

Westminster Estates Pty Ltd
Jindee Innovation Project
Conservation Management Plan

9 December 2020

57481/130,978 (Rev 8)

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

EPBC number: EPBC 2012/6631

Project name: Jindee Innovation Project

Proponent: Westminster Estates Pty Ltd

Proposed/approved action: To clear native vegetation on Lot 9036 and part lot 3054 Marmion Avenue, Jindalee, WA for development of a residential estate

Location: 37km north of Perth and 14km west of Joondalup City Centre within lot 9006 Marmion Avenue

Date: 8 December 2020

Declaration of Accuracy

In making this declaration, I am aware that section 491 of the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed



Full name (please print)

Darren Walsh

Organisation (please print)

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

Date

9 December 2020

Table of Contents

1.	Introduction	1
1.1	Objective.....	1
1.2	Land details.....	1
1.3	Statutory and policy context	2
1.3.1	Metropolitan Regional Scheme Amendment	2
1.3.2	Environment Protection and Biodiversity Conservation Act 1999	2
2.	Carnaby's Cockatoo	6
2.1	Species information.....	6
2.2	Habitat within the Project Area.....	6
3.	Management measures for Carnaby's Cockatoo and their habitat	8
3.1	Parks and Recreation Reserves	8
3.1.1	Physical delineation of habitat to be retained.....	9
3.1.2	Erosion and dust control measures for retained habitat.....	11
3.1.3	Weed management for retained habitat.....	11
3.1.4	Pathogen management for retained habitat.....	12
3.1.5	Bushfire management for retained habitat.....	12
3.1.6	Feral animal control for retained habitat	13
4.	Monitoring actions	14
5.	Performance indicators and corrective actions.....	16
5.1	Parks and Recreation Reserves	16
6.	Plan implementation	17
6.1	Long-term management and timeframes for implementation	17
6.2	Roles and responsibilities.....	17
7.	References	19
8.	Limitations	20

List of Tables

Table 1.1: Sub-requirements of condition 10 and corresponding CMP section where each addressed.....	1
Table 1.2: Land identification information	2
Table 3.2: Management measures for delineating areas to be retained	9
Table 3.3: Management measures for erosion and dust control measures during construction.....	11
Table 3.4: Weed management measures	11
Table 3.5: Pathogen management measures	12
Table 3.6: Fire management measures.....	12

Table 3.7: Feral animal control measures.....	13
Table 4.1: Monitoring actions – Parks & Recreation and ROS spaces	14
Table 5.1: Performance indicators and corrective actions	16
Table 6.1: Long-term management and timeframes for implementation	17

List of Figures

Figure 1.1: Site location	3
Figure 1.2: Region schemes – zones and reserves.....	4
Figure 1.3: Concept plan	5
Figure 2.1: Carnaby’s Cockatoo foraging habitat.....	7
Figure 3.1: Degraded Carnaby’s Cockatoo habitat in the Project Area	10

Appendices

Appendix A	EPBC approval 2012/6631
Appendix B	Management works for the Parks and Recreation Reserves
Appendix C	Vegetation condition mapping
Appendix D	Weed assessment
Appendix E	Fire Hazard Assessment

1. Introduction

Westminster Estates Pty Ltd (Westminster) entered into an agreement in 2007 with the Western Australian Planning Commission (WAPC) and the City of Wanneroo (CoW) to undertake an innovative residential development, known as the Jindee Innovation Project. The Jindee Innovation Project is located approximately 37 km north of Perth, and 14 km west of the Joondalup City Centre, Western Australia, in the CoW (Figure 1.1). The development will occur on land owned by Westminster or under contract to Westminster, within Lot 9006 Marmion Avenue (Figure 1.2).

The Project Area covers a total area of 119.5 ha, including 6.9 ha of Parks and Recreation which was developed in consultation with the WAPC and the Environmental Protection Authority (EPA) with an objective to maximise the biodiversity protected on site.

This Conservation Management Plan (CMP) has been prepared in accordance with Condition 10 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval 2012/6631 for the Jindee Innovation Project (Appendix A). The purpose of this CMP is to demonstrate how Carnaby's Cockatoo habitat retained within ROS spaces within the Project Area will be managed in order to protect and enhance the available habitat (Figure 1.3).

1.1 Objective

The objective of this CMP is to meet the requirements of condition 10 of EPBC 2012/6631. The CMP has been prepared in accordance with condition 10 as outlined in Table 1.1.

Table 1.1: Sub-requirements of condition 10 and corresponding CMP section where each addressed

Condition No	Condition text	Relevant section
10	To protect and enhance habitat for Carnaby's Black Cockatoo, the approval holder must prepare and submit a <i>Conservation Management Plan</i> (the plan) detailing management of habitat for Carnaby's Black Cockatoo that is to be retained on the proposal site, for the Minister's approval. The plan must include	N/A
10(a)	measures to physically delineate areas that will be retained	Section 3.1.1
10(b)	erosion and dust control measures during construction	Section 3.1.2
10(c)	the management of weeds, <i>Phytophthora</i> dieback, bushfire and feral animals	Sections 3.1.3, 3.1.4, 3.1.5 and 3.1.6
10(d)	identification of any degraded habitat and how those areas will be managed	Section 3; Figure 3.1
10(e)	a monitoring program for Carnaby's Black Cockatoo and their habitat	Section 4
10(f)	Details of who will be responsible for the long-term management of the retained land, and how the land will be protected in the long term	Section 6.1.
10(g)	a commitment to fund all management actions in the two Parks and Recreation areas within the site boundary marked in green at Attachment B until the management of those areas is handed over to another party, including the amount of funding that will be allocated to these management actions	Section 3.1
10(h)	performance indicators and corrective actions	Section 5
10(i)	roles and responsibilities; and	Section 6.2
10(j)	timeframes for the implementation of the above measures	Section 6.1

1.2 Land details

The Project Area includes Lots 9006, 8001 and 8002 Marmion Avenue and has approximately 800 m frontage to the Indian Ocean. It is located within proximity to the Brighton District Centre, the proposed Brighton rail station and the Mitchell Freeway extension.

Table 1.2: Land identification information

Street address	Suburb	Cadastral information	Title	Zoning	Structure Plan
2469 Marmion Avenue	Jindalee	Lot 9006 Marmion Avenue	Lot 9006 on DP 403862	Urban	LSP 84
2409K Marmion Avenue	Jindalee	Lot 8001 Marmion Avenue	Lot 8001 on DP 403862	Parks and Recreation	LSP 84
1000K Maritime Drive	Jindalee	Lot 8002 Marmion Avenue	Lot 8002 on DP 403862	Parks and Recreation	LSP 84

1.3 Statutory and policy context

1.3.1 Metropolitan Regional Scheme Amendment

The Project Area includes Lots 9006, 8001 and 8002 Marmion Avenue. The coastal environment within and adjacent to Lot 9006 includes both limestone cliffs and beaches underpinned by limestone formation, which can support development closer to the coast than contemplated by the former Metropolitan Regional Scheme (MRS) boundary. An MRS amendment application was lodged in 2008 to amend the boundary (1152/41) and was approved by State Parliament in November 2009.

The MRS amendment was referred under the Section 48A of the *Environmental Protection Act 1986* (EP Act) to the EPA in March 2008. The level of assessment was set at 'Scheme Amendment Not Assessed – Advice Given' in May 2008. The EPA supported the scheme amendment on the basis that the two Parks and Recreation reserve were to be provided to offset the area of the foreshore Parks and Recreation Reserve that was proposed to be zoned Urban. As a result a land exchange was completed between the landowner and the WAPC for the reserves that are now Lots 8001, 8002.

1.3.2 Environment Protection and Biodiversity Conservation Act 1999

The Jindalee Project Area was the subject of EPBC approval 2012/6631, referred to the Department of the Environment (DotE) on 16 November 2012 and approved 18 July 2013. This CMP has been prepared in accordance with proposed condition 10 of this EPBC approval (refer to Table 1.1).

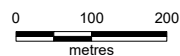
In accordance with condition 10 of EPBC approval 2012/6631, if the Minister approves the CMP, the approved plan must be implemented.



Legend

- Site boundary
- Cadastral boundary
- Roads (MRWA)

Scale 1:10,000 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 57481

Client: Estates Development Company

Version: A

Date: 10-Jul-2020

Drawn By: cthatcher

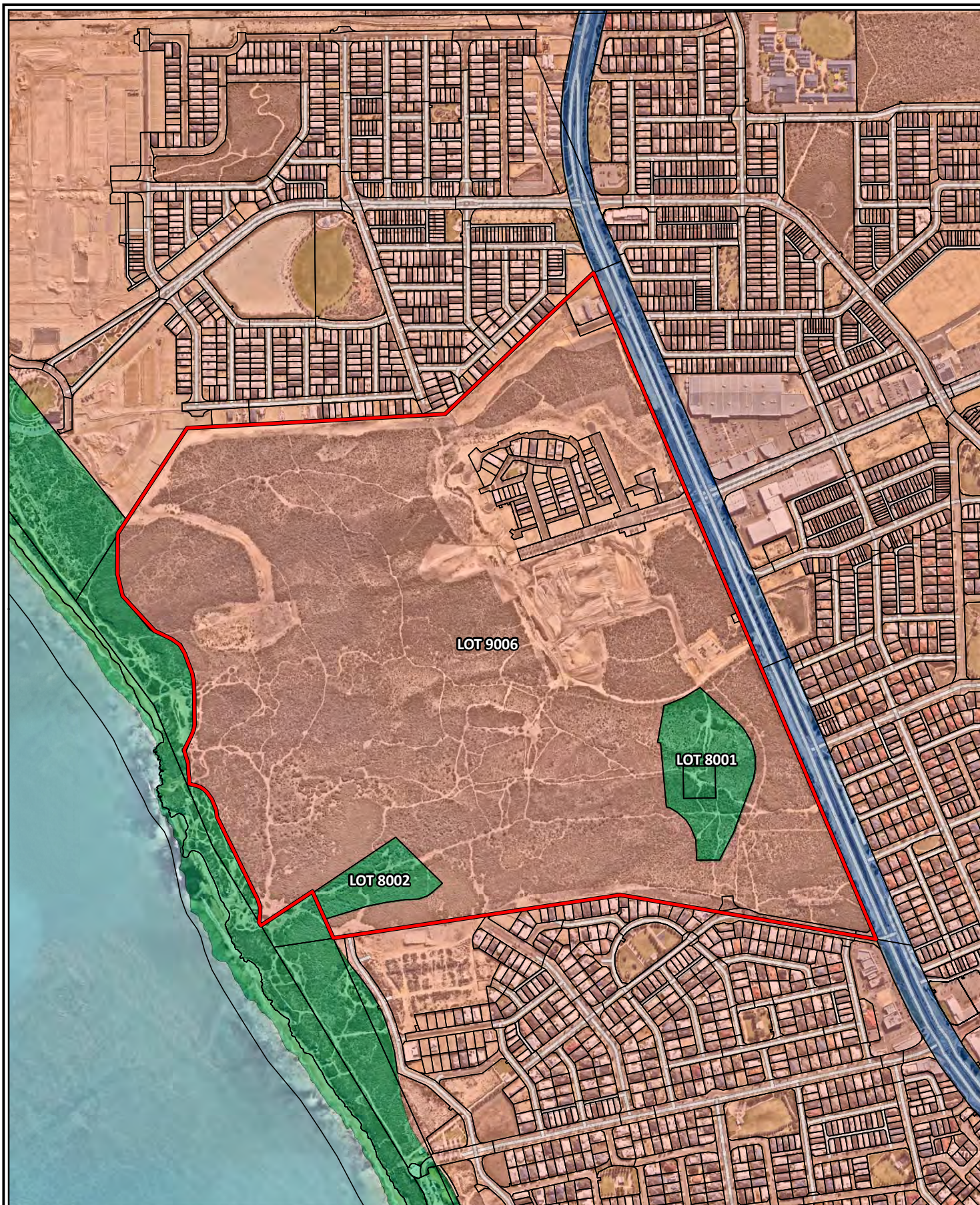
Checked By: HS

Jindee, WA

SITE LOCATION

FIGURE 1.1





Legend

Site boundary

Existing cadastral boundary

Region Schemes - Zones and Reserves (DPLH, 2020)

Other regional roads

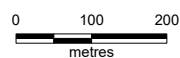
Parks and recreation

Urban

Waterways

Roads (MRWA)

Scale 1:10,000 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 57481

Client: Estates Development Company

Version: A

Date: 10-Jul-2020

Drawn By: cthatcher

Checked By: HS

Jindee, WA

**REGION SCHEMES
ZONES AND RESERVES**

FIGURE 1.2





<p>Legend:</p> <ul style="list-style-type: none"> Existing cadastral Subdivision Carnaby's Black Cockatoo habitat retained within ROS Roads 	<p>Scale 1:8,500 at A4</p> <p>0 100 200 metres</p> <p>Coord. Sys. GDA 1994 MGA Zone 50</p> <p>Job No: 57481</p> <p>Client: Estates Development Company</p> <p>Version: A</p> <p>Drawn By: cthatcher</p>		<p>Jindee, WA</p> <p>CONCEPT PLAN</p> <p>FIGURE 1.3</p> <p>strategen JBS&G</p>
	<p>Date: 10-Jul-2020</p> <p>Checked By: HS</p>		

2. Carnaby's Cockatoo

2.1 Species information

Carnaby's Cockatoos (*Calyptorhynchus latirostris*) are endemic to the South West of Western Australia. They mainly occur in uncleared remnant native eucalypt woodlands, especially those that contain Salmon gum, wandoo, and in shrubland or Kwongan heathland dominated by *Hakea*, *Dryandra*, *Banksia* and *Grevillea* species (DSEWPaC 2012). Current data on distribution of this species shows that there are numerous records along the Northern Swan Coastal Plain, including records in and around the Project Area.

2.2 Habitat within the Project Area

The vegetation within the Project Area is varied, reflecting the topography and soils found on site. Areas of *Banksia* woodland as well as the *Dryandra sessilis* thickets within the Project Area have the potential to support flora species known to be a food source for Carnaby's Cockatoo (Bamford 2006). The Project Area is not considered to contain breeding habitat for this species as it does not contain trees suitable for breeding purposes (RPS 2012).

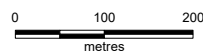
The development will result in the removal of no more than 43.45 ha of potential Carnaby's Cockatoo foraging habitat. At least 1.72 ha of good – excellent potential Carnaby's Cockatoo foraging habitat will be retained in ROS areas (Figure 1.3, Figure 2.1).



Legend:

- Site boundary
- Existing cadastral boundary
- Potential foraging habitat for Carnaby's Black Cockatoo to be retained and cleared in ROS
- Potential foraging habitat for Carnaby's Black Cockatoo to be cleared
- Subdivision layout
- Roads (MRWA)

Scale 1:8,500 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 57481

Client: Estates Development Company

Version: A

Date: 10-Jul-2020

Drawn By: cthatcher

Checked By: HS

Jindee, WA

BLACK COCKATOO FORAGING HABITAT

FIGURE 2.1



3. Management measures for Carnaby's Cockatoo and their habitat

3.1 Parks and Recreation Reserves

The purpose of this CMP is to demonstrate how Carnaby's Cockatoo habitat retained within the Project Area will be managed in order to protect and enhance the available habitat (Figure 2.1).

In accordance with conditions 10(g) of EPBC approval 2012/6631, Westminster will implement works funded to the order of \$393 000 (excl GST), as agreed by the WAPC to implement all relevant management actions in the two Parks and Recreation Reserves (A and B), until the management of those areas is handed over to another party, which is mostly likely to be the WAPC. The reserves will be handed over within 5 years of substantial commencement of the action, which will occur when land titles are created through the subdivision process administered by the WAPC. These areas are vested as Parks and Recreation Reserve under the Metropolitan Region Scheme (MRS) ensuring it is protected in the long term (see Table 6.1 for further information). The MRS is the highest order instrument within the WA town planning system and modifications can only occur with the approval of Parliament.

The works to be undertaken by Westminster are outlined in Appendix B, and will include:

- fire management
- installation of appropriate barriers to prevent pedestrian access such as fencing and access gates to dunes
- installation public amenities (i.e. pathways and observation deck)
- infill planting/seeding and weed control of areas to be revegetated as per the Clearing and Revegetation Management Plan and Table 3.1.

These management works will therefore be implemented as per Table 3.1 to protect and enhance the retained Carnaby's Cockatoo habitat within the Parks and Recreation Reserves. Vegetation across the site is predominantly in very good condition (RPS 2012, Appendix C); however, there are some degraded areas that are in proximity to Carnaby's Black-Cockatoo habitat proposed to be retained where native vegetation has been disturbed and weeds have been introduced by unauthorised access of off-road vehicles within the Parks and Recreation Reserves (Figure 3.1). Some of these unauthorised tracks are also proposed to be used in the creation of formal access pathways for pedestrians to reduce the clearing requirements in the Parks and Recreation Reserves. All degraded areas not proposed to be used for formal access tracks will be revegetated.

Degraded habitat within the Parks and Recreation Reserves will be managed through revegetation and weed control will be implemented as outlined in the Clearing and Revegetation Management Plan (Strategen 2014).

Table 3.1: Management measures for the Parks and Recreation reserves

Action	Timing	Responsibility
Carnaby's Cockatoo habitat being retained will be delineated by survey along clearing boundaries and protected by the installation of temporary fencing or survey pegs and flagging tape.	Prior to clearing	Construction contractor
GPS co-ordinates of areas approved to be cleared and those required to be retained will be provided to the contractor to ensure no unapproved clearing is undertaken.	Prior to clearing	Construction contractor
Appropriate barriers to prevent pedestrian access such as fencing will be installed around the perimeter of the Parks and Recreation Reserves.	During construction	Construction contractor
Access point in the form of a single gate will be installed at strategic locations in the Parks and Recreation Reserves.	During construction	Construction contractor
Stabilised gravel path and limestone bollards will be installed within the Parks and Recreation Reserve to ensure controlled public use.	During construction	Construction contractor
Gravel fire access tracks will be constructed in accordance with the Fire Management Plan*.	During construction	Construction contractor

Action	Timing	Responsibility
Firebreak creation, maintenance, removal of dead branches, and general fire prevention activities will be undertaken as recommended in the Fire Management Plan*. Note: Avoid disturbance of any Carnaby's Cockatoo habitat in Parks and Recreation areas for the purpose of firebreak creation.	During construction	Construction contractor, and Westminster
Determine appropriate method and timing of weed control in consultation with a suitably qualified specialist, based on monitoring results as described in the CRMP.	As per CRMP	Westminster
Implement weed control.	As determined by previous step and CRMP	Westminster
Monitor weed control results and implement further control if required as described in the CRMP	As per CRMP	Westminster.
All vehicles, machinery and equipment will be free of mud and soil.	When entering Parks and Recreation areas.	Revegetation (weed) contractor
Engage a qualified and licensed subcontractor, if necessary to undertake pest fauna control/removal appropriate to the species detected, based on monitoring described in CRMP.	On advice of qualified subcontractor	Westminster

*A Fire Management Plan will be addressed as part of the planning approvals process and will be finalised in accordance with CoW standard operating procedures.

3.1.1 Physical delineation of habitat to be retained

Delineation of habitat to be retained is important during the construction phase, as well as post construction. If retained Carnaby's Cockatoo habitat is not adequately delineated, it may become degraded through unapproved clearing, trampling, predation by feral animals/domestic pests and the introduction/spreading of weeds.

Prior to commencement of works within proximity of Carnaby's Cockatoo habitat to be retained within the ROS spaces will be delineated by survey and adequately delineated to ensure the areas are not disturbed during clearing or earthworks. Refer to Table 3.2 for further specific management measures.

Table 3.2: Management measures for delineating areas to be retained

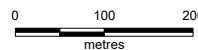
Action	Timing	Responsibility
Carnaby's Cockatoo habitat being retained will be delineated by survey along clearing boundaries and protected by the installation of temporary fencing in areas adjacent to construction activity, or survey pegs and flagging tape where construction activity is not occurring.	Prior to clearing	Construction contractor
Temporary signage will be installed in accordance CoW standard signage policy to restrict construction workers from entering Carnaby's Cockatoo habitat being retained.	Prior to clearing	Construction contractor
GPS co-ordinates of areas approved to be cleared and those required to be retained will be provided to the contractor to ensure no unapproved clearing is undertaken.	Prior to clearing	Construction contractor
Appropriate barriers to prevent pedestrian access such as fencing 'will be installed around the perimeter of ROS areas or retained habitat within to CoW specifications designed to prevent public access.	During construction	Construction contractor
Access points will be installed at strategic locations in the ROS areas to CoW requirements.	During construction	Construction contractor
Permanent signage will be installed to encourage public education and awareness on: <ul style="list-style-type: none"> the importance of retained bushland the detrimental effects of rubbish, weeds and pathogens on biodiversity the importance of keeping to the designated walking tracks the requirement for dogs to be on a lead in designated areas. 	During construction	Construction contractor



Legend:

- Site boundary
- Degraded areas in which revegetation will occur
- Existing cadastral boundary
- Potential foraging habitat for Carnaby's Black Cockatoo to be retained and cleared in ROS
- Potential foraging habitat for Carnaby's Black Cockatoo to be cleared
- Subdivision layout
- Roads (MRWA)

Scale 1:8,500 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 57481

Client: Estates Development Company

Version: A

Date: 10-Jul-2020

Drawn By: cthatcher

Checked By: HS

Jindee, WA

DEGRADED CARNABY'S COCKATOO HABITAT IN THE PROPOSAL AREA

FIGURE 2.2



3.1.2 Erosion and dust control measures for retained habitat

Dust generation within the Project Area has the potential to affect the health of retained Carnaby's Cockatoo habitat and/or cause changes in fauna behaviour in areas with frequently high dust levels.

The following project activities have the potential to generate dust during construction:

- earthworks (i.e. excavation, stockpiling, loading and movement of soil and construction waste, clearing of vegetation)
- vehicle/machinery activity on unsealed surfaces.

Appropriate dust and erosion management measures will be utilised to ensure that impacts to retained Carnaby's Cockatoo habitat areas are minimised. Refer to Table 3.3 for further specific management measures.

Table 3.3: Management measures for erosion and dust control measures during construction

Action	Timing	Responsibility
Cleared areas and any dry, dust-prone areas or stockpiles will be stabilised to prevent dust generation. Stabilisation methods may include wetting (through use of water trucks), application of hydromulch, use of chemical polymers (if required) or other sealing material.	During construction	Construction contractor
Vehicle speeds will be restricted to 40 km/hr to minimise dust generation on designated roads, access tracks and within construction areas.	During construction	Construction contractor

3.1.3 Weed management for retained habitat

A weed assessment has been undertaken of the areas of Carnaby's Cockatoo habitat within the Project Area (Strategen 2014). The purpose of the assessment was to determine the presence and abundance of exotic or weed species, particularly in the habitat to be retained. The weed assessment recorded high numbers and densities of introduced weeds through the majority of the existing Carnaby's Cockatoo habitat (Strategen 2014). A total of 20 weed species were recorded, including ten species listed as having a high ecological impact (DEC 2009).

Appropriate weed management measures will be implemented within ROS areas as soon as vegetation clearing commences adjacent to the ROS areas. Weed management will occur during and after construction works adjacent to ROS areas to minimise further spread of weed within retained Carnaby's Cockatoo habitat.

Weed management will be implemented using several techniques, including:

- spot spraying – where hand-spraying apparatus is applied directly to the target plant
- hand weeding – physical removal of the weeds.

Refer to Table 3.4 for further specific management measures.

Table 3.4: Weed management measures

Action	Timing*	Responsibility
Identify weeds occurring in retained habitat in ROS areas.	Annually	Westminster until handover
Determine appropriate method and timing of weed control in consultation with a suitably qualified specialist.	Annually	Westminster until handover
Implement weed control.	As determined by previous step	Westminster until handover
Monitor weed control results and implement further control if required, on the advice of CoW (e.g. bushland management personnel) or suitably qualified specialist.	Annually	Westminster until handover

* Weed control will commence in ROS areas when those ROS areas are directly adjacent or within the current stage of construction. Weed control will continue to be implemented by Westminster until the ROS area is handed over to the WAPC for management.

3.1.4 Pathogen management for retained habitat

A dieback assessment has been undertaken across all Carnaby's Cockatoo habitat contained within the Project Area. The purpose of this assessment was to identify areas at risk of dieback in order to prevent the possible spread of dieback to other areas (Glevan 2013).

No dieback infestations were observed during the assessment; however the survey area was found to be underlain by the calcareous soils of the Quindalup Dune system and these alkaline soils are known to be hostile to the pathogen (Glevan 2013). As a result, dieback does not express on such soils, and the entire study area has been classified as uninterpretable. The pathogen may be present within the study area, but it will subsist as an organism, rather than manifest and proliferate as visible disease symptoms. Due to the uncertainty of whether dieback exists within the areas to be retained, these areas will be managed as if they are dieback infested to minimise potential spread.

Appropriate management measures will therefore be implemented prior to, during and after construction works to minimise potential spread of dieback infestations to retained Carnaby's Cockatoo habitat. Access into these areas will be restricted and the appropriate dieback hygiene procedures will be undertaken for any authorised access to these areas. Refer to Table 3.5 for further specific management measures.

Table 3.5: Pathogen management measures

Action	Timing	Responsibility
All construction personnel will be inducted in relation to dieback risk, potential impacts and management.	During construction	Construction contractor
All vehicles, machinery and equipment will be free of mud and soil.	During construction – when arriving at site	Construction contractor

3.1.5 Bushfire management for retained habitat

Bushfires have the potential to cause serious damage to habitat within the Project Area. A Fire Hazard Assessment was prepared for the Project Area in 2012 by Town Planning Management Engineering Pty (TME 2012; Appendix E) in accordance with the requirements of the Planning for Bushfire Protection Guidelines (FESA & DPI 2010) to identify the relevant bush fire management issues which need to be addressed in the implementation of the Local Structure Plan, Detailed Area Plans and subdivision design.

A Fire Management Plan will be addressed as part of the planning approvals process and will be finalised in accordance with CoW standard operating procedures.

Refer to Table 3.6 for further specific management measures in relation to retained habitat.

Table 3.6: Fire management measures

Action	Timing	Responsibility
A Fire Management Plan will be prepared as required in accordance with CoW standard operating procedures.	Pre-construction	Westminster
Firebreak creation, maintenance, removal of dead branches, and general fire prevention activities will be undertaken as recommended in the Fire Management Plan.	Ongoing	Westminster until handover
A reticulated water supply will be extended throughout the subdivision area to all proposed lots.	During construction	Westminster

3.1.6 Feral animal control for retained habitat

Feral animals have the potential to negatively affect retained Cockatoo habitat through overgrazing, predation, burrowing, and generally providing additional competition for food and shelter. In particular, feral cats, foxes and rabbits have the potential to cause considerable damage to retained habitat if they occur within the Project Area.

Given this project involves the establishment of a residential development, it is anticipated that domestic cats and dogs will also likely pose a threat to native flora and fauna contained within retained Carnaby's Cockatoo habitat. Community education will therefore be required as well as appropriate feral animal controls utilised where required to protect and enhance the Carnaby's Cockatoo habitat being retained (Table 3.7).

Table 3.7: Feral animal control measures

Action	Timing	Responsibility
Engage a qualified and licensed subcontractor to undertake pest fauna control/removal appropriate to the species detected, based on monitoring results (Table 4.1).	On advice of qualified subcontractor	Westminster until handover
Provide community education signage around conservation areas detailing the potential risk domestic cats and dogs may pose to native flora and fauna within the Estate.	To be placed post-construction	Westminster

4. Monitoring actions

A monitoring program has been developed focusing on monitoring of retained Carnaby's Cockatoo habitat within the site rather than monitoring of individual Carnaby's Cockatoos utilising the site (Table 4.1). This species is highly mobile in nature and rely on different areas of habitat at different times of the year and between years. It would therefore be difficult to obtain a true representation of the effects of the development on this species through the monitoring of individual Cockatoos. Provision for the recording of opportunistic sightings or evidence of Carnaby's Cockatoo on-site has been included in this CMP.

A detailed monitoring program for revegetation, including weed control and degraded habitat within the two Parks and Recreation Reserves, is provided in the Clearing and Revegetation Management Plan (Strategen 2014).

Fire management will be monitored in accordance with the Fire Management Plan that will be prepared if required as part of the planning approval process and will be developed in accordance with CoW standard operating procedures.

Table 4.1: Monitoring actions – Parks & Recreation and ROS spaces

Parameter	Frequency	Location	Purpose	Responsibility
Delineation of habitat to be retained				
Condition of infrastructure delineating Carnaby's Cockatoo habitat (fencing, gates, pathways, signage etc).	Quarterly during construction.	Retained habitat near clearing boundaries.	To ensure infrastructure is in good condition and that there has been no unauthorised clearing beyond the barrier.	Construction contractor
Monitoring of revegetation success within degraded habitat				
A detailed monitoring program for revegetation of degraded habitat within retained habitat areas is provided in the Clearing and Revegetation Management Plan (Strategen 2014).				
Erosion and dust control for retained habitat				
Visual observations of dust generation and erosion.	Opportunistically during construction.	Unsealed surfaces prone to dust generation (e.g. roads, stockpiles).	To minimise erosion and dust impacts from construction on retained habitat.	Construction contractor
Dust suppression equipment / actions.	Opportunistically during construction.	Where potential dust generation is taking place.		Construction contractor
Visual observation of vegetation health, including dust smothering and erosion.	Monthly during construction.	Retained Carnaby's Cockatoo habitat beyond clearing boundaries.		Construction contractor
Weed management for retained habitat				
A detailed monitoring program for revegetation, including weed control, of degraded habitat within the Parks and Recreation Reserves is provided in the Clearing and Revegetation Plan (Strategen 2014).				
Pathogen management for retained habitat				
Inspection of machinery for construction works.	At first time of entry and opportunistically during construction.	Authorised access points into the site.	To ensure appropriate dieback hygiene are being undertaken.	Construction contractor
Bushfire management for retained habitat				
In accordance with the Fire Management Plan that will be prepared if required as part of the planning approval process and will be developed in accordance with CoW standard operating procedures.				
Feral animal control for retained habitat				
Presence of pests/feral animals/domestic animals (foxes, rabbits and feral cats).	Annually in spring.	Retained Carnaby's Cockatoo habitat in ROS areas until handover.	To determine presence of pests/feral animals within the retained habitat, and whether fauna control is required.	Westminster
	Opportunistically.			

Parameter	Frequency	Location	Purpose	Responsibility
Carnaby's Cockatoo opportunistic monitoring				
Presence of Carnaby's Cockatoo (as indicated by sightings, evidence of foraging, etc.).	Opportunistically.	Retained Carnaby's Cockatoo habitat in ROS areas, and in revegetation areas, until handover.	To determine presence of Carnaby's Cockatoo within the retained habitat.	Westminster

5. Performance indicators and corrective actions

5.1 Parks and Recreation Reserves

Corrective actions for the Parks and Recreation reserves are to be initiated in the event that the objectives for the protection and management of the retained habitat areas are not, or will not be met (Table 5.1).

Table 5.1: Performance indicators and corrective actions

Parameter	Performance indicator	Trigger	Action	Responsibility
Access / delineation of areas that will be retained.	Areas of retained habitat delineated.	Unrestricted or unauthorised access.	Determine how access was gained and, if possible, the likely time of access. Implement remedy, which could include: repair fence/s erect signs to highlight prohibited access. Monitor success of control.	Construction contractor
Erosion and dust.	Cleared areas and any dry, dust-prone areas or stockpiles stabilised.	Excessive dust levels are observed.	Investigate cause. Implement additional dust control measures as appropriate. Continue monitoring (visual observations) to determine success of implemented management actions.	Construction contractor
Weed and pathogens.	In accordance with the Clearing and Revegetation Management Plan.			
Bushfires.	In accordance with the Fire Management Plan that will be prepared if required as part of the planning approval process and will be developed in accordance with CoW standard operating procedures.			
Feral animals	No encounters with Pest/other grazing animal encounters within POS/civic areas	Pest/other grazing animal (primarily rabbits) encounters within retained habitat	Investigate cause. Undertake intervention or remediation works (including moving bins, implementing a feral animal trapping and baiting program). Monitor success	Westminster

6. Plan implementation

6.1 Long-term management and timeframes for implementation

In accordance with condition 10 of EPBC approval 2012/6631 this Conservation Management Plan will be implemented by Westminster as outlined in Table 6.1.

Table 6.1: Long-term management and timeframes for implementation

Type	Responsible for long term management	Legal mechanisms for protection in the future
Retained habitat in Parks and Recreation Reserves.	Management of the retained habitat will be undertaken by Westminster until the completion of construction adjacent to the reserves and completion of the CRMP commitments. Formal transfer of management responsibility to CoW (in the form of a revestment order over the lot) will be the responsibility of WAPC (refer to Section 6.2). WAPC will initiate the revestment order once Westminster Estate has completed the works required under 10 (g) of the EPBC approval.	Vested as Parks and Recreation Reserves as part of the MRS amendment.

6.2 Roles and responsibilities

All contractors and staff will be required to operate in accordance with this CMP. Key developer personnel and responsibilities are described in the following sections:

6.2.1.1 Westminster

The primary responsibilities of Westminster include:

- act as primary liaison between the construction contractor, DAWE and the CoW
- ensure all construction contracts contain relevant environmental management provisions
- review quarterly reports provided by the construction contractor
- management of Parks and Recreation Reserves until handover to another party
- report to DotE in accordance with Condition 4 of EPBC Approval 2012/6631.

6.2.1.2 Construction contractor

The primary responsibilities of the construction contractor include:

- overall accountability to ensure construction activities do not adversely impact Carnaby's Cockatoo habitat being retained
- ensure all site personnel are aware of the requirements of the CMP and related management plans
- provide support to the project manager and DPaW as required during the construction phase.

6.2.1.3 Revegetation contractor

The primary responsibilities of the revegetation contractor include:

- ensure all revegetation personnel are aware of the requirements of the CMP and related management plans
- provide support to the project manager and CoW as required during the construction phase.

6.2.1.4 Western Australian Planning Commission

The primary responsibilities of the WAPC include:

- facilitation of formal transfer of management responsibility of the Parks and Recreation Reserves to the long term manager (CoW).
- WAPC will initiate the revestment order once Westminster Estate has completed the works required under 10 (g) of the EPBC approval.
- As provincial landowner, ensure the land is managed consistent with the requirements of EPBC approval 2012/6631.

6.2.1.5 City of Wanneroo

The primary responsibilities of the CoW include:

- undertake the long term management and protection of retained habitat within the Project Area.

7. References

- Department of Environment and Conservation (DEC) 2009, *DEC Swan Region Environmental Weed List*, [Online]. Government of Western Australia. Available online: <http://www.dec.wa.gov.au/management-and-protection/plants/invasive-plants/invasive-plant-prioritisation-process.html?showall=&start=1> [October 2013].
- Department of Environment and Conservation (DEC) 2011, *DEC Nature Conservation Service – Biodiversity: Standard Operating Procedure – Techniques for mapping weed distribution and cover in bushland and vegetation*, prepared for DEC Regional Services and Nature Conservation Divisions, Perth.
- Department of Sustainability, Environment, Water, Population & Communities (DSEWPac) 2012, *Calyptrorhynchus latirostris–Carnaby’s Black-Cockatoo, short billed black-cockatoo*, (SPRAT), [Online], Available at http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=59523 [6 August 2013].
- Fire and Emergency Services Authority & Department of Planning and Infrastructure (FESA & DPI) 2010, *Planning for Bush Fire Protection*, Perth.
- Glevan Consulting (Glevan) 2013, Westminster Estates Pty Ltd Jindee Innovation Project – Phytophthora dieback occurrence assessment, Report prepared for Westminster Estates Pty Ltd, December 2013, Western Australia.
- M.J. & A.R. Bamford Consulting Ecologists (Bamford) 2006, *Jindee Fauna Assessment*, prepared for RPS Bowman Bishaw Gorham, Perth.
- RPS Environment and Planning Pty Ltd (RPS) 2012, *Environmental Assessment Report, District Planning Scheme Amendment Lot 9036 and Part Lot 3054 Marmion Avenue, Jindalee*, report prepared for Estates Development Company, Nedlands.
- Standards Australia (2009) *AS 3959 – Construction of Buildings in Bush Fire Prone Area*, Sydney, Standards Australia International Ltd.
- Strategen 2014, *Weed Assessment – Jindee*, prepared for Westminster Estates Pty Ltd, April 2014, Western Australia.
- Strategen 2016, *Jindee Innovation Project Clearing and Revegetation Management Plan*, prepared for Westminster Estates Pty Ltd, June 2016.
- Town Planning Management Engineering (TME) 2012, *Jindee Estate Estates Development Company Fire Hazard Assessment*, September 2012.

8. 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.

Strategen-JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by Strategen-JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

Appendix A EPBC approval 2012/6631



VARIATION OF CONDITIONS ATTACHED TO APPROVAL

Jindee Innovation Project, Jindalee, WA (EPBC 2012/6631)

This decision to vary conditions of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action

Person to whom the approval is granted	Westminster Estates Pty Ltd ABN: 48 008 675 081
Approved action	To clear native vegetation on Lot 9036 and Part Lot 3054 Marmion Avenue, Jindalee, WA, for development of a residential estate [See EPBC Act referral 2012/6631].

Variation

Variation of conditions attached to approval	<p>The variation is:</p> <p>Delete conditions 3, 5, 5A, 5B, 5C, 7, 9, 12 and 15 and the definition of New or increased impact attached to the approval and substitute with the conditions and definitions specified in the table below</p> <p>Revoke the definition of Primary feeding plants attached to the approval</p> <p>Add new conditions 5D, 5E, 16 and 17 specified in the table below</p> <p>Add new definitions of Business day, Environmental Offsets Policy, Legal securement, Further additional loss of habitat and WA DBCA as specified in the table below</p> <p>Add new Attachment A1 as specified in the table below</p>
---	---

Date of effect	This variation has effect on the date the instrument is signed
-----------------------	--

Person authorised to make decision

Name and position	Declan O'Connor-Cox Assistant Secretary A/g Assessments (Vic, Tas) and Post Approvals Branch
--------------------------	--

Signature

Date of decision

26 October 2020

Date of decision	Conditions attached to approval
Original dated 18/7/2013	1. Within 30 days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement .
Original dated 18/7/2013	2. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the Department . Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.
As varied on the date this instrument was signed	3. Within three months of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on the website addressing compliance with the conditions of approval over the previous 12 months, including implementation of the management plans as specified in the conditions. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time the compliance report is published. The approval holder must notify the Department in writing of any non-compliance with any conditions of this approval no later than two business days of becoming aware of the non-compliance.
Original dated 18/7/2013	4. Upon the direction of the Minister , the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister . The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister .
As varied on the date this instrument was signed	<p>Revision of action management plans</p> <p>5. The approval holder may, at any time, apply to the Minister for a variation to an action management plan approved by the Minister under conditions 10 and 12, or as subsequently revised in accordance with these conditions, by submitting an application in accordance with the requirements of section 143A of the EPBC Act. If the Minister approves a revised action management plan (RAMP) then, from the date specified, the approval holder must implement the RAMP in place of the previous action management plan.</p>
As varied on the date this instrument was signed	5A. The approval holder may choose to revise an action management plan approved by the Minister under conditions 10 and 12, or as subsequently revised in accordance with these conditions, without submitting it for approval under section 143A of the EPBC Act , if the taking of the action in accordance with the RAMP would not be likely to have a new or increased impact .
As varied on the date this instrument was signed	<p>5B. If the approval holder makes the choice under condition 5A to revise an action management plan without submitting it for approval, the approval holder must:</p> <ul style="list-style-type: none"> (a) notify the Department in writing that the approved action management plan has been revised and provide the Department with: <ul style="list-style-type: none"> i. an electronic copy of the RAMP; ii. an electronic copy of the RAMP marked up with track changes to show the differences between the approved action management plan and the RAMP;

Date of decision	Conditions attached to approval
	<ul style="list-style-type: none"> iii. an explanation of the differences between the approved action management plan and the RAMP; iv. the reasons the approval holder considers that taking the action in accordance with the RAMP would not be likely to have a new or increased impact; and v. written notice of the date on which the approval holder will implement the RAMP (RAMP implementation date), being at least 20 business days after the date of providing notice of the revision of the action management plan, or a date agreed to in writing with the Department. <p>(b) subject to condition 5D, implement the RAMP from the RAMP implementation date.</p>
As varied on the date this instrument was signed	5C. The approval holder may revoke its choice to implement a RAMP under condition 5A at any time by giving written notice to the Department . If the approval holder revokes the choice under condition 5A, the approval holder must implement the action management plan in force immediately prior to the revision undertaken under condition 5A.
As varied on the date this instrument was signed	<p>5D. If the Minister gives a notice to the approval holder that the Minister is satisfied that the taking of the action in accordance with the RAMP would be likely to have a new or increased impact, then:</p> <ul style="list-style-type: none"> (a) condition 5A does not apply, or ceases to apply, in relation to the RAMP; and (b) the approval holder must implement the action management plan specified by the Minister in the notice.
As varied on the date this instrument was signed	<p>5E. At the time of giving the notice under condition 5D, the Minister may also notify that, for a specified period of time, condition 5C does not apply for one or more specified action management plans.</p> <p>Note: conditions 5A, 5B, 5C and 5D are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised action management plan, at any time, to the Minister for approval.</p>
Variation dated 7/4/2016	6. Revoked
As varied on the date this instrument was signed	7. Unless otherwise agreed to in writing by the Minister , the approval holder must publish the management plans referred to in these conditions of approval on the website . The management plans must be published on the website within 1 month of being approved by the Minister or being submitted under condition 5B.
Original dated 18/7/2013	<p>8. If, at any time after five (5) years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence this action without the written agreement of the Minister.</p> <p>Note: The date in condition 8 refers to the date of the approval decision (18 July 2013).</p>
As varied on the date this instrument was signed	<p>9. To mitigate impacts to Carnaby's Black Cockatoo (<i>Calyptorhynchus latirostris</i>):</p> <ul style="list-style-type: none"> (a) At least 1.72 hectares of Carnaby's Black Cockatoo foraging habitat, must be retained and clearing of Carnaby's Black Cockatoo foraging habitat must not exceed 0.30 hectares within the areas shaded in green at <u>Attachment A1</u>;

Date of decision	Conditions attached to approval
	<p>(b) clearing of Carnaby's Black Cockatoo habitat in the areas shaded blue at <u>Attachment A1</u> must not exceed 40.57 hectares; and</p> <p>(c) total clearing of Carnaby's Black Cockatoo foraging habitat within areas shaded blue and areas shaded green at <u>Attachment A1</u> must not exceed 43.45 hectares.</p>
Variation dated 21/7/2014	<p>10. To protect and enhance habitat for Carnaby's Black Cockatoo, the approval holder must prepare and submit a <i>Conservation Management Plan</i> (the plan) detailing management of habitat for Carnaby's Black Cockatoo that is to be retained on the proposal site, for the Minister's approval. The plan must include:</p> <ul style="list-style-type: none"> (a) measures to physically delineate areas that will be retained; (b) erosion and dust control measures during construction; (c) the management of weeds, <i>Phytophthora</i> dieback, bushfire and feral animals; (d) identification of any degraded habitat and how those areas will be managed; (e) a monitoring program for Carnaby's Black Cockatoo and their habitat; (f) details of who will be responsible for the long-term management of the retained land, and how the land will be protected in the long-term; (g) a commitment to fund all management actions in the two Parks and Recreation areas within the site boundary marked in green at <u>Attachment B</u> until the management of those areas is handed over to another party, including the amount of funding that will be allocated to these management actions; (h) performance indicators and corrective actions; (i) roles and responsibilities; and (j) timeframes for the implementation of the above measures. <p>If the Minister approves the plan, the approved plan must be implemented.</p>
Original dated 18/7/2013	<p>11. Within 5 years of the substantial commencement of the action, the approval holder must provide the Department with written evidence that the two green areas of Parks and Recreation within the site boundary at <u>Attachment B</u>, have been granted to the City of Wanneroo for the purpose of conservation.</p>
As varied on the date this instrument was signed	<p>12. To mitigate impacts to Carnaby's Black Cockatoo, the approval holder must submit a <i>Clearing and Revegetation Management Plan</i> for the Minister's approval. The plan must include:</p> <ul style="list-style-type: none"> (a) a commitment to the staged collection of native seed from the areas shaded blue and areas shaded green at <u>Attachment A1</u>, prior to the clearing of these areas, for use in revegetation; (b) a commitment to store native seed and either use it on-site for revegetation or transport it to a seed bank or receiving site(s) where revegetation is being undertaken by WA DPaW or another receiving party (or parties); (c) detailed protocols for staged collection and use of native seed required by conditions 12(a) and 12(b) including:

Date of decision	Conditions attached to approval
	<ul style="list-style-type: none"> i. the optimal methodology for native seed collection from the proposal site; ii. how clearing will be staged to best harvest and utilise the native seed resource for revegetation; iii. how native seed will be stored and transported; and iv. onsite supervision and implementation monitoring mechanisms. <p>The approval holder must implement the <i>Clearing and Revegetation Management Plan</i> approved by the Minister in writing.</p>
Variation dated 21/7/2014	<p>13. The approval holder must not undertake any clearing of habitat for Carnaby's Black Cockatoo on the proposal site unless:</p> <ul style="list-style-type: none"> (a) the <i>Conservation Management Plan</i> required under condition 10 has been approved by the Minister; and (b) the <i>Clearing and Revegetation Management Plan</i> required under condition 12 has been approved by the Minister.
Variation dated 21/7/2014	<p>14. To offset the loss of habitat for Carnaby's Black Cockatoo, prior to the commencement of construction, the approval holder must provide the Department with written evidence of the provision of funds to WA DPaW for the acquisition of the offset property on Lot 24, Mimegarra Road, Lancelin, WA (Attachment C). The written evidence must be accompanied with the offset attributes and Shapefile.</p>
As varied on the date this instrument was signed	<p>15. To offset the additional loss of habitat for Carnaby's Black Cockatoo, the approval holder must provide the Department with written evidence of the provision of funds to WA DPaW to acquire 34 hectares of Carnaby's Black Cockatoo habitat (the additional offset). The written evidence along with the offset attributes and Shapefile must be provided to the Department prior to undertaking the clearing of up to 2.88 hectares within the areas shaded green at <u>Attachment A</u> as specified in condition 9(a) prior to the variation made on the date this instrument was signed.</p>
As varied on the date this instrument was signed	<p>16: To offset the further additional loss of habitat for Carnaby's Black Cockatoo, the approval holder must provide a second additional offset comprising either:</p> <ul style="list-style-type: none"> a) Legal securement in perpetuity of an offset site that: <ul style="list-style-type: none"> i. is a property containing no less than 40 ha of Carnaby's Black Cockatoo habitat with a habitat quality score of 8 or more out of 10 in accordance with the Environmental Offsets Policy and maintained for conservation; and ii. fully offsets the further additional loss of habitat in accordance with the Environmental Offsets Policy; and iii. has been agreed to by the Minister in writing, prior to its legal securement; <p>OR</p> <ul style="list-style-type: none"> b) A provision of funds to the WA DBCA that demonstrably provides all necessary funding for the purchase of at least 40 hectares within an offset site containing no less than 40 ha of Carnaby's Black Cockatoo habitat with a habitat quality score of 8 or more out of 10 in accordance

Date of decision	Conditions attached to approval
	with the Environmental Offsets Policy , as agreed by the Minister in writing prior to the provision of the funds.
As varied on the date this instrument was signed	17. The approval holder must not commence works that are part of the further additional loss of habitat for Carnaby's Black Cockatoo until the approval holder has provided the second additional offset required under Condition 16.

Date of decision	Definitions attached to approval
Variation dated 7/4/2016	Additional offset is a property (or part of a property) totalling 34 or more hectares of Carnaby's Black Cockatoo habitat purchased by WA DPaW on behalf of the approval holder, which will be maintained for conservation by WA DPaW .
As varied on the date this instrument was signed	Business day means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the action.
Original dated 18/7/2013	Clearing is defined as the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation.
Original dated 18/7/2013	Commencement includes clearing and any preparatory works required to be undertaken including clearing vegetation, the erection of any fences, signage or on-site temporary structures and the use of construction or excavation equipment on site for the purpose of breaking the ground for buildings, infrastructure or resource extraction.
Original dated 18/7/2013	Construction includes any preparatory works required to be undertaken including clearing vegetation, the erection of any on-site temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure.
Original dated 18/7/2013	Department is the Australian Government Department administering the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
As varied on the date this instrument was signed	Environmental Offsets Policy means the Department's Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, October 2012
Original dated 18/7/2013	EPBC Act is the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
As varied on the date this instrument was signed	Further additional loss of habitat means the additional clearing of 2.56 ha of Carnaby's Black Cockatoo foraging habitat within areas shaded blue and areas shaded green at Attachment A1 (changed from 40.89 hectares to 43.45 hectares) enabled by the variation of condition 9 on the date this instrument was signed.
Variation dated 21/7/2014	Independent Revegetation Expert - Revoked
Original dated 18/7/2013	Minister is the minister administering the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and includes a delegate of the Minister .
As varied on the date this instrument was signed	Legal securement means to execute a legal status or tenure of the offset site so as to provide enduring protection against it being used in a manner incompatible with the conservation of the habitat of matters protected under the EPBC Act which it contains.

Date of decision	Definitions attached to approval
As varied on the date this instrument was signed	New or increased impact means a new or increased environmental impact or risk relating to any protected matter , or a reduced overall environmental benefit from any restoration or offsetting works, when compared to the likely impact of implementing the action management plan that has been approved by the Minister under conditions 10 and 12, including any subsequent revisions approved by the Minister , as outlined in the <i>Guidance on 'New or Increased Impact' relating to changes to approved management plans under EPBC Act environmental approvals (2017)</i> .
Original dated 18/7/2013	Offset attributes must be in the form of an excel file ('.xls') capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.
Variation dated 21/7/2014	Offset property is the property that is no less than 635 ha in size (identified as the 'Carnaby's offset site at <u>Attachment C</u>) that will be purchased by the approval holder and will be maintained for conservation by the WA DPaW on behalf of the approval holder. The offset property is Lot 24 (on Deposited Plan 75789) on Mimegarra Road, 27 kilometres north-east of Lancelin, Western Australia.
As varied on the date this instrument was signed	Primary feeding plants - Revoked
Original dated 18/7/2013	Proposal site is Lot 9036 and Part Lot 3054 Marmion Avenue, shown as the 'site boundary' in <u>Attachment A</u> .
Original dated 18/7/2013	Revegetation is the removal of weeds and the long-term establishment of native vegetation.
Original dated 18/7/2013	Shapefile means an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset Area, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format.
Original dated 18/7/2013	Substantial commencement is when 1 hectare of land on the proposal site has been impacted by clearing or construction.
Variation dated 21/7/2014	WA DER - Revoked
Variation dated 21/7/2014	WA DPaW is the Western Australian Department of Parks and Wildlife (or equivalent agency).
As varied on the date this instrument was signed	WA DBCA means the Western Australian Department of Biodiversity, Conservation and Attractions (or successor agency)
As varied on the date this instrument was signed	Website means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.

Date of
decision

Attachment A

Variation
dated
7/4/2016

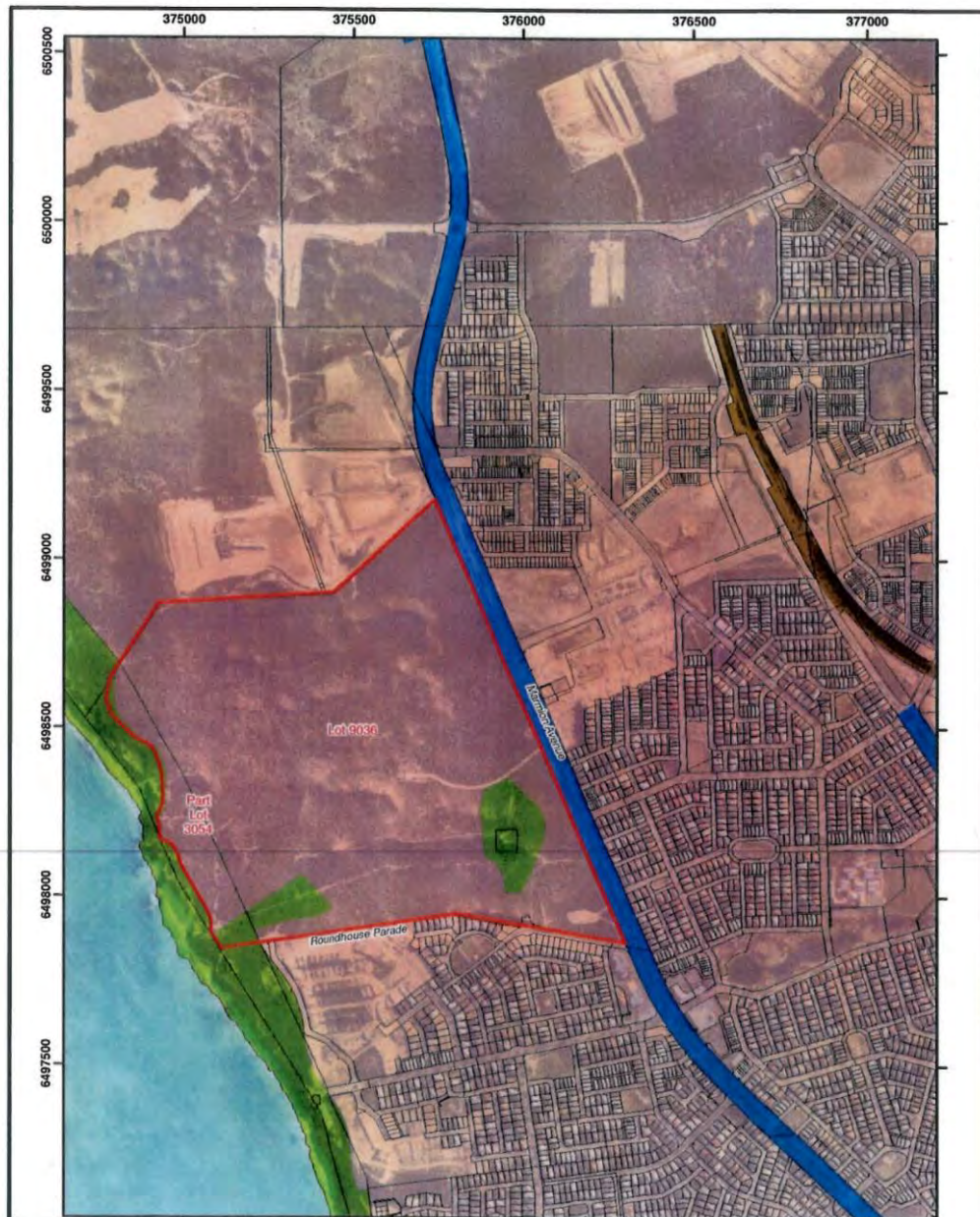




Date of
decision

Attachment B

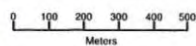
Original
dated
18/7/2013



Attachment B



Coordinate System: UTM 1994 MGA Zone 58
Date: 19/10/2012
Author: R. Ivie



1:15,000
at A4

Source: Topography: Geoscience Australia 2004. MRS: IPI 2012.
Cadastral: Online SIF Database, Landgate 09/2012.
Note that positional errors may occur in some areas.

Legend

- Site boundary
- Metropolitan Region Scheme
- Urban
- Other Regional Roads
- Parks and Recreation
- Railways
- Waterways
- Cadastral boundaries

Path: G:\GP\Corridor\2012\DC\1213301\ArcMap_documents\K001\K001B\DC12133_01_K001_RevB_1005.mxd



Date of
decision

Variation
dated
21/7/2014

Attachment C



Attachment C - Location of offset site (635 ha within Lot 24)

Scale 1:30,000 at A4

0 150 300 450 600 750 m

Coordinate System: GDA 1994 MGA Zone 50
Note that positional errors may occur in some areas

Date: 19/06/2014

Author: JChute

Source: Aerial image: Landgate, flown 27/02/2012, downloaded 02/2013.

Path: Q:\Consult\2012\EDC\EDC12133_01\ArcMap_documents\LD15\EDC12133_01_L015_AttachmentC.mxd

Legend

- Carnaby's offset site
- Lot 24 Mimegarra Road (1000 ha)



STRATEGEN
info@strategen.com.au
www.strategen.com.au

Appendix B Management works for the Parks and Recreation Reserves

Table A 1 Cost estimate for Parks and Recreation Reserve A

Description	Unit	Quantity	Cost at 2012
Preliminaries			
Preliminaries - 2%	item	1	\$19,000
Safety Hazard Study	item	1	\$5,745
Structures			
Appropriate barriers to prevent pedestrian access such as fencing	lin m	605	\$10,427
Access gate	each	6	\$1,800
Clearing of fire access track	lin m	605	\$12,100
Gravel for fire access track	sq m	1,630	\$16,300
Hardworks			
Stabilized gravel path (100mm thick)	sq m	992	\$49,012
Planting			
Dune rehabilitation (includes 1 tube/sqm and brush)	sq m	3,000	\$20,682
Total (excl GST)			\$135,066

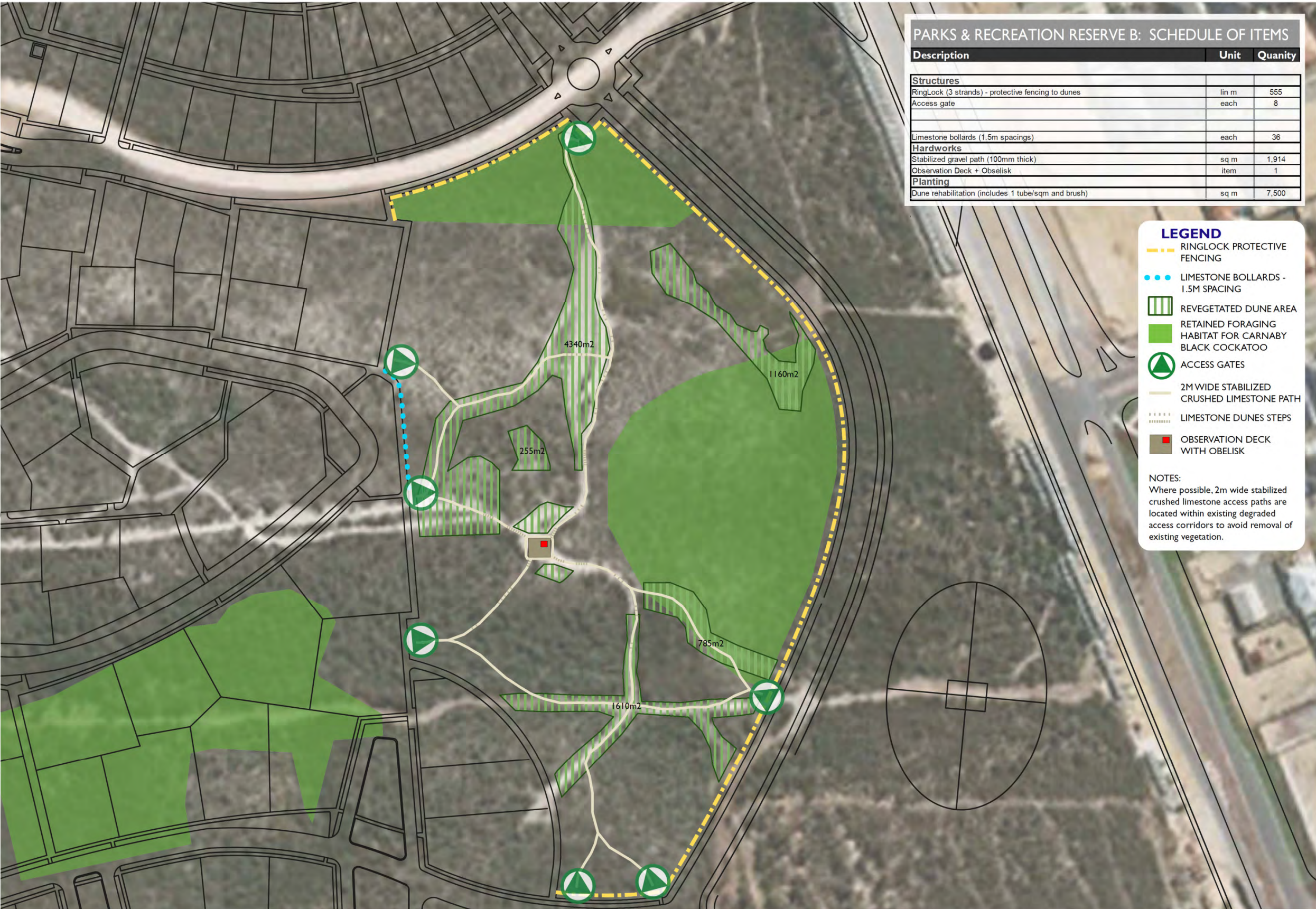
Table A 2 Cost estimate for Parks and Recreation Reserve B

Description	Unit	Quantity	Cost at 2012
Preliminaries			
Preliminaries - 2%	item	1	\$13,000
Safety Hazard Study	item	1	\$5,745
Structures			
Appropriate barriers to prevent pedestrian access such as fencing	lin m	555	\$9,565
Access gate	each	8	\$2,400
Clearing of fire access track	lin m	910	\$18,200
Gravel for fire access track	sq m	2,690	\$26,900
Limestone bollards (1.5m spacings)	each	36	\$7,200
Hardworks			
Stabilized gravel path (100mm thick)	sq m	1,914	\$94,565
Observation Deck + Obselisk	item	1	\$28,725
Planting			
Dune rehabilitation (includes 1 tube/sqm and brush)	sq m	7,500	\$51,705
Total (excl GST)			\$258,005



Jindee Innovation Project
Indicative works for Parks and Recreation Reserve A
Source: Blackwell Associates Pty Ltd 2014

Figure
1



Jindee Innovation Project
Indicative works for Parks and Recreation Reserve B
Source: Blackwell Associates Pty Ltd 2014

Figure
2

Appendix C Vegetation condition mapping

VEGETATION UNITS

- MhSp** *Melaleuca hirsuta*, *Syzygium globulosum* Closed Heath on shallow limestone
- MhSp** *Melaleuca cardophylla*, *Acacia rosea*, *Syzygium globulosum*, *Quercus arbus*, *Acacia saligna*
- MhSp** Closed Tall Scrub/Closed Heath in swales and lower slopes
- AsLSg** *Acacia saligna*, *Syzygium globulosum*, *Quercus arbus* Strimland/Open Strimland over
- AsLSg** *Phlegmarium capitatum*, *Melaleuca systena* Open Low Heath over *Lomandra maritima* Sedgeland
- AsLSg** *Eucaalyptus forsteri* Closed Strimland over *Antrozous albres* Strimland over *Antrozous albres* Heathland
- XpAs** *Xanthorrhoea preissii*, *Syzygium globulosum*, *Acacia saligna* Tall Open Scrub/Open Heath over
- XpAs** *Xanthorrhoea preissii*, *Melaleuca systena* Open Strimland over *Lomandra maritima*
- AhSg** *Lepidosperma squamatum* Open Sedgeland
- AhSg** *Agrostis laevis*, *Scoroparia globulifera* Closed Heath/Closed Low Heath over *Conostyis parviflora* ssp. ? Very Open Heathland
- B** *Banksia attenuata*, *B. menziesii* Low Woodland over *Dryandra* assae, *Melaleuca systena*, *Leucopogon polymorphus* Low Open Strimland
- B** *Banksia attenuata*, *B. menziesii* Low Woodland over *Trachyantha divaricata* Closed Heathland
- B** *Dryandra assae* Closed Tall Scrub over *Melaleuca systena* Scattered Shrubs over *Hibbertia hypericoides*, *Jacksonia calceola* Low Strimland
- DsSg** *Dryandra assae* Strimland to Tall Closed Scrub over *Xanthorrhoea preissii* Scattered Shrubs over *Jacksonia calceola*, *Hibbertia hypericoides*, *Phlegmarium capitatum* Low Open Strimland over *Trachyantha preissii*, *Angitia avensis*, *Arctostaphylos californica* Heathland
- Mixed** *Acacia trivittata*, *A. cochlearis*, *Syzygium globulosum*, *Quercus arbus* Closed Strimland over *Lepidosperma globulosum* Sedgeland/Open Sedgeland with lines of *Hemibegonia complanata*, *Conostyis parviflora* ssp. ? Heathland
- P** *Pyrosoma communis*, consisting largely of *Dryandra assae*, *Acacia pulchella* Closed Heathland
- Sg** *Syzygium globulosum* Closed/Open Heath over *Trachyantha divaricata*, *Trachyantha preissii*, *Conostyis parviflora* ssp. ? Heathland



VEGETATION UNITS

- MhSp** *Melaleuca hungatei*, *Syzygium globulosum* Closed Heath on shallow limestone
- MhSp** *Melaleuca cardophylla*, *Acacia rosea*, *Syzygium globulosum*, *Quercus arbus*, *Acacia saligna*
- MhSp** Closed Tall Scrub/Closed Heath in swales and lower slopes
- AsLSg** *Acacia saligna*, *Syzygium globulosum*, *Quercus arbus* Strubland/Open Strubland over
- AsLSg** *Phlegmarium capitatum*, *Melaleuca systena* Open Low Heath over *Lomandra maritima* Sedgeland
- AsLSg** *Eucaalyptus forsoniana* Closed Strubland over *Antrozous albres* Strubland over *Antrozous albres* Heathland
- XpAs** *Xanthorrhoea preissii*, *Syzygium globulosum*, *Acacia saligna* Tall Open Scrub/Open Heath over
- XpAs** *Leucopogon propinquus*, *Melaleuca systena* Open Strubland over *Lomandra maritima*
- AhSg** *Leptospermum squarrosum* Open Sedgeland
- AhSg** *Agrostis laevis*, *Scoroparia globulifera* Closed Heath/Closed Low Heath over *Conostyis pauciflora* ssp. ? Very Open Heathland
- B** *Banksia attenuata*, *B. menziesii* Low Woodland over *Dryandra* assae, *Melaleuca systena* Scattered Shrubs over *Rhagodia baccata*, *Hibbertia hypericoides*, *Leucopogon polymorphus* Low Open Strubland
- B** *Banksia attenuata*, *Banksia menziesii* Low Woodland over *Trachyantha divaricata* Closed Heathland
- B** *Dryandra assae* Closed Tall Scrub over *Melaleuca systena* Scattered Shrubs over *Hibbertia hypericoides*, *Jacksonia calceola* Low Strubland
- DsSg** *Dryandra assae* Strubland to Tall Closed Scrub over *Xanthorrhoea preissii* Scattered Shrubs over *Jacksonia calceola*, *Hibbertia hypericoides*, *Polypodium capillatum* Low Open Strubland over *Trachymene jelskii*, *Angitia avensis*, *Arctostaphylos californica* Heathland
- Mixed** *Acacia trivittata*, *A. cochlearis*, *Syzygium globulosum*, *Quercus arbus* Closed Strubland over *Leptospermum globulosum* Sedgeland/Open Sedgeland with lines of *Hemibegonia complanata*, *Conostyis pauciflora* ssp. ? Heathland
- P** *Pyrosoma communis*, consisting largely of *Dryandra assae*, *Acacia pulchella* Closed Heath/Closed Low Heath
- Sg** *Syzygium globulosum* Closed/Open Heath over *Trachyantha divaricata*, *Trachymene jelskii*, *Conostyis pauciflora* ssp. ? Heathland

