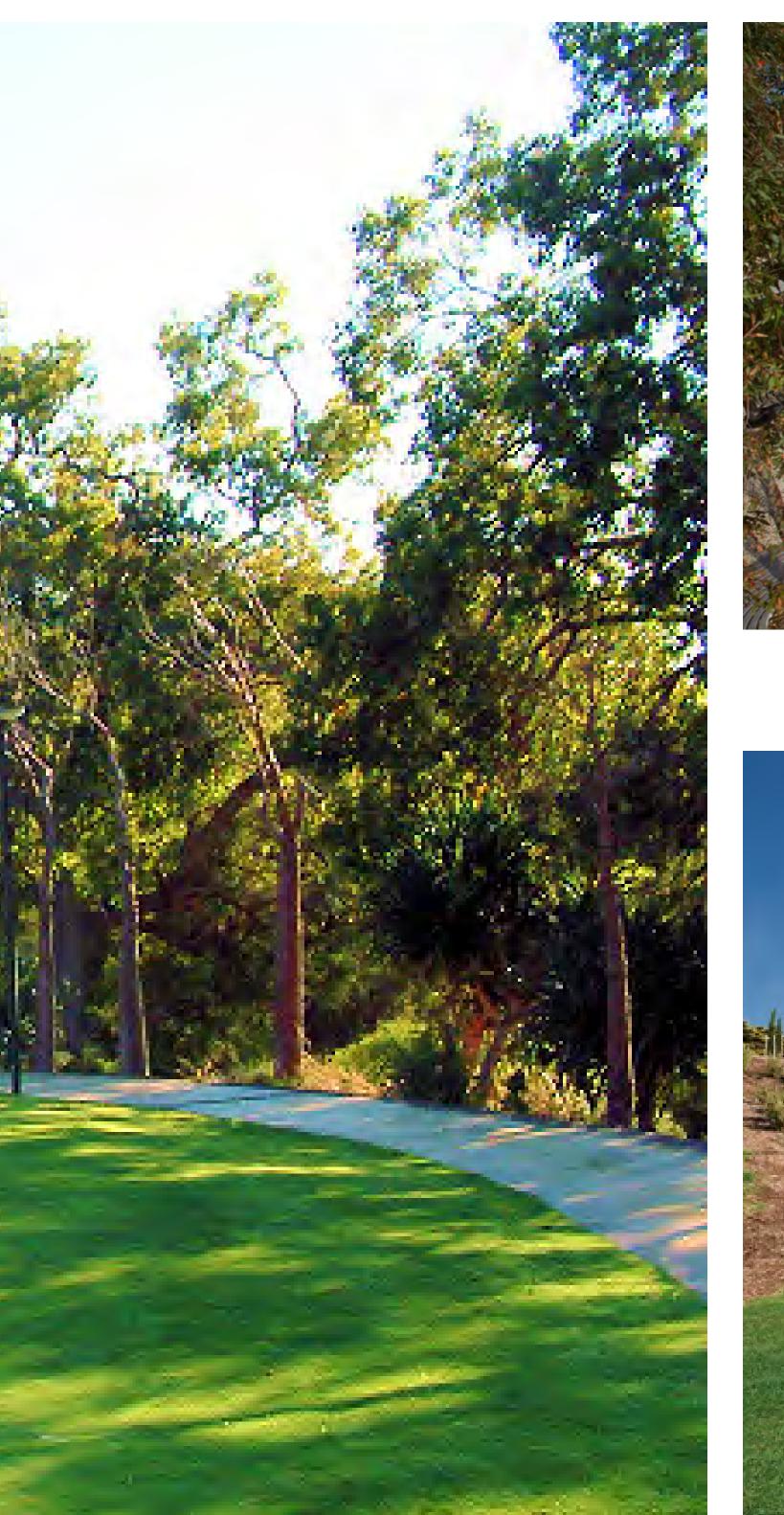




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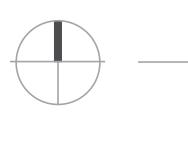














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### Environmental Assessment Lot 500 GAVOUR RD WATTLE GROVE



#### **EXECUTIVE SUMMARY**

An environmental assessment of Lot 500 is presented based on surveys of fauna, flora, soil types and the aquatic resources. Such an assessment is an integral stage of providing factual information, in context, for development applications.

The property is a flat elongated block of approximately 15 hectares, which is substantially larger than the surrounding properties. The environmental character of the block is dictated by the history and the use of the surrounding properties. Lot 500 is predominantly cleared, used as a equestrian sport facility and is surrounded by small residential holdings, most of which are parkland cleared residences including horticulture activities. The property is truncated by an 80m wide Western Power easement and has a major arterial road on the north- western boundary. The combination of the history and the impact of adjacent land use result in the classification of the site, including, the landform, the vegetation the faunal and the water resources, as disturbed.

To assist the process of a development application, surveys were conducted to record the current condition of the site. Few resident animals were noted, which reflects the nature of the surrounding environment especially the few and sparse vegetation types. No assemblages of vegetation or associated communities of animals were recorded in this predominately cleared Special Rural zone.

On investigation the seasonal water course was narrow, fast flowing, contained minimal habitat and was classified as moderate water quality.

These findings are consistent with the location and history of the property. No specific issues have been identified in this report that require further investigation.

The knowledge gained during this assessment process could be used to enrich the site and the local environs in both fauna and floral characteristics by directive landscape plans.

### **1.0 INTRODUCTION**

The aim of this document is to describe Lot 500 Gavour Rd Wattle Grove, from an environmental perspective. Such a description forms an integral component of development applications and can be incorporated into environmental management plans to be developed in the building application phase of development. Such a requirement has been set out in the Environmental Protection Act 1986.

Effective knowledge-based management is structured and transparent to permit a completion of the development application process. Primarily, good management practices rely on identifying and then understanding each physical, chemical and biological process, so that the cumulative impacts on the environment can be determined.

All developments have a level of impact on the existing and future environment. Knowledge-based management aims to reduce the impact to an acceptable level and even enhance the environment by ensuring projects are directed to promote care and sensitivity on both a local and regional scale.

The level of investigation is always placed into context with the environment present. The allocation of resources: time, money, emotion and opportunity cost is proportionate to the findings of the ecological investigations.

### 2.0 BACKGROUND

Aquatic Solutions, a company experienced in ecological evaluations, under the guidance of Brett O'Brien MSc BSc, was appointed by Mr. Ross Leighton to coordinate an Environmental Assessment of Lot 500 with consideration of environmental, botanical and zoological evaluations. The purpose of such an investigation is required to assist with a development application for the City of Kalamunda.

The services of Dr David Leach of Western Botanical and Dr Jenny Wilcox of Western Wildlife were contracted to assist with the assessment.

#### **3.0 PROPERTY DESCRITION**

A narrow property is 15.1808 ha in area, orientated north-west to south east. The property extends between Gavour Road to the southeast and Welshpool Road to the north-west. The width of the property is 210.17m. At the north-western portion of the property is truncated at 50 degrees to the southern boundary and is approximately 290m wide. The longer southern boundary is 850.75m and the northern boundary is 632.76m long.

The property is flat and slopes to the west with a fall of approximately 3m over a distance of 851m. An intermittent stream known as Crystal Brook, flows across the highest portion in the south-eastern section of the property.

There is an 80m wide Western Power easement that truncates the eastern portion of the property. A main arterial road consisting of 4 lanes and a medium strip, adjoins the north-western boundary.

### 4.0 HISTORY

The property was developed as a farm and a dairy in the 1930 to 1960's. The original house and associated buildings were removed because they were located in the easement area for the high tension power line. During the period of the 1960's to the 1970's the property was used for cattle grazing and sand extraction. The property was purchased by the current owners in 1979. During the last tenure of ownership the property has been remediated and developed as a private home and as a sporting venue for polo.

#### 5.0 SUROUNDING ENVIRONS

An environmental perspective needs to include both the property itself and to be placed in context with the surrounding landscape. Lot 500 is the largest of the properties in the near vicinity. Most of Gavour Road is zoned as Special Rural. The characteristics of such an area are open paddocks, grazing, parkland clearing, residential and horticulture activities.

The properties surrounding Lot 500 are smaller, usually less than 10,000m2 in Johnson Place to the west, along Gavour Road to the east, Ridley Road to the north and Crystal Brook Road to the south.

To the north of the main arterial road (Welshpool Road) there is a Bush Forever Site (2.74 ha).

#### 6.0 REGIONAL PERSPECTIVE

The south-eastern boundary of Lot 500 is situated approximately 650m west of the Darling Scarp. The landforms adjacent to Lot 500 are characterized by flat and even land. Colloquially, the area is know as "The Flats." The block is approximately 17km from the current coastline and is 25m above sea level.

The area beneath the scarp known as Wattle Grove is the result of deposition from the eroding scarp, formed due to fault line over 1,000km long that occurred over 2,500 million years ago. The soils of Lot 500 are derived from a combination of alluvial deposits from the streams flowing off the scarp, soil crept from material moving down the scarp (colluvial) and some sand deposits blown in from the marine environment. The combination of soil origin and nature of the deposition results in an even topography with more sand in the soil to the west and more clay to the east of the property.

### 7.0 ENVIRONMENTAL ASSESSMENT

The three main components of assessing the impact on the environment are utilizing the animals as biological indicators, vegetation as a base line determinant of native or introduced species and water as a habitat or vector for pollutants.

### 7.1 FAUNA

The fauna survey includes both a desktop and a field study, as is required in accordance with Environmental Protection Authority (EPA) Statement of Environmental Principles, Factors and Objectives (EPA 2016a), Environmental Factor Guidelines – Terrestrial Fauna (EPA 2016b), Technical Guide – Terrestrial Fauna Surveys (EPA 2016c), Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA & DEC 2010) and EPBC Act Referral Guidelines for three threatened black cockatoos: Carnaby's Cockatoo, Baudin's Cockatoo and Forest Red- tailed Black-Cockatoo (DSEWPaC 2012).

A Level 1 vertebrate fauna survey with a targeted Carnaby's Black-Cockatoo habitat survey was undertaken. The survey was conducted with reference to the following documents:

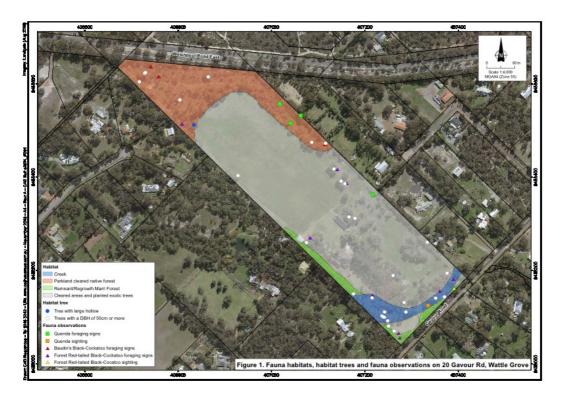
- Statement of environmental principles, factors and objectives (Environmental Protection Authority (EPA) 2016a)
- Environmental factor guideline terrestrial fauna (EPA 2016b)
- Technical guidance terrestrial fauna surveys (EPA 2016c)
- Technical Guide: terrestrial vertebrate fauna surveys for environmental impact assessment (EPA and DEC 2010)
- EPBC Act Referral Guidelines for three threatened black cockatoos: Carnaby's Cockatoo, Baudin's Cockatoo and Forest Red-tailed Black-Cockatoo (DSEWPaC 2012). The fauna survey included a search of available literature and databases (a desk-top study), and a brief site visit. The data collected in the field serve to put the desk-top study into context, as well as allowing for the identification of fauna habitats and likely fauna assemblages of the site.

As detailed in Appendix 1, including a map of sites where different species or species presence were noted. The site is characteristic of most of the land in the area, being residential lots with medium to high intensive use as Special Rural land. Such land use does not permit a rich faunal presence and the possibility of a diverse faunal assemblage of ecological significance.

Based on the area of the different habitat types the majority of the property is open grass, with the remainder being cleared open woodland or parkland cleared with minimal or no understory. The presence of roads on the eastern and western boundaries, plus adjoining properties, further restricts the ability of the property to provide moderately suitable habitat for many species. Suitable high quality habitat does not exist.

The food types, shelter required for protection from predators and ability to move and forage are all either absent or inadequate to support most species. Organisms that fly can make minor use of the habitat structure provided by larger trees (diameter of >0.5m) present on the site. Adjoining properties have a more substantial presence of vegetation to attract birds.

The aquatic habitat on the eastern boundary of the property is characterized by open, denuded and a simple channel for seasonal stream flow. Similarly, to the rest of the property, the creek zone does not provide the basic resources of shelter, food or breeding sites for many organisms. There is no riparian vegetation to assist in providing a range of foods or shelter.



## Map 1. Sightings of animals or the presence of animals on Lot 500. See Appendix 1 for details.

#### 7.1.1 Summary of Fauna Survey.

The structure of the community determines the faunal assemblage. The property has the usual range of species that are capable of inhabiting sparse and introduced vegetation. Lot 500 is mostly utilized by a few species (27 observed) that fly into and out of the property, making use of the trees present.

The presence of Cockatoos and some signs of Quendas (bandicoots) was noted. There were no signs of roosting cockatoos and more suitable vegetation exists in the area.

The aquatic resource is of moderate quality, is intermittent, fast flowing and lacks riparian shelter. Therefore, the basic requirement for a community of aquatic organisms is not available.

#### 7.2 FLORA

Similar to the preceding Fauna Survey, both the desktop and field studies provided the basis for assessment. The desktop study indicates that before settlement of Europeans, several functioning and stable vegetation communities existed. Some evidence of these assemblages exist in isolated and protected pockets within the vicinity of Lot 500. Predominantly they were *Banskia attenuata* woodlands. The polygons of potential occurrence of species is indicated in Appendix 2.

No *Banskia attenuata* or any other species threatened or priority species listed were identified on Lot 500.



A map of the property identifies the different vegetation zones.

\* Areas not mapped as vegetation (Condition Completely Degraded)

## Map 2. Vegetative Map - Depicts the vegetation types based on aerial photography and field surveys. See Appendix 2 for details.

1 Banksia menziesii open woodland

- 2 <u>Allocasuarina frasereriana</u> open woodland
- 3 Corymbia calophylla sparse woodland
- 4 <u>Corymbia calophylla</u> open woodland
- 5 <u>Corymbia calophylla</u> open woodland
- 6 Mixed *Corymbia citriodora* open
- 7 <u>Corymbia calophylla</u> woodland
- 8 Mixed native and exotic plantings

The investigation of the vegetation present indicate that all of the property is parkland cleared or grass. Over 50% of the area is turf and all but the most western portion of the property is introduced and degraded vegetation.

The small areas inhabited by a few native species Categories 1 to 4 in the Vegetation Map are located in a narrow strip along the main arterial road. They comprise approximately 8% of the property on the map, but this area includes the spaces between the few plants present and therefore the area "covered" is much smaller.

The few species present in Categories 1 to 4, occupy an area too small to create an assemblage or representative sample of any community structure. The species type, species number, structure of the array of plants result in them being isolated native plants. The surrounding land use being parkland cleared, essential firebreaks, adjoining 4 lane road and narrow band of native species is indicative of the last 70 years of land use. This land use has also resulted in the spread of the dieback fungus *Phytophthora innamomic* which is most likely the cause of the observed death of most of the susceptible native plants in the area.

### 7.21. Summary of Flora Survey

The history of land use and soil types (see later section 9.0) dictate the species and distribution of plants. The vegetation present follow east/west delineations. All of the vegetation on the property, as determined by area, is either grass, introduced species or parkland cleared. All of the vegetation is degraded from intense use, including being infected by the dieback fungus.

There is some remnant species of vegetation in a narrow band along the road on the western boundary. No threatened, endangered or priority species were identified. The investigation into the flora of Lot 500(Apeendix 1) identified areas that had been slashed in order to comply with the Bushfire Act and the requirements of the City of Kalamunda as a mandatory bushfire mitigation requirements. As an ongoing requirement these relatively small areas will be maintained in their current ( slashed ) state. This is considered an appropriate and responsible fire mitigation strategy.

### 8.0 WATER

Both the surface water and underground supplies are present on the property. Crystal Brook is the winter stream that flows through the highest and southern portion of the property. The climate of the area is long dry summers and cool wet winters, therefore the hydrological characteristics will predominantly be influenced by rainfall.

#### 8.1 Surface water

In practical terms, the surface water flows through in an channel of just over 200m of the property. The creek known as Crystal Brook is approximately 5 km long and on the site moves rapidly (>3m/sec) having just flowed down the 180m high scarp on the way to a swamp to the west of the property. In this swamp or soak area, the water filters through to Yule Brook approximately 2km to the west.

Water quality is moderate with slightly elevated salinity (300 to 500us/cm) and moderately high nitrogen levels (0.5 to 1.5 mg/l). Other parameters of pH, suspended solids, phosphorus and dissolved oxygen are acceptable for water from a catchment with land use of residential, high density residential, agriculture, horticulture and light industry.

Water quality would most likely improve during the season from the initial flows usually in June to the end of the season in October.

Aquatic fauna surveys revealed minimal organisms inhabiting the water and riparian zones. The combination of seasonal water availability, fast flowing water, narrow channel, minimal shelter and clay rich edges does not provide for suitable habitat for most organisms.

There are no aquatic species put at risk by any proposed development in or associated with the creek.

#### 8.2 Underground water supplies

The more sandy northern portion of the property did not have any ground water present to the depth of 4m. There is a shallow perched water table at approximately 1.1 to 1.6m in the southern portion of the property. This perched water is most likely just sitting on lenses of clay because the local bores in the area have standing water approximately 20m below ground level.

### 9.0 SOILS

There are three general soil types on the property, which are often reflected in the vegetation distribution because the soil type impacts on both fertility and water holding ability of the soil.

Soils associated with the eastern portion of the property except adjacent to the seasonal creek consist of clayey/sand topsoil to 0.2m overlying gravelly sandy/clay to 2m. These soils are formed on the slope (colluvial) in association with deposition of material derived from the creek (alluvial).

Adjacent to the creek and formed by more recent activity is the alluvial clays associated with flooding of the creek.

Soils in the northern quarter consist of medium to fine sand with organics to approximately 0.75m overlying medium fine yellow sand to a depth of 4m – typical of the Bassendean sand complex.

#### **10.0 ENVIRONMENTAL MANAGEMENT**

Effective management includes incorporating the knowledge of the environment into the design and to implement action plans. The value of knowledge is to assist managers to place all variables into a realistic context of the site, the area, the region and the investment required commensurate with each step in the evaluation process. This assessment of the existing fauna, flora and water resources of the site indicated that the site is typical of the area of intensive to semi-intensive rural pursuits.

No animals or plants of ecological significance were noted. Similarly, no issues relating to the seasonal creek or subterranean water resources were identified.

Gavour Road - Environmental Assessment

## Appendix 1 Fauna Survey

Gavour Road - Environmental Assessment

## Appendix 2 Flora Survey

## Lot 500 (32) Gavour Rd, Wattle Grove:

#### Fauna Survey 2018



creek (top) and forest red-tailed black-cockatoo (bottom) in the study area.

Prepared for: Aquatic Solutions

Prepared by: Western Wildlife 8 Ridgeway Pl Mahogany Creek WA 6072 Ph: 0427 510 934



November 2018

#### **Executive Summary**

#### Introduction

There is a proposal to develop Lot 500 (32) Gavour Rd, Wattle Grove (the 'study area') as a retirement facility. On behalf of the landowner, Aquatic Solutions commissioned Western Wildlife to conduct a targeted fauna survey of the study area.

#### Methods

The fauna survey was undertaken in accordance with Environmental Protection Authority (EPA) Environmental Factor Guidelines – Terrestrial Fauna (EPA 2016b), Technical Guide – Terrestrial Fauna Surveys (EPA 2016c), Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA & DEC 2010) and EPBC Act Referral Guidelines for three threatened black cockatoos: Carnaby's Cockatoo, Baudin's Cockatoo and Forest Red-tailed Black-Cockatoo (DSEWPaC 2012).

The field survey was carried out by one zoologist on the 10<sup>th</sup> October 2018. The field study included the identification of broad fauna habitats, opportunistic records of fauna and a targeted search for evidence of any conservation significant species, particularly foraging, breeding or roosting habitat for Black-Cockatoos (*Calyptorhynchus spp*). The field survey was supported by a review of the relevant literature and databases.

Species were deemed to be of conservation significance if listed under *The Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), *The Western Australian Wildlife Conservation Act 1950* (WC Act) or if listed as a Priority species by the Department of Biodiversity, Conservation and Attractions (DBCA).

#### Results and Discussion

Habitats observed in the study area were:

- Cleared areas with exotic trees
- Creek
- Remnant/regrowth Marri forest (mostly in association with the creek)
- Parkland cleared native forest

The habitats were lacking in native understory and generally degraded, but that even the canopy trees of Jarrah, Marri and She-oak are likely to support some native fauna species. The creek is likely to provide a local ecological linkage across the southern part of the study area. Overall, 31 Jarrah, Marri or Flooded Gum trees were identified that demonstrated a DBH  $\geq$  50cm.

The only four conservation significant fauna likely to use the study area on a regular basis are:

- Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) Endangered (EBPC Act), S2 (WC Act)
- Baudin's Black-Cockatoo (*Calyptorhynchus baudinii*) Endangered (EBPC Act), S2 (WC Act)
- Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*) Vulnerable (EBPC Act), S3 (WC Act)
- Quenda (*Isoodon fusciventer*) DBCA P4

The study area represents a small area of foraging habitat for black-cockatoos and although potential breeding habitat is present, only one tree appeared to have a large hollow that may be suitably-sized for cockatoos. The Quenda is relatively common in the Perth Hills and is likely to occur throughout the local area, wherever there is dense vegetation at ground level.

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#### 1. Introduction

There is a proposal to develop Lot 500 (32) Gavour Rd, Wattle Grove (the 'study area') as a retirement facility. On behalf of the landowner, Aquatic Solutions commissioned Western Wildlife to conduct a targeted fauna survey of the study area.

The main aims of the fauna survey were to characterize the fauna habitats present and search the study area for habitat that may be used by conservation significant black-cockatoos for roosting, foraging or breeding. In addition, the habitat was assessed for its potential to support other local native fauna and any other fauna of conservation significance.

#### 2. Methods

A Level 1 vertebrate fauna survey with a targeted Carnaby's Black-Cockatoo habitat survey was undertaken. The survey was conducted with reference to the following documents:

- Statement of environmental principles, factors and objectives (Environmental Protection Authority (EPA) 2016a)
- Environmental factor guideline terrestrial fauna (EPA 2016b)
- Technical guidance terrestrial fauna surveys (EPA 2016c)
- Technical Guide: terrestrial vertebrate fauna surveys for environmental impact assessment (EPA and DEC 2010)
- EPBC Act Referral Guidelines for three threatened black cockatoos: Carnaby's Cockatoo, Baudin's Cockatoo and Forest Red-tailed Black-Cockatoo (DSEWPaC 2012).

The fauna survey included a search of available literature and databases (a desk-top study), and a brief site visit. The data collected in the field serve to put the desk-top study into context, as well as allowing for the identification of fauna habitats and likely fauna assemblages of the site.

#### 2.1 Literature review

Publications that provide information on general patterns of distribution of frogs (Tyler *et al.* 2000), reptiles (Storr *et al.* 1983, 1990, 1999 and 2002), birds (Barrett *et al.* 2003; Johnstone and Storr 1998 and 2004) and mammals (Churchill 1998, Menkhorst and Knight 2011; Van Dyck and Strahan 2008), in order to determine the conservation significant fauna likely to occur in the study area.

The following databases were also searched:

- NatureMap (DBCA 2007-) a search area 5km in radius around a point centered on the study area.
- DBCA's Threatened and Priority Fauna Database a search area 1km in radius around a point centered on the study area.
- EPBC Act Protected Matters Search Tool a search area 1km in radius around a point centered on the study area.

The likelihood of these species occurring was determined on the basis of the habitats present, as investigated during the site visit.

#### 2.2 Site visit

The study area was visited on the 10<sup>th</sup> October 2018, by Ms Jennifer Wilcox of Western Wildlife. The entire study area was walked and notes were made on the habitats present and their likelihood of supporting native amphibians, reptiles, birds and mammals. All vertebrate fauna encountered were recorded. As black-cockatoos are significant species in the area, the study area was also assessed for the potential to support one or more of the following species:

- Forest Red-tailed Black-Cockatoo (Calyptorhynchus banksii naso)
- Carnaby's Black-Cockatoo (Calyptorhynchus latirostris)
- Baudin's Black-Cockatoo (Calyptorhynchus baudinii)

The study area was examined for the presence of vegetation types or plant species known to constitute black-cockatoo foraging habitat and any evidence of foraging such as chewed fruits or flowers.

The diameter at breast height (DBH) was recorded for all *Eucalyptus* and *Corymbia* tree species that had a DBH  $\geq$  50cm. Trees with a DBH  $\geq$  50cm are considered to have a high potential to have or develop hollows and support the breeding of black-cockatoos in the long term (DSEWPaC 2012). Trees were also examined from the ground for the presence of existing hollows. Hollows were classified as 'large' if they had some potential to support black-cockatoo breeding and 'small' if considered too small for black-cockatoos, but of potential use by other bird species such as parrots and pardalotes, or by other fauna including reptiles and bats. All trees identified were recorded with a GPS location. Any evidence of hollow use (e.g. chewing around the entrance of the hollow) was also recorded.

#### 2.3 Assessment of conservation significance

Fauna were considered to be of conservation significance if they are:

- Listed under *The Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as 'Matters of National Environmental Significance' (MNES). MNES include threatened species (further subdivided into critically endangered, endangered and vulnerable), threatened ecological communities and migratory species.
- Listed under The Western Australian Wildlife Conservation Act 1950 (WC Act), as per the following Schedules:
  - Schedule 1 (S1): Fauna that is rare or likely to become extinct (critically endangered fauna)
  - o Schedule 2 (S2): Fauna that is rare or likely to become extinct (endangered fauna)
  - o Schedule 3 (S3): Fauna that is rare or likely to become extinct (vulnerable fauna)
  - Schedule 4 (S4): Fauna presumed to be extinct
  - Schedule 5 (S5): Migratory birds protected under an international agreement
  - **Schedule 6 (S6):** Fauna that is of special conservation need (conservation dependent fauna)
  - Schedule 7 (S7): Other specially protected fauna
- Listed as a Priority species by the Department of Biodiversity, Conservation and Attractions (DBCA), according to the following:
  - **Priority 1 (P1):** Poorly known species (on threatened lands)
  - **Priority 2 (P2):** Poorly known species in few locations (some on conservation lands)
  - Priority 3 (P3): Poorly known species in several locations (some on conservation lands)
  - Priority 4 (P4): Rare, near threatened and other species in need of monitoring

# 3. Results and discussion

### 3.1 Fauna habitats

The majority of the site consists of cleared lands and planted trees, including non-endemic Australian eucalypts (Plate 1). Remnant native vegetation is restricted to the creek margins, northern portion of the study area and scattered trees (Figure 1).

The creek was flowing at the time of survey, and runs across the southern part of the study area. While some of the creek is densely vegetated, apart from scattered native trees, most of the vegetation is exotic (Plate 2). Parts of the creek are relatively un-vegetated, though there are stands of remnant/regrowth Marri near the southern boundary.

The parkland cleared forest areas have a canopy of Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) trees over a midstory of scattered Forest Sheoak (*Allocasuarina fraserinana*) and occasional Banksia (*Banksia attenuata*) (Plate 3). The native understory is almost entirely absent, except for tiny pockets on the northern boundary, too small to be separately mapped. The remaining understory consists mainly of weedy grasses (Plate 4), or has been mulched/mown short. In addition, a few patches of remnant or regrowth native trees, mainly Marri, are scattered across the property. Some of the younger trees have likely grown since the property was bought circa 40 years ago.

While overall the habitats are in a degraded condition, the native tree canopy is still likely to support some native fauna, and even a weedy understory is likely to support some species.



Plate 1. Cleared areas, some with planted trees.



Plate 2. Creek.



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Plate 3. Parkland-cleared native forest with no understory.



Plate 4. Parkland-cleared native forest with weedy understory.

## 3.2 Native fauna assemblages

The results of the NatureMap, DBCA Threatened and Priority Fauna Database and EPBC Protected Matters Search Tool searches are given in Appendices 1 - 3. These provide a general guide to the fauna recorded in the vicinity of the study area. Be aware that the lists may be incomplete, as although they may be present, a species may not be represented by a record within the search area, and conversely, not all the species listed are likely to occur, as the habitat of the study area may be unsuitable.

Two frog, two reptile, one mammal and 27 bird species were observed opportunistically during the site visit (Table 1). It is likely that more species use the study area than observed during the brief site visit. However, as most of the site is highly modified, it is not likely to support the abundance or richness of species that may occur in a similar-sized area of pristine native vegetation.

The native fauna that are likely to use the study area are a subset of those that occur in the native forests in the local area, and dominated by species that tolerate disturbance and/or use garden habitats.

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#### Table 1. Fauna observed during the site visit.

Key to status: Cr = Critically Endangered, En = Endangered, Vu = Vulnerable, S1 - S7 = Schedule 1 - 7, P1 - P4 = Priority 1 - 4.

Species		Status	Notes
FROGS			
Clicking Frog	Crinia glauerti		
Slender Tree Frog	Litoria adelaidensis		
REPTILES		•	
Fence Skink	Cryptoblepharus buchananii		
Tree Monitor	Varanus tristis		
BIRDS			
Australian Magpie	Cracticus tibicen		
Australian Raven	Corvus coronoides		
Australian Wood Duck	Chenonetta jubata		Adults and young foraging on lawns
Brown Honeyeater	Lichmera indistincta		
Common Bronzewing	Phaps chalcoptera		
Forest Red-tailed Black-cockatoo			3 x birds and foraging signs observed.
Baudin's Black-cockatoo	Calyptorhynchus baudinii	En, S2	Foraging signs observed
Galah	Cacatua roseicapilla		
Grey Butcherbird	Cracticus torquatus		
Grey Fantail	Rhipidura albiscapa		
Laughing Kookaburra	Dacelo noveaguineae		Introduced species
Magpie-lark	Grallina cyanoleuca		
Mistletoebird	Dicaeum hirundinaceum		
Pacific Black Duck	Anas superciliosus		
Rainbow Lorikeet	Trichoglossus moluccanus		Introduced species
Red-capped Parrot	Purpureicephalus spurius		
Red Wattlebird	Anthochaera carunculata		
Rufous Whistler	Pchycephala rufiventris		
Sacred Kingfisher	Todiramphus sanctus		
Shining Bronze-cuckoo Chrysococcyx lucidus			
Silvereye Zosterops lateralis			
Singing Honeyeater Gavicallis virescens			
Striated Pardalote	Pardalotus striatus		
Weebill	Smicrornis brevirostris		
Western Gerygone	Gerygone fusca		
Willie Wagtail Rhipidura leucophrys			
Yellow-rumped Thornbill Acanthiza chrysorrhoea			
MAMMALS			
Quenda / Southern Brown Bandicoot	lsoodon obesulus	P4	

The creek provides breeding habitat for native frogs and a small number of common waterbird species. The fringing vegetation, even where dominated by exotic plants, is likely to support some terrestrial birds and a few generalist reptile species. The Quenda (*Isoodon obesulus*) was observed in a patch of weeds along the creek. Foraging signs of this native mammal were also noted in weedy areas on the eastern boundary of the property (Figure 1). The creek is also likely to provide a local ecological linkage through the study area.

Remnant native vegetation, even single trees, may be used by native fauna. The cleared areas may be used by a small suite of native fauna, such as birds that forage on open grassed areas. Planted trees are also likely to provide foraging, nesting and/or roosting sites for a small number of species.

The study area is likely to support relatively few reptiles, though reptiles generally persist even in small areas of native vegetation. Species such as the Barking Gecko (*Underwoodisaurus milii*) occur on the ground, sheltering among debris. Other geckoes, such as the Marbled Gecko (*Christinus marmoratus*) occur on trees, hiding in crevices or under bark, as well as in sheds and houses. A suite of small to moderate-sized skinks are likely to occur, including the common ground-dwelling species such as *Lerista distinguenda*, *Hemiergis initialis*, *Morethia obscura* and *Ctenotus fallens*, that often shelter in leaf litter, though these are likely to be restricted to very small areas on the site boundaries and along the creek. The Bobtail (*Tiliqua rugosa*) and one species of dragon, the Bearded Dragon (Pogona minor) are likely to occur, and this species often basks in shrubs or on fence-posts. The Dugite (*Psuedonaja affinis*) and other snakes may occur, as these species are relatively mobile and can move between properties. Two goannas, the Black-tailed Tree Monitor (*Varanus tristis*) and Gould's Sand Goanna (*Varanus gouldii*) are likely to occur, the former species observed in the study area during the site visit.

The study area is likely to support a range of native birds, and the bird assemblage is likely to vary with the time of year. Some species such as cuckoos and the Rainbow Bee-eater (*Merops ornatus*) are migratory, only occurring in the Perth region for part of the year. Other species also make seasonal movements, including the Western Spinebill (*Acanthorhynchus superciliosus*), Grey Fantail (*Rhipidura albiscapa*) and Spotted Pardalote (*Pardalotus punctata*). Honeyeaters are likely to be common, moving into the area to take advantage of seasonal flowering resources. Tree hollows provide nesting habitat for a range of species, including the Galah (*Cacatua roseicapilla*), Australian Ringneck (*Platycercus zonarius*) and Red-capped Parrot (*Platycercus purpuricephalus*). Small hollows provide nesting habitat for pardalotes, and larger hollows, (of which only one was observed during the site visit), may be used by owls and possibly black-cockatoos. Birds of prey are likely to forage in the study area, though as part of a much larger home-range likely encompassing several surrounding properties. Small insectivorous birds such as the Splendid Fairy-wren (*Malurus splendens*) are likely to be uncommon as the study area generally lacks understory vegetation.

Many native mammals are likely to be locally extinct, and the modified habitats of the study area are only likely to provide habitat for a few species. As mentioned above, the Quenda (*Isoodon obesulus*) was observed in the study area and this species is likely to occur anywhere there is dense understory vegetation, including in gardens. The Quenda is listed as Priority 4 by DBCA. Several species of native insectivorous bats are likely to forage in in the study area, and some may roost in tree hollows or large crevices. The Common Brushtail Possum (*Trichosurus vulpecula*) also roosts in tree hollows, and though no possum scats were observed during the site visit, this species is common in the Perth hills. Although other native mammal species may occur on occasion, the study area is unlikely to provide significant habitat.

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## 3.3 Conservation Significant Fauna

Conservation significant species known from the region include:

- Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) Endangered (EBPC Act), S2 (WC Act)
- Baudin's Black-Cockatoo (Calyptorhynchus baudinii) Endangered (EBPC Act), S2 (WC Act)
- Forest Red-tailed Black-Cockatoo (Calyptorhynchus banksii naso) Vulnerable (EBPC Act), S3 (WC Act)
- Malleefowl (Leipoa ocellata) Vulnerable (EBPC Act), S3 (WC Act)
- Woylie (Bettongia lesueur) Endangered (EPBC Act), S1 (WC Act)
- Western Ringtail Possum (Pseudocheirus occidentalis) Vulnerable (EBPC Act), S1 (WC Act)
- Quokka (Setonix brachyurus) Vulnerable (EBPC Act), S3 (WC Act)
- Chuditch (Dasyurus geoffroii) Vulnerable (EPBC Act), S3 (WC Act)
- Brush-tailed Phascogale (Phascogale tapoatafa) S6 (WC Act)
- Peregrine Falcon (Falco peregrinus) S7 (WC Act)
- Common Sandpiper (Actitis hypoleucos) Migratory (EPBC Act), S5 (WC Act)
- Sharp-tailed Sandpiper (Calidris acuminata) Migratory (EPBC Act), S5 (WC Act)
- Pectoral Sandpiper (Calidris melanotos) Migratory (EPBC Act), S5 (WC Act)
- **Curlew Sandpiper** (*Calidris ferruginea*) Critically Endangered/Migratory (EPBC Act), S3/S5 (WC Act)
- Wood Sandpiper (*Tringa glareola*) Migratory (EPBC Act), S5 (WC Act)
- Common Greenshank (*Tringa nebularia*) Migratory (EPBC Act), S5 (WC Act)
- Marsh Sandpiper (Tringa stagnatilis) Migratory (EPBC Act), S5 (WC Act)
- Eastern Curlew (Numenious madagascariensis) Critically Endangered/Migratory (EPBC Act), S3/S5 (WC Act)
- Australian Painted Snipe (*Rostratula australis*) Endangered (EPBC Act), S2 (WC Act)
- Grey Wagtail (*Motacilla cinerea*) Migratory (EPBC Act), S5 (WC Act)
- Fork-tailed Swift (Apus pacificus) Migratory (EPBC Act), S5 (WC Act)
- Osprey (Pandion cristatus) Migratory (EPBC Act), S5 (WC Act)
- Western Brush Wallaby (Notamacropus irma) DBCA P4
- Southern Death Adder (Acanthophis antarcticus) DBCA P3
- Black-striped Snake (Neelaps calonotos) DBCA P3
- Blue-billed Duck (Oxyura australis) DBCA P4
- Water-rat (Hydromys chrysogaster) DBCA P4
- Quenda (Isoodon fusciventer) DBCA P4

Of these, the Woylie, Quokka, Western Ringtail Possum and Malleefowl are locally extinct and the Brush-tailed Phascogale is unlikely to occur outside of forested areas. The Chuditch is known to occur in more forested parts of the Perth Hills, but is unlikely to occur in the study area except perhaps as an occasional dispersing individual.

Although it may occur in the area, the Peregrine Falcon is only likely to forage in the study area as part of a much larger foraging range, so the study area is unlikely to have particular importance to this species.

The Common Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Curlew Sandpiper, Wood Sandpiper, Common Greenshank, Marsh Sandpiper, Eastern Curlew and Australian Painted Snipe are all migratory shorebirds and the study area has no suitable habitat for these species. The Grey Wagtail is a vagrant to the south-west and also unlikely to occur. Only coastal habitats and larger rivers are likely to support the Osprey. The Fork-tailed Swift is an aerial migratory species and is only likely to overfly the study area, not use any of the habitats present.

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The Western Brush Wallaby is likely to be excluded from this property due to the fencing, and is generally uncommon outside of large tracts of native vegetation. Though known from the region, the Southern Death Adder and Black-striped Snake are unlikely to occur due to the lack of understory vegetation. The Blue-billed Duck generally favours deep waters and is not likely to occur, even as an occasional visitor to the creek. The Water-rat occurs in areas of permanent water, generally only persisting on larger rivers and wetlands, and is unlikely to occur along the creek in the study area.

The only vertebrate fauna of conservation significance likely to occur on a regular basis are the three species of black-cockatoo and the Quenda, as described in the following sections.

#### 3.3.1 Black-Cockatoos

Three species of black-cockatoo are known to occur in the vicinity of the study area; the Forest Red-tailed Black-Cockatoo, Baudin's Black-Cockatoo and Carnaby's Black-Cockatoo. Of these, the Forest Red-tailed Black-Cockatoo and Baudin's Black-Cockatoo were recorded in the study area (the latter from foraging signs) and Carnaby's Black-Cockatoo is likely to occur. The Forest Red-tailed Black-Cockatoo and Carnaby's Black-Cockatoo have both been recorded within 1km of the study area on the DBCA Threatened and Priority Fauna Database (Appendix 2).

The native trees in the study area are likely to be black-cockatoo foraging habitat, including the Jarrah, Marri, She-oak and Banksia. These trees are scattered across the study area, mostly around the property boundaries. Evidence of black-cockatoo foraging (chewed Marri fruits) was observed during the site visit (Figure 1, Plate 5).



Plate 5. Marri fruits chewed by Forest Red-tailed Black-Cockatoos.

Black-cockatoos are known to roost in pines and tall eucalypts, often near riparian environments (DSEWPaC 2012, Shah 2006, Burnham *et al.* 2010). The study area includes tall eucalypts and riparian environments. Although no evidence of roosting by black-cockatoos (e.g. feathers, scats) was recorded during the site visit, it must be remembered that Carnaby's Black-Cockatoo is a seasonal migrant rather than present in an area year-round. Birds may roost nearby when foraging in the area, then move on. If Carnaby's Black-cockatoo roosts in the study area, the most likely locations are in the eucalypts along the creek. The Forest Red-tailed Black-Cockatoo is known to roost nearby in Gavour Rd, with 150 birds recorded roosting in 2016 (Peck *et al.* 2016).

The study area is within the known breeding range of both the Forest Red-tailed Black-Cockatoo and Carnaby's Black-Cockatoo, as modelled by DSEWPaC (2012). Both species are known to breed in the Wungong Dam catchment, including localities such as Armadale, Bedfordale, Lesley, Karagullen and Victoria Dam (Johnstone *et al.* 2013), around 6 - 18km south of the study area. They also breed to the north at Mundaring (Johnstone *et al.* 2011). Baudin's Black-Cockatoo is unlikely to breed in the area, generally breeding only as far north as Serpentine (Johnstone and Kirkby 2008), though there are outlying records of breeding in the Wungong Catchment (Johnstone *et al.* 2011).

In the study area, Carnaby's Black-Cockatoo may potentially use Jarrah or Marri trees for breeding, and though they favour smooth-barked eucalypts, they may potentially use any suitably-sized hollow (Johnstone and Storr 1998, DSEWPaC 2012). The Forest Red-tailed Black-Cockatoo favour hollows in large, old Marri trees, but may also use Jarrah on occasion (Johnstone and Storr 1998, Johnstone *et al.* 2013). Overall, 31 Jarrah, Marri or Flooded Gum trees were identified that demonstrated a DBH  $\geq$  50cm, (Figure 1, Appendix 4, Plate 6). Only one of these trees (Jarrah) appeared to have at least one large existing hollow potentially suitable for black-cockatoos, though such hollows are not always visible from the ground. There were small hollows present in three trees. Overall, eleven trees had trunks that split low down (Plate 6), which results in the upper limbs being narrow and unlikely to currently support large hollows.



Plate 6. Hollow-bearing tree (left) and tree branching low on the trunk (right) in the study area.

The presence of trees with a DBH  $\geq$  50cm indicates that the study area is potential breeding habitat for both the Forest Red-tailed Black-Cockatoo and Carnaby's Black-Cockatoo. However, no evidence of breeding was found (e.g. chewed hollow entrances) and only a single large hollow was recorded. As the study area is mostly cleared, very few large trees are present compared with similar sized neighboring properties.

#### 3.3.2 Quenda

The Quenda is listed as Priority 4 by DBCA. This species is relatively common in the Perth hills, occurring where there is dense vegetation at ground level. This includes native understory in forests or woodlands, riparian vegetation along creeks and around wetlands, in densely planted gardens and dense areas of weeds including exotic grasses or blackberry. The Quenda was recorded in the study area during the site visit (Plate 7). Individual Quenda using the study area are likely to also use adjacent properties, and the creek with its associated vegetation, may be a conduit for movement.



Plate 7. Quenda digging.

# 4. Conclusions

Although the fauna habitats present lack a native understory and are generally degraded, they are still likely to support some species of native fauna. The creek is likely to provide a local ecological linkage across the southern part of the study area.

The only four conservation significant fauna likely to use the study area on a regular basis are:

- Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) Endangered (EBPC Act), S2 (WC Act)
- Baudin's Black-Cockatoo (Calyptorhynchus baudinii) Endangered (EBPC Act), S2 (WC Act)
- Forest Red-tailed Black-Cockatoo (Calyptorhynchus banksii naso) Vulnerable (EBPC Act), S3 (WC Act)
- Quenda (Isoodon fusciventer) DBCA P4

The study area represents a small area of foraging habitat for black-cockatoos and although potential breeding habitat is present, only one tree appeared to have a large hollow that may be suitably-sized for cockatoos. The Quenda is relatively common in the Perth Hills and is likely to occur throughout the local area, wherever there is dense vegetation at ground level.

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## Appendix 1. NatureMap search results.

#### **Search Results**

Method='By Circle'; Centre=116° 00' 58" E,32° 00' 25" S; Buffer=5km; Kingdom=Animalia; Core Datasets Only=Yes; Execution Time=22.1s; Group By=Species Group;

Species Group	Names	Records
Amphibian	10	103
Bird	161	13882
Fish	1	1
Invertebrate	66	143
Mammal	20	344
Reptile	45	253
TOTAL	303	14726
Amphibian		
Crinia georgiana Quacking Frog		13
Crinia glauerti Clicking Frog		22
Crinia insignifera Squelching Froglet		8
Crinia pseudinsignifera Bleating Froglet		13
Heleioporus barycragus Hooting Frog		6
Heleioporus eyrei Moaning Frog		28
Limnodynastes dorsalis Western Banjo Frog		2
Litoria adelaidensis Slender Tree Frog		2
Myobatrachus gouldii Turtle Frog		1
Pseudophryne guentheri Crawling Toadlet		8
10 names, 103 records		
Bird		
Acanthiza apicalis Broad-tailed Thornbill, Inland Thornbill		33
Acanthiza chrysorrhoa Yellow-rumped Thornbill		297
Acanthiza inornata Western Thornbill		37
Acanthorhynchus superciliosus Western Spinebill		89
Accipiter cirrocephalus Collared Sparrowhawk		12
Accipiter fasciatus Brown Goshawk		43
Accipiter fasciatus subsp. fasciatus Brown Goshawk		1
Acrocephalus australis Australian Reed Warbler		240
Actitis hypoleucos Common Sandpiper IA		2
Anas gracilis Grey Teal		372
Anas platyrhynchos Mallard		2
Anas rhynchotis Australasian Shoveler		62
Anas superciliosa Pacific Black Duck		508
Anhinga melanogaster Darter (name not current)		1
Anhinga novaehollandiae Australasian Darter		26
Anser anser		1
Anthochaera carunculata Red Wattlebird		291
Anthochaera lunulata Western Little Wattlebird		17
Aquila audax Wedge-tailed Eagle		10
Ardea alba subsp. modesta Eastern Great Egret (name not current	.)	1
Ardea modesta great egret, white egret		51
Ardea novaehollandiae White-faced Heron		3
Ardea pacifica White-necked Heron		6
Artamus cinereus Black-faced Woodswallow		11
Artamus cyanopterus Dusky Woodswallow		15
Aythya australis Hardhead		67
Barnardius zonarius		119
Biziura lobata Musk Duck		28
Cacatua galerita Sulphur-crested Cockatoo		1
Cacatua pastinator Western Long-billed Corella		
Cacatua roseicapilla Galah		1
Cacatua sanguinea Little Corella		
*Cacatua tenuirostris Eastern Long-billed Corella Cacomantis flabelliformis Fan-tailed Cuckoo		1 25
		25
Cacomantis pallidus Pallid Cuckoo		23

Calyptorhynchus banksii Red-tailed Black-Cockatoo	236
Calyptorhynchus banksii subsp. naso Forest Red-tailed Black Cockatoo T	20
Calyptorhynchus baudinii Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo T	17
Calyptorhynchus latirostris Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo T	498
Calyptorhynchus sp. white-tailed black cockatoo T	9
Calyptorhynchus sp. 'white-tailed black cockatoo' (name not current)	1
Chenonetta jubata Australian Wood Duck, Wood Duck	107
Chroicocephalus novaehollandiae	3
Cincloramphus cruralis Brown Songlark (name not current)	1
Circus approximans Swamp Harrier	9
Colluricincla harmonica Grey Shrike-thrush	40
*Columba livia Domestic Pigeon	36
Coracina novaehollandiae Black-faced Cuckoo-shrike	271
Corvus bennetti Little Crow	1
Corvus coronoides Australian Raven	331
Cracticus nigrogularis Pied Butcherbird	2
Cracticus tibicen Australian Magpie	263
Cracticus tibicen subsp. dorsalis White-backed Magpie	1
Cracticus torquatus Grey Butcherbird	129
Cygnus atratus Black Swan	69
*Dacelo novaeguineae Laughing Kookaburra	153
Daphoenositta chrysoptera Varied Sittella	16
Dicaeum hirundinaceum Mistletoebird	108
Egretta garzetta	100
Egretta novaehollandiae	37
Egretta sacra Eastern Reef Egret, Eastern Reef Heron (name not current)	1
Elanus axillaris	14
Elseyornis melanops Black-fronted Dotterel	137
Eolophus roseicapillus	78
Eopsaltria georgiana White-breasted Robin	8
Erythrogonys cinctus Red-kneed Dotterel	2
Falco berigora Brown Falcon	2
Falco cenchroides Australian Kestrel, Nankeen Kestrel	10
Falco longipennis Australian Hobby	14
Falco peregrinus Peregrine Falcon S	1
Fulica atra Eurasian Coot	425
Fulica atra subsp. australis Eurasian Coot	4
Gallinula tenebrosa Dusky Moorhen	380
Gallinula tenebrosa subsp. tenebrosa Dusky Moorhen	3
Gallirallus philippensis Buff-banded Rail	34
Gallus gallus	1
Gerygone fusca Western Gerygone	283
Glossopsitta porphyrocephala Purple-crowned Lorikeet (name not current)	1
Glyciphila melanops Tawny-crowned Honeyeater	7
Grallina cyanoleuca Magpie-lark	277
Haliastur sphenurus Whistling Kite	3
Hieraaetus morphnoides Little Eagle	16
Himantopus himantopus Black-winged Stilt	120
Hirundo neoxena Welcome Swallow	100
Hirundo nigricans Tree Martin (name not current)	1
Lichenostomus ornatus Yellow-plumed Honeyeater (name not current)	6
Lichenostomus virescens Singing Honeyeater (name not current)	492
Lichmera indistincta Brown Honeyeater	568
Lophoictinia isura	2
Malacorhynchus membranaceus Pink-eared Duck	12
Malurus elegans Red-winged Fairy-wren	14
Malurus splendens Splendid Fairy-wren	96
Manorina flavigula Yellow-throated Miner	1
Megalurus gramineus Little Grassbird	59
Melithreptus brevirostris Brown-headed Honeyeater	5
Merops ornatus Rainbow Bee-eater	122
Microcarbo melanoleucos	56
Microeca fascinans Jacky Winter	1
*Neochmia temporalis Red-browed Finch	6
Neophema elegans Elegant Parrot	2
Neophema petrophila Rock Parrot	1
Ninox connivens Barking Owl	2

Ninox novaeseelandiae Boobook Owl (name not current) Nycticorax caledonicus Rufous Night Heron	19 11
Ocyphaps lophotes Crested Pigeon	5
Oxyura australis Blue-billed Duck P4	2
Pachycephala pectoralis Golden Whistler (name not current)	22 428
Pachycephala rufiventris Rufous Whistler	428
Pardalotus punctatus Spotted Pardalote Pardalotus striatus Striated Pardalote	368
Pelecanus conspicillatus Australian Pelican	19
Petrochelidon ariel Fairy Martin	3
Petrochelidon nigricans Tree Martin	218
Petroica boodang Scarlet Robin	24
Petroica goodenovii Red-capped Robin	15
Petroica multicolor subsp. campbelli Scarlet Robin (name not current)	1
Phalacrocorax carbo Great Cormorant	23
Phalacrocorax melanoleucos Little Pied Cormorant	2
Phalacrocorax sulcirostris Little Black Cormorant	77
Phalacrocorax varius Pied Cormorant	2
Phaps chalcoptera Common Bronzewing	104
Phaps elegans Brush Bronzewing	2
Phylidonyris niger White-cheeked Honeyeater	132
Phylidonyris novaehollandiae New Holland Honeyeater	469
Platalea flavipes Yellow-billed Spoonbill	61
Platalea regia Royal Spoonbill	1
Platycercus icterotis Western Rosella	19
Platycercus zonarius Australian Ringneck, Ring-necked Parrot	1
Podargus strigoides Tawny Frogmouth	7
Poliocephalus poliocephalus Hoary-headed Grebe	10
Porphyrio porphyrio Purple Swamphen	215
Porphyrio porphyrio subsp. bellus Purple Swamphen	3
Porzana fluminea Australian Spotted Crake	1
Porzana tabuensis Spotless Crake	11
Purpureicephalus spurius	75
Rhipidura albiscapa Grey Fantail	185
Rhipidura fuliginosa subsp. preissi Grey Fantail (name not current)	1
Rhipidura leucophrys Willie Wagtail	426
Sericornis frontalis White-browed Scrubwren	95
Smicrornis brevirostris Weebill	117
Stagonopleura oculata Red-eared Firetail	26
Stictonetta naevosa Freckled Duck	1
Stipiturus malachurus Southern Emu-wren	6
*Streptopelia chinensis Spotted Turtle-Dove	376
*Streptopelia senegalensis Laughing Turtle-Dove	308
Tachybaptus novaehollandiae Australasian Grebe, Black-throated Grebe	237
Tachybaptus novaehollandiae subsp. novaehollandiae Australasian Grebe, Black-throated Grebe	2
Tadorna tadornoides Australian Shelduck, Mountain Duck	259
Threskiornis molucca Australian White Ibis (name not current)	259
Threskiornis spinicollis Straw-necked Ibis	26
Todiramphus sanctus Sacred Kingfisher	20 95
Todiramphus sanctus subsp. sanctus Sacred Kingfisher	2
Tribonyx ventralis Black-tailed Native-hen	1
Trichoglossus haematodus Rainbow Lorikeet	407
Tringa glareola Wood Sandpiper IA	1
Tringa nebularia Common Greenshank, greenshank IA	5
Tringa stagnatalis Marsh Sandpiper (name not current) IA	1
Turnix varius Painted Button-quail	4
Tyto alba subsp. delicatula Barn Owl	1
Zosterops lateralis Grey-breasted White-eye, Silvereye	509
Zosterops lateralis subsp. gouldi Grey-breasted White-eye (name not current)	1
161 names, 13882 records	

#### Fish

Galaxias occidentalis Western Minnow

1 names, 1 records

Mammal	
Bettongia penicillata subsp. ogilbyi Woylie, Brush-tailed Bettong T	1
Chalinolobus gouldii Gould's Wattled Bat	11
Dasyurus geoffroii Chuditch, Western Quoll T	5
*Felis catus Cat	1
*Funambulus pennanti Indian Palm Squirrel	1 5
Hydromys chrysogaster Water-rat, Rakali P4 Isoodon fusciventer Quenda, southwestern brown bandicoot P4	179
Isoodon obesulus Southern Brown Bandicoot (name not current) P4	89
Isoodon obesulus subsp. fusciventer Quenda, Southern Brown Bandicoot (name not current) P4	
Macropus fuliginosus Western Grey Kangaroo	1
Macropus irma Western Brush Wallaby (name not current) P4	2
*Mus musculus House Mouse	1
Notamacropus irma Western Brush Wallaby P4	1
Nyctophilus geoffroyi Lesser Long-eared Bat	3
Phascogale tapoatafa subsp. tapoatafa Southern Brush-tailed Phascogale, Wambenger (name	2
not current) S	_
Phascogale tapoatafa subsp. wambenger South-western Brush-tailed Phascogale,	3
Wambenger <mark>S</mark> *Rattus rattus Black Rat	4
Scotorepens balstoni Inland Broad-nosed Bat	1
Tarsipes rostratus Honey Possum, Noolbenger	4
Vespadelus regulus Southern Forest Bat	5
20 names, 344 records	•
Reptile	
Acanthophis antarcticus Southern Death Adder P3	2
Acritoscincus trilineatus Western Three-lined Skink	3
Antaresia stimsoni subsp. stimsoni Stimson's Python	1
Aprasia repens Sand-plain Worm-lizard	8
Brachyurophis semifasciatus Southern Shovel-nosed Snake	9
Chelodina colliei South-western Snake-necked Turtle	2
Chelodina oblonga South-western Snake-necked Turtle (name not current)	1
Christinus marmoratus Marbled Gecko	3
Cryptoblepharus buchananii	6
Ctenophorus ornatus Ornate Crevice-Dragon Ctenotus australis	25 1
Ctenotus fallens	2
Delma fraseri Fraser's Legless Lizard	1
Delma gravii	3
Demansia psammophis subsp. reticulata Yellow-faced Whipsnake	1
Diplodactylus polyophthalmus	3
Egernia kingii King's Skink	1
Gehyra variegata	11
Hemiergis initialis subsp. initialis	3
Hemiergis quadrilineata	1
Heteronotia binoei Bynoe's Gecko	1
Lerista distinguenda Lerista elegans	2 4
Lialis burtonis	19
Menetia greyii	13
Morelia spilota subsp. imbricata Carpet Python	1
Neelaps bimaculatus Black-naped Snake	1
Neelaps calonotos Black-striped Snake, black-striped burrowing snake P3	6
Notechis scutatus Tiger Snake	3
Parasuta gouldii	7
Pletholax gracilis subsp. gracilis Keeled Legless Lizard	1
Pogona minor subsp. minor Dwarf Bearded Dragon	11
Pseudechis australis Mulga Snake	1
Pseudonaja affinis subsp. affinis Dugite	41
Ramphotyphlops australis (name not current)	7
Ramphotyphlops waitii (name not current) Strophurus spinigerus subsp. inornatus	6
Strophurus spinigerus subsp. spinigerus	2
Tiliqua rugosa	1
Tiliqua rugosa subsp. aspera	5

Tiliqua rugosa subsp. rugosa	19
Underwoodisaurus milii Barking Gecko	2
Varanus gouldii Bungarra or Sand Monitor	10
Varanus rosenbergi Heath Monitor	1
Varanus tristis Racehorse Monitor	1
45 names, 253 records	

#### Conservation Status

T - Rare or likely to become extinct

X - Presumed extinct

X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

# Appendix 2. DBCA Threatened and Priority Fauna Database search results.

CERTAINTY	METHOD	ТҮРЕ	COUNT	LOCALITY	SITE	YEAR
Calyptorhynch	us banksii naso - forest red-	tailed black cockatoo	- Vulneral	ole		
				WATTLE	back of 171 Crystal	
Certain	Opportunistic sighting	Day sighting	18	GROVE	Brook Rd	2009
				WATTLE	32 Judith Rd - back	
Certain	Opportunistic sighting	Day sighting	14	GROVE	boundary fence	2009
				WATTLE	back of 115 Crystal	
Certain	Opportunistic sighting	Day sighting	30	GROVE	Brook Rd property	2010
				WATTLE	15 Gavour Rd,	
Certain	Opportunistic sighting	Day sighting	10	GROVE	Wattlegrove	2010
Moderately				WATTLE		
Certain	Community survey	Dusk sighting	150	GROVE	KALWATR002	2016
					35 Gavour Rd back	
Moderately				WATTLE	garden. Site Code:	
Certain	Community survey	Sighting	31	GROVE	KALWATR002	2017
Calyptorhynch	us latirostris - Carnaby's Bla	ck-cockatoo - Endang	gered			
				WATTLE		
Certain	Survey	Day sighting	1	GROVE	Wattle Grove	2010
				WATTLE		
Very Certain	Targeted survey	Remote sensing	1	GROVE	16 Johnson Pl	2013
				WATTLE	Flying to S of	
Very Certain	Targeted Survey	Remote sensing	48	GROVE	Welshpool Rd	2013
Very Certain	Targeted Survey	Remote sensing	48	WATTLE GROVE		2013
Moderately		-			Lesmurdie mistletoe	
Certain	Observational	Sighting	1	FORRESTFIELD	site	2010
Calvptorhvnch	us sp. 'white-tailed black co	ckatoo' - Endangered	ł			
				WATTLE	110 Crystal Brook	
Certain	Opportunistic sighting	Day sighting	20	GROVE	Rd/corner Emanuel Ct	2010
Isoodon fusciv	enter - guenda, southweste	rn brown bandicoot	- Priority A	•	•	
ISOOUOII TUSCIV	enter - quenda, southweste			WATTLE	Wandilla Plant	1
Certain	Community survey	Day sighting	1	GROVE	Nurseries	2012
					Valcan Road near	
Moderately				WATTLE	Crystal Brook Road,	
, Certain	Community survey	Day sighting	1	GROVE	Orange Grove	2012
				WATTLE	100 Crystal Brook	
Certain	Community survey	Day sighting	3	GROVE	Road, Wattle Grove	2012
Moderately				WATTLE	5 Judith Rd, Wattle	
, Certain	Community survey	Day sighting	2	GROVE	Grove	2012
Moderately				WATTLE	110 Crystal Brook Rd,	
Certain	Community survey	Night sighting	4	GROVE	Wattle Grove	2012
Moderately				WATTLE	100 Crystal Brook	
Certain	Community survey	Day sighting	3	GROVE	Road	2013
Moderately				WATTLE	100 Crystal Brook	
Certain	Community survey	Day sighting	3	GROVE	Road	2014
					Intersection of Crystal	
Moderately				WATTLE	Brook Rd and Gavour	
Certain	Opportunistic sighting	Dead	1	GROVE	St, Wattle Grove	2004

## Appendix 3. EPBC Act Protected Matters Search Tool search results.



# **EPBC Act Protected Matters Report**

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 19/11/18 14:57:58

Summary Details Matters of NES Other Matters Protected by the EPBC Act Extra Information Caveat Acknowledgements



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates Buffer: 1.0Km



#### Summary

#### Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	31
Listed Migratory Species:	9

#### Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

#### Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	1
Invasive Species:	35
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

## Details

Matters of National Environmental Significance

y and other sources. When vegetation maps and point	
Status	Type of Presence
Endangered	Community likely to occur within area
	[Resource Information]
Status	Type of Presence
Critically Endangered	Species or species habitat may occur within area
Vulnerable	Species or species habitat known to occur within area
Endangered	Roosting known to occur within area
Endangered	Species or species habitat known to occur within area
Vulnerable	Species or species habitat likely to occur within area
Critically Endangered	Species or species habitat may occur within area
Endangered	Species or species habitat may occur within area
Vulnerable	Species or species habitat likely to occur within area
Critically Endangered	Species or species habitat may occur within area
Vulnerable	Species or species habitat likely to occur within area
	Status Critically Endangered Vulnerable Endangered Critically Endangered Endangered Critically Endangered Vulnerable Critically Endangered

Name	Status	Type of Presence
Acacia anomala		
Grass Wattle, Chittering Grass Wattle [8153]	Vulnerable	Species or species habita may occur within area
Andersonia gracilis		
Slender Andersonia [14470]	Endangered	Species or species habita may occur within area
Anthocercis gracilis		
Slender Tailflower [11103]	Vulnerable	Species or species habita likely to occur within area
Banksia mimica		
Summer Honeypot [82765]	Endangered	Species or species habita likely to occur within area
<u>Calytrix breviseta subsp. breviseta</u>		
Swamp Starflower [23879]	Endangered	Species or species habita may occur within area
Chamelaucium sp. Gingin (N.G.Marchant 6)		
Gingin Wax [88881]	Endangered	Species or species habita may occur within area
Conospermum undulatum		
Wavy-leaved Smokebush [24435]	Vulnerable	Species or species habita likely to occur within area
Darwinia apiculata		
Scarp Darwinia [8763]	Endangered	Species or species habita may occur within area
Diplolaena andrewsii		
[6601]	Endangered	Species or species habita may occur within area
Diuris micrantha		
Dwarf Bee-orchid [55082]	Vulnerable	Species or species habita may occur within area
Diuris purdiei		
Purdie's Donkey-orchid [12950]	Endangered	Species or species habita likely to occur within area
Drakaea elastica		
Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habita may occur within area
Eleocharis keigheryi		
Keighery's Eleocharis [64893]	Vulnerable	Species or species habita likely to occur within area
Eremophila glabra subsp. chlorella		
[84927]	Endangered	Species or species habita likely to occur within area
Eucalyptus x balanites		
Cadda Road Mallee, Cadda Mallee [87816]	Endangered	Species or species habita may occur within area
<u>Grevillea curviloba subsp. incurva</u>		
Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habita may occur within area
Grevillea thelemanniana		
Spider Net Grevillea [32835]	Critically Endangered	Species or species habita may occur within area
Lasiopetalum pterocarpum		
Wing-fruited Lasiopetalum [64922]	Endangered	Species or species habita may occur within area

Critically Endangered	
Critically Endangered	
Sincary Endangered	Species or species habitat likely to occur within area
Endangered	Species or species habitat may occur within area
Endangered	Species or species habitat known to occur within area
	[Resource Information]
n the EPBC Act - Threatene	d Species list.
Threatened	Type of Presence
	Species or species habitat likely to occur within area
	Species or species habitat may occur within area
	0
	Species or species habitat may occur within area
	Species or species habitat may occur within area
Critically Endangered	Species or species habitat may occur within area
	Species or species habitat may occur within area
Critically Endangered	Species or species habitat may occur within area
	Species or species habitat may occur within area
	Species or species habitat likely to occur within area
	Endangered n the EPBC Act - Threatene Threatened

Listed Marine Species		[Resource Information
* Species is listed under a different scienti	fic name on the EPBC Act - Threa	atened Species list.
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area

Western Wildlife City of Kalamunda

Jame	Threatened	Type of Presence
Apus pacificus		
Fork-tailed Swift [678]		Species or species habita likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habita likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habita may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habita may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habita may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habita may occur within area
Haliaeetus leucogaster		
Vhite-bellied Sea-Eagle [943]		Species or species habita likely to occur within area
Aerops ornatus		
Rainbow Bee-eater [670]		Species or species habita may occur within area
Aotacilla cinerea		
Grey Wagtail [642]		Species or species habita may occur within area
Jumenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habita may occur within area
Pandion haliaetus		
Osprey [952]		Species or species habita may occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habita may occur within area
ringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habita

Extra Information	
Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been include	ed.
Name	State
South West WA RFA	Western Australia

Invasive Species		[Resource Information
Weeds reported here are the 20 species of national si that are considered by the States and Territories to po following feral animals are reported: Goat, Red Fox, C Landscape Health Project, National Land and Water F	ose a particularly sig Cat, Rabbit, Pig, Wa	, along with other introduced plants gnificant threat to biodiversity. The ter Buffalo and Cane Toad. Maps fror
Name Birds	Status	Type of Presence
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat
		likely to occur within area
Passer domesticus		5 . The second strangers
House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus		
Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis		
Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis		
Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Mammals		
Bos taurus		
Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris		
Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Folio estus		
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer		Charles of section habits
Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Funambulus pennantii		
Northern Palm Squirrel, Five-striped Palm Squirrel [129]		Species or species habitat likely to occur within area
Mus musculus		
House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Rattus rattus		Oraciae er ereziee hebite
Black Rat, Ship Rat [84]		Species or species habita likely to occur within area
		likely to occur within area
Sus scrofa		
Pig [6]		Species or species habita
		likely to occur within area
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habita likely to occur within area
Plants		
Anredera cordifolia		
Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643] Asparagus asparagoides		Species or species habita likely to occur within area
Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's		Species or species habita
Smilax, Smilax Asparagus [22473]		likely to occur within area
Brachiaria mutica		
Para Grass [5879]		Species or species habitat
		may occur within area
Cenchrus ciliaris		
Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera		
Bitou Bush, Boneseed [18983]		Species or species habitat
		may occur within area
Chrysanthemoides monilifera subsp. monilifera		
Boneseed [16905]		Species or species habitat
		likely to occur within area
Genista linifolia		
Flax-leaved Broom, Mediterranean Broom, Flax Broor	n	Species or species habitat
[2800]		likely to occur within area
Genista monspessulana		
Montpellier Broom, Cape Broom, Canary Broom,		Species or species habitat
Common Broom, French Broom, Soft Broom [20126]		likely to occur within area
Genista sp. X Genista monspessulana		
Broom [67538]		Species or species habitat
		may occur within area
Lantana camara		
Lantana, Common Lantana, Kamara Lantana, Large-		Species or species habitat
leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage	J'r	likely to occur within area
[10892]		
Lycium ferocissimum		
African Boxthorn, Boxthorn [19235]		Species or species habitat
		likely to occur within area
Olea europaea		
Olive, Common Olive [9160]		Species or species habitat
		may occur within area
Pinus radiata		
Radiata Pine Monterey Pine, Insignis Pine, Wilding		Species or species habita
Pine [20780]		may occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat
an a		likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.	reichardtii	
Willows except Weeping Willow, Pussy Willow and		Species or species habita

Name	Status	Type of Presence
		within area
Salvinia molesta		
Salvinia, Giant Salvinia, Aquarium Water Weed [13665]	rmoss, Kariba	Species or species habitat likely to occur within area

## Appendix 4. Habitat tree records in the study area.

Waypoint	Easting	Northing	Tree species	DBH (cm)	Tree status	Hollows	Notes
G011	407249	6458092	Marri	70	Live	No visible hollows	
G021	407251	6458081	Marri	75	Live	No visible hollows	Trunk split low
G031	407263	6458071	Marri	65	Live	No visible hollows	Trunk split low
G041	407237	6458103	Flooded Gum	70	Live	No visible hollows	
G051	407242	6458100	Flooded Gum	80	Live	No visible hollows	
G061	407240	6458101	Flooded Gum Flooded	50	Live	No visible hollows	
G071	407242	6458112	Gum	90	Live	No visible hollows	
G091	407215	6458142	Flooded Gum	80	Live	No visible hollows	
G101	407075	6458260	Marri	55	Live	No visible hollows	Trunk split low
G111	406928	6458405	Marri	80	Live	No visible hollows	Trunk split low
G121	406833	6458513	Jarrah	85	Live	Potential large hollow & small hollows	Remnant tree (?). Feral Bees present
G131	406803	6458566	Jarrah	70	Burnt, resprouted from base	No visible hollows	
G141	406717	6458605	Marri	50	Live	No visible hollows	
G151	406728	6458623	Jarrah	55	Live	Small hollows	Remnant tree (?)
G161	406730	6458624	Jarrah	55	Live	Small hollows	Remnant tree (?)
G171	406865	6458616	Jarrah	50	Live	No visible hollows	
G181	407086	6458475	Marri	100	Live	No visible hollows	Remnant tree (?). Trunk split low
G191	407116	6458473	Marri	120	Live	No visible hollows	Remnant tree (?).
G201	407134	6458418	Marri	70	Live	No visible hollows	
G211	407149	6458392	Marri	75	Live	No visible hollows	
G221	407157	6458387	Marri	65	Live	No visible hollows	
G231	407179	6458312	Marri	55	Live	Small hollows	Trunk split low. Feral Bees present
G241	407166	6458316	Marri	55	Live	No visible hollows	Trunk split low
G251	407334	6458261	Marri	70	Live	No visible hollows	Trunk split low
G261	407376	6458195	Marri	50	Live	No visible hollows	
G271	407352	6458142	Marri	50	Live	No visible hollows	
G281	407284	6458132	Marri	120	Live	No visible hollows	Covered by Boston Ivy
G291	407261	6458190	Marri	70	Live	No visible hollows	Trunk split low
G301	407288	6458112	Marri	60	Live	No visible hollows	Covered by Boston Ivy
G311	407371	6458144	Marri	90	Live	No visible hollows	Trunk split low
G321	407176	6458150	Marri	65	Live	No visible hollows	Trunk split low



# Reconnaissance Survey of Flora and Vegetation Lot 500 Gavour Road Wattle Grove December 2018

Prepared for: Aquatic Solutions

Report Ref: WB894



Reconnaissance Survey – Lot 500 Gavour Road Wattle Grove

© Landcare Holdings Pty Ltd trading as Western Botanical 345 Princess Rd Mt Helena WA 6082 PO Box 169 Mt Helena WA 6082 T: 0407 193 637 E: info@westernbotanical.com.au

Report No: WB894

Client Name: Aquatic Solutions

Client Address: Not Supplied

Version	Prepared By	Approved for Issue	Issue Date
Final 1	Dr David Leach	Mr Geoff Cockerton	03/12/2018
Final 2	Dr David Leach	Dr David Leach	05/12/2018

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#### RECONNAISSANCE SURVEY – LOT 500 GAVOUR ROAD WATTLE GROVE

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# 1. Introduction

Aquatic Solutions engaged Western Botanical to undertake a Reconnaissance Level flora and vegetation survey of Lot 500 Gavour Road (the Project Area, Appendix 1), a 15.2 ha property in Wattle Grove. The flora survey was commissioned for the purpose of approvals as part of a commercial land development. A half-day survey was conducted on the 19<sup>th</sup> of October 2018 to map vegetation structure units and vegetation condition within the Project Area.

The Project Area lies primarily within the Swan Coastal Plain IBRA region (SWA2 subregion) with a small portion lying within the Jarrah IBRA region (JF1 subregion). The Project Area is wholly within the City of Kalamunda Local Government Area.

# 2. Methods

A desktop survey was conducted to detect previous records of conservation significant flora or vegetation communities within and near the Project Area. Database searches performed included:

- NatureMap search with 10 km radius
- DBCA's Threatened and Priority Flora databases with 7.5 km radius
- DBCA's Threatened and Priority Ecological Communities database with 5 km radius

A field survey was conducted in spring on the 19<sup>th</sup> of October 2018 by a single botanist with 10 years of botanical consulting experience within Western Australia and the Swan Coastal Plain. The entirety of the Project Area was traversed on foot to enable mapping of native vegetation units and to assess their condition using the Keighery Condition Scale (Appendix 2). As a reconnaissance survey, a species inventory and targeted search were beyond the survey's scope.

Flora voucher specimens were collected to confirm or determine the identity of key structural flora species. Identity of voucher specimens were finalised using the resources of the Western Australian Herbarium.

# 3. Results and Discussion

# 3.1. Desktop Survey

Searches of DBCA's Threatened and Priority Flora databases (reference 89-1018FL) and NatureMap produced a list of 98 taxa of conservation significance within 7.5 to 10 km of the Project Area (Appendix 3). This number of conservation significant flora is not unusual for metropolitan areas of the Swan Coastal Plain IBRA region.



No pre-existing records of conservation significant flora were found within the Project Area.

Pre-existing records for *Conospermum undulatum* (T), *Isopogon drummondii* (P3), and *Lasiopetalum glutinosum* subsp. *glutinosum* (P3) occur within 120 m of the Project Area's northern boundaries.

A search of DBCA's Threatened and Priority Ecological Communities database (DBCA Ref: 38-01118EC) found 12 records of TEC/PEC communities that cover a portion of the Project Area (Appendix 4). These records consist of:

- One polygon of '*SCP20a, Banksia attenuata woodland over species rich dense shrublands*', a Threatened Ecological Community (TEC) endorsed by the Western Australian Minister for Environment.
- Eleven polygons of 'Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region', which is a;
  - i) Priority 3 Ecological Community (PEC) endorsed by the Western Australian Minister of Environment, and
  - ii) Threatened Ecological Community (TEC) of national significance under the Environment Protection and Biodiversity Conservation Act 1999.

For nine of the detected 12 TEC/PEC community records, only the buffer portions overlie the Project Area, indicating those records do not originate from the Project Area. The three remaining TEC/PEC records indicate the existence of TEC/PEC vegetation within the Project Area, all of which are '*Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region*' PEC and TEC.

# 3.2. Vegetation Mapping

Eight vegetation units were mapped during survey (Appendix 5). Completely cleared areas comprised of landscaped garden and cleared fields (8.25 ha, 54.28% % of Project Area) were not considered native vegetation and not mapped within a vegetation unit. Brief descriptions of mapped vegetation units are provided below.

### 3.2.1. Unit 1: Banksia menziesii open woodland

Open woodland of *Banksia menziesii* (approximately 10 trees) with understory of resprouting *Xanthorrhoea* (Plate 1). This vegetation unit occupies 0.32 ha or 2.11% of the Project Area and has a Keighery condition rating of 'Good'. The native understorey within this unit was slashed for fire mitigation purposes approximately four weeks prior to survey.





Plate 1. Photo of Unit 1 Banksia menziesii open woodland.

# 3.2.2. Unit 2: *Eucalyptus marginata* subsp. *marginata* and *Allocasuarina fraseriana* open woodland

Open woodland of *Eucalyptus marginata* subsp. *marginata* and *Allocasuarina fraseriana* with occasional trees of *Banksia attenuata* (Plate 2). This vegetation unit occupies 0.57 ha or 3.75% of the Project Area and has a Keighery condition rating of 'Good'. The native understorey within this unit was slashed for fire mitigation purposes approximately four weeks prior to survey.



Plate 2. Photo of Unit 2 *Eucalyptus marginata* subsp. *marginata* and *Allocasuarina fraseriana* open woodland.



### 3.2.3. Unit 3: Corymbia calophylla sparse woodland

Sparse open woodland of *Corymbia calophylla* with sparse understory of resprouting *Xanthorrhoea* (Plate 3). This vegetation unit occupies 0.27 ha or 1.78% of the Project Area and has a Keighery condition rating of 'Good'. The native understorey within this unit was slashed for fire mitigation purposes approximately four weeks prior to survey.



Plate 3. Photo of Unit 3 Corymbia calophylla sparse woodland.

## 3.2.4. Unit 4: Corymbia calophylla open woodland

Open woodland of *Corymbia calophylla* with dense mixed understorey containing occasional small trees of *Banksia illicifolia*. This vegetation unit occupies 0.10 ha or 0.66% of the Project Area and has a Keighery condition rating of 'Good'. The unit represents a very narrow band along the property fenceline with the majority of *Corymbia calophylla* trees being outside but adjacent to the Project Area boundary.

# 3.2.5. Unit 5: Corymbia calophylla (Eucalyptus rudis) open woodland over degraded/cleared

Open woodland of *Corymbia calophylla* (*Eucalyptus rudis* variably present) over a historically cleared understorey (Plate 4). This vegetation unit occupies 2.91 ha or 19.14% of the Project Area and has a Keighery condition rating of 'Degraded' with an almost complete absence of understorey due to previous land use practices.





Plate 4. Photos of Unit 4 *Corymbia calophylla (Eucalyptus rudis*) open woodland over degraded/cleared.

# 3.2.6. Unit 6: *Corymbia citriodora* (planted) and *Eucalyptus rudis* woodland over degraded/cleared

Open woodland of *Corymbia citriodora* (planted) and *Eucalyptus rudis* (remnant) woodland over a historically cleared understorey (Plate 5). This vegetation unit occupies 0.84 ha or 5.53% of the Project Area and has a Keighery condition rating of 'Degraded' due to an almost complete absence of understorey due to previous land use practices.



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Plate 5. Photo of Unit 6 *Corymbia citriodora* (planted) and *Eucalyptus rudis* woodland over degraded/cleared.

#### 3.2.7. Unit 7: Corymbia calophylla woodland over dense garden planting

*Corymbia calophylla* woodland over a dense tall understorey and ground layer of exotic plantings (Plate 6). This vegetation unit occupies 1.51 ha or 9.93% of the Project Area and has a Keighery condition rating of 'Completely Degraded' from an almost complete absence of understorey due to previous land use practices. A creek runs through a portion of the unit but is not associated with a separate vegetation unit. The Declared Pest *Zantedeschia aethiopica* (Arum Lilly) is present within this unit.





Plate 6. Photos of Unit 7 Corymbia calophylla woodland over dense garden planting.

#### 3.2.8. Unit 8: Mixed native and exotic plantings

A variable unit representing historically completely cleared areas with mixed plantings of exotic species and non-local native species (Plate 7). This vegetation unit occupies 0.43 ha or 2.83% of the Project Area and has a Keighery rating of 'Completely Degraded' due to complete absence of native vegetation.



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Plate 7. Photo (right of view) of Unit 8 Mixed native and exotic plantings.

#### 3.3. Significant Flora

None of the dominant structural species surveyed were found to be of conservation significance (Threatened or Priority Flora). The identification of the recently slashed understorey components of Units 1, 2 and 3 lay outside the scope of this survey and this aspect is not addressed.

#### 3.4. Significant Communities

Results of the DBCA Threatened and Ecological Communities database search (see Section 3.1) indicate the presence of the Threatened and Priority Ecological Community (TEC and PEC); *'Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region'*.

In contrast to the DBCA search results, the field survey revealed a majority of the Project Area's native vegetation lying within the three relevant TEC/PEC polygon records does not consist of *Banksia* dominated woodland.

However, one vegetation unit of the Project Area (Unit 1 '*Banksia menziesii* open woodland') has affinity to the '*Banksia Dominated Woodlands*' TEC and PEC and is within the DBCA's pre-existing records of that significant community.

Though small (0.32 ha or 2.11% of the Project Area) Vegetation Unit 1 'Banksia menziesii open woodland' may represent an instance of the 'Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region' PEC and TEC (Priority Ecological Community and Threatened Ecological Community).



An assessment of the understorey components following recovery after slashing of Vegetation Unit 1 will inform whether this unit represents the above PEC and TEC. Further advice regarding the TEC/PEC status of Vegetation Unit 1, following recovery and assessment of understorey components, should be sought from the Department of Biodiversity, Conservation and Attractions.

#### 3.5. Weeds

Pasture and garden weeds were common within the Project Area, consistent with the property's history of horse keeping and landscaping. No Weeds of National Significance (WoNS) were encountered during the survey.

The Declared Pest plant *Zantedeschia aethiopica* (Arum Lilly) was encountered within vegetation unit 7 (*Corymbia calophylla* woodland over dense garden planting). Control of this weed is recommended and may be required under the Biosecurity and Agriculture Management Act 2007.

### **3.6.** Vegetation Condition

Table 1 presents a summary of vegetation condition as related to mapped vegetation units. The overall vegetation condition for the majority of the Project Area is 'Degraded' to 'Completely Degraded'. A minority of the Project Area (1.26 ha or 8.29%) has a condition rating of 'Good'.

Vegetation Condition (Keighery Scale)	Area (ha)	Area (% )	Included Vegetation Units
Pristine	0	0%	None
Excellent	0	0%	None
Very Good	0	0%	None
Good	1.26	8.29%	1, 2, 3, 4
Degraded	3.75	24.67%	5, 6
Completely Degraded	10.19	67.04%	7, 8, and non-vegetated areas

Table 1. Summary of vegetation condition in relation to mapped vegetation units.

### 4. List of Participants

Staff Member	Field Surveys	Specimen Identification	Data Analysis	Report Preparation
Dr David Leach	1	1	1	1
Flora License SL012379	•	•	•	•
Mr Geoff Cockerton				$\checkmark$



RECONNAISSANCE SURVEY - LOT 500 GAVOUR ROAD WATTLE GROVE

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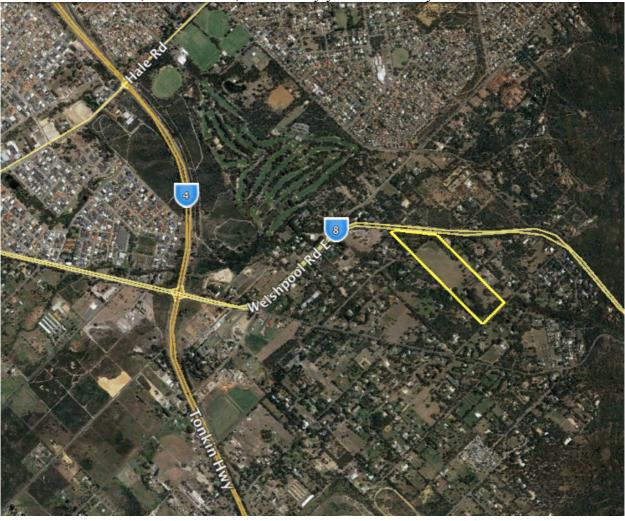
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Appendix 1. Project Area location.





Lot 500 Gavour Road, Wattle Grove, indicated by yellow boundary.



### Attachment 10.1.1.7

# Appendix 2. Keighery scale of Vegetation Condition.

As presented in Environmental Protection Authority (2016)



#### RECONNAISSANCE SURVEY – LOT 500 GAVOUR ROAD WATTLE GROVE

DECEMBER 2018

Vegetation Condition	South West and Interzone Botanical Provinces	
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	

### Appendix 3. Summary of Threatened and Priority Flora Database Search Results.



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#### RECONNAISSANCE SURVEY – LOT 500 GAVOUR ROAD WATTLE GROVE

	Conservation	Database		
Flora Taxon	Code	DBCA DBCA NatureMap		
		WAHerb	TPFL	waturewiap
Acacia anomala	Threatened	√	√	√
Acacia aphylla	Threatened	√	√	√
Andersonia gracilis	Threatened	√	$\checkmark$	√
Anthocercis gracilis	Threatened	√	√	√
Austrostipa bronwenae	Threatened	√	$\checkmark$	√
Banksia mimica	Threatened	$\checkmark$	$\checkmark$	√
Caladenia huegelii	Threatened	√		√
Calectasia cyanea	Threatened			√
Calytrix breviseta subsp. breviseta	Threatened	√	$\checkmark$	√
Conospermum undulatum	Threatened	$\checkmark$	$\checkmark$	$\checkmark$
Darwinia apiculata	Threatened	√	$\checkmark$	$\checkmark$
Diuris purdiei	Threatened	√	$\checkmark$	$\checkmark$
Eleocharis keigheryi	Threatened	√		√
Eremophila glabra subsp. chlorella	Threatened	√	$\checkmark$	√
Goodenia arthrotricha	Threatened	√	√	√
Grevillea curviloba subsp. incurva	Threatened			√
Grevillea thelemanniana	Threatened	√	√	√
Lepidosperma rostratum	Threatened	√	~	√
Macarthuria keigheryi	Threatened	√	$\checkmark$	√
Ptilotus pyramidatus	Threatened	√	$\checkmark$	√
Synaphea sp. Fairbridge Farm (D. Papenfus 696)	Threatened		$\checkmark$	√
Tetraria australiensis	Threatened	√		√
Thelymitra stellata	Threatened	√	√	√
Acacia lasiocarpa var. bracteolata long peduncle variant (G.J. Keighery 5026)	Priority 1			√
Amanita quenda	Priority 1	√		√
Bolboschoenus fluviatilis	Priority 1	, √		•
Boronia humifusa	Priority 1	, √	√	√
<i>Calandrinia</i> sp. Piawaning (A.C. Beauglehole 12257)	Priority 1	√ 	•	· ✓
Haloragis scoparia	Priority 1	•		· ✓
Hydrocotyle striata	Priority 1	√		· ✓
Ptilotus sericostachyus subsp. roseus	Priority 1	•		· ✓
Schoenus sp. Beaufort (G.J. Keighery 6291)	Priority 1	√		· ✓
Senecio gilbertii	Priority 1	√		v √
Thelymitra magnifica	Priority 1	v √	$\checkmark$	↓ ↓
Andersonia sp. Blepharifolia (F. & J. Hort 1919)	Priority 2	<b>√</b>	•	↓ ↓
Comesperma griffinii	Priority 2	· · ·		· · ·
Isotropis cuneifolia subsp. glabra	Priority 2	v √		V .(
Lepyrodia curvescens	Priority 2	v √		↓ ↓
Melaleuca viminalis	Priority 2	√ √		√ √
Paracaleana sp. Laterite (G. Brockman GBB 3571)	Priority 2 Priority 2	v		√ √
Schoenus loliaceus	Priority 2	√		↓ ↓ ↓
		v		
Thysanotus sp. Badgingarra (E.A. Griffin 2511)	Priority 2			✓
Acacia drummondii subsp. affinis	Priority 3			√ √
Acacia horridula	Priority 3	√	1	√ √
Acacia oncinophylla subsp. oncinophylla	Priority 3			√ √
Allocasuarina grevilleoides	Priority 3	$\checkmark$		√
Amanita kalamundae	Priority 3	√ (		
Amanita wadjukiorum	Priority 3	√	,	√ 
Asteridea gracilis	Priority 3	√ 	√ √	√ √
Babingtonia urbana	Priority 3	√	$\checkmark$	<b>√</b>
Banksia kippistiana var. paenepeccata	Priority 3			✓
Banksia pteridifolia subsp. vernalis	Priority 3	<i>√</i>		✓
Beaufortia purpurea	Priority 3	√	-	<b>√</b>
Byblis gigantea	Priority 3	$\checkmark$	$\checkmark$	√



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#### RECONNAISSANCE SURVEY - LOT 500 GAVOUR ROAD WATTLE GROVE

DECEMBER 2018

	Conservation	Database		
Flora Taxon	Code	DBCA	DBCA	NatureMap
		WAHerb	TPFL	Waturewiap
Carex tereticaulis	Priority 3	$\checkmark$	$\checkmark$	√
Chamaescilla gibsonii	Priority 3	$\checkmark$		√
Comesperma rhadinocarpum	Priority 3	$\checkmark$	$\checkmark$	√
<i>Eryngium pinnatifidum</i> subsp. <i>palustre</i> (G.J. Keighery 13459)	Priority 3	~		1
Eryngium sp. Subdecumbens (G.J. Keighery 5390)	Priority 3	√	√	√
Grevillea manglesii subsp. dissectifolia	Priority 3			√
Haemodorum loratum	Priority 3	√	√	√
Halgania corymbosa	Priority 3	√	√	√
Isopogon drummondii	Priority 3	√		√
Jacksonia gracillima	Priority 3	√		√
Lasiopetalum glutinosum subsp. glutinosum	Priority 3	√		√
Meionectes tenuifolia	Priority 3	√		√
Myriophyllum echinatum	Priority 3	√		√
Pithocarpa corymbulosa	Priority 3	√	√	√
Platysace ramosissima	Priority 3	√	√	√
Schoenus benthamii	Priority 3	√	√	√
Schoenus capillifolius	Priority 3	√	√	√
Schoenus pennisetis	Priority 3	√	√	√
Schoenus sp. Waroona (G.J. Keighery 12235)	Priority 3	√		√
Sporobolus blakei	Priority 3			√
Stackhousia sp. Red-blotched corolla (A. Markey 911)	Priority 3	√		√
Stylidium aceratum	Priority 3	√		√
Stylidium periscelianthum	Priority 3			√
Styphelia filifolia	Priority 3	$\checkmark$		√
Thysanotus anceps	Priority 3	√	√	√
Acacia oncinophylla subsp. patulifolia	Priority 4	√	√	√
Aponogeton hexatepalus	Priority 4	√	√	√
Boronia tenuis	Priority 4	√	√	√
Calothamnus accedens	Priority 4	$\checkmark$		√
Calothamnus graniticus subsp. leptophyllus	Priority 4			√
Centrolepis caespitosa	Priority 4	√		√
Cyanicula ixioides subsp. ixioides	Priority 4	√		√
Drosera occidentalis subsp. occidentalis	Priority 4		√	√
Hibbertia montana	Priority 4	√		√
Hydrocotyle lemnoides	Priority 4	√	√	√
Lasiopetalum bracteatum	Priority 4	√		√
Ornduffia submersa	Priority 4	√	√	√
Pimelea rara	Priority 4	√	√	√
Schoenus griffinianus	Priority 4			√
Schoenus natans	Priority 4	√		√
Senecio leucoglossus	Priority 4	√	√	√
Stylidium longitubum	Priority 4	√	$\checkmark$	√
Stylidium striatum	Priority 4	√	√	√
Verticordia lindleyi subsp. lindleyi	Priority 4	√	√	√



### Appendix 4: TEC/PEC records of the Project Area



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#### Image Key:

Green polygons:

• 3 x records of '*Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region*' PEC (WA) and TEC (National)

Clear polygons (buffer portion within Project Area only):

- 1 x record of '*SCP20a, Banksia attenuata woodland over species rich dense shrublands*' TEC (Western Australia)
- 8 records of 'Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region' PEC (WA) and TEC (National)



Appendix 5. Vegetation Structural Units map.



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#### **Vegetation Unit Key:**

- Unit 1: Banksia menziesii open woodland
- Unit 2: Eucalyptus marginata subsp. marginata and Allocasuarina fraseriana open woodland
- Unit 3: Corymbia calophylla sparse woodland
- Unit 4: *Corymbia calophylla* open woodland
- Unit 5: Corymbia calophylla (Eucalyptus rudis) open woodland over degraded/cleared
- Unit 6: Corymbia citriodora (planted) and Eucalyptus rudis woodland over degraded/cleared
- Unit 7: Corymbia calophylla woodland over dense garden planting
- Unit 8: Mixed native and exotic plantings









E info@westernbotanical.com.au www.westernbotanical.com.au

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Proposed Retirement Villages and Aged Care Facility Development Lot 500 (32) Gavour Road, Wattle Grove Revised - Transport Impact Statement

> PREPARED FOR: The Grove (WA) Pty Ltd

November 2018

### **Document history and status**

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Project manager:	Behnam Bordbar
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### 1.0 Introduction

This Revised Transport Impact Statement (TIS) has been prepared by Transcore on behalf of The Grove (WA) Pty Ltd with regard to the retirement village and aged care facility development to be located at Lot 500 Gavour Road, Wattle Grove, in the City of Kalamunda.

The Transport Impact Assessment Guidelines (WAPC, Vol 4 – Individual Developments, August 2016) states: "A Transport Impact Statement is required for those developments that would be likely to generate moderate volumes of traffic<sup>1</sup> and therefore would have a moderate overall impact on the surrounding land uses and transport networks". Section 6.0 of Transcore's report provides details of the estimated trip generation for the proposed development. Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this development.

Transcore prepared the original TIS in May 2018 which was submitted to the City of Kalamunda as part the support documents for the proposed Local Development Plan (LDP) application. The City of Kalamunda in their email of 6 August 2018 provided a range of comments on the proposed development including comments under the heading of Engineering. Department of Planning, Land and Heritage (DPLH) in their email of 27 July 2018 also provided comments on the TIS and the proposed access arrangements for the LDP. This revised TIS aims to address relevant comments by the City and DPLH as deemed appropriate.

The proposed development is bound by Welshpool Road East to the north-west, special rural lots to the east, north and south, Gavour Road to the south-east, and Crystal Brook traversing the site at the south-eastern end, as shown in Figure 1. The subject site is located in a special rural area.

A residential dwelling currently exists on the subject site, with the remaining area being vacant.

Key issues that will be addressed in this report include the traffic generation and distribution of the proposed development and layout and control of the development crossover on Welshpool Road East.

<sup>&</sup>lt;sup>1</sup> Between 10 and 100 vehicular trips per hour

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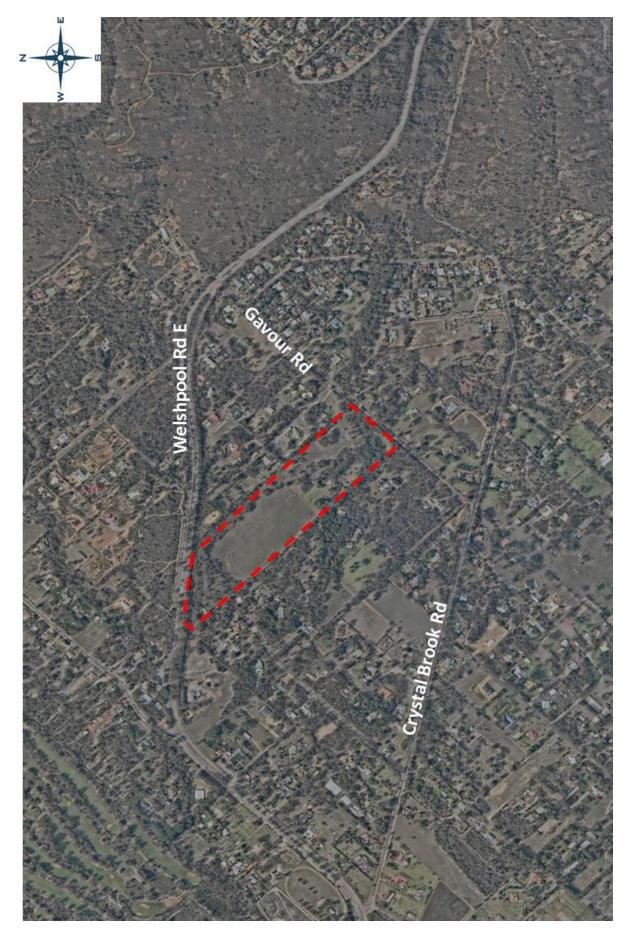


Figure 1: Location of the subject site

### 2.0 Proposed Development Site Plan

The proposal for the subject site is for a development comprising:

- 4 190 Independent living units; and,
- 4 120 bed residential aged care facility.

Direct vehicle access to the development will be provided on the adjacent road network, with main access available from Welshpool Road East.

Currently there is a median opening on Welshpool Road East fronting the subject site. It is proposed to utilise and modify the existing median opening to provide an appropriate crossover for the proposed development. The layout of the proposed crossover would entail a right turn pocket on Welshpool Road East. The length of the proposed right turn pocket is about 100m which is based on the existing posted speed limit of 80km/h on this section of Welshpool Road East.

Waste collection, delivery and other service vehicle activity will be accommodated within the site from Welshpool Road East crossover.

Refer to Appendix A for the proposed Development Site Plan (DSP).

### 3.0 Vehicle Access and Parking

### 3.1 Access

The proposed development will provide a full-movement vehicular crossover on Welshpool Road East, to the north-west of the subject site.

Figure 2 shows the location the proposed development crossover.

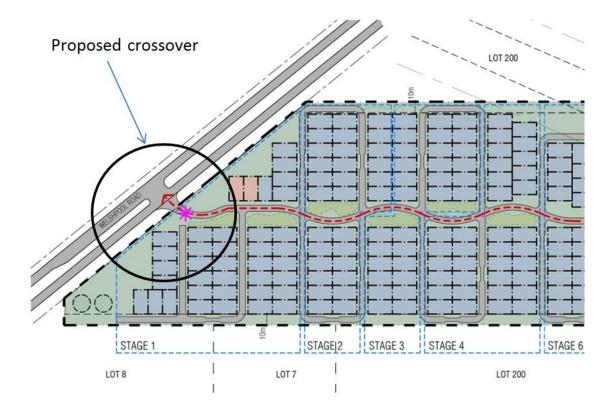


Figure 2: Proposed development crossover

The proposed Welshpool Road crossover is a priority controlled T-intersection with a right turn pocket of about 100m on Welshpool Road East. The proposed development also provides a secondary crossover on Gavour Road which will only be used during emergencies. Therefore, no traffic would be expected to be distributed from the proposed development onto Gavour Road.

### 3.2 Parking Demand and Supply

The City of Kalamunda Local Planning Scheme No.3 provides parking requirement standards for various land uses. The parking requirement rates applicable to the subject site include:

- Retirement Village: 0.5 bays per residential unit plus 1 bay per employee; and,
- 4 Aged Residential Care: 1 per employee plus 1 bay per 10 beds.

The proposed DSP is a concept plan at this stage and does not show the details of the parking supply on site. However it is recommended that sufficient parking bays should be provided on site for residents and visitors.

### 4.0 **Provision for Service Vehicles**

Service, waste collection and delivery vehicles will be accommodated on site.

Vehicular access to the service area will be facilitated via the proposed crossover on Welshpool Road East.

### 5.0 Hours of Operation

The retirement village is residential in nature and will generate heaviest traffic movement during weekday afternoon peak hour. The aged care component of the development traffic peak hour is dictated by the staff movements. The morning and afternoon staff changeover for the proposed aged care facility are expected to occur at around 8:00AM and 3:00PM.

Therefore, the traffic peak period of site traffic is assumed to occur between 8:00AM to 10:00AM and 3:00PM to 5:00PM.

### 6.0 Daily Traffic Volumes and Vehicle Types

### 6.1 Traffic Generation

The traffic volumes likely to be generated by the proposed development have been estimated in accordance with the *Transport Road & Marine Services NSW "Technical Direction TDT 2013/04a"* and *RTA NSW "Guide to Traffic Generating Developments (2002)"* documents, which provides daily and peak hour trip rates for the relevant land uses.

Transport Road & Marine Services NSW trip generation rates are best suited for the retirement village component of the proposed development is "Housing for seniors" and the RTA NSW trip generation rates which are best suited to estimate the aged care facility component of the development is "Housing for aged and disabled persons".

RTA NSW trip generation rates only provide evening peak hour vehicle trips for Aged Care Facility as this land use generates limited trips in the morning. For a robust assessment, it is assumed that the trip generation during morning peak hours for the proposed Aged Care Facility would be about 50% of evening (afternoon) peak hour vehicle trips. The peak hours trip rates for the Retirement Village component of the development was assumed to be similar during the AM and PM peak hours.

Accordingly, the trip rates which were used to estimate the development traffic generation are:

Retirement Village (Housing for seniors)

- Weekday daily vehicle trip = 2.1 per dwelling
- Weekday peak hour vehicle trips = 0.4 vehicles per dwelling (AM & PM)

Aged Care Facility (Housing for aged and disabled persons)

- Daily vehicle trips = 1 2 per dwelling
- Evening peak hour vehicle trips = 0.1 0.2 per dwelling
- Morning peak hour vehicle trips = 0.05 0.1 per dwelling (assumed 50% of evening peak hour vehicle trips)

These trip rates include the trip generation of visitors and employees and all other relevant vehicles that enter and exit the site.

Accordingly, it is estimated that the proposed development would generate about 620 daily vehicle trips, with approximately 88 and 100 trips during the AM and PM peak hour periods respectively. These trips include both inbound and outbound vehicle movements. It is anticipated that most of the vehicle types would be passenger cars and 4WDs with commercial vehicles representing a significantly smaller proportion of trips.

Table 1 is based on the following directional split assumptions:

AM and PM peak split estimated at 50%/50% inbound/outbound

Time period	Direction	Total Peak Hour Trips		
		Split	Total	
AM	Inbound	44	88	
Peak	Outbound	44		
PM	Inbound	50	100	
Peak	Outbound	50	100	

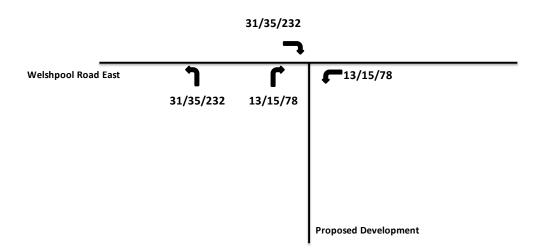
#### Table 1: Peak hour trips for the proposed development

### 6.2 Traffic Flow

With respect to the location of the subject site, access/egress system and the permeability and layout of the surrounding road network it is assumed that AM and PM peak hours and daily inbound/outbound traffic would be distributed as follows:

- **4** 70% to/from the west of Welshpool Road East; and,
- **4** 30% to/from the east of Welshpool Road West.

Figure 3 illustrated the AM and PM peak hours (weekday), maximum daily trip generation, and distribution over the local network for the proposed development.



## Figure 3: Estimated traffic movements for the proposed development – AM peak/PM peak/total daily trips

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### 6.3 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines* (2016) provides the following guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis.

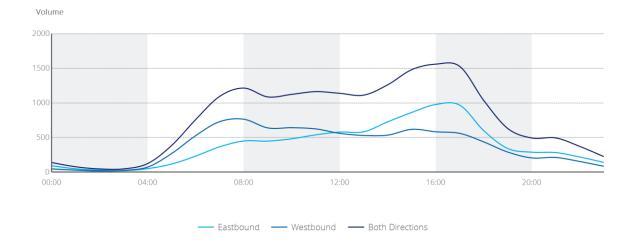
Therefore, the impact on the surrounding road network is considered to be insignificant and acceptable.

#### 6.4 Crossover analysis

In order to investigate the operation of the proposed development crossover on Welshpool Road East, SIDRA intersection analysis was undertaken for the AM and PM peak hours.

SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. The results of the SIDRA analysis are summarised in Appendix B. The analysis undertaken indicates that the proposed crossover will work satisfactorily and well within capacity with level of services C and with minimal queues and delays.

In order to assess the requirement for a left turn slip lane at the development crossover on Welshpool Road East, the warrants in "Austroads Guide to Road Design Part 4" document were checked against the left turning volumes during the critical PM peak hours. These warrants in graphical form are contained in Appendix C of this report. The applicable warrant for this assessment is for the design speed of less than 100km/h. Daily traffic flow on Welshpool Road East was sourced from Main Roads WA for 2015/2016 and used for the purpose of the assessment (refer Figure 4).



#### Figure 4: Daily traffic flow on Welshpool Road East, East of Tonkin Hwy

According to Figure 4, the westbound traffic on Welshpool Road East is about 600vph during the peak hours which will be distributed in two lanes. Therefore each lane on average would carry about 300vph. The total number of left turn movements from Welshpool Road to the proposed development is estimated to be about 15vph. According to the Austroads graphs in Appendix C, a basic left turn treatment (BAL) is considered to be sufficient for the proposed crossover on Welshpool Road East. The BAL treatment includes a widened shoulder, which assists turning vehicles to move further off the through carriageway, making it easier for through vehicles to pass.

Considering that Welshpool Road East has two lanes on each direction the kerb lane would facilitate the turning vehicles movements and therefore the basic widening is not required in this instance.

### 7.0 Traffic Management on the Frontage Streets

**Welshpool Road East**, north of the subject site, is a dual-divided carriageway road in the immediate vicinity of the subject site. It is approximately 24m wide with relatively low traffic volumes during the peak hours. It is classified as *Distributor A* in the Main Roads WA *Metropolitan Functional Road Hierarchy* and operates under the posted speed limit of 80km/h.

Traffic count data obtained from Main Roads WA indicates that Welsh Road East carried 19,356 vehicles per day (vph) in 2015/2016. The morning and afternoon peaks were recorded between 7:45AM-8:45AM and 4:45PM-5:45PM with a total of 1,539vph and 1,827vph, respectively.

**Gavour Road**, southeast of the subject site is a single carriageway road in the immediate vicinity of the subject site. It is approximately 5.5m wide with relatively low traffic volumes. It is classified as an *Access Road* in the Main Roads WA *Metropolitan Functional Road Hierarchy* and operates under the default, built-up area speed limit of 50km/h.

There are no available traffic counts for this road at present.

### 8.0 Public Transport Access

The subject site has access to bus service 282 along Welshpool Road East to the north of the subject site. This bus route passes through Kalamunda Transfer Station and provides opportunity to transfer to other connecting bus services. A bus stop is located along Welshpool Road East approximately 200m to the west of the subject site.

Nearby public transport services are shown in Figure 5.

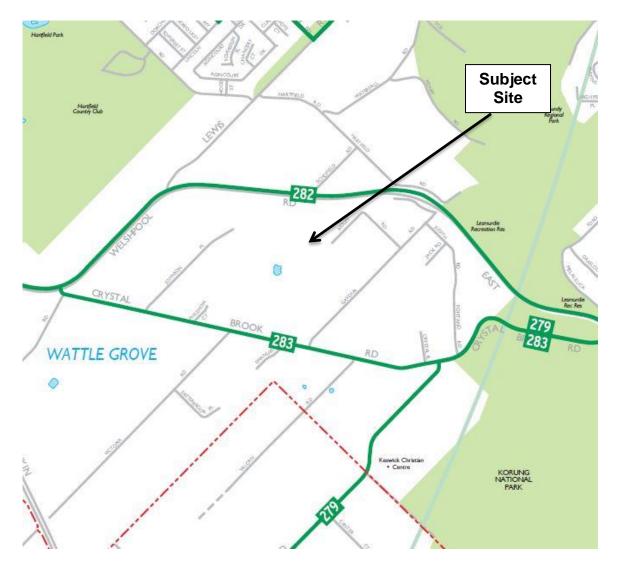


Figure 5: Public transport services (Transperth Maps)

## 9.0 Pedestrian Access

There is no direct pedestrian connectivity to the subject site from the surrounding road network.

The surrounding land uses are all rural under the MRS (refer Figure 6). Due to the nature and location of the proposed development the walking and cycling mode share is expected to be minimal and therefore provision of a shared path along Welshpool Road East fronting the proposed development is not justified. However in order to provide a safe and convenient path to the existing bus stop about 200m east of the proposed development it is suggested that the provision of a footpath connecting the proposed development to the bus stop should be investigated during the Development Application stage of this project.



Figure 6: Existing surrounding land uses (Extract from City of Kalamunda Intramaps)

## 10.0 Cycle Access

The Perth Bicycle Network Map (see Figure 7) shows the existing cyclist connectivity to the subject site. Shared paths are provided along Crystal Brook Road to the south of the subject site and Welshpool Road and Lewis Road to the west of the subject site. Lewis Road is also classified as good road riding environment.

Due to the nature and location of the proposed development the walking and cycling mode share is expected to be minimal and therefore provision of a shared path along Welshpool Road East fronting the proposed development is not justified.

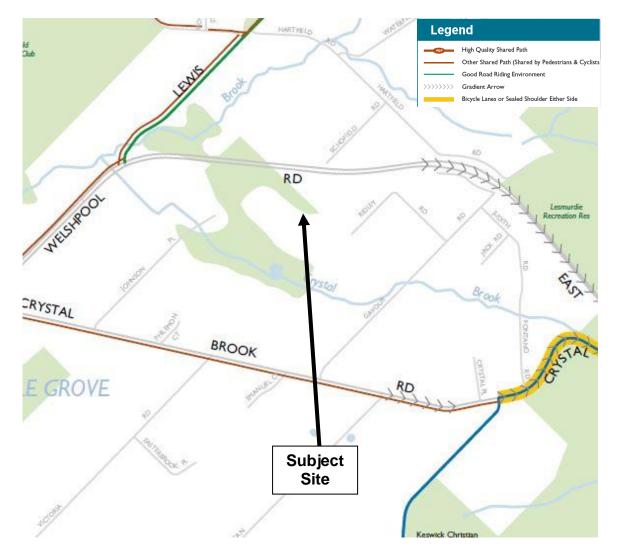


Figure 7: Extract from Perth Bicycle Network (Department of Transport)

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## **11.0 Site Specific Issues**

No site specific issues were identified within the scope of this assessment.

## 12.0 Safety Issues

No safety issues were identified within the scope of this assessment.

## **13.0 Conclusions**

This Revised Transport Impact Statement has been prepared by Transcore on behalf of The Grove (WA) Pty Ltd with regard to the retirement villages and aged care facility development to be located at Lot 500 Gavour Road, Wattle Grove, in the City of Kalamunda.

The site features connectivity with the existing road and cyclist network and public transport coverage through bus services. The proposed development vehicular crossover is on Welshpool Road East with an emergency only crossover also proposed on Gavour Road. The layout of the proposed crossover would entail a right turn pocket on Welshpool Road East but without a left turn slip lane.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is relatively low and as such would not have any significant impact on the surrounding road network. The proposed crossover intersection on Welshpool Road East will operate satisfactory without any impact on Welshpool Road East traffic.

A SIDRA network model was created to analyse the capacity of the proposed Welshpool Road East crossover. SIDRA results indicate the proposed crossover will work satisfactorily and well within capacity with level of services A to C and with minimal queues and delays.

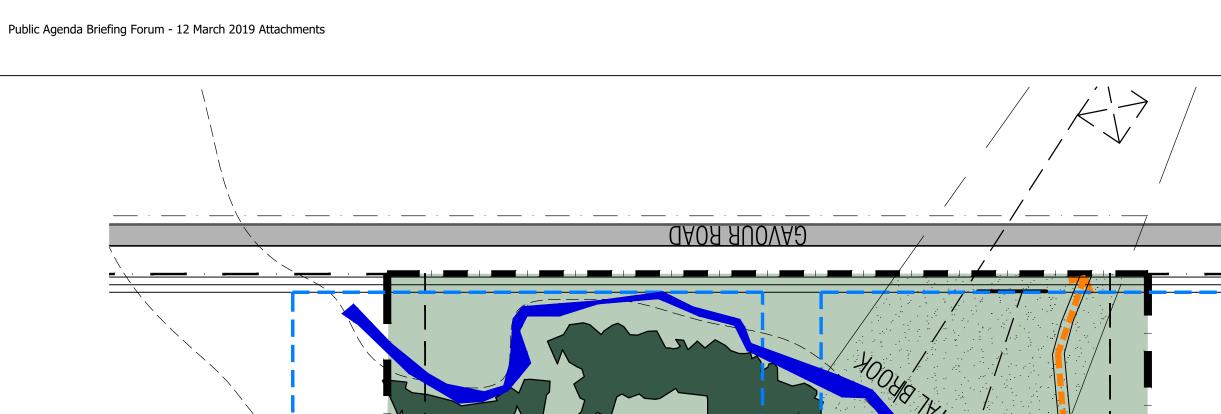
Due to the nature and location of the proposed development the walking and cycling mode share is expected to be minimal and therefore provision of a shared path along Welshpool Road East fronting the proposed development is not justified. However in order to provide a safe and convenient path to the existing bus stop about 200m east of the proposed development it is suggested that the provision of such a footpath should be investigated during the Development Application stage of this project.

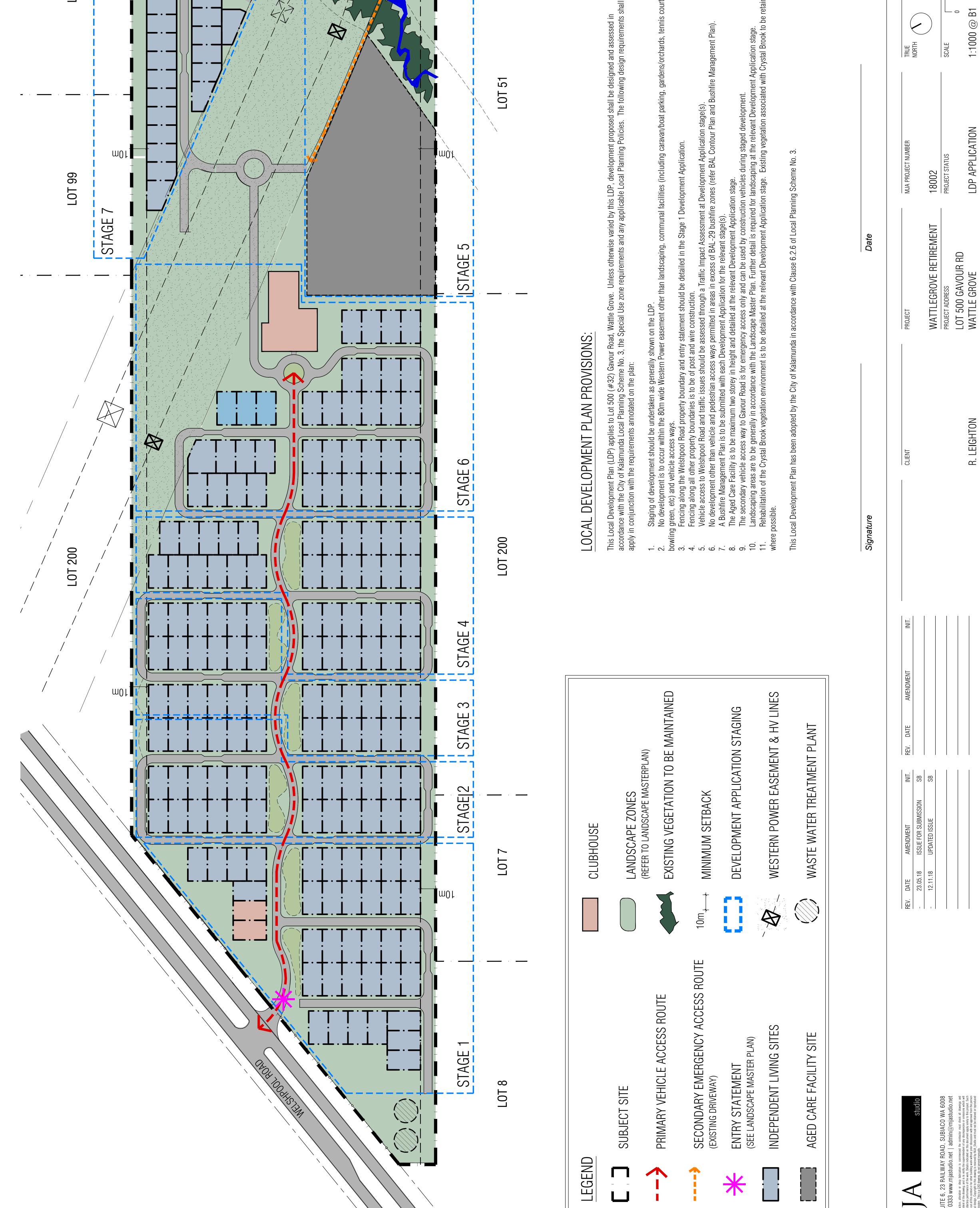
It is finally concluded that the findings of this Transport Impact Statement are supportive of the proposed retirement villages and aged care facility development.

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# **Appendix A**

## PROPOSED DEVELOPMENT PLAN





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Date					
REMENT	MJA PROJECT NUMBER	TRUE PROJECT NORTH NORTH	DRAWING LOCAL DEVELOPMENT PLAN	ENT PLAN	
	PROJECT STATUS	SCALE [ 50 50 50	DRAWING NO. DRAFTER	CHECKED REV.	
	LDP APPLICATION		A1.01 SB	WB -	

114

LOT 98

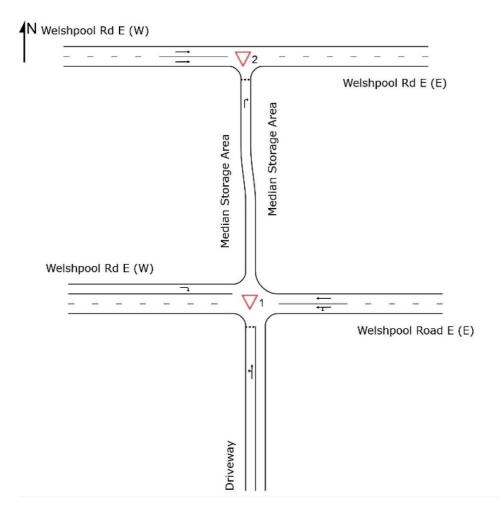




# **Appendix B**

SIDRA ANALYSIS

#### Sidra Network Model Layout



## Table 2. SIDRA results for the proposed Welshpool Road East crossoverStage 1 – weekday AM peak period

Mov ID	Turn	Demand	Flows	Arrival	Flows	Deg. Satn	Average Delav	Level of Service	95% Ba Quei		Prop. Queued	Effective Stop	Aver. / No.	Averag e
		Total	ΗV	Total	ΗV	Gaui	Delay	OCIVICE	Vehicles E		Queueu	Rate	Cycles S	
		veh/h		veh/h		v/c	sec		veh					km/h
Sout	h: Drive	eway												
1	L2	33	2.0	33	2.0	0.092	2.4	LOS A	0.3	2.3	0.62	0.56	0.62	23.3
2	T1	14	2.0	14	2.0	0.092	14.4	LOS B	0.3	2.3	0.62	0.56	0.62	10.2
Appr	oach	46	2.0	46	2.0	0.092	6.0	LOS A	0.3	2.3	0.62	0.56	0.62	20.7
East	Welsh	pool Road	I E (E)											
4	L2	14	2.0	14	2.0	0.309	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	73.8
5	T1	1097	13.4	1097	13.4	0.309	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.6
Appr	oach	1111	13.3	1111	13.3	0.309	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.5
West	: Welsh	pool Rd E	E (W)											
12	R2	33	2.0	33	2.0	0.101	15.8	LOS C	0.3	2.4	0.79	0.92	0.79	21.7
Appr	oach	33	2.0	33	2.0	0.101	15.8	NA	0.3	2.4	0.79	0.92	0.79	21.7
	ehicles	1189	12.5	1189	12.5	0.309	0.8	NA	0.3	2.4	0.05	0.05	0.05	76.7

## Table 3. SIDRA results for the Welshpool Road East crossover Stage 2 – weekday AM peak period

#### **MOVEMENT SUMMARY**

 ✓ Site: 2 [T intersection of Welshpool Rd E / the proposed crossover Stage 2 AM Peak]
 ♥♥ Network: N101 [Post-development AM Peak Hour]

T intersection of Welshpool Rd E / the proposed crossover Stage 2 Site Category: (None) Giveway / Yield (Two-Way)

Mov	Turn	Demand	Flows	Arrival	Flows	Dea.	Average	Level of	95% B	ack of	Prop.	Effective	Aver	Averag
ID	Turri	Demana	1 10 11 3	Anvan	10103	Satn	Delay	Service	Que		Queued	Stop	No.	E
		Total	ΗV	Total	ΗV				Vehicles			Rate	Cycles	
		veh/h		veh/h		v/c	sec		veh					km/t
Sout	h: Medi	an Storage	e Area											
3	R2	14	2.0	14	2.0	0.014	1.4	LOS A	0.0	0.2	0.38	0.26	0.38	18.2
Appr	oach	14	2.0	14	2.0	0.014	1.4	LOS A	0.0	0.2	0.38	0.26	0.38	18.2
Wes	t: Welsh	npool Rd E	(W)											
11	T1	452	8.7	452	8.7	0.122	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	80.0
Appr	oach	452	8.7	452	8.7	0.122	0.0	NA	0.0	0.0	0.00	0.00	0.00	80.0
AII V	ehicles	465	8.5	465	8.5	0.122	0.1	NA	0.0	0.2	0.01	0.01	0.01	79.8

## Table 4. SIDRA results for the Welshpool Road East crossover Stage 1 – weekday PM peak period

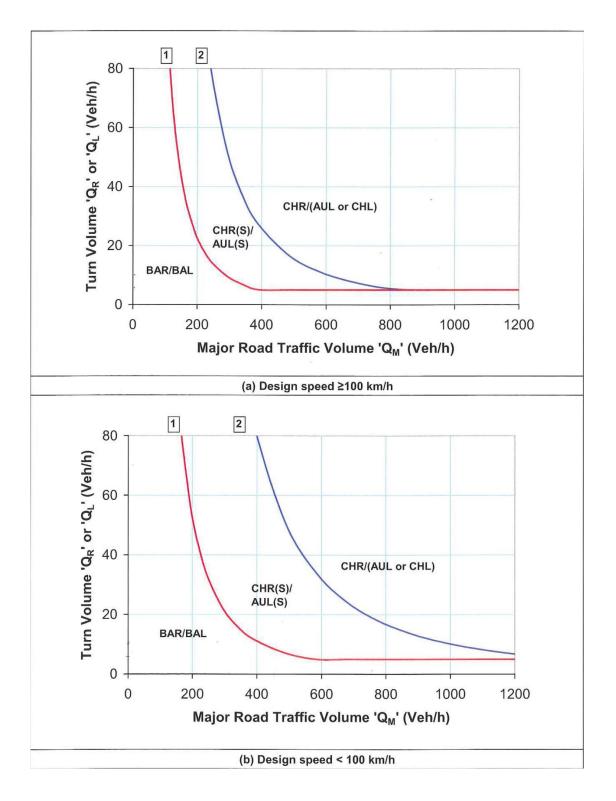
Mov ID	Turn	Demand	Flows	Arrival	Flows	Deg. Satn	Average Delay	Level of Service	Aver. B Que		Prop. Queued	Effective Stop	Aver. No.	Averag e
		Total veh/h		Total veh/h	HV %	v/c	sec	0011100	Vehicles I veh		aucuca	Rate	Cycles	
Sout	h: Drive			<b>VOID</b>										
1	L2	37	2.0	37	2.0	0.061	1.2	LOS A	0.1	0.7	0.45	0.34	0.45	28.2
2	T1	16	2.0	16	2.0	0.061	5.3	LOS A	0.1	0.7	0.45	0.34	0.45	14.5
Appr	oach	53	2.0	53	2.0	0.061	2.4	LOS A	0.1	0.7	0.45	0.34	0.45	25.7
East	Welsh	pool Road	E (E)											
4	L2	16	2.0	16	2.0	0.184	7.0	LOS A	0.0	0.0	0.00	0.03	0.00	73.3
5	T1	643	13.4	643	13.4	0.184	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	79.4
Appr	oach	659	13.1	659	13.1	0.184	0.2	NA	0.0	0.0	0.00	0.02	0.00	79.3
West	t: Welsh	npool Rd E	(W)											
12	R2	37	2.0	37	2.0	0.056	9.1	LOS A	0.1	0.6	0.57	0.77	0.57	31.1
Appr	oach	37	2.0	37	2.0	0.056	9.1	NA	0.1	0.6	0.57	0.77	0.57	31.1
All V	ehicles	748	11.8	748	11.8	0.184	0.8	NA	0.1	0.7	0.06	0.08	0.06	75.7

## Table 5. SIDRA results for the Welshpool Road East crossover Stage 2 – weekday PM peak period

Mov ID	Turn	Demand I	=lows	Arrival	Flows	Deg. Satn	Average Delay	Level of Service		Back of eue	Prop. Queued	Effective Stop	Aver. No.	Averag e
		Total veh/h		Total veh/h	HV %	v/c	sec	Gervice		Distance	Queucu	Rate	Cycles	
Sout	h: Media	an Storage												
3	R2	16	2.0	16	2.0	0.042	7.7	LOSA	0.0	0.3	0.74	0.74	0.74	5.2
Appr	oach	16	2.0	16	2.0	0.042	7.7	LOS A	0.0	0.3	0.74	0.74	0.74	5.2
Wes	t: Welsh	pool Rd E	(W)											
11	T1	1232	8.7	1232	8.7	0.334	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Appr	oach	1232	8.7	1232	8.7	0.334	0.0	NA	0.0	0.0	0.00	0.00	0.00	79.8
All V	ehicles	1247	8.6	1247	8.6	0.334	0.1	NA	0.0	0.3	0.01	0.01	0.01	79.6

# Appendix C

Warrants for Turn Treatments on the Major Road at Un-signalised Intersections (Source: Austroads 2009)





### **Bushfire Management Plan**

Prepared for The Grove (WA) Pty Ltd by Strategen

May 2018





### **Bushfire Management Plan**

Strategen is a trading name of Strategen Environmental Consultants Pty Ltd Level 1, 50 Subiaco Square Road Subiaco WA 6008 ACN: 056 190 419

May 2018

#### Limitations

#### Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

#### Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

#### Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

#### Document control

	D			Strategen	Submitte	d to Client
Report Version	Revision No.	Purpose	Strategen author	reviewer and accreditation details	Form	Date
Draft Report	A	For client review	C Turner	L Wears BPAD19809	Electronic (email)	10/05//2018
Final Report	0	For submission	C Turner	L Wears BPAD19809	Electronic (email)	16/05//2018

#### Client: The Grove (WA) Pty Ltd

Filename: RCA18043.01 R001 Rev 0 - 16 May 2018

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#### 1. Proposal details

The Grove (WA) Pty Ltd (the Proponent) is seeking to lodge a Local Development Plan to facilitate development of aged care housing and an aged care facility at Lot 500 Gavour Road, Wattle Grove (the project area) in the City of Kalamunda (the City). The Local Development Plan (LDP; Figure 1) identifies 193 aged care 'lots', an aged care facility, two club houses and an internal road network.

The project area is approximately 15 ha and as depicted in Figure 2 is surrounded by:

- Welshpool Road, Special Rural properties and Bush Forever Site 50 to the north
- Special Rural properties to the east, south and west.

The project area is designated as Bushfire Prone on the WA *Map of Bush Fire Prone Areas* (DFES 2017; see Plate 1).

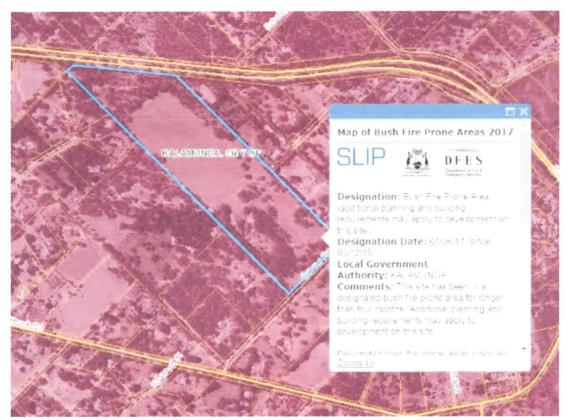
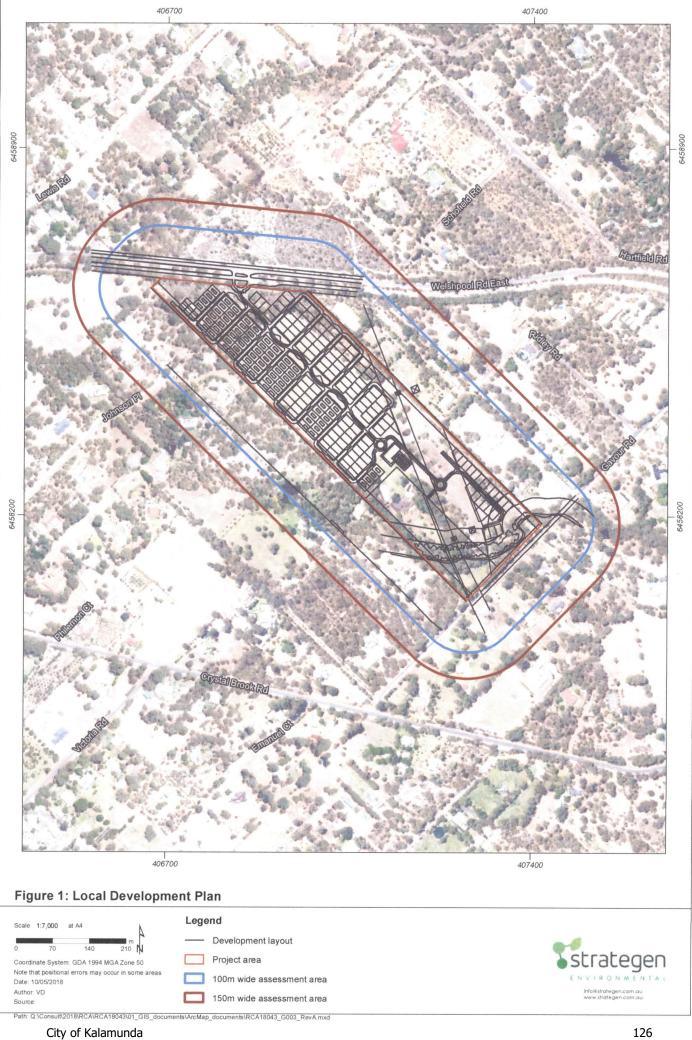


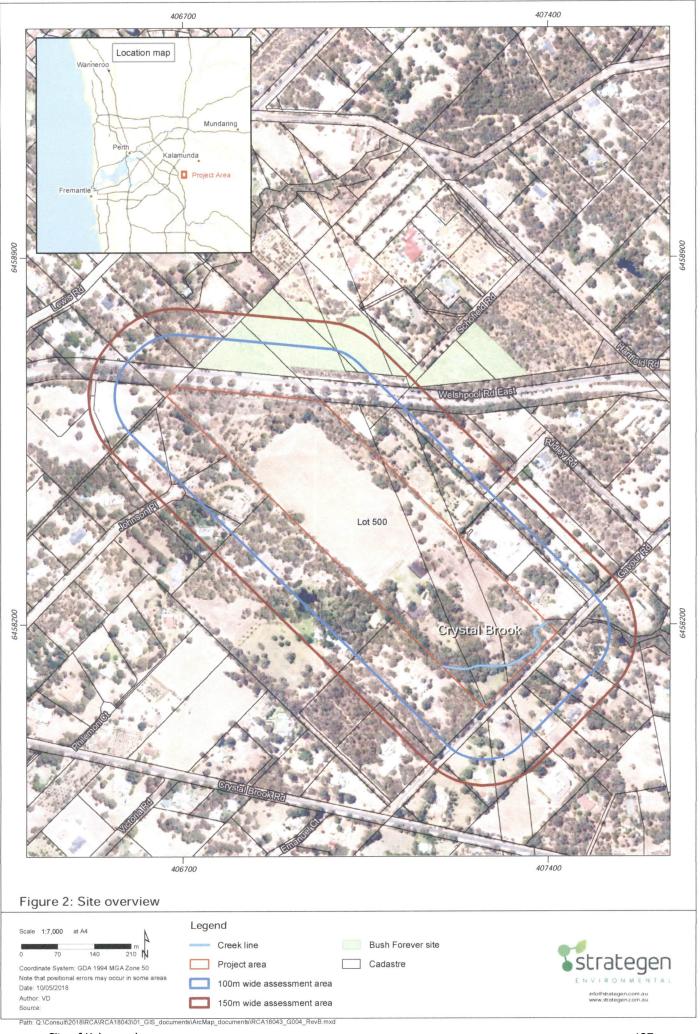
Plate 1: Bush Fire Prone Area mapping across entire lot, as indicated in pink/ purple

Adjacent rural residential lots to the north are being investigated for future urban development.

This BMP has been prepared to accompany the LDP to address the requirements of the City of Kalamunda, *State Planning Policy 3.7 Planning in Bushfire-Prone Areas* (SPP 3.7; WAPC 2015) and *Guidelines for Planning in Bushfire-Prone Areas* (the Guidelines; WAPC 2017).







#### 2. Environmental considerations

#### 2.1 Native vegetation – modification and clearing

#### 2.1.1 Vegetation and clearing within project area

A flora and vegetation survey was undertaken by Strategen on 3 May 2016 which identified remnant vegetation within the north-west and northern portion of the project area, as well as adjacent to Crystal Brook.

In order to facilitate the development, all vegetation within the project area will be cleared or managed in a low-threat state, consistent with exclusion Clauses 2.2.3.2 (e) and (f) of AS3959, with the exception of vegetation adjacent to Crystal Brook. Vegetation adjacent to Crystal Brook is currently proposed to be remediated to remove exotic species, and thinned to a structure consistent with Class G grassland, including ensuring that canopy cover is reduced to less than 10%.

#### 2.1.2 Vegetation and clearing external to project area

In order to facilitate construction of a cross-over from Welshpool Road to the project area, vegetation within the Welshpool Road will cleared and/ or managed in a low threat state in accordance with Clauses 2.2.3.2 (e) and (f) of AS3959.

Prior to clearing vegetation within the road reserve, permission from the relevant land manager will be required as well as a clearing permit.

#### 2.2 Environmental approvals

Clearing of native vegetation within the project area and Welshpool Road reserve will require approval (clearing permit) under Part V of the State *Environmental Protection Act 1986* unless a valid exemption applies. The proponent may also wish to submit a referral under the Commonwealth *Environment Protection and Biodiversity Act 1999* (EPBC Act) at subsequent planning stages, depending on any impacts to Matters of National Environmental Significance (MNES) that may be identified.

#### 2.3 Revegetation / Landscape Plans

The entire project area, with the exception of Crystal Brook, will be landscaped with non-vegetated and low threat elements, consistent with exclusion Clauses 2.2.3.2 (e) and (f) of AS3959. In addition, the portion of the Welshpool Road reserve abutting the project area will also be cleared and landscaped with low threat vegetation to create an entrance statement and cross-over. Where development constraints permit and low threat vegetation can be achieved, existing trees will be retained

Vegetation adjacent to Crystal Brook is proposed to be 'thinned' to remove exotic and introduced species, and reconfigured to a vegetation structure consistent with Class G grassland, including reducing canopy cover to less than 10% with a grassland understory typically <1 m in height. The landscape concept plan prepared for the project area includes reconfiguration of vegetation adjacent to Crystal Brook which will be subject to approval by the City of Kalamunda.

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#### 3. Bushfire assessment results

#### 3.1 Assessment inputs

#### 3.1.1 Classified vegetation

Strategen assessed classified vegetation and exclusions within 150 m of proposed development through on-ground verification on 6 February 2018 in accordance with *AS 3959—2009 Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2009). Results are depicted in Figure 3 and georeferenced site photos are contained in Appendix 1.

A summary of the post-development classified vegetation is as follows:

- Class B woodland occurs to the north, west and east within Special Rural landholdings and Bush Forever Site 50, and to the south-east within Gavour Road reserve and adjacent to Crystal Brook
- land to the north and area of proposed on-site POS in the northern corner of the project area and comprises banksia woodland or sparse eucalyptus woodland
- Class G grassland occurs to the south-east within Special Rural landholdings and is also proposed within the project area, adjacent to Crystal Brook.

A large portion of the site has been historically cleared and is currently managed in a low-threat state. Any areas of vegetation existing within the project area, as well as the portion of the Welshpool Road reserve abutting the project area will be subject to vegetation clearing, landscaping and ongoing fuel-load management. This will achieve a low threat state in accordance with Clause 2.2.3.2 (e) and (f) of AS3959 across the entire project area, with the exception of vegetation adjacent to Crystal Brook, which will be consistent with Class G grassland.

A summary of the assessed exclusions are as follows:

- Clause 2.2.3.2 (e) occurs throughout all areas of non-vegetated land such as land cleared for existing roads and proposed internal driveway network, proposed dwellings, club houses and aged care facility, and firebreaks required under the City's *Firebreak and Fuel Load Notice* (Appendix 2)
- Clause 2.2.3.2 (f) occurs throughout all land managed in a minimal fuel low threat condition, such as portions of existing managed Special Rural landholdings surrounding the project area.

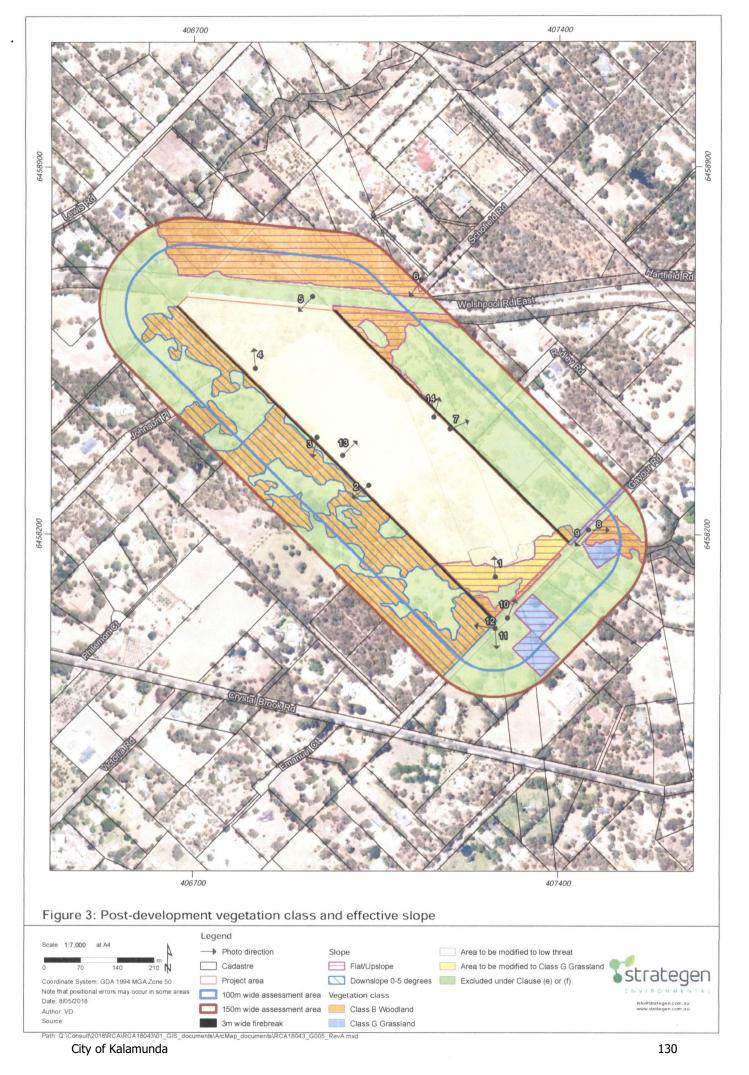
#### 3.1.2 Effective slope

Strategen assessed effective slope under classified vegetation through on-ground verification 6 February 2018 in accordance with AS 3959.

Regional topographic contours indicate that elevation across the project area ranges from approximately 36 Australian Height Datum (mAHD) in the north-west to approximately 50 mAHD in the south-east.

Site observations and regional contour data indicate that classified vegetation within the project area and adjacent 150 m is predominantly situated on flat/upslope land. Land beneath classified vegetation to the west of the project area, and adjacent to Crystal Brook was observed as downslope 0 to 5 degrees (Figure 3).





#### 3.2 Assessment outcomes

Any proposed habitable development that cannot achieve 100 m separation from post-development classified vegetation will require application of AS3959 to determine appropriate location and siting of development and potential increased building construction standards in response to the assessed bushfire attack level (BAL).

Strategen has undertaken an indicative BAL contour assessment in accordance with Method 1 of AS 3959 for the project area on the basis that the proposed development layout has been identified. The indicative BAL contour assessment is based on the anticipated post-development conditions within the site and is relies on several clearing and management assumptions (detailed in Section 5). The Method 1 procedure for calculating the BAL (as outlined in AS 3959) incorporates the following factors:

- state-adopted FDI rating
- vegetation class
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by proposed development and subsequently informs the standard of building construction (for building Classes 1, 2, 3 and associated 10a) and/or setbacks required for proposed development to potentially withstand such impacts.

The assessed indicative BAL contours are depicted in Figure 4.

The width of each BAL contour in Figure 4 is set in accordance with AS 3959 and reflects the relevant BAL rating applicable to the respective Class B woodland or Class G grassland vegetation types situated on the assessed slope (refer to Table 1). Where BAL contours differ based on the different BAL application distances associated with the vegetation classifications, the highest (worst case) BAL has been applied.

The BAL contours are based on post-development conditions, including the following assumptions:

- clearing, landscaping an ongoing management of the entire project area and portion of the Welshpool Road reserve abutting the site, in a low threat condition in accordance with Clause 2.2.3.2 (f) of AS3959 (with the exception of Crystal Brook vegetation described below)
- reconfiguration of Crystal Brook vegetation to a structure and fuel load consistent with Class G vegetation
- the installation of 3 m bare-earth firebreaks within adjacent land holdings immediately inside the lot boundary.

Given future clearing, management and vegetation modification proposed, the BAL contours can be reassessed at future development stages in accordance with any requirements of the City, prior to issuing of a building licence to confirm that measures specified within this BMP have been implemented. Should there be any additional changes in development design or classified vegetation extent that requires a modified bushfire management response, then the BAL contours will also need to be reassessed.

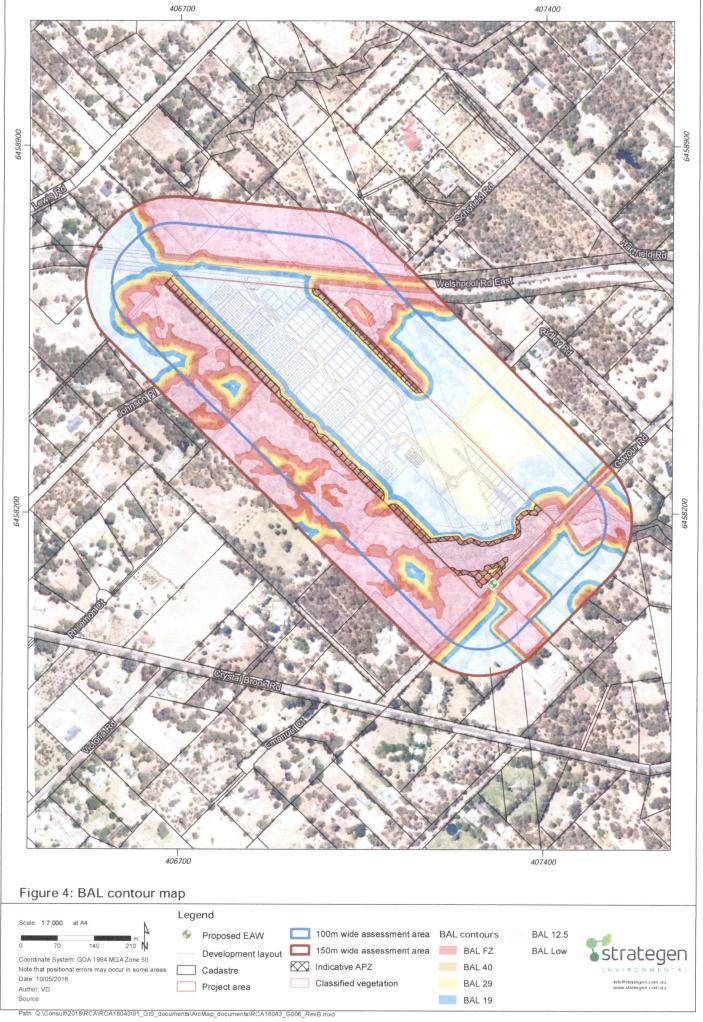


Classified vegetation	Effective slope	BAL contour width (m)	BAL rating
		<10	BAL-FZ
		10-<14	BAL-40
	All up-slopes and flat land (0 degrees)	14-<20	BAL-29
	(*******	20-<29	BAL-19
Class B		29–<100	BAL-12.5
woodland		<13	BAL-FZ
		13-<17	BAL-40
	Downslope 0 to 5 degrees	17–<25	BAL-29
		25-<35	BAL-19
		35-<100	BAL-12.5
		<6	BAL-FZ
		6-<8	BAL-40
	All up-slopes and flat land (0 degrees)	8-<12	BAL-29
	()	12-<17	BAL-19
Class G		17-<50	BAL-12.5
01855 0		<7	BAL-FZ
		7-<9	BAL-40
	Downslope 0 to 5 degrees	9-<14	BAL-29
		14-<20	BAL-19
		20<50	BAL-12.5

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Table 1: Method 1 BAL calculation





#### 4. Identification of bushfire hazard issues

While somewhat fragmented, there is a landscape scale bushfire risk associated with vegetation to the east of the project area located within Korung National Park. A bushfire travelling toward the site form the east could have a significant potential fire run through Korung National Park, Banyowla Regional Park and Jarrahdale State Forest.

The localised bushfire risk (within 150 m of the project area) is predominately associated with woodland vegetation within Special Rural landholdings located to the south-west. These areas of vegetation are fragmented and not considered to pose a significant bushfire risk, particularly once mitigation and management measures detailed within this BMP are implemented.

On completion of the development, there will be a reduced bushfire risk to future assets of the site as a result of vegetation clearing and management that will be undertaken to facilitate development. Maintaining cleared or low-threat buffers within the project area, around each stage of development will play an important role in managing the bushfire risk posed to proposed development, and prevention of temporary BAL ratings, from existing onsite vegetation during roll out of individual development stages. This is discussed as a key management measure in Section 5.

In addition, setbacks and Asset Protection Zones (APZs) will be implemented from any classified vegetation to habitable development, resulting in all proposed buildings being located in areas of BAL- 29 or less. This is also discussed as a key management measure in Section 5.

On this basis, Strategen considers the bushfire hazards within and adjacent to the project area and the associated bushfire risks are readily manageable through standard management responses outlined in the Guidelines and AS 3959 and management measures outlined in this BMP. These responses will be factored in to proposed development early in the planning process to ensure a suitable, compliant and effective bushfire management outcome is achieved for protection of future life, property and environmental assets.

strategen



#### 5. Assessment against the bushfire protection criteria

#### 5.1 Compliance table

Table 2 below provides an overview of how the 'acceptable solutions' of the Guidelines will be implemented throughout the various stages of the proposed development, to achieve compliance with the bushfire protection criteria.

	Method of compliance	Proposed bus	nfire management
Bushfire protection criteria	Acceptable solutions	Management strategy reference	Management strategy
Element 1: Location	A1.1 Development location	1	Refer to Figure 4, which identifies that all habitable buildings can be located in areas of BAL-29 or lower through the implementation of building setbacks and APZs.
Element 2: Siting and design	A2.1 Asset Protection Zone	2	The BAL contour assessment identifies that the project area can accommodate all proposed buildings in areas of BAL-29 or lower, with the capacity to achieve APZs (as shown indicatively in Figure 4).
			The final location of APZs will be identified at future planning stages.
			APZs will be to subject to ongoing management in accordance with standards outlined in the Guidelines (see Appendix 3).
Element 3: Vehicular access	A3.1 Two access routes.	N/A	No public roads are proposed as subdivision of the project area is not proposed. The internal road network is composed of private driveways.
			The project area will be accessed via the proposed crossover from Welshpool Road which will provide the main entrance to the development. Secondary access/ egress will be provided via an emergency access way (EAW) as discussed against Acceptable solution 3.6.
	A3.2 Public road	N/A	No public roads are proposed as subdivision of the project area is not proposed. The internal driveway network is composed of private driveways.
	A3.3 Cul-de-sac (including a dead-end- road)	N/A	N/A
	A3.4 Battle-axe	N/A	N/A

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#### Table 2: Bushfire protection criteria

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The Grove

	Method of compliance	Proposed bush	nfire management
Bushfire protection criteria	Acceptable solutions	Management strategy reference	Management strategy
	A3.5 Private driveway longer than 50 m A private driveway is to meet detailed	3	The internal driveway network will be constructed to relevant technical requirements under the Guidelines (see Appendix 4).
	requirements contained within the Guidelines		Although not detailed in the current LDP, any 'dead-ends' proposed will be fitted with appropriate turn-around points in accordance with the requirements of the guidelines (see Appendix 4).
	A3.6 Emergency access way	4	An EAW will be provided at the south-eastern end of the project area which will utilise an existing crossover to Gavour Road. The EAW will be constructed to relevant technical requirements under the Guidelines (see Appendix 4).
	A3.7 Fire service access routes (perimeter roads)	N/A	N/A
	A3.8 Firebreak width	5	As the project area is >0.5 ha, a 3-m bare earth firebreak will be required immediately inside the perimeter of the lot boundary, in accordance with the requirements of the City's annual firebreak notice (Appendix 2).
Element 4: Water	A4.1 Reticulated areas	6	The project area will be provided a reticulated water supply. Infrastructure proposed within the project area for supply of firefighting water will be determined at each DA stage and may include hydrants, water tanks or a combination of both.
	A4.2 Non-reticulated areas	N/A	N/A
	A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively)	N/A	N/A

12



#### 5.2 Additional management strategies

In addition to the management measures listed in Table 2, the following measures listed in Table 3, should be implemented at subsequent planning and development stages.

Table 3: Additional management strategies

Management strategy reference	Management strategy
7	<b>On-site staging buffers</b> : if development (and therefore clearing) is to occur on a staged basis, clearing in advance will need to occur to ensure building construction is not inhibited by a temporary vegetation extent located within adjacent development stages yet to be cleared. This can be achieved by ensuring that each approved stage subject to construction is surrounded by a 100-m wide, cleared or low threat (in accordance with Clause 2.2.3.2 (e) or (f)) buffer prior to development. Once the buffers are created, they will need to be maintained on a regular and ongoing basis at a fine fuel load less than 2 t/ha to achieve a low threat minimal fuel condition all year round until such time that the buffer area is developed as part of the next development stage. This will assist in managing the current on-site temporary vegetation hazards.
8	<b>Fuel management within Stages under construction</b> : cleared 'lots' awaiting construction will be managed in a non-vegetated or low threat standard on a regular and ongoing basis by the developer/ land manager until constructed (in accordance with Clauses 2.2.3.2 (e) or (f)). Management will involve slashing/mowing of grassland and weeds to height prescribed under the City of Kalamunda annual firebreak notice (refer to Appendix 4).
9	<b>Fuel management adjacent to Crystal Brook:</b> vegetation adjacent to Crystal Brook is to be remediated to remove exotic species, 'thinned' and landscaped to achieve a Class G grassland vegetation structure in a mature state.
10	<b>Ongoing fuel management across project area:</b> once constructed and landscaped, the project area will be managed on a regular and ongoing basis through slashing, weed control and manual fuel removal to ensure the understorey and surface fuels are kept in a low threat, minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959. Sparse retention and planting of individual overstorey trees can occur throughout the project area for visual/aesthetic/screening purposes and to retain environmental values where possible. Proposed landscaping plans for the project area will need to reflect the bushfire management measures required under this BMP. Ongoing management will be responsibility of the developer/ land manager.
11	<b>Road verge fuel management:</b> the Welshpool Road reserve abutting the project area will need to be managed to ensure the understorey and surface fuels remain in a low threat, minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959. Ongoing road verge management will be the responsibility of the City.
12	<b>Emergency evacuation plan:</b> a bushfire emergency evacuation plan will be prepared for the proposed aged care facility, which is considered a 'vulnerable land use', at the applicable development application stages.
13	<b>BAL compliance or individual lot BAL assessment at future stages:</b> a BAL compliance report or individual habitable building BAL assessment may be required at the discretion of the City following completion of development works and prior to construction of habitable buildings to confirm the accuracy of BAL assessments depicted in the BMP or demonstrate any change in the assessed BAL or other management measures documented in this BMP, which may occur as a result of changes in building location, vegetation class or bushfire management approach.
14	<b>Building construction standards:</b> all dwellings will be constructed to the assessed BAL rating, either in accordance with this BMP or future reassessment of the BAL to support future planning/building permit stages. AS3959 construction standards are not applicable to the aged care facility building.
15	<b>Compliance with annual firebreak notice</b> : the developer/land manager is to comply with the City's annual firebreak notice (refer to Appendix 2).
16	<b>Preparation of updated BMP or addendum:</b> To support future DAs across the project area, this BMP will need to be updated, or an addendum prepared and submitted in response to any changes in development design, or classified vegetation extent, in accordance with the requirements of SPP3.7.



# 6. Indicative responsibilities for implementation of bushfire management measures

Proposed management measures identified in this BMP are based on information at the LDP stage. Consequently, a revised BMP(s) including confirmation of the proposed management measures, may be required for proposed development at an appropriate future planning stage (i.e. development application) in response to any changes in development design or classified vegetation extent, to ensure the management measures within the BMP are consistent with the final development proposal.

Implementation of management measures identified in this and subsequent BMPs is the responsibility of the developer(s), prospective land managers and the City on an ongoing basis. Although none of the proposed management measures will be subject to implementation at the LDP stage, an indicative implementation table is provided below to inform any future BMPs and implementation of bushfire management measures at future planning stages.

	the second se		
Management strategy reference	Management strategy	Timing	Responsibility
1	Ensure all habitable buildings are located in areas of BAL-29 or lower through the implementation of appropriate building setbacks from classified vegetation (refer to Figure 4).	Prior to building occupancy, or final BAL assessment	Developer
2	Ensure the full extent of all APZs are established (as shown indicatively in Figure 4) and managed on a regular and ongoing basis in accordance with standards outlined in the Guidelines (see Appendix 3).	Prior to building occupancy, or final BAL assessment	Developer to establish APZ, relevant land manager to ensure ongoing maintenance
3	Ensure internal driveway network is constructed to relevant technical requirements under the Guidelines (see Appendix 4).	Prior to building occupancy	Developer
4	Provide an EAW at the south- eastern end of the project area, constructed to relevant technical requirements under the Guidelines (see Appendix 4).	Prior to building occupancy	Developer
5	Install and maintain a 3-m bare earth firebreak immediately inside permitter of lot boundary, in accordance with the requirements of the City's annual firebreak notice (Appendix 2).	Before 1 November and maintained up to and including 31 March, or as published in any subsequent annual firebreak notice.	Developer/ land manger
6	Provide a reticulated water supply to the project area and suitable infrastructure for supplying firefighting water to the development.	Prior to building occupancy	Developer

Table 4: Indicative management measures and responsibilities



#### TO MARA

RCA18043.01 R001 Rev 0 16-May-18

Management strategy reference	Management strategy	Timing	Responsibility
7	Ensure each development stage is surrounded by a cleared or low threat (in accordance with Clause 2.2.3.2 (e) or (f)) which is and maintained at a fine fuel load less than 2 t/ha buffer of sufficient size as to not increase the expected BAL rating of lots under construction (up to 100 m). Advice on width of buffer area can be provided by a qualified bushfire practitioner.	Prior to building occupancy of each stage, or final BAL assessment of each stage, maintained until the buffer area is developed (in accordance with Clause 2.2.3.2 (e) or (f)).	Developer/ land manger
8	Ensure cleared 'lots' awaiting construction are managed to a cleared or low threat standard on an ongoing basis (in accordance with Clauses 2.2.3.2 (e) or (f)).	Prior to building occupancy of each stage, or final BAL assessment.	Developer/ land manger
9	Ensure vegetation adjacent to Crystal Brook achieves a Class G grassland vegetation structure in a mature state.	Prior to building occupancy of final development stage (or other stages within 100 m of Crystal Brook vegetation), or final BAL assessment.	Developer/ land manger
10	Ensure the project area is managed on a regular and ongoing basis to ensure all areas (with the exception of Crystal Brook vegetation) are maintained in a low threat, minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959.	As part of development works for each stage, and ongoing.	Developer/ land manger
11	Ensure Welshpool Road reserve abutting the project area is constructed and managed to a low threat standard in accordance with Clause 2.2.3.2 (f) of AS 3959.	As part of development works and ongoing	Developer to construct crossover and undertake low threat landscaping, City to manage ongoing
12	Prepare a bushfire emergency evacuation for the aged care facility	Development Application stage of Aged Care Facility	Developer
13	Prepare a BAL compliance report or individual habitable building BAL assessment	At the discretion of the City following completion of development works and prior to construction of habitable buildings	Developer
14	Ensure all dwellings constructed to the final assessed BAL rating	As part of development works	Developer
15	Ensure compliance with the City's annual firebreak notice (refer to Appendix 2).	Before 1 November and maintained up to and including 31 March, or as published in any subsequent annual firebreak notice.	Developer/ land manger
16	Prepare updated BMP or addendum to support future DA	At the discretion of the City in response to any changes in development design, or classified vegetation extent.	Developer



#### 7. References

Department of Fire and Emergency Services (DFES) 2017, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from:

http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx, [13/02/2018].

- Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth, WA.
- Standards Australia (SA) 2009, Australian Standard AS 3959–2009 Construction of Buildings in Bushfireprone Areas, Standards Australia, Sydney.
- Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth.
- Western Australian Planning Commission (WAPC) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.3 August 2017, Western Australian Planning Commission, Perth.

16



Appendix 1 Site photographs

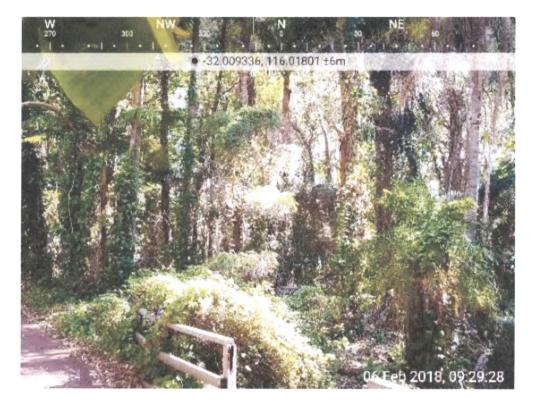


Photo 1: Class A forest adjacent to Crystal Brook (to be reconfigured to Class G grassland)

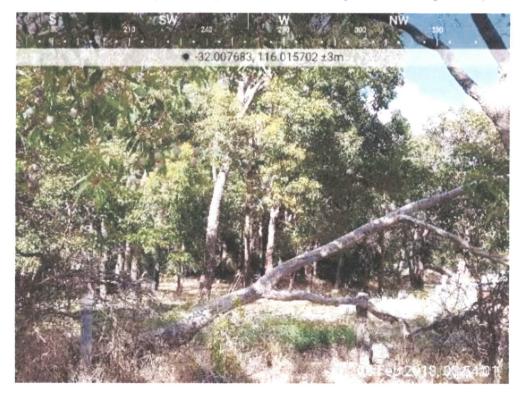


Photo 2: Class B woodland within Special Rural land to the south-west

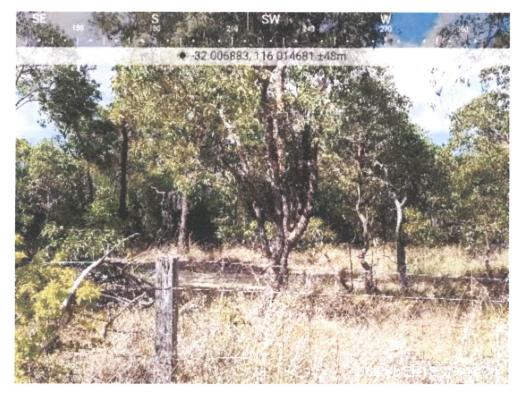


Photo 3: Class B woodland within Special Rural land to the south-west



Photo 4: Class B woodland within the project area



Photo 5: Class B woodland within Welshpool Road reserve, to be cleared and/ or landscaped to low threat



Photo 6: Class B woodland within Bush Forever site to the north

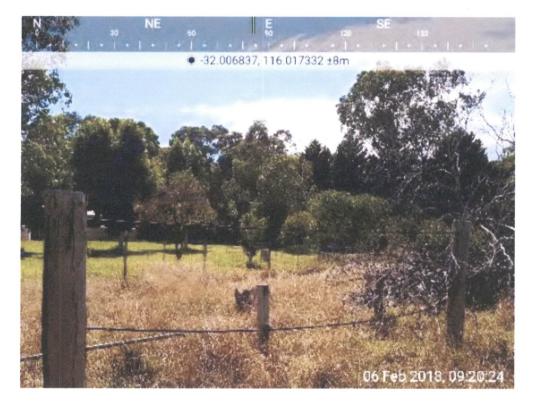


Photo 7: low threat managed land to the east



Photo 8: Class B woodland north of Gavour Road adjacent to Crystal Brook



Photo 9: low threat managed areas of Gavour Road reserve



Photo 10: Class B woodland areas of Gavour Road reserve

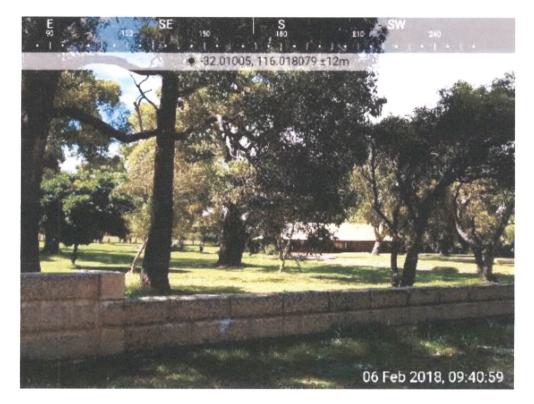


Photo 11: low threat managed land south-east of Gavour Road

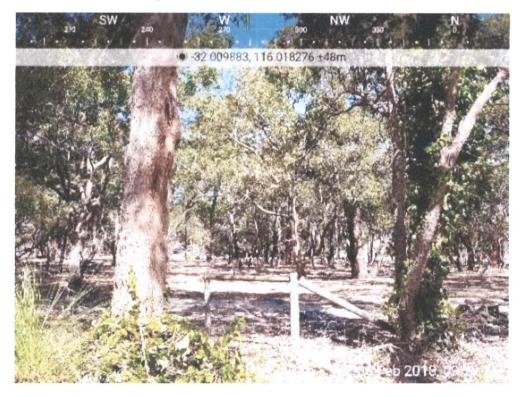


Photo 12: Class B woodland within Special Rural land to the west

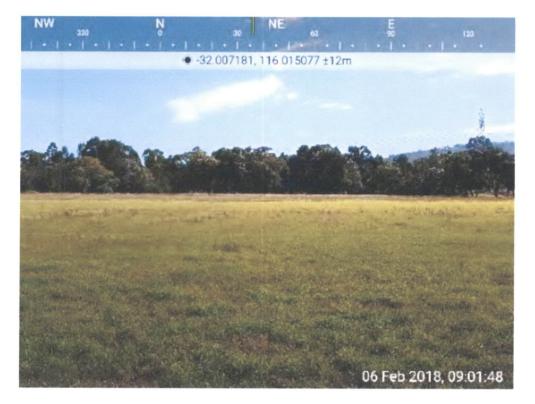


Photo 13: low threat managed land within project area

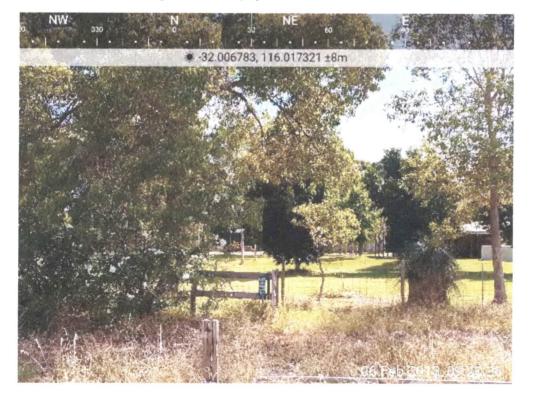


Photo 14: low threat managed land (background) within Special Rural property to the north-east

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Appendix 2 City of Kalamunda annual firebreak notice

# City of Kalamunda 2017/2018 FIREBREAK AND FUEL LOAD NOTICE Bush Fires Act 1954

### Notice to Owners and/or Occupiers\* of Land situated within the City of Kalamunda.

As a measure to assist in the control of bushfires and pursuant to the powers contained in section 33 of the *Bush Fires Act 1954* (as amended), as the property owner or occupier of land within the City of Kalamunda, you are hereby required before 1 November 2017, or within 14 days of becoming an owner or occupier of land if after this date, to comply with the requirements set out in this notice.

The applicable works outlined below must be completed before 1 November 2017 and maintained up to and including 31 March 2018.

Persons who fail to comply with the requirements of this notice may be issued with an infringement notice penalty (\$250) or prosecuted with an increased penalty (maximum penalty \$5,000). Additionally, the City of Kalamunda may carry out the required work at cost to the owner/occupier.

# 1. Land, with a building on it, with an area *greater than* 5,000m<sup>2</sup>

### You are required to:

- □ Have all flammable matter slashed, mowed or trimmed down by other means to a height no greater than 50mm across<sup>1</sup> the entire property (living trees, shrubs, plants and lawn under cultivation are excepted).
- Install bare earth firebreaks three (3) metres wide immediately inside and along all boundaries of land in a continuous form, including on boundaries adjacent to roads, rail and drain reserves and all public

open space reserves, with all overhanging branches, trees, limbs etc. to be trimmed back from over the firebreak area from ground level to a minimum height of four (4) metres. Driveways must also be maintained to these conditions.

- Ensure the roofs, gutters and walls of all buildings on the land are free of flammable matter.
- □ Install and maintain an Asset Protection Zone in accordance with the requirements set out in Part 4 of this Notice.
- 2. Land, with a building on it, with an area *less than* 5,000 m<sup>2</sup>

### You are required to:

- □ Have all flammable matter slashed, mowed or trimmed down by other means to a height no greater than 50mm across the entire property (living trees, shrubs, plants and lawn under cultivation are excepted).
- Install a firebreak immediately inside all external boundaries of the property unless the property is maintained clear of flammable matter by slashing and mowing or maintaining living garden beds or lawn.
- Ensure the roofs, gutters, walls of all buildings on the land are free of flammable matter. Driveways must also be maintained to these conditions.
- □ Install and maintain an Asset Protection Zone in accordance with the requirements set out in Part 4 of this Notice.

\* Please note that the Bush Fires Act 1954 (WA) requires the owner or occupier of land to attend to all requirements in this Notice. The City may take action against either the owner or occupier of land for a failure to comply with this Notice at its absolute discretion.



City of Kalamunda

## 3. All Vacant Land

### You are required to:

- Have all flammable matter slashed, mowed or trimmed down by other means to a height no greater than 50mm across the entire property (living trees, shrubs, plants under and lawn under cultivation excepted).
- □ On vacant land larger than 1,000 m<sup>2</sup>, install bare earth firebreaks three (3) metres wide immediately inside and along all boundaries of land in a continuous form, including on boundaries adjacent to roads, rail and drain reserves and all public open space reserves, with all overhanging branches, trees, limbs etc. to be trimmed back from over the firebreak area from ground level to a minimum height of four (4) metres. Driveways must also be maintained to these conditions. A Fire Control Officer may request firebreaks to be installed on vacant land under 1,000m<sup>2</sup> should they deem it necessary under Part 5 of this Notice to reduce risk of fire.

# 4. Asset Protection Zones

The area of land that extends out 20m from a habitable building or attached structure (for example verandas or gazebos) within the boundaries of a lot on which a habitable building is situated, is considered to be an Asset Protection Zone, also known as 'Building Protection Zone' (Asset Protection Zone).

In the Asset Protection Zone, unless an approved 'Alternative Bushfire Management Plan' is in place:

- Non-flammable managed vegetation, reticulated lawns and gardens and other non-flammable features are permitted only.
- □ All grass must be maintained to or under 50mm in height.
- Mature trees over five (5) metres in height must be under pruned to at least a height of two (2) metres from the ground (which means you must prune branches and leaves etc. from the ground up to the first 2 metres in height of the tree).

□ Tree or shrubs over two (2) metres high must not be within 2 metres of a habitable building.

# 5. Additional Works

In addition to the requirements noted above, regardless of land size and location, the City of Kalamunda or its duly authorised officer(s) may require you to undertake additional works on your property to improve access and/ or undertake further hazard removal (Additional Works) where, in the opinion of an authorised officer, such Additional Works are necessary to prevent the outbreak and/or the spread of a bush fire.

### 6. Firebreak Variations

If you consider for any reason that it is impractical to clear firebreaks as required by this Notice, or if natural features render firebreaks unnecessary, you may apply in writing to the City of Kalamunda or its duly authorised officers, not later than 1 October 2017, for alternative positions, or other methods of fire prevention on your land.

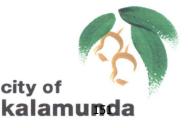
If permission is not granted, you must comply with the requirements of this Notice. This applies to variations to the Asset Protection Zone as well. The Chief Bush Fire Control Officer reserves the right to review and revoke any variation granted.

### Fuel Dumps and Depots

You are required to remove all flammable matter within ten (10) metres of where fuel drums, fuel ramps or fuel dumps are located, and where fuel drums, whether containing fuel or not, are stored.

By order of the City of Kalamunda.

Rhonda Hardy CHIEF EXECUTIVE OFFICER



City of Kalamunda

Appendix 3 Standards for APZs

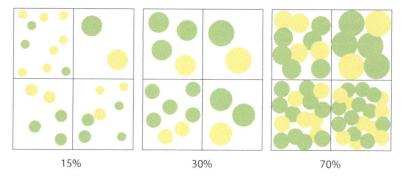


### **ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT**

### SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

- Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
- Fine Fuel load: combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
- Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.

Figure 18: Tree canopy cover - ranging from 15 to 70 per cent at maturity



- Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m<sup>2</sup> in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- Grass: should be managed to maintain a height of 100 millimetres or less.

Appendix 4 Vehicle access technical requirements

### A3.5 Private driveway longer than 50 metres

A private driveway is to meet all of the following requirements:

- · Requirements in Table 6, Column 3;
- · Required where a house site is more than 50 metres from a public road;
- Passing bays: every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house; and
- Any bridges or culverts are able to support a minimum weight capacity of 15 torines.
- All-weather surface (i.e. compacted gravel, limestone or sealed).

#### E3.5 Private driveway longer than 50 metres

For a driveway shorter than 50 metres, fire appliances typically operate from the street frontage however where the distance exceeds 50 metres, then fire appliances will need to gain access along the driveway in order to defend the property during a bushfire. Where house sites are more than 50 metres from a public road, access to individual houses and turnaround areas should be available for both conventional twowheel drive vehicles of residents and type 3.4 fire appliances.

Turn-around areas should be located within 50 metres of a house. Passing bays should be available where driveways are longer than 200 metres and turn-around areas in driveways that are longer than 500 metres. Circular and loop driveway designs may also be considered. These criteria should be addressed through subdivision design.

Passing bays should be provided at 200 metre intervals along private driveways to allow two-way traffic. The passing bays should be a minimum length of 20 metres, with the combined width of the passing bay and the access being a minimum of six metres.

Turmaround areas should allow type 3.4 fire appliances to turn around safely (i.e. kerb to kerb 17.5 metres) and should be available at the house sites and at 500 metre intervals along the driveway.

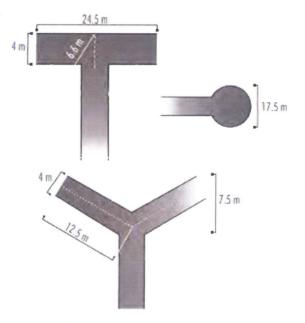


Figure 22: Design requirements for a private driveway longer than 50 metres Turning areas should allow type 3.4 fire appliances to turn safely.

### A3.6 Emergency access way

An access way that does not provide through access to a public road is to be avoided in bushfire prone areas. Where no alternative exists (this will need to be demonstrated by the proponent), an emergency access way is to be provided as an alternative link to a public road during emergencies. An emergency access way is to meet all of the following requirements:

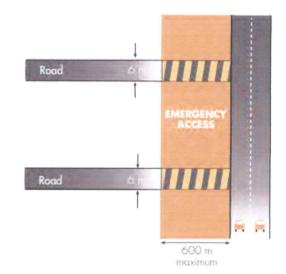
- · Requirements in Table 6, Column 4;
- · No further than 600 metres from a public road;
- Provided as right of way or public access easement in gross to ensure accessibility to the public and fire services during an emergency; and
- · Must be signposted.

#### E3.6 Emergency access way

An emergency access way is not a preferred option however may be used to link up with roads to allow alternative access and egress during emergencies where traffic flow designs do not allow for two-way access. Such access should be provided as a right-of-way or easement in gross to ensure accessibility to the public and fire emergency services during an emergency.

The access should comply with minimum standards for a public road and should be signposted. Where gates are used to control traffic flow during non-emergency periods, these must not be locked. Emergency access ways are to be no longer than 600 metres and must be adequately signposted where they adjoin public roads.

Where an emergency access way is constructed on private land, a right of way or easement in gross is to be established.



# Figure 23: Minimum design requirements for an emergency access way

Two different vehicular access routes, both of which connect to the public road network, should be available to all residents at all times.

TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
Minimum trafficable surface (m)	6.	6	4	ó*	ó*
Horizontal clearance (m)	0	6	6	0	6
Vertical clearance (m)	4.5	N. A	4.5	4.5	4.5
Maximum grade <50 metres	1 m 10	1 10 10	1 in 10	1 in 10	1 m 10
Minimum weight capacity (f)	15	1.5	15	15	15
Maximum crossfall	1 in 33	1 ar. 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5
*Refer to £3.2 Public roady Trafficuple	s. dor. o				



# PROPOSED WATTLE GROVE RETAIMENT VILLAGE

# CROSSOVER INTERSECTION ON WELSHPOOL ROAD EAST, WATTLE GROVE

City of Kalamunda

# t18.062-sk01

SCALE 1:1000 @A3 6.02.2019



AMG:CHW:1160605

alex.mcglue@lavan.com.au

craig.wallace@lavan.com.au

Alex McGlue

**Craig Wallace** 

Direct Line: (08) 9288 6890

Direct Line: (08) 9288 6828



The Quadrant, 1 William Street Perth Western Australia 6000

Tel +61 8 9288 6000 Fax +61 8 9288 6001

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for 120 years

Western Australians

17 December 2018

Our ref: Contact:

Email:

Email:

Partner:

Mr Tony Papalia Managing Director **Total Project Management** Level 6, 1008 Hay Street PERTH WA 6000 By Email: tony@totalpm.com.au

### **Dear Tony**

### 32 Gavour Road, Wattle Grove – submissions on LDP

### Background

- 1 Our mutual client Ross Leighton is the owner of 32 Gavour Road, Wattle Grove (Property).
- 2 Our client has proposed a local development plan (LDP) for the Property, which is yet to be formally endorsed by the City of Kalamunda (City).
- Submissions objecting to the proposed LDP have recently been provided to the City 3 by Rowe Group.
- 4 You have asked me to comment upon a couple of these submissions from Rowe Group, which contend that the LDP in its current form is legally incapable of being endorsed by the City.

#### Submissions

5

The first general submission from Rowe Group reads:

As previously stated, it is our view that the proposed LDP does not comply with the Regulations by virtue of the fact that it does not contain specific and detailed guidance for future development as required under Clause 46(a) Clause 48(c)(0. We also note that the proposed LDP does not address the requirement for "the location of a possible future road and servicing easement(s) with future implementation arrangements for these should land use changes occur on the properties adjoining Lot 500 in the future".

#### A full service Western Australian firm:

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Commitment Integrity

Our values:

3470-7722-7020\_1160605, v.2



6 The second general submission from Rowe Group reads:

In this regard, it is our view that the proposed LDP does not satisfy the (nondiscretionary) Conditions set out in Schedule 4 5U20 of LPS3 and is therefore not capable of approval in its current form. On this basis, the proposed LDP must be withdrawn or amended. Any changes to the proposed LDP must be re-advertised to adjoining residents.

- 7 In summary, the four contentions from Rowe Group with respect to the proposed LDP are:
  - 7.1 the LDP does not comply with requirements for an LDP as set out under Part 6 of Schedule 2 of the *Planning and Development (Local Planning Schemes) Regulations 2015* (WA) (Deemed Provisions);
  - 7.2 the LDP does not address mandatory conditions as outlined in Schedule 4 of the *City of Kalamunda Local Planning Scheme No 3* (Scheme) and is therefore legally incapable of being approved;
  - 7.3 specifically, the LDP does not address requirements in Schedule 4 of the Scheme in relation to a possible future road and servicing easements; and
  - 7.4 the LDP must be both amended and readvertised.

### Scheme provisions

- 8 The Property is located within a "special use" zone under the Scheme.
- 9 Clause 4.7.2 of the Scheme provides:

A person must not use any land, or any structure or buildings on land, in a Special Use zone except for the purposes set out against that land in Schedule 4 and subject to compliance with any conditions set out in Schedule 4 with respect to that land.

10 Similarly, clause 5.16.3 of the Scheme provides:

No person shall use any land, or any building or structure thereon in a Special Use zone, except for the purpose set against that land in Schedule 4 and subject to compliance with any conditions specified in the Schedule with respect to the land.

- 11 The Property is addressed by Item 20 in the table at Schedule 4 of the Scheme.
- 12 The column labelled "special use" in this table contains something of an objectives statement for the Property and addresses the contemplated land uses, but nothing turns on the content of this particular column for the purpose of this advice.
- 13 More importantly, the column labelled "conditions" in this table contains a total of 8 very detailed conditions.
- 14 Given the language used in clauses 4.7.2 and 5.16.3 of the Scheme, the conditions specified in the table at Schedule 4 of the Scheme must be interpreted as imposing mandatory requirements for which development at the Property must comply.

### **Contention 1 from Rowe Group – Deemed Provisions**

15 Clause 46 of the Deemed Provisions defines the term "local development plan" to mean:

2



a plan setting out specific and detailed guidance for a future development including one or more of the following –

(a) site and development standards that are to apply to the development;

(b) specifying exemptions from the requirement to obtain development approval for development in the area to which the plan relates.

16

Clause 48(1)(c) of the Deemed Provisions states that a local development plan must:

set out the following information -

(i) the standards to be applied for the buildings, other structures and works that form part of the development to which it applies;

(ii) details of the arrangements to be made for vehicles to access the area covered by the plan.

- 17 It is my opinion that this contention from Rowe Group is misconceived and that the LDP complies with clauses 46 and 48(1)(c) of the Deemed Provisions.
- 18 In particular, the LDP:
  - 18.1 contains a plan showing items such as the locations of living sites, the configuration of internal roads, retained vegetation and the intended uses of particular buildings on the Property, which would collectively constitute "specific and detailed guidance for a future development"; and
  - 18.2 sets out text comprising 11 provisions setting out further "design requirements" for development on the Property, which would collectively constitute "site and development standards" and the "standards to be applied for the buildings, other structures and works".
- 19 Although clause 46 of the Deemed Provisions refers to local development plans containing "specific and detailed guidance", it must be kept in mind that the level of detail in a local development plan is never going to be of the same level as a development application, because its very purpose is to guide the formulation of future development applications.
- 20 This contention from Rowe Group should be rejected and dismissed.

### Contention 2 from Rowe Group – Mandatory LDP requirements

- 21 As stated above, given the language used in clauses 4.7.2 and 5.16.3 of the Scheme, those 8 conditions specified in the table at Schedule 4 of the Scheme contain mandatory requirements for which development at the Property must comply.
- 22 The final condition listed in Schedule 4 of the Scheme provides that clause 5.5 of the Scheme does not apply to the Property.
- 23 Clause 5.5 of the Scheme contains a general power for varying development requirements and standards under the Scheme, so the fact that this provision does not apply to the Property reinforces the position that the 8 conditions in Schedule 4 of the Scheme are mandatory.
- 24 Importantly though, nothing in the Rowe Group submissions referred to above would seem to indicate that conditions (a), (b), (c), (d), (f), (g) or (h) in Schedule 4 of the Scheme will not be satisfied once the Property has been developed.



- 25 The only potential issue canvassed by Rowe Group relates to condition (e), which itself is the condition that requires the creation of the LDP.
- 26 The key point is that conditions (a), (b), (c), (d), (f), (g) or (h) in Schedule 4 of the Scheme strictly speaking only need to be complied with by the time that development occurs and do not need to be satisfied as part of the process of formulating the LDP.
- 27 Condition (e) in Schedule 4 of the Scheme is the only such condition that must be satisfied at the LDP stage (this item is covered below in this letter in the context of contention 3 from Rowe Group).
- 28 This contention from Rowe Group should be rejected and dismissed.

### **Contention 3 from Rowe Group – LDP content**

29 In relation to the content of the LDP, the second sentence of condition (e) in Schedule 4 of the Scheme reads:

> This will, amongst addressing other relevant planning and design matters, identify the location of the Aged Residential Care Facility, identify proposed staging, and the location of a possible future public road and servicing easement(s) with future implementation arrangements for these should land use changes occur on the properties adjoining Lot 500 in the future.

- 30 The LDP clearly shows the location of a proposed aged care facility and identifies proposed staging, so those aspects of condition (e) in Schedule 4 of the Scheme are not in issue.
- 31 Rowe Group has however identified that the LDP, as advertised, does not actually show:
  - 31.1 the location of a possible future public road and servicing easements; or
  - 31.2 future implementation arrangements for these should land use changes occur on the adjoining properties in the future.
- 32 In terms of an underlying planning purpose, it would appear that condition (e) in Schedule 4 of the Scheme only refers to a "possible future public road" in contemplation of possible future urban development immediately abutting both sides of the Property, in which case, it would arguably be desirable to have a public road connection between the two developed urban neighbourhoods (although this would appear to be contrary to the "special use" designation of the Property).
- 33 This is reflected in how condition (e) in Schedule 4 of the Scheme contains the words "should land use changes occur on the properties adjoining Lot 500 in the future".
- 34 It is observed that such a development outcome for the abutting land is highly speculative and uncertain, especially given public submissions on the LDP that encourage the retention of rural zoned land in the locality.
- 35 I would also consider it highly unlikely that any such urban development would actually occur within the 10 year period of validity of the LDP (see clause 57 of the Deemed Provisions), so the logic of requiring the LDP itself to show a possible future public road in contemplation of urbanisation on the abutting land really needs to be questioned.

4



- 36 Having said that, condition (e) in Schedule 4 of the Scheme makes clear that the LDP showing a "possible future public road" is a mandatory condition for the City to endorse the LDP, so regardless of its planning merits, the condition must be complied with for now.
- 37 On this note, in order to address contention 3 from Rowe Group, you have provided me with a copy of a proposed modified version of the LDP, which shows the location of a "possible future public road" in an area of the Property that is currently the subject of a Western Power easement.
- 38 Condition (e) in Schedule 4 of the Scheme is silent on the precise location or the requirement dimensions of this "possible future public road", so the simple fact that a possible future public road has been identified in the proposed modified version of the LDP would, in my opinion, satisfy the requirement from a legal perspective.
- 39 I observe that condition (e) in Schedule 4 of the Scheme also requires the LDP to identify the location of servicing easements and to provide for "future implementation arrangements".
- 40 On this note, I would also suggest further minor modifications to the LDP (perhaps by way of additional content under the heading "local development plan provisions"):
  - 40.1 to confirm that "servicing easements" associated with the possible future public road would be located within or adjacent to the road reserve for that possible future public road; and
  - 40.2 to briefly address the "future implementation arrangements", for the unlikely event that urbanisation occurs on land abutting both sides of the Property during the 10 year timeframe of the LDP.

### Contention 4 from Rowe Group - readvertising of LDP

- 41 It is my opinion that if amendments are made to the LDP and it remains the same substantive proposal, there will be no requirement for the LDP to be readvertised.
- 42 This opinion is based on the content of the Deemed Provisions.
- 43 In particular:
  - 43.1 clause 50 of the Deemed Provisions says that a local government is to advertise and seek comments in relation to a proposed local development plan;
  - 43.2 clause 51 of the Deemed Provisions says that a local government must consider all such submissions received; and
  - 43.3 clause 52 of the Deemed Provisions says that a local government may approve a local development plan "including any amendments made to the plan to address matters raised in submissions".
- 44 The effect of the quoted content in clause 52 of the Deemed Provisions seems to be that in the case of a local development plan, readvertising is not required if amendments are made following receipt of submissions.
- 45 It is arguable that if amendments made to a local development plan following receipt of submissions were so extensive so as to render it an entirely new proposal, then readvertising should occur, but that is very unlikely to be the case in this matter.



- 46 It is also relevant that clause 50(3) of the Deemed Provisions states that a local government may decide not to advertise a local development plan if it is not likely to adversely affect any owners or occupiers within the adjoining area.
- 47 If amendments are made to this LDP, and the substance of those amendments does not adversely affect landowners in the adjoining area, then the City could apply clause 50(3) of the Deemed Provision as a further statutory basis not to readvertise.
- 48 This contention from Rowe Group should be rejected and dismissed.

### Summary

- 49 The only contention from Rowe Group that I view as having any potential substance is the observation that the LDP does not specifically provide for a possible future public road and servicing easements, as is required by condition (e) in Schedule 4 of the Scheme.
- 50 On this note, I would suggest that minor modifications be made to the advertised version of the LDP in order to explicitly satisfy all requirements that are contained in condition (e) in Schedule 4 of the Scheme.
- 51 In my view, this outcome would be achieved if:
  - 51.1 the LDP is modified to show the location of a "possible future public road" within the boundaries of the Property;
  - 51.2 the LDP is modified to show (whether illustrated on the plan or described in the textual component) the proposed location of associated "servicing easements"; and
  - 51.3 the LDP in one way of another addressed "future implementation arrangements" with respect to the possible future public road and servicing easements.
- 52 As stated above, if any such amendments to the LDP are modest in nature, then there will be no legal basis or requirement for the LDP to be readvertised by the City.
- 53 // Please contact me or Alex McGlue if you have any questions.

Yours sincerely

Craig Wallace Partner

Please notify us if this communication has been sent to you by mistake. If it has been, any privilege between solicitor and client is not waived or lost and you are not entitled to use it in any way.

Agency/	Comment	Applicant response	City Comments
respondent			
Department	The department notes that no	An environmental assessment has been	Advice received from DBCA confirms the information
of	environmental assessment or	undertaken and provided as part of this	presented and predominantly the 'Reconnaissance Survey
Biodiversity,	information was provided to	response.	of Flora and Vegetation' prepared by Western Botanical
Conservation	support his application despite the		and note that the surveys did not identify any threatened
and	site containing intact remnant	The Environmental Assessment Report	ecological communities or flora. The surveys and flora
Attractions	vegetation in good or better	submitted, has confirmed that there are no	report are considered satisfactory and undertaken in
	condition. In the absence of any	significant flora and fauna within the	accordance with current EPA guidance.
	environmental information the	proposed development area. However any	
	department has drawn on known	significant trees for black cockatoos within	It is noted that given the circumstances of the clearing it is
	records to provide the following	the Crystal Brook buffer zone are proposed	not unusual that the report did not identify any significant
	advice.	to be retained.	flora, ecological communities and only limited threatened
			fauna habitat however there is unlikely grounds to request
	DBCA advises there are numerous	Clearing of vegetation will be assessed	any further environmental assessment of the site unless the
	known locations of the threatened	through the Part V clearing permit process.	City of Kalamunda considers this may be necessary as part
	flora species Conospermum		of future planning for the site.
	undulatum as close as 20 m form		
	the remnant vegetation on the	The proponent understands its obligations	The applicant is however obligated to refer the proposal to
	subject site. Given the proximity of	under Commonwealth EPBC Act.	the Federal Government for assessment of impacts Matters
	known occurrences and similar		of National Environmental Significance under the EPBC Act.
	habitat onsite, it is highly likely		
	that C. undulatum also occurs on		The City acknowledges the importance of some of the
	Lot 500. There is also a high		vegetation on site and therefore will require the LDP to be
	probability that the vegetation		modified to include a minimum 15m buffer to Welshpool
	onsite aligns with the threatened		Road frontage. The extent of the vegetation buffer will be
	ecological community (TEC)		considered further through potential environmental
	Banksia attenuate woodland over		investigations at the development application stage of the
	species rich dense shrublands (SCP		planning process.
	20a) which occurs 60 m to north		
	east in Bush Forever Site 50		
	(Welshpool Road Bushland, Wattle		
	Grove). The department also		

advises that the vegetation onsite	
is mapped as 'Banksia Woodlands	
of the Swan Coastal Plain' TEC,	
which was recently included by the	
Australian Government of the list	
of threatened ecological	
communities for the EPBC Act	
1999. Banksia Woodlands such as	
this also provide suitable habitat	
for Commonwealth listed	
threatened fauna.	
Due to the high likelihood of	
significant environmental values	
onsite DBCA considers the	
information provided with the	
application is not sufficient to	
adequately assess the impacts on	
the environment. The department	
therefore recommends an	
environmental assessment be	
undertaken on Lot 500, which	
includes identifying vegetation	
condition and floristic community	
types an undertaking a targeted	
threatened flora survey, to provide	
the necessary information required	
to adequately assess the potential	
impacts of the proposal.	
The department advises that any	
clearing of native vegetation is	
prohibited in Western Australia	

Department of Water and Environment Regulation	unless the clearing is authorised by a clearing permit (or a valid exemption applies). Consideration should be given to the obligations for assessment of the proposal in accordance with the Commonwealth EPBC Act. The DWER has previously provided comments and approved a Local Water Management Strategy (LWMS) for the proposed development of the site. However, it is noted from the plans provided that the proposed Local Development Plan shows more extensive development of the site than previously accounted for. Due to the further development of the site, including development of the site, including development of the site, including development of the site, including development of the site, that the LWMS is updated to reflect the changes to the development of the site. The updated LWMS should be referred to the DWER for comment, prior to the approval of the plan. <b>Policy Measure 6.3a Preparation</b>	Noted. As per the response to DPLH, do not consider an updated LWMS is required provided that the LDP is updated to show where the WWTP and effluent disposal will occur. The revised LDP plan shows the location of the proposed of the wastewater treatment plan and has deleted the non-specific development within the transmission line corridor. The effluent disposal area will not be compromised. Further any development (landscaping) within the transmission line corridor will be subject to Western Power approval. This will be addressed in detail as part of the DA submission.	The requirement for the existing LWMS to be updated will be addressed at Stage 1 of the development application process.
Department of Fire &	of a BAL Contour Map:		requirements of DFES through a modified Bushfire

		Management Plan at Stage 1 of the development
egetation: he classification of Class G rassland along the Crystal Brook reek line is not substantiated. The MP refers to the area being hodified. However, it is unclear if ny environmental considerations f revegetation, clearing permits re required) will prejudice the ssumptions within the BMP. urthermore, an enforceable hechanism is required to provide ertainty that the proposed hanagement measures can be chieved in perpetuity and that hey are enforceable. Alternatively, he vegetation classification should e revised to apply the worst case cenario as per AS 3959.	The proponent understands that the classification of Class G Grassland along the Crystal Brook creek line is subject to the support and approval of the City of Kalamunda. The future planning process provides a regulatory framework for ensuring the implementation of achieving this vegetation structure, through mechanisms such as the provision of a condition of Development Approval. The BMP has proposed this as Management strategy reference #9 in the BMP to be completed prior to building occupancy of final development stage (or other stages within 100 m of Crystal Brook vegetation), or final BAL assessment.	application stage of the planning process.
	Maintenance of this vegetation to a Class G structure will form park of the standard maintenance program for the site undertaken by the future land manager. This is the same mechanism which ensures that other landscaped areas within the site will be maintained to a low-threat standard in perpetuity. Given that future development stages in the	
		other landscaped areas within the site will be maintained to a low-threat standard in perpetuity.

BAL Contour Map:	subject to a Development Approval, there is	
The Method 1 BAL calculation	opportunity to revise the building setback to	
indicates a 14 metre and 17 metre	vegetation within the creek line if Class G	
separation distance (slope	Grassland is ultimately not supported by the	
dependent) for development	Shire. A BMP will be required to support each	
adjacent to Class B Woodland to	Development Application and therefore will	
achieve BAL-29. However the	capture any changes to the proposed	
nominated setbacks within the	restructure of Crystal Brook creek line	
LDP, adjacent to the Class B	vegetation at relevant stages.	
Woodland (periphery of site) is		
only 10 metres. It is unclear given		
this discrepancy if the independent	However, for this stage of the planning	
living sites sited adjacent to	process (Local Development Plan) Class G	
perimeter boundaries can achieve	grassland is considered appropriate, as this is	
BAL-29 or lower.	currently the proponents objective, to	
Policy Measure 6.5c Compliance	minimise the bushfire risk to elderly	
with the Bushfire Protection	residents.	
Criteria:		
Location:	The LDP proposes setbacks from classified	
A1.1 – insufficient information	vegetation, to building envelopes of	
The BAL ratings cannot be	sufficient size to achieve BAL-29. Figure 4:	
validated, as the vegetation	BAL Contour Map, of the BMP shows some	
classification inputs require	indicative building envelopes within	
modification as per the above	designated 'lot' boundaries, which are	
table	setback to the BAL-29 contour. While 'lot'	
	boundaries may be 10 m from classified Class	
Siting & Design:	B Woodland, all building envelopes will	
A 2.1 - not demonstrated	achieve BAL-29 or lower.	
The development has not been		
designed appropriately to ensure		
bushfire protection measures can		
be achieved and to minimise the		

level of bushfire impact to people that are considered vulnerable. Vehicular Access: A3.3 – not demonstrated Two cul-de-sacs are incorporated into the design without incorporating required turn around		
provisions.	See previous comment. The LDP proposes setbacks from classified vegetation, to building envelopes of sufficient size to achieve BAL-29. Figure 4: BAL Contour Map, of the BMP shows some indicative building envelopes within designated 'lot' boundaries, which are setback to the BAL-29 contour.	
A3.5 – not demonstrated An internal road which is intended to provide egress for a large number of unknown occupants (190 independent living sites plus	While 'lot' boundaries may be 10 m from classified Class B Woodland, all building envelopes will achieve BAL-29 or lower.	
an aged care facility) should not be considered a private driveway in a residential context. The internal road should be designed to meet the requirements of a public road and facilitate unimpeded two-way traffic throughout the site in an	As above	
emergency event. It is not demonstrated a vertical clearance of 4.5 metres can be achieved where the internal road passes beneath Western Power high voltage lines.	Refer to Table 2; Acceptable Solution A3.5 which states 'Although not detailed in the current LDP, any 'dead-ends' proposed will be fitted with appropriate turn-around points	

A3.6 – not demon The LDP does not EAW is of sufficient the requirements Guidelines (pg. 68 should be redesig requirements of a facilitate unimped traffic throughout emergency event. Additionally, the i (including the brid should give consid meeting structura requirements at p (refer DFES Guide site planning and specifications). A the responding to a st within a multi stor facility may require turning circles and bridges) capable of tonnes; above that protection required	<ul> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> <li>The road system through the devision of the bushfire</li> </ul>	elopment is s more A stage. The e safety ill be appropriate e event of an
Water: A4.3 – comment The BMP states th provided with a re		

	7	
supply. The lot is approximately 750 metres in length and will require fire hydrants to be provided within the private development in accordance with AS2419.1 Appendix B to address the bushfire risk. This should be clarified within the BMP at subsequent development approval stages.	It is noted that the LDP does not provide detailed specifications for the EAW. This information will be provided as part of the relevant DA stage. The BMP states that the EAW will be constructed to meet the technical specifications of the guidelines.	
Policy Measure 6.6 Vulnerable Land UsesBushfire Emergency Evacuation Plan (EEP):Subject to this Policy measure, development applications for vulnerable land uses are required to include an Emergency Evacuation Plan (EEP). The LDP recognises the site is intended for an Age Care Facility which is a vulnerable land use, and whilst an EEP is not required at this stage, consideration should be given to the formulation of an EEP at subsequent planning stages.It is recommended that further consideration be given to the Guidelines (Version 1.3) Section 5.5.2 'Developing a Bushfire and Emergency Evacuation Plan'. This	Agreed. The proponent will comply. This level of detail has not been provided at the high-level LDP stage however will be provided as part of the relevant Development Application. It is suggested that the City of Kalamunda condition the LDP appropriately.	

contains further detail in regard what an EEP should include and will ensure the appropriate content is detailed when formulating an EEP for submissi to the City of Kalamunda at the development approval stage.	water supply and hydrants in future BMPs for each stage of development.
Recommendation – not suppor modifications required	ed
It is critical that the bushfire management measures within to BMP are refined, to ensure they are accurate, defined and can be implemented to reduce the vulnerability of the development to bushfire. The proposed development is not supported for the following reasons:	Agreed. An EEP will be prepared and implemented prior to the occupation of the residential aged care facility and will be provided as part of the DA for this facility.
<ol> <li>The development design has not demonstrated compliance to Element 1: Location, Element 2 Siting and Design, Element 3: Vehicular Access and Element 4 Water.</li> <li>The proposed development intensifying land use in a bushfiprone area without addressing increased risk associated with a vulnerable land use.</li> </ol>	

This is an inappropriate statement in the context of the LDP.	
It is premature to go to this level of detail for	
the LDP. This is more appropriately dealt with at the detailed design stage and through	
the BMP required to support each Development Application. The City may wish to condition the LDP appropriately	
The proposed development achieves compliance with Element 1: Location and	
Element 2: Siting and Design by ensuring that future buildings are not exposed to a radiant heat flux > 29kW/m <sup>2</sup> .	
neut nux / 25kwynn .	
The BMP will be updated as per the comments above to ensure that compliance	
with Element 3: Vehicular Access is achieved.	
DFES have acknowledged above that detail regarding Element 4: Water can be provided	
at each Development Application stage to	

		demonstrate compliance with the requirements of the Guidelines.	
		The development will demonstrate compliance with SPP3.7 and the Guidelines, as outlined in the BMP. In addition, the Development Application for the future aged care facility will be accompanied by an EEP. The development will therefore address all statutory requirements associated with development in a bushfire prone area, including the requirements associated with the introduction of a vulnerable land use.	
Department of Planning, Lands and Heritage	The LDP proposesthe removal of a large amount of vegetation in the location of Welshpool Road East.	The Environmental Assessment Report submitted, concludes that there are no significant flora that will be impacted by the proposed development. It is not proposed to undertake any clearing within the Welshpool Road reserve, apart from creating the cross over.	The applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The Fauna Report concludes that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos.
			Advice received from DBCA confirms the information presented and predominantly the 'Reconnaissance Survey of Flora and Vegetation' prepared by Western Botanical and note that the surveys did not identify any threatened

		ecological communities or flora. The surveys and flora report are considered satisfactory and undertaken in accordance with current EPA guidance.
Due regard should be given to State Planning Policy 5.4 <i>Road and</i> <i>Rail Transport Noise and Freight</i> <i>Considerations in Land Use</i> <i>Planning.</i>	Noted.	The City notes the applicant's comment.
No information appears to have been provided with respect to the provision of a <b>public road through</b> <b>the site</b> as required by condition (e) of the relevant Special Use provisions of the Shire of Kalamunda LPS3. If such a road is required or proposed it is recommended further information on the matter be provided and incorporated into the TIA where appropriate.	Please refer to the revised LDP drawing and the letter from Lavan Legal, dated 17 December 2018. It should be noted that the services easement will follow the proposed public road.	<ul> <li>The City acknowledges that the Local Development Plan has been updated to show an indicative road.</li> <li>However, the City is concerned that the indicative road has not been given the consideration typically given to road designs.</li> <li>Instead, the City considers it appropriate in this instance for the Local Development Plan to only show the potential connections to adjoining sites, while the location of the road pavement can be determined later.</li> </ul>
No details appear to have been provided with respect to on-site wastewater treatment. As part of the assessment process for	Noted. The City has advised that this is a matter more appropriately dealt with during the DA phase.	The applicant will be required to provide an updated LWMS as part of Stage 1 of the Development Application process for referral to DWER.
Amendment 57 the EPA stated that such a facility would require works approval under the EP Act	The updated LDP shows the location of the waste water treatment plant.	
1986. Given the on-site	The LWMS required a minimum area of 2.25	
wastewater treatment facility would presumably have certain land take and buffer requirements	ha for disposal without buffers based on 410	
	persons including residents and staff. This	

	it is recommended consideration be given to these requirements at the LDP stage.	transmission line easement. This will be the subject of detailed design. The City has been provided with a significant body of information on the waste water treatment strategy. This should be adequate for the purpose of the LDP.	
	A large portion of the site is proposed to be cleared. The clearing works would likely require approval under the EPBC Act 1999. It is the proponent's responsibility to investigate the referral requirements under the EPBC Act and ensure clearing works are only undertaken with the appropriate approvals.	Noted. The proponent understands their obligations under Commonwealth EPBC Act and will consult with their environmental consultant on the significance of impacts to matters protected under the Act, following flora, vegetation and fauna surveys of the project area.	The applicant is however obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act
	The application proposes various 'community facilities' within the Western Power easement. The City may wish to refer the application to Western Power for comment.	The revised LDP has removed facilities within the Western Power easement. This was an oversight in the original submission. There will be no permanent structures within the easement. Development within the transmission line easement will be landscaping to compliment the proposed development and for the safe disposal of treated waste water. Prior and separate approval will be obtained from Western Power before undertaking any works within the easement.	The City notes the applicant's comments regarding facilities within the Western Power easement.
Nature Reserve	The potential loss of a valuable wildlife corridor and green linkage,	Crystal Brook currently contains a combination of native and exotic species,	The City acknowledges the importance of Crystal Brook as a wildlife corridor and green linkage.

Preservation	with the threat to the integrity of a	with many invasive species occupying the	
Group section of one of our main lines	section of one of our main creek	understory.	It is evident from the environmental assessment and the
	lines		fauna survey prepared in support of the LDP that the creek
		An environmental assessment has been	line contains mainly exotic species and likely to provide an
		undertaken and provided as part of this response.	ecological linkage through the subject land providing breeding habitat for native frogs and a small number of common waterbirds species. However the creek line does
		The flora, vegetation and fauna assessment undertaken has confirmed that there are no	not provide the basic resources of shelter, food or breeding sites and there is no riparian vegetation to assist in
		significant flora and fauna within the	providing a range of food and shelter. It was also noted that
		proposed development area. However any	a declared pest (Arum Lilly) is present along the creek line.
		significant trees for black cockatoos within the Crystal Brook buffer zone are proposed	Future development of the site associated with proposal
		to be retained.	will provide an opportunity to undertake rehabilitation of
		Clearing of vegetation will be assessed	the creek.
		through the Part V clearing permit process.	
		The proponent understands its obligations	
		under Commonwealth EPBC Act.	
		Close liaison with the landscape architects	
		will ensure that the Crystal Brook vegetation	
		provides appropriate habitat for ground	
		dwelling fauna, and maximises the retention	
		of black cockatoo habitat trees, whilst	
		meeting the bushfire management objectives.	
		Crystal Brook currently contains a	Refer to previous comments above.
	considering accepting a Leighton	combination of native and exotic species,	
	proposal, in its April 2015 SCM	with many invasive species occupying the	
		understory.	

agenda (see below), appeared to		
address our main concerns.	Refer to the response above.	
There was a demonstrated	Refer to the response above.	
	In line with the Duchfire Management Dian	
concern for protecting the section	In line with the Bushfire Management Plan,	
of Crystal Brook flowing through the south east corner of the lot -	up to 10% tree canopy cover is proposed to	
	be retained. While it is acknowledged that	
condition (e).	vegetation will be removed from the creek	
The Special Council Meeting of 20	line, the majority of clearing in the	
April 2015 Agenda, in considering	understorey comprises weed species not	
whether "to finally adopt	endemic to the area.	
Amendment No. 57 for Lot 500		
(32) Gavour Road, Wattle Grove",		
appeared to give concrete signs of		
sensitivity to the importance of		
maintaining this creek line. Staff		
recommended that Council:		
"Adopts the Amendment to Local		
Planning Scheme No. 3 with		
modifications in accordance with		
the following"		
Those 'modifications' (conditions),		
were seen by NRPG as vital in		
order to fully address our		
concerns. They were:		
Condition (e). "Prior to the		
occupation of any of the		
integrated aged care facility		
development on Lot 500 a		
foreshore reserve for Crystal Brook		
shall be ceded free of cost to the		
Crown as a Reserve for foreshore		
management. The extent of such		
reserve shall be at least 20 metres		

distant from, and parallel to the	
top of the northern bank of the	
brook and extending from that line	
southwards to the Gavour Road	
frontage of the lot. A foreshore	
reserve management plan shall be	
prepared, approved by the Council,	
and implemented as part of the	
development at the cost of the	
owner of Lot 500."	
However, in the unconfirmed	
minutes of this meeting, this	
condition was struck out of the	
amendment. It appears that, since	
the removal of this condition	
(proposed by an unidentified	
Councillor) at the SCM 20 April	
2015, no condition of any sort has	
been substituted regarding the	
fate of Crystal Brook. Since the fate	
of this waterway was our primary	
environmental concern in all our	
earlier submissions, we still have	
that concern. We are extremely	
disappointed at the deletion of the	
above condition and the failure to	
insert any other condition aimed at	
protecting the creek line and its	
environmental values. The impact	
of this proposed Local	
Development Plan on the Brook is	
now of greater concern than ever.	
-	

This will be addressed later in this		
submission.		
Bushfire Management Plan-	Crystal Brook currently contains a	Matters pertaining to the implementation of the Bushfire
Section 2.1.1 Vegetation and	combination of native and exotic species,	Management Plan will be addressed in Stage 1 of the
clearing within the project area.	with many invasive species occupying the	development application process.
"Vegetation adjacent to Crystal	understory.	
Brook is currently proposed to be		
remediated to remove exotic	An environmental assessment has been	
species and thinned to a structure	undertaken and provided as part of this	
consistent with Class G grassland,	response.	
including ensuring that canopy		
cover is reduced to less than 10%"	The Environmental Assessment Report	
This statement is even worse than	submitted, concludes that there are no	
the outcome indicated on the	significant flora and fauna within the	
Landscaping Concept Plan. In that	proposed development area. However any	
Plan, we find "allowing for 10%	significant trees for black cockatoos within	
tree canopy retention". Here,	the Crystal Brook buffer zone are proposed	
without any qualification as to the	to be retained.	
maximum thinning that will be		
allowed, we have a figure of "less	Clearing of vegetation will be assessed	
than 10%". This figure, however,	through the Part V clearing permit process.	
refers to the percentage of		
"canopy cover". Having the terms		
'tree canopy' and 'canopy cover',	The proponent understands its obligations	
with different percentages is	under Commonwealth EPBC Act.	
confusing. Assuming the BMP will		
take precedence, given its policy		
status, thinning could result in a		
drastically low percentage of		
canopy cover remaining. In both		
cases the SPP 3.7 requirements		
appear to have been interpreted		
harshly, to the detriment of the		

his alternative sector of the second literation		
biodiversity values of the creek line		
and its riparian area. In a similar		
development in Serpentine		
Jarrahdale (Rowley Road		
Development) Grassland type G,		
describes those areas as having		
"<10% trees". Yet more confusing		
wording. The accompanying photo		
however, gives a far more honest		
depiction of what to expect of this		
G category Grassland. It is not an		
 encouraging picture.		
2.1.2 Vegetation and clearing	Noted, vegetation proposed for retention can	The applicant has undertaken an environmental
external to project area.	be identified in close consultation with the	assessment of the site, and flora and fauna survey.
Given the recent community	City, and will also be considered through the	
concern over the clearing issues on	State clearing permit process, and where	The Fauna Report concludes that whilst the red tailed black
Welshpool Road, the proposal to	applicable the Commonwealth EPBC Act	cockatoo is likely to use the study area, the study area
have vegetation "cleared or	referral process.	represents a relatively small area for foraging habitat for
managed in a low threat state"		black cockatoos. Only one tree appeared to have a large
gives further cause for concern.		breeding hollow that may be suitable for black cockatoos.
The propensity of developers to		
take the easiest way out when		Advice received from DBCA confirms the information
dealing with any clearing		presented and predominantly the 'Reconnaissance Survey
requirements, makes it essential		of Flora and Vegetation' prepared by Western Botanical
that environmentally qualified city		and note that the surveys did not identify any threatened
staff are available to supervise any		ecological communities or flora. The surveys and flora
such clearing. The city, having		report are considered satisfactory and undertaken in
approved this development, must		accordance with current EPA guidance.
not then avoid its responsibility to		
supervise such sensitive activities.		Any clearing would need to be in accordance with Agency
		and Local Government approvals. Whilst the City would
		undertake compliance action to ensure development
		occurs in accordance with any approval, in the first instance
		becars in decordance with any approval, in the first fistance

			the onus is on the developer of a site to ensure compliance with all relevant approvals.
Western Power	<ul> <li>Any design shall not be within 30m of any towers in the easement</li> </ul>	Noted.	The City acknowledges the applicant's response to the submission, noting that construction works are no longer proposed within the Western Power easement.
	<ul> <li>Structure foundation assessment based on maximum expected water table as a result of effluent discharge based on the latest hydrology study. This assumes that the flow direction of the effluent will be away from Western Power assets.</li> <li>As a minimum the customer shall undertake the following studies:         <ul> <li>Earth Potential Rise (EPR);</li> <li>Low frequency/Electromagnetic Induction (LFI);</li> <li>Electric &amp; Magnetic Fields (EMF);</li> <li>Electrostatic Induction (EI);</li> <li>Soil Model, Resistivity and</li> </ul> </li> </ul>	This will be addressed in detail during the DA stage. It is proposed to liaise closely with Western Power for prior approval of any works within the easement. There will be no impact on structure foundations. These studies to be done at detailed design stage following development approval of relevant stages of the project. It is not proposed to undertake any construction within the easement. This is reflected in the amended LDP.	proposed within the Western Power easement.
	<ul><li>grid/stake impedance; and</li><li>Hydrology Study</li></ul>		

1 -Objection	Proposal lacking information as to the waste water disposal, services and natural greenery between dwellings	This will be addressed in detail during the DA stage. The revised LDP plan shows the location of the wastewater treatment plant. It is proposed to dispose of treated waste water within the transmission line corridor.	The City acknowledges the submission. The City agrees that landscaping would be addressed at the development application stage of development. The City acknowledges the applicant's comments regarding waste water. This will be addressed through the revised LWMS as part of Stage 1 of the development application process.
	Concerning the traffic issues, a direct left onto a major road is asking for trouble. This access is after a blind corner, most heavy haulage vehicles travel in the left lane. The previous proposal had better access with an intended slip road.	The LDP and future Development Applications are (and will be) supported by a Traffic Impact Statement. DPLH, the responsible authority for Welshpool Road East has provided its comments to the Applicant on traffic issues and the Applicant will address them. The traffic management plan has determined that a turn left slip lane is not required. However the proponent is prepared to install the slip lane provide the City approve the removal of any verge tress necessary to construct the slip lane.	The City is required to consider the appropriateness of vehicle access at the development application stage of development. The applicant will be required to provide a slip land providing for a left hand turn for vehicles heading west along Welshpool Road East which is noted on the revised LDP. The applicant has submitted an aerial overlay showing the impact of the slip lane on the vegetation. This along with a photograph of the site suggest any impact on the vegetation will be minimal. This will be investigated at the development application stage of the process when a more detailed plan of the slip lane and its impact will be considered. The applicant will be required to submit a Road Safety Audit as part of Stage 1 of the development applicant process.
	The proposal would set an undesirable precedent.	The land is zoned "Special Use", which means it has been given special consideration for the proposed development, and as such will not set a precedent.	The Minister has in approving the Special Use zone over the site has acknowledged the suitability of the land use in the location.

2-Objection	The effects to our nature &	Issues addressed in previous comments.	The applicant has undertaken an environmental
	environment of such high density		assessment of the site, and flora and fauna survey.
	living will have grave effects.		
	We have a group of red cockatoos		The Fauna Report concludes that whilst the red tailed black
	living in this area & the destruction		cockatoo is likely to use the study area, the study area
	of their environment will only		represents a relatively small area for foraging habitat for
	increase their risk of extinction.		black cockatoos. Only one tree appeared to have a large
	The loss of trees and habitat- our		breeding hollow that may be suitable for black cockatoos.
	city will no longer be a home in the		
	forest.		Advice received from DBCA confirms the information
	A large density development with		presented and predominantly the 'Reconnaissance Survey
	inadequate sewerage facilities,		of Flora and Vegetation' prepared by Western Botanical
	little to no medical facilities,		and note that the surveys did not identify any threatened
	destruction of wildlife habitat,		ecological communities or flora. The surveys and flora
	removal of bushland and another		report are considered satisfactory and undertaken in
	slip road on the bend of an already		accordance with current EPA guidance.
	high speed major road is ridiculous		
	and shows little insight in this area.		The applicant is however obligated to refer the proposal to
			the Federal Government for assessment of impacts Matters
			of National Environmental Significance under the EPBC Act.
			The City acknowledges the importance of some of the
			vegetation on site and therefore will require the LDP to be
			modified to include a minimum 15m buffer to Welshpool
			Road frontage. The extent of the vegetation buffer will be
			considered further through potential environmental
			investigations at the development application stage of the
			planning process.
			Through the Scheme amendment process to rezone the site
			the proponent demonstrated with the approval of the ther
			Department of Water, that on site effluent disposal could
			be accommodated. The applicant will be required to updat

			the LWMS as part of Stage 1 of the development application process. A slip lane on Welshpool Road East is required to ensure vehicles have safe vehicle movement into the site. The
			applicant will be required to provide a Road Safety Audit as part of Stage 1 of the development application process.
3 – Non-			
Objection			
4- Non-			
Objection			
5 -Objection	Sewerage: I have concerns about	The site has previously been zoned for the	The applicant has satisfactorily demonstrated that sewer
	the provisions and plans for	unsewered development, with a Local Water	and wastewater are capable of being managed on the site.
	sewerage and waste water on site.	Management Strategy (LWMS). The LWMS	
	I was advised at the Information	demonstrated that effluent disposal could be	The detailed design of any facilities would be undertaken to
	evening on the 5th of July at the	undertaken satisfactorily on the site.	form part of Stage 1 of the development application
	Shire of Kalamunda that the plan		process.
	to manage effluent / waste water	The construction of a 2 km sewer main would	
	prior to connection to deep	be extremely expensive (minimum cost in the	Details of the Bushfire Management Plan will be addressed
	sewerage was to treat all waste in	millions of dollars) and is anticipated to make	as part of Stage 1 of the development application process.
	a treatment facility on the North West corner of the property prior	the project financially unviable. There is currently a significant need for aged care	
	to pumping it to a waste water	facilities in the City and this project is	
	disposal site between the	required to proceed.	
	community facilities in the centre		
	of the proposed development.	Wastewater pump stations within the	
	Adequacy of the proposed	Metropolitan Area routinely pump	
	alternate waste water treatment	wastewater over heights much greater than	
	system I do not think that a	14 m. These pump stations are located	

development of up to 190	underground in residential areas, including	
individual homes plus an Aged	adjacent to homes. Because of the	
Residential Care Facility and	underground location and low noise design,	
related facilities should be allowed	these facilities do not cause significant noise.	
to progress using on site disposal	These pump stations are required to have	
in a residential area when access	adequate storage to manage pump failure. If	
to Deep Sewer is within 2000m (as	a pump failure occurs, the pump stations	
advised by Kalamunda shire	send an SMS to the operator notifying them	
engineers – Tonkin Highway). I	of the situation to ensure it is rapidly	
think that Deep Sewer should be	repaired. Any pump stations within the	
introduced by the developer from	development would be required to meet	
the inception of the project in	these standards.	
cooperation with the		
Infrastructure provider. If it is not	The understorey surrounding the creek line is	
connected when the single biggest	currently predominantly exotic weeds with a	
development occurs in the area	native tree overstorey. To meet DFES	
then when will it be. I do not think	requirements, the upper tree canopy is	
that the existing conditions in the	required to be reduced to less than 10%	
SU20 for connection to the "future	through thinning, and the understory must	
reticulated sewerage" is sufficient	be kept low. The development is proposing	
given that there is no guarantee	to remove the exotic weeds and remediate	
that the reticulated sewerage will	the understorey with local native species.	
ever get to within 200m of the		
boundary. I think it should be a		
requirement from the outset. I am		
advised from the Bushfire		
Management Plan at Section 3.1.2		
that there is a slope from the		
North West to the south East of		
approx. 14m. I would like to know		
that it is possible and practical to		
pump this waste over that distance		
uphill without excessive noise from		

6 – Non-	pumping station. Please advise how this is to be achieved and what redundancies will be in place to manage the waste in the event of pumping failure. I understand that there is a requirement to produce an Urban Water Management Plan but have not been able to review this document nor assess its adequacy or plans to address, noise, odour, health etc. Vegetation Management I was advised at the Information evening on the 5th of July at the Shire of Kalamunda that there would be no change to the vegetation along the Crystal Brook Creek line. This appears to be inconsistent with the Bushfire Management Plan at Section 2.1.1 which states that "Vegetation adjacent to Crystal Brook is currently proposed to be remediated to remove exotic species, and thinned to a structure consistent with Class G grassland, including ensuring that canopy cover is reduced to less than 10%." Are these consistent concepts.		
Objection 7-Objection	The loss of wildlife habitat the red cockatoo are at very low numbers - this is a significant feeding area for	Addressed in responses above.	The applicant has undertaken an environmental assessment of the site, and flora and fauna survey.

	these beautiful birds. This area needs to be reserved as a green belt.	The Fauna Report concludes that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. The applicant is however obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.
8 – Non- Objection		
9- Non-		
Objection		
10-Non-		
Objection		
11 - Non-		
Objection		
12- Non-		
Objection		
13- Non-		
Objection		
14- Non-		
Objection		

Another disgusting attempt to put profit over the preservation of nature and common sense.	Noted but not relevant to the matter at hand.	Noted.
Access onto Welshpool Road is DANGEROUS	Addressed in responses above	The City's traffic assessment of the proposal indicates that a left-turn slip-lane is required. The applicant at the request of the City has provided amended TIS and modified LDP to include notification showing requirement for a slip lane.
	profit over the preservation of nature and common sense.	profit over the preservation of nature and common sense.       hand.         hand.

			The applicant will also be required to provide a Road Safety Audit as part of Stage 1 of the development application process.
	Layout of units shows NO IMAGINATION	Detail to be provided at subsequent DA stage.	The layout of units is logical, although broad-brush, and will be considered in more detail at the development application stage of the planning process. If there are features of the site identified in a future development application which warrant more of a site-specific unit layout to protect or enhance features of the land, the City will encourage the applicant to modify the unit layout to accommodate those features.
	Why have single units with no shared walls.	Irrelevant consideration.	The design of individual units, and their interface with other units, will be subject to refinement at the development application stage. This detail is not typically determined at the Local Development Plan stage.
Objection 29	Rejected as an adequate proposal since the plans show no initiative to include desirable facilities or pleasant design.	The LDP shows community facilities, comprehensively landscaped open spaces, community club rooms, remediated creek environment for bush walking, intimate	The applicant has provided indicative facilities, details of which would be considered at the development application stage.
	No playgrounds, community facilities etc.	gathering areas, pocket parks, picnic/BBQ areas, active recreation areas (tennis, bowls etc). These are considered to be highly desirable facilities and will be designed by the architect and landscape architect.	There is flexibility for the applicant to consider the scale of communal facilities it provides at the development application stage.
Objection 30	We oppose on the grounds of safety at Welshpool Road. Lives will be lost as the residents of the development try to cross	The development has been reviewed by an expert traffic consultant. Addressed in responses above	The City's traffic assessment of the proposal indicates that a left-turn slip-lane is required. The applicant at the request of the City has provided amended TIS and modified LDP to include notification showing requirement for a slip lane.

31- Non-Objection 32- Non-Objection 33- Non-Objection 34- Non-Objection 35- Non-Objection 36- Non-Objection 37- Non-Objection 38- Non-Objection 39- Non-Objection 40-Objection

Welshpool Road to get to the Shops.		The applicant will also be required to provide a Road Safety Audit as part of Stage 1 of the development application process.
Concerned that the development will affect our privacy, our lifestyle and also our activities on our property. We operate chainsaws,	These activities can continue. The proposed development does not impinge on the enjoyment of neighbouring properties, and is adequately set back from property	If activities are being undertaken in accordance with applicable approval requirements, the likelihood of a conflict occurring between existing development and the potential future development of the subject site is

considered to be low.

The applicant has undertaken an environmental

assessment of the site, and flora and fauna survey.

fire risk.

lawn mowers and other machinery

to maintain our property as a low

It will affect the environment.

There are countless birds

boundaries.

Addressed in responses above

	(Carnaby's especially) fauna and wildlife surrounding us.		<ul> <li>The Fauna Report concludes that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos.</li> <li>The applicant is however obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act.</li> <li>The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.</li> </ul>
41-Objection	Object because it is an urban use in a rural area.	The site is zoned Special Use for an Integrated Aged Care Facility.	<ul> <li>The land use can be considered on the site in accordance with the Special Use zoning.</li> <li>The appropriateness of the scale of future development will be a consideration at the development application stage.</li> </ul>
	This area is a fire risk area where the fire danger is extreme in summer and it would be difficult to evacuate a dense urban facility quickly.	The development will comply with the bushfire planning and management requirements of SPP3.7. Please refer to the BMP prepared by Strategen.	The Bushfire Management Plan will be considered in more detail with respect to its compliance with DFES's requirements a part of the development application for Stage 1 of the development.

	The area is home to red-tailed black cockatoos and a wide variety of native flora and fauna, all of which are certain to suffer with the increasing urbanisation of the area.	Addressed in responses above	The applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The Fauna Report concludes that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. The applicant is however obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.
42 Non	It is a spot rezoning that lacks planning merit and it should be rejected.	The matter being considered is a Local Development Plan, not a rezoning. The previous rezoning was a well-considered, comprehensive Scheme Amendment that was assessed by a range of government departments, and ultimately approved by the current Minister for Planning. It was approved on its substantial planning merits.	The land use can be considered on the site in accordance with the Special Use zoning approved by then then Minister for Planning.
42- Non- Objection			
43-Objection	Misleading Information	The plan referred to is a "Concept Master Plan" which is a thematic, diagrammatical	Detailed information is required to be provided at the development application stage. The information

	Landscape presentation comprising photos of small parts of other developments elsewhere is highly misleading and paints a false picture of what is achievable with this plan.	representation of what is intended by the Proponent. Of course, the Proponent could not provide photos of the actual development of the site, as the site is not yet developed. This type of master plan is quite normal, and in our view is not misleading.	accompanying the LDP providing real-life examples of what future development may look like is appropriate.
	Potential Residents exposed to extreme road accident risk.Instead of, as the original proposal, being entered from Gavour Road, this proposal is being presented with normal vehicle entry and exit quite unrealistically from Welshpool Road East close to a bend and at the foot of a steep incline.In this immediate locality it is already classified as a known "Accident Black Spot" (recently fitted with multiple heavy duty safety guard cabling for only that reason).Entry and exit pose extraordinarily high safety risk, and for older drivers frequent fatal accidents would be virtually guaranteed.	The LDP and future Development Applications are (and will be) supported by a Traffic Impact Statement. DPLH, the responsible authority for Welshpool Road East, has provided its comments to the Applicant on traffic issues and the Applicant will address them. Addressed in responses above	The City's traffic assessment of the proposal indicates that a left-turn slip-lane is required. The applicant at the request of the City has provided amended TIS and modified LDP to include notification showing requirement for a slip lane. The requirement for a slip lane on Welshpool Road East was supported by the DPLH. The applicant will also be required to provide a Road Safety Audit as part of Stage 1 of the development application process.
44- Non- Objection			
45- Non- Objection			

46- Non-			
Objection			
47- Non-			
Objection			
48- Non-			
Objection			
49- Non-			
Objection			
50Non-			
Objection			
51-Objection	There appears to be insufficient information about the clearing of land and maintaining native vegetation (which is important for animals, including the cockatoos in the area). I am particularly concerned about the impact of the proposed slip lane from Welshpool Road East and the impact on the Lemon Scented Gum Trees. I consider further information about the preservation of the vegetation should be provided before this application proceeds further.	Addressed in responses above	<ul> <li>The applicant is obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act.</li> <li>The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.</li> <li>The applicant has submitted an aerial overlay showing the impact of the slip lane on the vegetation. This along with a photograph of the site suggest any impact on the vegetation will be minimal. This will be investigated at the development application stage of the process when a more detailed plan of the slip lane and its impact will be considered.</li> <li>The City's traffic assessment of the proposal indicates that a left-turn slip-lane is required. The applicant at the request of the City has provided the following:</li> </ul>

			<ul> <li>amended TIA;</li> <li>modified LDP to include notification showing requirement for a slip lane.</li> <li>Photo overlay of the slip land on the road verge showing the extent of the vegetation removal.</li> </ul>
52- Non- Objection			
53- Non-			
Objection			
54- Non-			
Objection			
55- Non-			
Objection			
56- Non-			
Objection			
57- Non-			
Objection			
58- Non-			
Objection			
59- Non-			
Objection			
60- Non-			
Objection			
61- Non-			
Objection			
62-Objection	We don't need a building of this proportion in this area.	The development is proportionate to the zoning of the land.	Given the site is appropriately zoned for a future development application to be lodged, the City will be required to consider all matters to be considered as set out

			<ul> <li>in the Planning and Development (Local Planning Schemes) Regulations 2015.</li> <li>The 'need' for a development of this potential size is not a consideration listed in the abovementioned regulations.</li> <li>The built form is a consideration, but not 'need'.</li> </ul>
	The road structure in this area is not built to suit increased traffic.	This is not correct. Traffic experts have confirmed that roads are in adequate condition to meet the (low) demand of the proposed development.	The applicant has submitted sufficient information through a TIS demonstrating that the existing road network does have capacity to accommodate potential future development.
			The applicant will be required to provide a Road Safety Audit in support of Stage 1 of the development application process.
	There is no deep sewerage.	Alternative methods for effluent disposal is proposed, and preliminary approvals received.	The applicant has sufficiently demonstrated that the site has the capacity to service future development.Servicing will be a further consideration at the development application stage.
	Why not use the old building on Lewis Road?	Not a relevant planning consideration.	The applicant can apply to develop the land. The City does not have the ability to force applicants to use other facilities.
63- Non- Objection 64 Non-			
Objection 65-Objection	This area has native endemic species that are going to be devastated. The construction alone	Addressed in responses above	The applicant has undertaken an environmental assessment of the site, and flora and fauna survey.

	is going to be destructive to the flora and fauna. The buildings are going to be set back by 10 metres this also has the road way leaving no room for native visual screening.		The Fauna Report concluded that the modified habitats of the study area are only likely to provide habitats for a few native mammals, notably Quenda. The report also notes that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. The applicant is obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.
66-Objection	Object to the visual look of this proposal. Too much concrete within the sight of our property and not enough mature trees to be left as visual screening.	The proposal is balanced and appropriate, as was intended under the Scheme Amendment. A quality landscaping regime is proposed to provide visual screening to external properties and streets, balancing environmental and bushfire requirements.	The design of the development will be further considered at the development application stage. The City will expect a future development application to include landscaping which allows the development to integrate with the existing and surrounding streetscapes to minimise its visual impact.
67- Non- Objection			

68- Non-			
Objection			
69- Non-			
Objection			
70- Non-			
Objection			
71- Non-			
Objection			
72- Non-			
Objection			
73- Non-			
Objection			
74-Objection	Please register my objection to this development on both the environmental issued in a recent environmental review of Lot 500 Gavour Road.	Noted. Addressed in responses above	<ul> <li>The applicant has undertaken an environmental assessment of the site, and flora and fauna survey.</li> <li>The Fauna Report concluded that the modified habitats of the study area are only likely to provide habitats for a few native mammals, notably Quenda.</li> <li>The report also notes that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos.</li> <li>The applicant is obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act.</li> <li>The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool</li> </ul>

com asse 1. A atte habi flora 2. Ro pote road East 3. Th "Cry 4. M	e development will destroy or mpromise 4 key environmental sets: A threatened "Banksia enuata" native woodland, bitat of threatened & protected ra & fauna.	Addressed through previous comments. It is noted that Section 51B of the EP Act (referred to in submission) relates to the declaration of Environmentally Sensitive	The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break notice and approved by DWER, it was unable to identify the presence of the EPBC Act listed Banksia species. The Fauna
habi Carr cock Plea the l Envi and requ Bush	Roadside Public reserve - tential 100m clearing to create ad access from Welshpool Rd st. The area around the stream rystal Brook". Marri trees across the property - nich provide suitable roosting bitat for the Endangered rnaby and Vulnerable red-tailed ckatoo. ease note: under Section 51b of e EPA act Bush Forever sites are vironmentally Sensitive Areas d a minimum 500m buffer is quired from the boundary of a sh Forever Site to protect the vironmental values of a site. A	Areas. Environmentally Sensitive Areas are only relevant in the context of exemptions for native vegetation clearing permits under Part V of the EP Act. Clearing of native vegetation will be a consideration of DWER through the Part V EP Act approval process. Regardless, an Environmentally Sensitive Area is mapped across the majority of the site. DWERs database identifies this as the buffer to a Threatened Ecological Community, which appears to be located on the opposite side of Welshpool Road East, to the site. It is noted that as per the Environmental Protection (Environmentally Sensitive Areas) Notice 2005, the buffer to a TEC is not an ESA, despite DWER mapping TEC buffers as ESAs. We are not aware of any statutory requirement for a 500 m buffer to Bush	Report did note that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. The applicant is obligated to refer the proposal to the Federal Government for assessment of impacts Matters of National Environmental Significance under the EPBC Act. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process. The applicant has provided an aerial overlay of the slip lane on the reserve vegetation which shows the impact on the vegetation will be minimal. Final design for the slip lane will be considered at Stage 1 the development application
500r #50	Om buffer to Bush Forever site 0 (just opposite) overlaps the ajority of Lot 500 Gavour Rd.	Forever sites, and development is commonly permitted immediately adjacent to Bush forever sites, on the proviso that potential	process.

	it is not possible to judge the level of native vegetation retention because the documents provided are inconsistent. The landscape development plan shows removal of most existing vegetation around Crystal Brook to reduce BAL, whereas the local development plan shows existing vegetation to be maintained in the same area. This contradiction suggests strongly that further work is needed to produce plans that maximise both social and environmental benefits.	impacts are managed. No potential impacts to Bush Forever have been identified.	It is evident from the environmental assessment and the fauna survey prepared in support of the LDP that the creek line contains mainly exotic species and likely to provide an ecological linkage through the subject land providing breeding habitat for native frogs and a small number of common waterbirds species. However the creek line does not provide the basic resources of shelter, food or breeding sites and there is no riparian vegetation to assist in providing a range of food and shelter. It was also noted that a declared pest (Arum Lilly) is present along the creek line. Future development of the site associated with proposal will provide an opportunity to undertake rehabilitation of the creek.
76- Non- Objection			
77-Objection	The area needed to be cleared for the Bushfire Management is huge. This will practically denude the base of the Hill of any and all vegetation. This is totally unacceptable. In keeping with the destruction of so many trees and shrubbery – whether native or not – this will mean a loss of habitat for so many native animals and	Refer to responses above. A Bush Forever site (site 50) is situated to the north of Welshpool Road East, and is considered an Environmentally Sensitive Area (ESA) due to the presence of the Threatened Ecological Community FCT 20a 'uplands centred on Bassendean Dunes and Dandaragan Plateau.' While the mapped buffer of the ESA extends into Lot 500, the	Further consideration to the Bushfire Management Plans and its implications for the existing natural environment will be considered at Stage 1 of the development application process. The subject site is not a Bush Forever Site. With regard to the impact of the proposal on Crystal Brook, It is evident from the environmental assessment and the fauna survey prepared in support of the LDP that the creek
	birds. Has an Environmental Study been done of this area in recent times? Is not some of this area Bush Forever? What impact on this Bush Forever site will this	majority of this buffer comprises cleared vegetation, development and farmland. Remnant native vegetation within Lot 500 currently has limited connection with the Bush Forever site as it is separated from the	line contains mainly exotic species and likely to provide an ecological linkage through the subject land providing breeding habitat for native frogs and a small number of common waterbirds species. However, the creek line does not provide the basic resources of shelter, food or breeding

	elopment make as, to my	Bush Forever site by Welshpool Road at a	sites and there is no riparian vegetation to assist in
	erstanding, there is to be a	distance of approximately 30 m, including	providing a range of food and shelter. It was also noted that
-	e buffer zone around any of	paved road, degraded vegetation and	a declared pest (Arum Lilly) is present along the creek line.
	e sites.	planted, non-native vegetation. As such,	Future development of the site associated with proposal
	development will also impact	direct impacts to the Bush Forever site	will provide an opportunity to undertake rehabilitation of
	rystal Brook itself which will	resulting from the proposed development of	the creek.
	act other areas as a	Lot 500 are not anticipated.	
	equence. I would not object to		The City's traffic assessment of the proposal indicates that a
the C	City removing the bamboo	It is acknowledged that clearing will be	left-turn slip-lane is required. The applicant at the request
curre	ently strangling the brook,	required as detailed in the submission.	of the City has provided the an amended TIS, and modified
how	ever.	However, the retention of up to 10% of the	LDP to include notification showing requirement for a slip
	ummarise.	tree canopy cover along the Crystal Brook,	lane. The applicant will also be required to provide a Road
l obj	ect most strongly to the	including Corymbia calophylla and Eucalyptus	Safety Audit as part of Stage 1 of the development
Deve	elopment going ahead on the	marginata, will continue to provide foraging	application process.
follo	wing grounds;	habitat for Forest Red-tailed Black Cockatoos.	
	6.The entrance/exit onto		The applicant has undertaken an environmental
	Welshpool Road East will	Additionally, Development Applications (DA)	assessment of the site, and flora and fauna survey.
	create an extremely	are required to be submitted for approval of	
	dangerous traffic hazard	each stage of the development	The Fauna Report concludes that whilst the red tailed black
	with vehicles moving		cockatoo is likely to use the study area, the study area
	slowly coming into the	An impact assessment will be undertaken	represents a relatively small area for foraging habitat for
	path of vehicles coming	once these values have been quantified.	black cockatoos. Only one tree appeared to have a large
	down Lesmurdie Hill at	Approval under the EPBC Act and Part V of	breeding hollow that may be suitable for black cockatoos.
	80kph and the heavy	the EP Act is also likely to be required for	
	transport trucks that use	clearing within any of the development	Advice received from DBCA confirms the information
	this route daily.	stages; as such, any obligations in relation to	presented and predominantly the 'Reconnaissance Survey
	8.The bush – whether	these two Acts will also be met.	of Flora and Vegetation' prepared by Western Botanical
	native or not- that needs		and note that the surveys did not identify any threatened
	to be cleared to be	Any potential impacts to Crystal Brook	ecological communities or flora. The surveys and flora
	compliant with the	relating to stormwater management will be	report are considered satisfactory and undertaken in
	Bushfire Management Plan	address through stormwater management	accordance with current EPA guidance.
	is destruction on a huge	plans for each stage of development.	

dest repla up fo habi	inhabit this area. This area is home to a number of threatened species. 10.There has been no recent Environmental Study done on the proposed area. 11.Bush Forever land is being impacted on and not treated with the utmost respect it should have. These areas were to remain bush for us and future generations. 12.This development will impact on Crystal Brook and therefore other areas down of it. Native flora and fauna are to be troyed and planting acement trees will not make for their natural and usual itat. They will still be just as	vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.
78- Non- Objection	e. Forever.	

79-Objection	I object to the proposal local development plan (DA18/022) as it will have an excessive and detrimental impact on the rare bush land located on Lot 500 Gavour Road, as well as the nearby Bush Forever site (Area No. 50). The proposal does not fit in with the general feel of the area. I feel that the many large trees located in the City of Kalamunda are one of the key reasons people value this area and migrate here. Many people I talk to associate Kalamunda with forests and trees. By further removing the large trees and bushland on this property it will have a negative impact on the image of the City of Kalamunda, eroding its character and	Bush Forever site 50 is situated to the north of Welshpool Road East, and is considered an Environmentally Sensitive Area (ESA) due to the presence of the Threatened Ecological Community FCT 20a 'uplands centred on Bassendean Dunes and Dandaragan Plateau.' While the mapped buffer of the ESA extends into Lot 500, the majority of this buffer comprises cleared vegetation, development and farmland. Remnant native vegetation within Lot 500 currently has limited connection with the Bush Forever site, as it is separated from the Bush Forever site by Welshpool Road, by approximately 30 m, including paved road, degraded vegetation and planted, non-native vegetation. As such, direct impacts to the Bush Forever site resulting from the proposed development of Lot 500 are not anticipated. While it is acknowledged that vegetation is proposed to be removed from the site as	of National Environmental Significance under the EPBC Act.
	the key reasons people value this area and migrate here. Many people I talk to associate Kalamunda with forests and trees. By further removing the large trees and bushland on this property it will have a negative impact on the image of the City of Kalamunda,	separated from the Bush Forever site by Welshpool Road, by approximately 30 m, including paved road, degraded vegetation and planted, non-native vegetation. As such, direct impacts to the Bush Forever site resulting from the proposed development of Lot 500 are not anticipated. While it is acknowledged that vegetation is	of Flora and Vegetation' prepared by Western Botanical and note that the surveys did not identify any threatened ecological communities or flora. The surveys and flora report are considered satisfactory and undertaken in accordance with current EPA guidance. The applicant is however obligated to refer the proposal to the Federal Government for assessment of impacts Matters

30 -	A community group recently	1. and 2. Addressed in responses above.	The Flora and Vegetation Survey report noted that due to
Objection	commissioned Ecologia	Development Applications (DA) are required	the clearing undertaken on the site as part of the fire brea
	Environmental Consultants to carry	to be submitted for approval of each stage of	notice and approved by DWER, it was unable to identify th
	out a preliminary assessment and	the development.	presence of the EPBC Act listed Banksia species. The Fauna
	another consultant (whose study is		Report did note that whilst the red tailed black cockatoo is
	still in progress) to do a more		likely to use the study area, the study area represents a
	detailed, floristic analysis and	Disturbance to any MNES resulting from a	relatively small area for foraging habitat for black
	impact assessment of the	development is not permitted without	cockatoos. Only one tree appeared to have a large breeding
	proposal.	approval under the EPBC Act; as such, any	hollow that may be suitable for black cockatoos.
	1. Lot 500 includes over 4ha of	obligations under the EPBC Act will also be	
	highly cleared, endangered	taken into consideration prior to each stage	It is noted that the applicant is obligated to have the
	Forrestfield Vegetation Complex as	of development.	proposal assessed under impacts Matters of National
	mapped by DPAW (2016), see		Environmental Significance listed under the EPBC Act. This
	attached map (Conservation	Additionally, DBCA will be required to	will be addressed further as part of Stage 1 of the
	Values of Lot 500. The Welshpool	consider the relative scarcity of the	development application process. To date, the applicant
	Rd Bush Forever Area 50 also	vegetation complex when considering	has undertaken an environmental assessment of the site,
	comprises the Forrestfield	approval of a Native Vegetation Clearing	and flora and fauna survey.
	Vegetation Complex. The EPA has	Permit under Part V of the EP Act.	
	publicly stated on many occasions		The City acknowledges the importance of some of the
	that the Forrestfield Vegetation	3. Addressed in responses above	vegetation on site and therefore will require the LDP to be
	Complex is of very high		modified to include a minimum 15m buffer to Welshpool
	conservation to it, as over 97% of	4. Clearing of vegetation within Lot 500 will	Road frontage. The extent of the vegetation buffer will be
	the former extent of the eastern	not completely disrupt the ecological linkage,	considered further through potential environmental
	Swan Coastal Plain native	as retained trees along Crystal Brook and	investigations at the development application stage of the
	vegetation (including the Guildford	landscaping will continue to provide some	planning process.
	and Forrestfield Vegetation	habitat for fauna within the Lot.	
	Complexes) have been cleared and		Concerns regarding the suitability of the site for aged
	the remainder is of the highest	Lot 500 is already highly disturbed with the	persons are noted, however the proposed land use can be
	conservation significance.	majority of the site cleared for residential	

The development proposal will	property, farm buildings, and paddocks. Any	considered on the site in accordance with the Special Use
clear 90% of the existing native	clearing within the Lot is relatively small-	zoning approved by then then Minister for Planning.
vegetation on Lot 500.	scale when the broader area of intact native	
	vegetation in the region is considered,	Through the Scheme amendment process to rezone the site
2. There are also multiple Matters	including Bush Forever sites 50 (Welshpool	the proponent demonstrated with the approval of the then
of National Environmental	Road Bushland), 387 (Greater Brixton St	Department of Water, that on site effluent disposal could
Significance (MNES) listed under	Wetlands) and 320 (Hartfield Park) as well as	be accommodated. The applicant will be required to update
the Federal EPBC Act that will be	Mundy and Banyowla Regional Parks to the	the LWMS as part of Stage 1 of the development
significantly impacted by this	east. No clearing of Bush forever site 50 is	application process.
development, as listed below.	proposed as part of this development.	
The 4ha of Forrestfield Vegetation		The Bushfire Management Plan will be considered in more
Complex on Lot 500 comprises	5. Development Applications (DA) are	detail with respect to its compliance with DFES's
quality forage habitat (Marri and	required to be submitted for approval of	requirements a part of the development application for
Jarrah trees) of the Threatened	each stage of the development. Addressed in	Stage 1 of the development.
Fauna Species: Baudins Black	responses above	
Cockatoo, Forest Red-Tailed Black		
Cockatoo and Carnabys Black	Disturbance to MNES is not permitted	
Cockatoo, all listed under the EPBC	without approval under the EPBC Act.	
Act.	Referrals under the EPBC Act will be	
There is at least 4 ha of quality	prepared for each stage of the development,	
forage habitat in Lot 500 (much of	and will require the inclusion of data	
it being mature and thus	collected in the abovementioned spring flora,	
significant potential nesting trees >	vegetation and fauna habitat surveys.	
500mm DBH) in close proximity to		
several night roosts recorded in	Approval under Part V of the EP Act and	
the Great Cocky Count 2018 at	potentially the EPBC Act will be required for	
Kalamunda, Kenwick and	clearing of native vegetation; as such, any	
Forrestfield (within 3.5km or less	obligations in relation to these two Acts will	
of Lot 500) and in close proximity	also be met.	
to breeding sites in the Darling		
Range and Kenwick (within 4km or	Comments regarding bushfire safety and	
less of Lot 500).	vulnerable occupants have been addressed in	
	previous comments.	

 This means that the referral	
	It is noted that clearing proposed for buchfing
thresholds are exceeded and the	It is noted that clearing proposed for bushfire
proponent is required to refer the	safety will not necessitate complete removal
proposed development (due to its	of revegetation, and retention of trees and
significant impact on one or both	some vegetation may be able to occur on the
of these species) to the Federal	proviso that it complies with Clause 2.2.3.2(f)
Department of Environment and	of AS3959 which relates to managed, low-
Energy under the EPBC Act.	threat vegetation. Vegetation/ trees to be
	retained can be discussed in close
3.Lot 500 also includes at least	consultation with the City and informed by a
1.1ha of (Good to Excellent condition) of Threatened	flora and vegetation assessment.
Ecological Community (TEC)	We note that the Ecologia report has not
bushland listed under the EPBC Act	been provided to the proponent.
(see attached map Conservation	
values in Lot 500).	The LWMS prepared for the site in 2015
This TEC bushland in Lot 500 is	identified that:
either:	1. The soils on the site were suitable for
FCT 20a: Banksia Woodlands of the	effluent disposal based on
Swan Coastal Plain, Threatened	geotechnical and hydraulic
Ecological Community	conductivity testing.
(Endangered) listed under the	2. The proposed wastewater loading
EPBC Act; or	can be managed on the site within
FCT 20c: Shrublands and	Department of Health Criteria.
Woodlands of the eastern Swan	
Coastal Plain, Threatened	This approach was endorsed by the then
Ecological Community (Critically	Department of Water as being able to occur
Endangered) listed under the EPBC	without impact to surrounding residents.
Act	Additional studies to confirm nutrient inputs
Lot 500 meets the criteria for	and demonstrate compliance with health
patch size and vegetation	criteria will be required to be undertaken
condition for both TECs above.	· ·
condition for both recs above.	prior to the wastewater system being
	approved for construction by Department of

This means that the referral	Health and Department of Water and
thresholds are exceeded	Environment Regulation. This will include
regardless of which Floristic	assessment of potential health and
Community Type is confirmed.	environmental impacts associated with the
Thus the proponent is required to	wastewater disposal based on detailed
refer the proposed development	design of the WWTP and disposal system.
(due to its significant impact) to	
the Federal Department of	
Environment and Energy under the	Refer to previous responses.
EPBC Act.	
A multivariate analysis of floristics	
to unequivocally confirm the	
Floristic Community Type(s) in Lot	
500 is in progress as part of the	
second botanical study	
commission by our group. We will	
supply this supplementary	
evidence, if required, in the near	
future.	
For FCT20a (Banksia Woodlands of	
the Swan Coastal Plain) TEC, the	
threshold for referral (see quote	
below from DEE conservation	
advice below) for assessment to	
the Federal Department of	
Environment and Energy under the	
Federal EPBC Act is 0.5ha to 1ha in	
Very Good to Excellent condition:	
"Minimum patch sizes apply for	
consideration of a patch as part of	
the listed ecological	
community for EPBC Act referral,	
assessment and compliance	

purposes.		
Where patches meet different		
levels of condition, different		
minimum patch sizes apply:		
'Pristine' – no minimum patch size		
applies		
'Excellent' – 0.5 ha or 5,000 m2		
(e.g. 50 m x 100 m)		
'Very Good' – 1 ha or 10,000 m2		
(e.g. 100 m x 100 m)		
'Good' – 2 ha or 20,000 m2 (e.g.		
200 m x 100 m)		
To be considered as part of the		
EPBC Act ecological community a		
patch should meet at least		
the Good Condition category".		
For FCT 20c (Shrublands and		
Woodlands of the eastern Swan		
Coastal Plain) TEC there is no		
minimum threshold for referral		
(see quote below from DEE		
conservation advice below) for		
assessment to the Federal		
Department of Environment and		
Energy under the Federal EPBC		
Act. So all areas (regardless of their		
size or condition) that meet the		
description of the FCT 20c		
ecological community should be		
referred for assessment to the		
Federal Department of		
Environment and Energy under the		
Federal EPBC Act		

The bushland on Lot 500 meets the habitat, floristic and vegetation structure description of the community parolided on the DEE listing/ conservation advice and other publications for this TEC (quote): • "This community mainly occurs on soils mapped as the Forrestfield Unit of the Ridge Hill Shelf"; • "The Shrublands and Woodlands of the eastern Swan Coastal Plain ecological community is a woodland mainly on the transitional soils of the Ridge Hill Shelf, on the Swan Coastal Plain adjacent to the Darling Scarp, and extends onto the eastern fringe of the Swan Coastal Plain, and also into adjacent aeolian deposits. The community mainly occurs as a shrubland, or a woodland flanksia atternuts and Banksia menziesii, or Corymbia		
structure description of the community and the habitat of the FCT 20c community provided on the DEE listing/ conservation advice and other publications for this TEC (quote): "This community mainly occurs on soils mapped as the Forrestfield Unit of the Ridge Hills Shelf"; "The Shrublands and Woodlands of the eastern Swan Coastal Plain ecological community is a woodland mainly on the transitional soils of the Ridge Hill Shelf, on the Swan Coastal Plain adjacent to the Darling Scarp, and extends onto the alluvial clays deposited on the eastern fringe of the Swan Coastal Plain, and also into adjacent aeolian deposits. The community mainly occurs as a shrubland, or a woodland fanksia attenuata and Banksia menziesii, or Corymbia		
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the alluvial clays deposited on the eastern fringe of the Swan Coastal Plain, and also into adjacent aeolian deposits. The community mainly occurs as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia		
on the eastern fringe of the Swan Coastal Plain, and also into adjacent aeolian deposits. The community mainly occurs as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia		
the Swan Coastal Plain, and also into adjacent aeolian deposits. The community mainly occurs as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia		
and also into adjacent aeolian deposits. The community mainly occurs as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia	-	
aeolian deposits. The community mainly occurs as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia	-	
community mainly occurs as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia	-	
as a shrubland, or a woodland of Banksia attenuata and Banksia menziesii, or Corymbia	-	
woodland of Banksia attenuata and Banksia menziesii, or Corymbia		
menziesii, or Corymbia		
menziesii, or Corymbia	attenuata and Banksia	
	calophylla, sometimes with	

Allocasuarina fraseriana,	
over a shrub layer that can	
include the species	
Adenanthos cygnorum,	
Hibbertia huegelii,	
Scaevola repens var.	
repens, Allocasuarina	
humilis, Bossiaea	
eriocarpa, Hibbertia	
hypericoides and Stirlingia	
latifolia. A suite of herbs	
including Conostylis aurea,	
Trachymene pilosa,	
Lomandra hermaphrodita,	
Burchardia umbellata and	
Patersonia occidentalis,	
and the sedges	
Mesomelaena	
pseudostygia,	
Mesomelaena tetragona,	
and Lyginia barbata often	
occur in the community."	
and	
"Because the ecological	
community has a very	
restricted distribution and	
is listed as Critically	
Endangered in Western	
Australia, no condition	
thresholds have been	
applied to the nationally-	
listed ecological	
community and hence it is	

considered that all areas		
meeting the description of		
the ecological community		
are critical to its survival."		
Therefore as the referral		
thresholds are exceeded for both		
TECS in Lot 500, the proponent is		
required to refer the proposed		
development (due to its significant		
impact on one or both of these		
TECs) to the Federal Department		
of Environment and Energy under		
the EPBC Act.		
4. Ecological Connectivity		
All of the conservation values of		
the TEC bushland in Lot 500 are		
enhanced by its close linkage		
(<30m separation distance) to the		
Welshpool Rd Bush Forever Area		
that is TEC bushland of the same		
FCT as Lot 500. Also Lot 500 is part		
of a major ecological corridor that		
links the most biodiverse and		
important Bush Forever Area of		
the region (Greater Brixton St		
Wetlands BFA 387) to the large		
Darling Range National and		
Regional Parks (see Broad Scale		
values map attached).		
5. Bush fire Management		
Clearing or thinning of the		
Welshpool Rd Bush Forever Area		
50 and /or part of Lot 500 for		

bushfire management purposes	
would constitute vegetation	
clearing under the EPBC Act and	
the WA EP Act. Thus the bushfir	
safety plans of the Lot 500	
proposal is another reason that	Lot
500 action should be referred for	
assessment to the Federal	
Department of Environment and	
Energy under the Federal EPBC	Act
The fire separation zone for the	Lot
500 proposal currently includes	
part of Bush Forever site 50 and	
much of the TEC and Threatene	
Cockatoo habitat in Lot 500.Nor	e
of this vegetation should be	
cleared, or thinned or burnt for	the
purposes fire separation zones;	the
latter actions would constitute	
vegetation clearing under the El	PBC
Act and the WA EP Act.	
The proponent has a legal	
obligation under the EPBC Act to	
mitigate (avoid, reduce or mana	ge)
impacts on the EPBC Act listed	
values and not just (irresponsible	
seek to maximize impacts with r	
consideration for the conservation	on
values, as the proponent is	
currently proposing to do with	
development extending over th	
entirety of Lot 500.The fire	
separation zone required for sat	ety

of property and inhohitants can be	
of property and inhabitants can be	
accommodated by reserving part	
of the current grassed areas of Lot	
500 for fire separation zones. A	
100 m, or wider, grassed area	
could easily be maintained as a	
separation zone between the TEC	
bush and the new buildings	
proposed. If the developer wishes	
to increase the lot's yield for	
buildings beyond that afforded	
above, the standard of	
construction on some of the	
proposed buildings (as required)	
should be increased from the	
current minimum Bush Fire Attack	
(BAL) rating to the higher BAL	
required to conform with	
Australian Building Standards that	
provide for the fire safety of	
buildings situated closer to the	
higher risk areas.	
Additionally, I object to proposal	
for housing the elderly in this part	
of Wattle Grove. This area is	
inherently a high bushfire danger	
zone and thus not suitable for	
accommodating a large population	
of slow moving, potentially	
disorientated and vulnerable	
people who would be at great risk	
during bush fire season. This	

season is growing hotter and	
longer every year with increasing	
periods of very windy days during	
extreme heat events. We have	
bush reserves on the hill and	
surrounding this site. This area is	
best left special rural so that	
threatened species of national	
significance can be protected,	
threatened trees can persist to	
cool the area, and a sustainable	
way of life can be achieved. The	
aged or over 55's community could	
be more appropriately	
accommodated elsewhere in	
other, safer locations.	
I also object to this proposal	
because it is not connected to	
sewerage and the initial soil report	
commissioned by the proponent of	
the Lot 500 development stated	
that soil was unsuitable for	
receiving treated waste water from	
the onsite treatment plant. The	
neighbours of the treatment plant	
and the Crystal Brook catchment	
would be adversely affected by the	
large volumes of treated waste	
water which will be produced.	
I urge for all these reasons that the	
City of Kalamunda reject this	
proposal, or failing that, the City of	

	Kalamunda (or the proponent) refer the proposed development (on the grounds of multiple significant impacts on MNES) to the Federal Department of Environment and Energy for assessment under the EPBC Act.		
81 - Objection	<ul> <li>For the following reasons the proposed re development of 500 Gavour Road should NOT proceed.</li> <li>1. The threatened "Banksia attenuate" native woodland, habitat of threatened and protected flora and fauna.</li> <li>2. roadside Public reserve – potential 100m clearing to create road access from Welshpool road East.</li> <li>3. the area around the stream "Crystal Brook"</li> <li>4. Marri trees across the property – which provide suitable roosting habitat for the ENDANGERED CARNABY and VULNERABLE RE-TAILED COOKATOO.</li> <li>Please note: Under section 51b of the EPA act Bush forever sites are Environmentally Sensitive Areas and a minimum 500m buffer is required from the boundary of a Bush Forever Site to protect the environmental values of a site. A</li> </ul>	It should be noted that the ESA mapped around Bush Forever site 50 relates to the presence of the Threatened Ecological Community FCT 20a within the Bush Forever site, rather than being a buffer to the Bush Forever site itself. DBCA maps all locations of TECs with a 500 m buffer, and the ESA mapping is based on this buffered TEC boundary. While the mapped buffer of the ESA extends into Lot 500, the majority of this buffer comprises cleared vegetation, development and farmland. Remnant native vegetation within Lot 500 currently has limited connection with the Bush Forever site as it is separated from the Bush Forever site by Welshpool Road at a distance of approximately 30 m, including paved road, degraded vegetation and planted, non-native vegetation. As such, direct impacts to the Bush Forever site resulting from the proposed development of Lot 500 are not anticipated. It is acknowledged that clearing will be required within the four areas detailed in the submission. However, the retention of up to	The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break notice and approved by DWER, it was unable to identify the presence of the EPBC Act listed Banksia species. The Fauna Report did note that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. It is noted that the applicant is obligated to have the proposal assessed under impacts Matters of National Environmental Significance listed under the EPBC Act. This will be addressed further as part of Stage 1 of the development application process. To date, the applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.

500m buffer to Bush Forever site #50 (just opposite) overlaps the majority of Lot 500 Gavour Road.	10% of the tree canopy cover along the Crystal Brook, including Corymbia calophylla and Eucalyptus marginata, will continue to provide foraging habitat for Forest Red-tailed Black Cockatoos.	The applicant has provided an aerial overlay of the slip lane on the reserve vegetation which shows the impact on the vegetation will be minimal. Final design for the slip lane will be considered at Stage 1 the development application process.
	Additionally, Development Applications (DA) are required to be submitted for approval of each stage of the development. Addressed in responses above	It is evident from the environmental assessment and the fauna survey prepared in support of the LDP that the creek line contains mainly exotic species and likely to provide an ecological linkage through the subject land providing breeding habitat for native frogs and a small number of
	Approval under the EPBC Act and Part V of the EP Act is also likely to be required for clearing within any of the development	common waterbirds species. However, the creek line does not provide the basic resources of shelter, food or breeding sites and there is no riparian vegetation to assist in providing a range of food and shelter. It was also noted that a declared pest (Arum Lilly) is present along the creek line.
	stages; as such, any obligations in relation to these two Acts will also be met.	Future development of the site associated with proposal will provide an opportunity to undertake rehabilitation of the creek.

82 Non- Objection			
83-Objective	I am very much saddened by the thought of losing the trees in Wattle Grove. They are sanctuary for so many native birds and animals. We are losing so much of these natural areas and trees, it makes me very sad. Please stop and leave this area as it is, very beautiful. Thank you.	It is acknowledged that clearing is likely to be required. However, the retention of up to 10% of the tree canopy cover along the Crystal Brook, including Corymbia calophylla and Eucalyptus marginata, will continue to provide foraging habitat for Forest Red-tailed Black Cockatoos. Subsequent to any clearing of native vegetation, landscaping will be undertaken within the confines of bushfire planning, which will also provide some habitat for native fauna species including Quenda. Addressed in responses above	It is noted that the applicant is obligated to have the proposal assessed under impacts Matters of National Environmental Significance listed under the EPBC Act. This will be addressed further as part of Stage 1 of the development application process. To date, the applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.

84-Objection	The project has been previously rejected by the prior Minister for Planning after lengthy consideration.	The current Minister for Planning approved the Scheme Amendment. The matter currently being progressed is a Local Development Plan.	Scheme amendment 57 which rezoned the site to Special Use for aged accommodation has been approved by the Minister for Planning.
	There is conflict between the Bushfire Management Plan and the Transport Impact Statement over emergency access. As they are diametrically opposed one party must be wrong.	We do not believe this to be the case.	The Applicant will be required to address the requirements of the DFES through modifications to the Bushfire Management Plan at Stage 1 of the development application process.
85-Objection	This area is not suitable, is still meant to be special rural (even though the demise of this zone seems imminent).	The site is suitable for the proposed development and accords with the Special Use that applies to the land.	The City confirms that the land use can be considered on the site. The suitability of a future development will be assessed on its planning merits at the development application stage.
86-Objection	No Environmental "specialist studies" have been undertaken and made available for this public comment In light of this, an independent desktop environmental	Addressed in responses above . 2. The proposed development will destroy or compromise 4 key environmental assets within the Lot	The applicant has prepared an environmental assessment, and flora and fauna survey of the site which are considered satisfactory from the perspective of DBCA as it meets the requirements of the EPA. With reference to the four key environmental assets stated, the following is noted:
	assessment identifying some of the key environmental issues and values associated with Lot 500	It is acknowledged that clearing will be required within the four areas detailed in the	• The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire

Gavour Rd Wattle Grove has been	submission. However, the retention of up to		break notice and approved by DWER, it was unable to
undertaken. This desktop	10% of the tree canopy cover along the		identify the presence of the EPBC Act listed Banksia
assessment was supported by a	Crystal Brook, including Corymbia calophylla		species. The Fauna Report did note that whilst the red
site visit on 11 July 2018 to	and Eucalyptus marginata, will continue to		tailed black cockatoo is likely to use the study area, the
ground-truth some of the	provide foraging habitat for Forest Red-tailed		study area represents a relatively small area for
preliminary findings of the desktop	Black Cockatoos.		foraging habitat for black cockatoos. Only one tree
assessment. The site visit had to be			appeared to have a large breeding hollow that may be
conducted from various	Lot 500 is already highly disturbed with the		suitable for black cockatoos.
boundaries of the property as	majority of the site cleared for residential		
access is not possible. The	property, farm buildings, and paddocks. Any	•	It is noted that the applicant is obligated to have the
environmental consultants	clearing within the Lot is relatively small-		proposal assessed under impacts Matters of National
(ECOLOGIA) who undertook this	scale when the broader area of intact native		Environmental Significance listed under the EPBC Act.
report have been operating for 25	vegetation in the region is considered,		This will be addressed further as part of Stage 1 of the
years and are a preferred supplier	including Bush Forever sites 50 (Welshpool		development application process. To date, the
to the WALGA (West Australian	Road Bushland), 387 (Greater Brixton St		applicant has undertaken an environmental assessment
Local Government Association).	Wetlands) and 320 (Hartfield Park) as well as		of the site, and flora and fauna survey.
Please accept the report (attached)	Mundy and Banyowla Regional Parks to the		
as part of my comment and as	east.	•	The City acknowledges the importance of some of the
supporting expert evidence for the			vegetation on site and therefore will require the LDP to
balance of this submission.	3. Development does not seem to have		be modified to include a minimum 15m buffer to
Given this I am enquiring as to the	appropriate approvals and limited potential		Welshpool Road frontage. The extent of the vegetation
whereabouts of such a "specialist	for approval		buffer will be considered further through potential
study" (be it a biodiversity study,			environmental investigations at the development
environmental impact assessment	A: It should be noted that the ESA mapped		application stage of the planning process.
or even appropriate seasonal flora	around Bush Forever site 50 relates to the		
and vegetation surveys) If one (or	presence of the Threatened Ecological	•	The applicant has provided an aerial overlay of the slip
any) was not undertaken or	Community FCT 20a within the Bush Forever		lane on the reserve vegetation which shows the impact
submitted – why was one not	site, rather than being a buffer to the Bush		on the vegetation will be minimal. Final design for the
undertaken or submitted?	Forever site itself. DBCA maps all locations of		slip lane will be considered at Stage 1 the development
Especially given the evidence and	TECs with a 500 m buffer, and the ESA		application process.
recommendations of the	mapping is based on this buffered TEC		
Assessment by Ecologia.	boundary. Preliminary environmental	•	It is evident from the environmental assessment and
	investigations indicated that an		the fauna survey prepared in support of the LDP that

The proposed development will	approximately 0.5 ha area of bushland in the	the creek line contains mainly exotic species and likely
destroy or compromise 4 key	northwest of the site contains vegetation	to provide an ecological linkage through the subject
environmental assets within the	that potentially aligns with the Banksia	land providing breeding habitat for native frogs and a
Lot:	Woodlands of the Swan Coastal Plain	small number of common waterbirds species. However
	Threatened Ecological Community (Banksia	the creek line does not provide the basic resources of
1. A threatened "Banksia	Woodlands TEC); however, additional site	shelter, food or breeding sites and there is no riparian
attenuata" native woodland,	investigations would be required to confirm	vegetation to assist in providing a range of food and
habitat of threatened & protected	this.	shelter. It was also noted that a declared pest (Arum
flora & fauna.		Lilly) is present along the creek line. Future
2. Roadside Public reserve -	B: Development Applications (DA) are	development of the site associated with proposal will
potential 100m clearing to create	required to be submitted for approval of	provide an opportunity to undertake rehabilitation of
road access from Welshpool Rd	each stage of the development. Addressed in	the creek.
East.	responses above	
3. The area around the stream		• The DBCA have advised that the buffer to the existing
"Crystal Brook".		ESA on the adjoining lot does impact the ability of the
4. Marri trees across the property -	<b>4.</b> The LWMS prepared for the site in 2015	subject site to proceed with development on site and
which provide suitable roosting	identified that:	no further referral for environmental assessment.
habitat for the Endangered	1. The soils on the site were suitable for	
Carnaby and Vulnerable red-tailed	effluent disposal based on geotechnical and	With regard to the other "red flags" the following is noted:
cockatoo.	hydraulic conductivity testing.	
	2. The proposed wastewater loading	• Given the site is appropriately zoned for a future
For more details please refer to	can be managed on the site within	development application to be lodged, the City will be
Independent (7 page)	Department of Health Criteria.	required to consider all matters to be considered as set
Environmental assessment		out in the Planning and Development (Local Planning
conducted on 11/7/18 by Ecologia.	This approach was endorsed by the then	Schemes) Regulations 2015. The 'need' for a
	Department of Water as being able to occur	development of this potential size is not a
Development does not seem to	without impact to surrounding residents.	consideration listed in the abovementioned
have appropriate approvals and	Additional studies to confirm nutrient inputs	regulations. The built form is a consideration, but not
limited potential for approval.	and demonstrate compliance with health	'need'.
	criteria will be required to be undertaken	• Through the Scheme amendment process to rezone the
A. Disregard for "Bush Forever"	prior to the wastewater system being	site the proponent demonstrated with the approval of
buffer.	approved for construction by Department of	the then Department of Water, that on site effluent
	Health and Department of Water and	disposal could be accommodated. The applicant will be

<ul> <li>"Most notably the development would appear to contravene Section 51b of the EPA act 1980: Bush Forever sites are Environmentally Sensitive Areas and a minimum 500m buffer is required from the boundary of a Bush Forever Site to protect the environmental values of a site. A 500m buffer to Bush Forever site #50 (just opposite) overlaps the majority of Lot 500 Gavour Rd."</li> <li>B. Disregard for Section 51C Environmental Protection Act 1986. Need for clearing approval and referral to DoEE.</li> <li>"The condition of the vegetation on the site range from Very Good to Excellent, in north-western corner of the Lot, to Good to Very Good in the north-eastern portion. Banksia woodlands also provide critical foraging (feeding) habitat for the Carnaby's Black Cockatoo which is listed as Endangered under the EPBC Act 1999 and as</li> </ul>	<ul> <li>Environment Regulation. This will include assessment of potential health and environmental impacts associated with the wastewater disposal based on detailed design of the WWTP and disposal system.</li> <li>We note that the Ecologia report has not been provided to the developer. Given that the developer was not approached for permission for Ecologia to access the site, any report by Ecologia would be based on a desktop review. This report is will not be as accurate or relevant to the development of the site as the LWMS, which is based on groundwater and soils testing undertaken on the site.</li> <li>5. Local Government Approval and Public Comment premature and without sufficient information</li> <li>The LDP is intended to be a strategic document created as an overarching plan for future development. Each stage of the development Application.</li> <li>Addressed in responses above</li> </ul>	<ul> <li>required to update the LWMS as part of Stage 1 of the development application process.</li> <li>Bushfire management as part of an Asset Protection Zone (APZ) has to be addressed on site and can't extend to surrounding properties. There are situations where DFES have accepted the road verge as part of the APZ.</li> <li>The proposal is for an LDP not the development application. It is considered that the applicant at the request of the City has provided sufficient information to enable the LDP to be considered.</li> <li>With respect to Point 5, it is considered that the applicant has provided sufficient information for the LDP to be considered and determined and where appropriate further information deferred to the development application stage of the planning process.</li> </ul>
critical foraging (feeding) habitat for the Carnaby's Black Cockatoo which is listed as Endangered	development will require the submission of a Development Application.	
'Specially protected fauna' under the Western Australian Wildlife Conservation Act 1950. None of the other TEC's listed in the Environmental Assessment Report		

(360 Environmental 2018) as	
occurring in the vicinity of Lot 500	
are considered to occur on Lot	
500.	
Amendments to Section 51C of the	
Environmental Protection Act 1986	
(EP Act) in July 2004 included new	
provisions for the regulation of	
clearing of native vegetation in	
Western Australia, whereby	
clearing of native vegetation is	
deemed to be an offence under	
the EP Act unless it is conducted	
under the authority of a native	
vegetation clearing permit or	
where an exemption can be	
applied. Under the amendments,	
any clearing of native vegetation	
requires a permit (i.e. a Native	
Vegetation Clearing Permit	
(NVCP)). Under Schedule 5 of the	
EP Act, applications to clear native	
vegetation are assessed by the	
relevant authority against ten	
clearing principles (DER 2014a).	
One of these clearing principles	
(i.e. Principle D) states that "native	
vegetation should not be cleared if	
it comprises the whole or part of,	
or is necessary for the	
maintenance of a threatened	
ecological community". Therefore,	
in my opinion, any NVCP	

application to clear a potential TEC	
on Lot 500 may be at variance with	
this Principle and the relevant	
authority (i.e. the Department of	
Water and Environmental	
Regulation) may not approve an	
application to clear the TEC.	
Furthermore, in September 2016,	
the Commonwealth Department of	
Environment and Energy (DoEE)	
listed Banksia Woodlands on the	
Swan Coastal Plain as an	
Endangered TEC under the EPBC	
Act 1999. As a consequence, any	
development application proposal	
that has the potential to	
significantly impact this	
community would require referral	
to the DoEE for assessment."	
4. The development raises other	
red flags:	
Aside from environmental	
concerns outlined and detailed in	
Ecologia's environmental	
assessment there are other	
matters of concern:	
• The intensity of development.	
Remaining queries over	
appropriate waste water disposal –	
has the potential for	
contamination of the ground water	
and crystal brook by	
· · · · ·	

pharmaceuticals been correctly	
determined?	
<ul> <li>"Knock on" affect- whereby</li> </ul>	
mitigation of fire risk (given build	
out and high density of	
development) would dictate	
thinning of surrounds and	
surrounding properties negatively	
impacting native woodlands,	
undergrowth, habitat, rare,	
threatened and vulnerable flora	
and fauna.	
5.Local Government Approval and	
Public Comment premature and	
without sufficient information.	
Given the lack of genuine, up-to-	
date environmental data re 500	
Gavour Rd, approval cannot	
meaningfully be considered by	
Local Government, Local Council or	
put to informed and transparent	
public comment.	
10.2 of the local planning scheme	
states: "The local government in	
considering an application for	
planning approval is to have due	
regard to such of the following	
matters as are in the opinion of the	
local government relevant to the	
 1	

use or development the subject of	
the application –	
(d) any approved environmental	
protection policy under the	
Environmental	
Protection Act 1986	
(i) the compatibility of a use or	
development with its setting;	
aa) any other planning	
consideration the local	
government considers relevant."	
Given the lack of "specialist	
studies" dealing with	
environmental considerations, it	
could be argued that it is	
impossible (and premature) for	
this development to be genuinely	
assessed and considered for	
approval by Local Government (&	
Council) with regard to EPA rulings	
(d), compatibility (i) and other	
issues (aa) including permissions	
from relevant agencies such as	
- Swan Region, Parks and Wildlife,	
Department of Biodiversity,	
Conservation and Attractions	
Service; or	
- Commonwealth Department of	
Environment and Energy (DoEE)	
 · · · · · ·	

As no material evidence, relevant	
data or assessment from the	
developer exists, is readily	
accessible nor seems to have been	
requested by the City, it is not	
possible or appropriate for Local	
Government (and other agencies)	
to assess, nor for the public to	
comment on the development at	
this stage. Further preparation and	
submissions from the developer, I	
believe are warranted. The	
development submission of the	
developer seems to fall short of	
minimum requirements for	
submissions (9.2 of LPS) therefore	
rendering considerations (10.2 of	
LPS) premature and lacking the	
breadth and depth of appropriate	
information. Given Expert	
(Ecologia's assessment) and	
departmental (Dept of	
Biodiversity, Conservation and	
Attractions) advise planning	
approval is contingent on vital	
issues of environmental impact,	
that have not been adequately	
addressed or made publicly	
available with suitable	
transparency. Any decision made	
at this stage or any public	
comment - given the lack of	
necessary, relevant and	

recommended information may lead to intensified community disharmony, scrutiny, criticism and potential rescission. Furthermore a decision taken at this time without appropriate specialist studies reveals the reality (or creates the perception) that the Environment is not a valid or necessary consideration in the eyes of the City and therefore the City (& and its Council) are not expressing & reflective with Electors priorities.	

87-Objection	great concerns that the	Addressed in responses above	The Flora and Vegetation Survey report noted that due to
	development will compromise 4		the clearing undertaken on the site as part of the fire break
	key environmental assets: 1. A threatened "Banksia	The comment recording buckfire risk and	notice and approved by DWER, it was unable to identify the
	attenuata" native woodland,	The comment regarding bushfire risk and vulnerable occupants has been previously	presence of the EPBC Act listed Banksia species. The Fauna Report did note that whilst the red tailed black cockatoo is
	habitat of threatened & protected	address, and is provided for under SPP3.7.	likely to use the study area, the study area represents a
	flora & fauna. Under Section 51b	The BMP has been prepared in accordance	relatively small area for foraging habitat for black
	of the EPA act Bush Forever sites	with the requirements of SPP3.7 and	cockatoos. Only one tree appeared to have a large breeding
	are Environmentally Sensitive	development will be required to achieve	hollow that may be suitable for black cockatoos.
	Areas and a minimum 500m buffer	appropriate setbacks, to achieve a rating of	
	is required from the boundary of a	BAL-29 or lower. The development does not	It is noted that the applicant is obligated to have the
	Bush Forever Site to protect the	propose clearing within adjacent lots,	proposal assessed under impacts Matters of National
	environmental values of a site. A	however anticipates that adjacent bushfire	Environmental Significance listed under the EPBC Act. This
	500m buffer to Bush Forever site	hazards may be reduced in future, given that	will be addressed further as part of Stage 1 of the
	#50 overlaps most of Lot 500	the local area has been identified for urban	development application process. To date, the applicant
	Gavour Rd.	expansion in the Sub-Regional Planning	has undertaken an environmental assessment of the site,
	2. Roadside Public reserve -	Frameworks. Where the adjacent bushfire	and flora and fauna survey.
	potential 100m clearing of	hazard is retained at the time of	
	vegetation likely to have significant	development, the lots shown as	The City acknowledges the importance of some of the
	environmental value to create	'quarantined' in the BMP will not be	vegetation on site and therefore will require the LDP to be
	road access from Welshpool Rd	developed.	modified to include a minimum 15m buffer to Welshpool
	East.		Road frontage. The extent of the vegetation buffer will be
	3. The area around the stream	Regarding visual amenity screening, a	considered further through potential environmental
	"Crystal Brook" is likely to have	landscaped vegetation buffer is proposed	investigations at the development application stage of the
	significant environmental value.	along the Welshpool Road boundary, and	planning process.
	4. Marri trees across the property -	landscaping in conjunction with retained	
	which provide suitable roosting	trees along Crystal Brook is proposed at the	
	and foraging habitat for the Endangered Carnaby and	Gavour Road boundary.	The applicant has provided an aerial overlay of the slip lane
	Vulnerable red-tailed cockatoo.		on the reserve vegetation which shows the impact on the vegetation will be minimal. Final design for the slip lane will
	There are also confirmed roosting		

sites on adjacent properties for	be considered at Stage 1 the development application
upwards of 150 cockatoos (as	process.
surveyed in the 'great cockatoo	
count' organised by birdlife WA),	It is evident from the environmental assessment and the
increasing the value of all existing	fauna survey prepared in support of the LDP that the creek
mature Marri trees in the area.	line contains mainly exotic species and likely to provide an
	ecological linkage through the subject land providing
We also have very great concerns	breeding habitat for native frogs and a small number of
that the development and future	common waterbirds species. However the creek line does
residents would be vulnerable if a	not provide the basic resources of shelter, food or breeding
bush fire were to occur in the area.	sites and there is no riparian vegetation to assist in
The proposed units abut the	providing a range of food and shelter. It was also noted that
property boundaries and are very	a declared pest (Arum Lilly) is present along the creek line.
close to existing vegetation on	Future development of the site associated with proposal
neighbouring properties. The	will provide an opportunity to undertake rehabilitation of
planned 'minimal setback' is	the creek.
unlikely to be sufficient if a bushfire	
were to threaten the area. Further	The Bushfire Management Plan will be considered in more
removal of vegetation from	detail in consultation with DFES at Stage 1 of the
neighbouring properties would	development application process.
probably be required to ensure	
sufficient fire breaks. This would	
further compromise the	
environmental and aesthetic value	
of the area and negatively impact	
the liveability of the area for	
current neighbouring residents.	
Finally, we are very concerned that	
if the development were to	
proceed, it would have a negative	
impact on the aesthetic and social	
value for residents of the rural	

	area that it is situated within. Many current residents, including ourselves and have chosen to live here to be surrounded by open spaces that greatly contribute to our social, physical and emotional wellbeing. We hold a high value on the open spaces and environmental integrity of the area and are greatly opposed to these being compromised by the proposed development.		
88-Objection	Critical Banksia and Marri are under threat which are foraging diets and roosting habitats for endangered black cockatoos. We have already lost so much important flora.and fauna in WA. Under section 51b of the Environmental Protection Act bush forever sites are Environmentally Sensitive Areas and a minimum 500m is required from the boundary if a bush forever site to protect the environmental values of a site. A 500m buffer to bush forever site #50 (just opposite) overlaps the majority of lot 500 Gavour Road. Base on this, the development should not proceed.	Addressed in responses above	Noted. The DBCA have advised that there is no statutory requirement for a 500m buffer buffer to the existing ESA on the adjoining lot.

89-Objection	I refer you to the above reference	It is acknowledged that clearing will be	The Flora and Vegetation Survey report noted that due to
	number - and would voice my	required within the four areas detailed in the	the clearing undertaken on the site as part of the fire break
	concern that this development will	submission. However, the retention of up to	notice and approved by DWER, it was unable to identify the
	compromise 4 key environmental	10% of the tree canopy cover along the	presence of the EPBC Act listed Banksia species. The Fauna
	assets.	Crystal Brook, including Corymbia calophylla	Report did note that whilst the red tailed black cockatoo is
	1) A threatened 'Banksia	and Eucalyptus marginata, will continue to	likely to use the study area, the study area represents a
	attenuata' native woodland,	provide foraging habitat for Forest Red-tailed	relatively small area for foraging habitat for black
	habitat of threatened & protected	Black Cockatoos. Developments will include	cockatoos. Only one tree appeared to have a large breeding
	flora & fauna.	landscaped areas which are also likely to	hollow that may be suitable for black cockatoos.
	2) Roadside Public reserve -	provide habitat for Quenda, a species known	
	potential 100m clearing to create	to continue to utilise urban areas even where	It is noted that the applicant is obligated to have the
	road access from Welshpool Rd. E.	bushland is highly fragmented.	proposal assessed under impacts Matters of National
	3) The area around the stream		Environmental Significance listed under the EPBC Act. This
	'Crystal Brook.'	Lot 500 is already highly disturbed with the	will be addressed further as part of Stage 1 of the
	4) Marri trees across the property	majority of the site cleared for residential	development application process. To date, the applicant
	which provide suitable roosting	property, farm buildings, and paddocks. Any	has undertaken an environmental assessment of the site,
	habitat for the endangered	clearing within the Lot is relatively small-	and flora and fauna survey.
	Carnaby & vulnerable Red-tailed	scale when the broader area of intact native	
	Cockatoo. Please consider the	vegetation in the region is considered,	The City acknowledges the importance of some of the
	above and the impact on the	including Bush Forever sites 50 (Welshpool	vegetation on site and therefore will require the LDP to be
	environment and native species	Road Bushland), 387 (Greater Brixton St	modified to include a minimum 15m buffer to Welshpool
	within it.	Wetlands) and 320 (Hartfield Park) as well as	Road frontage. The extent of the vegetation buffer will be
		Mundy and Banyowla Regional Parks to the	considered further through potential environmental
		east.	investigations at the development application stage of the
			planning process.
			The applicant has provided an aerial overlay of the slip lane
			on the reserve vegetation which shows the impact on the
			vegetation will be minimal. Final design for the slip lane will
			be considered at Stage 1 the development application
			process.
			·

			It is evident from the environmental assessment and the fauna survey prepared in support of the LDP that the creek line contains mainly exotic species and likely to provide an ecological linkage through the subject land providing breeding habitat for native frogs and a small number of common waterbirds species. However the creek line does not provide the basic resources of shelter, food or breeding sites and there is no riparian vegetation to assist in providing a range of food and shelter. It was also noted that a declared pest (Arum Lilly) is present along the creek line. Future development of the site associated with proposal
90-Objection	Threatened, Priority & Valuable Fauna (Carnaby, Bandicoot & Red- Tailed black cockatoo) are known to be present at 500 Gavour Rd and the vital habitat that supports these creatures will be lost forever if the development proceeds.	It is acknowledged that clearing will be required as detailed in the submission. However, the retention of up to 10% of the tree canopy cover along the Crystal Brook, including Corymbia calophylla and Eucalyptus marginata, will continue to provide foraging habitat for Forest Red-tailed Black Cockatoos. Landscaped areas are also likely to provide	The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break notice and approved by DWER, it was unable to identify the presence of the EPBC Act listed Banksia species. The Fauna Report did note that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding
	Environmental reports for the site documented the Priority 4 listed Southern Brown Bandicoot (Quenda) as being present in the adjacent Bush Forever Site 50.and Lot 500 Gavour Rd has been found	<ul> <li>habitat for Quenda, a species known to continue to utilise urban areas even where bushland is highly fragmented.</li> <li>Lot 500 is already highly disturbed with the majority of the site cleared for residential</li> </ul>	hollow that may be suitable for black cockatoos. It is noted that the applicant is obligated to have the proposal assessed under impacts Matters of National Environmental Significance listed under the EPBC Act. This will be addressed further as part of Stage 1 of the
	to support similar suitable habitat to Bush Forever site 50. Furthermore, discussions with the owners of the adjoining 45 Ridley Rd confirmed the presence of	property, farm buildings, and paddocks. Any clearing within the Lot is relatively small- scale when the broader area of intact native vegetation in the region is considered, including Bush Forever sites 50 (Welshpool	development application process. To date, the applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The City acknowledges the importance of some of the
	Southern Brown Bandicoot (Quenda) on their property	Road Bushland), 387 (Greater Brixton St Wetlands) and 320 (Hartfield Park) as well as	vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool

	indicating that they are also likely presence on the planned development site. Both Banksia and Marri (Corymbia calophylla) trees that are found on Lot 500 provide suitable foraging and roosting habitat for the EPBC Act listed Endangered Carnaby's Black Cockatoo (Calyptorhynchus latirostris) and the Vulnerable Red- tailed Forest Black Cockatoo (Calyptorhynchus banksii naso). These birds are known to frequent the area and thus development of this site would result in loss of valuable habitat. Under section 51b of the EPA act, Bush Forever sites are considered as environmentally sensitive and a minimum buffer of 500m from the boundary of these sites should be preserved to protect the environment. This buffer zone would overlap the majority of lot 500 Gavour Road and therefore the development should not proceed.	Mundy and Banyowla Regional Parks to the east. It should be noted that the ESA mapped around Bush Forever site 50 relates to the presence of the Threatened Ecological Community FCT 20a within the Bush Forever site, rather than being a buffer to the Bush Forever site itself. DBCA maps all locations of TECs with a 500 m buffer, and the ESA mapping is based on this buffered TEC boundary. While the mapped buffer of the ESA extends into Lot 500, the majority of this buffer comprises cleared vegetation, development and farmland. Remnant native vegetation within Lot 500 currently has limited connection with the Bush Forever site as it is separated from the Bush Forever site by Welshpool Road at a distance of approximately 30 m, including paved road, degraded vegetation and planted, non-native vegetation. As such, direct impacts to the Bush Forever site resulting from the proposed development of Lot 500 are not anticipated.	Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process. The applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The Fauna Report concluded that the modified habitats of the study area are only likely to provide habitats for a few native mammals, notably Quenda. The DBCA have advised that there is no statutory requirement for a 500m buffer to the existing ESA on the adjoining lot.
91-Objection	The Locality Plan, the Landscape Plan and Fire management plan are in conflict with the proponents undertaking for 14 years that most	Development Applications (DA) are required to be submitted for approval of each stage of the development.	Noted. The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break

of the existing trees on the	Noted. Comment regarding clearing of	notice and approved by DWER, it was unable to identify the
Western part of the site (area	Crystal Brook vegetation addressed through	presence of the EPBC Act listed Banksia species. The Fauna
generally adjacent to Welshpool	previous comments.	Report did note that whilst the red tailed black cockatoo is
Road East) will be retained "where		likely to use the study area, the study area represents a
practical" (more weasel words).		relatively small area for foraging habitat for black
The Western Part of the site has		cockatoos. Only one tree appeared to have a large breeding
the existence of significant		hollow that may be suitable for black cockatoos.
endangered flora and fauna and		
therefore vegetation should be to		It is noted that the applicant is obligated to have the
be retained if this ghastly		proposal assessed under impacts Matters of National
development goes ahead. The		Environmental Significance listed under the EPBC Act. This
foregoing is witnessed by the		will be addressed further as part of Stage 1 of the
factor that a piece of land which		development application process. To date, the applicant
was part of the proponents site		has undertaken an environmental assessment of the site,
was sold by the proponent to the		and flora and fauna survey.
WA government to be part of		
Bushplan and has vegetation and		The City acknowledges the importance of some of the
fauna present consistent with that		vegetation on site and therefore will require the LDP to be
on the western part of the subject		modified to include a minimum 15m buffer to Welshpool
site.		Road frontage. The extent of the vegetation buffer will be
		considered further through potential environmental
The Fire management plan		investigations at the development application stage of the
confirms clearing the total project		planning process.
area completely and leaving no		
more tree canopy than 10%		The Bushfire Management Plan will be considered in more
surrounding Crystal Brook. This is		detail in consultation with DFES at Stage 1 of the
completely unacceptable by any		development application process.
measure and out of context with		
the Wattle Grove East area where		The applicant has demonstrated to the satisfaction of the
the average lot size is 25000m <sup>2</sup>		then Department of Water that all waste water can be
covered in Marri, Jarrah and many		contained on site. The applicant is required to update the
other native species.		LWMS to the satisfaction of DWER which will be addressed
		at the development application stage of the process.

The City did not ask the Water	
Authority whether reticulated	
sewerage could be connected to	
the site (In my opinion Chief	
Planner Rory Obrien and disgraced	
CEO James Trail just did not want	
to ask because they knew the	
answer and would have been	
obliged to have disclosed the same	
to ratepayers in 2009). The City	
and its planners just maintained to	
all who ask and at public forums	
that it was possible to connect	
reticulated sewerage to the site	
(just like it is possible for a family	
to land on Mars). I ask then if it	
was always possible why has the	
City not facilitated or compelled	
the site be connected to	
reticulated sewerage, the answer	
is self-evident, it never practically	
could be. If the City had asked they	
would have been advised, like me	
and anybody else that ask from	
2009 on, that it could not viably be	
connected which again is now self-	
evident. If development ever goes	
ahead we in Wattle Grove will	
have to suffer millions of litres of	
treated sewerage being reticulated	
to our groundwater. The Local	
Development Plan does not even	
identify which part of the site the	

	treated sewerage is to be spread. If the City would have investigated and disclosed the truth regarding sewerage availability in 2009 the rezoning precipitating this Development Plan would have been kicked to the curb then as it should have been and should be.		
92-Objection	I object to the proposed development at Lot 500 Gavour Road because of the negative impacts on irreplaceable and increasingly rare environmental assets. These include the removal of threatened "Banksia attenuata" native woodland, which is habitat for threatened & protected flora & fauna, disturbance of the area around Crystal Brook, and removal of trees that are essential foraging resources for the federally listed endangered Black Cockatoos. My request is that as much of the native vegetation be retained as possible. Yet, it is not possible to judge the level of native vegetation retention because the documents provided are inconsistent. The landscape development plan shows removal	The LDP is intended to be a strategic document created as an overarching plan for future development. Each stage of the development will require the submission of a Development Application' Addressed in responses above	Noted. The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break notice and approved by DWER, it was unable to identify the presence of the EPBC Act listed Banksia species. The Fauna Report did note that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. It is noted that the applicant is obligated to have the proposal assessed under impacts Matters of National Environmental Significance listed under the EPBC Act. This will be addressed further as part of Stage 1 of the development application process. To date, the applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental

	of most existing vegetation around Crystal Brook to reduce BAL, whereas the local development plan shows existing vegetation to be maintained in the same area. Our waterways desperately need vegetation to maintain their ecological function, and this contradiction suggests strongly that further work is needed to produce plans that maximise both social and environmental benefits.		investigations at the development application stage of the planning process.
93-Objection	threatened "banksia attenuata" native woodland would be destroyed, a habitat of native flora and fauna -roadside public reserve clearing to create road access from Welshpool Rd eastMari trees across the property- which provide suitable roosting habit for the endangered Carnaby and Vulnerable red-tailed black cockatoo	It is acknowledged that clearing will as detailed in the submission. However, the retention of up to 10% of the tree canopy cover along the Crystal Brook, including Corymbia calophylla and Eucalyptus marginata, will continue to provide foraging habitat for Forest Red-tailed Black Cockatoos. Addressed in responses above	The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break notice and approved by DWER, it was unable to identify the presence of the EPBC Act listed Banksia species. The Fauna Report did note that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos. It is noted that the applicant is obligated to have the proposal assessed under impacts Matters of National Environmental Significance listed under the EPBC Act. This will be addressed further as part of Stage 1 of the development application process. To date, the applicant has undertaken an environmental assessment of the site, and flora and fauna survey. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool

			Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process. The applicant has provided an aerial overlay of the slip lane on the reserve vegetation which shows the impact on the vegetation will be minimal. Final design for the slip lane will be considered at Stage 1 the development application process. The environmental impact of a future development will be assessed in more detail at the development application stage of development to ensure that the environmental impact is still acceptable to the City.
94-Objection			
95- Non- Objection 96-Non- Objection			
Rowe Group on behalf of Submitter 97	We confirm that a formal extension of the advertising period has been granted to Rowe Group by the City to <b>enable to</b> <b>preparation</b> of this submission.	The extension granted to Rowe Group without advice to the proponent is noted.	Noted.
	Bushfire: It is inappropriate for vulnerable, and potentially immobile people, to reside in a development that relies on alternative design solutions to address the bushfire Issues associated with the LDP site	This statement is not correct. The BMP does not propose any alternative solutions. The BMP has been prepared in accordance with an 'acceptable solutions' approach and ensures appropriate separation to bushfire hazards, water supply and vehicular access.	The Bushfire Management Plan will be considered further in consultation with DFES and the proponent at Stage 1 of the development application stage of the planning process.

<ul> <li>(refer to Section 5 of the BMP which outlines a number of "acceptable solutions" for various elements associated with the bushfire protection criteria).</li> <li>It appears that there are a number of the 'Independent Living Sites' located within the BAL-FZ (flame zone), BAL 40 and BAL 29 contours.</li> <li>With a number of bushfire protection criteria reliant upon (alternative) "acceptable solutions", and with a number of assumptions used in the BAL assessment, the LDP ought to be redesigned to ensure a higher degree of bushfire safety for the occupants of the proposed development.</li> </ul>	It is considered that only the 'aged care facility' will be considered a vulnerable land use, as defined in SPP 3.7 given that occupants of the independent living units are likely to be able bodied. In accordance with the requirements of SPP3.7, a Bushfire Emergency Evacuation Plan will be prepared to support the DA of the proposed aged care facility. This statement is not correct. The BMP does not propose any alternative solutions. The BMP has been prepared in accordance with an 'acceptable solutions' approach and has not proposed any building envelopes with BAL-FZ or BAL-40 contours thus complying with policy requirements.	Noted, refer previous comments.
Extensive clearing is proposed by the LDP, with only a small portion of existing vegetation being retained in proximity to Crystal Brook. Clause 5.18 of LPS3 (Tree and Vegetation Preservation) states:	Addressed in responses above. The nearest Bush Forever Site (50) is located on the opposite side of Welshpool Road East. No impacts will occur to Bush Forever Site (50) as a result of development of the site. No setbacks are required to Bush Forever Sites where potential impacts area managed. No potential impacts to the Bush Forever site have been identified.	The Flora and Vegetation Survey report noted that due to the clearing undertaken on the site as part of the fire break notice and approved by DWER, it was unable to identify the presence of the EPBC Act listed Banksia species. The Fauna Report did note that whilst the red tailed black cockatoo is likely to use the study area, the study area represents a relatively small area for foraging habitat for black cockatoos. Only one tree appeared to have a large breeding hollow that may be suitable for black cockatoos.

"Native vegetation shall not be		It is noted that the applicant is obligated to have the
damaged, destroyed or removed	A stormwater management plan will be	proposal assessed under impacts Matters of National
unless it is in accordance with	prepared to support each DA.	Environmental Significance listed under the EPBC Act. This
relevant state legislation, acts,		will be addressed further as part of Stage 1 of the
regulations and guidelines. Such		development application process. To date, the applicant
legislation includes the		has undertaken an environmental assessment of the site,
Environmental Protection Act		and flora and fauna survey.
1986, the Environmental		
Protection (Clearing of Native		The DBCA have advised that there is no statutory
Vegetation) Regulations 2004 and		requirement for a 500m buffer to the existing ESA on the
other legislation as adopted from		adjoining lot.
time to time."		
		In support of the proposal and in response to submissions
We have reviewed the desktop		received, in particular from the DBCA the applicant has
environmental assessment		submitted an environmental assessment and flora and
undertaken of the LDP site by		fauna survey.
Ecologica Environment on behalf		
of the Save the Gums Trees of		The clearing undertaken as part of the fire break notice has
Wattle Grove dated July 2018. The		been approved by DWER.
assessment raises concerns in		
relation to:		
Buffers to Bush Forever		
Site No. 50;		
Foreshore setbacks Crystal		
Brook;		
• Stormwater management;		
The protection of existing		
foraging and roosting habitat for		
the EPBC Act listed Endangered		
Carnaby's Black Cockatoo and the		
Vulnerable Red-tailed Forest Black		
Cockatoo; and		

<ul> <li>The existence of Threatened Ecological Communities and Threatened Flora in the vicinity of the LDP site.</li> <li>To our knowledge, the proposed LDP is not supported by any environmental assessment on the basis that no such document was included in the advertising material released by the City. In this regard, it is not possible to conclude that the proposed LOP would satisfy the requirements at Clause 5.18 of LPS3. Given the extent of clearing proposed and the concerns raised by Ecologic Environment, it is requested that a detailed environmental assessment of the LDP site be undertaken before the proposed LDP is considered for approval by the City of Kalamunda.</li> </ul>		
It is our view that the proposed LDP has not been designed to maintain the rural character of the adjacent area by virtue of the fact that: • it proposes extensive clearing with only a small area of existing vegetation being retained along Crystal Brook;	This statement is contradictory, given that often rural landscapes comprise of large cleared areas. In fact, a large percentage of the site is currently cleared do to the historic rural use of the site. The development will necessitate limited clearing, which will be quantified and assessed for significance of impacts under Part V of the EP Act and where necessary the EPBC Act.	The subject site has been rezoned to a Special Use zone under Local Planning Scheme 3 to allow for an integrated aged care facility to be developed on the site subject to certain conditions. The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental

	The landscaping plan will be subject to endorsement by the City and will ensure that visual amenity is addressed.	investigations at the development application stage of the planning process.
<ul> <li>The Traffic Impact Statement (TIS) prepared in support of the proposed LDP is lacking in sufficient detail to accurately assess the traffic Impacts associated with the proposed LDP. The TIS does not contain any consideration for, or analysis of, vehicle sightlines at the Welshpool Road East access and egress point. Analysis of sightlines is particularly important at this location for the following reasons:</li> <li>Analysis of Main Roads WA (MRWA) Crash History for the section of Welshpool Road East between Crystal Brook Road (east and west) reveals 55 recorded vehicle crashes between 2013-2017, 16 of which involved casualties (source: MRWA Asset and Geospatial Information, 2018);</li> <li>Welshpool Road East between Crystal Brook Road (east and west) received funding under the</li> </ul>	An RSA will be provided as part of a Development Application. Not appropriate for the LDP. City may wish to condition the LDP.	The City's traffic assessment of the proposal indicates that a left-turn slip-lane is required. The applicant at the request of the City has provided an amended TIS, and modified LDP to include notification showing requirement for a slip lane. The applicant will also be required to provide a Road Safety Audit as part of Stage 1 of the development application process.

2015/2016 Australian		
Government Black Spot		
Program. Works comprised		
the construction of barrier		
fencing on the median and		
left hand verge (west		
bound) at a cost of over		
\$438,000. These works		
may be compromised by		
the proposed LDP access		
arrangements; and		
The geometry of		
Welshpool Road East		
between Crystal Brook		
Road (east and west)		
includes 'bends' on both		
the eastern and western		
approaches to the		
proposed LDP site.		
Sightlines are also		
compromised by existing		
mature vegetation within		
the Welshpool Road East		
road reservation.		
Having regard to the above, a Road		
Safety Audit (RSA) is an essential		
requirement and must be		
undertaken <u>before</u> the proposed		
LDP is formally considered for		
approval by the City of Kalamunda.		
The RSA should pay particular	The RSA will address these issues.	Noted.
attention to demonstrating that		

T-Inter higher RSA n of peo Welsh acces servic and w comp instal Gover Welsh Crysta is class Regio Metro (MRS) the W Comm of We the pi as a " that f allow	roposed 'Priority Controlled ersection' design achieves the est of safety standards. The must also consider the safety destrians who must navigate hpool Road East in order to s the only public transport ce available in this location, whether the works will promise the barrier fencing led under the Australia rnment Black Spot Program. hpool Road East between al Brook Road (east and west) ssified as an Important anal Road under the opolitan Region Scheme ) and is under the control of Vestern Australian Planning mission (WAPC). The portion elshpool Road which adjoins roposed LOP site is classified Category 2" road meaning frontage access may only be ed subject to approval.	Previous submissions identified access from Gavour Road. This was changed in response to strong community objections. The TIS clearly identifies the Welshpool Road East access to be appropriate. The TIS demonstrates that a left hand turn slip lane is not required. Consideration will be given to providing a slip lane provided the CoK accepts the need to clear verge vegetation to achieve this. Additionally, the Applicant secured support from both the (then) Shire of Kalamunda and the Integrated Transport section of the (then) Planning Department (WAPC) during the Scheme Amendment process. Copies of these documents have been provided to the City, previously.	The LDP has been considered by the transport section of the DPLH with a recommendation that access to the site via Welshpool Road East be provided with a slip land for vehicles heading west along Welshpool Road East.
	r knowledge, the Applicant ot provided any	This statement is incorrect.	Refer previous comments from the DPLH.

documentation to demonstrate that the WAPC/Department of Planning Lands and Heritage (OPLH)/MRWA has granted its approval, or given its support, for the proposed access arrangements. It is therefore further requested that the RSA be reviewed and supported by the WAPC/DPLH/MRWA before the proposed LDP is considered for final approval by the City of Kalamunda.	The Applicant secured support from both the (then) Shire of Kalamunda and the Integrated Transport section of the (then) Planning Department (WAPC) during the Scheme Amendment process. Copies of these documents have been provided to the City, previously.	
Further to this, however, is the fact that MRWA has not supported access to/from the site via Welshpool Road East. This has been reiterated as late as 2015 with MRWA confirming it does not support vehicle access to the LDP site to and from Welshpool Road East and (instead) vehicle access should be restricted to its current access to a local road (being Gavour Road).	Welshpool Road East at this point is not the responsibility of Main Roads WA (MRWA) and MRWA has subsequently apologised for by making inappropriate comments in relation to this issue. The TIS undertaken by Transcore did not identify any major traffic issue for the proposed Welshpool Road East crossover. A RSA will be undertaken to assess any safety issues with respect to the proposed Welshpool Road East crossover.	The DPLH is the referral agency for this section of Welshpool Road East and their comments have been provided to the City.
This in itself poses further traffic issues with a considerable amount of additional traffic being forced onto the local (rural) road network in and around the LDP site. There will be major traffic implications to Gavour Road, Crystal Brook Road	The analysis undertaken in the TIS assumes that all the development traffic would use the Welshpool Road East crossover and no traffic is distributed to the local road network including Gavour Road.	Refer previous comments. The City has reviewed the revised TIS and has no objection subject to the requirement for the slip lane, and a traffic safety audit being undertaken.

and other local roads and intersections in the locality		
The TIS concludes that the proposed development would not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vpd to warrant further analysis. The WAPC threshold however, is not +100vpd, it is 100vpd. Given the proposed development is predicted to increase traffic flows on Welshpool Road East by 100vpd during its peak period, further analysis is considered necessary in accordance with WAPC requirements.	The evening peak hour vehicle trips of the proposed Aged care facility is estimated to be between 0.1 to 0.2 per dwellings (refer TIA page 8) however Transcore has used the higher rate of 0.2 and concluded that the total trip generation of the proposed development would be up to 100vph. If we use the average trip rate of 0.15 per dwellings for the aged care facility the trip generation of the proposed development would be approximately 94vph which is less than 100vph. In any case Transcore has undertaken intersection analysis for the Welshpool Road East crossover to investigate satisfactory operation of this intersection in the future.	Refer above comments.
This analysis should be undertaken before the proposed LDP is considered for approval by the City of Kalamunda. It is also requested that should the City of Kalamunda resolve to approve the proposed LOP, a condition be placed on that approval, requiring the undertaking of a further TIS as part of the Development Application stage. As Welshpool Road East is a Category 2 road under the care and control of the WAPC, it is also requested that all traffic reporting	The level of detail suggested is not consistent with the level of detail required in the WAPC Guidelines. All individual developments in WA should be assessed in accordance with the requirements of Volume 4 of the 2016 WAPC Traffic Impact Assessment Guidelines There are three levels of assessment within this: 1. Negligible impact (less than an additional 10 vehicular trips in the peak hour): No assessment required;	Refer previous comments

be referred to the DPLH's	2. 2. Moderate impact (between 10
Integrated Transport Unit for	and 100 vehicular trips in the peak
approval.	hour): 'Transport Impact Statement'
	required; or
	3. 3. High impact (More than 100
	vehicle trips in the peak hour):
	Transport Impact Assessment
	required.
	As indicated in the TIS, the proposed
	development is forecast to generate up to an
	additional 100 trips in the peak hour, hence a
	Transport Impact Statement is required, not
	a detailed Transport Impact Assessment.
	The WAPC Guidelines state that 'Transport
	Impact Statements' are to be <b>kept simple</b>
	and focussed on transport issues i.e.:
	"A transport impact statement is a <b>brief</b>
	statement outlining the transport aspects of
	the proposed development. The intent of the
	statement is to provide the approving
	authority with sufficient transport
	information to confirm that the proponent
	has adequately considered the transport
	aspects of the development and that it would
	not have an adverse transport impact on the
	surrounding area. <b>It is envisaged that the</b>
	transport impact statement will generally be
	from two to three pages up to several pages
	in length, but this will depend upon the
	number and nature of any specific issues that

	need to be addressed. It is expected that most, if not all, of the information to be provided will be of a non-technical nature, that is, will not require input from a specialist in transportation planning or traffic engineering. This will, however, depend upon the nature of the specific issues to be addressed and specialist technical input may be required on occasions." The suggestions by the submitter cannot be addressed within a Transport Impact <u>Statement</u> ; this level of detail is included in a Transport Impact <u>Assessment</u> report. The 2016 WAPC Guidelines make it very clear that a proposed development that generates up to (and including 100 trips) during the peak hour is considered <b>moderate</b> . As such, RSA and additional work is not required for this LDP process.	
Noise (Welshpool Road East)		The issue of noise will be addressed at the more detailed stage of the planning process.
Noise attenuation measures may	It is understood that a traffic noise	
be required for those dwellings	assessment will need to be undertaken. This	
located in proximity to Welshpool Road East. An acoustic assessment	is a matter for detailed design, not LDP.	
should be undertaken to identify	DPLH raised a similar matter with respect to	
whether noise attenuation	State Planning Policy 5.4, and suggested	
measures are required.	regard should be had for this issue at future	

	development stages.	
As this assessment may reveal the need for additional setbacks or physical treatments in the form of walls or landscape bunds along the Welshpool Road East frontage of the LDP site, the acoustic assessment must be undertaken before the proposed LOP is formally considered for approval by the City of Kalamunda.		
High Voltage Power Lines The proposed LDP identifies the construction of Community Facilities directly underneath the high voltage power lines and within the Western Power easement that traverses the site.	The LDP has been referred to Western Power for comment and the Applicant has received those comments from Western Power. The requirements and limitations associated with the Western Power easement are known and understood. It is not proposed to build anything within the easement that does not comply with Western Power's requirements.	The LDP has been amended to remove structures from the Western Power easement.
Sewer The proposed LDP does not identify how or where this on-site solution will be located.	Addressed in responses above	The applicant has satisfactorily demonstrated that sewer and wastewater are capable of being managed on the site. The detailed design of any facilities would be undertaken to form part of Stage 1 of the development application process.

Amenity – Special Rural Interface The LDP site is located in a semi-rural with very few non-rural land uses. Properties in the vicinity of the LDP site measure typically between 1.0 and 2.0 ha in area. Each of the properties contains, on average, a	The LDP conforms with the approved Scheme amendment. These statements/objections have no relevance.	The subject site has been rezoned to a Special Use zone under Local Planning Scheme 3 to allow for an integrated aged care facility to be developed on the site subject to certain conditions.
single residential dwelling and related outbuildings. The residential density of the locality is therefore in the order of between R0.5 and R1 (i.e. 0.5 - 1 dwellings per ha).		
The introduction of 190 Independent Living Sites and an Aged Care Facility is inconsistent with the pattern of surrounding development and incompatible with surrounding land uses. The proposed land use will be completely out of context with the surrounding rural environment and will conflict with the rural lifestyle of surrounding residents. It is therefore imperative that the interface between the proposed development and its Special Rural surrounds be given thorough and respectful consideration.		
Notation 4. on the proposed LDP states: <i>"Fencing along all other property boundaries is to be post and wire construction".</i> This form of fencing is inadequate to ameliorate the significant impacts	This is in keeping with the pattern of the surrounding area.	The proposed fencing treatment is consistent with that of the surrounding area. The fencing coupled with appropriate vegetation (landscaping) treatment should provide and appropriate interface to adjoining residents.

generated by the proposed development. Solid fencing is required, details of which must be set out in the proposed LDP.	The submitter has not described what significant impacts there would be? This is an integrated aged care facility. We do not agree that solid fencing is required.	
The proposed boundary setbacks are inadequate. A setback of 10 metres along the southern boundary of the proposed LDP site will not provide sufficient amelioration to adjoining residents, particularly along those sections of the boundary where the setback area will be used for vehicle access and therefore unable to accommodate landscaping.	The proposed setbacks are considered adequate. The submitter has not described what impacts might need amelioration.	The setbacks are consistent with those of the Special Rural zone.
A setback of 20 meters is considered more appropriate, as this will enable vehicle access and landscaping along the entire length of the southern boundary and provide greater separation between the proposed urban land uses and existing rural land uses. We note that LPS3 requires a 10 meter setback in the Special Rural Zone and expect this is why a 10 meter setback is proposed by the Applicant. However, the intensity of land uses proposed on the LDP site is such that a 'standard' setback is inadequate. Additional separation is required to assist in ameliorating the impacts that will naturally occur between such opposing land uses	This is an unsubstantiated opinion and a 10m setback is entirely appropriate.	Refer above comments.

A nil boundary setback is propose the Aged Care Facility Site. This is inadequate for such a high intens use and as such, a consistent 20 n minimum setback should be appli along the full length of the southe boundary.	to the Aged Care facility, all that has been shown on the LDP is the land allocation. Appropriate setbacks will be provided and detailed at Development Application stage	The City acknowledges the importance of some of the vegetation on site and therefore will require the LDP to be modified to include a minimum 15m buffer to Welshpool Road frontage. The extent of the vegetation buffer will be considered further through potential environmental investigations at the development application stage of the planning process.
The configuration of the proposed Independent Living Sites 'siding' of rather than 'fronting' the access r along the southern boundary of th LDP area does not provide an acceptable interface with the adjoining Special Rural Zone. This configuration also means that any noise generating outdoor living ar	from outdoor living areas will be almost non- existent and completely compliant.	Development of the built form will need to comply with the relevant noise regulations.
The proposed LDP is inconsistent Liveable Neighbourhood requiren because it does not maintain good linkages with surrounding urban a and is not located close to any exi town or neighbourhood centers. I this regard, the proposed LDP doe not satisfy the generally accepted principles for the siting of aged persons accommodation.	vith ents accommodation are open and this proposal provides a legitimate and exciting proposal which has been supported totally by representatives by the aged and aging in the	As noted previously, the site has been zoned for integrated aged care on the basis the strategic context for the surrounding area had identified the area for future urban land use. The LDP will require modification to identify future road linkages to the adjoining lots.

	services and facilities they have always had. There are numerous transport options for getting residents to the town centre – e.g. a village bus service.	
LDP ProvisionsThe development control provisions set out in the proposed LDP are grossly inadequate and provide no meaningful information about the nature of development that will be permitted on the site.190 Independent Living Sites are proposed however no information is provided to explain what an Independent Living Site is. More importantly, the proposed LDP does 	Everyone knows what Independent Living is in the context of a retirement village. The development controls are those set by the City and will be addressed at DA stage. This LDP is different from other standard LDPs. LDPs are usually required to provide development control over small lots that are proposed in subdivision, so that independent purchasers of those small lots can comply with the developer's intent (and the local government's requirements). As there is no intention to subdivide off the unit sites and sell to the general public, our LDP does not need to be a prescriptive on lot size, setbacks, open space calculations, building height, garage/carport location etc,. This LDP is about providing a spatial layout across the large site. All of the detail will come at DA stage.	The comments of the applicant are noted. it is clear from the LDP that the proposal will comprise independent living units and an assisted care component. One of the conditions of the Scheme amendment was that the development shall not be strata titled. The number of dwellings are established as per the LDP.

The proposed LDP iden Clubhouse Sites, one lo on the site and two at t Road East entry point. I is provided about any o and no development co proposed	cated centrally he Welshpool No information f these sites three. These are matters DA not LDP. Again, this LDP is about pu arrangement of different	to be addressed at roviding a spatial aspects that form
The precise nature and ancillary uses has not b identified. There are no prohibit the types of lar could be established. Fo Community Facility Site retail and offices land u the proposed land uses defined in the LDP and land use and developm provisions put in place.	een clearly controls to nd uses that or example, the s could include ses. Each of needs to be appropriate	rmine what uses care facility will be considered as part of the future
The absence of develop provisions within the pr inexcusable. It is reques proposed LDP be amen appropriate developme provisions. These devel provisions must be re-a the public for further co the proposed LDP is cor approval by the City of	the Regulations and is interested that the ded to include ant control opment control dvertised to mment before asidered for	entionally required considered at the development application stage of the planning process. objectives. Details
The lack of developmer provisions incorporated proposed LDP provides or certainty for surroun that the form of develo sufficiently and approp controlled. It is inappro contemplate the prospe	It controlThe land has ALREADY BEI into thePlanning Department andno protectionoffice were in agreementding residentsprior to issuing Final Appramendment.amendment.	I the Minister's.with the proposal.approved by the Minister for Planning.

consideration of the natu development which may of land should the rezoning successful, particularly wh proposed land use is incomp the surrounding pattern of development and incomp surrounding land uses.The proposed LDP is requ prepared in accordance w the Planning and Develop Planning Schemes) Regula (Regulations). The propose not comply with the Regu virtue of the fact that it do contain specific and detail for future development and under Clause 46(a) Clause this regard, it is our view proposed LDP should not accepted by the City in its form and that accordingly not fulfil its obligation und 49(1 Ha) of the Regulation	becur on that be hen the hisistent with f atible with The local government has ex discretion and has clearly acc because it has allowed the LI progressed to advertising. The obviously of a mind that the acceptable. This is clearly the Clause 49 (2) of the Deemed states: (2) The local development plot to have been accepted for as advertising if the local govern given written notice of its ded applicant by the latest of the — (a) 14 days after receipt of	<pre>cepted the LDP, DP to be he City is LDP is he case when at I Provisions it</pre> requirements of the Regulations in particular clause 48(1) and condition e) of the Special Use zone 20.
Schedule 4 of LPS3 (Special 20) states that the proposi integrated aged care facil	ed	The City is recommending a number of modifications to the proposed LDP, specifically:
"will be designed implemented to rural character o adjacent area wi	maintain the f the	<ul> <li>A minimum 15m buffer to retain vegetation fronting Welshpool Road East.</li> <li>The inclusions of notations identifying future external road linkages to the site.</li> </ul>

<ul> <li>maintaining flexibility to enable the facility's integration with development on adjoining properties should land use changes occur in the future".</li> <li>It is our view that the proposed LDP has not been designed to maintain the rural character of the adjacent area by virtue of the fact that: <ul> <li>it contains land uses of a greater intensity than those of adjacent areas;</li> <li>it proposes extensive clearing with only a small area of existing vegetation being retained along Crystal Brook;</li> <li>will permit the construction of residential dwellings within 10 metres of adjacent properties and an Aged Care Facility on the boundary;</li> <li>it contains inadequate landscaping along the southern boundary; and</li> <li>it provides no development controls to limit the form and scale of development.</li> </ul> </li> </ul>	The land use and density is consistent with the Special Use zone. The vegetation is degraded. A flora survey has been undertaken and provided with these responses. Setbacks are compliant. Comprehensive landscaping is proposed. Details of the development will be done at DA stage.	Development of the site will need to accord with the setback requirements prescribed under the Special Rural zone, specifically 10m to the side boundaries. Building development proposed is consistent with that of a aged care facility for which the site is zoned for.
As previously stated, it is our view that the proposed LDP does not comply with the Regulations by virtue of the fact that it does not contain specific and detailed guidance for future development as required under Clause	Please refer to the revised LDP drawing and the letter from Lavan Legal, dated 17 December 2018.	Noted.

46(a) Clause 48(c)(0. We also note that the proposed LDP does not address the requirement for <i>"the location of a</i> <i>possible future road and servicing</i> <i>easement(s) with future</i> <i>implementation arrangements for</i> <i>these should land use changes occur</i> <i>on the properties adjoining Lot 500 in</i> <i>the future".</i>		
In this regard, it is our view that the proposed LDP does not satisfy the (non-discretionary) Conditions set out in Schedule 4 5U20 of LPS3 and is therefore not capable of approval in its current form. On this basis, the proposed LDP must be withdrawn or amended. Any changes to the proposed LDP must be re-advertised to adjoining residents.	Please refer to the revised LDP drawing and the letter from Lavan Legal, dated 17 December 2018.	The City is satisfied the applicant has provided sufficient information on the LDP and through the supporting technical documentation for the LDP to be considered by Council.

Attachment 10.1.1.13



Department of **Planning,** Lands and Heritage

> Your ref: DA18/0226 Enquiries: Eleanor Richards (6551 9284)

Chief Executive Officer City of Kalamunda PO Box 42 Kalamunda WA 6926

Attention: Luke Harris

Dear Luke

#### PROPOSED LOCAL DEVELOPMENT PLAN - LOT 500 (NO. 32) GAVOUR ROAD, WATTLE GROVE

I refer to your letter dated 19 June 2018 regarding the above referenced Local Development Plan (LDP).

The application proposes a full movement access from Welshpool Road East which is designated as an Other Regional Road under the Metropolitan Region Scheme. Given the type and nature of the proposed development a Transport Impact Assessment (TIA) should be submitted to the Department of Planning, Lands and Heritage (DPLH) to assist in assessing the transport impacts of the development on Welshpool Road East.

The TIA should be prepared in accordance with the WAPC's Transport Impact Assessment Guidelines (August 2016), available at <u>https://www.planning.wa.gov.au/publications/1197.aspx</u>, to enable DPLH to adequately assess the transport implications of the proposed LDP.

It is also recommended the City give consideration to the following matters:

- Main Roads WA traffic counts show this section of Welshpool Road East as accommodating 19,356 vehicles per day in the subject location (11% of which are heavy vehicles). The LDP proposes minimal setbacks to Welshpool Road East and the removal of a large amount of vegetation in this location, therefore it is recommended due regard be given to *State Planning Policy 5.4: Road and Rail Transport Noise and Freight Considerations in Land Use Planning.*
- No information appears to have been provided with respect to the provision of a future public road through the site as required by condition e of the relevant Special Use provisions of the Shire of Kalamunda Local Planning Scheme No. 3. If such a road is required or proposed it is recommended

further information on this matter be provided and incorporated into the TIA where appropriate.

- No details appear to have been provided with respect to on-site wastewater treatment. As part of the assessment process for Amendment 57 the Environmental Protection Authority stated that such a facility would require works approval under the *Environmental Protection Act 1986*. Given the onsite wastewater treatment facility would presumably have certain land take and buffer requirements it is recommended consideration be given to these requirements at the LDP stage.
- A large proportion of the site is proposed to be cleared. The clearing works would likely require approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). It is the proponent's responsibility to investigate the referral requirements under the EPBC Act and ensure clearing works are only undertaken with the appropriate approvals.
- The application proposes various 'community facilities' within the Western Power easement. The City may wish to refer the application to Western Power for comment if it has not done so already.

Thank you for forwarding the application through for comment.

Should you have any queries regarding this advice, please do not hesitate to contact Eleanor Richards on 6551 9284.

Yours sincerely

Victoria Brown Planning Manager Land Use Planning

4 July 2018



Department of **Planning,** Lands and Heritage

> Your ref: DA18/0226 Enquiries: Alex Campbell

Chief Executive Officer City of Kalamunda PO Box 42 Kalamunda WA 6926

**Dear Andrew** 

# PROPOSED LOCAL DEVELOPMENT PLAN – LOT 500 (NO. 32) GAVOUR ROAD, WATTLE GROVE

I refer to your email received on 19 December 2018 and the previous advice provided by this Department in its letter dated 4 July 2018 relating to the draft local development plan (LDP) at Lot 500 Gavour Road, Wattle Grove.

The applicant submitted a Traffic Impact Assessment (TIA) in support of the draft LDP. The TIA considers that a basic left turn treatment with a widened shoulder will be sufficient for the proposed crossover on Welshpool Road East. The Department contends that both left and right turning lanes to the site should be provided for the following reasons:

- Austroads states that the need for deceleration lanes cannot be stated definitively in all instances because of the multiplicity of factors to be considered. Two of these factors include the volume of vehicles (19,356vpd) and the proportion of heavy vehicles using the road (e.g. Welshpool Road East forms part of Main Roads WA Tandem Drive 4 Network, allowing for 27.5 metre semi-trailers, 11% HVs). (Refer to Austroads p 112 A.14.2: Volume 4, 2017);
- Austroads also states that for major roads on steep downgrades where numerous heavy vehicles travel quickly down the grade, it is not appropriate to adopt a basic left turn (BAL) treatment. Instead an AUL (S) (shorter lane) or an AUL (longer lane) would be a preferred treatment (refer top 97 of Austroads Volume 4 Guide to Road Design, 2017). Topography is 36m AHD immediately to the west of the site, rising to almost 200m AHD near Melaleuca Road to the east;
- It is recommended that the crossover to Welshpool Road East be reconfigured to improve sightlines in accordance with Austroads which seeks to align side roads to intersect major roads at 90 degrees.

In addition to the above comments, the Department notes that the site contains Threatened and Priority Ecological Communities that have been identified under state and Commonwealth environmental legislation. A flora and fauna survey may be required to be undertaken to identify the existing environmental attributes of the site. It is recommended that advice be sought from the Department of Biodiversity, Conservation and Attractions and the Commonwealth Department of Environment and Energy before the LDP is determined.

Thank you for forwarding the application for comment.

If you have any questions regarding this advice, please do not hesitate to contact Alex Campbell on 6551 9183.

Yours sincerely

Mario Carbone A/Planning Manager Land Use Planning

11 January 2019



Government of Western Australia Department of Water and Environmental Regulation

Your r	ef:	DA18/0226

File ref: DWERT952

PA ref: 21670

Enquiries: Bree Lyons

Tel<sup>.</sup>

6250 8035

City of Kalamunda PO Box 42 KALAMUNDA WA 6926

Via email - luke.harris@kalamunda.wa.gov.au

Attention: Luke Harris

Dear Sir/Madam,

#### Re: Proposed Local Development Plan – Lot 500 Gavour Road, Wattle Grove WA

Thank you for the above referral dated 1 March 2018. The Department of Water and Environmental Regulation (DWER) has assessed the proposal and would like to provide the following advice:

The DWER has previously provided comments and approved a Local Water Management Strategy (LWMS) for the proposed development of the site.

However, it is noted from the plans provided that the proposed Local Development Plan shows more extensive development of the site than previously accounted for. Due to the further development of the site, including development of the previously proposed effluent disposal area, the DWER requires that the LWMS is updated to reflect the changes to the development of the site.

The updated LWMS should be referred to the DWER for comment, prior to the approval of the plan.

#### Water Resource Advice Only

The Department of Water has recently merged with the Department of Environment Regulation and Office of the Environmental Protection Authority to create the new agency Department of Water and Environmental Regulation.

The former agencies are in the process of amalgamating their functions. Until this fully occurs, please note that the advice in this correspondence pertains only to water resource matters previously dealt with by the Department of Water.

Swan Avon Region 7 Ellam Street Victoria Park WA 6100 Telephone: 08 6250 8000 Facsimile: 08 6250 8050 www.dwer.wa.gov.au If you wish to discuss the matter further, please contact Bree Lyons on 6250 8035 or <u>bree.lyons@dwer.wa.gov.au</u>.

Yours sincerely,

vded

Carlie Slodecki Senior Natural Resource Management Officer Land Use Planning Swan Avon Region

10 July 2018



Government of Western Australia Department of Fire & Emergency Services



Our Ref: D05911 Your Ref: DA18/0226

Luke Harris City of Kalamunda enquiries@kalamunda.wa.gov.au

Dear Mr Harris

# RE: VULNERABLE LAND USE - LOT 500 (32) GAVOUR ROAD, WATTLE GROVE – RETIREMENT VILLAGE AND AGED CARE FACILITY - LOCAL DEVELOPMENT PLAN

I refer to your email dated 19 June 2018 regarding the submission of a Bushfire Management Plan (BMP) (Version 0), prepared by Strategen Environmental Consultants Pty Ltd, and dated 16 May 2018, for the above Local Development Plan (LDP).

DFES provide the following comments with regard to *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines).

#### <u>Assessment</u>

#### 1. Policy Measure 6.3 a) (ii) Preparation of a BAL contour map

Issue	Assessment	Action
Vegetation classification	The classification of Class G Grassland along the Crystal Brook creek line is not substantiated. The BMP refers to the area being modified. However, it is unclear if any environmental considerations (if revegetation, clearing permits are required) will prejudice the assumptions within the BMP. Furthermore, an enforceable mechanism is required to provide certainty that the proposed management measures can be achieved in perpetuity and that they are enforceable. Alternatively, the vegetation classification should be revised to apply the worst case scenario as per AS 3959.	Modification/ clarification required.
BAL Contour Map	The Method 1 BAL calculation indicates a 14 metre and 17 metre separation distance (slope dependent) for development adjacent to Class B Woodland to achieve BAL-29. However the nominated setbacks within the LDP, adjacent to the Class B Woodland (periphery of site) is only 10 metres. It is unclear given this discrepancy if the independent living sites sited adjacent to perimeter boundaries can achieve BAL-29 or lower.	Modification required.

Element	Assessment	Action
Location	<b>A1.1 – insufficient information</b> The BAL ratings cannot be validated, as the vegetation classification inputs require modification as per the above table.	Modification required.
Siting & Design	A 2.1 - not demonstrated The development has not been designed appropriately to ensure bushfire protection measures can be achieved and to minimise the level of bushfire impact to people that are considered vulnerable.	Modification required.
Vehicular Access	<b>A3.3 – not demonstrated</b> Two cul-de-sacs are incorporated into the design without incorporating required turn around provisions.	Modification required.
	A3.5 – not demonstrated An internal road which is intended to provide egress for a large number of unknown occupants (190 independent living sites plus an aged care facility) should not be considered a private driveway in a residential context. The internal road should be designed to meet the requirements of a public road and facilitate unimpeded two-way traffic throughout the site in an emergency event. It is not demonstrated a vertical clearance of 4.5 metres can be achieved where the internal road passes beneath Western Power high voltage lines.	Modification required.
	<b>A3.6 – not demonstrated</b> The LDP does not demonstrate the EAW is of sufficient size to meet the requirements of Table 6 of the Guidelines (pg. 68). The EAW leg should be redesigned to meet the requirements of an EAW and facilitate unimpeded two-way traffic throughout the site in an emergency event.	Modification required.
	Additionally, the internal road (including the bridge) and EAW should give consideration to meeting structural fire- fighting requirements at planning stages (refer DFES Guidelines GL11 - DFES site planning and fire appliance specifications). A fire appliance responding to a structure fire within a multi storey aged care facility may require increased turning circles and roads (and bridges) capable of supporting 30 tonnes; above that of the bushfire protection requirements for vehicle access.	Comment
Water	<b>A4.3 – comment</b> The BMP states the project will be provided with a reticulated water supply. The lot is approximately 750 metres in length and will require fire hydrants to be provided within the private development in accordance with AS2419.1 Appendix B to address the bushfire risk. This should be clarified within the BMP at subsequent development approval stages.	Comment for subsequent development approval stages.

## 2. Policy measure 6.5 c) Compliance with the Bushfire Protection Criteria

#### 3. Policy measure 6.6 Vulnerable land uses

Issue	Assessment	Action
Bushfire Emergency Evacuation Plan (EEP)	Subject to this policy measure, development applications for vulnerable land uses are required to include an Emergency Evacuation Plan (EEP). The LDP recognises the site is intended for an Age Care Facility which is a vulnerable land use, and whilst an EEP is not required at this stage, consideration should be given to the formulation of an EEP at subsequent planning stages.	Consideration for subsequent planning stages.
	It is recommended that further consideration be given to the Guidelines (Version 1.3) Section 5.5.2 'Developing a Bushfire and Emergency Evacuation Plan'. This contains further detail in regard to what an EEP should include and will ensure the appropriate content is detailed when formulating an EEP for submission to the City of Kalamunda at the development approval stage.	

#### Recommendation - not supported modifications required

It is critical that the bushfire management measures within the BMP are refined, to ensure they are accurate, defined and can be implemented to reduce the vulnerability of the development to bushfire. The proposed development is not supported for the following reasons:

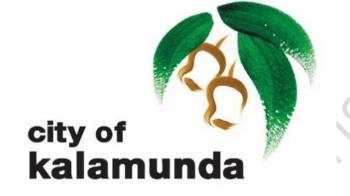
- 1. The development design has not demonstrated compliance to Element 1: Location, Element 2: Siting and Design, Element 3: Vehicular Access and Element 4: Water.
- 2. The proposed development is intensifying land use in a bushfire prone area without addressing the increased risk associated with a vulnerable land use.

If you require further information, please contact Land Use Planning Officer, Sherrie Nicholas on telephone number 9482 1777.

Yours sincerely

Sandeep Shankar SENIOR LAND USE PLANNING OFFICER

26 July 2018



Wattle Grove Cell 9

# **Development Contribution Plan – Report**

Feb 2019

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## 1. Introduction

### 1.1 Background

The Wattle Grove Cell 9 development area is located within the City of Kalamunda and is generally bound by Tonkin Highway, Roe Highway, and Welshpool Road East.

The Wattle Grove Cell 9 Local Structure Plan (the LSP) has been prepared to facilitate residential subdivision and development within the area. Due to the nature of fragmented land ownership, a Development Contribution Plan (DCP) has been prepared to coordinate the provision of common infrastructure required to cater for development.

### A copy of the LSP is contained in 6.1.

### 1.2 Purpose of Development Contribution Plan

This report has been prepared to set out in detail:

- The infrastructure, land and other items for which development contributions are to be collected;
- How land values are calculated and the valuation methodology applied;
- The cost estimates of infrastructure and other items;
- The periodic review of the cost estimates;
- The cost contribution rate applicable;
- Principles for the priority and timing of infrastructure provision and land acquisition; and
- Various other operational matters.

#### 1.3 Status

This DCP Report has been prepared pursuant to Schedule 11 of the City of Kalamunda (the City) Local Planning Scheme No.3 (LPS 3).

The DCP Report should be read in conjunction with Schedule 11 (Development Areas Part 1) of LPS 3 and the LSP. This DCP Report does not form part of LPS 3 but has been prepared generally in accordance with the DCP provisions contained in Schedule 11 of LPS 3.

# 2. Infrastructure, Land and Other Items

This section of the DCP Report identifies the infrastructure, land and other items for which development contributions will be collected. These items include:

- Land for roads and intersections;
- Construction of roads and intersections;
- Landscaping;
- Drainage;
- Shared paths and footpaths; and
- Administration costs.

### 2.1 Land Value

Land is required to deliver the infrastructure and Public Open Space outlined within the DCP Report. To determine the total cost of items, an estimate of land value needs to be identified for each parcel.

Valuation report undertaken in February 2018 assigned a land valuation rate of **\$165m/2** to be utilised for determining estimated land acquisition costs.

#### 2.1.1 Land for Roads, Public Open Space and Miscellanea

The DCP takes responsibility for acquiring DCP road reserve land where the existing reserve is widened or where the road is a new road. The DCP is also responsible for acquiring Public Open Space land where it is identified on the LSP. Under the DCP there is generally no liability for landowners to vest Public Open Space in the Crown free of charge.

The following table brings together the road reserve and Public Open Space acquisitions along with an allowance for miscellaneous land purchase, which may be required through the course of detailed design work:

Item	Area of Remaining Acquisition (m <sup>2</sup> )	Cost of Remaining Acquisition (\$)
Road Reservation	523	\$86,295
Public Open Space	28,040	\$4,726,600
Miscellaneous Land Acquisition Related Works		\$330,568.73

A detailed breakdown of the cost is provided in Appendix A.

## 2.2 Roads / Intersections

#### 2.2.1 Hale Road

Hale Road is an existing road and forms a main traffic route from Welshpool Road East to Tonkin Highway. Hale Road is required to be upgraded to service the future development envisaged by the LSP.

The following items are included in the DCP for Hale Road:

• Widening of carriageway along north side by approximately three metres to accommodate a dual carriageway separated by median islands.

- Construction of a dedicated bicycle lane along the north side of Hale Road to provide a continuous connection between Welshpool Road East and Tonkin Highway, including upgrading of the existing pedestrian path in this location.
- Undergrounding and relocating of power lines within a section of the northern footpath along Hale Road.
- Landscaping improvements and additions.

#### The future development cost for Hale Road is estimated at \$5,692,517.

A detailed breakdown of the cost is provided in Appendix B.

#### 2.2.2 Woodlupine Brook Improvements

Woodlupine Brook is a watercourse that splits Cell 9 into two halves. There are improvements proposed to Woodlupine Brook to increase attractiveness, usability, and accessibility.

The following items are included in the DCP for Woodlupine Brook:

- Earthworks to modify flow path.
- Erosion and flow control measures.
- Landscaping improvements and additions.
- Removing drop structures.
- Construction of pedestrian bridge and footpaths.
- Construction of fencing.

# The future development cost for Woodlupine Brook Improvements is estimated at \$2,376.350.

A detailed breakdown of the cost is provided in Appendix C.

#### 2.2.3 Sheffield Road/Arthur Road Pathway Installation

The Pathway Installation costs are for the remaining pathway upgrades and installation of pathways along Arthur Road and Sheffield Road.

#### The future development cost of Pathway Installation is estimated at \$90,386.85.

A detailed breakdown of the cost is provided in Appendix D.

#### 2.3 Developer Drainage Works

Developer drainage works are costs associated with reimbursing private developers for drainage they install themselves. These works generally include gross pollutant traps, pipes, manholes and other related infrastructure.

#### The future development cost for Developer Drainage Works is estimated at Error! Reference source not found..

A detailed breakdown of the cost is provided in Appendix E.

### 2.4 Miscellaneous Land Acquisition Related Works

Miscellaneous land acquisition related works are costs which may be required through the course of detailed design work, such as improvements and remediation work.

Previous DCP Reports applied a \$200,000 contingency for these works. The City has received costs estimates for miscellaneous land acquisition related works for the Hale Road widening and Woodlupine Brook Improvements which has been applied to the total cost plus the \$200,000 contingency for future land acquisitions.

#### **The future miscellaneous land acquisition related works costs is estimated at 330,568.73**A detailed breakdown of the cost in provided in Appendix E.

### 2.5 Project Management

Project Management costs are associated with the City's management of the contractors undertaking the DCP works.

#### The future project management costs is estimated at \$100,000.

A detailed breakdown of the cost in provided in Appendix G.

#### 2.6 Education Department Loan

The DCP was originally set up to purchase the Wattle Grove Primary School site. However, this never occurred as there was not enough money collected at the time and the site was purchased directly by the Department of Education. Thus, the DCP now owes the Department of Education for the site. The City has attempted on many occasions to repay the 'loan' to the Department of Education without success. The loan money is interest free and has been set aside to repay in future.

# The future cost to repay the Education Department Loan is Error! Reference source not found..

#### 2.7 Administrative Items (including consultant expenses)

Administrative items include all expended and estimated future costs associated with administration, planning and development of the LSP, DCP and any technical documents necessary for the implementation of the above, including:

- Legal and land admin costs;
- Planning costs;
- Other related technical and professional studies; and
- Scheme Management Costs (including administration and management of the DCP).

Excluded from administration costs are:

- Engineering and technical design fees for infrastructure projects;
- Contingencies; and
- Staging costs.

The total administration costs expended from inception up to August 2018 is **Error! Reference source not found.** 

The estimated costs for future administrative items is estimated at \$548,800.

A detailed breakdown of the costs is provided in Appendix H.

## 2.6 Estimated Costs

The following table provides a summary of the remaining cost for all infrastructure, land and other items within the DCP.

\*Note – Expenditure costs stated are as of the start of 2016 until 31 January 2019. The financial recording process of Cell 9 was updated in 2016. A review of the financials pre-2016 was undertaken with a decision made to document actual costs from 2016 onwards to accurately reflect the cost of works since this time. See Section 2.7 for total expenditure since the inception of the Cell 9 DCP (2001). Remaining costs are estimated from 31 January 2019.

			C.
Item	Expenditure (\$)	Remaining Cost (\$)	Total Cost (\$)
Hale Road	\$431,899.43	\$5,692,517	\$6,124,416.43
Arthur Road/Wimbridge/ Sheffield Projects	\$1,205,356	\$90,386.85	\$1,295,743
Woodlupine Brook Improvements	\$1,459,557.07	\$2,376,350	\$3,835,907.07
Developer Drainage Works	\$66,497.52	\$792,000	\$858,497.52
Project Management	\$32,224.76	\$100,000	\$132,224.76
Miscellaneous Land Acquisition Related Works	Expenditure accounted for in line items above.	\$330,568.73	\$427,885.73
Subtotal	\$3,195,534.78	\$9,381,823	\$12,577,357.78
<i>5% contingency on above (rounded)</i>	NA	\$470,000	NA
Education Department Loan	NA	\$3,909,092	\$3,909,092.00
Land for Roads	\$1,555,121.83	\$86,295	\$6,368,016.83
Land for Public Open Space		\$4,726,600	
Land contingency	NA	\$200,000	\$200,000.00
Administrative Items	\$150,037.40	\$548,800	\$698,837
Total	\$4,900,694	\$19,322,609.58	\$24,223,303.58

# 2.7 Total Expenditure

Expense	Expenditure
Operating Expenses	\$2,211,472
Capital Expenses	\$20,774,511
Total	\$22,985,983

## 3. Development Contribution Methodology

This section of the DCP Report sets out the methodology for determining the development contributions applicable. The development area is characterised by a single precinct and development contributions are made on a 'per lot' basis.

The method for calculating contributions is as follows:

Net outstanding costs = remaining costs - funds held in bank

Remaining lot yield = R - Code yield or Commercial zone equivalent

Contribution Rate =  $\frac{\text{Net outstanding costs ($)}}{\text{Remaining lot yield}}$ 

Remaining costs	\$19,322,609.58
Funds held in bank	\$10,047,521
Remaining lot yield	359 lots or lot equivalent
<b>Contribution Rate</b>	\$25,836 per lot

Contribution Rate =

JRAFF FOR Y

 $\frac{(\$19,322,609.58 - \$10,047,521)}{359} = \$25,836 \text{per lot}$ 

# 4. Priority and Timing of Provision

The following key principles are utilised to guide the identification of priorities for the provision of infrastructure and land acquisition, including:

- Ensuring a constant turnover of funds By managing the cash flow of the DCP, the City
  can optimise the use of funds between land acquisition and civil works and recovery of
  developer pre-funding.
- Prioritising the purchase of land identified for high priority infrastructure works.
- Undertaking works and land acquisition in areas of fragmented ownership this assists in the successful and coordinated development of these areas. In some areas, the developer provides infrastructure and land as an offset to their contribution liability.
- Grant funding opportunities the City will actively seek grant funding to assist in the provision of DCP infrastructure. In most instances, the use of grant funding is reliant on the City providing a matching or partial contribution. The City may utilise DCP funds and elevate the priority and timing of an infrastructure item to capitalise on grant funding opportunities. This approach is beneficial to the long-term financial viability of the DCP.

Subject to the availability of funding, the City has determined the following items as the current order of priority:

- 1. Arthur/Sheffield Footpath Installation (H1 2019);
- 2. Woodlupine Brook Improvements land acquisition, design and construction (Ongoing 2019/2020);
- 3. Hale Road land acquisition, design and construction (2019/2020);
- 4. Developer drainage works (Ongoing);
- 5. Miscellaneous Land Acquisition Costs (Ongoing);
- 6. Project Management (Ongoing); and
- 7. Administration Cost (Ongoing).

The priority list will be updated as part of the annual cost estimate review and associated DCP Report update.

# 5. Items not included in the DCP

The City undertook an audit of public open space that is yet to be developed within Cell 9. The following reserves were identified by the audit:

- Lot 42 Bruce Road
- Lot 312 Sheffield Road
- Lot 26 St John Street
- Lot 60 Bruce Road

The cost for land acquisition of these reserves has been factored into the DCP, however the improvements of the reserves has not been included since inception. The cost to improve these reserves through the DCP would be too significant a cost burden on the remaining lots to be developed, and therefore these costs have been left out of the DCP. Improvements to these reserves will need to be included in the City's annual budget.

The estimated costs associated with the improvements of the reserves is approximately \$2,672,400. It should be noted that the timing of these improvements would be contingent on the timing of land acquisition.

## 6. Period of Operation and Review

The DCP will operate for a period of 4 years, concluding on the date the last infrastructure works are completed – currently estimated at 1 July 2022.

The DCP will be reviewed every year, having regard to the rate of subsequent development in the area since the last review and the degree of development potential still existing. The review will include costs of construction, land values, changes to priorities, administration costs, developed lots and minor modifications to infrastructure items.

Additional reviews may be completed as required, having regard to cost volatility and development priorities.

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## 7. Figures

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#### 7.1 Wattle Grove Cell 9 Local Structure Plan



City of Kalamunda

## 8. Appendices

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#### 8.1 Appendix A: Land for Future Purchase

L01 42 (12) Bruce Road       11,191       \$1,946,515       0       \$0         L01 60 (7) Bruce Road       6,912       \$1,140,480       0       \$0         L01 2 (268) Hale Road       3,000       \$495,000       323       53,295         L01 28 (296) Hale Road       1,837       \$303,105       200       \$33,000         L01 26 (44) St John Road       5,100       \$841,500       0       \$0         T0tal       28,040       \$4,726,600       523       \$86,295		Area of POS (sqm)	Cost POS (\$)	Area Road Reserve (sqm)	Cost Road Reserve (\$)
Road         6,912         \$1,140,460         0         \$0         \$0           Lot 2 (268) Hale Road         3,000         \$495,000         323         53,295           Lot 28 (296) Hale Road         1,837         \$303,105         200         \$33,000           Lot 26 (44) St John Road         5,100         \$841,500         0         \$0           Total         28,040         \$4,726,600         523         \$86,295		11,191	\$1,946,515	0	\$0
Road         5,000         \$493,000         523         53,293           Lot 28 (296) Hale Road         1,837         \$303,105         200         \$33,000           Lot 26 (44) St John Road         5,100         \$841,500         0         \$0           Total         28,040         \$4,726,600         523         \$86,295		6,912	\$1,140,480	0	\$0
Road         1,837         \$303,103         200         \$33,000           Lot 26 (44) St John Road         5,100         \$841,500         0         \$0           Total         28,040         \$4,726,600         523         \$86,295		3,000	\$495,000	323	53,295
John Road         3,100         \$041,300         0         \$0           Total         28,040         \$4,726,600         523         \$86,295		1,837	\$303,105	200	\$33,000
		5,100	\$841,500	0	\$0
ORAFT FOR PUBLIC MONE	Total	28,040	\$ 4,726,600	523	\$ 86,295
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City of Kalamunda

# 8.2 Appendix B: Hale Road

Hale Road Widening	Estimate to Complete
Design	\$7,000
Electrical Review 3E Consulting Engineers Pty Ltd	\$0
Detailed Design <i>Lycopodium</i>	\$7,000
Construction	\$5,414,778
Hale Road Temporary Pedestrian Crossing (Opposite Shopping Centre) <i>City's Infrastructure Maintenance Team</i>	\$0
Widening Stage 1 (Welshpool to the Hale/Wimbridge/Arthur Roundabout)	\$1,825,485
Western Power Stage 1 (Welshpool to the Hale/Wimbridge/Arthur Roundabout)	\$1,300,000
Reticulation/Landscape Stage 1 (Welshpool to the Hale/Wimbridge/Arthur Roundabout)	\$300,000
Widening Stage 2 (Hale/Wimbridge/Arthur Roundabout to Tonkin Highway)	\$1,009,293
Western Power Stage 2 (WHale/Wimbridge/Arthur Roundabout to Tonkin Highway)	\$780,000
Reticulation/Landscape Stage 2 (Hale/Wimbridge/Arthur Roundabout to Tonkin Highway)	\$200,000
	+
Construction Administration/Supervision	\$270,739
Widening Stage 1 (Welshpool to the Hale/Wimbridge/Arthur Roundabout)	\$171,274
Widening Stage 2 (Welshpool to the Hale/Wimbridge/Arthur Roundabout)	\$99,465
Miscellaneous	\$0
Falling Weigt Deflectometer Testing ARRB Group Ltd	\$0
Pavement Testing/Analysis Talis Consultants Pty Ltd	\$0
Grand Total - Hale Road Widening	\$5,692,517

# 8.3 Appendix C: Woodlupine Brook Improvements

Public Open Space Development (Woodlupine Brook Living Stream)	Estimate to Complete
Design	\$40,000
Hydraulic Design David Wills & Associates	\$0
Living Stream <i>Syrinx Environmental (Design)</i>	\$0
Irrigation Design Stage 2 <i>Total Design</i>	\$0
Stage 3 Design Review <i>Syrinx Environmental (Design)</i>	\$40,000
Irrigation Design Stage 3	\$0
Construction	\$2,130,000
Pedestrian Bridge Dowsing Group	\$0
Living Stream Stage 2 Civil/Landscaping Syrinx Environmental (Construction)	\$85,000
Living Stream Stage 2 Plant Supply Benara Nurseries	\$0
Living Stream Stage 2 Plant Supply NAMS Nursery	\$0
Living Stream Stage 2 Plant Supply <i>Plantrite</i>	\$0
Reticulation Installation Stage 2 <i>Total Eden</i>	\$60,000
Soil Improvement & Stolon Implementation Stage 2 City Parks & Environmental Team	\$65,000
Mulch Supplementation Stage 2 <i>City Parks &amp; Environmental Team</i>	\$50,000
Living Stream Stage 3 Civil/Landscaping Construction	\$1,500,000
Living Stream Stage 3 Plant Supply	\$150,000
Reticulation Installation Stage 3	\$75,000
Soil Improvement & Stolon Implementation Stage 3 City Parks & Environmental Team	\$85,000

Mulch Supplementation Satge 3 City Parks & Environmental Team	\$60,000
Construction Administration/Supervision	\$165,350
Pedestrian Bridge Syrinx Environmental (Design)	\$0
Living Stream Stage 2 Civil/Landscaping Syrinx Environmental (Design)	\$0
Living Stream Stage 2 Plant Supply Syrinx Environmental (Design)	\$0
Living Stream Stage 3 Civil/Landscaping Syrinx Environmental (Design)	\$128,250
Living Stream Stage 3 Plant Supply Syrinx Environmental (Design)	\$17,100
Acid Sulphate Soil Investigation Miscellaneous	\$20,000 <b>\$15,000</b>
Artist Impression of the Woodlupine Brook Pedestrian Bridge Castledine & Castledine Designers	\$0
Supply/Install Surface Bollards Metal Works	\$0
Supply/Install Bollards at the Pedestrian Bridge Landmark Operations Ltd	\$0
Woodlupine Brook Living Stream Design Review Sercul	\$0
Tender Advertising - Woodlupine Brook Living Stream (Tender 1722) Marketforce Pty Ltd	\$0
Site Signage DMI Signs	\$0
Relocation of Communciation Services Telstra	\$0
Scanning for Undergorund Services United Scanning Services Pty Ltd	\$0
Side Entry, Kerb and Pram Ramp Installation (The Promenade near the Pedestrian Bridge)	\$0
ASS Investigation Stage 2 Hydro Geo Enviro Pty Ltd	\$0
ASS Investigation Stage 3 Strategen EnvironmentalConsultants Pty Ltd	\$0
Water Corporation Maintenance Agreement/Easement Arrangements	\$15,000

**Grand Total - Public Open Space Development** 

\$2,376,350

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### 8.4 Appendix D: Developer Drainage Works

Developer Drainage Works	Estimate to Complete
Design	\$0
	\$0
Construction	\$792,000
Provision of Gross Pollution Traps	\$207,000
Provision of Stormwater Pipe Drainage > 450mm dia	\$585,000
Construction Administration/Supervision	<b>\$0</b>
	\$0
Miscellaneous	<b>\$0</b> \$0
Grand Total - Developer Drainage Works	\$792,000
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## 8.5 Appendix E: Miscellaneous Land Acquisition Related Works

Land Acquisition Related Works	Estimate to Complete
Miscellaneous Lot 2 and Lot 28 Hale Road Improvements	\$130,568.73
Contingency	\$200,000
Grand Total - Land Acquisition Related Works	\$330,568.73

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# 8.6 Appendix F – Pathway Installation for Arthur Road and Sheffield Road

Pathway Installation		Estimate to Complete
Design		<i></i> complete
		\$0
Construction		\$65,401
Arthur Road		\$65,401
Sheffield Road		\$0
Cycle Path Contribution (Job No 2255)	Ś	\$26,986
Construction Administration/Supervisi		¢0
Construction Aummistration/ Supervisio		<b>\$0</b> \$0
		<b>φ</b> υ
Miscellaneous		\$0
		<u> </u>
	C	1
	Grand Total - Pathway Installation	\$90,387
2		

# 8.7 Appendix G - Project Management

		Estimate to Complete
Project Management Charges		\$100,000
2015/2016 Financial Year		\$0
2015/2016 Consultant Review		\$0
2016/2017 Financial Year		\$0
2017/2018 Financial Year		\$0
2018/2019 Financial Year	S.	\$40,000
2019/2020 Financial Year		\$30,000
2020/2021 Financial Year	0	\$20,000
2021/2022 Financial Year		\$10,000
	Grand Total - Project Management Charges	\$100,000
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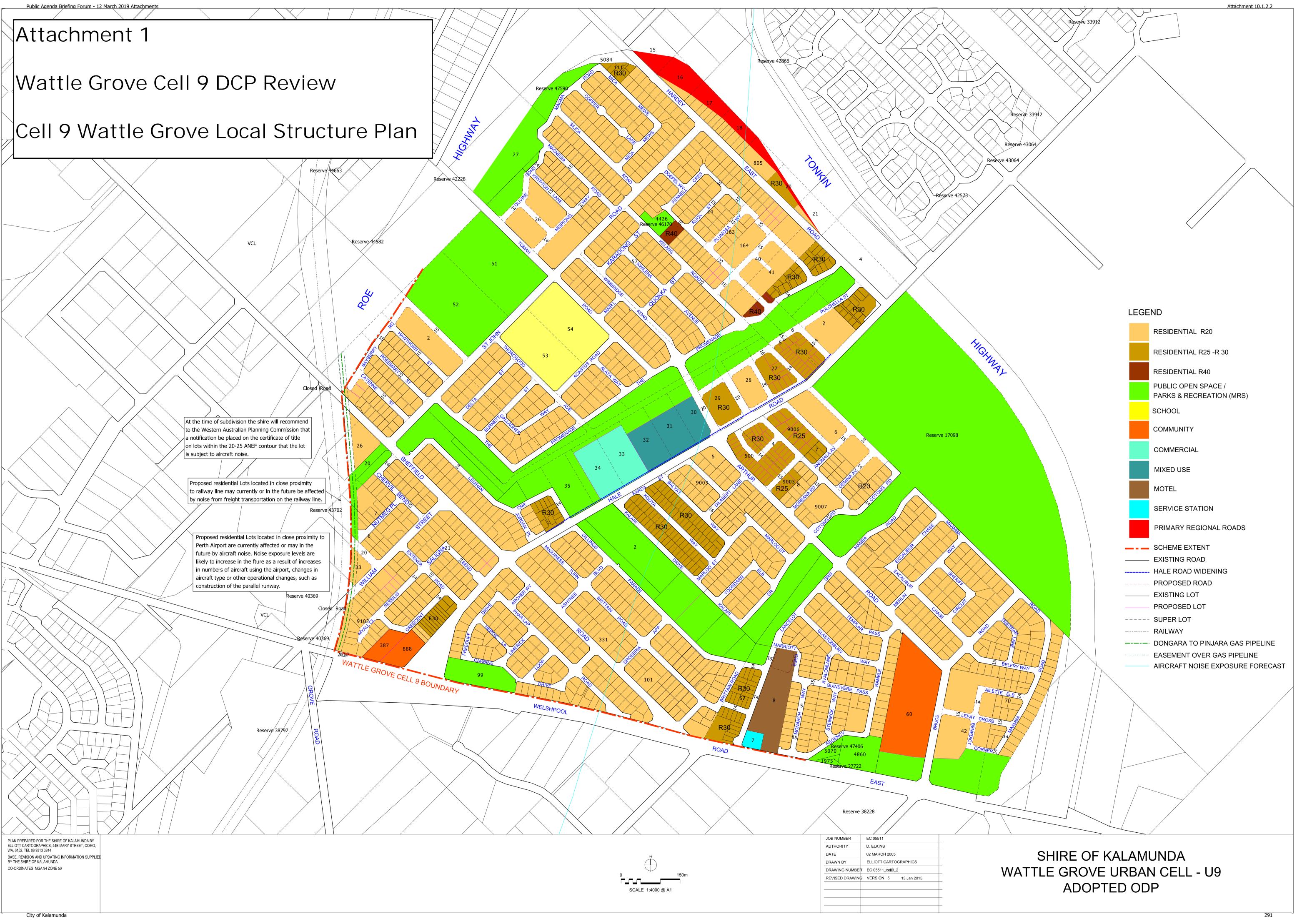
Description	Annual (\$)	Years	Total (\$)
Consultant Expenditure			
Legal / Land Admin	\$15,000	4	\$60,000
DCP Annual Review / Audit	\$5,000	4	\$20,000
Land Valuation	\$10,000	4	\$40,000
Staffing Costs			
Planning / Project Management	\$87,200	4	\$348,800
Scheme Windup	\$20,000	4	\$80,000
Total	\$137,200	4	\$548,800

## 8.8 Appendix H: Administrative Items (including consultant expenses)

Justification:

- Legal / Land Admin: Costs incurred for the establishment of legal agreements between the City and landowners to facilitate road construction and acquisitions and public open space purchases. Estimates are inclusive of surveying and subdivision costs.
- <u>DCP Annual Review</u>: Costs incurred for the accounting inputs into the financial spreadsheets and management of the DCP.
- <u>Land Valuation</u>: Costs incurred to undertake the annual land valuation.
- <u>Planning / Project Management:</u>
  - Finance and accounting staff mainly at EOFY and End of Quarter 10 hours per month.
  - Planning administration 0.2 FTE accounting for structure plan amendments, DCP review, report writing and admin.

# Administration and Consulting – Expenditure to date since inception (1/2/2000): 927,869





# City of Kalamunda

# **Local Planning Scheme No.3**

# AMENDMENT NO.TBA

To rezone portion of Lot 500 Wandoo Road, Forrestfield from 'No Zone' to 'Residential' with an R20 density code

FORM 2A

# Planning and Development Act 2005

## RESOLUTION TO PREPARE AMENDMENT TO LOCAL PLANNING SCHEME

## Local Planning Scheme No. 3 Amendment Number TBA

# Resolved that the Local Government pursuant to section 75 of the *Planning and Development Act* 2005, amend the above Local Planning Scheme by:

To rezone portion of Lot 500 Wandoo Road, Forrestfield from No Zone to Residential R20.

The amendment is standard under the provisions of the *Planning and Development (Local Planning Schemes) Regulations* 2015 for the following reason(s):

- The propsed amendment would have minimal impact on land in the scheme area that is not the subject of the amendment;
- The proposed amendment does not result in any significant environmental, social, economic or governance impacts on land in the scheme area;
- The proposed amendment is neither complex nor basic, as defined under Part 5 of the *Planning and Development (Local Planning Schemes) Regulations 2015.*

Dated this \_\_\_\_\_\_ day of \_\_\_\_\_\_ 20\_\_\_\_

(Chief Executive Officer)

2



# Planning and Development Act 2005 RESOLUTION TO SUPPORT LOCAL PLANNING SCHEME AMENDMENT

# City of Kalamunda Local Planning Scheme No. 3 Amendment Number TBA

# Resolved that the Local Government pursuant to section 75 of the *Planning and Development Act* 2005 support the above Local Planning Scheme by:

Rezoning a portion of Lot 500 (No. 27) Wandoo Road, Forrestfield from 'No Zone' to 'Residential' with an applicable density code of R20.

# Planning and Development Act 2005 RESOLUTION TO SUPPORT LOCAL PLANNING SCHEME AMENDMENT

# City of Kalamunda Local Planning Scheme No. 3 Amendment Number TBA

# Resolved that the Local Government pursuant to section 75 of the *Planning and Development Act* 2005 support the above Local Planning Scheme by:

Rezoning a portion of Lot 500 (No. 27) Wandoo Road, Forrestfield from 'No Zone' to 'Residential' with an applicable density code of R20.

FORM 6A

#### COUNCIL ADOPTION

This standard Amendment was adopted by resolution of the Council of the City of Kalamunda at the \_\_\_\_\_ Meeting of the Council held on the \_\_ day of \_\_\_\_\_, 20\_\_.

.....

MAYOR

.....

CHIEF EXECUTIVE OFFICER

#### COUNCIL RESOLUTION TO ADVERTISE

by resolution of the Council of the City of Kalamunda at the \_\_\_\_\_ Meeting of the Council held on the \_\_ day of \_\_\_, 20\_ proceed to advertise this Amendment.

.....

MAYOR

.....

CHIEF EXECUTIVE OFFICER

#### COUNCIL RECOMMENDATION

This Amendment is recommended for support by resolution of the City of Kalamunda at the \_\_\_\_\_Meeting of the Council held on the\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ and the Common Seal of the City of Kalamunda was hereunto affixed by the authority of a resolution of the Council in the presence of:

.....

MAYOR

.....

CHIEF EXECUTIVE OFFICER

WAPC ENDORSEMENT (r.63)

.....

DELEGATED UNDER S.16 OF THE P&D ACT 2005

Local Planning Scheme No.3 Amendment No<mark>.TBA</mark> 18

DATE.....

FORM 6A - CONTINUED

# APPROVAL GRANTED

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.....

### MINISTER FOR PLANNING

DATE.....



Chief Executive Officer City of Kalamunda PO Box 42 Kalamunda WA 6926

1<sup>st</sup> June 2018

#### ATTENTION: PLANNING DEPARTMENT

Dear Sir / Madam,

#### RE: PROPOSED SCHEME AMENDMENT - LOT 500 (No. 27) WANDOO ROAD, FORRESTFIELD

On behalf of the owners of the above property, we seek the City's initiation of an Amendment to Local Planning Scheme No. 3 to rezone a 570m<sup>2</sup> portion from 'No Zone' (road reserve) to Residential R20.

The proposed rezoning is consistent with advice contained in WAPC's subdivision approval reference number 155121 for the subject property which states that the land identified as road reserve is no longer required. The rezoning will remove an anomaly of a proposed subdivided lot having a portion zoned Residential and another portion identified as road reserve, in favour of a single Residential zoning.

The 570m<sup>2</sup> portion of land identified as road reserve is owned by our clients. This portion is surplus to the current and future requirements of Coolabah Way and the lots within it which were created over 40 years ago. As a result there will be no impact on adjoining and nearby owners.

In support of the Amendment we enclose a report detailing the proposed in further detail in accordance with the City's requirements.

Can you please provide us with an invoice for the City's fee made out to Norman & Susan Wong c/- The Land Division.

oel Carter

# THE LAND DIV SION

# APPLICANT'S SCHEME AMENDMENT REPORT

#### 1. INTRODUCTION

The landowners of Lot 500 (No. 27) Wandoo Road, Forrestfield seek to initiate an amendment to the City of Kalamunda's Local Planning Scheme No. 3 ('LPS 3') by:

• Rezoning a portion of Lot 500 (No. 27) Wandoo Road, Forrestfield from 'No Zone' (identified as road reserve in LPS 3) to 'Residential' with an applicable density code of R20 as shown in the Scheme Amendment Map (**Appendix 1**).

The amendment will enable a proposed new subdivided lot to be entirely zoned Residential R20, rather than a complicated Residential R20 zoning / No Zone classification.

The proposed new subdivided lot is described as Lot 501 in draft Deposited Plan 412868 (**Appendix 2**).

Note: the land identified as road reserve in LPS 3 has never previously been created and forms part of Lot 500. This amendment is therefore not a road closure.

#### 2. BACKGROUND

#### 2.1 Location

Lot 500 is located in the eastern portion of Forrestfield in close proximity to Lesmurdie Falls Natinal Park. Land to the north and east of the subject site is zoned 'Special Rural' and land to the south and west is categorised by Residential zoned land. The surrounding land is established and has been developed according to applicable zoning / density classifications.

#### 2.2 Land Description & Ownership

The subject land is legally described as Lot 500 on Deposited Plan 46029 on Certificate of Title Volume 1465, Folio 458 and is owned in fee simple by Norman & Susan Wong (see **Appendix 3** – Record of Certificate of Title).

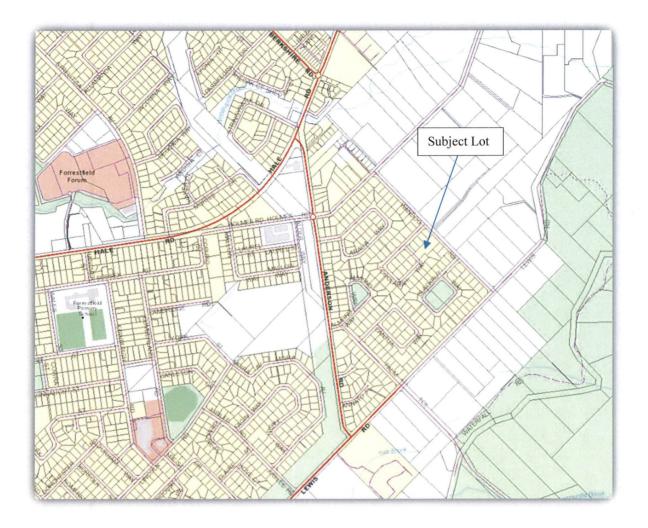


Figure 1 – Location Plan

# 2.3 Subdivision Approval

On the 2<sup>nd</sup> August 2017 the Western Australian Planning Commission ('WAPC') conditionally approved a subdivision of the subject land into 5 lots.

The submitted subdivision plan proposed the creation of 570m<sup>2</sup> of road reserve (extension of Coolabah Way) and a 500m<sup>2</sup> residential lot.

During the subdivision assessment process the Applicants for the subdivision (The Land Division) were advised by the WAPC that the City no longer required the 570m<sup>2</sup> road reserve. Consistent with this advice the following Conditions and Advice Notes were imposed in the WAPC's subdivision approval reference 155121:

- Condition 1. The plan of subdivision be modified to amalgamate proposed Lot 1 and the proposed 570m<sup>2</sup> road to form a balance lot.
- Advice Note 1. In regard to Condition 1, the landowner/applicant is advised that the proposed road reserve as identified on the approved plan of subdivision **is no longer required** by the Shire of Kalamunda. The applicant should discuss the possibility of a Local Planning Scheme Amendment with the City of Kalamunda. (emphasis added in bold).

## 2.4 Physical Characteristics & Current Land Use

Lot 500 is generally rectangular in shape and comprises a total area of  $3,555m^2$ . The land enjoys frontage to both Wandoo Road and Coolabah Way (see **Appendix 4** – Deposited Plan 46029).

The land has been developed with a residential house and various incidental outbuildings and improvements.

The 570m<sup>2</sup> portion of land to be rezoned is relatively flat and devoid of native vegetation. Dial Before You Dig investigations have concluded that there are no services located within this portion.



Figure 2 – Aerial Image

#### 3 STRATEGIC AND STATUTORY FRAMEWORK

#### 3.1 State Planning Context

#### 3.1.1 Metropolitan Region Scheme

Lot 500 is classified 'Urban' zone under the Metropolitan Region Scheme (MRS). The proposal is therefore consistent with the zoning classification under the MRS.

#### 3.1.2 State Planning Policies

#### 3.1.2.1 SPP 3.7 – Planning in Bushfire Prone Areas

A portion of Lot 500 is identified as being within a 'Bushfire Prone Area' however this is not considered relevant to the proposal given that this was previously addressed as part of the subdivision assessment process prior to subdivision approval being issued.

More relevantly the 570m<sup>2</sup> portion of land to be rezoned is not identified as being within a 'Bushfire Prone Area'.

#### 3.2 Local Planning Context

#### 3.2.1 Local Planning Scheme

Under the terms of the City of Kalamunda's current operative Local Planning Scheme No.3 (LPS 3) the majority of Lot 500 is classified 'Residential' zone with a density coding of R20. The south eastern portion of the site (approx. 20m in width and 570m<sup>2</sup> in area) is identified for Road Reserve purposes.

#### 4 AMENDMENT PROPOSAL

#### 4.1 Proposed Rezoning

This amendment to LPS 3 proposes to rezone a portion of Lot 500 (No. 27) Wandoo Road, Forrestfield from 'No Zone' (road reserve) to 'Residential R20'.

#### 4.2 Planning Justification

Based on the City's of Kalamunda's directive that the 570m<sup>2</sup> portion of land identified as Road Reserve is no longer required, the amendment will essentially remove an anomaly under LPS 3 where a proposed subdivided lot would have a dual Residential zoning / Road classification in favour of a standard Residential zoning across the entire lot. This will in turn simplify consideration and assessment for any future Building applications for the land.

Existing lots in Coolabah Way were created in 1975 & 1977 and therefore the existing road network has functioned in its current state for over 40 years without a 'short cut' through Lot 500. Given the relatively short length of Coolabah Way, it is agreed that the minor road extension (which would introduce intersections) is not necessary. The 570m<sup>2</sup> portion of land to be rezoned is therefore considered to be surplus to the current and future requirements of the established road network.

The 570m<sup>2</sup> portion of land to be rezoned is cleared and physically capable of being developed for residential purposes at the proposed density. Parent Lot 500 enjoys good access to the local and regional road network and is served by essential service infrastructure.

#### 5 CONCLUSION

Pursuant to Section 75 of the Planning and Development Act we request Council adopt a standard amendment to LPS 3 by:

• Rezoning a 570m<sup>2</sup> portion of Lot 500 (No. 27) Wandoo Road, Forrestfield from 'No Zone' (road reserve) to 'Residential R20'.

The amendment will enable the proposed new subdivided lot to have a standard Residential zoning across the entire lot.

The amendment will have no impact on the amenity or character of the locality and is considerered to be consistent with orderly and proper planning.

#### Attachment 10.1.3.3

HELD BY DLI

IN DIGITAL FORM ONLY

21.6.2006

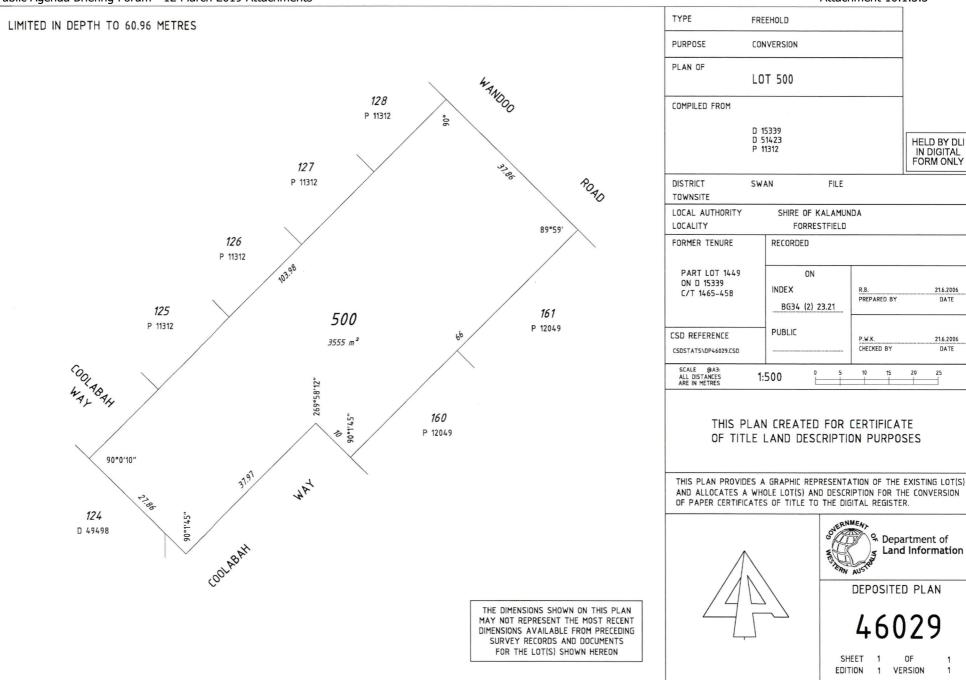
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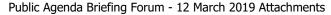




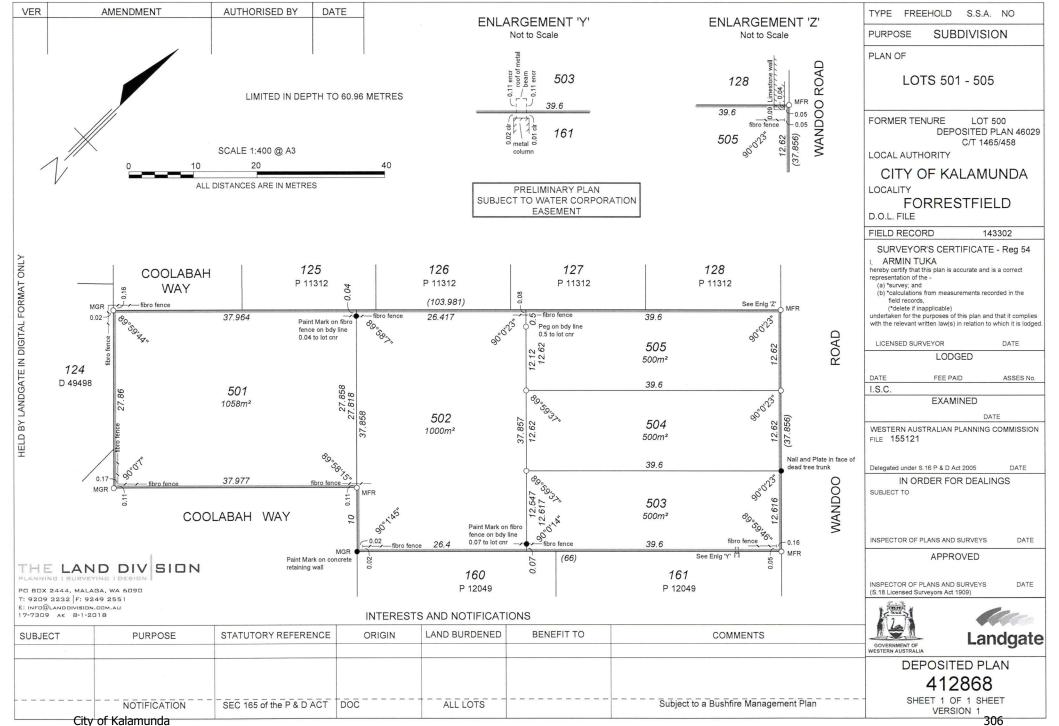
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OF

Land Information



#### Attachment 10.1.3.4



Public Agenda Briefing Forum - 12 March 2019 Attachments

Enquiries: Luke Harris – 9257 9861 Our Ref: WAPC155121 Your Ref: 155121



13 June 2017

Western Australian Planning Commission Locked Bag 2506 Perth WA 6001

Attn: Jemma Douglas

Dear Sir/Madam,

### Proposed Subdivision – Lot 500 (27) Wandoo Road, Forrestfield – Five (5) Lot Freehold Subdivision

Further to your correspondence dated 02 May 2017 please find the following advice pro-forma for the proposed subdivision.

- 1. Property: Lot 500 (27) Wandoo Road, Forrestfield
- 2. MRS Zoning: Urban
- 3. Local Planning Scheme No 3: Residential

Zoning: R20

Provisions which may affect the proposal: Nil

- 4. Guided/ Resumptive Town Planning Scheme, Structure Plan or Outline Development Plan: Local Planning Scheme No. 3
- 5. Relevant planning policies and Council Local Laws affecting the proposed subdivision: **Nil**
- 6. Associated Local Planning Scheme amendments, development applications, or other proposal which may affect the proposed subdivision: **Nil**
- 7. Adjacent and nearby land uses and any sources of potential nuisance/pollution: **Nil**
- 8. Other information to be provided (in brief) wherever possible and/or if appropriate:

#### Shire of Kalamunda

2 Railway Road, Kalamunda WA 6076 PO Box 42, Kalamunda WA 6926 T: (08) 9257 9999 E: (08) 9293 2715 E: kala.shire@kalamunda.wa.gov.au www.kalamunda.wa.gov.au - 2 -

#### Topography

The site incorporates a gradual slope between the south-west and north-east corners of the property.

### Vegetation

The site currently contains a number of managed gardens that comprise of hedges, trees, and other vegetation.

#### Access

Access to the site is proposed from both Wandoo Road and Coolabah Way.

## **Existing Development**

Existing Residence to be retained.

9. Council's recommendation and reasons in respect of the plan of proposed subdivision/amalgamation.

#### That the application for the subdivision of Lot 500 (27) Wandoo Road, Forrestfield into a Five (5) Lot Freehold Subdivision be approved subject to the following conditions and advice.

- 1. Arrangements being made with the Water Corporation [DELETE / INSERT SERVICE PROVIDER AS APPLICABLE] so that provision of a sewerage service will be available to the lots shown on the approved plan of subdivision. (Water Corporation) [DELETE / INSERT LICENSED SERVICE PROVIDER AS APPLICABLE].
- 1. All septic sewer systems including all tanks and pipes and associated drainage systems (soak wells or leach drains) and any stormwater disposal systems are to be decommissioned, in accordance with the Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974, removed, filled with clean sand and compacted. Proof of decommissioning is to be provided in the form of either certification from a licensed plumber or a statutory declaration from the landowner/applicant, confirming that the site has been inspected and all septic tanks, soak wells, leach drains and any associated pipework have been removed.
- 2. 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 level of the land abutting.

- 3. The land being filled, stabilised, drained and/or graded as required to ensure that:
  - a) lots can accommodate their intended development and retain trees;
  - 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; and
  - c) stormwater is contained on-site, or appropriately treated and connected to the local drainage system.
- 5. 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

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.

- 6. Suitable arrangements being made for connection of the land to the comprehensive district drainage system at the landowner/applicant's cost.
- 7. Satisfactory arrangement being made with the local government, at the cost of the developer, for upgrading the end of Coolabah way into a Culde-sac.
- 8. A barrier restricting vehicle access is to be constructed on the proposed road reserve boundary to the satisfaction of the Shire of Kalamunda.
- 9. The proposed road reserve area is to be landscaped to a minimum standard of verge treatment to the satisfaction of local government.
- 10. Suitable arrangements being made with the local government for the provision of vehicular crossover(s) to service the lot(s) shown on the approved plan of subdivision.
- 11. Redundant vehicle crossover(s) to be removed and the kerbing, verge, and footpath (where relevant) reinstated with grass or landscaping to the satisfaction of the Western Australian Planning Commission and to the specifications of the local government.
- 12. Measures being taken to ensure the identification and protection of any vegetation on the site worthy of retention that is not impacted by sub divisional works, prior to commencement of sub divisional works (Local Government).
- 13. An area(s) of land at least 355.5 square metres in area, in a position to be agreed with the Western Australian Planning Commission, being shown on the diagram or plan of survey (deposited plan) as a reserve for public 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).

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- 14. The existing dwelling being retained is to comply with the requirements of the Residential Design Codes.
- 15. Other than buildings, outbuildings and/or structures shown on the approved plan for retention, all buildings, outbuildings and/or structures present on the proposed lots at the time of subdivision approval being demolished and materials removed from the lot(s).

### Advice Notes:

- a. The applicant is advised that the proposed road reserve as identified on the proposed plan of subdivision is no longer required by the Shire of Kalamunda and that an application to amend Local Planning Scheme No. 3 to rezone the portion of the subject land to urban can be submitted to the Shire of Kalamunda for its consideration.
- b. The landowner/applicant is advised that the Department of Environment and Conservation has prepared dust control guidelines for development sites, which, outline the procedures for the preparation of dust management plans. The dust management plans are generally approved, and their implementation overseen, by Local Government. Further information on the guidelines can be obtained from the Department of Environment and Conservation's website www.dec.wa.gov.au under air quality publications.
- c. 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. The guidelines set out the minimum best practice requirements recommended for subdivision construction and granting clearance of engineering conditions imposed.
- d. Prior to obtaining approval from the Shire of Kalamunda, no works relating to clearing of vegetation, trees and earthworks shall be carried out on site and adjacent areas.
- e. The applicant is advised that all drainage is required to utilize and comply with water sensitive urban design principles/guidelines.
- f. With regard to condition no. 7, the cul-de-sac design is required to address manoeuvring spaces for a standard waste collection truck movement, and crossover location.
- g. With regard to condition no. 9, the road reserve area is not to be used for any construction activities.
- h. The applicant should consider if any existing trees can align with the planned verges on the new to be constructed roads.
- i. The applicant to carry out street tree planting at one street tree per household at completion of development. Please contact the Shire of Kalamunda Landscape Officer for species advice on street trees to be planted and planting details.
- j. With condition 12 trees and vegetation for retention or removal to be identified and formally marked on a plan for approval. This will assist demonstration condition met when clearance requested .

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- k. The applicant is to be informed that the verge remains under management of the Shire of Kalamunda with vegetation an asset of Shire of Kalamunda and any works must not impact on this vegetation. Removal of any vegetation is not allowed. Native trees are protected by legislation as verges have the potential to serve important ecological functions in urban environments.
- 1. Any proposed crossover is to be positioned so it does not conflict with the street trees. Any crossover is to be positioned a minimum of three meters away from the tree, this distance is measured from the centre of the tree. This allows root system sufficient room for growth.
- m. Any trees requiring protection from development works should be in accordance with AS 4970 2009 "Protection *of trees on Development sites*".
- n. In regard to Condition 13, the Western Australian Planning Commission hereby approves of a cash-in-lieu contribution in accordance with Section 153 of the *Planning and Development Act 2005.*

Should you have any further queries regarding this matter please contact Luke Harris on 9257 9861 or via email (luke.harris@kalamunda.wa.gov.au).

Yours sincerely,

Andrew Fowler-Tutt Manager Approval Services

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**Chief Executive Officer** City of Kalamunda PO Box 42 **KALAMUNDA WA 6926** 

Our Ref: CMS17484 Enquiries: Stephen Pavey, 6364 7600 Email: Steve.Pavey@dwer.wa.gov.au

Dear Ms Hardy

# **DECISION UNDER SECTION 48A(1)(a) Environmental Protection Act 1986**

## SCHEME:

LOCATION: **RESPONSIBLE AUTHORITY: DECISION:** 

City of Kalamunda - Local Planning Scheme 3 -Amendment 100 Lot 500 (27) Wandoo Road, Forrestfield **City of Kalamunda Referral Examined, Preliminary Investigations** and Inquiries Conducted. Scheme Amendment Not to be Assessed Under Part IV of EP Act. No Advice Given. (Not Appealable)

Thank you for referring the above scheme to the Environmental Protection Authority (EPA).

After consideration of the information provided by you, the EPA considers that the proposed scheme should not be assessed under Part IV Division 3 of the Environmental Protection Act 1986 (EP Act) and that it is not necessary to provide any advice or recommendations.

Please note the following:

For the purposes of Part IV of the EP Act, the scheme is defined as an assessed scheme. In relation to the implementation of the scheme, please note the requirements of Part IV Division 4 of the EP Act.



• There is no appeal right in respect of the EPA's decision to not assess the scheme.

Yours sincerely

Anthony Sutton Delegate of the Environmental Protection Authority Executive Director EPA Services

5 November 2018

# **Response to Submissions Received**

# Local Planning Scheme Amendment No. 100 – Rezoning from 'No Zone' (Road Reserve) to Residential R20.

Submitter No.	Nature of Submission	Applicant/Owner Response	City of Kalamunda Response
Submitter 1	<ul> <li>We received a letter dated 16.11.18 regarding Lot 500 #27 Wandoo Road Forrestfield. I believe you are referring to the back part of the block that has a street fronting onto Coolabah Way between house no #40 and #47.</li> <li>Our concerns are as the original plan was for a road reserve to become a through road but did not eventuate, the end of Coolabah has not been made into a cul-de-sac where vehicles can turn around safely. Over the past few months we have had several trucks reversing down our street whilst the new house was under construction at Lot #47.</li> <li>We have even had the Cleanaway truck reverse down the road to #31 turn around and reverse back up to empty the bins when there have been cars in the way of safely doing a three point turns with a few attempts.</li> <li>Today I took a video of the garbage truck, we had an NBN ute and trailer propped in the road reserve area near the fence to allow the Cleanaway truck to empty bins, a van parked across the road and then the garbage truck at the end of the street. The garbage truck driver got out of his truck and asked the NBN ute so he reversed back down the street to #31 to turn</li> </ul>	It is not possible for the unmade road reserve (in private ownership) within Lot 500 to remain as this would be inconsistent with valid WAPC subdivision approval ref: 155121. As part of its assessment of the subdivision application the City resolved that the unmade road reserve " <i>is no longer</i> <i>required</i> ". The WA Planning Commission agreed with the City and imposed a subdivision condition requiring the road reserve to be amalgamated with the adjoining proposed lot. In addition, the WAPC recommended that the landowner / applicant commence discussions with the City to rezone the subject land. Following issue of the subdivision approval our client subsequently proceeded to act	It is acknowledged that the local road network was designed with the intent of the road achieving a full circular movement for Coolabah Way. Should the road reserve be rezoned to Residential, the circular movement is no longer achieved, thereby triggering the requirement of road upgrades (Cul-de-sac) to ensure safe and legible vehicular manoeuvrability. The City recommends the proposed amendment be modified to include a requirement for the landowner to upgrade Coolabah Way to provide a cul-de-sac.

# **Response to Submissions Received**

# Local Planning Scheme Amendment No. 100 – Rezoning from 'No Zone' (Road Reserve) to Residential R20.

	<ul> <li>around, the Cleanaway truck successfully turn in 2 attempts at a 3 point turn.</li> <li>Both the Cleanaway truck and the NBN ute used the 6 metres or so of the road verge to the fence to either park or turn around, if this is made into a R20 block where do the trucks turn around. A suggestion can the City claim back the land at the side of Lot 500 in Coolabah Way to make a safe turning circle for road users.</li> <li>We have both young children and senior citizens in our street and we do not find it safe for trucks to be reversing down our street.</li> <li>Many thanks and look forward to your reply.</li> </ul>	on fulfilling the assigned subdivision conditions (at a significant expense) and is currently in the final stages.	
Department of Water and Environmental Regulations	Thank you for the above referral dated 16 November 2018. The Swan Avon region of the Department of Water and Environmental Regulation has assessed the referral as a proposal of no interest and such has no comments to provide.		Noted.
Department of Planning, Lands and Heritage	Thank you for your letter dated 16 November 2018 seeking comment from Department of Planning, Lands and Heritage (DPLH) regarding advertising of Amendment 100 for public comment. A review of the Register of Places and Objects as well as the DPLH Aboriginal Heritage Database		Noted.

## **Response to Submissions Received**

# Local Planning Scheme Amendment No. 100 – Rezoning from 'No Zone' (Road Reserve) to Residential R20.

	<ul> <li>concludes that there are no known Aboriginal sites or heritage places within the proposed Scheme Amendment No.100 area intersecting Lot 500 (27) Wandoo Road, Forrestfield. Therefore based on the information held by DPLH, no approval is required under the <i>Aboriginal Heritage act 1972 (AHA)</i>.</li> <li>For any proposed future works DPLH suggests that applicants refer to the State's Aboriginal Heritage Due Diligence Guidelines (Guidelines). The Guidelines can be found on the DPLH website at the following link:</li> <li><u>http://www.daa.wa.gov.au/heritage/land-use/</u></li> <li>The Guidelines allow proponents to undertake their own risk assessment regarding any proposal's potential to impact Aboriginal heritage.</li> </ul>	
Department of Health	<ul> <li>Thank you for your letter dated 16 November 2018 requesting comment from the Department of Health (DOH) on the above proposal.</li> <li>The DOH has no objection to the amendment provided future developments are required to connect to scheme water and reticulated sewerage as required by the <i>Government Sewerage Policy – Perth Metropolitan Region.</i></li> </ul>	Noted.

В

P-DEV 43 - Residential Design		Purpo se
Management Procedure Relevant Delegation		1.0 ackgro und

This Policy has been prepared to provide incentives to encourage balanced, high quality residential development and streetscape outcomes whilst streamlining the State Planning Policy 3.1: Residential Design Code (Residential Design Code) assessment process.

# 2.0 Application of the Policy

This Policy applies to all residential development applications in the City of Kalamunda where variations to the deemed to comply provisions of the Residential Design Codes are proposed.

# 3.0 Statutory Authority / Legal Status

This Policy has been prepared under and in accordance with Schedule 2 of the *Planning and Development (Local Planning Scheme) Regulations 2015* (the Regulations) and Part 7 of the Residential Design Codes

(a) Relationship to Local Planning Scheme No.3.

This Policy is a local planning policy prepared and to be read with regard to the general provisions and objectives of, Part 2 of Local Planning Scheme No.3.

(b) Relationship to other state planning/ development control policies.

This Policy must be read in conjunction with State Planning Policies. State Planning Policies relevant to this policy are:

- i. State Planning Policy 1 State Planning Framework.
- ii. State Planning Policy 3.1 Residential Design Codes.
- iii. State Planning Policy 3.7 Planning in Bushfire Prone Areas
- iv. State Planning Policy Liveable Neighbourhoods
- v. State Planning Policy 2.2 Residential Subdivision

(c) Relationship to other local planning policies

This Policy must be read in conjunction with City of Kalamunda Local Planning Policies. Local Planning Policies relevant to this policy are:

- i. Local Planning Policy P-DEV 20 Outbuildings and Sea Containers
- ii. Local Planning Policy P-DEV 45 Public Notification of Planning Proposals.
- iii. Local Planning Policy P-DEV 57 Street Fence, Wall and Gate Policy
- iv. Local Planning Policy P-DEV 61- Retention and Upgrade of Grouped Dwellings
- v. Local Planning Policy P-DEV 54 -Dual Density Design Guidelines

# 4.0 Policy objectives

- a) To ensure variations to the deemed-to-comply requirements of the Residential DesignCodes maintain the amenity and character of the City;
- b) To provide endorsed offsets for specific types of deemed-to-comply variations;
- *c)* To encourage innovative approaches to maximise the development potential of residential sites; and
- d) To streamline the assessment process for minor residential development.

# **Policy Statement**

## 5.0 Variation Matrix

Table 1 provides design elements which can be varied, if the minimum matrix points are achieved through the design of the residential development.

Table 1 – Variation Matrix	P-DEV 43
Design Element	
Primary Street Setback	Reduction of 50%, no averaging.
	Requires 50 matrix points.
Open Space	Reduction of 25% where portion of front setback area is soft landscaping.
2	Any subsequent variations due to application of this Open Space reduction are not covered by this Policy.
	Requires 50 matrix points.
Garage Setbacks	In line with Primary street setback, but only when there is no footpath.
	Requires 10 matrix points.

# 6.0 Offset Matrix

Table 2 provides the assessment matrix to achieve the objectives of this Policy.

Table 2 – Offset Matrix	Matrix Value
Retention of Significant Vegetation to the satisfaction of the City of Kalamunda. This will require written confirmation from the City's Approval Services team.	50
Verge tree (Minimum 100 litre pot size).	30
Mature Tree on Site (minimum 100 litre pot size).	30
Soft landscaping in Front Setback area, common property, and verge (excludes footpaths and driveway areas).	20
Reduction of driveway width to four (4) metres.	10
<ul> <li>Architectural Features.</li> <li>Multiple Textures/Materials</li> <li>Feature Wall</li> <li>Façade Lighting</li> <li>Entry Feature</li> <li>Roof pitch</li> </ul>	10 each
<ul> <li>Sustainable Development Initiatives.</li> <li>Solar Panel/s</li> <li>3000lt Water Tank</li> <li>Grey Water System</li> </ul>	10 each
A minimum 4m2 Deep soil area to allow for future mature planting.	10

#### 7.0 **Minor Development Exemptions**

Table 3 provides for additional exemptions from the requirement to obtain development approval for minor residential development, subject to meeting the conditions in the table. This is consistent with objective (d) of the Policy which is to streamline the assessment process for minor residential development.

Table 3 - Residential Development	Condition/s
A boundary wall or any wall that would be setback between 0.6m and 1m from the boundary on lots with an applicable R Code of R20 or greater.	<ol> <li>Is not greater than 9m in length.</li> <li>No higher than 3.5m with an average of 3m or less.</li> </ol>
Feature walls (Landscape Walls)	<ol> <li>Maximum 3m width at a max height of 2.1m from natural ground level; and</li> <li>Setback behind the primary street setback.</li> </ol>

The erection or extension of a single house, external fixture, boundary wall or fence, pergola, veranda, garage, carport or swimming pools and spas on the same lot as a single house or grouped dwelling within the Urban Development Zone.	<ol> <li>Where a Structure Plan is in place and designates an R Code.</li> <li>The proposed development complies with the R Codes, as amended by this policy.</li> <li>Not within a Special Control Area.</li> </ol>
Rainwater Tanks in Rural based zones	<ol> <li>Maximum height 2.4m above natural ground level.</li> <li>Compliant with the relevant setbacks/building envelope requirements for the applicable zone/designation.</li> <li>Permitted sizes by lot area:         <ul> <li>a) ≥4,000m2 = 8.74m in diameter</li> <li>b) &lt;4,000m2 but ≥ 2,000m2 = 3.88m in diameter</li> <li>c) &lt;2,000m2 = 6,000L tank</li> </ul> </li> <li>An 8.74m diameter x 2.2m high (200mm sand pad / footing) holds 131,941L;</li> <li>A 3.88m diameter x 2.2m high holds 26,062L.</li> </ol>
Satellite Dishes, masts and antennas	<ol> <li>Is not visible from the primary street.</li> <li>Maximum diameter of 1.8m.</li> <li>Maximum projection of 3m from the highest point of the building to which it is attached.</li> </ol>
Solar Panels	<ol> <li>Is associated with a residential development. Solar panels are positioned in the same plane of an existing roof and does not project higher than the highest point of the roof.</li> </ol>
Sail and Shade Structures	<ol> <li>Is associated with a residential development</li> <li>Where no part of the fabric is closer than 500mm to any boundary -         <ul> <li>The posts can have a nil setback.</li> <li>Setback behind the primary street setback area.</li> </ul> </li> </ol>
Trellis – or similar perforated material attached to Common or Dividing Fence	If located on a side or rear (not secondary street) dividing fence -
	<ol> <li>The combined height of the fence and trellis does not exceed 2.4m from natural ground level; and</li> <li>Setback 6m from primary street boundary.</li> </ol>
	OR if located on a primary street dividing fence –
	1. The combined height of the fence and trellis does not exceed 1.5m; and

	2. The trellis does not cover more that 25% of the frontage.
Water Feature	<ol> <li>Maximum height of 2.4m above natural ground level if located behind the primary street setback.</li> <li>Maximum height of 1.2m above natural ground level if located within the primary street setback.</li> <li>Permitted with a nil boundary setback.</li> </ol>
Windmills and Wind Turbines	<ol> <li>Incidental to residential development occurring on the land which has Council approval or does not require Council approval.</li> <li>Only permitted in Rural based zones/designation.</li> <li>Compliant with the relevant setbacks/building envelope requirements for the applicable zone/designation.</li> <li>A maximum height of 12m.</li> <li>One Windmill or Wind Turbine is permitted per lot.</li> <li><i>Note: Noise must be compliant with the Environmental (Noise) Regulations 1997.</i></li> </ol>
Works to a building in a dangerous state or state of an emergency.	<ol> <li>The repairs will replicate the external appearance of the structure in its original state; and</li> </ol>
(i.e. a building that presents a hazard to members of the public)	2. No additions are applied or implemented to the structure as part of the works.
Maintenance of a Building	<ol> <li>The repairs will replicate the external appearance of the structure in its original state; and</li> <li>No additions are applied or implemented to the structure as part of the works.</li> </ol>
Flag Poles	<ol> <li>Maximum height of 4m.</li> <li>Behind the Primary Street Setback.</li> <li>Does not contain commercial or offensive content to the satisfaction of the City.</li> </ol>

Related Local	
Law	
Related	
Policies	
Related	
Budget	
Schedule	
Legislation	Local Government Act 1995
	Planning and Development Act 2005

	Planning and Development (Local Planning Schemes) Regulations 2015
Conditions	
Authority	
Adopted	Next Review Date

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1 February 2019

# 1. Title: Kalamunda Environmental Advisory Committee

# **Recommended Fox Control Program for the City of Kalamunda**

# 2. Author

Fox Control Working Group: Kevin Goss, Mark Schilling and City Officers

# 3. Executive Summary

The KEAC fox control working group was formed at the request of the Chief Executive Officer of the City of Kalamunda at 26<sup>th</sup> June 2018 Ordinary Council Meeting.

REQUEST the Chief Executive Officer to form a working group comprising of KEAC members and the City of Kalamunda to undertake research to determine a best practice approach to fox management that balances effectiveness of control method with humaneness considers appropriate sites for placement, including minimising the risk to other animals, and to prepare a report for council that clarifies the future direction of the program.

This request was borne from community concern in response to the accidental trapping of a pet dog in the fox control program which commenced on 28<sup>th</sup> May 2018, that fox control in the City of Kalamunda was not being undertaken humanely or applied best practice.

Investigation of the incident confirmed that all statutory and regulatory requirements were met by both the City and the City's contractor and that the owner of the dog had not observed site warning signage, particularly those on the track adjacent to the location of the traps. The dog was not restrained on a lead as required for users of the reserve.

This paper considers impacts from foxes in the City of Kalamunda and recommends the most effective program for future fox control activities on consideration of current techniques available and applicable frameworks.

# 4. Background

Control of foxes is important for the protection of local and regional biodiversity, as well as agricultural and private livestock in the City of Kalamunda. Foxes predate and negatively impact populations of native wildlife such as Bandicoots, Woylies and Possums and are one of the species which has contributed to the extinction of around 11% of Australia's mammal species.

Under the Biosecurity and Agricultural Management (BAM) Act 2007 foxes are a declared pest. It is the responsibility of the landholder or land administrator to control foxes found on their land. Under the Act, it is stated that there should be some form of management applied to alleviate the harmful impact, reduce numbers and distribution and contain the spread of the organism.

Significant reductions in numbers of foxes is readily achieved through the effective use of a number of prescribed methods including:

- 1080 and other poisoned baits
- Shooting

- Trapping
- Den destruction
- Den fumigation

Poisoning using 1080, a Schedule 7 poison, and use and discharge of a firearm on public land in urban areas are not permitted. Therefore, the City of Kalamunda may only employ physical den destruction and trapping methods in an urban and peri-urban environment.

The City of Kalamunda began a small-scale fox control program in January 2013 at Maida Vale Reserve in response to community reports of fox sightings in the area. This was a "*once-off*" response with no long term aims to decreasing fox activity within the reserve, or for the City's application over a long period of time. The single program saw three foxes captured.

A formalised program for fox control began in 2017 with an allocated budget of \$4,400 to engage a contractor to decrease the impact of fox predation on the biodiversity of key reserves in the City of Kalamunda.

The City engaged the services of Animal Pest Management Services (APMS) who advised that the budget would be most efficiently utilised by the use of soft-Jawed leg hold traps. The use of soft catch jawed traps is regulated by the Animal Welfare Regulations (2003) and can only be used if the jaws are padded and modified so that the captured animal is unlikely to suffer significant injury.

Five reserves were selected by the contractor based upon data gathered through reconnaissance of our highest priority reserves:

- Ray Owen
- Maida Vale (2)
- Hartfield Park (1)
- Ledger Rd (2)
- Brine Moran (1) (foxes caught)

Recommendations from the contractor after the successful program was to undertake regular fox trapping as the foxes removed from the program would be replaced by other foxes moving into the area.

Following this advice, the contractor was engaged to trap for foxes in the same reserves during May – June 2018 with an allocated budget of \$5,000. The program began on Monday 28<sup>th</sup> May before being halted on the 29<sup>th</sup> May due to the capture of a domestic dog. One fox was trapped at Hartfield Park.

### 5. Review of Current Program

The working group reviewed the 2017 to 2018 fox control program and developed recommendations for an effective future program by:

- Review 2018 public survey results to determine the sentiment of residents.
- Benchmark current practices utilised at the City of Kalamunda against practices used at other similar peri-urban Local Governments.
- Consultation with lead researchers from Department Primary industries and Development (DPIRD) and University WA (UWA).
- Investigating current research into alternative methods and any new technology available and suitable for the control of foxes in the City of Kalamunda.

### 5.1. Public survey

The City of Kalamunda public survey posted on the "have your say" portal of the City's website between 2<sup>nd</sup> August and 10<sup>th</sup> September 2018 provided the following information:

- 49 respondents completed the survey.
- The majority of respondents (73%) reported fox activity in their neighbourhood.
- The majority of respondents (75%) were aware of the City's responsibility to undertake fox control on its lands.
- 90% of respondents supported fox control.
- 9% of the respondents who supported fox control were concerned with the current soft jawed leg hold traps method used.
- 10% of respondents did not support fox control by any means.

### Conclusions

- a) Facebook posts were mostly highly emotive responses and did not represent the overall views of City Residents.
- b) The small number of survey responses was not considered statistically viable as representative of the City's residents and could be used as a guide only.
- c) Residents were regarded as generally supportive of the requirement to control foxes for biodiversity and stock protection.
- d) There was a proportion of residents supportive of the program, who qualified their support with the necessity to undertake the control as humanely as possible. In some of the responses soft jawed leg hold traps were considered inhumane. Some responses mentioned poisoning being inhumane.
- e) Community expectation and emotion will need to be managed as part of any fox control program.

### 5.2. Benchmarking

Information regarding methods and data collected from other local government fox control programs was sourced and reviewed.

• The City's service provider presented data relating for twenty (20) clients n the Perth Metropolitan area or other Metropolitan areas. All of their clients use soft jawed leghold traps in their fox control programs.

- City Officers sought information from eight (8) Local Governments and DBCA Regional Parks in the Perth Metropolitan area known to undertake fox control. Information regarding their programs includes:
  - All LGA's contacted implemented annual or greater (up to 4 /annum) fox trapping programs. Only DBCA had an ad hoc approach based upon sightings and complaints.
  - All LGA's targeted priority bushland reserves only.
  - All LGA's used soft jawed leg hold traps in the program.
  - 50% of LGA's informed their community via their usual communications and media avenues, regarding the trapping.
  - The Shire of Serpentine Jarrahdale in partnership with SJ Landcare worked with landholders to support fox control on private property. The use of soft jawed leg hold traps is one of the recommended methods of control.
- The South West Group, a voluntary regional organisation of six (6) member Councils are currently undertaking a research project with Murdoch University to radio track the movement of foxes through their region. Data will inform future control programs.
- The WESROC group of Local Governments engaged consultants to:
  - record (cameras) fox activity in their reserves.
  - engage with the community (media/comms) of the results and follow-up control.
  - controlled foxes in reserves using soft jawed leghold traps.

### Conclusions

- a) Fox control is considered an important role for Local Governments throughout the Perth Metropolitan area and should be considered likewise the City of Kalamunda.
- b) The use of soft jawed leg hold traps is considered best practice and used by all LGA's in their fox control programs and should be utilised in the City of Kalamunda within the regulatory framework.
- c) Community notification is important to the residents of the City of Kalamunda.

### 5.3. Consultation with Research Organisations

Members of the Working Group met with a number of organisations undertaking research projects related to fox control in WA

- PhD candidate Vandana Subroy and her supervisor from the UWA School of Agriculture and Environment discussed current research and best practice. The meeting did not introduce any information for the control or monitoring of fox populations. However, Vandana's PhD thesis developed a community engagement survey to ascertain people's values for species and invasive predator control strategies, for input into a cost:benefit analysis. This was considered worthwhile for managing community expectations and emotion in future fox control programs.
- Members of the working group had several meetings with Dr Peter Adams, Development Officer Invasive Species DPIRD. Key points from the meetings:

- Murdoch University are actively researching fox activity in the Perth metropolitan area and contact will be made with the University when term commences in 2019.
- Based on discussion, a long term fox control program based in three (3) timeframes/phases emerged as being most effective:
  - 1. Short term regular trapping of foxes in priority natural area reserves with an aim to undertake monitoring with cameras to measure success. This is essentially a continuation of the current program, with expansion into other priority biodiversity protection reserves.
  - 2. In the medium term, develop a community fox control model across public and private lands, utilising the group of residents at Bickley Valley as a trial community. The 2018 consultation identified this as a key priority area for a citizen science project to:
    - monitor foxes using camera traps, supply information to City
    - submit data to city for analysis
    - participate in strategic trapping program
  - 3. In the longer term, develop a regional scale collaborative to fox control by engaging with:
    - Landholders within the City of Kalamunda and adjacent LGAs; Water Corporation, WAPC, DPLH, DBCA, Shire of Mundaring, City of Swan, City of Armadale and the City of Gosnells
    - Eastern Metropolitan Regional Council
    - Perth Natural Resource Management (Perth NRM)

### Conclusions

- a) Considerations that ;
  - the use of recommended poisons such as 1080, paraaminopropiophenone (PAPP) would not be authorised in the City of Kalamunda by the regulatory authority.
  - soft jawed leg hold traps are an important tool for the control of foxes in the City of Kalamunda and is the most appropriate trapping method.
- b) The gathering of data by methods such as cameras and fox radio tracking will increase the effectiveness of any future fox control program and will be important in measuring effectiveness and reporting back to the community.
- c) Partnerships with community through citizen science programs and research organisations such as UWA and Murdoch University is necessary for determining fox control method effectiveness and minimising harm to animals.
- d) A three (3) phased approach, and incremental increase in resourcing is considered the most appropriate to introducing a comprehensive, integrated program for the most effective control of foxes in the City of Kalamunda in the long term.

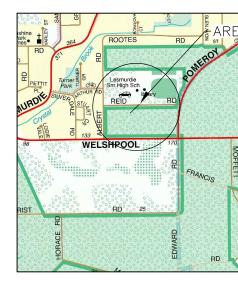
### 6. Recommendation

The recommendation of the KEAC working group is to continue in the development of a comprehensive integrated fox control program and is based on information and data gathered from various sources including:

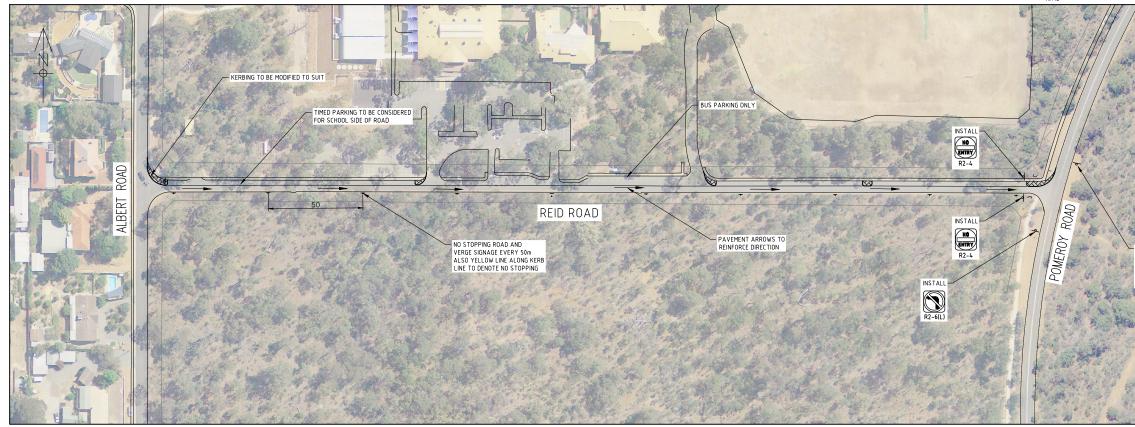
- City of Kalamunda residents survey on the City's fox trapping program.
- The City's contract service provider for feral animal control with more than thirty (30) years experience in managing pest animals in urban, rural and peri-urban locations.
- Eight (8) LGA's within Perth Metropolitan Area currently undertaking fox control.
- Researchers from UWA School of Agriculture and Environment.
- Development Officer Invasive Species and the Department of Primary Industries and Regional Development (DPIRD).

KEAC recommend to the City of Kalamunda that:

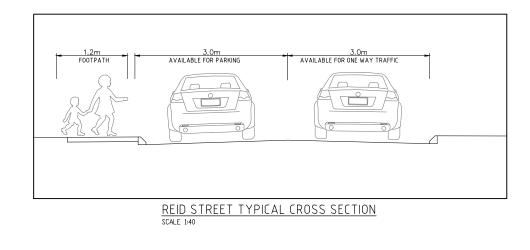
- 1. Fox control in the City of Kalamunda is important for biodiversity and domestic animal protection and should be continued.
- 2. In the absence of any other regulated methods (1080, PAPP, shooting) for the control of foxes in the City of Kalamunda, the following prescribed methods are considered necessary in any control program;
  - Trapping
  - Den destruction, and
  - Den fumigation
- 3. Soft jawed leg hold traps are currently the most effective, efficient and least harmful method of trapping foxes in the Perth Metropolitan area and should not be excluded for use in the City of Kalamunda.
- 4. Managing community expectation and emotion is essential in any future fox control program. Appropriate community communications and engagement processes are essential to the control program. Engagement with UWA to utilize their community engagement survey model for ascertaining people's values for species and invasive predator control strategies, to inform a cost:benefit analysis should be undertaken in the City.
- 5. The future City of Kalamunda integrated fox control program may be developed over three phases:
  - I. Short term Regular trapping of foxes in priority reserves with monitoring to measure effectiveness.
  - II. Medium term Develop a collaborative community fox control model utilising the group of residents in Bickley Valley as a trial, and if proven to be successful, use this approach in other residential communities within the City of Kalamunda.
  - III. Long term Develop a regional scale collaborative control program by engaging with key landholders within and adjacent to the City of Kalamunda.
- 6. Quantitative data gathered from rigorous monitoring methodology must form the basis for measuring, evaluating and reporting the effectiveness of the program for controlling foxes and meeting community expectations.



LOCALITY PLAN

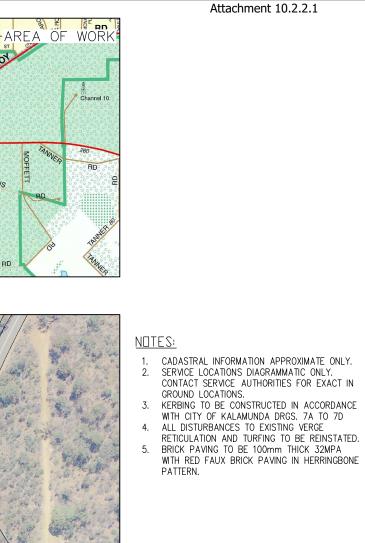






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City of Kalamunda

## ASSET SERVICES

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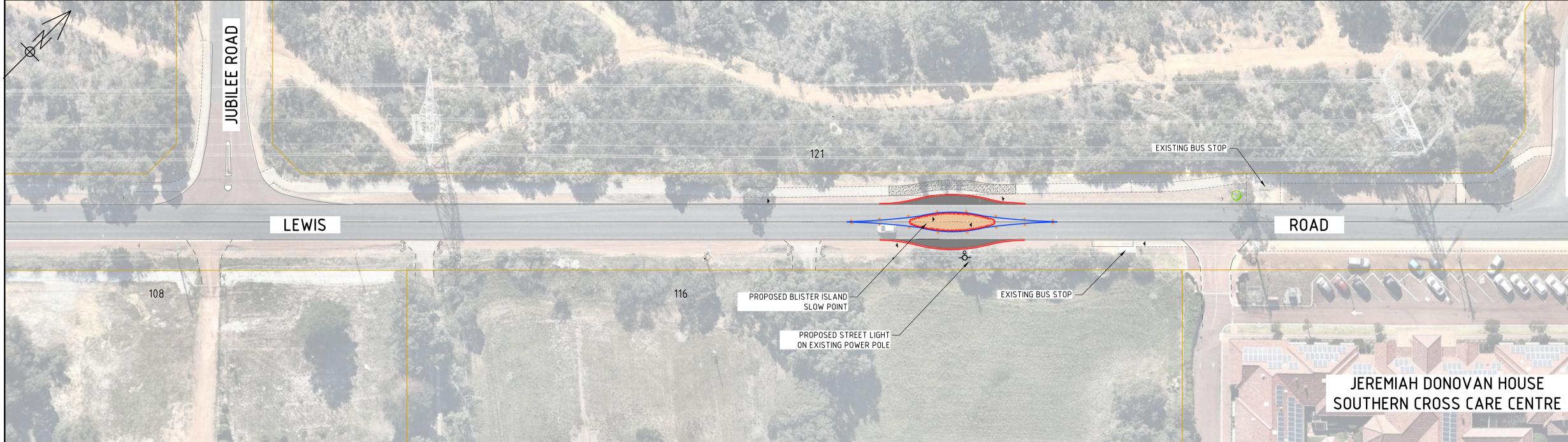
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	FOOTPATH (CONCRETE)
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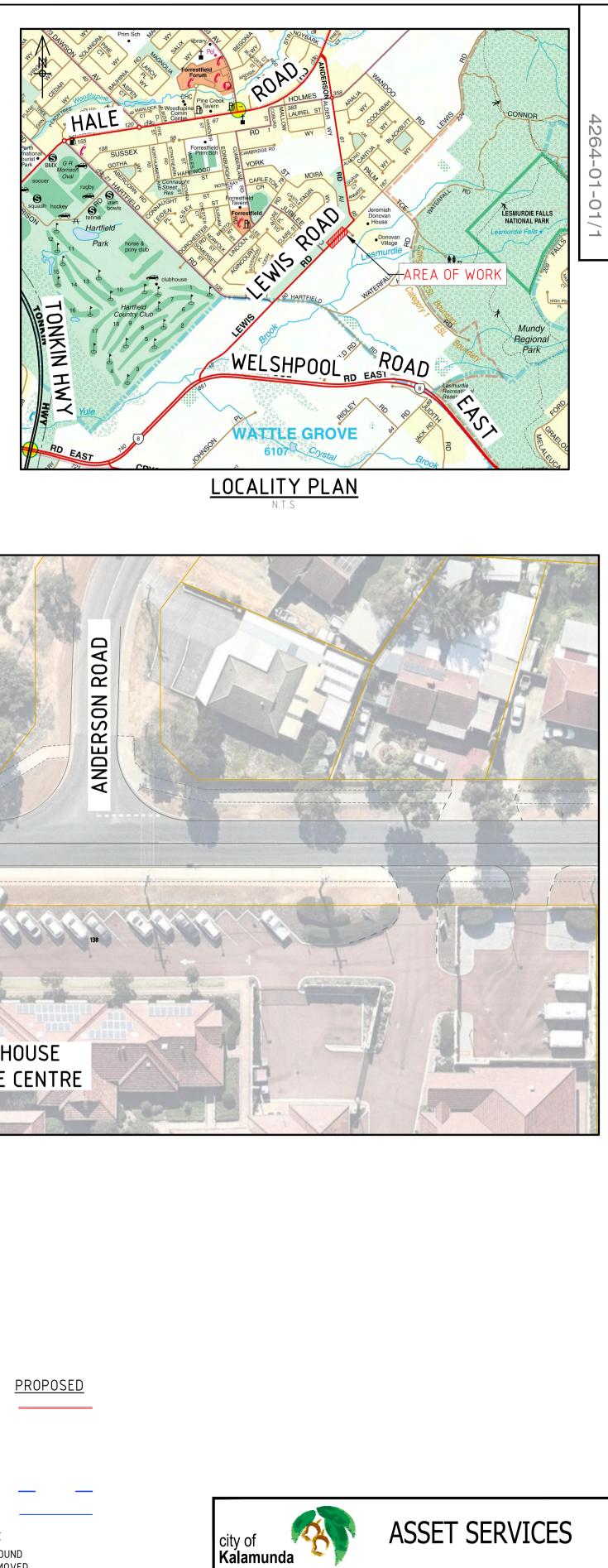
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# LAYOUT AND LOCALITY PLAN

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Enquiries: Gavin Ellery on Ph 08 9323 4454 Our Ref: 18/1248 Your Ref:

30 October 2018

Chief Executive Officer City of Kalamunda PO Box 42 KALAMUNDA WA 6926

Dear Ms Hardy

### ROE HIGHWAY / KALAMUNDA ROAD INTERCHANGE CITY OF KALAMUNDA – REQUEST FOR ROAD DEDICATION COUNCIL RESOLUTION & EXCISION OF CROWN LAND

Attached for consideration by Council are plans depicting land required for the Roe Highway Kalamunda Road Interchange Project. In order for the project to proceed, the land shown shaded on the enclosed copies of Land Dealing Plans 1360-210, 1760-174, 1860-190, 1860-191, 1860-197 and 1860-205 are required for inclusion in the road reserve that fall within the City of Kalamunda.

Main Roads has approached the other affected parties and arrangements for acquisition are being progressed. MRWA is anticipating works to commence April/May 2019. The access to the Golf Course is intended to become part of the road reserve to ensure the golf course is not severed from the road network. The acquisition of the affected land parcels and any maintenance arrangements of them are separate negotiations and actions to the below request for road dedication which Main Roads will progress with the relevant parties.

To enable the land to be dedicated as road reserve **after it has been acquired**, it is a requirement of the *Land Administration Act* that local government resolve to dedicate the road.

In order to dedicate the road widening, a council resolution will be required pursuant to section 56 of the *Land Administration Act 1997* (LAA).

It would be appreciated if Council could consider the matter at its next meeting and provide the following statement in a letter to Main Roads marked to my attention. This will satisfy the requirements of Regional and Metro Services (RMS) at the Department of Lands who will be arranging dedication after the land has been acquired.

"Council at its ordinary meeting held on (Day Month Year) passed a resolution for the dedication of the land the subject of Main Roads Land Dealing Plans 1360-210, 1760-174, 1860-190, 1860-191, 1860-197 and 1860-205 as a road pursuant to Section 56 of the Land Administration Act 1997".

In addition, please provide a copy of the minutes of the Council meeting relating to the resolution, which is required for the Department of Lands and Main Roads' records.

	Main Roads Western Australia
	Don Aitken Centre, Waterloo Crescent, East Perth WA 6004
City of	PO Box 6202, East Perth WA 6892 Kalamunda

mainroads.wa.gov.au enquiries@mainroads.wa.gov.au 138 138

331

The land requirements for the road widening are shown on Main Roads drawing numbers 1360-210, 1760-174, 1860-190, 1860-191, 1860-197 and 1860-205. Copies of the plans are attached.

MRWA indemnifies the City and the Minister for Lands against any claims that may arise as a result of the dedications, in accordance with section 56(4) of the LAA.

In addition, one of the land parcels that will also be affected, is part of Lot 11347 on Plan 16894, being portion of Reserve 41480. The reserve is set aside for the purpose of 'Public Recreation', with a management order in favour of the City.

Consent is required from the City as the management body, to excise the road widening from the reserve. The land requirement for the widening ex Reserve 41480 is shown on plan 1860-191.

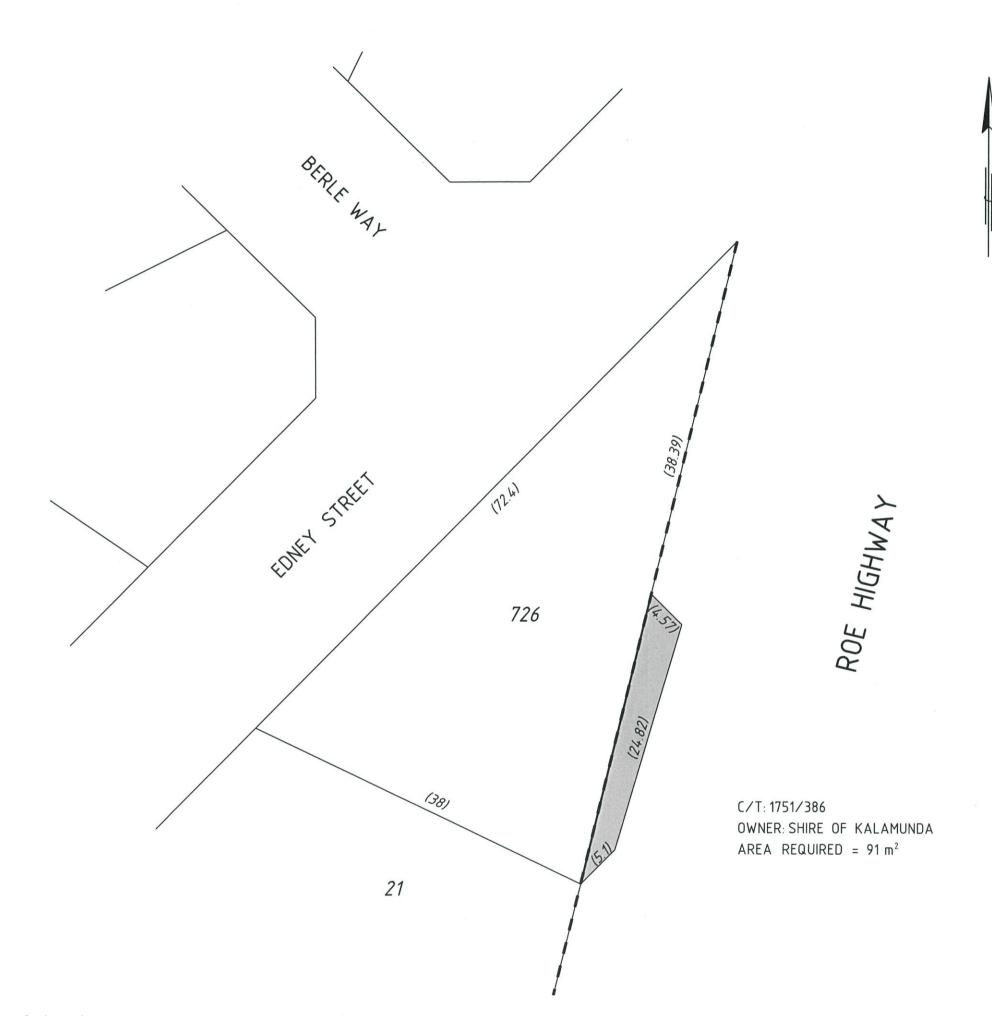
With respect to Reserve 41480, can you please provide the following:

- the City's consent to excise the land required for the widening ex Reserve 41480 as shown on Main Roads drawing number 1860-191;
- confirmation of whether the City has granted any interests over the reserve that would be affected by the proposed widening; and
- consent to MRWA and its contractors to enter onto Reserve 41480 to carry out any construction works, should the situation arise where construction works commences prior to the excision from the reserve being completed.

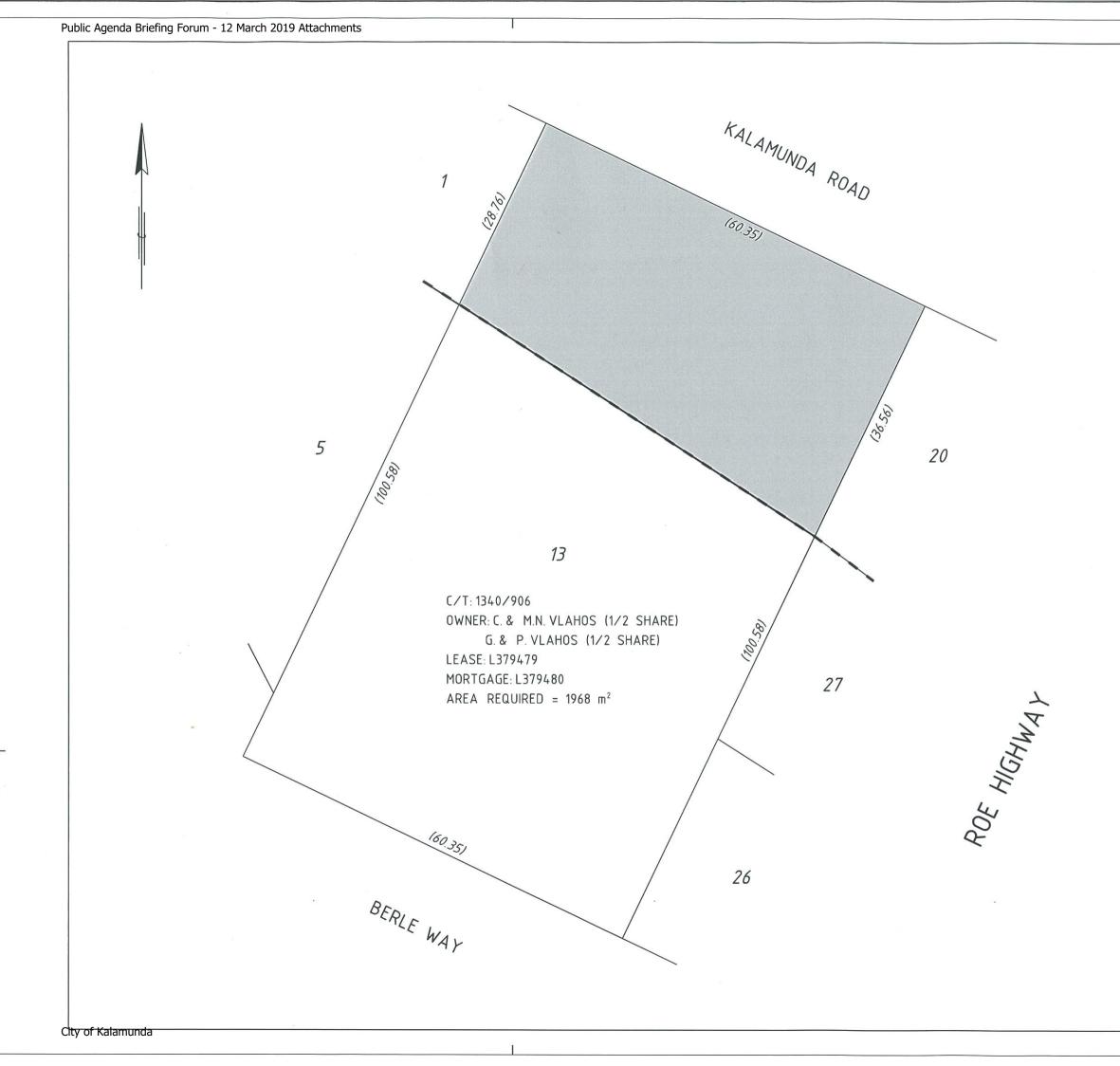
Should you have any enquiries regarding this matter, please do not hesitate to contact me by email at <u>gavin.ellery@mainroads.wa.gov.au</u> or telephone on 9323 4454.

Yours sincerely

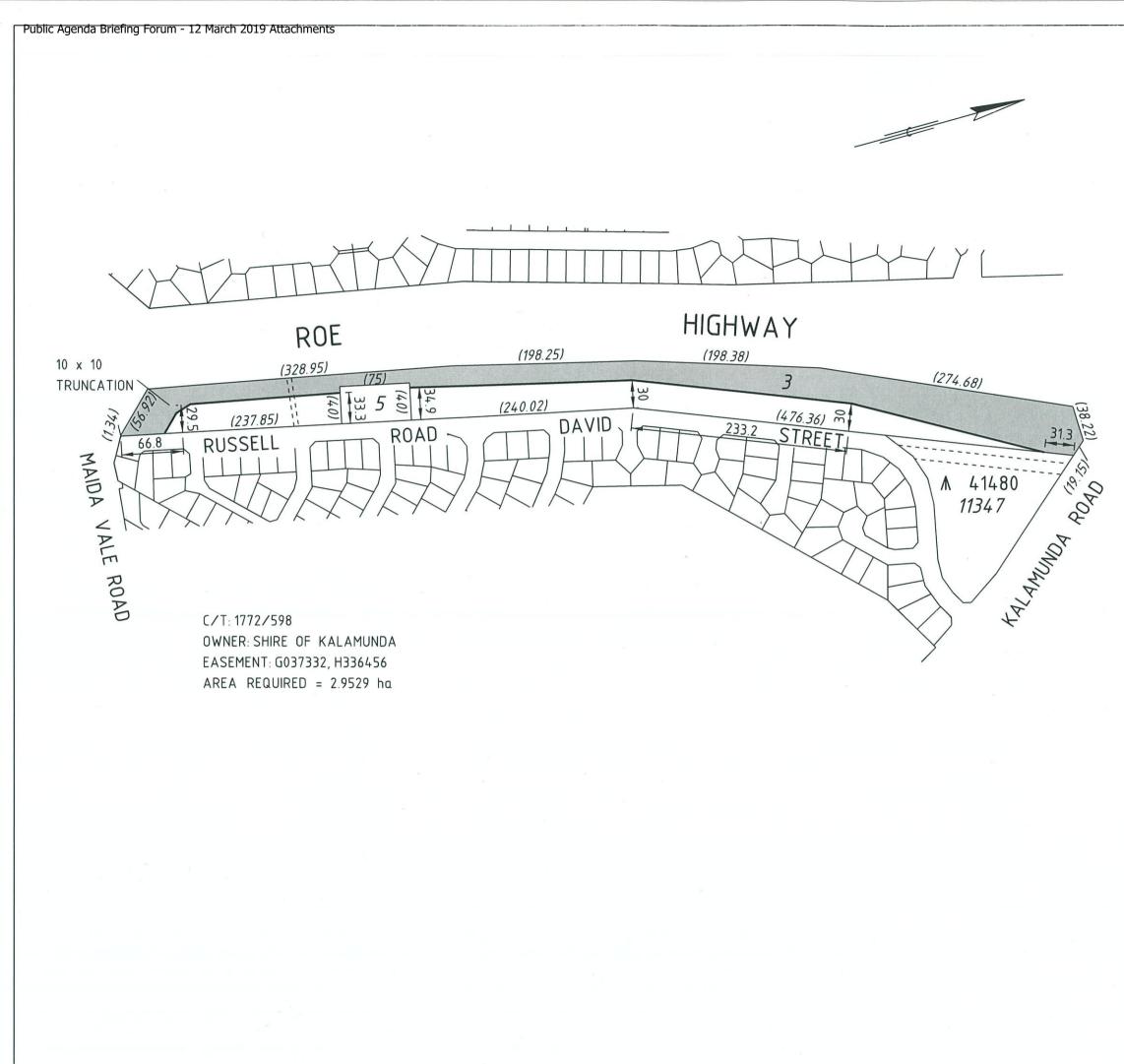
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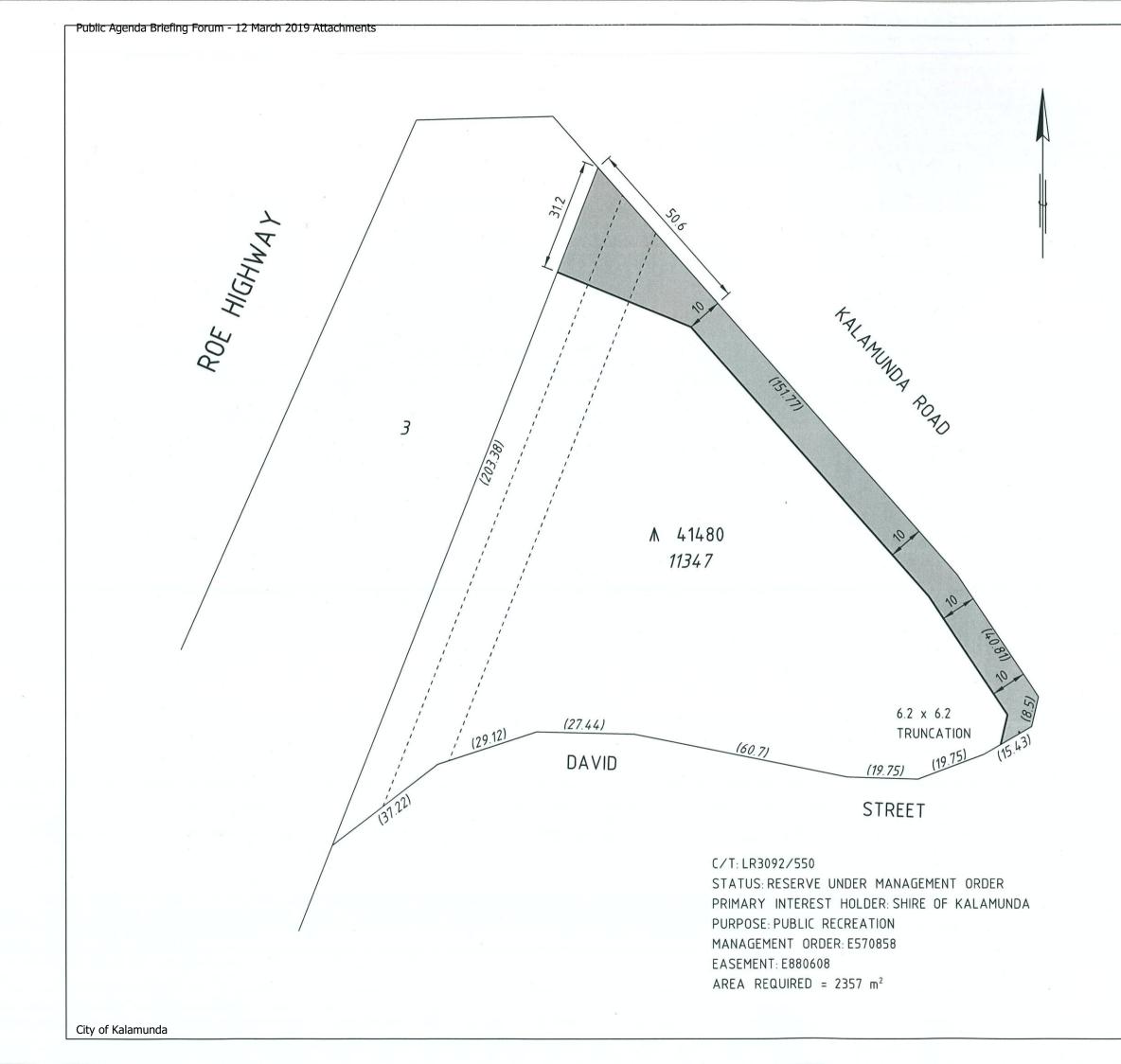
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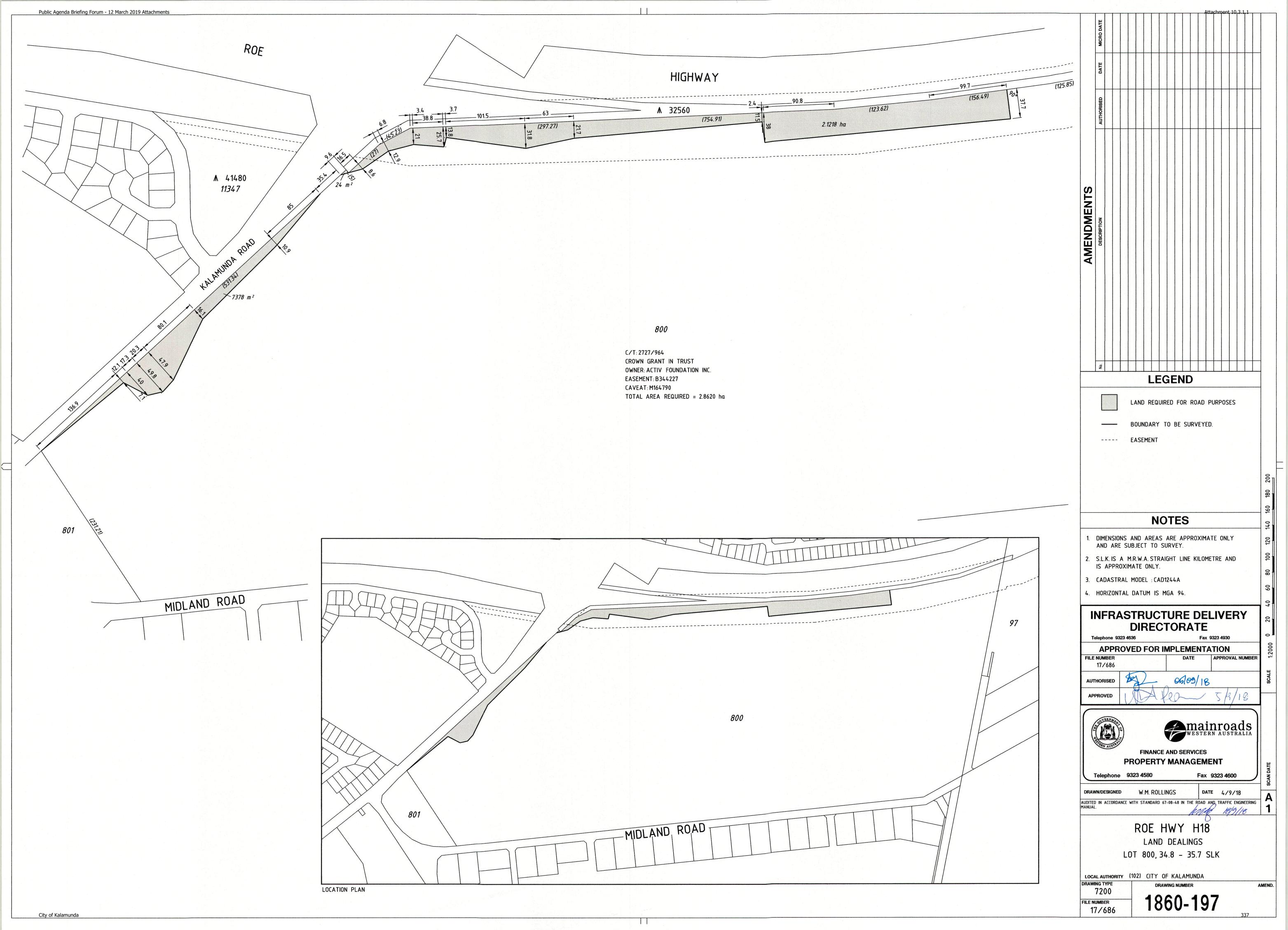
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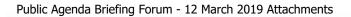


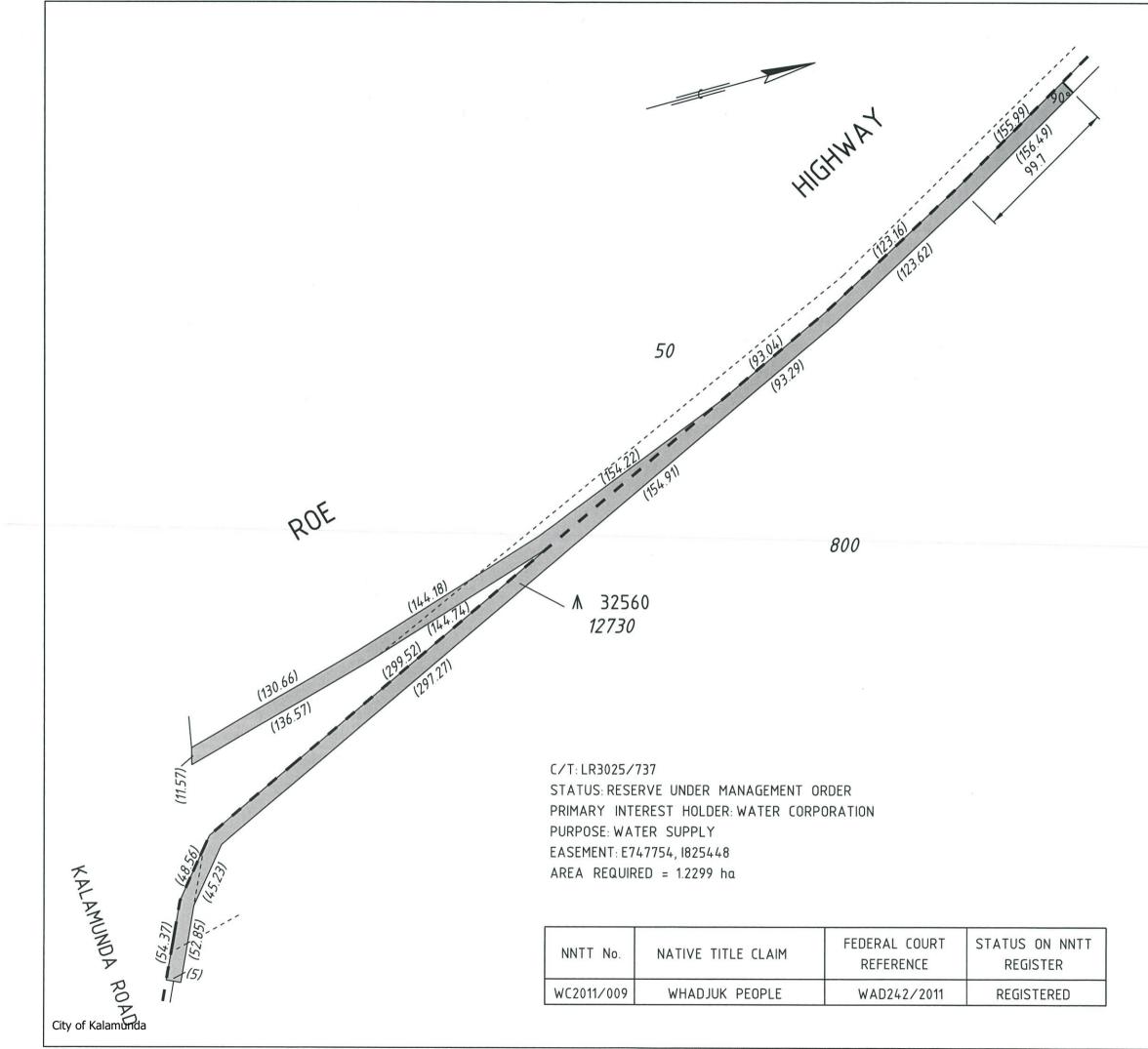
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### **Summary of Submissions**

### Proposed Dedication of Land Required for Roe Highway/Kalamunda Road Interchange Project

Submitter No.	Nature of Submission	Response/Recommended Modifications
Submission 1	Request for copy of an overview plan (a plan which shows all portions of land proposed to be dedicated).	Copy of an overview plan provided. It is noted that this submitter did not lodge any further submissions.
Telstra	No objection, subject to condition. Telstra's plant records indicate that there are no Telstra assets within the area of the proposal. Subject to compliance with Telstra's standard conditions, Telstra has no objection to the dedication of land. Telstra would also appreciate due confirmation when this proposed acquisition proceeds so as to update its Cadastre records.	Noted.
ATCO Gas	No objection, subject to condition. ATCO has no objection to the proposal to facilitate the proposed change in land tenure (road dedication) for the areas shown and supports this on the condition that any gas infrastructure is protected or relocated as part of the Project. ATCO has mains of varying pressures within the Project area, however, with regard to the specific areas the City has requested comment on, ATCO has a high pressure main within the southern portion of Lot 3 Maida Vale Road (Drawing Number 1860-190). ATCO will not object to the land being dedicated as road.	Noted.

Western Power	No objection.	Noted.
	Western Power does not have any objection at this time to the proposal but would appreciate being kept informed of developments.	
Water Corporation	No objection.	Noted.
	In general, the Water Corporation has no opposition to the proposal.	Discussions to occur between the Water Corporation, the City of
	The Water Corporation is working closely with Main Roads Western Australia in regard to the relocation of Water Corporation services.	Kalamunda, Main Roads Western Australia and the Department of Planning, Lands & Heritage
	In Reserve 41480, an additional area will need to be set aside for the relocated valve building and associated easements for mains that are outside the proposed road reserve.	regarding the protection of Water Corporation assets located within Reserve 41480 and outside the proposed road reserve.

9

Minutes - Planning Services 12 July 1999

78. Rationalisation and Closure of Road Reserves off Asher Road in Paulls Valley. (AS-03/GEN, HM-03/GEN) (Planning Services) Refer Item: Item PS71/99 Applicant: Gray and Lewis Owner: Department of Conservation and Land Management(CALM) (State Forest) Robada Nominees P/L (Private Locations)

### Purpose of Report

- 1. Council is to re-consider the rationalisation of road reserves within the Paulls Valley area to provide improved dedicated access to three privately owned properties.
- 2. It is proposed that an existing track through the State Forest 54 providing access to Locations 619, Pt 982 and Pt 1722, all under the same ownership, be dedicated and that the un-constructed 'road reserve' (road number 1839), be officially closed *(Attachment 1.)*. The land from this closure would be amalgamated into the surrounding State Forest 54.

### Background

- 1. This matter was considered at the June 1999 round of meetings (Item PS71/99) whereby it was resolved to defer consideration of the item pending further investigation of costs associated with possible compensation claims and surveying of the proposed dedicated road reserve and for clarification in respect to the Department of Land Administration (DOLA) being indemnified against any compensation or costs.
- 2. The above proposal entails the requirement to close an existing dedicated road reserve under Section 58 of the Land Administration Act 1977 (LAA) which is unconstructed and the dedication of a new road reserve through State Forest. The proposed new road reserve follows an existing track.

#### Comments

- 1. The road pavement over which the reserve is being created is basically a one lane gravel track which is periodically (3 times a year) graded by Council on a need basis. The owners of Location 619, Pt 982 and Pt 1722 have been looking at the future use of the land and the upgrading of the road will most likely be required at some future date either at the Councils, the developers cost or a shared cost arrangement.
- 2. In accordance with the LAA requirements and Council's Policy TP 1.15 dealing with 'Road Closures', the proposal to rationalise these roads (ie dedication and closure) was advertised in both the West Australian and local papers.
- 3. Written notice was provided to service authorities. Comments were also sought from the Department Of Land Administration and the Department of Conservation and Land Management. No objections to the proposal were received.

### Minutes - Planning Services 12 July 1999

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- 4. Section 56 of the Land Administration Act, relating to dedication of roads, states that 'the local government is liable' to indemnify the Minister (for Lands) against any claim for compensation in any amount equal to the amount of all costs and expenses reasonably incurred in considering and granting the request.
- 5. CALM who have management of the subject land have now indicated that they will not lodge a compensation claim in this particular case as the incorporation of the proposed 'closed' road reserve is considered adequate compensation for the land lost for the new road purpose.
- 6. With regard to survey of the road reserve, costs are estimated to be approximately \$5000. Council would be required to meet these costs. Funds have not been set aside in the 1999/2000 budget for survey work for dedication of the proposed roads. It is recommended that this be listed as an item for consideration in the 2000/20001 budget for Engineering Services. Alternatively, the applicant could pay for the survey costs to progress the dedication of the existing track.
- 7. DOLA will not progress the dedication of this road until a survey is undertaken. On this basis it is recommended that the matter be deferred pending funding approval in the 2000/01 Council budget or surveying costs being met by the applicant.
- 8. The applicant told committee that he would be prepared to contribute the \$5000 for survey costs to expedite the process rather then wait for the 2000/01 budget for allocation of funds. He also spoke to committee on the history of the road and suggested the name Quicke be considered after the original owners of the land.
- 9. Councillors discussed the prefunded money that the applicant was prepared to supply and concern was expressed over landowners paying for public roads and whether the Council would be refunding it at the next budget allocation. Acting/Executive Manager Engineering Services advised that surveying could not be done in house, as the Shire surveyor was not a licensed surveyor.
- 10. Councillors decided that they would like to consider the naming of the road at this stage and therefore added a further point to the recommendation to include this.

342

Public Agenda Briefing Forum - 12 March 2019 Attachments

Minutes - Planning Services 12 July 1999

MOVED: (Cr Millar)

SECONDED: (Cr McKechnie)

4. 19.

RECOMMENDATION PS

Staff Recommendation:

□ Endorsed. ☑ Amended

78/99

That Council resolve that:

- 1. The Minister for Lands be requested to approve the closure of Road Number 1839 extending from Asher Road through to Mundaring Weir as indicated in the attachment.
- 2. The Minister for Lands be requested to approve the dedication of the proposed road reserve from Asher Road to Location 619 as shown in the attachment.
- 3. Council indemnify the Department of Land Administration against any compensation and costs and expenses reasonably incurred as a result of closure of the existing road reserve and dedication of the proposed roads.
- 4. Funding approval is granted in the Council budget for approximately \$5,000 for survey costs; or
- 5. The applicant meets all associated survey costs.
- 6. Once the road reserve is surveyed and gazetted that the name Quicke be forwarded to the Geographic Names Committee for consideration.

Shire of Kalamunda

FOR MOTION Cr McGrath Cr Giardina Cr Casey Cr Govan Cr Sadler Cr Stallard Cr Millar Cr McKechnie

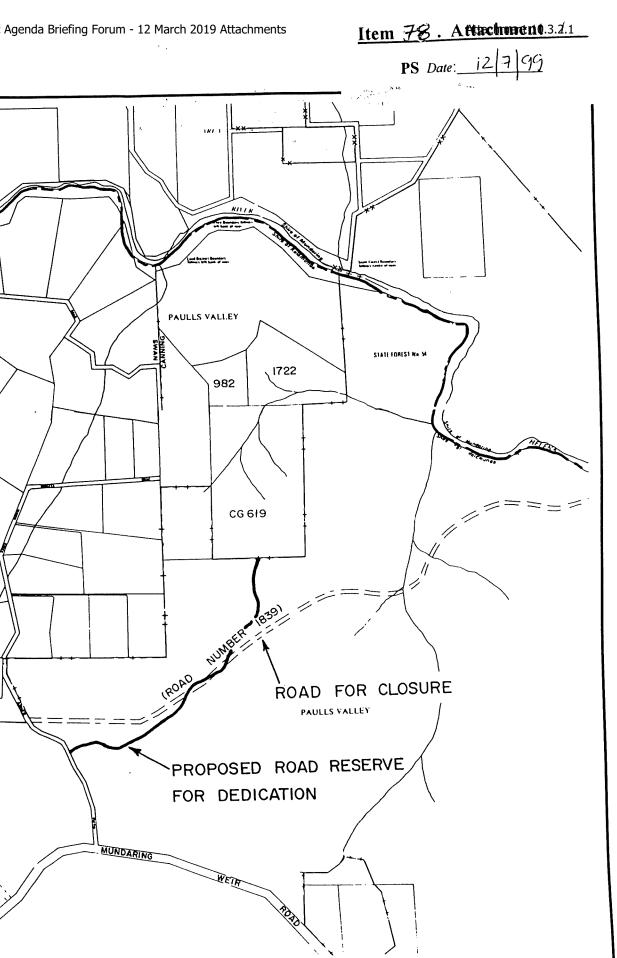
AGAINST MOTION Cr Everett Cr Taylor Cr Ronalds

ADOPTED BY COUNCIL ON ... 19 7 99

CARRIED.

343

11





Rationalisation of Road Reserves in Paulls Valley

PLANNING & DEVELOPMENT SERVICES

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# EXCISED FROM STATE FOREST GAZ.9.2.2001 pg.795

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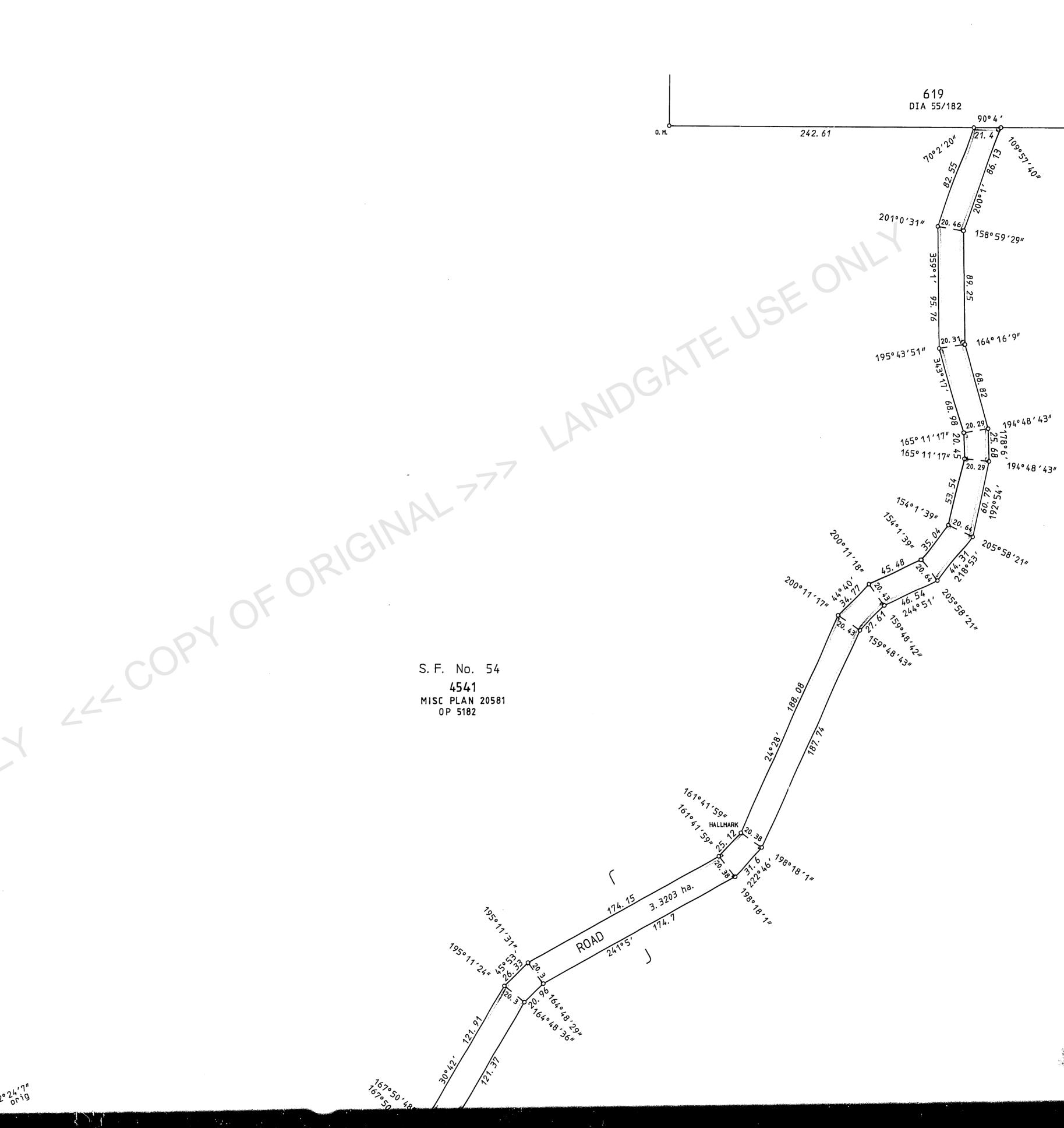
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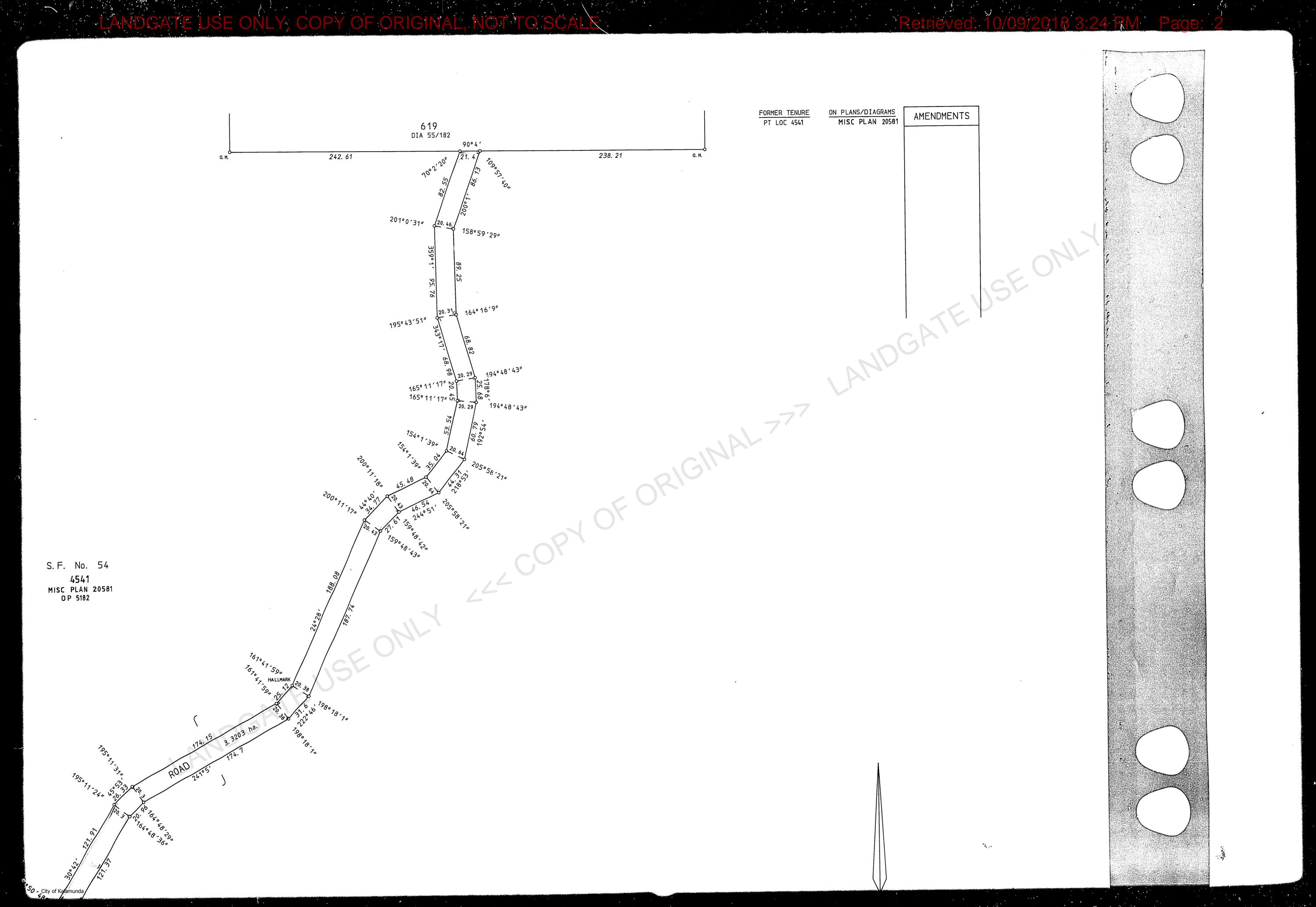
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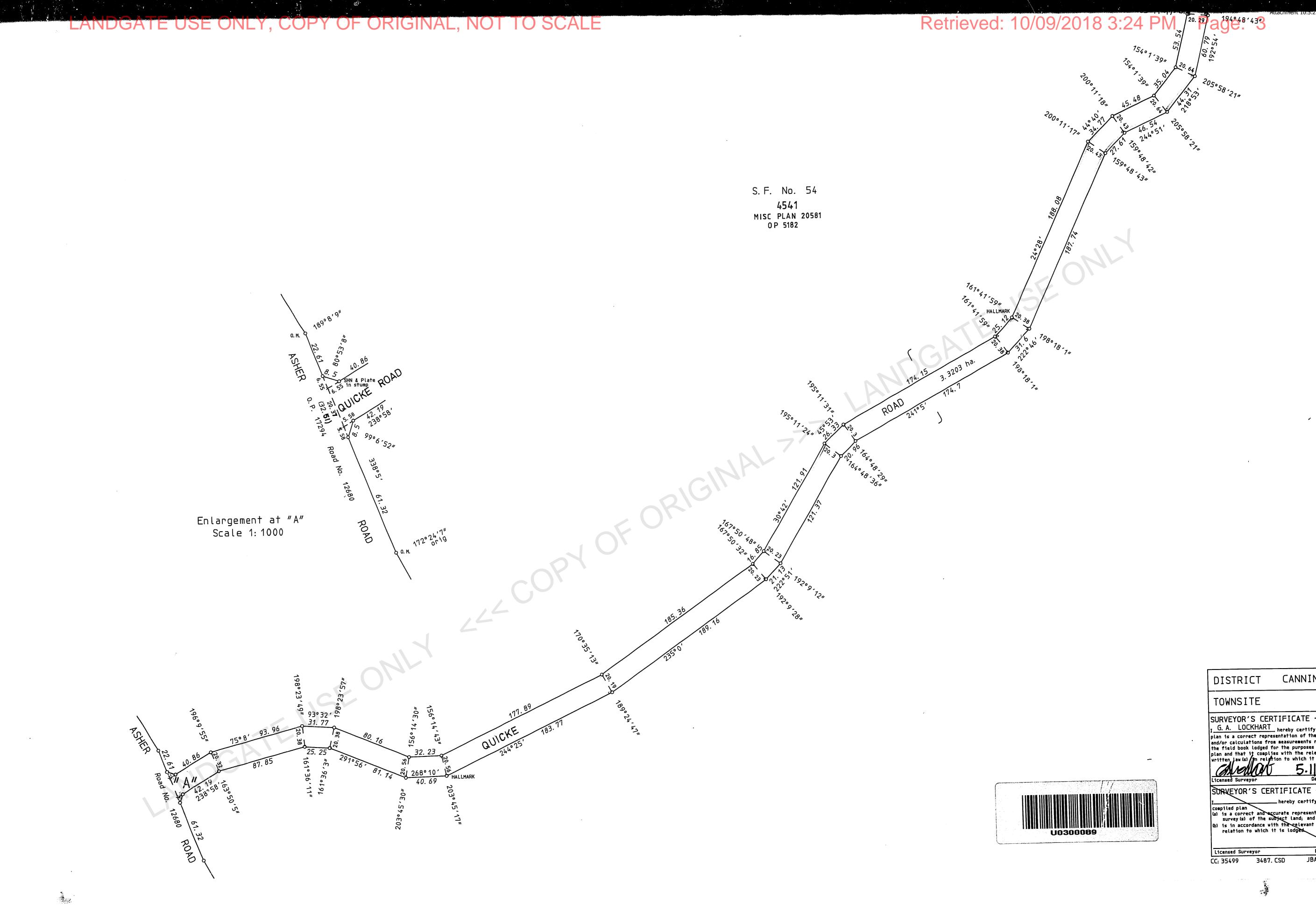
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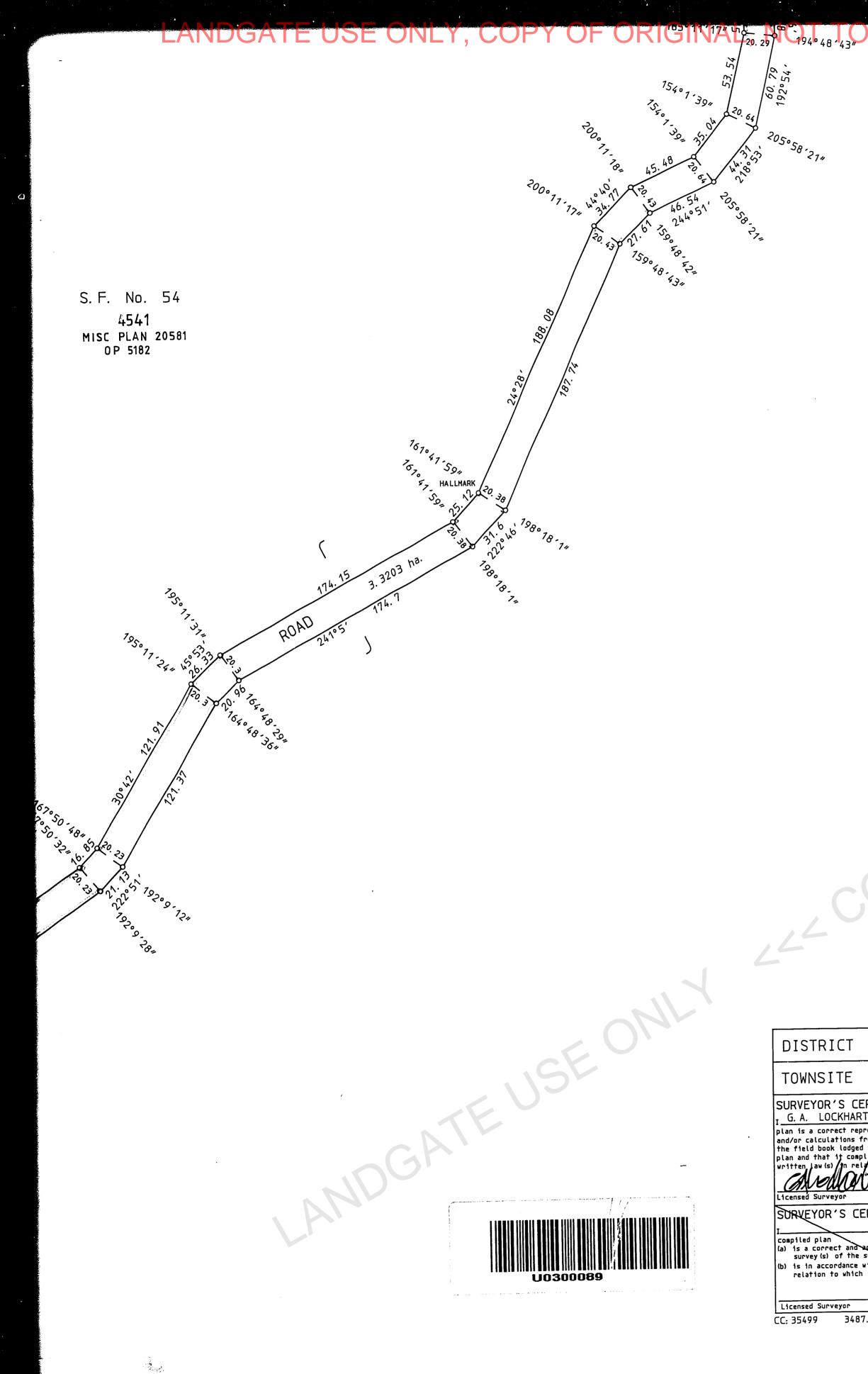
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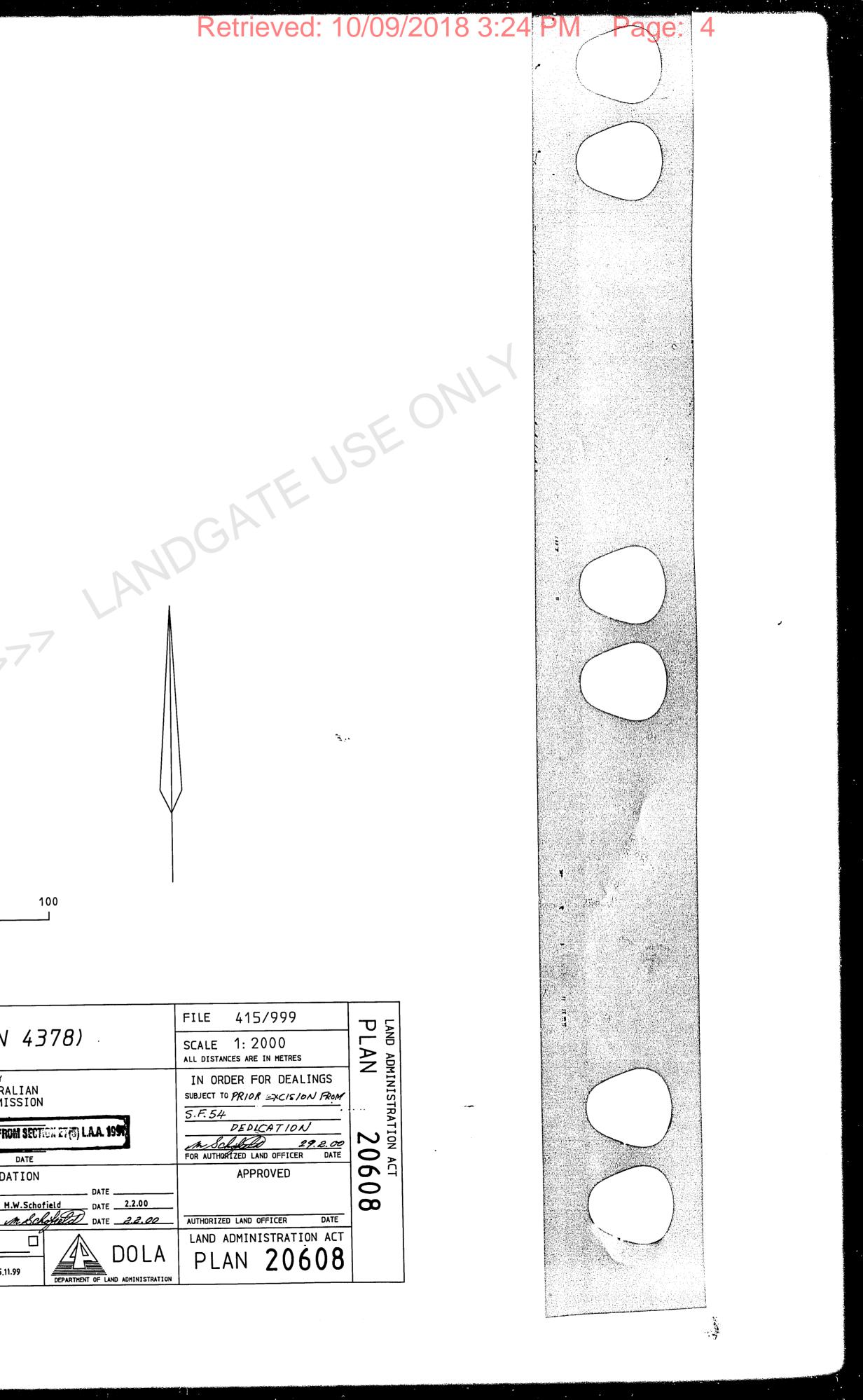
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Enlargement at "A" Scale 1:1000

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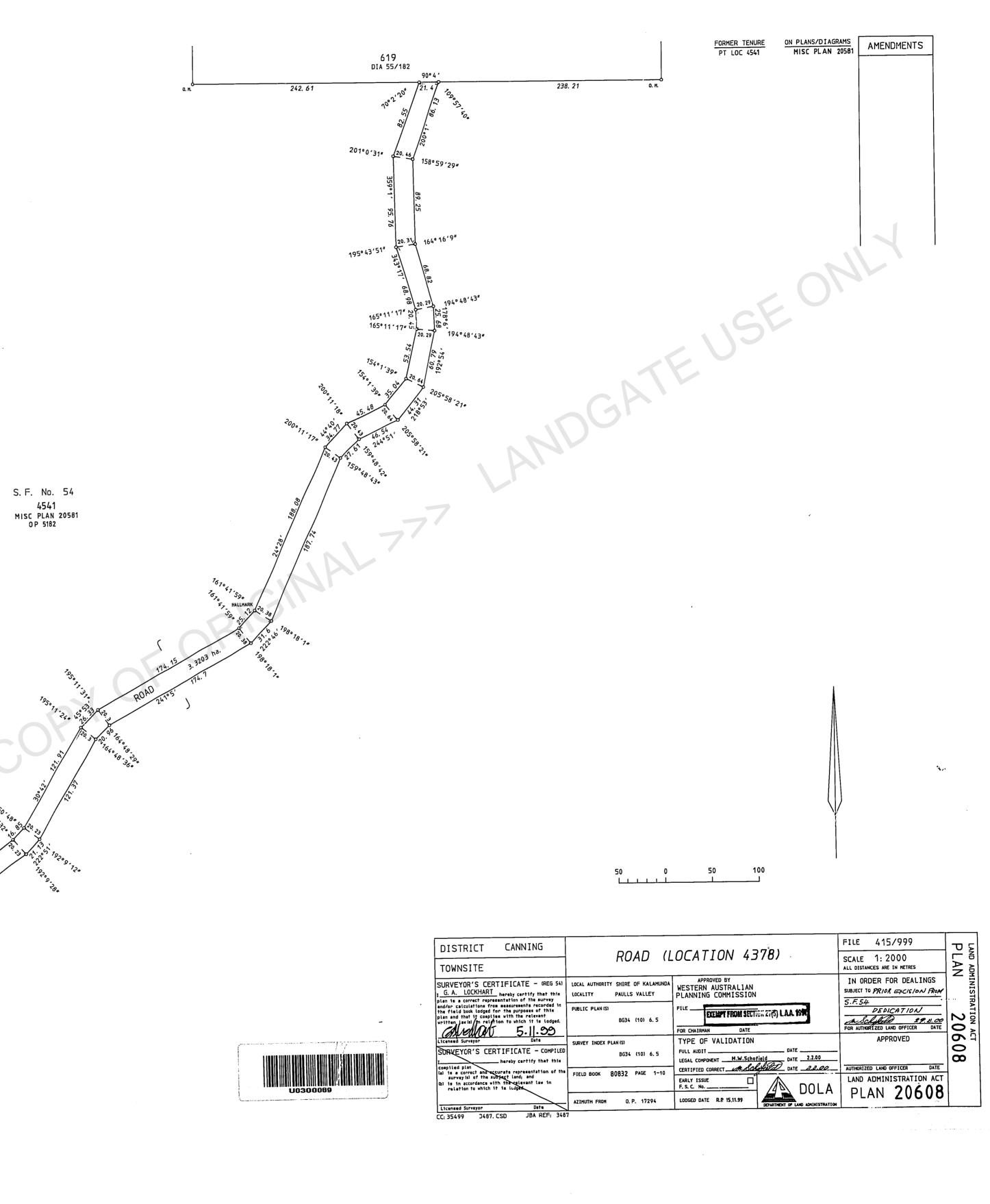
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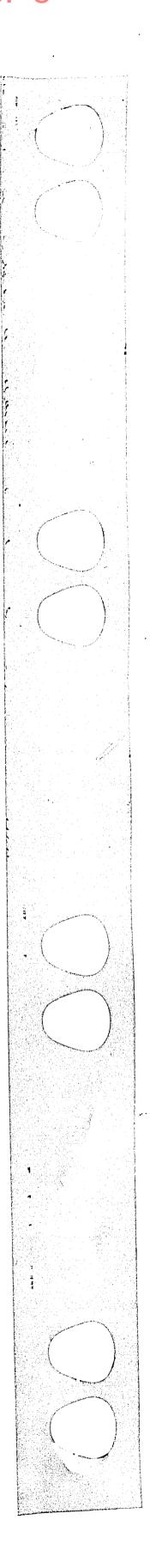
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# Retrieved: 10/09/2018 3:24 PM Page: 5





Our Ref: 13/2017

5 September 2018

City of Kalamunda PO Box 42 KALAMUNDA WA 6962

Attention: Gary Ticeman

Dear Gary,

# RE: REQUEST FOR CONVERSION OF UNALLOCATED CROWN LAND (SIGNPOSTED AS QUICKE ROAD) TO PUBLIC ROAD TO PROVIDE ACCESS TO LOTS 1722, 619 & 982 ASHER ROAD, PAULLS VALLEY

Thankyou for meeting with me on the 30 August 2018. I appreciate your advice on the process in terms of costs, fees, public advertising and future referral to Council.

On behalf of the owner of the abovementioned land I lodge this correspondence as a formal request seeking the City's support for conversion of the existing Unallocated Crown Land (signposted as 'Quicke Road') into a dedicated public road in accordance with Section 56 of the Land Administration Act 1997.

I attach a plan showing the extent of Unallocated Crown Land which starts at the Asher Road intersection through to the southern boundary of Lot 619 – Attachment 1.

My client will pay the \$350.00 fee directly and be responsible for payment of any separate survey costs. My clients contact details are included below:

Robada Pty Ltd Att: Robert Armstrong PO Box 138 KALAMUNDA WA 6026

If Mr Armstrong can arrange payment by telephone please contact him directly on 0418 913 413. If he needs to pay in person please advise and I will arrange for him to attend the Citys' offices.

I seek the City's support based on the following:

1. The gravel track within the Unallocated Crown Land in question is known as Quicke Road, is sign posted, is maintained by the City and provides the only trafficable (gravel) practical access to Lots 1722, 619 and 982.

The Unallocated Crown Land connects with the southern boundary of Lot 619, and from that point onwards my clients private driveway provides internal access to all 3 lots (photograph overpage).

- 2. My client has existing planning approvals issued by the City for single dwellings on Lots 982 and Lot 1722 respectfully, dated 7 August 2017. The existing planning approvals require new development to be connected to Quicke Road via an easement refer Attachment 2 and 3.
- 3. The gazetted road reserve of Brigetta Road abuts the western boundary of existing Lot 619 however it is unconstructed, appears rocky, is undulating and contains above ground powerlines (photo below).

Based on previous investigations we do not believe that construction of the portion of Brigetta Road adjacent to Lot 619 is viable, cost effective or practical.

The Unallocated Crown Land provides good quality gravel access and is sufficient to service the limited number of isolated lots.



View of UCL connection to south boundary of Lot 619

Brigetta Road (unconstructed)

I also seek to assure Council Officers that my client is of the view that the existing gravel nature of the Unallocated Crown Land (UCL) provides sufficient and suitable access to the three lots. We are not seeking any upgrading or bitumen construction of the UCL now or in the future.

The purpose of the request is simply to formalise the existing situation and legally recognise that the UCL is used for access to three lots.

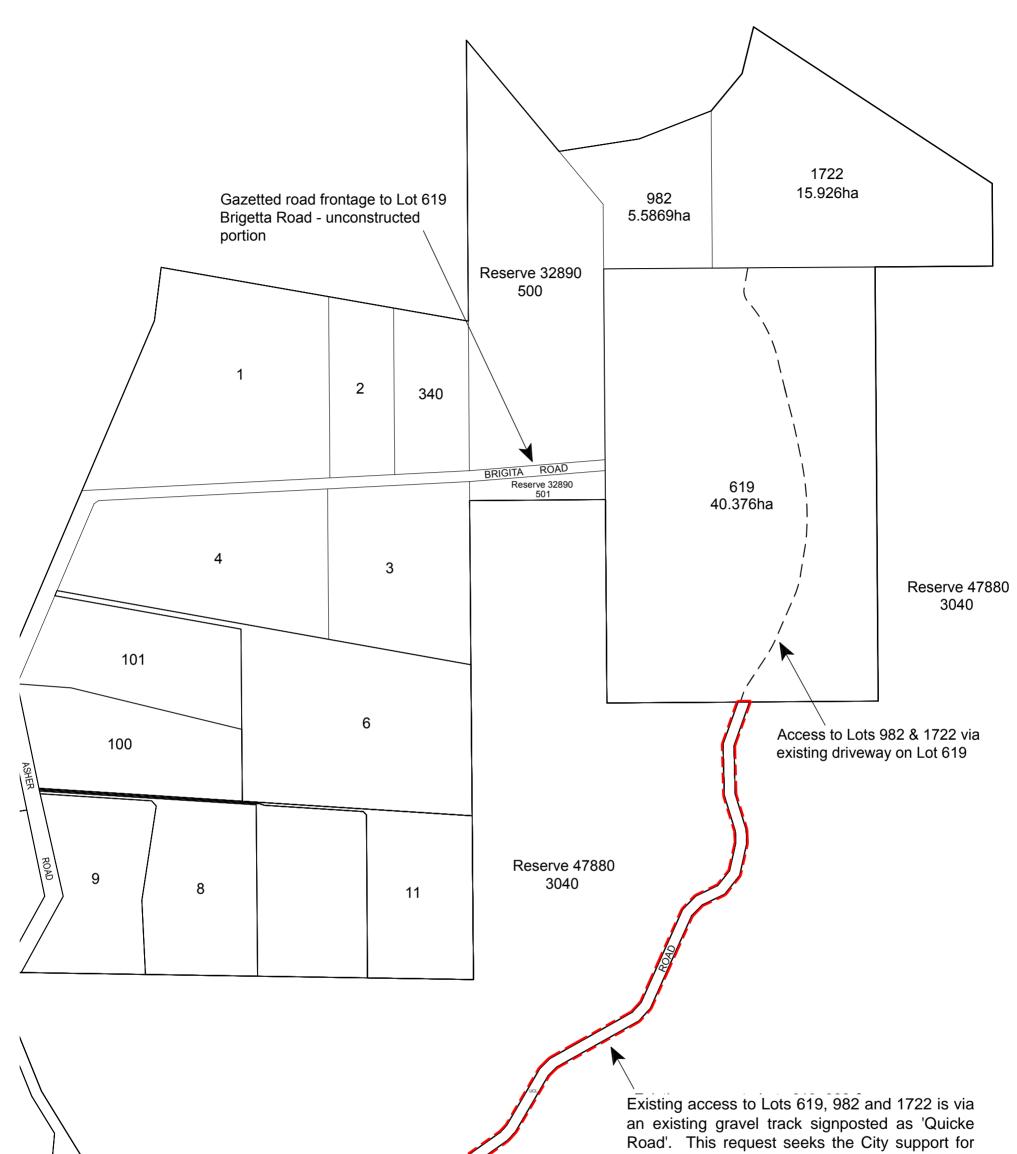
I look forward to this matter being progressed. If you have any queries, please do not hesitate to contact me.

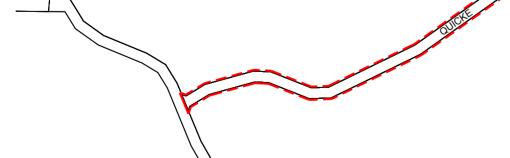
Yours Sincerely,

Liz Bushby TOWN PLANNING INNOVATIONS

Enc – Plan and Attachments

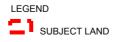
### PLAN OF UNALLOCATED CROWN LAND PROPOSED TO BECOME PUBLIC ROAD





this UCL to be converted into a public road.

# REQUEST FOR CONVERSION OF UNALLOCATED CROWN LAND (Signposted as Quicke Road) TO PUBLIC ROAD





JOB REFERENCE: 13-2017 DATE: 4th SEPTEMBER 2018

THE DOCUMENT MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF ENGAGEMENT FOR THE COMMISSION. UNAUTHORISED USE OF THIS DOCUMENT IN ANY FORM WHATSOEVER IS PROHIBITED.

City of Kalamunda

**ATTACHMENT 1** 

Enquiries: Mitchell Brooks – 9257 9938 Ref: DA17/0230 & AS-03/054



07 August 2017

TOWN PLANNING INNOVATIONS PO BOX 223 GUILDFORD WA 6935

Dear Liz,

### Single House – Lot 982 (54) Asher Road, Paulls Valley

Please be advised that your planning application received 06/06/2017 for a proposed Single House at the above mentioned property has been **APPROVED** subject to the conditions and advice notes on the attached Notice of Determination.

If the development subject of this approval is not substantially commenced within a period of two (2) years or such other period as specified in the approval after the date of the determination the approval shall lapse and be of no further effect.

If you are not satisfied with any of the conditions imposed, a right of review (appeal) exists against the decision to the State Administrative Tribunal. Appeal rights exist for 28 days after the date of this letter. Appeal forms can be obtained at the State Administrative Tribunal.

Should you wish to discuss the matter further please contact Mitchell Brooks in the City's Planning Services on 9257 9938 or via email (mitchell.brooks@kalamunda.wa.gov.au).

Yours sincerely,

Chris Lodge Senior Statutory Planning Officer

Encl.

Notice of Determination Approved Plans

Shire of Kalamunda 2 Railway Road, Kalamunda WA 6076 PO Box 42, Kalamunda WA 6926 T: (08) 9257 9999 F: (08) 9293 2715 E: kala.shire@kalamunda.wa.gov.au - 2 -

### City of Kalamunda

2 Railway Road, KALAMUNDA WA 6076

Postal Address PO Box 42. KALAMUNDA WA 6926

Tel: (08) 9257 9999 Fax: (08) 9293 2715

Email: enquiries@kalamunda.wa.gov.au



### NOTICE OF DETERMINATION ON APPLICATION FOR PLANNING APPROVAL

### PLANNING AND DEVELOPMENT ACT 2005

ADDRESS:	54 Asher Road	LOT NO.	982
	Paulls Valley Wa 6076		
TITLE VOL NO.	1691	FOLIO	553
1			
APPLICATION DATE	18/05/2017	RECEIVED ON	06/06/2017
		T.	
DESCRIPTION OF	Single House	-	
PROPOSAL:			

The application for approval to undertake development in accordance with the plans attached thereto is:

x Granted subject to the following conditions:

Refused for the following reason(s):

### CONDITIONS OF APPROVAL

- 1. The development shall be carried out only in accordance with the terms of the application as approved herein, and any approved plan.
- 2. The owner shall register a public access easement to provide for a right-ofaccess for vehicular and pedestrian movement to the lot, to the satisfaction of the City. The easement must be executed and registered by the owner prior to the submission of a building permit application.
- 3. Prior to occupation of the approved dwelling, information is to be provided to the City of Kalamunda to demonstrate that the measures contained in the bushfire management plan/statement (prepared by Ruic Fire, Version 1.0, Reference 7135A, July 2017) that address the bushfire protection criteria, have been implemented during development works, to the satisfaction of the City of Kalamunda.
- 4. A new effluent disposal system that complies with the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974 must be installed.

- 5. On site disposal of stormwater or construction of stormwater on-site detention to achieve predevelopment hydrological regimes (5 year storm event) prior to outflowing.
- 6. Prior to the commencement of development works, information is to be provided to the City of Kalamunda to demonstrate that measures have be taken to ensure the identification and protection of any vegetation on the site worthy of retention that is not impacted by development works.

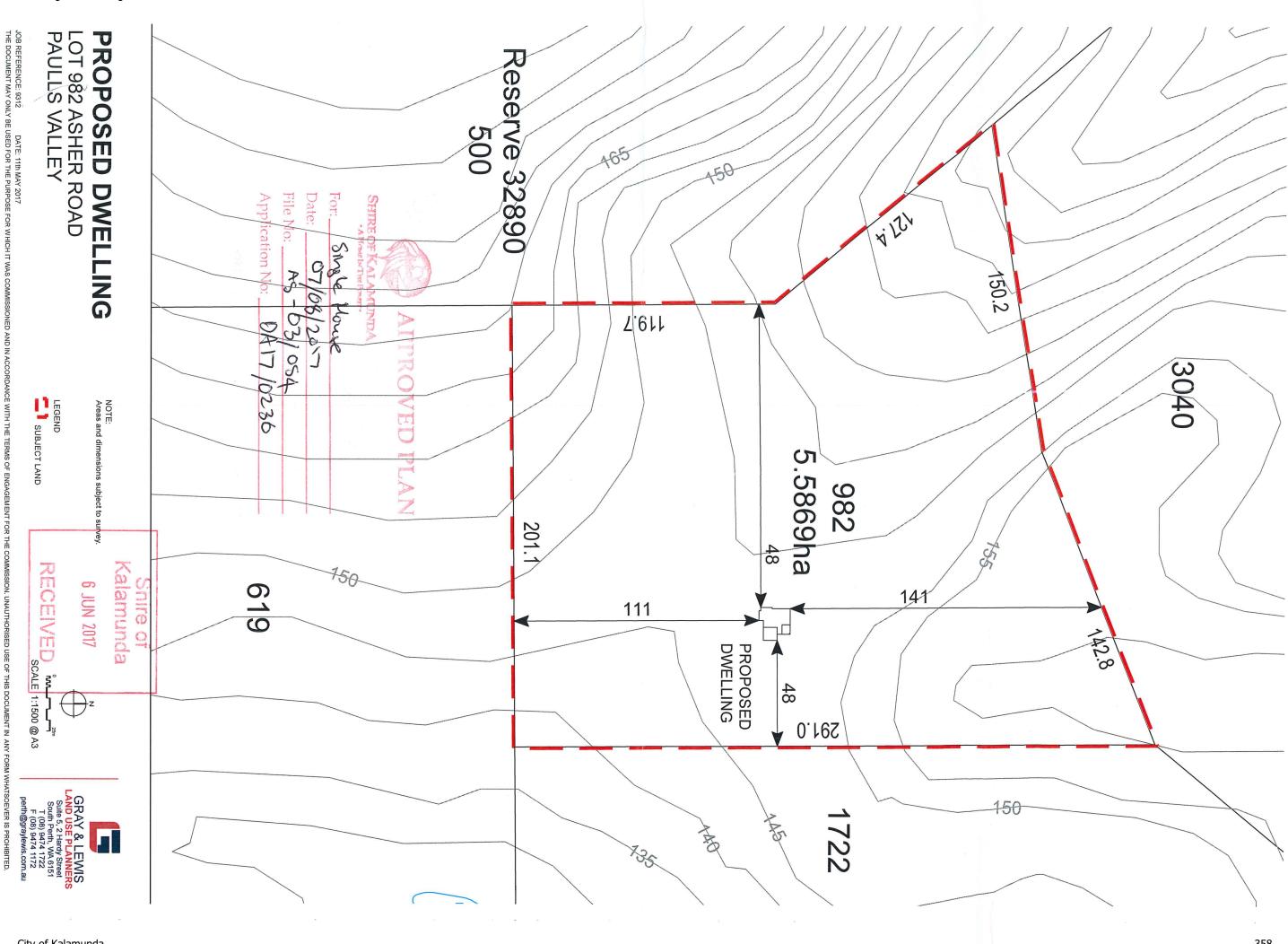
In addition to the conditions, the applicant is to have regard to the following:

- a) All development must comply with the provisions of Council's Local Planning Scheme No 3, Health Regulations, Building Code of Australia, and all other relevant Acts, Regulations and Local Laws.
- b) Prior to construction on site the applicant is required to obtain a building permit from the City's Building Services.
- c) In regards to Condition 5, the applicant is requested to contact the City of Kalamunda's Building Services regarding disposal of stormwater.
- d) The applicant is reminded of their obligations to comply with the "Land development sites and impacts on air quality: a guideline for the prevention of dust and smoke pollution from land development sites in Western Australia", prepared by the Department of Environment.
- e) The applicant is advised that all drainage is required to utilize and comply with water sensitive urban design principles/guidelines.
- f) The applicant is advised that with regard to condition 4 an "Application to Construct or Install an Apparatus for the Treatment of Sewage" must be submitted and approved before a building licence will be issued. Please refer to enclosed application form.

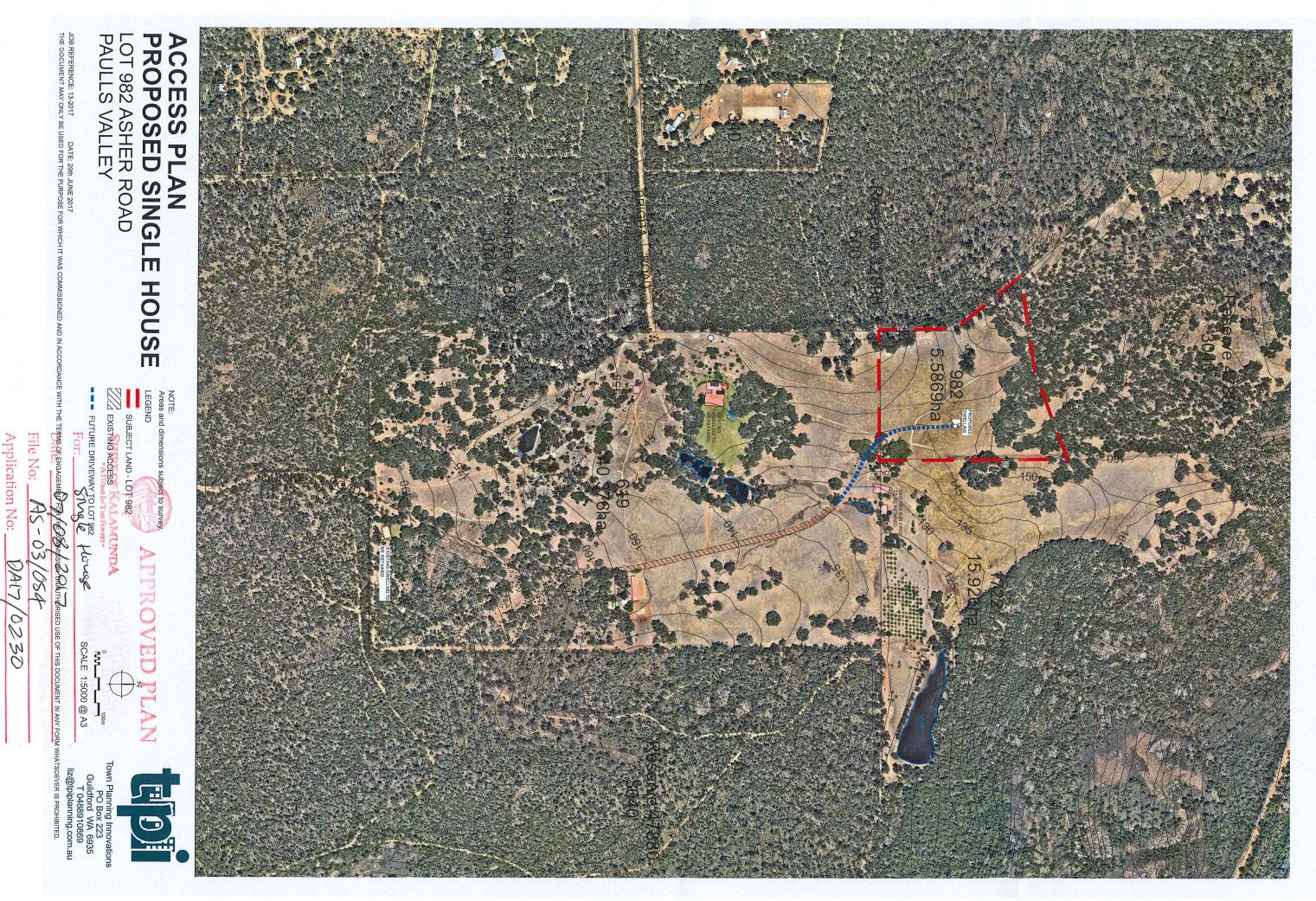
I hereby sign this approval for the application received 06/06/2017 for a proposed Single House for and on behalf of the City of Kalamunda.

Chris Lodge Senior Statutory Planning Officer

### Public Agenda Briefing Forum - 12 March 2019 Attachments



Attachment 10.3.2.3



**ATTACHMENT 2** 

Enquiries: Chris Lodge – 9257 9807 Ref: DA17/0231 & AS-03/050



07 August 2017

TOWN PLANNING INNOVATIONS PO BOX 223 GUILDFORD WA 6935

Dear Liz,

### Single House – Lot 1722 (50) Asher Road Paulls Valley Wa 6076

Please be advised that your planning application received 6 June 2017 for a proposed single house at the above mentioned property has been **APPROVED** subject to the conditions and advice notes on the attached Notice of Determination.

If the development subject of this approval is not substantially commenced within a period of two (2) years or such other period as specified in the approval after the date of the determination the approval shall lapse and be of no further effect.

If you are not satisfied with any of the conditions imposed, a right of review (appeal) exists against the decision to the State Administrative Tribunal. Appeal rights exist for 28 days after the date of this letter. Appeal forms can be obtained at the State Administrative Tribunal.

Should you wish to discuss the matter further please contact me on 9257 9807 or via email (chris.lodge@kalamunda.wa.gov.au).

Yours sincerely,

\_\_\_\_

Chris Lodge Senior Statutory Planning Officer

Encl.

Notice of Determination Approved Plans

### Shire of Kalamunda

2 Railway Road, Kalamunda WA 6076 PO Box 42, Kalamunda WA 6926 T: (08) 9257 9999 F: (08) 9293 2715 E: kala.shire@Kalamunda.wa.gov.au - 2 -

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Postal Address PO Box 42. KALAMUNDA WA 6926

Tel: (08) 9257 9999 Fax: (08) 9293 2715

Email: enquiries@kalamunda.wa.gov.au



### NOTICE OF DETERMINATION ON APPLICATION FOR PLANNING APPROVAL

### PLANNING AND DEVELOPMENT ACT 2005

ADDRESS:	54 Asher Road Paulls Valley Wa 6076	LOT NO.	1722
TITLE VOL NO.	1691	FOLIO	100
APPLICATION DATE	18/05/2017	RECEIVED ON	06/06/2017
DESCRIPTION OF PROPOSAL:	Single House		

The application for approval to undertake development in accordance with the plans attached thereto is:

x Granted subject to the following conditions:

Refused for the following reason(s):

### CONDITIONS OF APPROVAL

- 1. The development shall be carried out only in accordance with the terms of the application as approved herein, and any approved plan.
- 2. The owner shall register a public access easement to provide for a right-ofaccess for vehicular and pedestrian movement to the lot, to the satisfaction of the City. The easement must be executed and registered by the owner prior to the submission of a building permit application.
- 3. Prior to occupation of the approved dwelling, information is to be provided to the City of Kalamunda to demonstrate that the measures contained in the bushfire management plan/statement (prepared by Ruic Fire, Version 1.0, Reference 7135b, July 2017) that address the bushfire protection criteria, have been implemented during development works, to the satisfaction of the City of Kalamunda.
- 4. A new effluent disposal system that complies with the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974* must be installed.

- 5. On site disposal of stormwater or construction of stormwater on-site detention to achieve predevelopment hydrological regimes (5 year storm event) prior to outflowing.
- 6. Prior to the commencement of development works, information is to be provided to the City of Kalamunda to demonstrate that measures have be taken to ensure the identification and protection of any vegetation on the site worthy of retention that is not impacted by development works.

In addition to the conditions, the applicant is to have regard to the following:

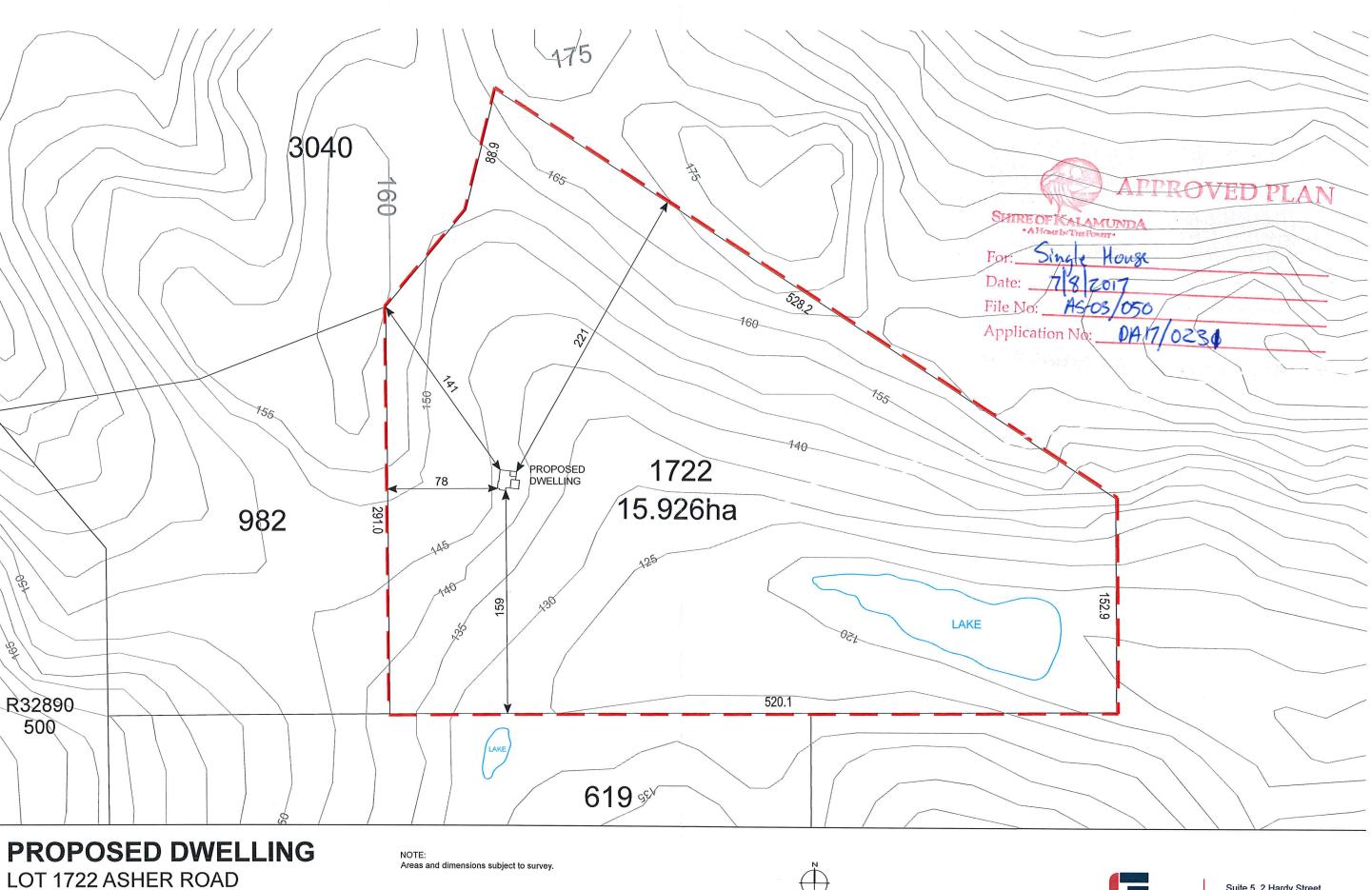
- a) All development must comply with the provisions of Council's Local Planning Scheme No 3, Health Regulations, Building Code of Australia, and all other relevant Acts, Regulations and Local Laws.
- b) Prior to construction on site the applicant is required to obtain a building permit from the City's Building Services.
- c) In regards to Condition 5, the applicant is requested to contact the City of Kalamunda's Building Services regarding disposal of stormwater.
- d) The applicant is reminded of their obligations to comply with the "Land development sites and impacts on air quality: a guideline for the prevention of dust and smoke pollution from land development sites in Western Australia", prepared by the Department of Environment.
- e) The applicant is advised that all drainage is required to utilize and comply with water sensitive urban design principles/guidelines.
- f) The applicant is advised that with regard to condition 4 an "Application to Construct or Install an Apparatus for the Treatment of Sewage" must be submitted and approved before a building licence will be issued. Please refer to enclosed application form.

I hereby sign this approval for the application received 6 June 2017 for a proposed single house for and on behalf of the City of Kalamunda.

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Dated 78 2017

Chris Lodge Senior Statutory Planning Officer



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JOB REFERENCE: 9312 DATE: 11th MAY 2017

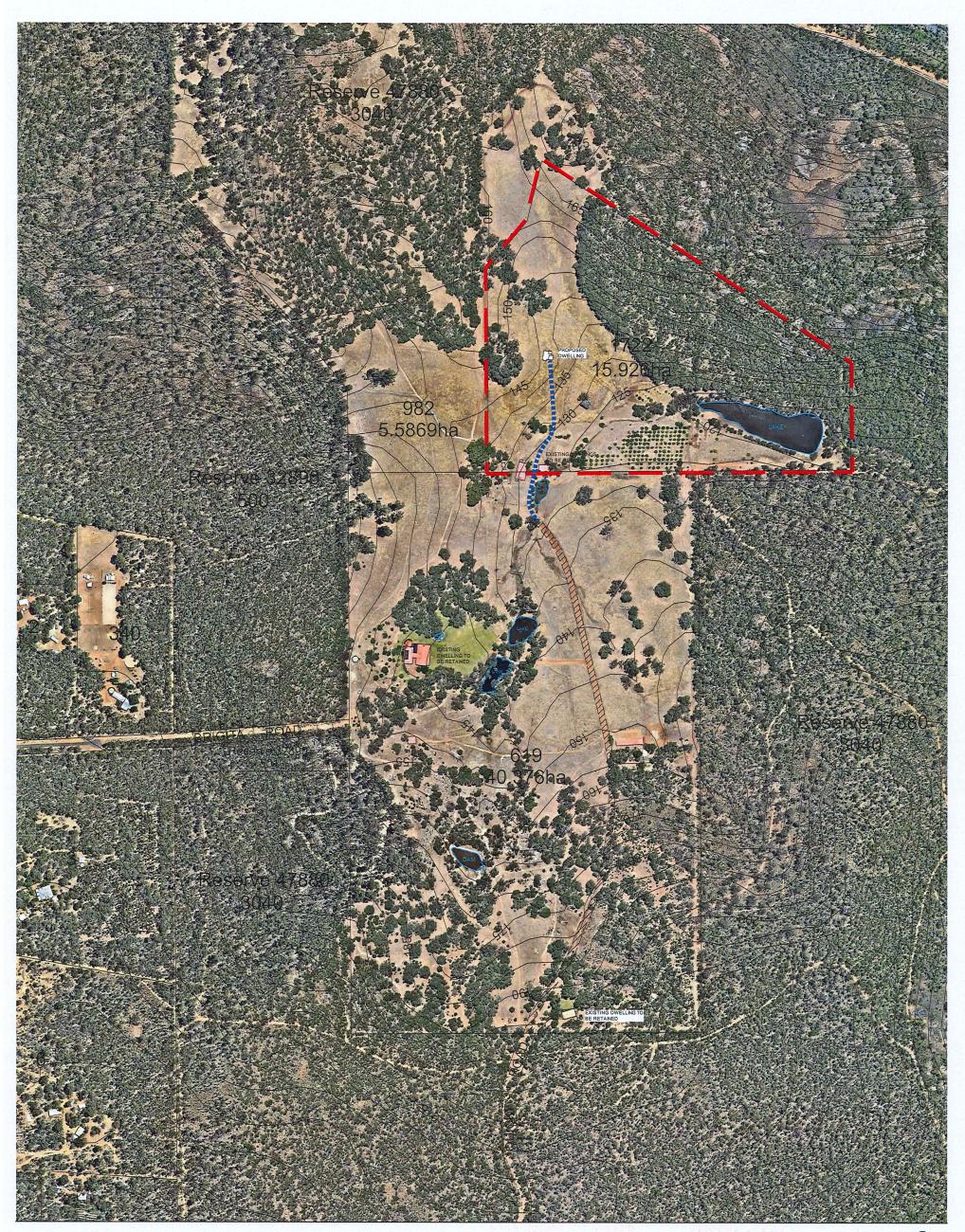
PAULLS VALLEY

THE DOCUMENT MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF ENGAGEMENT FOR THE COMMISSION. UNAUTHORISED USE OF THIS DOCUMENT IN ANY FORM WHATSOEVER IS PROHIBITED.

### Attachment 10.3.2.3

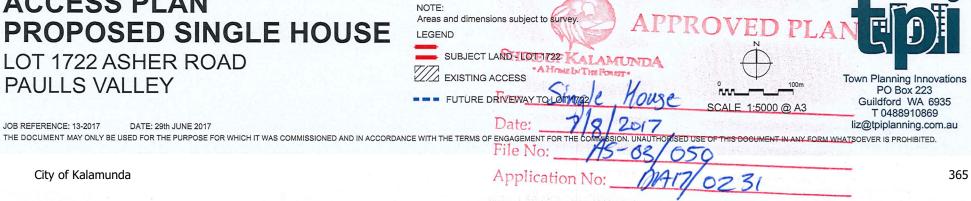


Suite 5, 2 Hardy Street South Perth, WA 6151 T (08) 9474 1722 F (08) 9474 1172 perth@graylewis.com.au



# ACCESS PLAN **PROPOSED SINGLE HOUSE** LOT 1722 ASHER ROAD PAULLS VALLEY

DATE: 29th JUNE 2017



City of Kalamunda

JOB REFERENCE: 13-2017

### **Summary of Submissions**

### Proposed Dedication of Unallocated Crown Land - Lot 4378 on Deposited Plan 220608 - Quicke Road, Paulls Valley

Submitter No.	Nature of Submission	<b>Response/Recommended Modifications</b>
Submission 1	Query:	City's Response:
	"Despite a visit to the City offices and a front counter meeting with Melissa from Planning , it is not clear what this "Dedication" will mean 1. Will the road be realigned?	"Thank you for your query. The gravel track known as Quicke Road is not legally a road. The process of dedication will result in the track becoming a road.
	<ul><li>2. Will the road be widened?</li><li>3. Will it be paved?</li><li>Pertinent to all of the above questions is the fact that Quicke Rd is</li></ul>	The road will not be realigned or widened. The City proposes to dedicate the current gravel track.
	<ul> <li>basically a private road/driveway for one landholder. It may be on three titles – but all are held by one owner.</li> <li>To widen/straighten the existing road would mean yet more loss of bush, including the now rare Persoonia, Clematis and some very old habitat trees.</li> <li>To pave the road would provide more access to hoons for burn</li> </ul>	The dedication process will only result in the track becoming a road. No construction or paving works are proposed as part of this process."
	outs and street racing [see evidence of such activity at the top of Asher Rd]. With this access comes a greater risk of anti social behaviour, illegal dumping and fire .	The City notes that this submitter did not lodge any further submissions.
	We would appreciate a response to these questions so we may make a more complete submission."	
Submission 2	Query:	City's Response:
	"Hello. You have recently advertised the above proposed dedication and asked for public comment. I have spent over an hour looking	"The online public comment for this proposal is via Engage Kalamunda under Road Notices,

	for it on the website and can find no trace. Please direct me to the appropriate part of the website so I can view and comment."	Works & Closures. The direct link is: <u>https://engage.kalamunda.wa.gov.au/road-</u> <u>NWC/news_feed/proposed-dedication-quicke-</u> <u>rd-paulls-valley</u> ." The City notes that this submitter did not lodge any further submissions.
Telstra	<ul> <li>No objection, subject to condition.</li> <li>Telstra's plant records indicate that there are no Telstra assets within the area of the proposal.</li> <li>Subject to compliance with Telstra's standard conditions, Telstra has no objection to the road dedication.</li> <li>Telstra would also appreciate due confirmation when this proposed acquisition proceeds so as to update its Cadastre records.</li> </ul>	Noted.
ATCO Gas	No objection. ATCO Gas Australia has no objection to the proposal to facilitate the dedication of that area of Quicke Road as shown on the attached Deposited Plan 220608 (LAA Plan 20608), based on the information provided and to formalise access to Lots 619, 1722 and 982 Asher Road, Paulls Valley.	Noted.
Western Power	No objection. Western Power does not have any objection at this time to the proposal but would appreciate being kept informed of developments.	Noted.

Water Corporation	No objection.	Noted.
	The Water Corporation has no objection to the proposed dedication. The Water Corporation has no services in the area.	