

MEMORANDUM

Date	9 August 2017	Title	Wattle Grove Clearing Permit Application Report
Ref.	PHA17001/02	Distribution	Department of Water and Environmental Regulation
Author	Gabriela Martinez Senior Environmental Scientist/Botanist	Reviewer	Kellie Bauer-Simpson Principal Ecologist/Environmental Manager

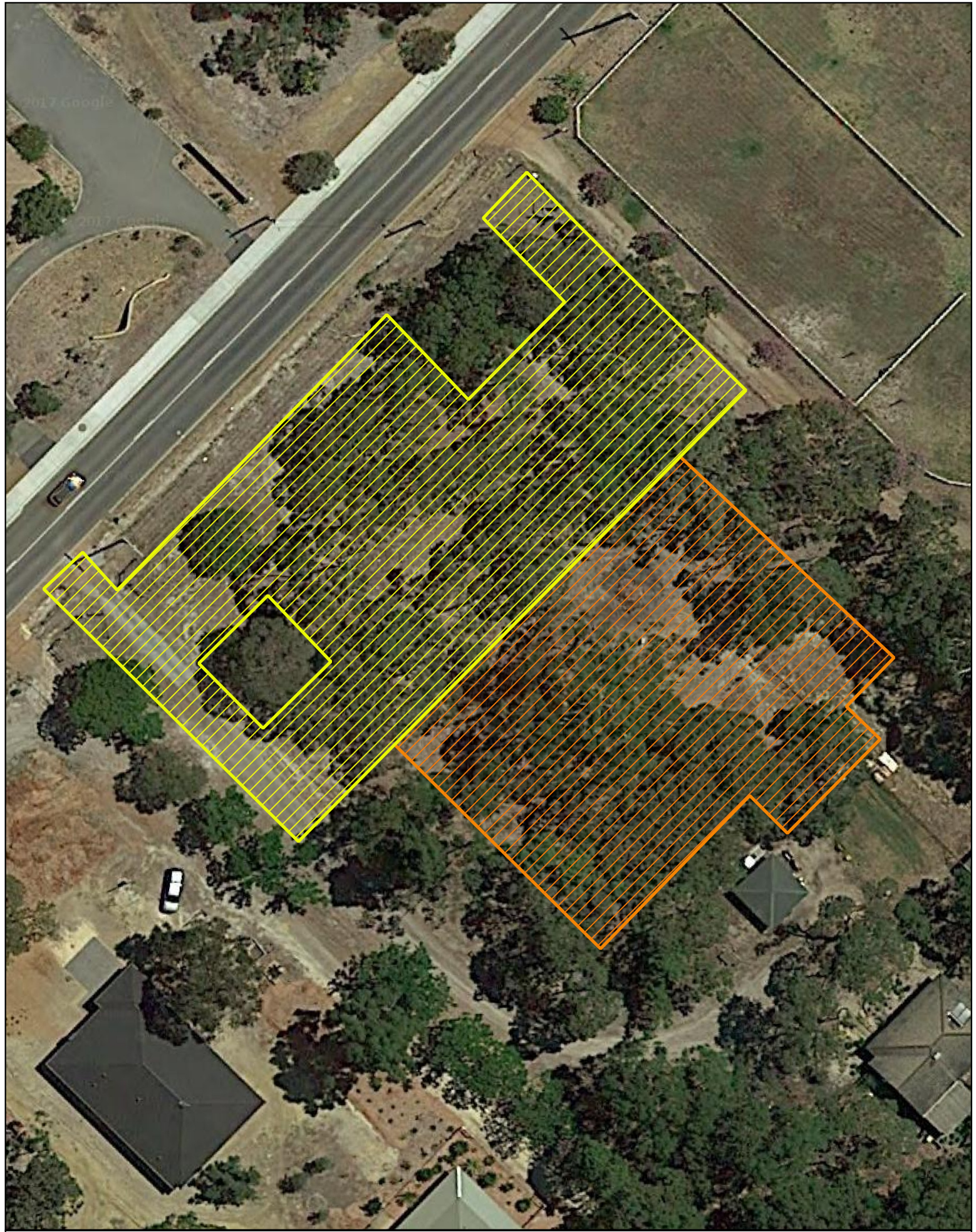
Background

An area of Lot 28 Lewis Road, Wattle Grove is proposed for the construction and operation of a building that will serve the purposes of a place of worship, a sanctuary and a community centre. An area adjacent to the building is also required to be cleared for a carpark to service the building. Additional trees surrounding the sites have also been proposed to be removed to reduce fuel loads and therefore bushfire risk.

Peter Hunt Architect were engaged by the proponent to design the building and assist with management of the project. On behalf of the proponent, Peter Hunt Architect commissioned Focused Vision Consulting Pty Ltd (FVC) to undertake an assessment of the proposed clearing area, to determine the general flora, vegetation and fauna values, and the requirements for a Native Vegetation Clearing Permit (NVCP). The assessment determined that a clearing permit is required for all clearing, and that no exemptions under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*, due to the fact that the site falls within an Environmentally Sensitive Area (ESA), due to being within the buffers of nearby Bush Forever sites.

The proposed development footprints as they occur on **the site are presented in Figure 1**. The area within the development footprints for both the building and carpark totals 0.424 hectares. Within this area, there are a number of Marri trees (*Corymbia calophylla*) some open areas already cleared and void of native vegetation and areas occupied by the non-endemic tree species, Lemon-scented Gum (*Eucalyptus citriodora*). The approximate area occupied by native vegetation (Marri trees) which requires clearing is 0.286 hectares, where trees including their canopy and dripline are considered (**Figure 2**).

This report provides information to support the NVCP application submitted, requesting approval to clear the native vegetation within the proposed footprints.



0 5 10 15 20 m
GDA 94 / MGA Zone 50



Legend

-  Proposed Carpark Footprint
-  Proposed Building Footprint

Figure 1 - Proposed Clearing Footprint



0 5 10 15 20 m
GDA 94 / MGA Zone 50



Legend

-  Proposed Carpark Footprint
-  Proposed Building Footprint
-  Clearing Extent

FOCUS
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**Figure 2 - Proposed Native
Vegetation Clearing Extent**

Methodology

An inspection of the study area was conducted by Principal Ecologist, Kellie Bauer-Simpson, on 27 June and again on 1 August 2017.

The inspections were made on foot, and included a focused inspection of the areas proposed for clearing for the building and carpark. This included individual co-ordinate recordings of all native trees (all *Corymbia calophylla*, Marri) present within the footprints. Other trees previously marked by a Bush Fire Consultant, suggested for removal to reduce field loads were also recorded.

Records of tree location and information including species, size (including interpretation of diameter at breast height (DBH)) and whether or not they were marked for removal were recorded in an electronic tablet device, equipped with GPS, coupled with mobile mapping software program, Mappt™.

Once uploaded, field data was used to conduct spatial analysis of areas and trees proposed to be cleared.

Field observations and data were then considered in relation to:

- *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*
- A Guide to the Exemptions and Regulations for Clearing Native Vegetation Under Part V of the Environmental Protection Act 1986 (Department of Environment Regulation 2014)
- EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii* and Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso* (Department of Sustainability, Environment, Water, Population and Communities 2012).

Results and Discussion

Flora and Vegetation

The areas proposed to be cleared for a building and car park do not support intact native vegetation. The vegetation in these locations comprise only trees over a sparse understorey of introduced grasses and other weeds. There is no intact native understorey present. Many of the trees present are native, *Corymbia calophylla* (Marri), which was the only endemic (locally-native) species that was observed, besides three isolated *Xanthorrhoea preissii* (Grasstrees), which are in relatively poor health. The site also supports several non-endemic trees, mostly *Eucalyptus citriodora* (Lemon-scented Gum) (**Plates 1 and 2**).



Plate 1: Habitat present at the site, showing non-endemic Lemon-scented gums in the foreground (mostly where the building is proposed) and native Marri trees beyond (photograph taken from the eastern corner of the site, with a west facing view)



Plate 2: Habitat present at the site, showing native Marri trees (photograph taken from the north-west corner of the site, with an east facing view)

The location of each of the Marri trees present within the proposed carpark and building footprints, and in locations outside the footprints, where Marri trees are proposed to be removed to reduce bushfire risk, is shown in **Figure 3**. The total number of Marri trees proposed to be cleared is 154, which includes 92 within the carpark footprint, 36 within the building footprint and 26 surrounding the footprints for fire risk reduction.

Most of these trees proposed to be cleared are small (many coppicing saplings) or medium (**Plates 3 and 4**), with two being very large and two being large trees (**Figure 1**).

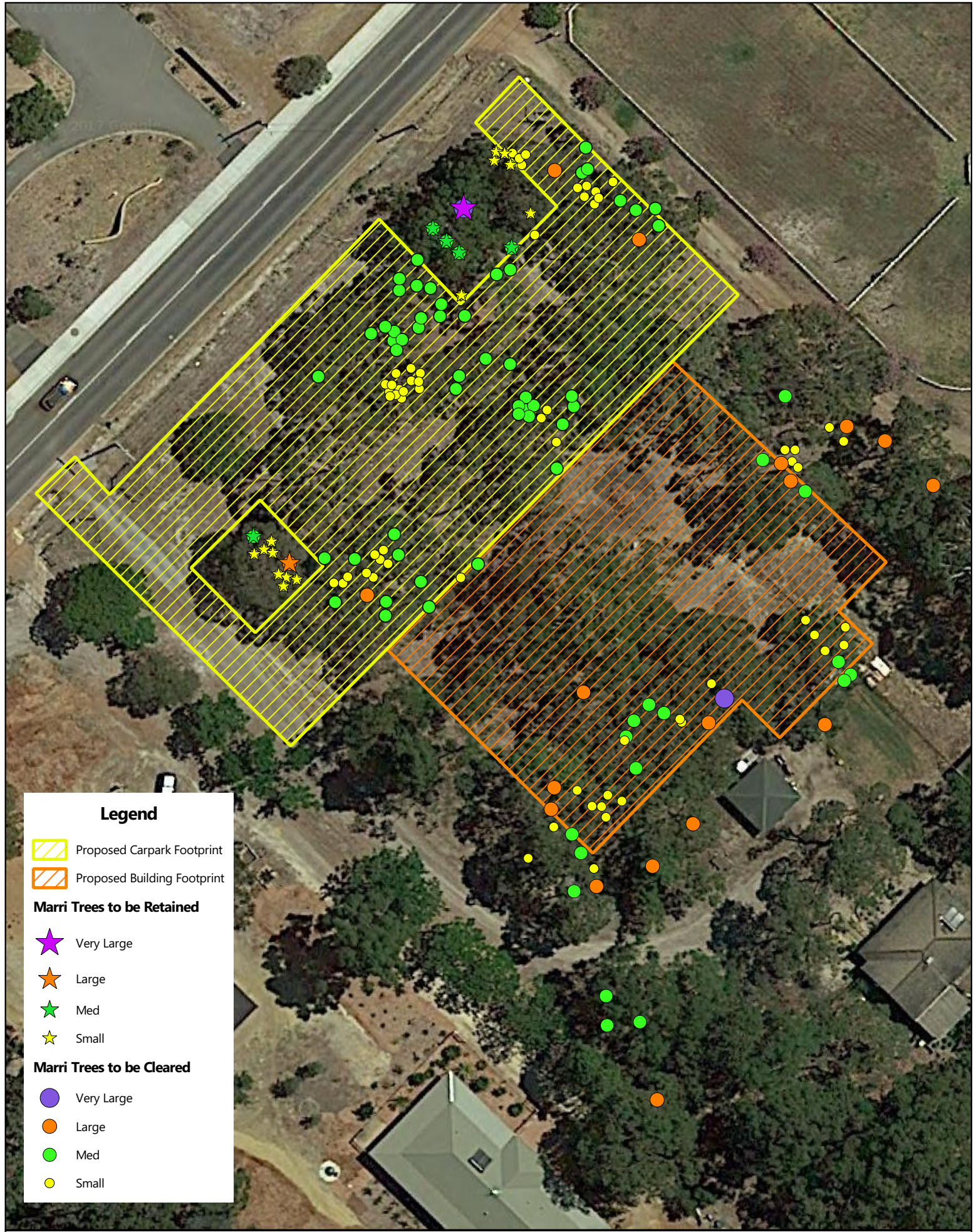


Plate 3: Many of the Marri trees proposed to be cleared, showing small or medium size/maturity



Plate 4: Marri trees proposed to be cleared, showing small or medium size/maturity

The current proposed footprint for the carpark has been adjusted to allow retention of 21 Marri trees, including the two of the largest trees present at the site. These largest trees are situated in the north-eastern corner of the site, and near the western edge of the carpark, and they recorded DBH scores of 81 cm and 70 cm, respectively (**Plates 5 and 6**). Two other trees present were found to exhibit DBH measurements greater than 50 cm (75 and 69 cm), shown as the very large tree on the southern edge of the building footprint and the large tree near the south-west corner of the carpark footprint in **Figure 3**, respectively. **Plate 7** also presents the large tree near the south-west corner of the carpark footprint.



Legend

-  Proposed Carpark Footprint
-  Proposed Building Footprint

Marri Trees to be Retained

-  Very Large
-  Large
-  Med
-  Small

Marri Trees to be Cleared

-  Very Large
-  Large
-  Med
-  Small

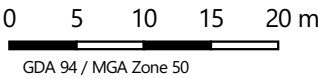


Figure 3 - Marri Trees Proposed to be Cleared



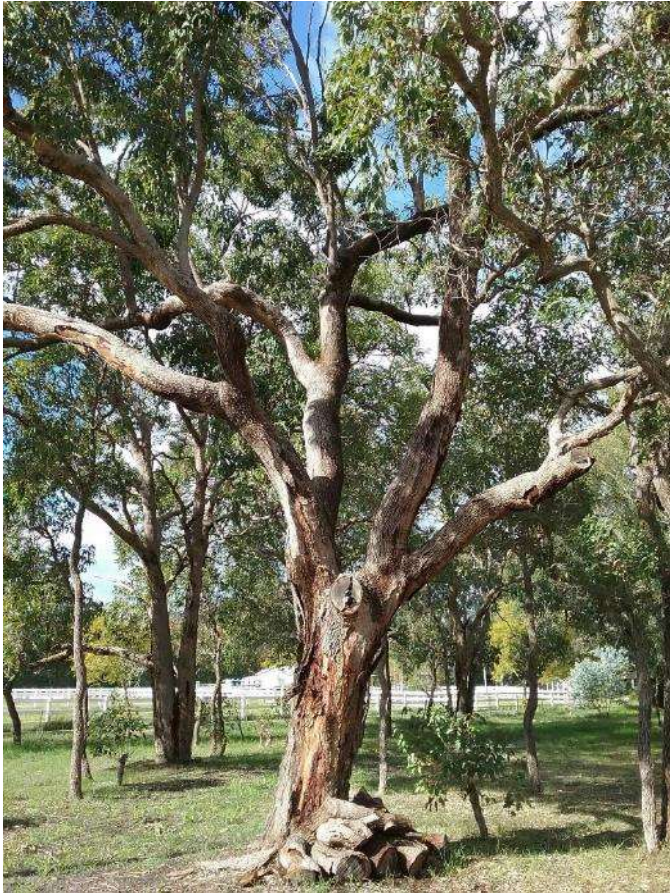


Plate 5: Very large Marri tree (DBH 81 cm), to be retained

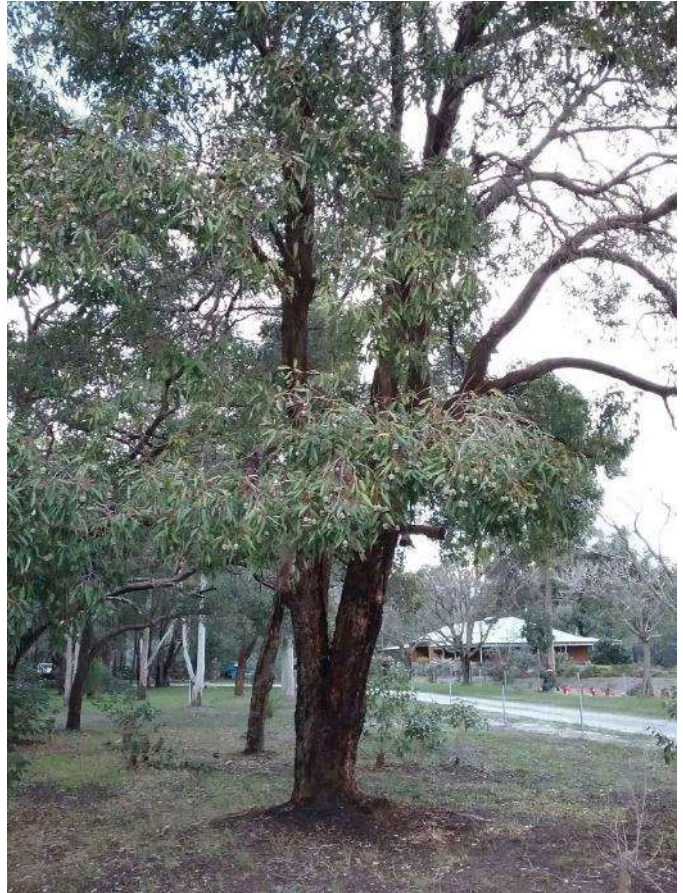


Plate 6: Large Marri tree (DBH 70 cm), to be retained



Plate 7: Large Marri tree (DBH 69 cm), proposed to be cleared

The condition of the vegetation within the proposed carpark clearing footprint was assessed in accordance with the currently accepted scale for vegetation condition, as per Environmental Protection Authority (EPA) technical guidance for flora and vegetation assessments (EPA 2016), which is an adaptation of the Keighery (1994) and Trudgen (1988). The scale considers vegetation condition in terms of weed proportions, disturbances and retained structure; the condition of the vegetation present within the. In accordance with the scale, the vegetation within the proposed clearing footprint is considered to be 'Degraded to Completely Degraded'.

Fauna

The vegetation within the proposed clearing footprints provides limited, although some habitat for native fauna, including birds, reptiles and potentially small mammals. Mammal occupation of the area is considered unlikely, or limited at best, given the relatively built-up nature of the semi-rural urban surrounds, and proximity to roads, as well as the likely high pressure that domestic animals (predominantly cates) would post to such species. Small reptiles are likely to utilise the site, although understorey and protective ground cover is limited for reptiles and mammals.

Several bird species were observed to visit the site during the field assessment in June, including Australian Ringneck Parrots, Singing Honeyeaters and Red-tailed Black-cockatoos, the latter being a Threatened species of Commonwealth environmental significance. Two Red-tailed Black-cockatoos were observed foraging on nuts in a Marri tree during the field assessment in the mid-afternoon on a fine day, and were present for at least 15 minutes, before flying in a northerly direction.

None of the trees present within the clearing footprint were observed to support breeding hollows for Black-cockatoos, although four are considered habitat trees (potential future nesting trees), due to trunk DBH measurements of greater than 50 cm, as discussed above, and as shown in **Figure 3** and **Plates 5, 6 and 7**.

The Black-cockatoo night roosting habitat status of the site is not known, however the Great Cocky Count of 2017 (BridLife Australia) recorded a roost site in Wattle Grove for Forest Red-tailed Black-cockatoos, although specifically, the site at Lot 28 Lewis Road in Wattle Grove is not a known night roost site.

Due to the fact that the Marri trees present within the proposed clearing footprint represent one of the main food sources of Threatened Black-cockatoos, combined with sighted feeding birds, the site is certain foraging habitat for Black-cockatoos. Due to this, the fauna habitat value of the site is considered significant, which is reflected in the assessment against the clearing principles provided in this report. However, given the small area proposed to be cleared, referral to the Commonwealth Department of the Environment and Energy is not required. The referral guidelines stipulate that clearing more than one hectare of quality foraging habitat triggers the need for referral to the Commonwealth, but less than one hectare does not. There is no apparent requirement to refer due to the presence of breeding or night roost habitat either, due to a lack of evidence of such habitat being supported by the site.

Assessment Against the Ten Clearing Principles

The project has been broadly assessed against the ten clearing principles, based on information collected during the assessment.

Principle	Assessment	Outcome	Impact Mitigation Commitment
1 (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.	The vegetation proposed to be cleared is considered to support a low level of biological diversity, as it does not support intact native vegetation or a recognized ecological community. The results of the site survey show that vegetation within the proposed clearing footprints comprises only native and non-endemic trees over a sparse understorey of introduced grasses and other weeds. Most trees present are native, <i>Corymbia calophylla</i> (Marri), however, the site also supports several non-endemic trees, <i>Eucalyptus citriodora</i> (Lemon-scented Gum). The proposed clearing footprints encompass an area of 0.242 ha, or 0.286 ha where trees and their canopies/driplines are calculated, including outside the footprints, which consists of 154 Marri trees. The tree count has been reduced from 175 trees within the full footprints, with adjustments to the carpark footprint which will retain a further 21 Marri trees, including two mature trees with DBH >50 cm. No species of Priority Flora or Priority Ecological Communities (PECs) were recorded during the field surveys, nor are they expected to occur or be supported by the site, given the highly degraded nature of the vegetation, which has been classified as 'Degraded to Completely Degraded', in accordance with currently accepted scales. It is unlikely that clearing within the study area will cause significant impacts to the biological diversity of the wider region, including within nearby Bush Forever sites.	Proposed clearing is not at variance with this principle.	NA
2 (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant habitat for fauna indigenous to Western Australia.	The survey area supports habitat utilised by native fauna species, including birds observed during the site assessment; Australian Ringneck Parrots, Singing Honeyeaters and Red-tailed Black-cockatoos, the latter being a Threatened species of Commonwealth environmental significance. The site does not support a known night-roosting habitat for Black-cockatoos, nor are any breeding trees present within the area proposed to be cleared. The fauna habitat value of the site is significant, as it represents foraging habitat for Black-cockatoos. Additionally, two Marri trees proposed to be cleared are considered habitat trees (potential future nesting trees) due to recording DBHs greater than 50 cm (75 and 69 cm). However, two habitat (potential future nesting trees) will be retained, both with large DBH measurements (81cm and 70 cm). However, the proposed impacts to significant habitat are not also considered to be significant impacts, due to the small area of clearing proposed (0.286 ha, including all trees and their driplines). Additionally, the habitat of the survey area is not unique in the local context, as there are significant areas of trees providing foraging habitat for Black-cockatoos in the immediate vicinity of the project area.	Clearing of Marri trees would be at variance with this principle.	Avoid clearing of two habitat trees with DBH of 81 cm and 70 cm. Avoid clearing as many trees as possible, including a footprint adjustment which retains 21 Marri trees, including those listed above.

Principle	Assessment	Outcome	Impact Mitigation Commitment
3 (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of rare flora	No Threatened Flora were recorded during the site assessment, nor are any expected to occur, given the highly degraded nature of the site.	Proposed clearing is not at variance with this principle.	NA
4 (d) 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.	The native vegetation within the survey area does not comprise of the whole or part of, nor is it necessary for the maintenance of a Threatened Ecological Community (TEC).	Proposed clearing is not at variance with this principle.	NA
5 (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	The proposal does not require clearing of any remnant vegetation considered to be significant. The EPA's objective is to protect at least 30% of the original extent of each vegetation complex in unconstrained areas and 10% in constrained areas (i.e. urban zoned regions). The proposal will require clearing within the Forrestfield Complex, of which 10.26% of the pre-European vegetation extent remains and is therefore not considered to be under-represented and meets EPA's objective for an urban area.	Proposed clearing is not at variance with this principle.	NA

Principle	Assessment	Outcome	Impact Mitigation Commitment
6 (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	A perennial stream flows (Yule Brook) through a section of the property to the south-east of the proposed clearing, which is approximately 60 m from the closest section of the proposed footprint. The vegetation within the proposed clearing footprint is not riparian and not growing in association with the stream, nor any other wetland. Proposed clearing would not be expected to impact on the stream in any way.	Proposed clearing is not at variance with this principle.	NA
7 (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	Any clearing of native vegetation will result in further degradation of the natural environment. However, there are significant areas of native vegetation remaining in locations to the south-east and north-west of the proposed clearing area, including within Bush Forever Site 50 – <i>Welshpool Road Bushland in Wattle Grove</i> and Bush Forever Site 320 – <i>Hartfield Park Bushland in Forrestfield</i> (173 m south-east and 264 m north-west from the study area, respectively) and other sizeable areas of native vegetation in relatively close proximity. The clearing proposed for the project is expected to be minimal in the local context, especially given the degraded nature of the site in its current form. Areas of quality vegetation will be retained in nearby reserves and other remnants, and it is expected unlikely that any proposed clearing would be likely to result in appreciable land degradation in the local region.	Proposed clearing is not at variance with this principle.	NA
8 (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	The nearest conservation areas to the study area are Bush Forever Site 50 – <i>Welshpool Road Bushland in Wattle Grove</i> and Bush Forever Site 320 – <i>Hartfield Park Bushland in Forrestfield</i> (173 m south-east and 264 m north-west from the study area, respectively). Any proposed clearing will not impact on any of these conservation areas, due to the fact that they are a significant distance from the proposed clearing footprints.	Proposed clearing is not at variance with this principle.	NA

Principle	Assessment	Outcome	Impact Mitigation Commitment
9 (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.	Data relating to groundwater (depth to) in the study area has not been made available and an analysis of surface water and groundwater has not been carried out as part of the biological assessment. However, generally, clearing of riparian vegetation that interacts with groundwater may have impacts on groundwater levels and potentially quality. However, none of the vegetation proposed to be cleared is growing in association with surface water features. The study area does encompass the perennial stream (Yule Brook) which flows through a section of the site, approximately 60 m from the closest edge of the proposed clearing footprint. Due to the small area of clearing, consisting of scattered Marri trees over no understorey, it is considered highly unlikely that there would be any deterioration in the quality of surface or underground water as a result of the clearing.	Proposed clearing is considered unlikely to be at variance with this principle.	NA
10 (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate the incidence or intensity of flooding.	The amount of clearing proposed for the project is be minimal in a regional context. Additionally, alterations in surface water run-off and flows as a result of small amounts of clearing is expected to be negligible due to the existing free draining sands of much of the study area, and existing conditions which do not include an understory layer or think layer of little which could impede surface water run-off. Furthermore, the building and carpark would be constructed complete with suitable drainage and storm water retention features. Therefore, it is not expected that the proposed clearing would exacerbate the incidence or intensity of flooding.	Proposed clearing is considered unlikely to be at variance with this principle.	Inclusion of suitable drainage and storm water retention features in the design and construction of the building and carpark.

Closing

Should you require further information or clarification regarding the information provided in this report, please do not hesitate to contact the undersigned.

Best regards,

Kellie Bauer-Simpson
Director & Principal Ecologist/Environmental Manager
Focused Vision Consulting Pty Ltd
0408 766 346
kellie@focusedvision.com.au

MEMORANDUM

Date	20 December 2017	Title	Wattle Grove Clearing Permit Application Report Addendum: Revised Building Footprint Outcomes Response to Public Submissions
Ref.	PHA17001/04	Distribution	City of Kalamunda
Author	Kellie Bauer-Simpson Principal Ecologist/ Environmental Manager	Reviewer	Gabriela Martinez Senior Environmental Scientist/Botanist

Background

This Addendum is to be read in conjunction with a memo report dated 9 August 2017, which was in support of a Native Vegetation Clearing Permit (NVCP) application.

The project site is an area of Lot 28 Lewis Road, Wattle Grove, proposed for the construction and operation of a building that will serve the purposes of a place of worship, a sanctuary and a community centre.

This report provides information relating to the quantum of native Marri trees that will be retained from an adjusted building footprint, achieved via a small shift to the north-east and impingement on the carpark area.

This report also provides responses to relevant submissions received from the public, in response to the advertised Development Application.

Improved Tree Retention

A shift in the previously drafted building footprint on 1.5 m to the north-east and 6.5 m to the north-west (impinging into the areas designated for a carpark), would result in the retention of a further:

- 1 very large tree
- 1 large tree
- 7 small trees.

This revised footprint is shown in blue in **Figure 1**, with the previous footprint in yellow.

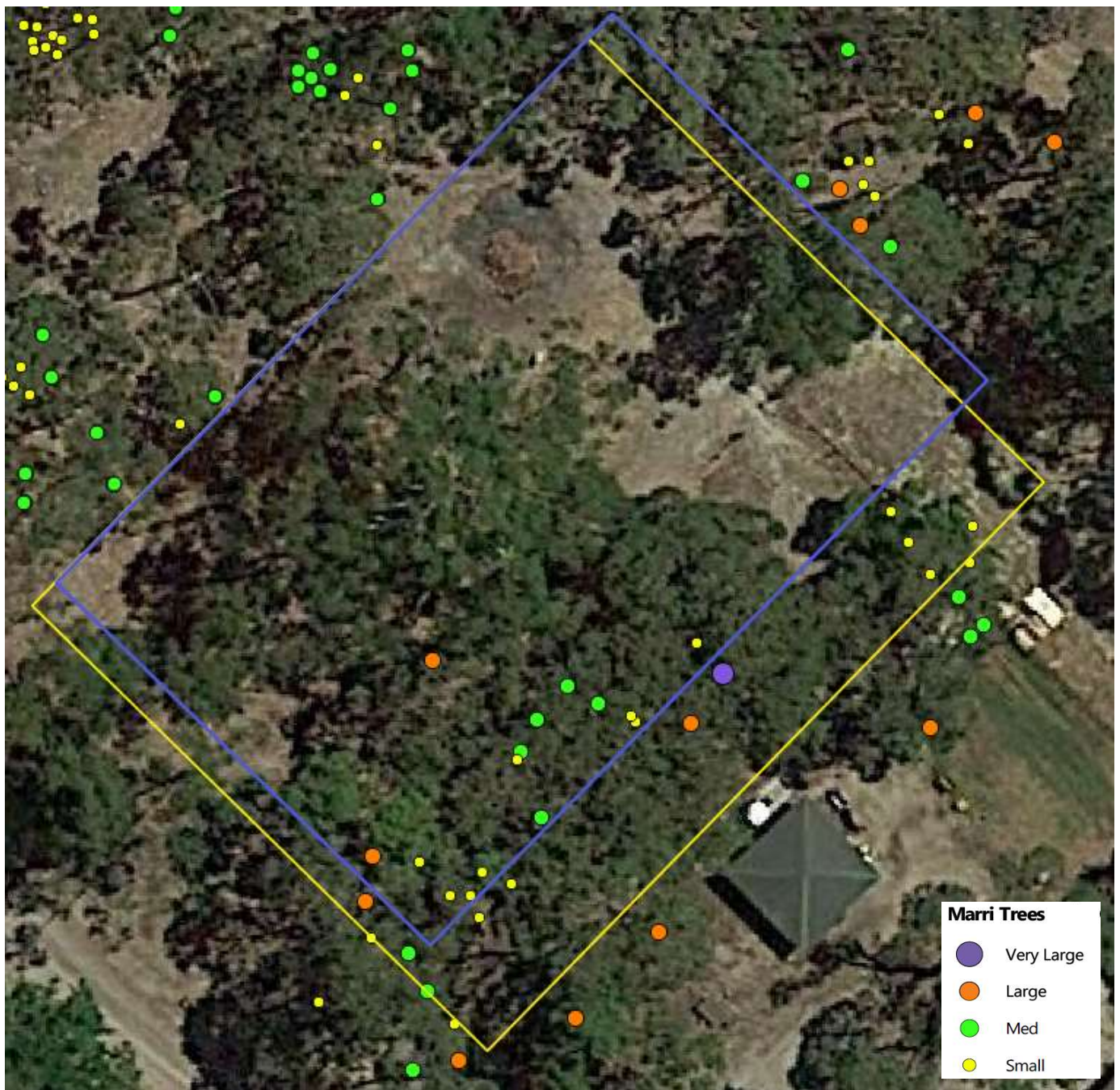


Figure 1 Revised Building Footprint showing Native Marri Tree Locations

The significant outcome of this revision is the retention of the very large tree, which is classified as a Black-cockatoo habitat tree, with a recorded diameter at breast height (DBH) of 75 cm.

The remaining trees within the revised footprint now includes:

- 2 large trees
- 5 medium trees
- 8 small trees.

All trees are native Marri (*Corymbia calophylla*), and most are relatively small and immature, although all healthy. All trees have a DBH well below the 50 cm threshold that renders them as habitat trees for Black-cockatoos (potential future breeding trees). None of the trees remaining within the building footprint are Black-cockatoo habitat trees or considered to be of any conservation significance.

The trees discussed above within the building footprint to no address trees proposed to be cleared within the carpark footprint, or in the buffers surrounding the development for the purposes of bushfire risk management. Such trees are addressed in the original memo dated 9 August 2017 (carpark footprint) and various reports prepared as part of the bushfire assessment and management planning.

Responses to Submissions

Nature of Submission	Response
Environmental Concerns - I object to the removal of trees and vegetation in, what was, our rural community. - Detrimental Impacts on our Flora and Fauna. - I object to the clearing of trees for this development (DA17/0367) since it is natural foraging habitat for the critically endangered Red-tailed black cockatoo. They continue to suffer habitat loss due to developments being approved such as this. - BIG NO to tree removal negative impact on green canopy, carbon foot print & not in keeping with "<i>home in the forest.</i>" - It will have detrimental impacts on our Flora and Fauna. 117 trees to be removed trees that support and shelter an endangered black red tail cocktail. - We have provided watering troughs for endangered birds to water from. - Wattle Grove is home to the endangered white and red tailed black cockatoos, due to loss and destruction of native habitat in the Perth metropolitan area. - There is also enough pollution and sediment flow down Yule Brook. - Clearing of natural bushland and trees - wildlife habitat destroyed. - I'm concerned the expansive removal of vegetation will see native animals perish or leave. - The removal of 77 Marri trees to build a car park and a new place of worship is offensive. - I object to the removal of the trees along this road and believe it will severely reduce the appeal of the area as being 'the hills' and close to nature. - More removal of Tree Flora, Vegetation & Fauna. How about some genuine consideration be given by the Shire of Kalamunda and its history of rapid deforestation resulting in loss of habitat for birds and wildlife & shade. - I am worried about the significant tree and vegetation loss associated with this proposal.	Refer to the memo report (FVC) dated 9 August 2017, which was in support of a NVCP application. This report assesses the flora, vegetation, fauna and habitat value of the proposed clearing area for the building and carpark. The conclusions are that here are no significant impacts that would be in contravention of the granting of a NVCP. The State Department of Environmental and Water Regulation (DEWR) determined that due to a lack of conservation significant biological values, the proposed clearing would not be of sufficiently significant impact to even warrant the need for a NVCP. The application was therefore withdrawn. The Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) Referral Guideline for Impacts to Black-cockatoos (2012) was followed to determine if the proposed clearing triggers any need for referral, with a result of 'no trigger'. Therefore, no Commonwealth referral or environmental approval was required. Further details can be found in the memo report (FVC) dated 9 August 2017.

Closing

Should you require further information or clarification regarding the information provided in this report, please do not hesitate to contact the undersigned.

Best regards,

Kellie Bauer-Simpson
Director & Principal Ecologist/Environmental Manager
Focused Vision Consulting Pty Ltd
0408 766 346
kellie@focusedvision.com.au