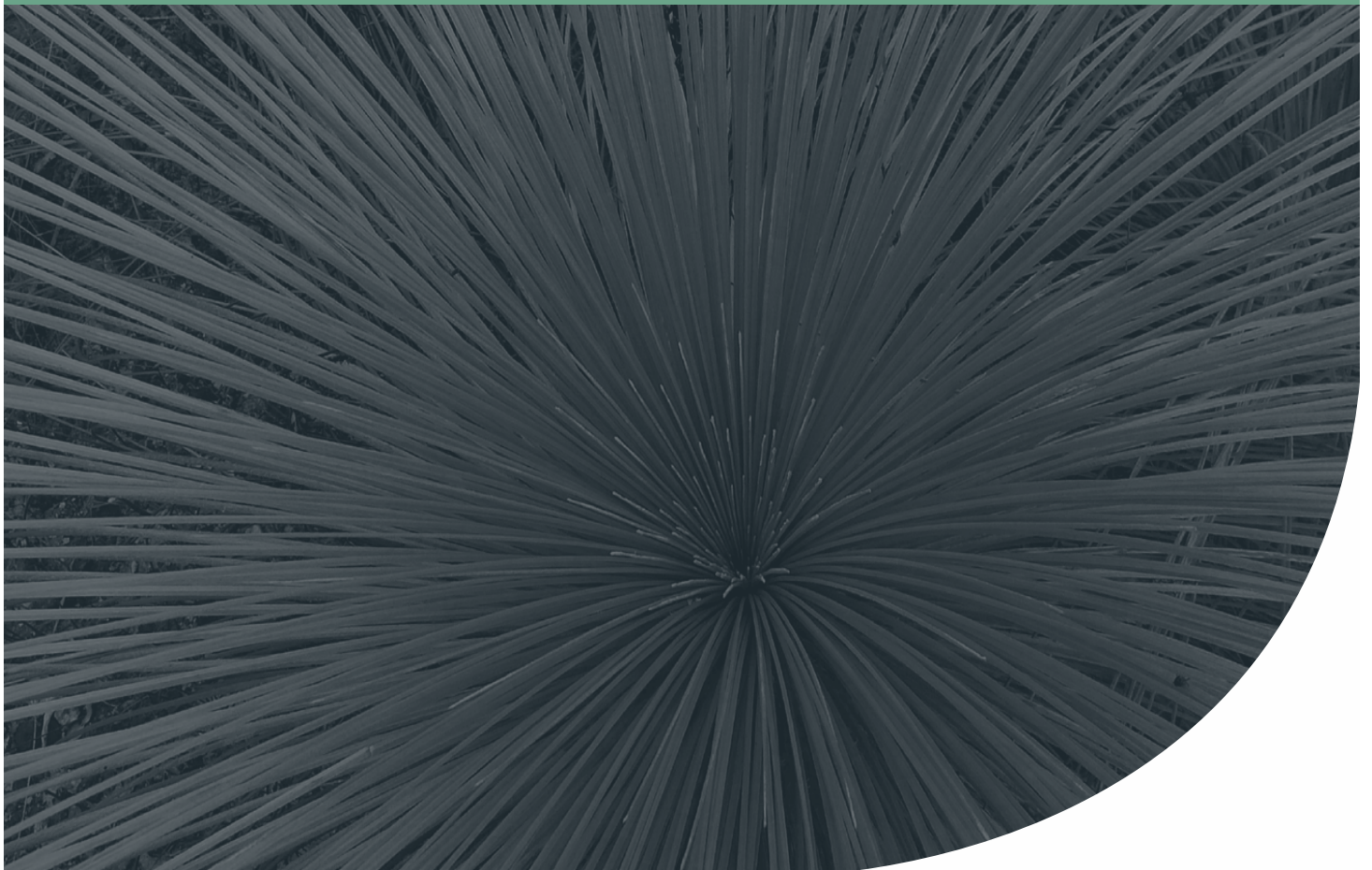


# 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach

Project No: EP19-086

**Prepared for Lendlease Communities (Alkimos) Pty Ltd  
September 2019**



# 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



## Document Control

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	For review by Lendlease				
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	Amended following Lendlease review				

# 2019 Annual Compliance Report – EPBC 2011/5902

## Alkimos Beach



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Conformance with the Conservation Area Management Plan

### **Appendix B**

Conformance with Foreshore Management Plan

### **Appendix C**

Conformance with the Precinct Revegetation and Landscape Plan

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## 1 Introduction

### 1.1 Purpose

This Annual Compliance Report (ACR) has been prepared for the purpose of fulfilling the requirements of condition 3 of *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval 2011/5902 (EPBC 2011/5902). Condition 3 requires the proponent to publish an ACR addressing compliance with each condition of EPBC 2011/5902; as follows:

*Unless otherwise agreed to in writing by the Minister, the person taking the action must, within three months of every 12 month anniversary of the commencement of the action:*

- a. publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions; and*
- b. provide to the Department documentary evidence of the date of publication and non-compliance with any of the conditions of this approval.*

### 1.2 Scope

This ACR addresses the audit period between 6 September 2018 to the 5 September 2019 for the conditions associated with EPBC 2011/5902. This ACR is due to be published on the Lendlease website by 5 December 2019.

As part of the preparation of the ACR the relevant environmental management commitments/ obligations included in the following management plans were also assessed to determine if the plans have been satisfactorily implemented:

- Conservation Area Management Plan (CAMP) (RPS 2018a) - required by condition 10.
- Foreshore Management Plan (FMP) (RPS 2018b) - required by condition 11.
- Precinct Landscape and Revegetation Plan (PLRP) (LendLease 2018) - required by condition 12.

Where a previous ACR found a condition or management commitment to be 'Completed' that finding was accepted as being applicable to the current audit period, unless circumstances to the contrary were identified, in which case the item was re-assessed.

### 1.3 Project background

Lendlease Communities (Alkimos) Pty Ltd (Lendlease) in partnership with LandCorp (now Development WA), is developing the Alkimos Beach Urban Development (the project) located approximately 40 km northwest of the Perth Central Business District.

On 30 June 2012, the project was approved by the Federal Minister for the Environment under s130(1) and 133 of the EPBC Act, with Lendlease designated as the approval holder. Construction of the project was subsequently commenced on the 5 September 2012.

The project involves clearing approximately 97 ha of native vegetation for urban development on Lot 1004, 80L Romeo Road and 2611 Marmion Avenue, Alkimos, see **Figure 1**.

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## 1.4 Approvals under the Environment Protection and Biodiversity Conservation Act 1999

On the 30 June 2012, the project received conditional approval from the Federal Minister for the Environment (EPBC 2011/5902). A number of variations to conditions have been approved since this time as detailed in **Table 1**.

*Table 1: Summary of variation to conditions*

Variation No.	Approval Date	Description
1	24 August 2012	Amending condition 14 to change the timeframe required for the condition.
2	13 June 2013	This variation was triggered by the de-listing of the Graceful Sun-Moth from the threatened species list defined under the EPBC Act. The variation includes removal of conditions 9, 15, 16, 17, Attachment B and changes to relevant definitions referring to those removed conditions. This variation also includes revision to conditions 10 and 11.
3	19 August 2016	This variation includes a revision to condition 4 of EPBC 2011/5902 to include the 'Revised Management Plan condition' whereby minor updates that do not result in a 'new or increased impact' to the protected matter can be made to management plans without requiring approval from the Minister.
4	30 November 2018	This variation includes: <ul style="list-style-type: none"> <li>• A revision to condition 3, whereby the Minister can approve the cessation of the annual compliance reports.</li> <li>• The revoking of condition 5, which relates to the Minister having the ability to request specified revisions to the management plans.</li> <li>• Inclusion of condition 12A, whereby a request can be made to the Minister to cease the implementation of a management plan and the maintenance of records for that plan.</li> </ul>

In addition to the above, there have also been a number of revisions to the three management plans since their original approval.

It is also noted that all three management plans are currently being amended in line with Variation 4 to facilitate handover of portions of the proposed action area. The revised management plans were not finalised at the time of this audit, and therefore this audit is based on the currently approved plans.

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## 2 Project status

Activities undertaken during the audit period (6 September 2018 to 5 September 2019) involved activities relating to Precinct (P) 1, 2, 3 and 4, CAMP study area and the FMP area of the Alkimos Beach development, and can be summarised as:

- Vegetation clearing occurred in P3 and P4 within the project area.
- 0.15 ha of Carnaby Black Cockatoo foraging habitat was cleared, and therefore clearing to date is 21.01 ha.
- Civil construction occurred in P2, P3 and P4.
- CAMP study area:
  - Maintained 2.08 ha within the CAMP study area.
  - Monitoring within the CAMP study area including:
    - Informal inspections to assess weeds, fire risk, erosion control and access.
    - Repairing of fencing.
- FMP area:
  - Revegetation of and maintained 2.7 ha (as of Autumn 2019) within the FMP area.
  - Monitoring and maintenance within the FMP area including:
    - Infill planting.
    - Initial planting within the lookout and associated blowout.
    - Erosion control including installation of coir netted areas and brushing to stabilise the surfaces.
    - Weed control.
    - Replacing signage.
    - Repairing and installing fencing.
    - Site inspections for rabbits.
    - Informal inspections.
- PLRP Study area
  - Monitoring and maintenance within POS areas dedicated to Carnaby Cockatoo (CC) foraging species (known herein as 'CC POS') including:
    - Informal inspections of CC POS.
  - Handover of CC POS U and D to the City of Wanneroo (CoW) within this audit period.

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### 3 Audit methodology

The audit reported on in this ACR, addresses the period between 6 September 2018 and 5 September 2019 for the conditions and commitments of EPBC 2011/5902.

It is recognised that, as reported in the 2018 ACR, the CAMP's three-year rehabilitation monitoring period has been completed, and therefore the rehabilitation elements of the CAMP have ceased. As such, this audit of the CAMP will focus on assessing and verifying the ongoing implementation of the CAMP, specifically the measures undertaken to achieve the following CAMP objective:

- *Minimise the impact of activities that could degrade Carnaby's Black-Cockatoo habitat.*

As such evidence required to demonstrate ongoing implementation of the CAMP is considered to include the following, as related to Condition 10c-f:

- Any actions taken to manage weeds and feral pests.
- Any actions taken relating to bushfire prevention and management.
- Any actions taken to monitor and manage erosion.
- Any actions taken to monitor and manage access.

The 2019 compliance audit was undertaken in August and September 2019 and involved:

- A site inspection by Anna Welker from Emerge Associates on the 3 September 2019.
- Interviews with key members of the project team.
- Review of documentation provided by key members of the project team.

Key personnel consulted as part of the audit are listed in **Table 2**.

*Table 2: Key personnel consulted during the audit*

Personnel	Organisation and Position
Nadja Kampfenkel	Lendlease Communities Sustainability Manager WA
Jacob Abbott	Lendlease Communities Assistant Development Manager
Peter Grose	Tranen Managing Director Project Revegetation Consultant
Emma Carr	Emerge Associates Senior Landscape Architect Project Landscape Architect



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## 3.1 Audit terminology

The 'Compliance Status' field of the audit tables describes the implementation of actions and compliance with the approval. **Table 3** details the terminology that has been applied in this audit.

Table 3: Audit terminology

Compliance status term	Abbreviation	Description
Regulatory requirements - applicable to the conditions of approval		
Compliant	C	When all the requirements of a condition have been met, including the implementation of management plans or other measures required by those conditions.
Completed	CLD	Where a requirement with a finite period of application has been satisfactorily completed.
Not Applicable	N/A	Where the requirements of a condition or elements of a condition fall outside of the scope of the current reporting period. For example a condition which applies to an activity that has not yet commenced.
Non-compliant	NC	Where the requirements of a condition or elements of a condition, including the implementation of management plans and other measures, have not been met.
Corporate policies, standards and procedures – applicable to the CAMP, FMP and PLRP		
Conformant	C	When sufficient evidence has been provided to confirm that the requirements within a corporate policy, standard and/or procedure (including an environmental management plan) has been satisfactory implemented.
Completed	CLD	Where a requirement with a finite period of application has been satisfactorily completed.
Not Applicable	N/A	Where the requirements of a corporate policy, standard and/or procedure (including an environmental management plan) fall outside of the scope of the current reporting period. For example a management plan which applies to an activity that has not yet commenced.
Non-conformant	NC	Where the requirements within a corporate policy, standard and/or procedure (including an environmental management plan) have not been satisfactory implemented.

\*adapted from OEPA (2012b); (OEPA 2012a); DoEE (2014); (Graham A Brown & Associates 2014); OEPA (Undated)

## 4 Audit findings

The results of the 2019 audit of EPBC 2011/5902 are shown in **Table 6**.

The results of the 2019 audit of conformance with the ongoing objectives of the CAMP (condition 10) are outlined in **Appendix A**, and for the management actions within the FMP (condition 11) and PLRP (condition 12) within **Appendix B** and **Appendix C**, respectively.

A total of 122 items were audited from EPBC 2011/5902, CAMP, FMP and PLRP.

### 4.1 Compliance with EPBC 2011/5902 conditions

No non-compliances with conditions of EPBC 2011/5902 (**Table 6**) were identified during the audit.

#### 4.1.1 Conformance with the Conservation Area Management Plan

Based on the audit methodology specified in **Section 3**, no non-conformances with the requirements of the CAMP (**Appendix A**) were identified during the audit.

#### 4.1.2 Conformance with the Foreshore Management Plan

No non-conformances with the requirements of the FMP (**Appendix B**) were identified during the audit.

In accordance with the FMP (refer to audit item FMP 60), this ACR is required to contain a foreshore CC habitat revegetation section which will include material that relates to the following:

- Revegetation completion criteria and weed monitoring.
- Revegetation and weed contingency actions if required.
- Erosion monitoring within the foreshore area.
- Report observations of feral pests.
- Temporary fencing, pathways and signage of the revegetation area.
- Report any fire incidences in the foreshore and the response.

The information required to address FMP 60 is provided in **Table 4**, and is based on advice from Lendlease, Tranen and Georgiou (the civil construction contractor).

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Table 4: Foreshore CC habitat revegetation performance

Action item	Comment																														
Revegetation completion criteria and weed monitoring	Monitoring of the FMP completion criteria commenced in Spring 2015. Monitoring results for the last two years are reported below. See the 2018 ACR for the first two years of monitoring results (Spring 2015, Autumn 2016, Spring 2016, Autumn 2017).																														
	<table border="1"> <thead> <tr> <th>Year after planting</th> <th>Targets</th> <th>Spring 2017 (overall mean)</th> <th>Autumn 2018 (overall mean)</th> <th>Spring 2018 (overall mean)</th> <th>Autumn 2019 (overall mean)</th> </tr> </thead> <tbody> <tr> <td>Survival (established plant density – both planting and seeding)</td> <td>90% (Yr 1) (equivalent to 1.8 plants /m2)  70% (Yr 2) (equivalent to 1.4)</td> <td>See average plant density</td> <td>See average plant density</td> <td>See average plant density</td> <td>See average plant density</td> </tr> <tr> <td>Average plant density (plants/m2)</td> <td>1.7 to 2 plants /m2</td> <td>2.9</td> <td>2.8</td> <td>2.8</td> <td>2.6</td> </tr> <tr> <td>Plant coverage (% area of visual ground cover measured by a botanist/ revegetation consultant)</td> <td>25% (Yr 1) 50% (Yr 2)</td> <td>43</td> <td>53</td> <td>54</td> <td>53</td> </tr> <tr> <td>Weeds coverage</td> <td>10%</td> <td>&lt;1</td> <td>&lt;1</td> <td>&lt;1</td> <td>&lt;1</td> </tr> </tbody> </table>	Year after planting	Targets	Spring 2017 (overall mean)	Autumn 2018 (overall mean)	Spring 2018 (overall mean)	Autumn 2019 (overall mean)	Survival (established plant density – both planting and seeding)	90% (Yr 1) (equivalent to 1.8 plants /m2)  70% (Yr 2) (equivalent to 1.4)	See average plant density	See average plant density	See average plant density	See average plant density	Average plant density (plants/m2)	1.7 to 2 plants /m2	2.9	2.8	2.8	2.6	Plant coverage (% area of visual ground cover measured by a botanist/ revegetation consultant)	25% (Yr 1) 50% (Yr 2)	43	53	54	53	Weeds coverage	10%	<1	<1	<1	<1
	Year after planting	Targets	Spring 2017 (overall mean)	Autumn 2018 (overall mean)	Spring 2018 (overall mean)	Autumn 2019 (overall mean)																									
	Survival (established plant density – both planting and seeding)	90% (Yr 1) (equivalent to 1.8 plants /m2)  70% (Yr 2) (equivalent to 1.4)	See average plant density	See average plant density	See average plant density	See average plant density																									
	Average plant density (plants/m2)	1.7 to 2 plants /m2	2.9	2.8	2.8	2.6																									
Plant coverage (% area of visual ground cover measured by a botanist/ revegetation consultant)	25% (Yr 1) 50% (Yr 2)	43	53	54	53																										
Weeds coverage	10%	<1	<1	<1	<1																										
Revegetation and weed contingency actions if required	<p>Overall mean plant coverage and average plant density during the audit period was above all criteria.</p> <p>Further infill planting has been conducted in the FMP area where the plant coverage and species richness for specific quadrats indicate that revegetation is required. Seedlings for infill planting for the next planting season have also been ordered, primarily for the lookout and its blowout, and some for the beach blowout, which have lower than average plant densities and /or plant % cover. Poor plant survival at the lookout and associated blowout was considered largely attributed to human foot traffic and repeated removal of brushing material by third party individuals to make various play structures. Access control measures have been implemented to minimise this impact in the future.</p> <p>Weed control by herbicide spraying and manual removal continues to be undertaken as per the FMP requirements.</p>																														
Erosion monitoring within the foreshore area	<p>Erosion controls were put in place as part of the initial revegetation works (brushing and mulch).</p> <p>Coir netting and brushing was placed to stabilise the surfaces around the lookout and its access paths as these areas were planted for the first time in this audit period. As per above, both blowout locations have had brushing repeatedly removed during the audit period. To deter the removal of brushing by the public, in discussion with the CoW, larger brush has now been wired to star pickets.</p>																														
Report observations of feral pests	<p>No evidence of any significant pest activity was noted on the site, although a few rabbit scats were observed in one spot on the north beach road during the Autumn 2019 monitoring period.</p> <p>An independent fauna specialist undertook an additional site visit on 10 May 2019. During the visit, no major areas of disturbance as a result of rabbits was noted. No further action was considered to be required.</p>																														

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Table 4: Foreshore CC habitat revegetation performance

Action item	Comment
Temporary fencing, pathways and signage of the revegetation area	<p>Temporary fencing, boulders and signs have been installed in key areas to restrict access to the revegetation areas. Tracks not required for use have been revegetated.</p> <p>Regular monitoring of the temporary fencing is carried by the construction contractor and no issues were noted. The Spring monitoring report, indicated that the metal sign located to the north of the lookout blowout, was absent. As such in August 2019, additional metal signs were installed to the north of the blowout.</p> <p>Unauthorised motorbike access was also noted in the Area Previously Designated for Maintenance and Emergency Vehicle Access (APDMEVA) revegetation area at the time of the site inspection, including damage to the boundary fence and a removal of a sign. Lendlease has confirmed that the fence and sign will be repaired as soon as possible.</p>
Report any fire incidences in the foreshore and the response.	No fire incidents have been observed to date.

## 4.1.3 Conformance with the Precinct Landscape and Revegetation Plan

No non-conformances with the requirements of the PLRP (**Appendix C**) were identified during the audit.

In accordance with the annual reporting requirements outlined in the PRLP (audit item PLRP 19), this ACR is required to include material related to the following:

- An update of any completed stages or tendered landscape for future stages.
- Report against planting targets and landscape survival targets.
- Update of completed tree planting for each stage.
- Amendments to precinct and staging plans.
- Updated plant schedules for each stage of the development.

The information required to address PLRP 18 is provided in **Table 5**, and is based on advice from Lendlease, the landscape team at Emerge Associates and Georgiou.

Table 5: Precinct Landscape and Revegetation Plan CC habitat planting performance

Action item	Comment
Provide an update of any completed or tendered landscape for future stages.	A summary of the works undertaken during the audit period, including plant schedules provided in <b>Appendix D</b> .
Report against planting targets.	Tracking against the rehabilitation targets is provided in <b>Appendix D</b> , including tree and shrub tracking spreadsheets.
Update of completed tree planting for each stage.	An update of completed planting with CBC POS is provided in <b>Appendix E</b> , including specific species numbers.
Amendments to precinct and staging plans.	The most up to date precinct plan is provided in <b>Appendix F</b> . The most up to date staging plan is provided in <b>Appendix E</b> .
Updated plant schedules for each stage of the development.	Updated plant schedules for each stage is provided in <b>Appendix E</b> .

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Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
1	Within 30 days after the commencement of Construction, the person taking the action must advise the Department in writing of the actual date of commencement.	CLD	This item is reported as completed in the 2014 ACR.	R001_Strategen EPBC 2011_5902 ACR 2014
2	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of 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.	C	Accurate records for all applicable conditions have been maintained and were available at the time of the audit and following the audit.	Refer to other items in this table and appendices.
3	Unless otherwise agreed to in writing by the Minister, the person taking the action must, within three months of every 12 month anniversary of the commencement of the action: a) publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions; and b) provide to the Department documentary evidence of the date of publication and non-compliance with any of the conditions of approval	C	DoEE was notified via email on the 4 December 2018 that the 2018 compliance report was published on the Alkimos Beach website on the 4 December 2018.  No non-compliances were reported within the 2018 compliance report.	E003_Lendlease_Annual compliance report 2018 to DoEE  E004_Lendlease_Date of website publication  P001_Emerge Associates Snapshot of AB website_MP links  R003_Strategen EPBC20115902 ACR 2018
4.1	a) The person taking the action may choose to revise the CAMP, FMP and PLRP approved by the <b>Minister</b> under conditions 10, 11 and 12 without submitting it for approval (including approval under section 143A of the EPBC Act), if the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact.	N/A	The CAMP, FMP and PLRP were not revised during this audit period.	N/A

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Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
4.2	<p>If the person taking the action makes this choice they must:</p> <p>i) Notify the Department in writing that the approved plan has been revised and provide the Department with:</p> <ul style="list-style-type: none"> <li>• an electronic copy of the revised plan</li> <li>• an explanation of the differences between the revised plan and the approved plan; and</li> <li>• the reasons the person taking the action considers that taking the action in accordance with the revised plan would not be likely to have a new or increased impact.</li> </ul>	N/A	Refer to Condition Ref. 4.1 above.	
4.3	<p>ii) Declare in writing a date on which the revised plan will first be implemented by the person taking the action. That date of initial implementation must be at least 28 days after the revised plan is submitted.</p>	N/A	Refer to Condition Ref. 4.1 above.	
4.4	<p>b) The person taking the action may revoke their choice under condition 4.a) at any time by giving written notice to the Department, in which case from the following day the person taking the action must implement the approved plan.</p>	N/A	The proponent has chosen not to revoke their choice under condition 4 a) (Condition Ref 4.1) during this audit period.	N/A
4.5	<p>c) If the <b>Minister</b> gives a notice to the person taking the action that the <b>Minister</b> is satisfied that the taking of the action in accordance with the revised plan would be likely to have a new or increased impact, then:</p> <ol style="list-style-type: none"> <li>i. Condition 4.a) does not apply, or ceases to apply, in relation to the revised plan; and</li> <li>ii. The person taking the action must implement the approved plan.</li> </ol> <p>To avoid any doubt, this condition does not affect any operation of conditions 4.a) and 4.b) in the period before the day the notice is given.</p>	N/A	Refer to Condition Ref. 4.1 above.	

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Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
4.6	At the time of giving the notice the <b>Minister</b> may also notify that for a specified period of time condition 4.a) does not apply for one or more specified plans required under the approval.	N/A	Refer to Condition Ref. 4.1 above.	
5	<i>Revoked.</i>			
6	If, at any time after five years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the <b>Minister</b> .	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013
7.1	Unless otherwise agreed to in writing by the <b>Minister</b> , the person taking the action must publish all management plans referred to in their conditions of approval on their website.	C	The approved PLRP, CAMP and FMP were sighted on the Alkimos Beach website during the audit period (13 August 2019) at:  <a href="https://communities.lendlease.com/western-australia/alkimos-beach/living-in-alkimos-beach/sustainability/">https://communities.lendlease.com/western-australia/alkimos-beach/living-in-alkimos-beach/sustainability/</a>	N/A
7.2	Each management plan must be published on the website within 1 month of being approved and must remain on the website for the life of the project.	C	The 2018 ACR noted that the revised plans were posted on the Alkimos Beach Website within one month of re-approval.  The approved PLRP, CAMP and FMP were sighted on the Alkimos Beach website during the audit period (13 August 2019) at:  <a href="https://communities.lendlease.com/western-australia/alkimos-beach/living-in-alkimos-beach/sustainability/">https://communities.lendlease.com/western-australia/alkimos-beach/living-in-alkimos-beach/sustainability/</a>	R003_Strategen EPBC 2011_5902 ACR 2018

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Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
8	The person taking the action must not clear more than 21.1 ha of Carnaby's Black Cockatoo foraging habitat from Lot 1004, 80L Romero Road and 2611 Marmion Avenue, Alkimos, Western Australia.	C	During the audit period 0.15 ha of CC foraging habitat was cleared within Lot 1004, 80L Romero Road and 2611 Marmion Avenue, Alkimos. <sup>1</sup>  Total clearing to date is 21.01 ha.	D001_RobertsDay CBC clearing area 2019  E002_Robertsday_Clearing undertaken 2019
9	<i>Revoked.</i>			
10.1	To protect habitat for listed threatened species, the person taking the action must prepare and submit a Conservation Area Management Plan (CAMP) detailing management of POS (designated Conservation POS at Attachment A), for the approval by the <b>Minister</b> . The CAMP must include: <ul style="list-style-type: none"> <li>a) at least 2 ha of Carnaby's Black-Cockatoo foraging habitat to be retained and rehabilitated in POS on the project area, as shown in Attachment A, to be managed for habitat recovery, protection and conservation;</li> <li>b) details of supplementary planting equivalent to at least 1 ha of Carnaby's Black-Cockatoo foraging habitat on the project area (to be spread across conservation POS and ROS), including timeframes and survival targets proposed for plantings;</li> <li>c) measures to manage weeds and feral pests;</li> <li>d) bushfire prevention and management measures;</li> <li>e) erosion control measures;</li> <li>f) access management (including boardwalks, pathways, signage and fencing);</li> <li>g) performance indicators and corrective measures;</li> <li>h) monitoring and reporting measures;</li> <li>i) roles and responsibilities of contractors, staff and the person taking the action; and</li> <li>j) time frames for the implementation and management of the above measures.</li> </ul>	CLD	No revisions were made to this plan during this audit period. This condition was noted to be compliant in the 2018 ACR and therefore considered complete.	R003_Strategen EPBC 2011_5902 ACR 2018

<sup>1</sup> As a note, the Lot that clearing occurred during this audit period is now balance Lot 9045 on Deposited Plan 415997.



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Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
10.2	The CAMP must be submitted to the Department within 12 months of the date of approval.	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013
10.3	If the <b>Minister</b> approves the CAMP, the approved plans must be implemented.	C	It is recognised that, as reported in the 2018 ACR, the CAMP's three-year rehabilitation monitoring period has been completed, and therefore the rehabilitation elements of the CAMP have ceased to be implemented. As such, only the ongoing obligations of the CAMP were assessed during this audit period and it was found that of the five ongoing obligations identified all were conformant.  Refer to <b>Appendix A</b> for further detail.	
10.4	No construction can commence in the area shown as the No Clearing area on Attachment C until the CAMP is approved by the <b>Minister</b> .	CLD	This item is reported as compliant in the 2014 ACR, and is considered completed.	R001_Strategen EPBC 2011_5902 ACR 2014

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
11	To protect habitat for listed threatened species, the person taking the action must prepare and submit a Foreshore Management Plan (FMP) detailing management of ROS on the project area (designated Regional Parks and Recreation at Attachment A), for approval by the <b>Minister</b> . The FMP must include: <ol style="list-style-type: none"> <li>details of supplementary planting equivalent to at least 1 ha of Carnaby's Black-Cockatoo foraging habitat on the project area (to be spread across conservation POS and ROS), including timeframes and survival targets proposed for plantings;</li> <li>details of funding to be provided for long-term conservation management of ROS and details of the entity who will be responsible for management of ROS;</li> <li>measures to manage weeds and feral pests;</li> <li>bushfire prevention and management measures;</li> <li>erosion control measures;</li> <li>access management (including visitor facilities, boardwalks, pathways, signage and fencing);</li> <li>performance indicators and corrective measures;</li> <li>monitoring and reporting measures;</li> <li>roles and responsibilities of contractors, staff and the person taking the action; and</li> <li>time frames for the implementation and management of the above measures.</li> </ol>	CLD	No revisions were made to this plan during this audit period. This condition was noted to be compliant in the 2018 ACR and therefore considered complete.	R003_Strategen EPBC 2011_5902 ACR 2018
11.2	The FMP must be submitted to the Department within 12 months of the date of approval.	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013
11.3	If the <b>Minister</b> approves the FMP, the approved plans must be implemented.	C	The key actions of the FMP were assessed during this audit period and it was found that of the 69 key actions identified within the FMP: <ul style="list-style-type: none"> <li>• 61 conformant</li> <li>• 6 completed</li> <li>• 2 N/A.</li> </ul> Refer to <b>Appendix B</b> for further detail.	

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
11.4	No construction can commence in the area shown as the No Clearing area on Attachment C until the FMP is approved by the <b>Minister</b> .	CLD	This item is reported as compliant in the 2014 ACR and is considered completed.	R001_Strategen EPBC 2011_5902 ACR 2014
12	To protect habitat for listed threatened species the person taking the action must prepare and submit a Precinct Landscape and Revegetation Plan (PLRP) for the project area, for approval by the <b>Minister</b> . The PLRP must include: <ol style="list-style-type: none"> <li>measures to establish the equivalent of at least 5 ha of Carnaby's Black-Cockatoo habitat on the project area, through streetscape and landscape planting;</li> <li>at least 50% of plantings of trees and shrubs in streetscape and landscape planting must consist of plant species known to be primary feeding plants for Carnaby's Black-Cockatoo;</li> <li>timeframes and survival targets proposed for plantings;</li> <li>contingency measures if survival targets are not achieved;</li> <li>monitoring and reporting measures;</li> <li>roles and responsibilities of contractors, staff and the person taking the action; and</li> <li>timeframes for the implementation and management of the above measures.</li> </ol>	CLD	No revisions were made to this plan during this audit period. This condition was noted to be compliant in the 2018 ACR and therefore considered complete.	R003_Strategen EPBC 2011_5902 ACR 2018
12.2	The PLRP must be submitted to the Department within 12 months of the date of approval.	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013
12.3	If the <b>Minister</b> approves the PLRP, the approved plans must be implemented.	C	The key actions of the PLRP were assessed during this audit period and found that of the 18 actions identified within the PLRP: <ul style="list-style-type: none"> <li>• 13 conformant</li> <li>• 1 completed</li> <li>• 4 N/A.</li> </ul> Refer to <b>Appendix C</b> for further detail.	

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
12.4	No construction can commence in the area shown as the No Clearing area on Attachment C until the PLRP is approved by the <b>Minister</b> .	CLD	This item is reported as compliant in the 2014 ACR and is considered completed.	R001_Strategen EPBC 2011_5902 ACR 2014
12A.1	The person taking the action may, with written agreement of the <b>Minister</b> , cease to implement the CAMP, FMP and/or PRLP. If the person taking the action wishes to cease implementing the CAMP, FMP and/or PRLP, the person taking the action must submit a request to the <b>Minister</b> which: <ul style="list-style-type: none"> <li>a) includes a report demonstrating that the outcomes and performance indicators of the approved CAMP, FMP and/or PRLP have been achieved;</li> <li>b) specifies the entity that will implement the CAMP, FMP and/or PRLP in the future;</li> <li>c) includes written agreement from the entity to implanting the approved CAMP, FMP and/or PRLP and</li> <li>d) sets out the entity's capacity to implement the CAMP, FMP and/or PRLP.</li> </ul>	N/A	No request was made to cease the implementation of the CAMP, FMP and or/PRLP.	N/A
12A.2	If the <b>Minister</b> agrees to the request, the person taking the action may cease to implement the CAMP, FMP and/or PRLP, to maintain associated records (Condition 2) and/or report on implementation of the CAMP, FMP and/or PRLP (Condition 3).	N/A	Refer to Condition Ref. 12A.1 above.	
13.1	To offset the loss of habitat for Carnaby's Black-Cockatoo, the person taking the action must, within 12 months of the commencement of construction, provide funds to WA DEC for the acquisition, and a contribution to management of the offset described in Alkimos Lot 1004 Residential Development Mitigation and Offsets Strategy for Matters of National Environmental Significance (Eco Logical Australia, January 2012).	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table 6: Compliance within conditions in EPBC 2011/5902

Condition Reference	Condition	Compliance Status	Comment	Evidence
13.2	The offset land must be at least 126 ha of freehold land in the Gingin area and contain vegetation that has equivalent or better foraging habitat for Carnaby's Black-Cockatoo, including Banksia woodland/shrubland. Within 4 weeks of the funding being provided to the WA DEC, the person taking the action must provide written evidence to the Department of the payment.	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013
14	Within 12 months of the commencement of construction, the person taking the action must provide the Department with a description and map clearly defining the location and boundaries of the offset property described at Condition 13, which must be accompanied with the offset attributes and a shapefile.	CLD	This item is reported as completed in the 2013 ACR.	R002_Lendlease EPBC20115902 ACR 2013



## 5 Recommendation

It is recommended that actions identified in the latest FMP study area monitoring reports are implemented, particularly those measures regarding plant cover and density within the lookout and its blowout, as well as continued monitoring of access into these areas by third parties. Infill planting at the beach blowout should also take into consideration the recent impacts from erosion that was noted during the site visit.

It is also recommended that agreement be sought from the Minister as per Condition 12 A, to cease the implementation of the PLRP for CC POS D and U, given that these POS areas have now been handed over to the CoW. In addition, it is recommended that frequent monitoring of CC POS G is undertaken to ensure that this POS meets the 90% survival target at handover.

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



## 6 References

### 6.1 General references

Department of Environment and Energy (DoEE) 2014, *Annual Compliance Report Guidelines*, Canberra.

Graham A Brown & Associates 2014, *Environmental Audit Guidebook*, Thomson Reuters.

LendLease 2018, *Precinct Landscape and Revegetation Plan (Commonwealth)*, V5.

Office of the Environmental Protection Authority (OEPA) 2012a, *Post Assessment Guideline for Preparing a Compliance Assessment Report*.

Office of the Environmental Protection Authority (OEPA) 2012b, *Post Assessment Guidelines for Preparing an Audit Table*.

Office of the Environmental Protection Authority (OEPA) Undated, *Post Assessment Form 2 for a Statement of Compliance*, Perth, WA.

RPS 2018a, *Conservation Area Management Plan (Commonwealth)*, L1234701:2, Rev 3.

RPS 2018b, *Foreshore Management Plan (Commonwealth)*, L1234701, Rev 5.



# Figures



*Figure 1: Carnaby's Black Cockatoo habitat*








**LEGEND**

 SUBJECT LAND

**CARNABYS BLACK COCKATOO**


 RETENTION (0.14ha)


 LOSS (21.14ha)

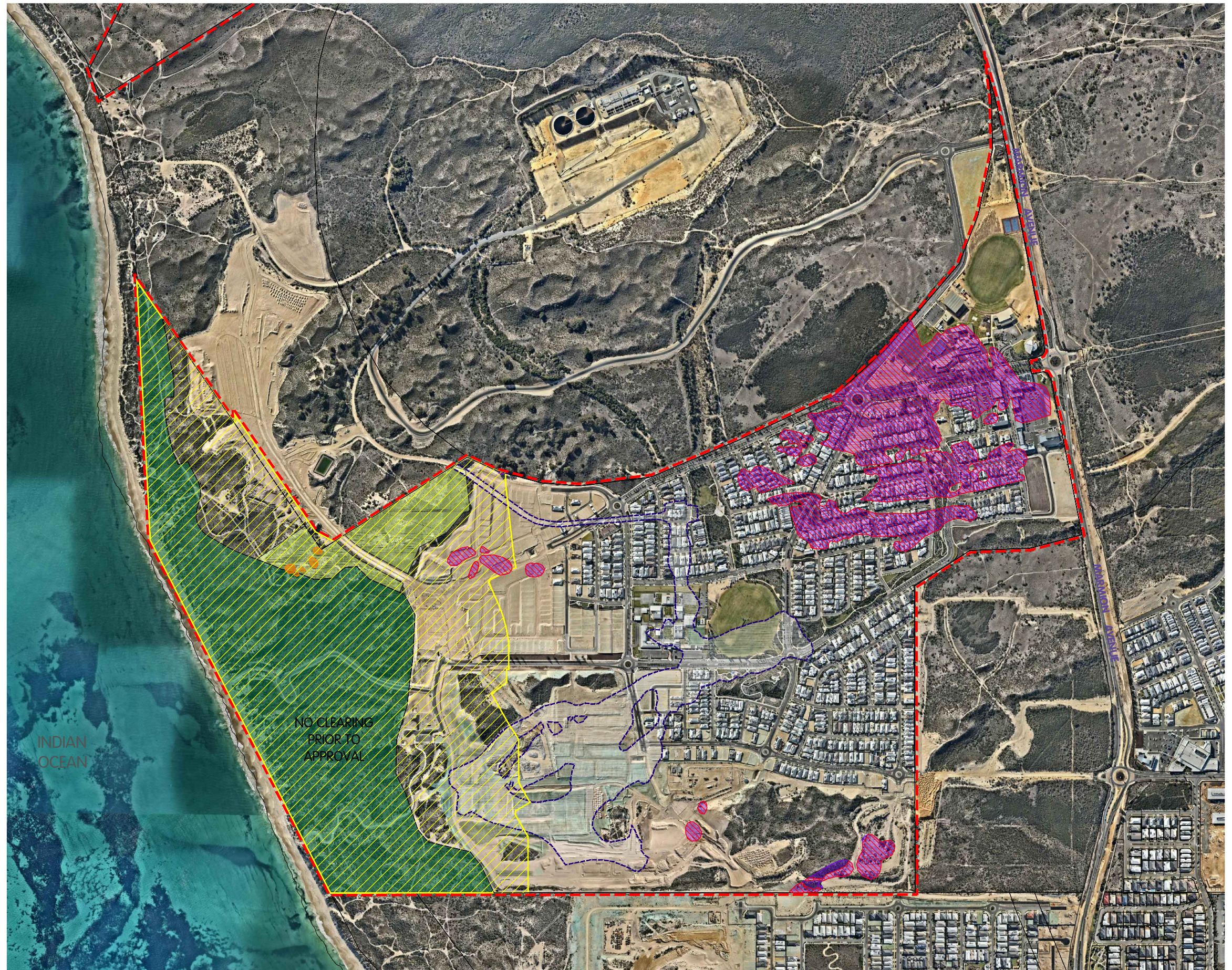
TOTAL AREA - 21.28ha

 CONSERVATION POS

 REGIONAL OPEN SPACE

 AREA PREVIOUSLY  
CLEARED DURING  
WWTP WORKS

 CLEARED AREA OF  
CBC HABITAT - 21.01ha



**AERIAL PHOTOGRAPHY**  
SOURCE: NEARMAPS  
YYMMDD: 190525

**CADASTRAL INFORMATION**  
SOURCE: LANDGATE  
YYMMDD: 101101  
DWG REF: 0845cad  
PROJECTION: PCG94



SIZE A3 1:10000



REV	DESCRIPTION	YYMMDD	DRAWN	APPR'D
I	UPDATE ORTHO & AREA CLEARED	190805	SB	RD
H	UPDATE ORTHO & AREA CLEARED	180822	SB	RD
G	CALC. CLEARED AREA OF CBC HABITAT	171004	SB	RD
F	UPDATE ORTHO & AREA CLEARED	170830	SB	RD
E	UPDATE ORTHO	160830	HH	RD

**CARNABY'S BLACK COCKATOO - FIGURE**  
**Alkimos Beach - South Alkimos**  
City of Wanneroo

REF NO. **DLL ALK** DRAW NO. **RD1 051** REV. **I**





# Appendix A

Conformance with the Conservation Area Management Plan



## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table A 1: Conformance with Conservation Area Management Plan

This is 'Emerge-Table Header' style.	Conformance Status	Comment	Evidence
Measures to manage weed and feral pests	C	Weed control, both manual and with the application of herbicide was undertaken on an opportunistic basis during this audit period.	D009_Tranen Alkimos Beach Revegetation Post activity report  R004_Tranen Autumn 2019 CAMP Monitoring  P0030_Tranen CAMP revegetation 1  P0030_Tranen CAMP revegetation 2
Bushfire prevention and management measures	C	Opportunistic walkovers were undertaken on various occasions to determine any areas of bushfire risk. No significant issues were noted.	D009_Tranen Alkimos Beach Revegetation Post activity report  R004_Tranen Autumn 2019 CAMP Monitoring
Erosion control measures	C	Opportunistic walkovers were undertaken on various occasions to assess erosion control measures. No major issues were noted.	D009_Tranen Alkimos Beach Revegetation Post activity report  R004_Tranen Autumn 2019 CAMP Monitoring
Access management (including pathways, signage and fencing)	C	Opportunistic walkovers were undertaken on various occasions to assess access control. An inspection by the construction contractor on the 17 July 2019 did note that two sections of fencing had been driven through.  This fence was noted as being repaired during the site inspection.	D009_Tranen Alkimos Beach Revegetation Post activity report  R004_Tranen Autumn 2019 CAMP Monitoring  D006_Georgiou Alkimos Beach fence inspection reports  D0012_Emerge site inspection notes  P003_Emerge Associates Photo of CAMP repaired fence

# Appendix B

Conformance with Foreshore Management Plan







## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table B 1 Conformance with Foreshore Management Plan

Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
<b>Carnaby's Black Cockatoo Habitat – Revegetation Species</b>						
FMP 1	4.2.2 Revegetation Species	A range of native plant species will be used in this revegetation program for the foreshore area. <i>The proposed native species to be used for rehabilitation purposes in the foreshore area are outlined in Tranen's FMP Revegetation Management Plan in Appendix 2.</i>	N/A	C	Tranen has reported a range of native plants used in this revegetation program for the FMP area.	R005_Tranen Autumn 2019 FMP Monitoring R006_Tranen Spring 2018 FMP Monitoring
FMP 2		A range of overstorey and understorey species will be planted in order to provide diversity to the vegetation structure and habitat. The proposed native species to be used for rehabilitation purposes in the foreshore area are outlined in Appendix 2.	N/A	C	The list of species used in revegetation consist of a range of overstorey and understorey species.	R005_Tranen Autumn 2019 FMP Monitoring R006_Tranen Spring 2018 FMP Monitoring
<b>Plant Propagation</b>						
FMP 3	4.3.1 Plant Propagation	Where possible seedlings will be propagated from the seed bank. Where seed is not available of desired species, seed and seedlings will be sourced from the nearest available provenance.	N/A	C	Where available seedlings used for infill planting were propagated from seed or cuttings taken from the site. Otherwise seedlings were propagated from the Swan Coastal Plain provenance.	D003_Lendlease FMP Management Advice
<b>Seedling Propagation</b>						
FMP 4	4.3.1.1 Seedling Propagation	Seedlings will be grown by nurseries that are accredited by the Nursery Industry Accreditation Scheme of Australia (NIASA)	N/A	C	Seedlings are grown by Plantrite, an accredited NIASA plant nursery.	D003_Lendlease FMP Management Advice  D008_Plantrite Brush and seedling invoice

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
<b>Site Protection</b>						
FMP 5	4.3.2 Prior to Revegetation	Old vehicle access tracks are to be blocked at both ends by pushing up soil and placing large objects such as limestone boulders or large logs in front of the mounds.	N/A	CLD	Initial work in 2015 included closing of 4WD tracks using boulders and fencing within the foreshore area. The previous ACR confirmed vegetation and boulders have been placed in the required areas to reduce scouring from vehicles and restrict vehicle activity, therefore this item is considered completed.	R003_Strategen EPBC20115902 ACR 2018
FMP 6		A combination of rabbit exclusion fencing, tree guards, and targeted rabbit control will be employed.	N/A	C	<p>The monitoring reports confirmed that there has been no evidence of any significant pest activity, although a few rabbit scats were observed on the north beach road during the Autumn 2019 monitoring period.</p> <p>An independent fauna specialist undertook an additional site visit on 10 May 2019. No major areas of disturbance as a result of rabbits was noted. No further action was considered to be required.</p>	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Lendlease Spring 2018 FMP Monitoring</p> <p>D003_Lendlease FMP Management Advice</p> <p>L003_ALPA Pest Animal Solutions Rabbit survey invoice</p>

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 7		Semi permanent fencing will be installed adjacent to roads and urban subdivision areas during construction.	NA	CLD	The 2018 ACR reported that the FMP area is fenced and therefore this is considered completed.	R003_Strategen EPBC20115902 ACR 2018  E0011_Georgiou_Alkimos Beach fence inspections
FMP 8		All construction activities will be restricted to the subdivision areas and will avoid the rehabilitation area.	N/A	C	Construction activities have been restricted to the subdivision area.	P004_Emerge Associates Photo of clearing restricted to subdivision area
Revegetation Site Preparation						
FMP 9	4.3.3 Revegetation Site Preparation	To maximise the potential for revegetation success, the area(s) that are subject to revegetation will be prepared in the following manner: <ul style="list-style-type: none"> <li>weed spraying commenced, rubbish and debris will be removed and disposed of appropriately.</li> </ul>	N/A	C	Tranen has reported the site preparation management activities in biannual reports (R005, R006).	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring  D009_Trannen Alkimos Beach Revegetation Post activity report

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 10		<ul style="list-style-type: none"> <li>brushing and/or mulching may be used to assist stabilising soil in erosion prone locations as required.</li> </ul>	N/A	C	<p>Tranen has reported that coir netting and brushing have been placed to stabilise the surfaces around the lookout and its access paths, as well as the beach blowout.</p> <p>The Tranen reports have also stated that at both blowout locations, brushing has been repeatedly removed during the audit period by third party individuals to make various play structures.</p> <p>To deter the removal of brushing by the public at these locations, larger brush has now been wired to star pickets.</p>	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP Monitoring</p> <p>P002_Tranen Photos of brush anchoring and signs</p> <p>D008_Plantrite Brush and seedling invoice</p> <p>P005_Emerge Associates photo of lookout blowout brush and fencing</p> <p>P0030_Tranen Beach blowout brush</p> <p>P0013_Emerge Associates Photo coir netting at lookout</p>
<b>Revegetation Method</b>						
FMP 11	4.3.4 Revegetation Method	<p>Revegetation species will be subdivided into four categories:</p> <ol style="list-style-type: none"> <li>1. Beach grasses and herbaceous species adopted for the most exposed locations.</li> <li>2. Semi-stable dune colonisers adapted to partially protected areas.</li> <li>3. Plants of protected dunal situations.</li> <li>4. Plants of protected well stabilised and vegetated areas.</li> </ol>	NA	C	Tranen has reported the locations for species in Table 2 of the biannual reports, detailing the four categories as required.	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP Monitoring</p>

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
Schedule						
FMP 12	Scheduling	Tube stock used in the revegetation program will be sourced from local accredited nurseries.	NA	C	Refer to FMP 3 and FMP 4.	
FMP 13		Planting will be carried out in winter; around June-July when the soil moisture content is high enough for optimum seedling growth without irrigation and after the existing weeds have germinated and have been sprayed.	In winter; around June-July	C	Tranen conducted planting around the Lookout and its access paths in late August/early September 2018.  In the 2018 ACR Tranen had reported that generally seedlings planted later in the year, up to the end of September, have performed better in terms of survival and growth rates than those planted in June / July.	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring  R003_Strategen EPBC20115902 ACR 2018
FMP 14		Each tube stock will be planted with a plastic guard, if required, to prevent rabbits feeding on plant stock and to protect from strong winds	NA	C	Refer to FMP 6	

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 15		Tube stock will mostly be planted at an average density of two plants per m <sup>2</sup> dependant on the specific plant species used. The planting density can range from 1.7 m <sup>2</sup> to 2 m <sup>2</sup> .	NA	C	The initial planting density at the lookout and its blowout, was above two plants per m <sup>2</sup> plants.  Tranen reported the overall mean plant density within the FMP revegetation area was 2.6 plants per m <sup>2</sup> in Spring 2018 and 2.8 plants per m <sup>2</sup> in Autumn 2019.	D005_Trannen Alkimos Beach planted Seedlings August 2019  R005_Trannen Autumn 2019 FMP Monitoring Monitoring  R006_Trannen Spring 2018 FMP Monitoring
FMP 16		Rabbit guards will be used (if required) for tube stocks in the revegetation areas.	N/A	C	Refer to FMP 6.	
FMP 17	Watering	Some tube stock will be planted with tablets/water crystals during planting to help improve survival rates. The coastal plant species to be used in the rehabilitation of areas within the ROS will be drought tolerant and therefore it is not anticipated these natives will require irrigation or extensive hand watering.	N/A	C	No water crystals were considered to be required. Tranen has used fertiliser tablets for planting tube stock to improve survival rates.	D003_Lendlease FMP Management Advice
FMP 18	Seedling Planting	Seedlings will be directly planted using planting tubes. Seedlings will be watered before delivery to site on the day of planting.	N/A	C	The 2018 ACR reported that seedlings are directly planted using planting tubes and watered before the day of planting. This advice was dated November 2018 and no planting has occurred since this time. Therefore this action is considered conformant.	R003_Strategen EPBC20115902 ACR 2018  R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 19	Seed treatment and Direct Seeding	All seed to be utilised will be pre-treated prior to seeding to break dormancy factors. This will include aerosol smoke treatment, mechanical scarification, or hot water treatment as appropriate to individual species. Seed will then be combined with a bulking agent to facilitate even distribution across the site. Hand broadcasting will be the application technique as this will permit even dispersal of all seed sizes.	N/A	N/A	The maintenance activities undertaken during this audit period did not include direct seeding.	R005_Tranen Autumn 2019 FMP Monitoring  R006_Tranen Spring 2018 FMP Monitoring
FMP 20	Signage	To assist in preventing unauthorised access and trampling of revegetation efforts, signage where appropriate will be installed.	N/A	C	<p>Signage is noted in the photos within the 2019 Tranen monitoring report. However, the Spring monitoring report reported the metal sign located to the north of the lookout blowout, as absent. As such in August, additional metal signs were installed to the north of the blowout. These were noted as being present during the site inspection.</p> <p>A sign in the APDMEVA was also noted as recently removed at the time of the site inspection.</p> <p>Lendlease has confirmed that the fence and sign will be repaired as soon as possible.</p>	<p>R006_Tranen Spring 2018 FMP Monitoring</p> <p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>P002_Tranen Photos of brush anchoring and signs</p> <p>P005_Emerge Associates Photo of lookout blowout brush and fencing</p> <p>P007_Emerge Associates Photo replaced signage north of lookout</p> <p>P0011_Emerge Associates Photo motorbike tracks and sign removed</p> <p>D0012_Emerge site inspection notes</p>

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 21	Weed Management	If weeds are considered an issue within the rehabilitation area, a weed spraying program to control weed species, prior to installation of seeds and seedlings will be implemented.	Spring prior to initial rehabilitation and spring and autumn post planting	C	Weed control (both spraying and manual removal) continues to be undertaken as per the FMP requirements. Tranen has reported weed management activities in biannual reports.	R005_Tranen Autumn 2019 FMP Monitoring  R006_Tranen Spring 2018 FMP Monitoring  D009_Tranen Alkimos Beach Revegetation Post activity report
FMP 22		Selective herbicides (i.e. grass or broadleaf-specific) will be favoured over general knockdown herbicides.	NA	C	Where weeds were present, the names of significant species were recorded, generally to a maximum of three species, to guide future weed control activities and herbicide selections.	R005_Tranen Autumn 2019 FMP Monitoring  R006_Tranen Spring 2018 FMP Monitoring
FMP 23		To ensure that off-target damage is minimised, herbicide spraying operators will only be engaged if they: <ul style="list-style-type: none"> <li>are appropriately qualified and licensed in herbicide application</li> <li>have demonstrated experience in the ability to identify, and distinguish between, native and weed species</li> <li>are familiar with the most appropriate control measures, timing, herbicides, and application rates for the target species</li> </ul>	NA	C	Tranen is qualified to apply herbicides and manage revegetation and have been involved in the project for several years.	



## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 24		Weed spraying will be undertaken to manage the abundance and spread of weed species into and within the revegetation area if required.	Contingency	C	<p>Weed control by herbicide spraying and manual removal occurred on numerous occasions between April 2018 and October 2018. Additional manual removal of weeds occurred on various occasions between October 2018 and March 2019.</p> <p>Tranen noted, during the site inspection, that the onion weed may remain around the lookout until native plant cover has increased sufficient to stabilise this area.</p>	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP Monitoring</p> <p>D007_Tranen Herbicide usage form</p> <p>D009_Tranen Alkimos Beach Revegetation Post activity report</p> <p>D0012_Emerge site inspection notes</p>
Post-rehabilitation Management						
FMP 25	4.5 Post-rehabilitation Management	Rehabilitation areas will be monitored and maintained for five years following initial seedling installation	5 years post revegetation	C	Tranen was contracted in June 2015 to perform rehabilitation activities and will continue with the monitoring and maintenance in the foreshore area for five years.	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP Monitoring</p>

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence																				
Completion Criteria																										
FMP 26	4.5.1 Completion Criteria	<p>If completion criteria are not met, further infill planting will be required.</p> <table border="1"> <thead> <tr> <th>Year after Planting</th> <th>Year 1</th> <th>Year 2</th> <th>Autumn 2019</th> </tr> </thead> <tbody> <tr> <td>Survival (established plant density both planting and seeding)</td> <td>90% (equivalent to 1.8 plants /m2)</td> <td>70% (equivalent to 1.4 plants /m2)</td> <td>See below</td> </tr> <tr> <td>Average plant density (plants/m2)</td> <td>1.7 to 2</td> <td>1.7 to 2</td> <td>2.6</td> </tr> <tr> <td>Plant coverage (% area of visual ground cover measured by a botanist/revegetation consultant)</td> <td>25%</td> <td>50%</td> <td>53</td> </tr> <tr> <td>Weeds coverage</td> <td>No greater than 10% cover</td> <td>No greater than 10% cover</td> <td>&lt;1</td> </tr> </tbody> </table>	Year after Planting	Year 1	Year 2	Autumn 2019	Survival (established plant density both planting and seeding)	90% (equivalent to 1.8 plants /m2)	70% (equivalent to 1.4 plants /m2)	See below	Average plant density (plants/m2)	1.7 to 2	1.7 to 2	2.6	Plant coverage (% area of visual ground cover measured by a botanist/revegetation consultant)	25%	50%	53	Weeds coverage	No greater than 10% cover	No greater than 10% cover	<1	NA	C	<p>Further infill planting has been conducted in the FMP area where the plant coverage and species richness indicate that revegetation is required. Seedlings for the next planting season have been ordered, primarily for the lookout and its blowout, and some for the beach blowout, which have slightly lower than average plant densities and /or plant % cover.</p> <p>Recent erosion was noted at the beach blowout during the site visit, where some seedlings were reported to have been exposed. Infill planting and stabilising measures will continue at this location.</p>	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP Monitoring</p> <p>P0025_Emerge Associates Photo FMP revegetation (1)</p> <p>P0026_Emerge Associates Photo FMP revegetation (2)</p> <p>P0030_Tranen Beach blowout</p> <p>D0012_Emerge site inspection notes</p>
Year after Planting	Year 1	Year 2	Autumn 2019																							
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Weeds coverage	No greater than 10% cover	No greater than 10% cover	<1																							
Rehabilitation and Weed Monitoring and Performance Criteria																										
FMP 27	4.5.2 Rehabilitation and Weed Monitoring	At the end of rehabilitation and planting activities, a report will be provided detailing the quantities of seedlings installed and seed broadcast, and any variations from the Tranen FMP revegetation plan. This will be used as baseline data for comparison in future monitoring assessments.	At the end of planting	NA	Rehabilitation is ongoing.	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP Monitoring</p>																				

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 28		The revegetation areas will be monitored biannually (includes weed monitoring) each spring and autumn, and maintained for a five-year period after installation (months are nominated rather than specific, as plant growth cycles are dependent on weather).	Biannually (Spring and Autumn) for 5 years	C	Tranen has reported the rehabilitation management activities in biannual reports.	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring
FMP 29		A monitoring report will be undertaken following each formal monitoring event, to assess if there are any issues requiring attention.	Following each formal monitoring event	C	Refer to FMP 28.	
FMP 30		One monitoring plot, of 2.5 m x 5 m will be established per revegetation area as well as one permanent photograph reference point at each monitoring plot.	NA	C	Tranen report on monitoring plots and permanent photo reference points in the biannual reports.	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring
FMP 31		Photographic records will be captured prior to construction and annually to qualitatively assess density, diversity and weed cover.	Prior to construction and annually	C	Refer to FMP 30.	
FMP 32		The first assessment in spring will assess the developing threats to the stabilisation of each area and the short-term survival of the seedlings and weed cover. Any problems will be identified early so that comprehensive treatment(s) of the issue can be undertaken, and additional seedlings propagated if required.	Spring	CLD	This occurred prior to the audit period. Refer to the 2016 ARC.	R007_Strategen EPBC20115902 ACR 2016
FMP 33		The second assessment in the following Spring will determine if there are any losses over the dry summer period, and this will form the basis for the maintenance winter program.	In the following Spring	C	Tranen has reported the rehabilitation management activities in Spring 2018.	R006_Trannen Spring 2018 FMP Monitoring
FMP 34		The third and subsequent rehabilitation assessments will occur in Autumn and then the subsequent Spring.	In the following Autumn then Spring	C	Tranen has again reported the rehabilitation management in Autumn 2019.	R005_Trannen Autumn 2019 FMP Monitoring

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 35		Further remedial works may include additional revegetation works, weed management, rabbit control, additional monitoring.	Following assessments	C	Refer to FMP 26 for remedial works.	
Corrective Measures						
FMP 36	4.5.3 Corrective Measures	Monitoring and management corrective measures that may be required in the five years include but are not limited to the following: <ul style="list-style-type: none"> <li>• Re-brushing or re-mulching areas</li> <li>• Ongoing weed management</li> <li>• Replanting in areas</li> <li>• Tree guard repair/replacement</li> <li>• Fence, sign and pathway maintenance</li> </ul>	In the five years (biannual monitoring)	C	The following management activities have been undertaken throughout the audit period: <ul style="list-style-type: none"> <li>• weed control by herbicide spraying and manual removal</li> <li>• site inspections for rabbits</li> <li>• infill seedling planting where considered necessary</li> <li>• fence inspections and maintenance</li> <li>• informal site inspections of signs and pathways.</li> </ul> <p>It was determined unnecessary to use tree guards around tube stock, due to the minimal herbivory from rabbits and/or kangaroos across the site. Refer to FMP 6.</p>	R005_Trannen Autumn 2019 FMP Monitoring R006_Trannen Spring 2018 FMP D003_Lendlease FMP Management Advice L003_ALPA Pest Animal Solutions Rabbit survey invoice E0011_Georgiou Alkimos Beach fence inspections D006_Georgiou Alkimos Beach fence inspection reports E0011_Georgiou_Alkimos Beach fence inspections D009_Trannen Alkimos Beach Revegetation Post activity report

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Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 37		Where the % weed species cover exceeds the 10% cover limit, additional weed spraying will be undertaken to reduce the abundance and spread of weed species into and within the FMP area.	Summer	C	The average weed cover does not exceed 1%, however additional weed control has occurred to reduce weeds where necessary.	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring
FMP 38		All the contingency measures listed in Table 5 (of FMP) will be implemented if the target seedling survival completion criteria fall below 70% in two consecutive events.	Following assessments	C	Seedling survival is above 70% in two consecutive events.	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP Monitoring
Feral Pests						
FMP 39	4.6 Feral Pests	A combination of rabbit exclusion fencing, tree guards, and targeted rabbit control will be employed over a five year period. Where appropriate, seedlings located outside of these areas will be protected with tree guards. The guards will be rigid corflute held in place with hardwood stakes. A rabbit control program will also be initiated in advance of site works to provide longer term protection to seedlings. This will include a combination of warren destruction, rabbit haemorrhagic disease virus (RHDV) release, and Pindone baiting. Each tube stock will be planted with a plastic guard to prevent rabbits feeding.	Over 5 years	C	Refer to FMP 36.	
FMP 40		Observe for evidence of feral animals during the revegetation monitoring (biannually).	Biannually, during monitoring events	C	Trannen refers to feral animal monitoring within their biannual monitoring reports.	R005_Trannen Autumn 2019 FMP Monitoring  R006_Trannen Spring 2018 FMP
FMP 41		Feral Pest Corrective Measures: Table 7 Implement additional rabbit control measures including fencing and biological controls	Contingency	C	Refer to FMP 36.	

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 42		Re-plant seedlings / revegetate areas impacted by rabbits	Contingency	C	Refer to FMP 36.	
FMP 43		Repair rabbit exclusion fencing and replace damaged tree guards.	Contingency	C	Refer to FMP 36.	
Monitoring and Reporting						
FMP 44	4.6.6 Monitoring and Reporting	The revegetation areas will be monitored biannually each spring and autumn and maintained for a five year period after installation within each site.	Biannually (Spring and Autumn) for 5 years	C	Refer to FMP 29.	
FMP 45		Foxes, rabbits and feral cats as part of the revegetation monitoring program will also be monitored and if observed reported.	NA	C	Refer to FMP 40.	
FMP 46		The monitoring report will be submitted to Lend Lease following each formal monitoring event, and will focus on the impacts to planted seedlings, tree guards and ensuring the rabbit fence remains intact.	After monitoring event	C	The biannual monitoring reports were provided by Lendlease, which confirms that Tranen submitted the biannual reports to Lendlease.	
Bushfire Management Key Actions						
FMP 47	Table 8: Bushfire Management Key Actions	No rubbish or vegetation will be burnt on site.	NA	C	Tranen has reported no signs of burning of rubbish or vegetation during their revegetation events or informal site visits.	D003_Lendlease FMP Management Advice
FMP 48		Construct perimeter roads and pathways between the ROS and residential areas to act as the key firebreak(s)	NA	CLD	The 2018 ACR confirmed that this action was compliant and therefore this is considered completed.	R003_Strategen EPBC20115902 ACR 2018



## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 49		Conservation fencing to the City of Wanneroo's requirements will be installed at the boundary of the ROS and the roads and urban subdivision adjacent to the Carnaby's Black Cockatoo rehabilitation areas. This includes fencing the access paths and carpark adjacent to the Carnaby's Black-Cockatoo rehabilitation areas prior to handover to the City of Wanneroo	NA	CLD	The 2018 ACR indicates that fencing has been installed around the perimeter of the ROS prior to handover to the CoW. Therefore, this action is considered to be completed.	R003_Strategen EPBC20115902 ACR 2018
FMP 50		Corrective measure will include replanting Carnaby's Black Cockatoos habitat and repair damage to fences as required.	NA	C	Refer to FMP 26.	
<b>Monitoring and Reporting</b>						
FMP 51	<b>4.7.6 Monitoring and Reporting</b>	Any bushfire event in the foreshore will be reported to DFES and the City of Wanneroo.	NA	C	There have been no bushfire events recorded during the audit period.	D003_Lendlease FMP Management Advice
FMP 52		The annual monitoring report will include details of fire events.	After monitoring event	C	Refer to FMP 51.	
FMP 53		The monitoring of the Carnaby's Black-Cockatoo existing and rehabilitation foraging areas will be undertaken biannually each spring and autumn and maintained for a five-year period.	Each Spring and Autumn	C	Refer to FMP 28.	
<b>Erosion Control Key Actions</b>						
FMP 54	<b>5.2.10 Table 9: Erosion Control Key Actions</b>	Placement of brush/mulch over revegetation areas susceptible to potential erosion to a depth of 50 mm.	NA	C	Refer to FMP 36.	
FMP 55		Undertake revegetation of bare/open areas in accordance with the FMP Revegetation Management Plan (Tranen 2015)	NA	C	Refer to FMP 36.	
FMP 56		Installation of temporary fencing in/around the revegetation area.	NA	C	Refer to FMP 36.	

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 57		A proportion of the rehabilitation works will be undertaken on old vehicle access tracks. These tracks are to be blocked at both ends to prevent future vehicle access in these areas.	NA	CLD	Refer to FMP 5.	
Monitoring and Reporting						
FMP 58	4.8.6 Monitoring and Reporting	Monitoring of the erosion / open areas in the revegetation area will be biannually each spring and autumn and maintained for a five year period as part of the revegetation monitoring.	Biannually (Spring and Autumn) for 5 years	C	Refer to FMP 28.	
FMP 59		The monitoring report will be submitted to Lendlease following each formal monitoring event, to assess if there are any erosion issue(s) requiring attention.	After monitoring event	C	Refer to FMP 46.	
Access Management: Beach Access Key Actions						
FMP 60	4.9 Table 12: Beach Access Key Actions	Closure of old vehicle access tracks for rehabilitation in accordance with the FMP Revegetation Management Plan (Tranen 2015).	Post construction	C	Refer to FMP 57.	
FMP 61		Conservation fencing to the City of Wanneroo's requirements will be installed at the boundary of the ROS and the roads and urban subdivision adjacent to the Carnaby's Black Cockatoo rehabilitation areas. This includes fencing the access paths and carpark adjacent to the rehabilitation areas prior to handover to the City of Wanneroo.	NA	C	Refer to FMP 49.	

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Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 62		Undertake additional rehabilitation work of areas impacted from any unauthorised access within the revegetation areas.	NA	C	<p>Tranen has reported no evidence of recent unauthorised 4WD vehicle traffic in the FMP area. Although some motorcycle traffic has been noted in the APDMEVA. Unauthorised 4WD vehicle traffic was noted by Tranen during site visit along the pathway to the beach, north of the lookout. The fence was observed as repaired and no damage to vegetation was noted.</p> <p>Recent unauthorised motorbike access in the APDMEVA revegetation area was observed at the site inspection, including damage to the boundary fence and removal of a sign. Minimal damage to vegetation was noted.</p> <p>Access deterrent such as boulders and star picket have been installed and were observed.</p> <p>Lendlease has confirmed that the fence and sign will be repaired as soon as possible.</p>	<p>R005_Tranen Autumn 2019 FMP Monitoring</p> <p>R006_Tranen Spring 2018 FMP</p> <p>D0012_Emerge site inspection notes</p> <p>P008_Emerge Associates Photo damaged APDMEVA fence</p> <p>P009_Emerge Associates Photo replacement fencing where illegal 4wd</p> <p>P0010_Emerge Associates APDMEVA star pickets installed for deterrent</p> <p>P0011_Emerge Associates Photo motorbike tracks and sign removed</p>

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Reference code	Activity	Action	Timing	Conformance	Comment	Evidence
FMP 63		Undertake additional weed management if the monitoring determines the weed cover is above the 10% cover	NA	C	Refer to FMP 37.	
FMP 64		Ensure the fences if damaged are repaired or replaced.	NA	C	Refer to FMP 26.	
<b>Monitoring and Reporting</b>						
FMP 65	4.9.6 Monitoring and Reporting	Monitoring for unauthorised access will occur as part of the rehabilitation monitoring (biannually spring and autumn) which will be occur for a five-year period.	Annually until handover to the City of Wanneroo	C	Tranen report on unauthorised access in the biannual reports.	R005_Tranen Autumn 2019 FMP Monitoring  R006_Tranen Spring 2018 FMP Monitoring
FMP 66		The monitoring report will be submitted to Lendlease following each formal monitoring event, to assess if there are any erosion issue(s) requiring attention.	After monitoring event	C	Refer to FMP 46.	
FMP 67	5.0 Monitoring and Reporting Measures	To satisfy Condition 3 of the EPBC Act approval, Lend Lease will publish a compliance report every 12 months from the commencement of the construction works.	Annually	C	Refer to Condition No 3 in Table 6.	
FMP 68		The compliance report will contain a ROS area Carnaby's Black-Cockatoo habitat rehabilitation section which will include the following: <ul style="list-style-type: none"> <li>rehabilitation completion criteria and weed monitoring</li> <li>revegetation and weed contingency actions if required</li> <li>erosion monitoring within the rehabilitation area</li> <li>observations of feral pests</li> <li>temporary fencing and signage of the rehabilitation area fire incidences and the response.</li> </ul>	Annually	C	The 2018 compliance report contains the relevant Carnaby's Black Cockatoo habitat rehabilitation section.	R003_Strategen EPBC20115902 ACR 2018
<b>Land Ownership and Funding</b>						
FMP 69	<b>5.1 Land Ownership and Funding</b>	All foreshore access and community infrastructure works will be undertaken by Lendlease, and then maintained for a period of five years after practical completion.	For a period of five years.	C	Refer to FMP 36. Tranen is conducting maintenance on behalf of Lendlease for a five-year period.	

# Appendix C

Conformance with the Precinct Revegetation and Landscape Plan





## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Table C 1: Conformance with the Precinct Landscape and Revegetation Plan

Reference code	Action	Timing	Conformance	Comment	Evidence		
Section 3 Planting schedule							
PLRP 1	<i>Table 3 Objectives, targets and indicators – replication of 5 ha of Carnaby's habitat</i>		Revegetation - during revegetation	C	As per the 2018 ACR, Lendlease plans to achieve the objectives over the next few years.  No additional CC POS's have been constructed during this audit period. Therefore, as per the previous audit currently 22% of plantings across 2.4 ha of identified CC POS areas (POS A, D, F, G, S, U) are CC species. Up to 57% of species planted across >5 ha of current and future POS areas will be CBC species.	R003_Strategen EPBC20115902 ACR 2018  E0010_Lendlease_Management Advice  D0010_Emerge Alkimos Beach CBC plant tracking spreadsheet  D0011_Emerge Alkimos POS actual and proposed CBC plant species	
	Objective	Target					Performance indicator
	Establish equivalent of greater than 5 ha of Carnaby's Black-Cockatoo habitat within the project area	Plant and establish >2,500 CBC habitat trees within the project area to create an equivalent of greater than 5ha of Carnaby's Black-Cockatoo habitat by handover of final stage to the City of Wanneroo with a 90% survival rate.					Number of Carnaby's Cockatoo species identified in annual monitoring (number, species and location). 90% survival rate achieved.
At least 50% of plantings of trees and shrubs in the equivalent >5 ha Carnaby's Black-Cockatoo habitat area must consist of plant species known to be primary feeding plants for Carnaby's Black Cockatoos.	>50% of trees and shrubs planted in the > 5 ha Carnaby's Black-Cockatoo habitat, are plant species known to be primary feeding plants for Carnaby's Black-Cockatoo, with a 90% survival rate.	Number of Carnaby's Black-Cockatoo species identified in annual monitoring (number, species and location).					



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Reference code	Action	Timing	Conformance	Comment	Evidence																																										
PLRP 2	<p>Table 4 provides an indicative Precinct by Precinct breakdown of the Carnaby's Cockatoo tree targets (refer to <b>Appendix C</b> for a map) to track progress against the ultimate target described in Table 3, across all precincts. These are interim targets for monitoring purposes only; the total of 2,500 trees remains the ultimate compliance target.</p> <p><i>Table 4: Precinct breakdown of Carnaby's Cockatoo tree targets</i></p> <table border="1"> <thead> <tr> <th>Precinct</th> <th>Area (ha)</th> <th>Carnaby's Tree Target</th> <th>Target &gt; 5 ha CBC habitat (ha)</th> <th>Target &gt;2,500 CBC species</th> <th>CBC primary feeding plants</th> <th>Non-CBC primary feeding plants</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>50.30</td> <td>1,000</td> <td>1.483</td> <td>1,594</td> <td>10,840</td> <td>40,911</td> </tr> <tr> <td>2</td> <td>47.87</td> <td>500</td> <td>0.911</td> <td>1,968</td> <td>3,810</td> <td>14,072</td> </tr> <tr> <td>3</td> <td>32.51</td> <td>500</td> <td>1.124</td> <td>1,846</td> <td>36,159</td> <td>9,040</td> </tr> <tr> <td>4</td> <td>43.89</td> <td>500</td> <td>1.532</td> <td>1,580</td> <td>41,011</td> <td>10,253</td> </tr> <tr> <td colspan="3">TOTAL</td> <td>5.051</td> <td>6,988</td> <td>91,820 (55%)</td> <td><b>74,276 (45%)</b></td> </tr> </tbody> </table>	Precinct	Area (ha)	Carnaby's Tree Target	Target > 5 ha CBC habitat (ha)	Target >2,500 CBC species	CBC primary feeding plants	Non-CBC primary feeding plants	1	50.30	1,000	1.483	1,594	10,840	40,911	2	47.87	500	0.911	1,968	3,810	14,072	3	32.51	500	1.124	1,846	36,159	9,040	4	43.89	500	1.532	1,580	41,011	10,253	TOTAL			5.051	6,988	91,820 (55%)	<b>74,276 (45%)</b>	Revegetation - during planning	C	<p>As per the 2018 ACR Lendlease plans to achieve the objectives over the next few years.</p> <p>No additional CC POS areas have been constructed during this audit period.</p>	<p>R003_Strategen EPBC20115902 ACR 2018</p> <p>E0010_Lendlease_Management Advice</p>
Precinct	Area (ha)	Carnaby's Tree Target	Target > 5 ha CBC habitat (ha)	Target >2,500 CBC species	CBC primary feeding plants	Non-CBC primary feeding plants																																									
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TOTAL			5.051	6,988	91,820 (55%)	<b>74,276 (45%)</b>																																									
PLRP 3	For each landscaping stage of the development an indicative Plant Schedule is prepared and updated as required and will be used as a guide to check that planting numbers are trending toward compliance with the overall tree target.	Revegetation - during planning	N/A	No additional CBC POS areas have been constructed during this audit period.	E0010_Lendlease_Management Advice																																										
PLRP 4	All future planting schedules and landscape designs will be in accordance with the targets in the PLRP.	Revegetation - during planning	C	<p>The tracking sheet provides guidance for future landscape designs.</p> <p>In addition, the future planting requirements were also provided to the contractor.</p>	<p>D0010_Emerge Alkimos Beach CBC plant tracking spreadsheet</p> <p>D0011_Emerge Alkimos POS actual and proposed CBC plant species</p> <p>E008_Emerge_PLRP POS J CBC plant species list</p>																																										

2019 Annual Compliance Report – EPBC 2011/5902  
Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence																													
<b>Section 4 Monitoring, Reporting and Review</b>																																		
PLRP 5	<p>Table 5 includes timeframes, contingency measures, monitoring and reporting measures for achieving Condition 12 of EPBC 2011/5902.</p> <p><i>Table 5: Monitoring actions</i></p> <table border="1"> <thead> <tr> <th>Target</th> <th>Performance indicator</th> <th>Monitoring Actions</th> <th>Type of monitoring action</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Plant and establish ≥2,500 individual CBC habitat trees across the project area to create ≥5 ha of CBC habitat by handover of final stage to the City with a 90% survival rate</td> <td rowspan="2">Number of CBC species identified in annual monitoring (number, species and location).</td> <td>Review landscape plans, plant orders and planting schedules to determine number and type of species planted (i.e. CBC species)</td> <td>Desktop review</td> <td>Annually</td> </tr> <tr> <td>Record the species, location and number of CBC plants installed during the planting phase.</td> <td>Within each precinct where planting has been undertaken</td> <td>During planting</td> </tr> <tr> <td>90% survival rate achieved.</td> <td>Monitor success of species planted and determine whether infill planting is required.</td> <td>Within each precinct</td> <td>Annually</td> </tr> <tr> <td rowspan="3">≥50% of trees and shrubs in the equivalent ≥5ha CBC habitat area, are plant species known to be primary feeding plants for CBC, with a 90% survival rate</td> <td rowspan="2">Number of CBC tree and shrub species identified in the equivalent &gt;5 ha through annual monitoring reporting.</td> <td>Review landscape plans, plant orders and planting schedules to determine number and type of species planted (i.e. CBC species).</td> <td>Desk top review</td> <td>Annually</td> </tr> <tr> <td>Record the species, location and number of CBC plants installed during the planting phase</td> <td>Within each precinct where planting has been undertaken</td> <td>During planting</td> </tr> <tr> <td>90% survival rate achieved.</td> <td>Monitor success of species planted and determine whether infill planting is required.</td> <td>Within each precinct</td> <td>Annually</td> </tr> </tbody> </table>	Target	Performance indicator	Monitoring Actions	Type of monitoring action	Frequency	Plant and establish ≥2,500 individual CBC habitat trees across the project area to create ≥5 ha of CBC habitat by handover of final stage to the City with a 90% survival rate	Number of CBC species identified in annual monitoring (number, species and location).	Review landscape plans, plant orders and planting schedules to determine number and type of species planted (i.e. CBC species)	Desktop review	Annually	Record the species, location and number of CBC plants installed during the planting phase.	Within each precinct where planting has been undertaken	During planting	90% survival rate achieved.	Monitor success of species planted and determine whether infill planting is required.	Within each precinct	Annually	≥50% of trees and shrubs in the equivalent ≥5ha CBC habitat area, are plant species known to be primary feeding plants for CBC, with a 90% survival rate	Number of CBC tree and shrub species identified in the equivalent >5 ha through annual monitoring reporting.	Review landscape plans, plant orders and planting schedules to determine number and type of species planted (i.e. CBC species).	Desk top review	Annually	Record the species, location and number of CBC plants installed during the planting phase	Within each precinct where planting has been undertaken	During planting	90% survival rate achieved.	Monitor success of species planted and determine whether infill planting is required.	Within each precinct	Annually	Revegetation - during planning	C	<p>Annual update of the monitoring actions and records has occurred.</p> <p>Advice from Lendlease indicate the previous audit results were incorrect and no CC POS areas required infill planting. POS U was visited twice, in 2016, and in 2019 as part of the site inspection. It is noted that the vegetation cover over the three years had not significantly deteriorated.</p> <p>Lendlease has advised that Total Eden, the landscaping contractor, undertake regular maintenance checks of completed POS. Example maintenance check emails and invoices have been provided. Total Eden were noted undertaking maintenance activities during the site inspection.</p>	<p>D0010_Emerge Alkimos Beach CBC plant tracking spreadsheet</p> <p>D0011_Emerge Alkimos POS actual and proposed CBC plant species</p> <p>D0015_Total Eden Graceful Blvd Infill Planting</p> <p>P0028_Emerge Associates Photo 2016 POS U (1)</p> <p>P0029_Emerge Associates Photo 2016 POS U (2)</p> <p>P0017_Emerge Associates Photo 2019 POS U (1)</p> <p>P0018_Emerge Associates Photo 2019 POS U (2)</p>
Target	Performance indicator	Monitoring Actions	Type of monitoring action	Frequency																														
Plant and establish ≥2,500 individual CBC habitat trees across the project area to create ≥5 ha of CBC habitat by handover of final stage to the City with a 90% survival rate	Number of CBC species identified in annual monitoring (number, species and location).	Review landscape plans, plant orders and planting schedules to determine number and type of species planted (i.e. CBC species)	Desktop review	Annually																														
		Record the species, location and number of CBC plants installed during the planting phase.	Within each precinct where planting has been undertaken	During planting																														
	90% survival rate achieved.	Monitor success of species planted and determine whether infill planting is required.	Within each precinct	Annually																														
≥50% of trees and shrubs in the equivalent ≥5ha CBC habitat area, are plant species known to be primary feeding plants for CBC, with a 90% survival rate	Number of CBC tree and shrub species identified in the equivalent >5 ha through annual monitoring reporting.	Review landscape plans, plant orders and planting schedules to determine number and type of species planted (i.e. CBC species).	Desk top review	Annually																														
		Record the species, location and number of CBC plants installed during the planting phase	Within each precinct where planting has been undertaken	During planting																														
	90% survival rate achieved.	Monitor success of species planted and determine whether infill planting is required.	Within each precinct	Annually																														

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence
<b>Section 4.1 Survival targets</b>					
PLRP 6	Following the completion of a landscaping stage (POS or streetscape), the landscape architects visit the area on behalf of Lendlease to ensure the specifications have been met by the contractor (including the planting of specified Carnaby's Black Cockatoo species as documented within the approved design drawings).	During Construction	N/A	No CC POS areas were constructed or achieved practical completion within this audit period.	E0010_Lendlease_Management Advice

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence
PLRP 7	Prior to handover to the City, Lendlease will ensure the 90% plant survival target is met to enable the handover to the City to be finalised.	During Construction	C	<p>CC POS D and U have been handed over to the CoW this audit period. Lendlease has advised that Total Eden, the landscaping contractor, undertakes regular maintenance checks of completed POS areas to ensure that they meet a 90% survival target prior to handover.</p> <p>Photos were taken of POS U and D during the site visit and minimal dead vegetation was noted. In addition, representatives of the CBC foraging species on the tracking sheet were observed to be present.</p> <p>The vegetation within POS G was noted as struggling during the site visit. Lendlease has confirmed that they will continue to monitor this area to ensure it meets the 90% target prior to handover.</p>	<p>D0014_Lendlease PLRP management advice</p> <p>P0017_Emerge Associates Photo 2019 POS U (1)</p> <p>P0018_Emerge Associates Photo 2019 POS U (2)</p> <p>P0021_Emerge Associates Photo POS D</p> <p>P0027_Emerge Associates Photo POS D (2)</p>

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence
<b>Section 4.2 Timeframes for the implementation</b>					
PLRP 8	Handover to the City will be undertaken a minimum of 2 years after practical completion.	24 months following planting	C	Handover of POS D and U occurred a minimum of 2 years after practical completion. The remaining POS are either yet to achieve practical completion or are yet to be handed over to the City.	L001_CoW Handover accepted - POS U L002_CoW Handover accepted - POS D D0014_Lendlease PLRP management advice
PLRP 9	Following handover, maintenance of streetscapes and POS will be managed by the City.	On-going following handover	C	The City had confirmed the handover of landscape works associated with POS D and U.	L001_CoW Handover accepted - POS U L002_CoW Handover accepted - POS D
PLRP 10	Handover of planting across the site will be staged in accordance with the park and street delivery. All parks and streets are expected to be handed over by the completion of the project. Refer to the indicative precinct plan in <b>Appendix C</b> for the breakdown of park and street delivery across the Estate.	On completion of each area During Construction	C	Handover of planting has been staged in accordance with POS and street delivery.	L001_CoW Handover accepted - POS U L002_CoW Handover accepted - POS D
<b>Section 4.3 City of Wanneroo process</b>					
PLRP 11	For each stage of landscaping (streetscape or POS) a detailed design is submitted to the City for their review and approval.	Pre-construction	N/A	No new stages of landscaping associated with CC habitat were proposed to commence construction in this audit period and therefore no detailed designs were submitted to the City for their review and approval.	E0010_Lendlease_Management Advice

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence
PLRP 12	The City assesses each design to ensure it complies with their standards and confirms that ultimately the City will be able to manage the area following the required 2 year maintenance period.	Handover	C	The City had confirmed that they will accept handover of POS D and U.	L001_CoW Handover accepted - POS U L002_CoW Handover accepted - POS D
PLRP 13	As the management of the park in the long term is undertaken by the City, a City officer visits the area prior to handover of a stage to the City, to ensure it meets the specifications (and therefore planting of specified Carnaby's Black Cockatoo species as documented within the approved design drawings) and survival targets.	Prior to handover	C	POS D and U were both visited by a CoW officer prior to handover.	L001_CoW Handover accepted - POS U L002_CoW Handover accepted - POS D
PLRP 14	Once a stage of landscaping is handed over to the City, the requirements of the Condition for that park and streetscape are considered complete. The City accepts no liability for the requirements of the conditions of the EPBC Act approval and will not report on the ongoing management of the Carnaby's species.	Handover	N/A	Refer to Condition 12 A1 in Table 6.	
PLRP 15	Due to the City requirements streetscape works in residential streets will be completed at the time of the front yard landscaping by the landscape contractor. In this instance it is incumbent on the landscape contractor to ensure that planting schedules meet the PLRP requirements.	Prior to approval of management plans	C	Lendlease has confirmed that the planting schedules have not changed since the previous audit. Minor amendments have been made to the plant tracking sheet to reflect what was in ground.	E0010_Lendlease_Management Advice D0010_Emerge Alkimos Beach CBC plant tracking spreadsheet
PLRP 16	Clearing within the 'no clearing area' on Attachment C of EPBC 2011/5902 is not permitted to commence until the Management Plans required under Condition 10-12 of the approval are approved.	Prior to approval of management plans	CLD	Action assessed as completed during 2014 ACR.	R001_Strategen EPBC 20115902 ACR 2014

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence
<b>Section 4.4 Annual reporting requirements</b>					
PLRP 17	<p>Lendlease is required to submit an ACR in accordance with Condition 3 of EPBC 2011/5902, as detailed below:</p> <p><i>'Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published. Each management plan must be published on the website for the length of the approval.'</i></p>	Annually	C	Refer to Condition No. 3 in Table 6 of this document.	

## 2019 Annual Compliance Report – EPBC 2011/5902

Alkimos Beach



Reference code	Action	Timing	Conformance	Comment	Evidence
PLRP 18	<p>In accordance with the PLRP the following details are required to be included in the ACR:</p> <ul style="list-style-type: none"> <li>• An update of any completed stages or tendered landscape for future stages.</li> <li>• Report against planting targets and landscape survival targets.</li> <li>• Update of completed tree planting for each stage.</li> <li>• Amendments to precinct and staging plans.</li> <li>• Updated plant schedules for each stage of the development.</li> </ul>	Annually	C	<p>The 2018 ACR provides a summary of the current status of the project, including works undertaken during the audit period and practical completion.</p> <p>Future planting schedules were provided in Appendix 4 of the ACR and tracking against the rehabilitation targets and the revised staging plans was provided in Appendix 5.</p> <p>Lendlease has confirmed that no changes were made to the precinct plan and therefore an amended plan was not included in the 2018 ACR.</p>	<p>R003_Strategen EPBC 20115902 ACR 2018</p> <p>D0012_Emerge site inspection notes</p>





# Appendix D

Plant schedules





Precinct	Park	Status	Actual Area	Planting Area (m2) <sup>[1]</sup>	Planting Area		Use	Classification	Trees		Shrubs		Total	Total	Total	Comments
					(ha)	(%)			CBC	Non-CBC	CBC	Non-CBC	CBC	Non-CBC		
1	A	Complete	1,966	786	0.079	40%	Local	Passive Open Space	18	45	297	1,405	315	1,450	1,765	
1	D	Complete	921	461	0.046	50%	Local	Passive Open Space	41	13	243	608	284	621	905	D & E built as one stage
1	F	Complete	12,658	6,962	0.696	55%	Neighbourhood	Passive Open Space	150	129	700	19,393	850	19,522	20,372	F, F1 & F2 built as one stage
1	F1	Complete	1,071	643	0.064	60%	Local	Passive Open Space								F, F1 & F2 built as one stage
1	F2 PAW	Complete	843	801	0.080	95%	Local	Passive Open Space								F, F1 & F2 built as one stage
2	G	Complete	2,425	2,183	0.218	90%	Local	Natural - Conservation Interface	455	63	927	4,133	1,382	4,196	5,578	
3	J	Future*	11,195	9,516	0.952	85%	Neighbourhood	Reflect and Restore - Dune Link	1,136	18	26,390	7,544	27,526	7,562	35,088	~80% of plantings to POS portion are CBC feeding species
3	O	Future*	1,818	1,727	0.173	95%	Local	Passive Open Space	710	-	5,154	1,166	5,864	1,166	7,030	~80% of plantings to POS portion are CBC feeding species
4	P	Future*	12,058	4,582	0.458	38%	Neighbourhood	Active Park - Include area of high natural value	10	15	12,210	3,040	12,220	3,055	15,275	~80% of plantings to POS portion are CBC feeding species
4	R	Future*	13,100	10,742	1.074	82%	Neighbourhood	Natural - Conservation interface	1,570	20	27,221	7,172	28,791	7,192	35,983	~80% of plantings to POS portion are CBC feeding species
2	S	Complete	20,372	6,926	0.693	34%	Neighbourhood	Reflect and Restore - Dune Link	1,513	33	949	9,405	2,462	9,438	11,900	
1	U	Complete	39,862	5,182	0.518	13%	Neighbourhood	Active Park - Include area of high natural value	1,297	75	7,255	13,492	8,552	13,567	22,119	
<b>Totals</b>			<b>118,289</b>	<b>50,510</b>	<b>5.05</b>				<b>6,900</b>	<b>411</b>	<b>81,346</b>	<b>67,358</b>	<b>88,246</b>	<b>67,769</b>	<b>156,015</b>	

Summary 'CBC parks' only (Cond 12a & 12b)		Cond 12b		Cond 12a		Cond 12b	
Parks and planting areas i.e. allocated to CBCs (in ha)		Total Trees (CBC)	Total Trees (non CBC)	Total Shrubs (CBC)	Total Shrubs (non CBC)	Total trees & shrubs (CBC)	Total trees & shrubs (non CBC)
Existing Parks A, D, F, G, S, U:	2.394	3,474	358	10,371	48,436	13,845	48,794
						22%	78%
Future Parks J (partial), O, P, R:	2.657	3,426	53	70,975	18,922	74,401	18,975
						80%	20%
<b>Total ha</b>	<b>5.051</b>	<b>6,900</b>				<b>88,246</b>	<b>67,769</b>
						<b>57%</b>	<b>43%</b>

**Key**

Parks dedicated to CBCs species and included in the calculations above

\*Planting targets for future parks are indicative only and no. may change depending on the availability of plants at the time



# Appendix E

Tracking against planting targets





# Alkimos Beach - Native Trees and Shrubs

## Carnaby's Black Cockatoo - Tracking Spreadsheet (vers. M-04\_09)

			PRECINCT 1				PRECINCT 2				PRECINCT 3		PRECINCT 4
CBC Parks Only (Cond 12a+12b)**			T+S all	T+S all	T+S all	T+S all	T+S all	T+S all	T+S all	T+S all	T+S all	T+S all	
Botanical Name	Common Name	Primary Feeding Plants for CBCs#	Stage 1 - Park A CBC Park	Stage 3 & 4 excl streetscape (POS D only) CBC Park	Stage 10 -Park U excl streetscape (Fairy Pde)	Stage 7 - Park F CBC Park	Park G only ALL26 CBC Park	Park S ALL35 CBC Park	Park O CBC Park FUTURE***	Park P CBC Park FUTURE***	Park R CBC Park FUTURE***	Park J CBC Park FUTURE*** (shows all plants for Park J)	
<b>TREES</b>													
<i>Agonis flexuosa</i>	WA Peppermint	Y	9		23	46	5	47	5	10	50	30	
<i>Allocasuarina fraseriana</i>	Common Sheoak	N					13						
<i>Allocasuarina littoralis</i>	Black Sheoak / River Black Oak	N											
<i>Angophora costata</i>	Smooth Barked Apple	N										20	
<i>Araucaria columnaris</i>	Cook Island Pine	N											
<i>Araucaria heterophylla</i>	Norfolk Island Pine	Y	6	2	2			9					
<i>Banksia ashbyi</i>	Ashby's Banksia	Y			1155				300		1,000	700	
<i>Banksia attenuata</i>	Candlestick (Biara) Banksia	Y			29								
<i>Banksia grandis</i>	Bull Banksia	Y			19								
<i>Banksia integrifolia</i>	Coast Banksia	N											
<i>Banksia menziesii</i>	Firewood Banksia	Y						703	200		500	300	
<i>Banksia menziesii dwarf</i>	Firewood Banksia Dwarf	Y					438						
<i>Banksia prionotes dwarf</i>	Dwarf Acorn Banksia	Y							200			300	
<i>Banksia sessilis</i>	Parrot Bush	Y						703				500	
<i>Callitris preissii</i>	Cypress Pine	Y				47		38			10	15	
<i>Callistemon Kings Park Special</i>	Bottlebrush	Y											
<i>Casuarina equisetifolia</i>	Horse Tail Sheoak	N	27	7	53							10	
<i>Casuarina fraseriana</i>	Weeping Beach Sheoak	N				23					10		
<i>Casuarina obesa</i>	Swamp Sheoak	N	5			26				15	10		
<i>Corymbia calophylla</i>	Marri	Y			23								
<i>Corymbia calophylla rosea</i>	Marri Rosea	Y											
<i>Corymbia ficifolia</i>	Red Flowering gum	Y										20	
<i>Corymbia maculata</i> #	Spotted gum	Y						5			10	20	
<i>Delonix Regia</i>	Poinciana	N											
<i>Erythrina indica</i>	Coral Tree	N											
<i>Eucalyptus marginata</i>	Jarra	Y											
<i>Eucalyptus gomphocephala</i>	Tuart	Y	3		46		12	8	5			20	
<i>Eucalyptus sideroxylon</i>	Ironbark	N											
<i>Eucalyptus sideroxylon Rosea</i>		N											
<i>Eucalyptus tottiana</i>	Coastal Blackbutt	Y											
<i>Eucalyptus utilis</i>	Coastal Moort	N											
<i>Eucalyptus victrix</i>	Coolibar	N				9							
<i>Ficus macrophylla</i>	Morton Bay Fig	Y											
<i>Gleditsia triacanthos</i>	Honey Locust	N											
<i>Hakea laurina</i>	Pincusion Haekea	Y											
<i>Liquidambar styraciflua</i>	Liquidambar	Y					8						
<i>Macadamia integrifolia</i>	Macadamia	Y				15							
<i>Macrozamia riedlei</i>	Zamia palm	N					48	33					
<i>Melaleuca armillaris</i>	Bracelet Honey Myrtle	N											
<i>Melaleuca lanceolata</i>	Rottnest Island Tea	N				29							
<i>Melaleuca preissiana</i>	Swamp Tea Tree	N			14	24							
<i>Melaleuca quinquenervia</i>	Broad-leaved	N	13		8	18							
<i>Morus pendula alba</i>	Mulberry	N											
<i>Metrosideros thomasi</i>	New Zealand Christmas Tree/Bush	N		4									
<i>Olea europaea</i>	Olive	N		2									
<i>Phoenix canariensis</i>	Canary Island date palm	N					2						
<i>Robinia pseudoacacia</i>	Black Locust	N											
<i>Santalum acuminatum</i>	Native Peach (Quandong)	N											
<i>Tipuana Tipu</i>	Tipuana	Y		3		14							
<i>Xanthorrhoea preissii</i>	Grass tree	Y		36		20							

<b>SHRUBS</b>												
<i>Acacia cyclops</i>	Western Coastal Wattle	N						829				
<i>Acacia drummondii</i>		N										800
<i>Acacia lasiocarpa</i>		N	142			784			200	600	1,000	2,000
<i>Acacia littorea</i>		N						703				
<i>Acacia saligna prostrate</i>	Dwarf Orange Wattle	Y			1682				600	800	2,400	2,600
<i>Acanthocarpus preisii</i>		N				374		703				
<i>Agonis flexuosa nana</i>	Dwarf WA Peppermint	Y			2362				500	800	1,500	2,000
<i>Alyogyne 'Blue Heeler'</i>	Native Hibiscus	N										
<i>Alyogyne 'Mellissa Anne'</i>	Lilac Hibiscus	N										
<i>Anigozanthos rufus 'Big Red'</i>	Red Kangaroo Paw	N			428	10			200	100	200	0
<i>Anigozanthos 'Yellow Gem'</i>	Yellow Kangaroo Paw	N							200	0	0	0
<i>Anigozanthos flavidus 'Red'</i>		N										
<i>Atriplex cinerea</i>	Coast Saltbush	N				1249		703	200	100	500	0
<i>Atriplex isatidea</i>		N						703				
<i>Atriplex nummularia</i>		N										
<i>Baeckea virgata nana</i>		N										
<i>Banksia ashbyi dwarf</i>	Dwarf Ashby's Banksia	Y			382				200	800	1,700	1,500
<i>Banksia blechnifolia</i>		Y						34	800		1,500	1,500
<i>Banksia blechnifolia (seed)</i>		Y										
<i>Banksia dallanneyi</i>	Couch Honeypot	Y						26	500	800	1,500	1,500





Botanical Name	Common Name	Primary Feeding Plants for CBCs <sup>#</sup>	Stage 1 - Park A CBC Park	Stage 3 & 4 excl streetscape (POS D only) CBC Park	Stage 10 -Park U excl streetscape (Fairy Pde)	Stage 7 - Park F CBC Park	Park G only ALL26 CBC Park	Park S ALL35 CBC Park	Park O CBC Park FUTURE <sup>***</sup>	Park P CBC Park FUTURE <sup>***</sup>	Park R CBC Park FUTURE <sup>***</sup>	Park J CBC Park FUTURE <sup>***</sup> (shows all plants for Park J)
<i>Thryptomene saxicola</i> 'Paynes'	Paynes Hybrid	N					438					
<i>Thryptomene saxicola</i> 'Supa Nova'	Supa Nova'	N							0	0	0	0
<i>Westringia fruticosa</i> 'Aussi Box'	Box Westringia	N		103								0
<i>Westringia</i> 'Bulli Coastal Creeper'	Westringia	N										
<i>Westringia dampieri</i>	Shore Westringia	N				771		829	161	280	0	0
<i>Westringia fruticosa</i>	Coastal rosemary	N						21				
<i>Westringia fruticosa</i> 'Grey Box'	Grey Westringia	N										
<i>Westringia fruticosa</i> 'Mundi'	Coastal rosemary	N	173									
<i>Westringia fruticosa</i> 'Jervis Gem'		N				784			0	0	0	0
<i>Westringia fruticosa</i> 'Seefoam'	Coastal Rosemary	N							0	0	0	0

<b>Total trees</b>			63	54	1,372	279	518	1,546	710	25	1,590	1,935
<b>Total shrubs (and groundcovers etc)</b>			1,702	851	20,747	20,093	5,060	10,354	6,320	15,250	34,393	35,934
<b>Total all</b>			1,765	905	22,119	20,372	5,578	11,900	7,030	15,275	35,983	37,869
<b>Cond 12B CBC Species Only</b>												

**CBC Parks**

<b>Cond 12B</b>	Parks A,D,F,G,S,U Total CBC (existing)	13,845
	Parks J,O,P,R Total CBC (future)	77,170
	A,D,F,G,S,U Total all trees and shrubs	62,639
	J,O,P,R Total all trees and shrubs	96,457
	Parks A,D,F,G,S,U % CBC (existing)	22%
	Parks J,O,P,R % CBC (future)	80%

<b>CBC Parks - Total CBCs</b>	<b>91,015</b>
<b>CBC Parks - Total CBC &amp; non CBC</b>	<b>159,096</b>
<b>% of CBC species across 5ha plantii</b>	<b>57%</b>

\*Plants for Carnaby's as listed in Groom, C (2011) Plants Used by Carnaby's Black Cockatoo. Department of Environment and Conservation; Birdlife Australia (2012) Carnaby's Black Cockatoo foraging and nesting plant species; Valentine, L & Stock, W (2008) Food Resources of Carnaby's Black Cockatoo in the Gnangara Sustainability Study Area. Frith Cowan University  
 #Corymbia maculata is considered a roosting tree for CBCs as per the DEC species list. It has still been included in the overall CBC tree count as it is a habitat tree but excluded  
 \*\*POS A, D, F, F1, F2 PAW, G, J, O, P, R, S, U  
 \*\*\*Planting targets for future parks are indicative only and no. may change depending on the availability of plants at the time



# Appendix F

Precinct and Staging Plan









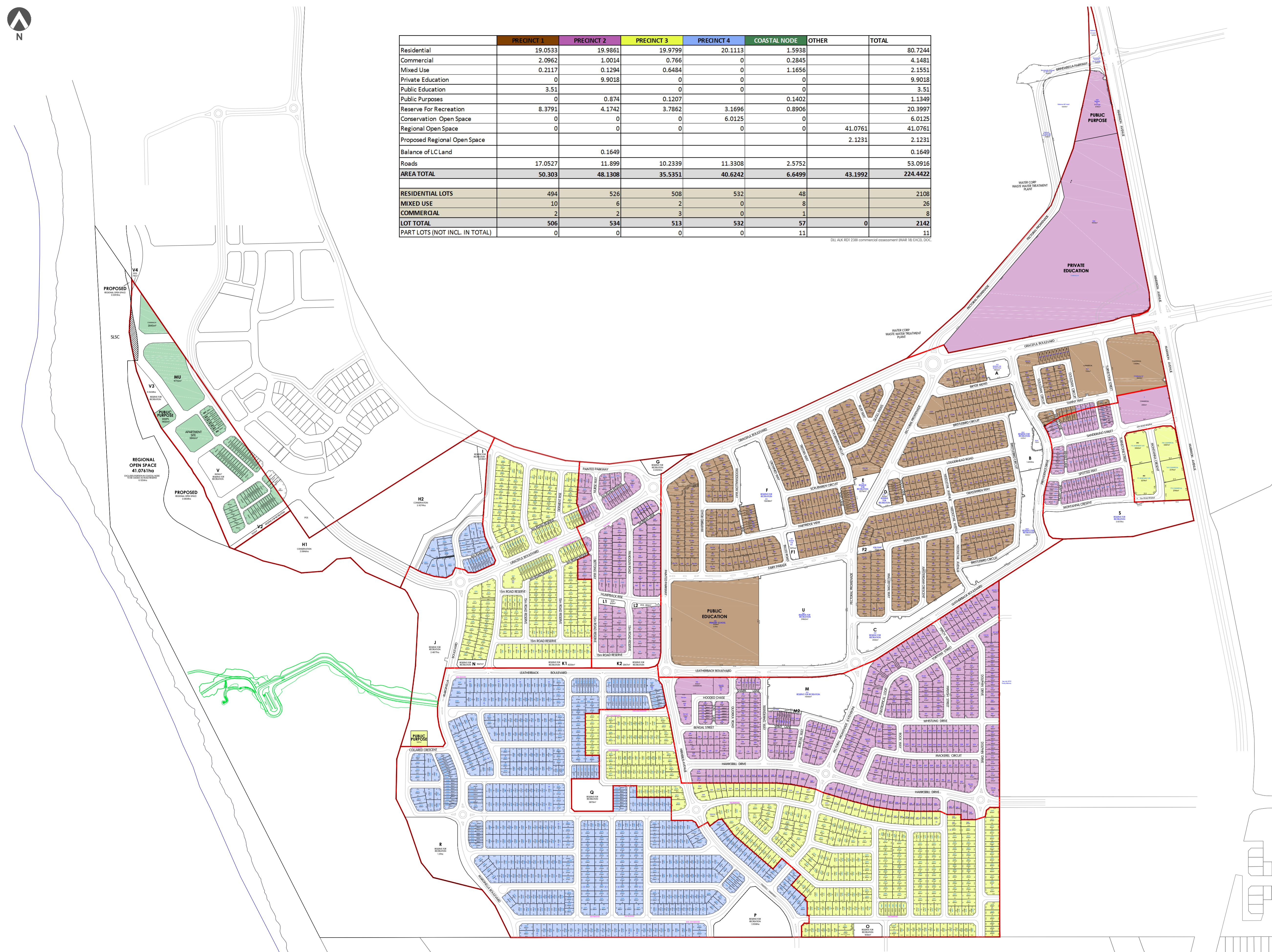
	PRECINCT 1	PRECINCT 2	PRECINCT 3	PRECINCT 4	COASTAL NODE	OTHER	TOTAL
Residential	19,0533	19,9861	19,9799	20,1113	1,5938		80,7244
Commercial	2,0962	1,0014	0,766	0	0,2845		4,1481
Mixed Use	0,2117	0,1294	0,6484	0	1,1656		2,1551
Private Education	0	9,9018	0	0	0		9,9018
Public Education	3,51	0	0	0	0		3,51
Public Purposes	0	0,874	0,1207	0	0,1402		1,1349
Reserve For Recreation	8,3791	4,1742	3,7862	3,1696	0,8906		20,3997
Conservation Open Space	0	0	0	6,0125	0		6,0125
Regional Open Space	0	0	0	0	41,0761		41,0761
Proposed Regional Open Space					2,1231		2,1231
Balance of LC Land		0,1649					0,1649
Roads	17,0527	11,899	10,2339	11,3308	2,5752		53,0916
<b>AREA TOTAL</b>	<b>50,303</b>	<b>48,1308</b>	<b>35,5351</b>	<b>40,6242</b>	<b>6,6499</b>	<b>43,1992</b>	<b>224,4422</b>
<b>RESIDENTIAL LOTS</b>	<b>494</b>	<b>526</b>	<b>508</b>	<b>532</b>	<b>48</b>		<b>2108</b>
<b>MIXED USE</b>	<b>10</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>8</b>		<b>26</b>
<b>COMMERCIAL</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>		<b>8</b>
<b>LOT TOTAL</b>	<b>506</b>	<b>534</b>	<b>513</b>	<b>532</b>	<b>57</b>	<b>0</b>	<b>2142</b>
<b>PART LOTS (NOT INCL. IN TOTAL)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>		<b>11</b>

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POS Ref No.	AREA m <sup>2</sup>	PRECINCT
<b>A</b>	1966	1
<b>B</b>	16054	1
<b>C</b>	8140	1
<b>D</b>	921	1
<b>E</b>	2276	1
<b>F</b>	12658	1
<b>F1</b>	1071	1
<b>F2 PAW</b>	843	1
<b>G</b>	2425	2
<b>I</b>	6538	4
<b>J</b>	24877	3
<b>K1</b>	4230	3
<b>K2</b>	2847	2
<b>L1</b>	811	2
<b>L2</b>	499	2
<b>M</b>	14346	2
<b>M2 PAW</b>	442	2
<b>N</b>	1067	3
<b>O</b>	1818	3
<b>P</b>	12058	4
<b>Q</b>	5870	3
<b>R</b>	13100	4
<b>S</b>	20372	2
<b>U</b>	39862	1
<b>V</b>	4656	4-CNODE
<b>V2</b>	1513	4-CNODE
<b>V3</b>	2658	4-CNODE
<b>V4</b>	79	4-CNODE
<b>203997</b>		

DLL ALK RD1 238H EXCEL DOC

- LEGEND**
- PRECINCT BOUNDARIES
  - PRECINCT 1
  - PRECINCT 2
  - PRECINCT 3
  - PRECINCT 4
  - COASTAL NODE



**DRAFT**



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SIZE A1

1:4000

0 20 40 60 80 100 120 140 160 180 200

**TRAFFIC ENGINEERING DATA**  
 SOURCE: CAW - 6016 futurebase.dwg  
 Y/M/D/D: 14/08/12  
**CADASTRAL INFORMATION**  
 SOURCE: WHEELAND  
 Y/M/D/D: 14/07/23  
 DWG REF: 1512025-034-r1.dwg  
 PROJECTION: PCG94

I LOTS MODIFIED - 5TH PRECINCT 4 180202 SB -  
 H PRECINCT 3 UPDATED PRE-CAI/TABLE UPDATED 180228 SB -  
 G PRECINCT 2 UPDATED PRE-CAI/TABLE UPDATED 180219 HH/SB RD  
 F PRECINCT 3 & 4 - DESIGN MODIFIED/ CALCS UPDATED 180213 SB RD  
 E PRECINCT 3 & 4 - DESIGN MODIFIED 180129 SB  
 REV DESCRIPTION Y/M/D/D DRAWN APPRD

COMMERCIAL ASSESSMENT (MARCH 2018)  
**Alkimos Beach**  
 City of Wanneroo

REF NO. DRAW NO. REV.  
 DLL ALK RD1 238 I

DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY

NOTE: NOT TO BE LODGED FOR SUBDIVISION APPROVAL