Preliminary Faunal Survey
Lot 365 Millars Road

Summary
The Shire of Serpentine/Jarrahdale has requested a preliminary faunal survey, especially in regard to black cockatoos, to further assess the potential use of the recently purchased Lot 365 Millars Road. To facilitate the identification of the main features of the property that would impact on all faunal activity, 15 areas have been delineated as depicted in Diagram 1. Each area is described with 24 accompanying photo's of the vegetation and geomorphology.

In general terms, Lot 365 is a 50 acre property positioned between the Shire caravan park, the historic Mill site, the Shire oval and 2 main arterial roads. Foot and vehicle traffic is frequent as is regular squatters. The property has been clear-felled approximately 50 years ago, used for gravel extraction, dumping of waste and settlement. Weeds are invading the site, especially blackberry, grapes, figs and European garden species.

In regard to black cockatoos, the property does not form an integral part of the habitat for any cockatoo species. In all the 15 Areas depicted in Diagram 1, only one dead jarrah tree (Photo's 19 & 20) was located in area 5a. No black cockatoos were sighted. The dead jarrah has no signs of activity on, in or around the tree. Given the area was heavily logged and disturbed, most of the dominant tree species are of a similar age/size, being too young and small a to provide breeding or roosting sites.

The only presence of fauna were signs of kangaroo diggings, some kangaroo faecal material and the typical understory jarrah species birds that were sparse. There are no signs of any other fauna (faecal material, diggings, paths, feeding sites or shelter). Even available sites of fallen logs (Photo 23) had no sign of being used for shelter by reptiles or mammals.

Based on location, the history and this survey of the 50 acres, not only is it unlikely that the faunal presence on the property would be observed, but few animals or signs of animal activity were noticed. There are no signs of any habitat that would make the property of particular interest to black cockatoos, especially given better quality, less disturbed and older forest is available to the North and East of the site.

Diagram 3 at the end of the report indicates the area proposed for clearing. The specific area and the reasons this site is chosen for clearing are listed. The main criteria for selecting this area are minimal environmental impacts on the site.

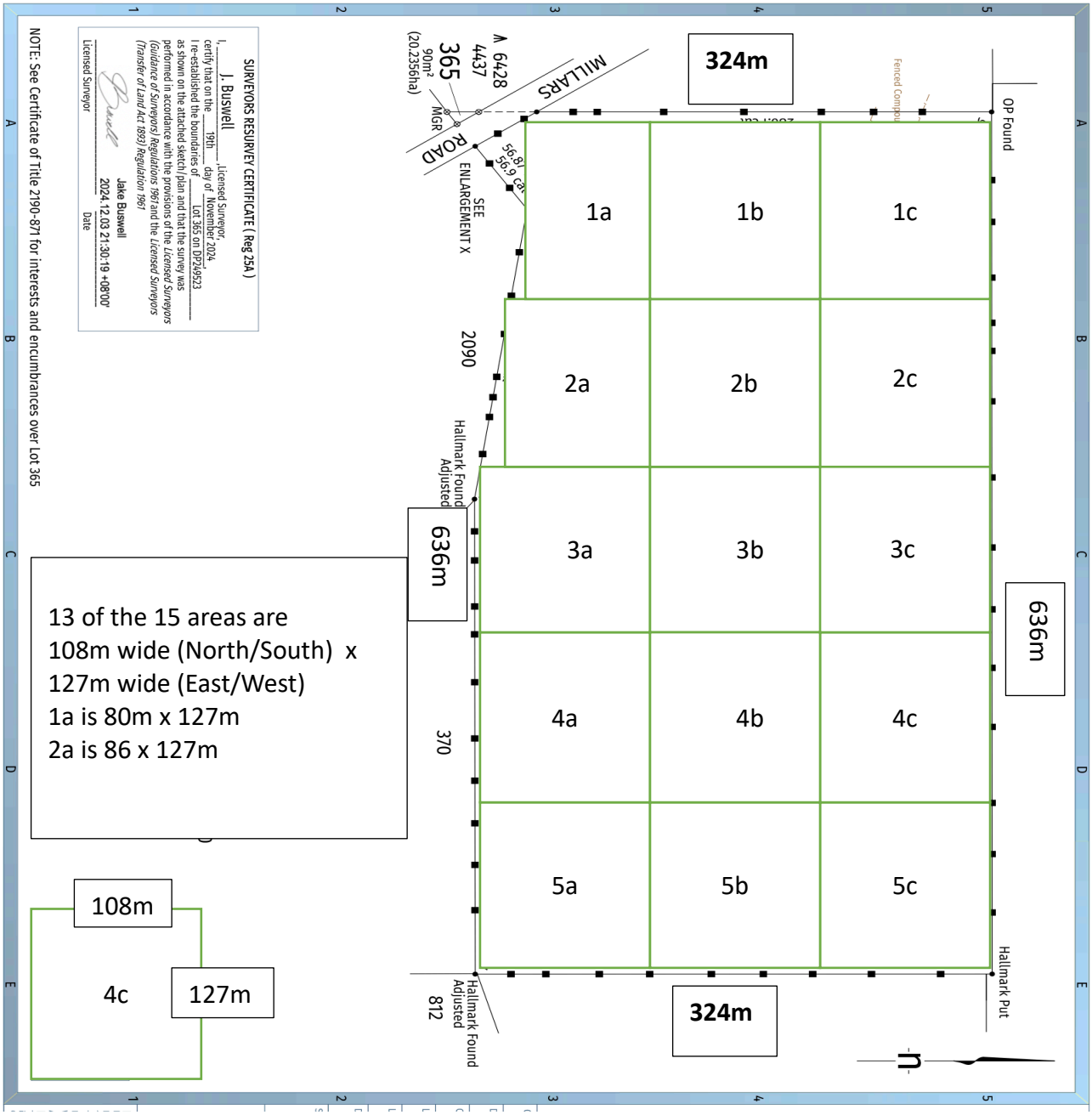


Diagram 1. Illustrates the boundaries, shape, orientation, size and 15 Areas the property has been divided into for intensive inspection of faunal activity.

Introduction

The purpose of this document is to detail the general characteristics of the property, including the slopes, floral assemblages, habitat type and signs of faunal activity, in particular any presence of black cockatoos (Calyptorhynchus sps), cockatoo feeding activities or nesting sites.

The standard method to achieve this aim is to provide a logical and reproducible pattern of observations, in the form of description that can be followed by other investigators of the habitat types on the property. In this regard, 15 separate areas have been delineated.

The 15 rectangular areas of approximately equal size, are depicted in Diagram 1 above. Of the 15 areas, 13 are identical in size (108m x 127m) and 2 are slightly smaller being approximately 80m x 127m. The smaller areas of the 2 areas (1a & 2a) are a result of the narrowing of the property boundary in the south-western corner, adjoining the caravan park and Millars Road.

The location where each photo' was taken is detailed. In Diagram 2 at the end of the report.

Property Description

The dimensions of the perimeter of the property are 636m x 324m. The longer boundaries are the northern and southern boundaries (Diagram 1). In a general sense, the property slopes from the highest point at 245m in the North-West corner to 221m in the South-East. The slope is only 24m over more than 600m is minor.

Vegetation over most of the property is the standard Jarrah/Marri mix with sparse understory including macro zamia, Acacia sps, Banksia sps and Xanthorea sps, except for the south eastern portion of the property where more water tolerate sedge growth is present adjacent to Gooralong Brook.

There are several cleared areas along the southern and western boundaries as well as in the central area of the property of several thousands of square metres.

Property History

Given that the property has been clear-felled approximately 50 to 60 years ago, the regrowth is of similar size. Many stumps of the older forest are still visible. There are remnant gravel extraction sites and active signs of settlement in the Eastern and Southern areas. These sites are surrounded by weed infestation including blackberry, grapes, figs, European garden and trees species, including "bamboo."

Because the property adjoins the Shire caravan park, which does not have public toilets, the foot traffic is frequent and the presence of toilet paper is abundant. The property is also alongside the Shire oval, which attracts much foot and vehicle traffic, including "drag racing" in and next to the property. Squatters have occupied several sites on the property and since purchasing the property they have been regularly asked to vacate the premises.

Method

4 people including the two owners, a Jarrah Forest specialist ecologist and their assistant walked through each area of the property in a methodical manner. The aim was for the 4 people, equally spread out about 6m apart, all looking for signs of faunal activity. According to a "step monitor," each person walked approximately 2.6km or over 10kms collectively.

Such a method would result in most of the property being walked and seen by the investigators.

Photographic Record

The series of 24 photo's provide evidence of the observations in each of the 15 Areas depicted. The photo's show the property as a sparsely vegetated and partially cleared block with a small wetland in the south- eastern corner.

Most of the canopy is Jarrah/Marri the maximum size of which is set by the time of clear-felling. There is only one dead jarrah tree in Area 5a that is too small to use as a nesting site with no hollow section visible and has no signs of nesting or roosting (Photo 19). There are no signs on the ground under the tree of faecal material, food scraps or other activity (Photo 20).

A waterhole is visible immediately alongside Millars Road in Photo 2. This is the only site of surface water in summer and it is difficult to access. No tracks or signs of animals using the water hole are visible.

AREA 1 of 5 – South Eastern corner

This is the lowest portion on the property and the only site with permanent water. It contains a dense stand of wattle on the southern boundary, a waterhole, a cleared area and a small wetland.



Photo 1. in Area 1a – south eastern corner.
Wetland habitat with brachen fern and sedges and sparse canopy of small trees.



Photo 2. in Area 1a – Waterhole. Millars Road boundary, southern portion.
Cleared and wetland vegetation on the far side of the water hole adjoining Millars Road.



Photo 3. in Area 1b – cleared area with a current squatter (arrow), weed species on the left and right. Lot 365 encompasses this car park and the lefthand side of the photo.



Photo 4. Area 1c – south western corner characterised by sparse small trees and a small spring. Wattle and blackberry weeds are visible in the photo. There is a dry dam in this corner.

Area 2 of 5 - the lower portion of the property is mostly a sparse forest with roads truncating the gentle slopes. The Goorlaong Brook also passes through this Area with a narrow band of wetland vegetation to the left of Photo 5.



Photo 5. AREA 2a illustrating the small size of most of the trees and a gravel road. Gooralong Brook is to the left of the photo.



Photo 6. - AREA 2b depicts open ground that has not been revegetated.



Photo 7. - Area 2c Typical sparse banksia growth with one Jarrah. None of these trees have particular roosting value for avifauna such as Cockatoos.

AREA 3 of 5 – Central Zone
The area has the entrance of the Gooralong Brook onto the property, the second large clearing adjacent to the caravan park and more evidence of squatters. In vegetation type it is similar to Areas 2a to 2c



Photo 8. - Area 3a Seasonally dry Gooralong Brook with European species invading the creek line.
AREA 3a



Photo 9. - Area 3a – Camp site used by squatters.



Photo 10.- Area 3b more sparse vegetation indicating a forest that has not recovered from clearing.



Photo 10 -Area 3c the northern mid-section of the property indicating more sparse forest with small trees.



Photo 11 -Area 3c the northern mid-section of the property indicating more sparse forest with small trees and typical understory species.

Area 4 of 5 - Central Eastern mid-slope including the gravel pit.



Photo 12. - AREA 4a similar to Photo 3a and 3b small trees in an open forest.



Photo 13. - Area 4a has a road along the Southern boundary. Lot 365 is to the left side of road.



Photo 14. - Area 4b is similar to AREA 3b and together represents the most central portion of the property and includes the proposed section to be cleared.



Photo 15.- Area 4c existing gravel roads that extend through the property, again showing the small nature of the trees and the open understory.



Photo 16. – Area 4c one of the few large logs that is perfect shelter for animals if they were present.

Area 5 of 5 - Eastern mid-slope including many jarrah trees.
Areas 5a to 5c represent the most eastern portion of the property. It joins to dense forest where kangaroos are seen entering the property and also private property where orchards are actively managed. It is the only Area that contains a standing dead jarrah tree.



Photo 17. – Area 5a the south eastern corner characterised by slightly larger trees, but still a sparse forest with small shrubs, mostly Acacia pulchella. This area is flat and joins a commercial orchard. This area has some kangaroo diggings, visible in the photo.



Photo 18. – AREA 5a borders private property where there is a commercial orchard. Lot 365 extends to the left of the photo.



Photo 19. - Area 5a is the location of the only standing dead jarrah tree.



Photo 20 - Area 5a is the base of the dead jarrah tree indicating no activity in the tree. Usually there are signs of wood fragments, food or droppings if the tree is in use. No signs of cockatoos were observed.



Photo 21. – Area 5b remnant stumps for the clear-felling are common. This is the healthier forest on Lot 365. It is also the site of the most faunal activity in the form of kangaroo diggings.



Photo 22.- Area 5b – signs of animal activity in the form of small kangaroo diggings.



Photo 23. – Area 5b the best jarrah trees on the property in the North-Eastern corner



Photo 22. – Area 5c is flat and has the similar sparse forest, but there are more jarrah trees present here than elsewhere on the property.

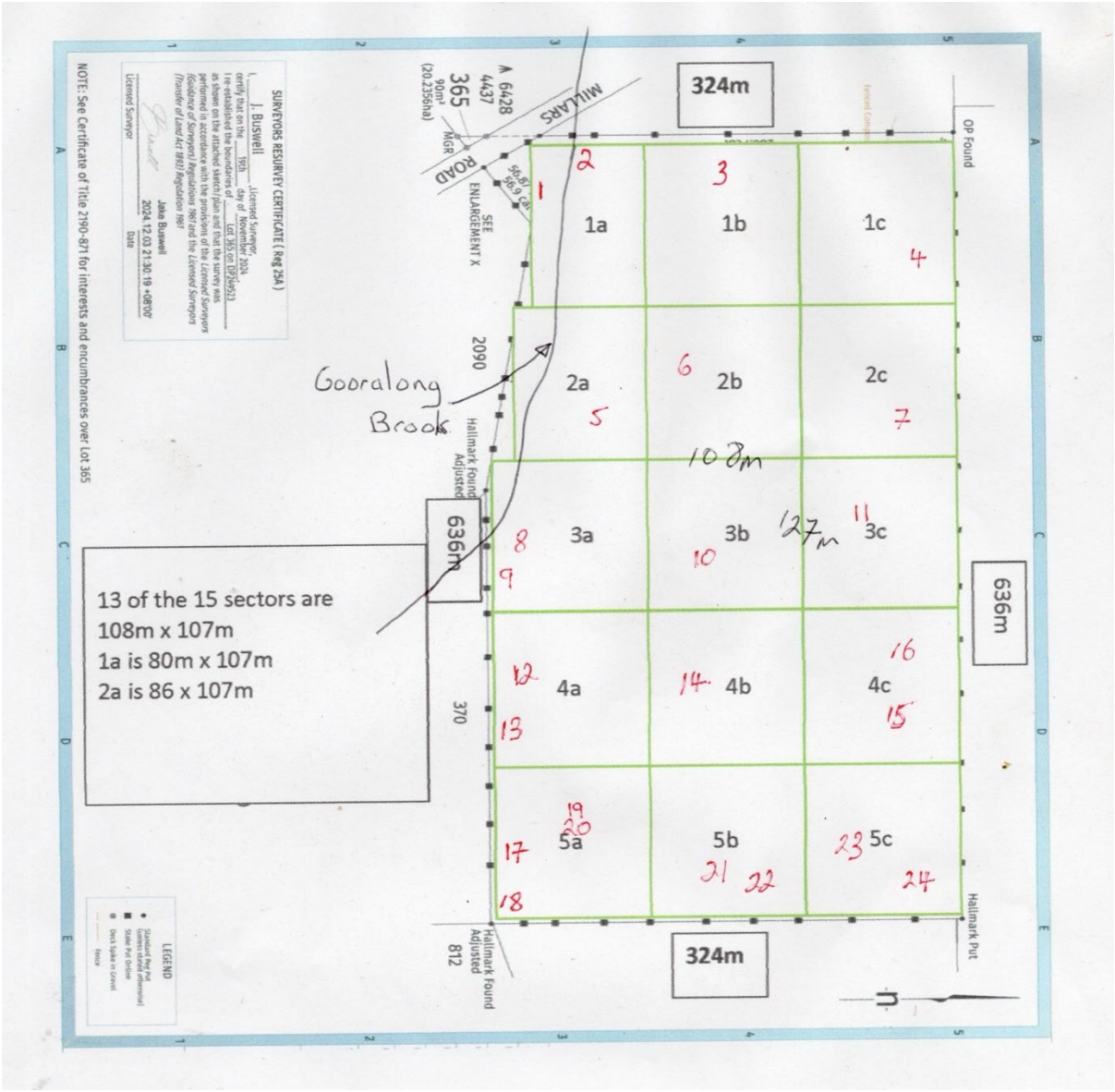


Diagram 2: Illustrates the approximate location of each of the photographs in this report relative to the property boundaries and the 15 Areas depicted. The location of Gorralong Brook is also highlighted.

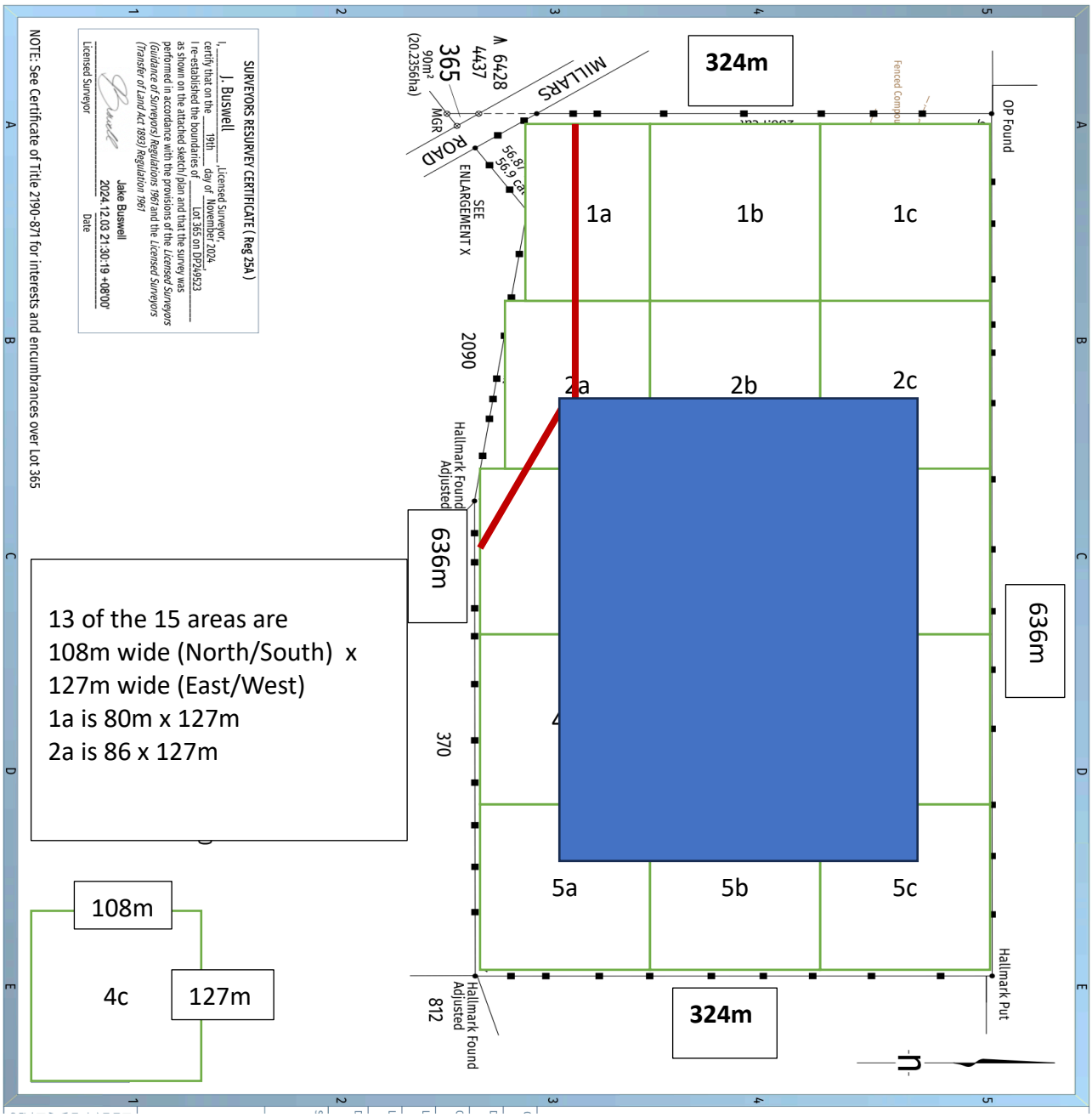


Diagram 3: Illustrates the 15 acres or 60700 m^2 of the 50 acres property planned to be cleared. It is approximately 202m wide and 301 long. The red line is the approximate fenced area to protect the moist ground where sedges are growing.

Planned area to be cleared has been calculated based on:

1) It includes the old gravel pit;
2) It is the most sparsely trees area with roads and clearings;
3) It avoids all land associated with any wet ground;
4) It permits a buffer of bush for privacy and to support movement of any birds or animals in corridors;
5) It is flat land and has no potential for erosion; and
6) It avoids the best remaining Jarrah trees which are located along the Eastern and Northern boundaries.