

Department of Education  
Wellard Village Primary School  
Vegetation and Fauna Management Plan

14 April 2021

59050-132450 (Rev 3)

JBS&G Australia Pty Ltd T/A Strategen-JBS&G

### Declaration of accuracy

I declare that to the best of my knowledge, all the information contained in, or accompanying this document is complete, current and correct. I am duly authorised to sign this declaration on behalf of the proponent/approval holder. I am aware that:

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## 1. Introduction

### 1.1 Project description

The Western Australian Department of Education (the Proponent) are proposing to develop part of Lot 9074 Lambeth Circle, Wellard (the site; Figure 1.1) as a primary school. The site is located within the City of Kwinana approximately 35 km south of Perth, and covers a total area of approximately 5 ha.

The proposal will result in potential impacts to Matters of National Environmental Significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), including:

- Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*)- Endangered
- Baudin's Black Cockatoo (*Calyptorhynchus baudinii*) - Endangered
- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*)- Vulnerable
- Tuart Woodlands and Forests of the Swan Coastal Plain Threatened Ecological Community (Tuart Woodlands TEC) – Critically Endangered.

A referral (EPBC 2020/8732) under the EPBC Act was submitted to the Department of Agriculture, Water and the Environment (DAWE) in July 2020. On 27 August 2020, the proposed action was determined to be a controlled action, to be assessed on preliminary documentation.

### 1.2 Objectives

This Vegetation and Fauna Management Plan (VFMP) has been prepared in support of the development's assessment under the EPBC Act, in accordance with the then Department of the Environment and Energy's (now DAWEs) *Environmental Management Plan Guidelines 2014*. Management actions contained within the VFMP have been designed according to the SMART principal, in that all actions are:

- Specific
- Measurable
- Attainable
- Relevant
- Time bound.

This VFMP incorporates the following environmental elements during the clearing and construction phases of the development, to ensure potential impacts to Matters of National Environmental Significance (MNES) are appropriately mitigated and managed:

- Measures to avoid and mitigate impacts to conservation significant vegetation and fauna, including:
  - Hygiene requirements to prevent the introduction or spread of *Phytophthora* sp. (dieback) and weeds
  - Clearing and access control measures (such as demarcation of clearing boundaries / trees proposed for retention)
  - Pre-clearing fauna relocations and significant tree inspections
  - Dust Control
  - Waste management

- Monitoring measures
- Contingency actions
- Roles and responsibilities of personnel associated with implementing this VFMP.

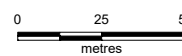




**Legend**

- The site
- Cadastral boundaries
- Roads (MRWA)

Scale 1:2,250 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 59050

Client: Department of Education

Version: A

Date: 14-Oct-2020

Drawn By: cthatcher

Checked By: JH

**Wellard Village Primary School  
Perth, WA**

**THE SITE**

**FIGURE 1.1**





## **2. Overview of existing environment**

### **2.1 Site description**

The site (Figure 1.1) is situated within a portion of Lot 9074 Lambeth Circle, Wellard within the City of Kwinana, approximately 35 km south of the Perth Central Business District (CBD).

The site is currently zoned as both 'Urban' and 'Public purposes – high school' under the Metropolitan Region Scheme (MRS), and as both 'Residential' and 'Public purposes – high school' under the City of Kwinana Local Planning Scheme (LPS) No. 2.

### **2.2 Geology, landform and soils**

Topography across the site ranges from approximately 15 m Australian Height Datum (AHD) in the north to 10 m AHD in the south (Figure 2.1).

Soil landscape mapping undertaken by DPIRD (2019) shows that the site lies within the Spearwood System, which is described as sand dunes and plains characterised by yellow deep sands, pale deep sands and yellow / brown sands.

### **2.3 Hydrology**

#### **2.3.1 Groundwater**

Groundwater monitoring undertaken by Strategen-JBS&G (2019) for the adjacent Wellard Village residential development suggest that recent maximum groundwater levels (September 2019) at the site are between three and four m AHD. Based on elevation contours across the site, this equates to a groundwater level of five to 10 meters below ground surface level (Figure 2.1).

Regional groundwater flow is anticipated to be towards the west, where is eventually discharges into either Lake Coo loongup or the Indian ocean north of Rockingham.

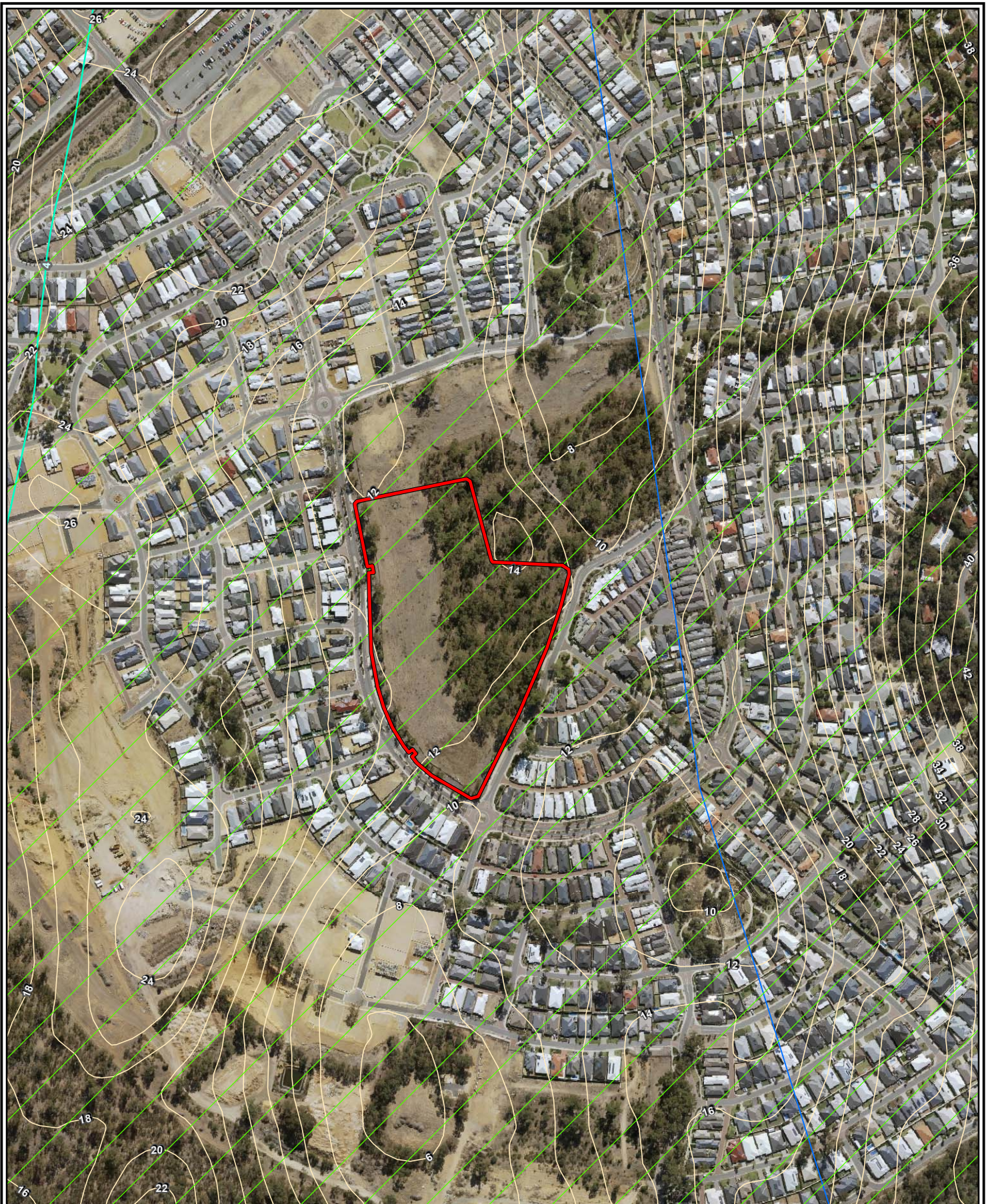
#### **2.3.2 Surface water and wetlands**

There are no surface water expressions within the site or broader Lot 9074. Furthermore, regional geomorphic wetland mapping indicates that there are no wetlands present within the site. The nearest geomorphic wetland is a Conservation Category Wetland (UFI: 6615) located approximately 710 m to the south west of the site.

#### **2.3.3 Public drinking water source area**

The proposed development is not located within a Public Drinking Water Source Area (PDWSA).

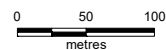




**Legend**

- The site
- Soil landscape system (DPRID)
- Spearwood System - Sand dunes and plains. Yellow deep sands, pale deep sands and yellow/brown shallow sands.
- Groundwater contours (min)
- Groundwater contours (max)
- Topographic contours (mAHD)

Scale 1:5,500 at A4



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**TOPOGRAPHY, SOILS AND GROUNDWATER**

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**FIGURE 2.1**

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## 2.4 Vegetation and flora

To date, three environmental surveys have been undertaken across the site and surrounding area. These surveys and their extent are presented in Table 2.1.

**Table 2.1: Environmental surveys conducted to date**

Survey title	Survey area
PGV Environmental. (2012). The Village at Wellard Stages 32 to 40: Flora and vegetation survey. Prepared for Peet Southern Joint Venture	96 ha across stages 32-40 of the Village at Wellard residential development.
Terrestrial Ecosystems. (2013). Level 1 Fauna Risk Assessment for the Wellard Village Site. Prepared for PGV Environmental	96 ha across stages 32-40 of the Village at Wellard residential development.
Strategen-JBS&G. (2020a). Wellard School Site: Flora, vegetation and black cockatoo habitat assessment. Prepared for the Department of Education.	Lot 9074
Strategen-JBS&G. (2020b). Lot 9074 Lambeth Circle: Black cockatoo hollow suitability assessment. Prepared for the Department of Education.	Lot 9074

The results of these surveys are summarised below in sections 2.4.1 to 2.5. Copies of Strategen-JBS&G (2020a) and Strategen-JBS&G (2020b) survey reports are provided in Appendix A and Appendix B, respectively.

### 2.4.1 Vegetation

The Strategen-JBS&G (2020a) survey determined that approximately 5.9 ha of remnant vegetation is present within the broader Lot 9074. Three vegetation types were identified within this area during the survey; EgEmBaBg, EmBaAp and PC (Parkland Cleared). This is broadly consistent with the vegetation recorded and mapped by PGV (2012), with the PC vegetation type being added as a result of the Strategen-JBS&G (2020a) survey. Vegetation condition (Degraded to Completely Degraded) was also consistent with the 2012 survey, with only minor changes to boundaries based on the availability of higher resolution aerial imagery. Vegetation Type and Vegetation Condition for the broader Lot 9074 are displayed within Figure 2.2 and Figure 2.3 respectively, with vegetation data presented in Table 2.2.

**Table 2.2: Vegetation types and condition within Lot 9074**

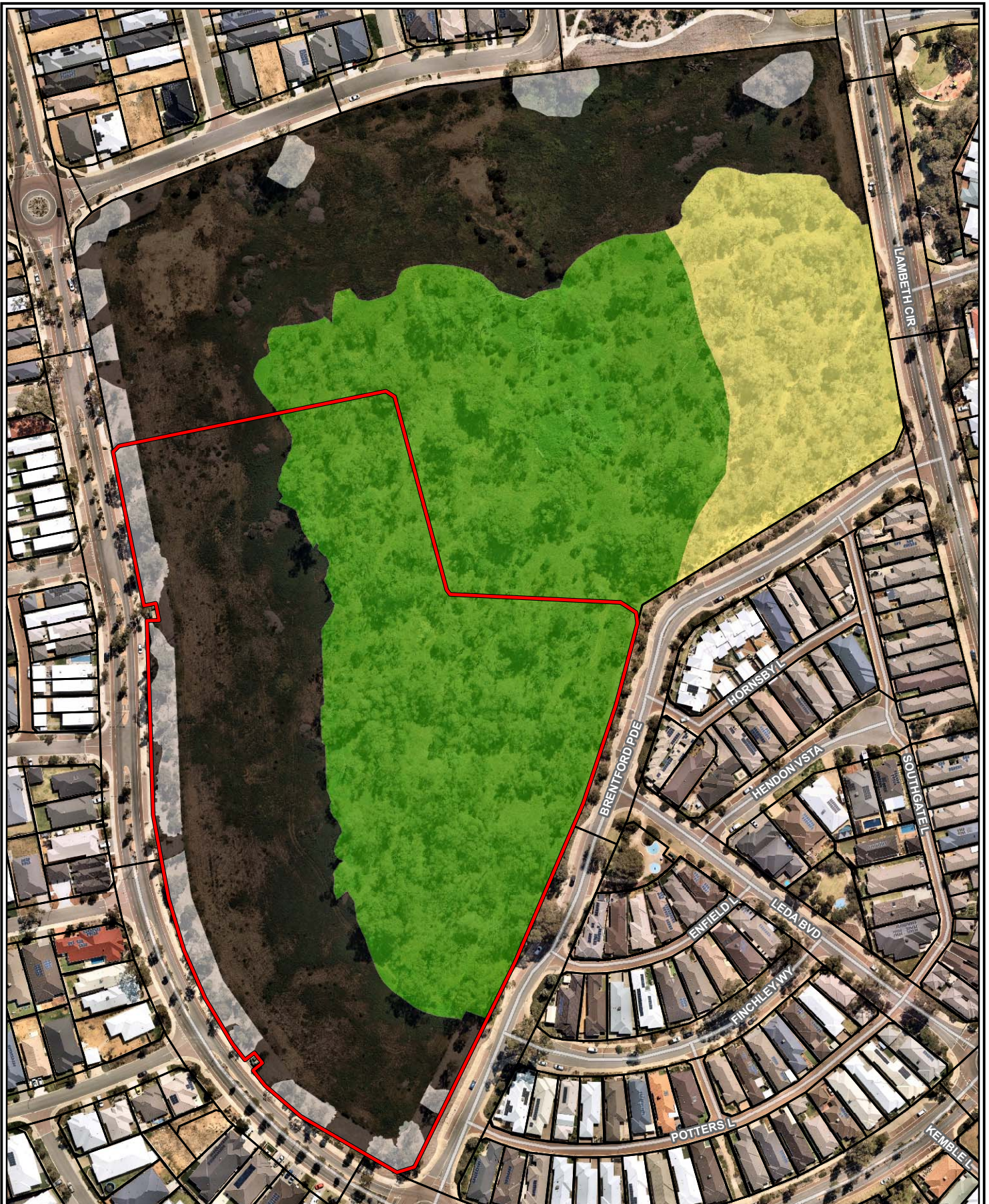
Vegetation type	Description	Vegetation Condition (ha)			Total area (ha)
		Completely Degraded	Degraded	No vegetation present	
EgEmBaBg	Woodland of <i>Eucalyptus gomphocephala</i> , <i>Eucalyptus marginata</i> , <i>Banksia attenuata</i> , and <i>Banksia grandis</i> over weeds.	0.26	4.38	-	4.64
EmBaAp	Woodland of <i>Eucalyptus marginata</i> and <i>Banksia attenuata</i> over weeds	0.15	1.06	-	1.21
PC	Parkland Cleared	0.58	-	-	0.58
Cleared		-	-	4.89	4.89
<b>Total</b>		<b>1.00</b>	<b>5.44</b>	<b>4.89</b>	<b>11.33</b>

Table 2.3 below presents the extent of vegetation within the site, with condition being assessed as 'Degraded' to 'Completely Degraded'.

**Table 2.3: Vegetation types within the site**

Vegetation type	Description	Area (ha)
EgEmBaBg	Woodland of <i>Eucalyptus gomphocephala</i> , <i>Eucalyptus marginata</i> , <i>Banksia attenuata</i> , and <i>Banksia grandis</i> over weeds.	2.43
PC	Parkland Cleared	0.34
Cleared		2.22
<b>Total</b>		<b>4.99</b>

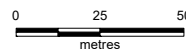




**Legend**

- The site
- Cadastral boundaries
- Vegetation type
- EgEmBaBg
- EmBaAp
- Cleared
- Parkland cleared
- Roads (MRWA)

Scale 1:2,250 at A4



Coord. Sys. GDA 1994 MGA Zone 50



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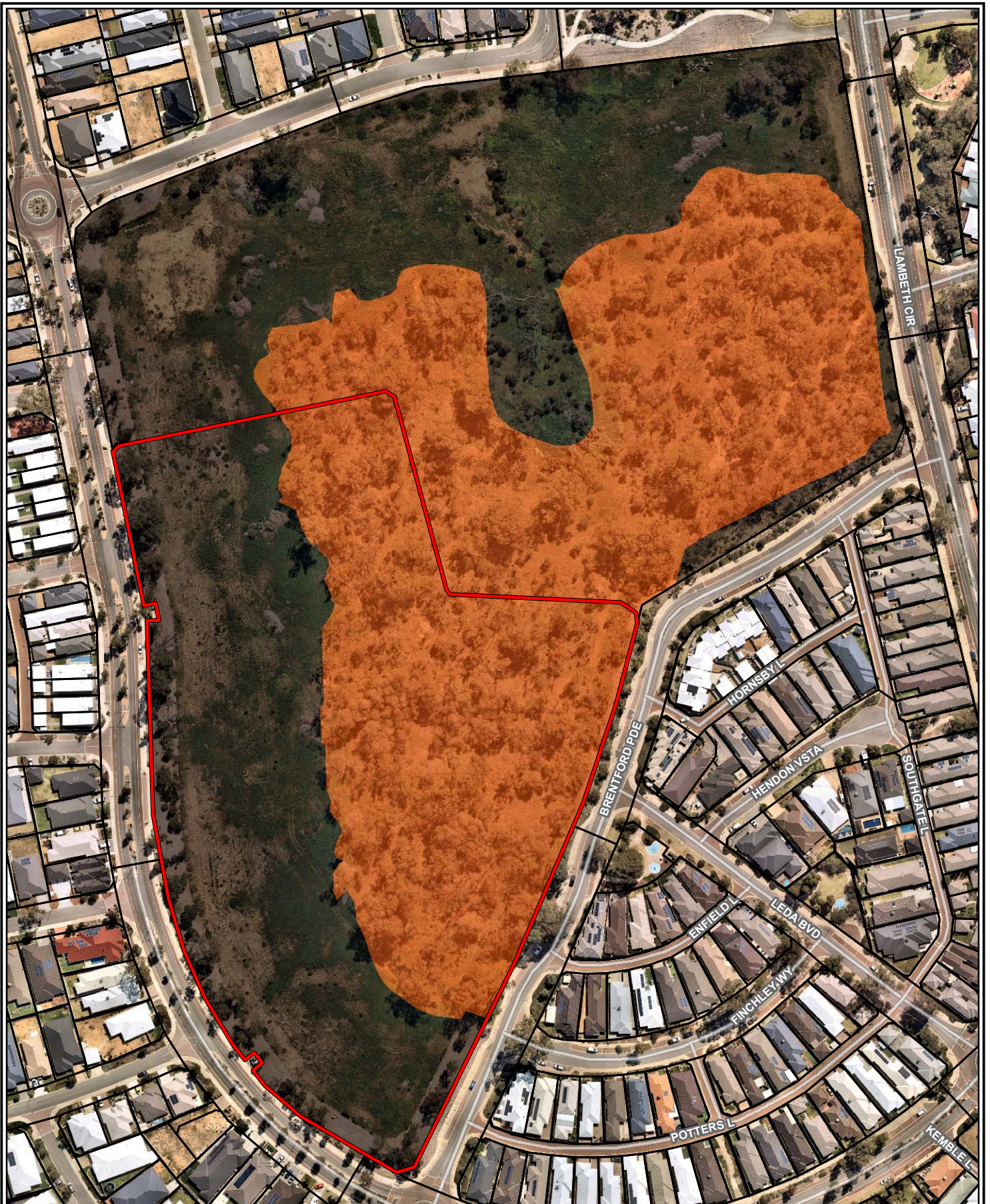
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Perth, WA**

**VEGETATION TYPES**

**FIGURE 2.2**



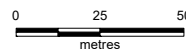




**Legend**

- The site
- Cadastral boundaries
- Vegetation condition
- Degraded
- Completely degraded
- Roads (MRWA)

Scale 1:2,250 at A4



Coord. Sys. GDA 1994 MGA Zone 50



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**VEGETATION CONDITION**

**FIGURE 2.3**





### 2.4.2 Threatened Ecological Communities

Based on the results of the Strategen-JBS&G (2020) survey (Appendix A), two Threatened Ecological Communities (TEC's) (and two PECs) are considered to have the potential to occur within the site and broader Lot 9074, based on the vegetation condition and structure:

- Banksia Woodlands of the Swan Coastal Plain (listed as Endangered under the EPBC Act and listed as a Priority 3 PEC by the DBCA)
- Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community (listed as Critically Endangered under the EPBC Act and listed as a Priority 3 PEC listed by the DBCA).

#### Banksia Woodlands of the Swan Coastal Plain TEC

A desktop assessment undertaken to support the developments referral under the EPBC Act identified this TEC as a “community likely to occur within the area”. As part of the Strategen-JBS&G (2020) survey, an analysis of the relevé data, site notes and historical reports was undertaken to determine the presence and extent of the Banksia Woodlands of the Swan Coastal Plain TEC within the broader lot. Vegetation within both vegetation types identified (EgEmBaBg and EmBaAp) within Lot 9074 did not meet the key diagnostic criteria for the Banksia Woodlands of the Swan Coastal Plain ecological community, specifically the condition criteria. Average vegetation condition within the patch was Degraded. The vegetation retains the upper canopy of Banksia species, characteristic of the community, but retained little understorey. The patch is fully confined to Lot 9074, and is not linked to other vegetation remnants. As such, this TEC is not considered to be present within Lot 9074.

#### Tuart Woodlands and Forests of the Swan Coastal Plain TEC

A desktop assessment undertaken to support the developments referral under the EPBC Act identified this TEC as a “community likely to occur within the area”. As part of the Strategen-JBS&G (2020) survey, an analysis of the relevé data, site notes and historical reports was undertaken to determine the presence and extent of the Tuart Woodlands and Forests of the Swan Coastal Plain TEC. The determination of patches was made using the key diagnostic criteria as per the Approved Conservation Advice (incorporating listing advice) for the Tuart Woodlands and Forests of the Swan Coastal Plain ecological community (TSSC 2019). Vegetation within type EgEmBaBg was confirmed to meet the key diagnostic criteria for this TEC, with a total patch size of 5.53 ha within Lot 9074, of which 3.039 ha may be impacted by the school development works. An assessment of the Tuart Woodlands TEC patch was also made against the condition thresholds presented within the Approved Conservation Advice (TSSC 2019). Based on the native species richness recorded within the patch (6 native understorey species per 0.01 ha), this TEC is considered to be of Moderate condition, despite the entirely Degraded condition of the vegetation according to the Keighery (1994) scale.

The extent of Tuart Woodlands TEC mapped within Lot 9074 is presented within Figure 2.4.

### 2.4.3 Flora

A total of 24 vascular flora taxa were recorded within the boundary of Lot 9074. Of these, four are considered introduced. Dominant species within Lot 9074 include:

- Tuart (*Eucalyptus gomphocephala*)
- Jarrah (*Eucalyptus marginata*)
- Marri (*Corymbia calophylla*)
- Candlestick Banksia (*Banksia attenuata*)

- Bull Banksia (*Banksia grandis*)
- Firewood Banksia (*Banksia menziesii*).

None of the species identified within Lot 9074 are listed as Threatened species under either the *Biodiversity Conservation Act 2016* or *Environmental Protection and Biodiversity Conservation Act 1999* or are listed as a Priority flora species listed by the Western Australian Department of Biodiversity, Conservation and Attractions (DBCA).

## 2.5 Fauna and habitat

A desktop assessment utilising the DAWE's *Protected Matters Search Tool* with a 5km search buffer was undertaken in support of the development's referral under the EPBC Act. Excluding migratory wetland bird species and other aquatic fauna (on the basis that there are no geomorphic wetlands or open water bodies within the site), the desktop assessment identified six Threatened fauna that could potentially occur within 5km of the site. Based on habitat requirements, three of these species were considered either possible or likely to utilise the site. These species are:

- Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*; CBC) - Endangered
- Baudin's Black Cockatoo (*Calyptorhynchus baudinii*; BBC) – Endangered
- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*; FRTBC) - Vulnerable

The black cockatoo habitat assessment (Strategen-JBS&G 2020a) identified approximately 3.085 ha of suitable foraging habitat for black cockatoos within the proposed action area, of moderate quality for all three species listed above.

Strategen-JBS&G (2020a) recorded potential black cockatoo breeding habitat (significant trees) within the proposed action area, being either Tuart, Jarrah or Marri trees with a diameter at breast height (DBH)  $\geq$  500 mm (significant trees). The assessment identified a total of 44 significant trees within the potential impact area.

An assessment of observed hollows was undertaken by Strategen-JBS&G on 7 August 2020, to determine the suitability for black cockatoo breeding. Of the 13 hollows included in the assessment, none were confirmed to be suitable for use by black cockatoos based on hollow morphometrics or nest competitors. However, two hollows (both within a single tree, refer Figure 2.4) were situated beyond the 15 m reach of the pole mounted camera, and were therefore unable to be readily assessed. Given no evidence of nest competitor activity was observed at the entrance of either hollow, and that the hollow entry diameter when viewed from ground level for each hollow was approximately 10 cm, it has been assumed that both of these hollows are suitable for use by black cockatoos.

It is noted that no black cockatoos were flushed from any trees during the tap and flush phase of the survey, however two FRTBC's were seen flying over the site during the survey.

A search of DBCA's *NatureMap* database was undertaken with a 5km search buffer to identify Threatened and Priority species with the potential to occur within the site. Excluding migratory wetland bird species, other aquatic fauna (on the basis that there are no geomorphic wetlands or open water bodies within the site), and CBC and FRTBC (which were already identified by the PMST), the search identified four Priority 3 (P3) and six Priority 4 (P4) fauna species as potentially occurring within 5km of the site. Management for these species has not been included in this plan, as these species are not protected under the EPBC Act.

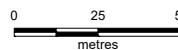




**Legend**

- The site
- Potential indirect impact area
- MNES potentially retained (0.260ha)
- MNES - impacted (3.027ha)
- Tuart woodland TEC (3.039ha)
- Black Cockatoo foraging habitat (3.085ha)
- Significant Black Cockatoo habitat trees
  - *Eucalyptus marginata* (16)
  - *Corymbia calophylla* (6)
  - *Eucalyptus gomphocephala* (22)
  - ✕ Hollow present - suitable

Scale 1:2,250 at A4



Coord. Sys. GDA 1994 MGA Zone 50



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Drawn By: cthatcher

Checked By: JH

**Wellard Village Primary School  
Perth, WA**

**TUART WOODLANDS TEC AND  
BLACK COCKATOO HABITAT**

**FIGURE 2.4**





### 3. Potential impacts to Matters of National Environmental Significance

#### 3.1 Risk assessment

A qualitative risk assessment was conducted in accordance with the DAWE *Environmental Management Plan Guidelines* to assess the risks of the development. Each environmental risk identified has been provided a likelihood and consequence rating using the criteria in Table 3.1 and Table 3.2. These ratings are then combined using Table 3.3 to generate a risk rating of low, medium, high or severe.

**Table 3.1: Likelihood**

Qualitative Measures for likelihood (How likely is it that this event/issue after control strategies have been put in place)	
Highly likely	Is expected to occur in most circumstances.
Likely	Will probably occur during the life of the project.
Possible	Might occur during the life of the project.
Unlikely	Could occur but considered unlikely or doubtful.
Rare	May occur in exceptional circumstances.

**Table 3.2: Consequence**

Qualitative Measures for consequence (what will be the consequence/result if this issue does occur rating)	
Minor	Minor incident of environmental damage that can be reversed.
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts.
High	Substantial instances of environmental damage that could be reversed with intensive efforts.
Major	Major loss of environmental amenity and real danger of continuing.
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage.

**Table 3.3: Risk rating**

	Consequence				
	Minor	Moderate	High	Major	Critical
Highly likely	Medium	High	High	Severe	Severe
Likely	Low	Medium	High	High	Severe
Possible	Low	Medium	Medium	High	Severe
Unlikely	Low	Low	Medium	High	High
Rare	Low	Low	Low	Medium	High

Activities associated with the development have the potential to impact on MNES. These activities include:

- Native vegetation clearance
- Excavation activities that disrupt surface water flows and contribute to erosion
- Ground disturbance and topsoil movements
- Vehicle movements
- Noise and dust emissions
- Generation and storage of waste
- Uncontrolled fire.

An assessment of the potential impacts and risks to the MNES resulting from the development has been undertaken (Table 3.4). Results of the risk assessment have been used to develop management measures that form part of this VFMP.

**Table 3.4: Environmental Risk Assessment**

Value	Potential impacts	Inherent Risk Rating			Management measures	Residual Risk Rating		
		Likelihood	Consequence	Risk		Likelihood	Consequence	Risk
Delineation and Access - Vegetation	Poor management and/or supervision during construction activities may lead to the loss and/or degradation of remnant and native vegetation outside of clearing boundaries	Possible	Moderate	Medium	See Section 4.1.	Unlikely	Moderate	Low
Weeds and <i>Phytophthora</i> dieback	Introduction and/or spread of weed species and pathogens leading to reduced flora species and system diversity	Likely	Moderate	Medium	See Section 4.2.	Possible	Minor	Low
Fauna and habitat	Poor management and / or supervision during construction activities may lead to the loss of conservation significant fauna and fauna habitat	Possible	Moderate	Medium	See Sections 4.3 and 4.3.1.	Unlikely	Moderate	Low
Dust	Dust generated as part of construction activities has the potential to impact on local flora and fauna species	Highly likely	Minor	Medium	See Section 4.4.	Likely	Minor	Low
Waste	Uncontrolled release of waste may result in pollution to groundwater, harm to native fauna, and could release contaminants into areas accessed by the public	Unlikely	Moderate	Low	See Section 4.5.	Unlikely	Moderate	Low
Fire	Construction activities have the potential to cause accidental bushfires which may lead to damage or death to surrounding flora and fauna communities	Possible	High	Medium	See Section 4.6.	Unlikely	High	Medium

## 4. Management measures

### 4.1 Delineation and access

Delineation of site boundaries and vegetation to be retained prior to clearing is important to prevent unauthorised clearing and unauthorised pedestrian and vehicle access, which may increase the risk of spread of weeds and pathogens such as dieback and dumping of waste.

As the site contains a number of trees which have been identified for retention, appropriate measures must be taken to ensure they are protected during clearing and construction works. Protection measures will be implemented in accordance with AS4970-2009 *Protection of trees on Development Sites*.

Delineation and access management actions, including those specific to tree retention, are summarised below in Table 4.1.

**Table 4.1: Delineation and access measures**

Reference No.	Management Action	Timing	Responsibility
<b>General delineation and access</b>			
VFMP 1.	All personnel are required to undertake an induction, ensuring that site contractors are made aware of clearing boundaries and delineation measures.	Prior to commencement of clearing	Construction Contractor / Project Manager / Site Supervisor
VFMP 2.	Clearly demarcate the clearing boundary with star pickets and/or flagging at minimum	Prior to commencement of clearing	Construction Contractor
VFMP 3.	Clearly demarcate each staging boundary within the site with flagging.	Prior to commencement of clearing	Construction Contractor
VFMP 4.	Install appropriate fencing around the periphery of vegetation to be retained.	As clearing is undertaken adjacent to vegetation to be retained	Construction Contractor
VFMP 5.	Install signage on periphery fencing detailing access restrictions and presence of vegetation to be retained	Immediately following installation of periphery fencing	Construction Contractor
VFMP 6.	Provide digital boundary of areas approved to be cleared and retained to the contractor to ensure no unapproved clearing is undertaken.	Prior to commencement of clearing	Project Manager
VFMP 7.	Temporary drainage to be constructed away from retained or adjacent vegetation such that altered surface water flows do not impact vegetation.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 8.	No machinery, equipment or laydown areas to be located within areas of native vegetation to be retained.	Ongoing, until completion of construction activities	Construction Contractor
<b>Demarcation of trees to be retained</b>			
VFMP 9.	In accordance with Section 4 of AS 4970-2009, establish/delineate Tree Protection Zones (TPZs), for each tree identified for retention within the site and install protective measures (if applicable) such as: <ul style="list-style-type: none"> <li>• Protection fencing in accordance with AS4970-2009</li> <li>• Signs</li> <li>• Trunk and branch protection</li> <li>• Ground protection.</li> </ul>	Prior to commencement of clearing	Construction Contractor / Landscape Contractor
VFMP 10.	Exclude the following activities within the TPZs: <ul style="list-style-type: none"> <li>• Machine excavation including trenching</li> <li>• Cultivation</li> <li>• Storage of equipment</li> <li>• Parking of vehicles and plant machinery</li> <li>• Dumping of waste</li> </ul>	During construction	Construction Contractor

Reference No.	Management Action	Timing	Responsibility
	<ul style="list-style-type: none"> <li>Placement filling</li> <li>Physical damage of tree.</li> </ul>		
VFMP 11.	Remove tree protection measures (if installed).	Post construction works at landscaping stage	Construction Contractor / Landscape Contractor

#### 4.2 Weed and pathogen management

Construction activities may introduce soil pathogens to the site and decrease the condition of retained vegetation through:

- Introducing soil pathogens to the site and adjacent vegetation
- Introducing and / or spreading weeds within the site and adjacent vegetation

Weed and pathogen management actions are summarised below in Table 4.2.

**Table 4.2: Weed and pathogen management measures**

Reference No.	Management Action	Timing	Responsibility
VFMP 12.	Include information pertaining to weed and dieback management in the induction for onsite contractors and their staff, including: <ul style="list-style-type: none"> <li>The requirement for vehicles and machinery to be “clean on entry”</li> <li>Access restriction relating to retained vegetation.</li> </ul>	Prior to personnel and contractors commencing work on site	Project Manager / Construction Contractor
VFMP 13.	Inspect and ensure that all vehicles and machinery are free of soil and plant material.	Prior to arrival on-site	Construction Contractor
VFMP 14.	Maintain accurate records of all vehicles / machinery being inspected and “clean on entry” (Appendix C).	Upon arrival on site	Construction Contractor
VFMP 15.	Require vehicles and machinery operators to clean vehicles which are determined to not meet hygiene standards before entry to site.	Before vehicle / machinery entry onto site	Construction Contractor
VFMP 16.	Restrict all vehicle access to within the boundaries of the site and exclude access from areas of retained vegetation within Lot 9074.	During construction	Project Manager / Construction Contractor
VFMP 17.	Locate topsoil, mulch and fill stockpiles more than 50 m from retained vegetation within Lot 9074.	During construction	Project Manager / Construction Contractor
VFMP 18.	Any mulch or fill material brought into the site must not be from a source known to contain weeds or pathogens.	During construction	Project Manager / Construction Contractor

#### 4.3 General fauna management

Clearing and construction will be undertaken in a manner that reduces impacts to fauna, and clearing of the site is proposed to be undertaken as one event. All personnel will be required to undertake an induction to ensure that the fauna values within and adjacent to the site, and management actions and obligations, are understood.

Fauna management actions are summarised below in Table 4.3.

**Table 4.3: Fauna management actions**

Reference No.	Management Action	Timing	Responsibility
VFMP 19.	The induction will address a range of issues including, but not limited to: <ul style="list-style-type: none"> <li>Relevant details of the VFMP including purpose and scope</li> <li>Conditions of relevant environmental licenses, permits and approvals</li> <li>Fauna of conservation significance found within the site</li> </ul>	Prior to commencing work on site	Construction Contractor / Project Manager / Site Supervisor



Reference No.	Management Action	Timing	Responsibility
	<ul style="list-style-type: none"> <li>Mitigation measures for the control of impacts to the above fauna, including:               <ul style="list-style-type: none"> <li>Speed limits</li> <li>Retained habitat</li> <li>Incident response and reporting requirements.</li> </ul> </li> </ul>		
VFMP 20.	Inspect potential black cockatoo breeding hollows and if vacant, obstruct hollow entrance to prevent black cockatoo nesting.	<p>Prior to clearing works.</p> <p>Potential black cockatoo breeding hollows must not be obstructed until artificial hollows have been installed, as required by the offset strategy (Strategen-JBS&amp;G 2021).</p>	Fauna Contractor
VFMP 21.	All construction vehicles and machinery are not to exceed speeds of 20 km/hr throughout the site, to minimise risks of fauna strike.	Ongoing, until completion of construction activities	Construction Contractor / All personnel
VFMP 22.	Install fauna crossing warning signage.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 23.	In the event that fauna is struck by a vehicle report the incident immediately to the Site Supervisor.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 24.	Any injured fauna shall be left alone and observed until a suitably qualified person can attend to the animal.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 25.	A fauna interaction register is to be maintained to capture observations and interactions with fauna.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 26.	Notify the Department of Agriculture, Water and the Environment (DAWE) of any interaction which results in the injuring or killing of an EPBC listed species occurs	Within seven days of an interaction which results in the injuring or killing of an EPBC listed species occurs	Construction Contractor
VFMP 27.	All domestic waste will be disposed of in designated bins and taken to a licenced landfill or recycling facility.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 28.	Feeding of fauna is not permitted.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 29.	No domestic animals will be permitted to be brought into the site by construction personnel.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 30.	Conduct inspections of pits/trenches for potentially trapped fauna	Daily prior to work commencement	Construction Contractor

#### 4.3.1 Pre-clearing significant tree inspections

In order to mitigate potential impacts to black cockatoos during the breeding season (July to February) (DSEWPac 2012), inspections of significant trees for black cockatoos are proposed to be undertaken no more than seven days prior to clearing. A period of seven days has been chosen to minimise the risk of black cockatoos utilising the trees following the inspection, before clearing commences.

The locations of significant trees for black cockatoos are presented in Figure 2.4. Detailed management actions for the proposed tree inspection program are summarised below in Table 4.4.

**Table 4.4: Pre-clearing tree inspection measures**

Reference No.	Management Action	Timing	Responsibility
VFMP 31.	If clearing is to be undertaken during the breeding season (July to February), 'significant trees' are to be investigated by a suitably	Within 7 days prior to clearing	Fauna Clearance Contractor

	qualified and experienced expert to detect the presence of black cockatoos using hollows.		
VFMP 32.	<p>If a black cockatoo is detected using a hollow in a tree or trees:</p> <ul style="list-style-type: none"> <li>the black cockatoo is not to be disturbed</li> <li>the tree or trees are to be clearly identified with fencing and signage and a 10 m exclusion buffer established around the tree until the black cockatoo/s vacate the tree of their own accord</li> <li>The respective tree/s are not to be cleared</li> <li>Undertake measures to avoid the tree/s being cut down, felled, removed, killed, destroyed, poisoned, ring-bared, uprooted or burned.</li> </ul>	Upon detection of a black cockatoo utilising a significant tree, until the hollow/s are no longer being used by the cockatoo as determined by a suitably qualified and experienced person	Fauna Clearance Contractor

#### 4.4 Dust management

Construction activities have the potential to release high amounts of dust particles into the local environment. Strong winds can increase the local dust levels. Excessive dust levels can have adverse effects on human and faunal health and the adjacent vegetation and create an uncomfortable and potentially unsafe working environment.

The key dust generating activities associated with the development of the site are likely to include:

- Vehicular movement on unsealed roads
- Earthworks and excavations
- Transference of soil to stockpiles
- Wind erosion of stockpiled materials.

Management actions for the prevention of excessive dust are summarised in Table 4.5.

**Table 4.5: Dust management actions**

Reference No.	Management Action	Timing	Responsibility
VFMP 33.	Include daily weather conditions in daily pre-start meetings.	Ongoing, until completion of construction activities	Site Supervisor / Construction Contractor
VFMP 34.	Maintain road surfaces in a good condition and suitable grades.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 35.	Vehicles must only be parked in allocated areas.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 36.	Vehicle speeds on site are not to exceed 20 km/hr to reduce dust emissions.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 37.	All dust generating loads leaving site must be covered.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 38.	Avoid dust generating activities during unfavourable weather conditions (e.g. high wind speed) and unfavourable wind directions, where practicable.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 39.	Cleared areas will be stabilised to prevent wind-blown dust generating on site.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 40.	Implement dust suppression (e.g. water spray / wet down of unsealed tracks and / or stockpiles if high levels of dust are observed or considered likely).	Ongoing, until completion of construction activities	Construction Contractor
VFMP 41.	Dust suppression methods must be used on unsealed roads, access tracks, cleared areas, and locations of high dust and impact risk.	Ongoing, until completion of construction activities	Construction Contractor

Reference No.	Management Action	Timing	Responsibility
VFMP 42.	During the use of water carts ensure that the overspray is adjusted to limit the effects on fringe vegetation and offsite runoff.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 43.	Apply surface treatments (such as hydromulch) to stabilise any bare areas which may be prone to wind erosion.	Ongoing, until completion of construction activities	Construction Contractor

#### 4.5 Waste management

Waste will require management during clearing and construction activities to prevent attracting animals (pets, feral and native), and generating waste that may impact vegetation within the remainder of Lot 9074. Potential waste streams include:

- Domestic waste – putrescible, plastics, glass, aluminium
- Controlled waste – hydrocarbon, packages waste
- Sewage waste.

Waste management actions are summarised below in Table 4.6.

**Table 4.6: Waste management actions**

Reference No.	Management Action	Timing	Responsibility
VFMP 44.	Appropriate waste management measures will be included in each induction to site personnel and contractors.	Prior to site personnel and contractors commencing works onsite	Construction Contractor / Project Manager
VFMP 45.	Waste skips and bins must have lids and kept closed to contain litter.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 46.	Littering is prohibited and all areas must be kept free from wind-blown waste generated through storage or transport.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 47.	Waste must be taken off-site to the nearest landfill regularly to ensure it does not overflow.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 48.	Remove all rubbish that has been dumped or has drifted into stands of retained vegetation.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 49.	All waste must be removed from site following the completion of construction works (for every stage).	Ongoing, until completion of construction activities	Construction Contractor
VFMP 50.	Chemical, hydrocarbon and other hazardous waste material must be appropriately stored onsite, and appropriately transported and disposed off-site.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 51.	All machinery must contain spill kits.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 52.	Portable ablution blocks must be stored at least 50 m from retained vegetation within the remainder of Lot 9074 to avoid potential impacts to retained vegetation.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 53.	Portable ablutions sewerage must be removed off-site by a licensed carrier.	Ongoing, until completion of construction activities	Construction Contractor

#### 4.6 Bushfire management

The activities undertaken during construction may represent a fire risk. Such risks may arise from vehicle movements over dry vegetation, undertaking 'hot work' such as welding, grinding, or other spark-producing operations, storage of hazardous materials (hydrocarbons) and disposal of matches or cigarettes. Fires have the potential to cause irreversible damage to the environment, property and human health or life.

Bushfire management actions are detailed below in Table 4.7.

**Table 4.7: Bushfire management actions**

Reference No.	Management Action	Timing	Responsibility
VFMP 54.	The daily 'fire danger' ratings will be obtained from the Bureau of Meteorology and communicated to personnel during the daily pre-start meeting.	Ongoing, until completion of construction activities	Construction Contractor / Site Supervisor
VFMP 55.	Smoking must only take place in designated smoking areas.	Ongoing, until completion of construction activities	All site personnel
VFMP 56.	Restrict or prohibit use of angle grinders, welders, soldering, gas cutting or any other cutting tools during times of total fire bans.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 57.	Provide and maintain onsite firefighting tank and pump, and first aid equipment.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 58.	All vehicles must be fitted with fire extinguishers.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 59.	Do not store bulk fuel in construction areas.	Ongoing, until completion of construction activities	Construction Contractor
VFMP 60.	Although considered unlikely, plant and vehicles operating over or through uncleared vegetation must be fitted with appropriate exhaust systems positioned or covered so that the vegetation cannot come into contact with the exhaust system.	Ongoing, until completion of construction activities	Construction Contractor



## 5. Monitoring and assessment

The following monitoring actions outlined in Table 5.1 have been developed to enable an assessment of the effectiveness of the management actions and to determine if there is a requirement to initiate corrective actions.

**Table 5.1: Monitoring actions**

Reference No.	Action/s	Timing / frequency	Purpose	Responsibility
<b>Delineation and access</b>				
VFMP M1.	Site inspections will be undertaken to assess the condition of fencing used to delineate areas of retention and barriers used to block unauthorised access	Daily / Opportunistically until completion of construction activities	To ensure that fencing and barriers have not been damaged, and to ensure that unauthorised access can be effectively prohibited	Site Supervisor / Construction Contractor / Project Manager
VFMP M2.	Cross reference approved clearing boundaries against site inspections and/or current aerial photography	Within 1 month of completion of clearing	To confirm that no unauthorised clearing has occurred	Construction Contractor / Project Manager
VFMP M3.	Site inspection to record the status and condition of trees identified for retention	Within 2 weeks of completion of clearing	To confirm that no trees identified for retention have been cleared or damaged as a result of construction activities	Construction Contractor / Project Manager
<b>Weed and pathogen management</b>				
VFMP M4.	Undertake baseline assessment of weed density and species, as well as visual observations of potential dieback, within retained vegetation adjacent to the Proposed Action Area.	Prior to commencement of construction.	To compile baseline information for comparison, post construction.	Project Manager / Environmental Consultant (Botanist / Ecologist)
VFMP M5.	Completed dieback / weed hygiene registers are to be maintained as per Appendix C, including Date of vehicle mobilisation to site.	Ongoing, until completion of construction activities	To confirm that vehicles and machinery are clean and free from a build-up of mud prior to entry to site	Construction Contractor / Project Manager
VFMP M6.	Site walkover by a qualified consultant (Botanist / Ecologist) to assess distribution and abundance of weed species in adjacent/ retained vegetation, or if there is any evidence of decline in tree health which indicates potential presence of pathogens compared to baseline information (as per VFMP M4)	Annually, following commencement of clearing, until completion of construction activities.	<ul style="list-style-type: none"> <li>To assess if there has been an increase in distribution and/or abundance of weeds</li> <li>To determine if there is any evidence of decline in tree health</li> </ul>	Project Manager / Environmental Consultant (Botanist / Ecologist)
<b>Fauna Management</b>				
VFMP M7.	Maintain records of all contractor inductions, for provision to the City of Kwinana / DAWE upon request	For the duration of the VFMP	To confirm that all personnel have undertaken the required induction	Construction Contractor / Project Manager
VFMP M8.	Maintain environmental incident and complaints forms and provide to DAWE upon request (or within seven days of an interaction which results in the injuring	Ongoing, until completion of construction activities	To ensure all incidents are recorded	Construction Contractor / Project Manager

Reference No.	Action/s	Timing / frequency	Purpose	Responsibility
	or killing of an EPBC listed species occurs).			
<b>Dust management</b>				
VFMP M9.	A complaints register is to be maintained throughout the course of the clearing and construction program	During clearing and construction	To determine if implementation of corrective actions is required	Construction Contractor
<b>Waste management</b>				
VFMP M10.	Site inspection of retained vegetation to assess rubbish/waste associated with clearing and construction activities	Opportunistically, and fortnightly following commencement of clearing and construction, until the completion of construction activities	To determine if implementation of corrective actions is required	Construction Contractor

## 6. Corrective actions and incident investigation

### 6.1 Corrective actions

Corrective actions will be initiated if monitoring indicates that management measures have not been successful or effective and/ or trigger criteria are being met (Table 6.1).

**Table 6.1: Corrective actions**

Parameter	Trigger criteria	Action/s	Responsibility
Delineation and access	Unauthorised vegetation disturbance has occurred	<ul style="list-style-type: none"> <li>Immediately investigate the cause of unauthorised clearing</li> <li>Notify and consult with DAWE on appropriate management/follow-up actions</li> <li>Implement corrective actions which may include:               <ul style="list-style-type: none"> <li>Review of management measures practicality or relevance</li> <li>Improve training and education for all personnel</li> <li>Improve and implement increased protective measures as necessary</li> <li>Improve methods for marking clearing lines</li> <li>Install additional temporary fencing or signs</li> </ul> </li> <li>Monitor the success of these actions</li> <li>Initiate rehabilitation of affected flora and vegetation area(s) if within vegetation to be retained</li> </ul>	Project Manager / Construction Contractor
	Fencing along periphery of retained vegetation is damaged	<ul style="list-style-type: none"> <li>Repair or replace damaged fencing and install additional signs if required</li> <li>Investigate cause of damage</li> </ul>	Project Manager / Construction Contractor
Weed and pathogen management	Vehicles or machinery are not clean on entry	<ul style="list-style-type: none"> <li>Investigate cause</li> <li>Ensure importance of maintaining hygiene is communicated to all personnel</li> <li>Clean down affected machinery / vehicles at designated clean/washdown station offsite prior to entering the site.</li> </ul>	Vehicle / Machinery operator
	Monitoring detects increased abundance or introduction of weeds and/or Phytophthora as a consequence of the proposed action within vegetation outside of the predicted impact area.	<ul style="list-style-type: none"> <li>Notify and consult with DAWE on appropriate management/follow-up actions (this may include the implementation of weed control or other appropriate measures).</li> </ul>	Project Manager / Environmental Contractor
Fauna management	Vehicle strikes involving EPBC Act listed species occur as a result of clearing or construction works	<ul style="list-style-type: none"> <li>If vehicle strike has not caused mortality of the fauna, the Wildcare Helpline will be contacted on 08 9474 9055</li> <li>Notify and consult with DAWE on appropriate management/follow-up actions</li> <li>The environmental incident and complaints register (Appendix A) is to be completed</li> <li>Investigate cause of the vehicle strike</li> <li>Implement further controls to limit the risk of fauna strike on site (e.g. undertake additional relocation works, recommunicate environmental values to personnel)</li> </ul>	Project Manager / Construction Contractor

Parameter	Trigger criteria	Action/s	Responsibility
	Injured, abandoned or otherwise visibly distressed vertebrate fauna are observed during clearing and construction works	<ul style="list-style-type: none"> <li>The Wildcare Helpline will be contacted on 08 9474 9055</li> <li>The environmental incident and complaints register (Appendix A) is to be completed</li> <li></li> </ul>	Project Manager / Construction Contractor
Fauna management - Pre-clearing significant tree inspections	A tree identified as being utilised by a black cockatoo is damaged or killed as a result of project works	<ul style="list-style-type: none"> <li>Notify and consult with DAWE on appropriate management/follow-up actions</li> <li>If the action results in injury to black cockatoos, then:               <ol style="list-style-type: none"> <li>Immediately contact the Wildcare helpline</li> <li>Treat the black cockatoo/s accordingly</li> </ol> </li> <li>Investigate reasons why the tree was damaged, despite demarcation measures</li> <li>Revise clearing and demarcation techniques as required</li> </ul>	Fauna Clearance Contractor / Construction Contractor / Project Manager
Dust management	Visible dust movement outside of the site or impacting areas of retained vegetation after implementing dust control measures	<ul style="list-style-type: none"> <li>Stop works</li> <li>Investigate the cause of dust movement (severe weather conditions or faulty dust suppression equipment)</li> <li>If weather conditions are the cause of ineffective dust suppression, the Contractor shall employ additional dust suppression contingency measures, such as additional water carts, use of temporary stabilisation (e.g. Dustex), stabilise completed earthworked areas with hydromulch or erect additional shade cloth</li> <li>If dust suppression equipment is faulty, fix equipment</li> <li>Only recommence works once dust suppression equipment is functional</li> </ul>	Project Manager / Construction Contractor
	Excessive dust generation noted during visual monitoring or receipt of a reasonable residents' complaint.	<ul style="list-style-type: none"> <li>Assess when dust complaint was received, the weather conditions at the time and construction activities on site.</li> <li>Review the effectiveness of the management actions and identify opportunities for improvement.</li> <li>Communicate outcomes of the incident at a toolbox meeting.</li> <li>Assess whether there is a requirement for onsite dust monitoring (i.e. DustTrak)</li> </ul>	Project Manager / Construction Contractor
Waste management	Disposal of waste in a manner that harms or is likely to harm the environment	<ul style="list-style-type: none"> <li>Investigate cause of incident</li> <li>Ensure appropriate remediation action is taken</li> <li>Re-train staff in correct waste management and disposal procedures</li> <li>Ensure appropriate storage and facilities are available for controlled and general waste</li> </ul>	Project Manager / Construction Contractor
Fire management	An unplanned bushfire occurs in retained vegetation	<p>Small fires:</p> <ul style="list-style-type: none"> <li>Fire extinguishers and/or on-site water tanks and firefighting pumps will be used by site personnel to extinguish the fire</li> </ul> <p>Large fires:</p> <ul style="list-style-type: none"> <li>Phone 000 – FESA will attend and extinguish fires that cannot be managed by site personnel</li> </ul>	Site personnel

## **6.2 Incident investigation**

All incidents must be investigated as soon as possible after the event. The incident will be recorded in the *Environmental Incident Form* (Appendix C) and maintained for audit purposes.

## **6.3 Notification – Internal**

All environmental incidents must be reported to the Site Supervisor immediately so that appropriate action can be taken to recover from, or reduce the risk of further harm to people and the environment.

## **6.4 Notification – External**

The Project Manager is responsible for all external communication relating to matters concerning the environment. Personnel and contractors are not to communicate directly with stakeholders or government agencies.



## 7. Adaptive management

The Department of Education will implement an adaptive management system to provide a robust management plan, which effectively meets the environmental objectives. To achieve this, this VFMP will be reviewed during construction in the event of any of the criteria outlined in Table 6.1 being triggered, to ensure that the plan assesses the effectiveness of the management measures and corrective actions outlined in the VFMP. Where deficiencies in the management measures or corrective actions are identified, the VFMP will be revised in consultation with DAWE, to ensure best practice management relevant to the MNES being impacted/ potentially impacted.

Additionally, the VFMP will be revised in the event of:

- any revision or change to the proposed action, or;
- changes in regulatory or corporate requirements.

If updated, a copy of the revised VFMP will be provided to DAWE for approval prior to implementation of the revised VFMP.

## 8. Reporting

Environmental data shall be maintained by the Project Manager, to be provisioned to the City of Kwinana / DBCA / DAWE upon request. Reports provided by the contractors may be used as evidence of legal compliance or non-compliance and must be correct and auditable.

The Project Manager will be responsible for verifying and quality controlling all data reported in relation to site activities. Documentation to be maintained includes:

- Tree inspection reports
- Environmental incident and complaints forms
- Annual weed monitoring reports.

## 9. Roles and responsibilities

This VFMP will be implemented by the Department of Education during the pre-clearing, clearing and construction phases of the development, until completion of construction. All contractors and staff are required to operate in accordance with this VFMP for the period of its duration. Key personnel and responsibilities are described in the following sections.

### 9.1 Project Manager

The primary responsibilities of the project manager include:

- Acting as the primary liaison between the construction contractor, environmental consultant, and City of Kwinana
- Ensure all construction contracts contain relevant environmental management provisions
- Review all relevant reports provided by the construction contractor
- Maintain all documentation and provide to DBCA / DAWE / City of Kwinana upon request.

### 9.2 Construction Contractor

The primary responsibilities of the construction contractor include:

- Overall accountability to ensure construction activities do not adversely affect retained fauna habitat within the site
- Ensure all site personnel are aware of the requirements of the VFMP and related management plans
- Implement the management actions of the VFMP where required.

### 9.3 Site Supervisor

Responsible for the day-to-day overall environmental performance and implementation of all requirements of the VFMP. The environmental responsibilities of the Site Supervisor include:

- Plan construction works in a manner that avoids or minimises impact to environment
- Ensure the requirements of this VFMP are fully implemented
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements
- Ensure environmental management procedures and protection measures are implemented
- Communicate with all personnel and subcontractors regarding compliance with the VFMP and site-specific environmental issues
- Ensure all site workers attend an environmental induction prior to the commencement of works
- Coordinate the implementation of the VFMP
- Coordinate the implementation and maintenance of pollution control measures
- Identify resources required for implementation of the VFMP
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Project Manager
- Coordinate action in emergency situations and allocate required resources

- Stop activities where there is an actual or potential risk of harm to the environment and advise the Project Manager
- Ensure all personnel and contractors have completed a site induction
- Provide relevant environmental management information to personnel in daily pre-start and toolbox meetings.

#### **9.4 Environmental Consultant**

The primary responsibilities of the environmental consultant will include:

- Acting as primary liaison between the fauna clearance contractor and the project manager
- Ensuring the construction contractor is aware of the conservation significant fauna and habitat on site, and which areas are proposed to be retained
- Undertaking annual weed monitoring of
- Coordinating weed control works as required.

#### **9.5 Fauna Clearance Contractor**

The primary responsibilities of the fauna clearance contractor will include:

- Implementation of tree inspection works as required
- Liaison with DBCA and the City of Kwinana as required to obtain relevant licenses if required
- Provision of reports detailing the results tree inspection works.

## 10. Limitations

### Scope of services

This report ("the report") has been prepared by Strategen-JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen-JBS&G. 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-JBS&G 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-JBS&G 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-JBS&G has also not attempted to determine whether any material matter has been omitted from the data. Strategen-JBS&G 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-JBS&G. The making of any assumption does not imply that Strategen-JBS&G 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-JBS&G 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.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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## 11. References

- Department of Primary Industry and Regional Development (DPIRD). 2019. *Soil landscape mapping*. Available online via: <https://catalogue.data.wa.gov.au/dataset/soil-landscape-mapping-best-available>.
- Department of Sustainability, Environment, Water, Populations and Communities (DSEWPaC). 2012. *EPBC Act referral guidelines for three threatened Black Cockatoo species*. Commonwealth of Australia. [Online]. Available online via: <https://www.environment.gov.au/system/files/resources/895d4094-af63-4dd3-8dff-ad2b9b943312/files/referral-guidelines-wa-black-cockatoo.pdf>. Accessed 30 September 2020.
- Higgins, P. J. (ed.). 1999. *Handbook of Australian, New Zealand and Antarctic Birds. Volume Four – Parrots to Dollarbird*. Melbourne: Oxford University Press.
- PGV Environmental (2012). *The Village at Wellard Stages 32 – 40: Flora and Vegetation Survey*. Prepared for Peet Southern Joint Venture.
- Strategen-JBS&G. (2019). *The Village at Wellard: 2019 Groundwater monitoring report*. Prepared for Peet Joint Venture Pty Ltd.
- Strategen-JBS&G (2020a). *Wellard School Site: Flora, vegetation and black cockatoo habitat assessment*. Prepared for the Department of Education.
- Strategen-JBS&G (2020b). *Lot 9074 Lambeth Circle: Black cockatoo hollow suitability assessment*. Prepared for the Department of Education.
- Strategen-JBS&G 2021, *Wellard Village Primary School DRAFT Environmental Offset Plan (EPBC 2020/8732)*, prepared for the Department of Education.
- Terrestrial Ecosystems (2013). *Level 1 Fauna Risk Assessment for the Wellard Village Site*. Prepared for PGV Environmental.
- Threatened Species Scientific Committee (TSSC) (2019). *Approved Conservation Advice (Incorporating listing advice) for the Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain ecological community*.

## **Appendix A Strategen-JBS&G (2020a). Wellard School Site: Flora, vegetation and black cockatoo habitat assessment**

Note: This Appendix is available at Appendix C of the Preliminary Documentation.

**Appendix B Strategen-JBS&G (2020b). Lot 9074 Lambeth Circle, Wellard:  
black cockatoo hollow suitability assessment**

Note: this Appendix is available at Appendix D of the Preliminary Documentation.

## Appendix C Management forms



## Environmental Inspection Form

Inspection details					
Date					
Inspected by					
Item	Inspection Items	YES	NO	N/A	Comments/Recommendations
<b>General Items</b>					
	Have all actions raised in the previous inspections been closed out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Have all actions from any recent environmental incidents been adequately investigated and appropriately addressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Delineation and Access</b>					
	Are fences intact with no sign of damage or forced entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Is signage available and intact for personnel and the public?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Have clearing activities been contained within boundary limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Are records of clearing (dates and area cleared) available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Are there any signs of damage or clearing of trees identified for retention?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Weed and Dieback Management</b>					
	Have vehicle hygiene inspections been conducted on plant and light vehicles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Have stockpiles of topsoil, mulch and fill be located more than 50 m from retained vegetation within Lot 9074?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Fauna Management</b>					
	Have incidents been reported for fauna injury or deaths?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Have significant Black Cockatoo trees been inspected prior to clearing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Is there evidence of fauna being fed on site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Dust Management</b>					
	Is dust suppression of dirt roads and other cleared areas being undertaken where excessive dust is visible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Waste Management</b>					
	Is the work area free from waste, including cigarette butts and windblown litter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Do bins have adequate capacity to contain rubbish disposed within them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Are levels on portable ablution blocks within acceptable limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Contractor Demobilisation Management</b>					
	Has all construction materials (including ablution blocks, temporary fencing etc.) been removed from site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Have all construction waste been removed from site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Are sediment traps free from sediment and debris?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Are fences intact, secure and padlocked?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Have all actions from environmental incidents been adequately addressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Inspection actions</b>					
#	Actions required	Due date	Responsible person		





## Dieback and Weed Hygiene inspection

<b>Vehicle Status:</b>	Leaving <input type="checkbox"/>	Entering <input type="checkbox"/>	Relocating <input type="checkbox"/>
<b>Name of inspector:</b>			
<b>Date:</b>		<b>Project Area:</b>	
<b>Equipment/Vehicle Type:</b>		<b>Vehicle # / Registration:</b>	
<b>Location of last works undertaken by equipment:</b>			
<b>Aspects</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Heavy build-up of dirt?	<input type="checkbox"/>	<input type="checkbox"/>	
Radiators/Filters free of dirt?	<input type="checkbox"/>	<input type="checkbox"/>	
Sump/Engine guard free of dirt?	<input type="checkbox"/>	<input type="checkbox"/>	
Scrub rake/Cutting blade free of dirt?	<input type="checkbox"/>	<input type="checkbox"/>	
Running gear/Belly plate free of dirt?	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Comments:</b>			



**Fauna interaction register**

Date/Time	Reported by (name/role)	Interaction (Include species if known, where interaction occurred and if the animal survived the encounter)	Supervisor Notified	External Parties notified/ who contacted	Actions (if any)
<i>15/5/2019 7am</i>	<i>John Doe/Operator</i>	<i>Struck a kangaroo on the access road with LV on route to site. Kangaroo did not appear to be injured as it was able to hop away.</i>	<i>Yes</i>	<i>NA</i>	<i>Vehicle inspected for damage. Interaction raised at prestart.</i>

## Environmental incident form

Environmental incident details			
Date of Incident:		Time of Incident (am/pm):	
Detailed Location of Incident: <i>(include maps, diagrams and photos where possible)</i>			
Nature of Incident: <i>(including probable cause)</i>			
Include details of the incident such as:	Volume discharged? <i>(if applicable)</i>	Duration of incident <i>(hrs/days etc):</i>	GPS coordinate: Easting: Northing:
<b>Type of Environmental Incident</b> <input type="checkbox"/> Soil Contamination <input type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Fauna <input type="checkbox"/> Vegetation <input type="checkbox"/> Other: <i>Specify</i>			
Steps to be taken to prevent incident from occurring again:			
<b>Close out and Incident Reporting</b> Site Supervisor Contacted? YES <input type="checkbox"/> NO <input type="checkbox"/> Site Supervisors Name: _____  Site Supervisor contacted Project Manager? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Further Comments <i>(if any)</i> :			








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