EPBC 2007/3333 New Sporting Field Bunbury Cathedral Grammar School Gelorup, Western Australia

17 JANUARY 2018 TO 16 JANUARY 2019

PREPARED FOR:

BUNBURY CATHEDRAL GRAMMAR SCHOOL ABN: 36 007 093 540

APRIL 2019

PREPARED BY:

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environmental and geoscience consultants

EPBC No 2007/3333 ANNUAL COMPLIANCE REPORT 2018

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Final Annual Compliance Report	Kirsi Kauhanen	Kristy Sell	11 April 2019

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1. DECLARATION OF ACCURACY

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed:

Full name:

Jennifer Nobbs

Position:

Director of Business and Administration

Bunbury Cathedral Grammar School

Organisation:

Date:

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2. INTRODUCTION

In December 2010, Bunbury Cathedral Grammar School (BCGS) was granted approval EPBC 2007/3333 under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) to clear 2.3 ha of native vegetation for a new sporting field at the school premises on Lot 73 Allen Road, Gelorup, Western Australia (WA). In order to offset the impacts of the vegetation clearing on Western Ringtail Possum (Pseudocheirus occidentalis) and White-tailed Black Cockatoos (*Calyptorhynchus baudinii* and *C. latirostris*), protected under the *EPBC Act*, the approval required the implementation of a Rehabilitation Management Plan (RMP) at Lot 9 on Plan 43302 in Stratham, WA.

The original RMP (September 2010) was a five year plan implemented from May 2011 to April 2016. Due to some of the set completion criteria not being achieved by the end of April 2016, an extension to the rehabilitation program was necessary. EPBC 2007/3333 approval was revised with a Variation to Conditions signed on 23 December 2016 requiring preparation and implementation of a revised RMP. RMP Rev2 (March 2017) was approved in March 2017.

This document comprises the Annual Compliance Report for 2018, for the reporting period of 17 January 2018 to 16 January 2019. It has been prepared to fulfil the requirements of the EPBC 2007/3333 Variation to Conditions (December 2016) or when a condition did not change the original EPBC 2007/3333 approval (December 2010) and the associated RMP Rev2 (March 2017).



3. DESCRIPTION OF ACTIVITIES

EPBC Number:	2007/3333 Original approval dated 21 December 2010 Variation to Conditions dated 23 December 2016
Project Name:	Construction of New Sporting Field
Approval Holder and ABN:	Bunbury Cathedral Grammar School (ABN: 36 007 093 540)
Approved Action:	To construct new sporting field at the school premises involving clearing of up to 2.3 ha of remnant vegetation.
Location of the Project:	Vegetation clearing: Lot 73 Allen Road, Gelorup, WA Offset rehabilitation: Lot 9 Plan 43302 Stratham, WA
Reporting Period:	17 January 2018 - 16 January 2019
Activities undertaken during Reporting Period:	Implementation of RMP Rev2 (March 2017).
Person accepting responsibility for the report – signed declaration (see Section 1):	Jennifer Nobbs – Director of Business and Administration
Date of Report:	11 April 2019



4. ASSESSMENT OF COMPLIANCE WITH EPBC 2007/3333

Compliance with EPBC 2007/3333 during the Reporting Period was determined via a desktop audit by Senior Environmental Scientist Kirsi Kauhanen from MBS Environmental. It comprised two main parts as follows:

- Assessment against EPBC 2007/3333 Variation to Conditions dated 23 December 2016, or when a condition did not change, against the original EPBC 2007/3333 approval dated 21 December 2010. The associated compliance assessment results are detailed in Appendix 1
- Assessment against RMP Rev2 (March 2017). The associated compliance assessment results are detailed in Appendix 2.



5. Non-Compliance with EPBC 2007/3333

5.1 SUMMARY OF NON-COMPLIANCE

No non-compliances were identified with the EPBC 2007/3333 Variation to Conditions (December 2016) or where applicable the original EPBC 2007/3333 approval (December 2010) during the Reporting Period (Appendix 1).

One partial non-compliance was identified with the RMP Rev2 (March 2017) during the Reporting Period, being the failure to maintain milestone of 1,500 stems/ha in Eastern and Western Rehabilitation Areas over the 2017/2018 summer period (Table 1, Appendix 2).

RMP Section	Key Management Measures	Compliance from 17/01/17 to 16/01/18	Evidence/Comments
7 Performance and Completion Criteria (Table 9 of RMP Rev2).	Milestones (by 31 December 2017)	Partly non-compliant	The milestones are required to be maintained. Stem density milestone of 1,500 stems/ha was not maintained in Eastern and Western Rehabilitation Areas over the 2017/2018 summer period, as noted in the autumn 2018 monitoring report (Appendix 6). However, the milestone was again achieved by spring 2018 in all rehabilitation areas (Appendix 7). All other milestones were maintained.

Table 1: Non-Compliances with RMP Rev2 (March 2017)

5.2 CORRECTIVE/PREVENTATIVE ACTIONS TAKEN

Infill planting was undertaken in Eastern and Western Rehabilitation Areas during winter 2018 to increase the stem density.

5.3 **RESULTS OF CORRECTIVE/PREVENTATIVE ACTIONS**

Rehabilitation monitoring in spring 2018 showed that stem density in Eastern and Western Rehabilitation Areas exceeded the milestone of 1,500 stems/ha and thus the partial non-compliance had been rectified.

5.4 FURTHER ACTIONS REQUIRED

None.



6. NEW ENVIRONMENTAL RISKS

There were no new risks identified during the Reporting Period. The RMP Rev2 (March 2017) includes a comprehensive risk assessment.



7. ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

Over the next Reporting Period from 17 January 2019 to 16 January 2020, the following activities are planned:

- BCGS will continue to implement the revised RMP Rev2 (March 2017) including infill planting of seedlings during winter 2019, weed control and biannual monitoring.
- BCGS will seek to remove the 'Sumpland' area from further rehabilitation obligations. Rehabilitation monitoring consistently indicates that completion criteria (environmental outcomes) for this rehabilitation area have been met.



APPENDICES



APPENDIX 1: COMPLIANCE ASSESSMENT - EPBC 2007/3333 VARIATION TO CONDITIONS (DECEMBER 2016) AND ORIGINAL EPBC 2007/3333 APPROVAL (DECEMBER 2010)



Table A1:	Compliance Assessment - EPBC 2007/3333 Variation to Conditions (December 2016) and original EPBC
	2007/3333 Approval (December 2010)*

Condition Number*	Condition	Compliance from 17/01/2018 to 16/01/19	Evidence/Comments
1	The person taking the action must clear no more than 2.3 hectares of native vegetation at the school premises on Lot 73 Allen Road, Gelorup, Western Australia in the area depicted with the pink line on the map at Attachment A.	Compliant	Clearing was undertaken in 2011 (as previously reported) and no additional clearing under this approval has been undertaken since.
2	By 30 March 2017 the approval holder must submit for the Minister's approval a revised version of the Rehabilitation Management Plan (RMP) at Attachment B of the approval dated 21 December 2010. The purpose of the revised RMP is to rehabilitate the Rehabilitation Areas to provide habitat for the Western Ringtail Possum (<i>Pseudocheirus occidentalis</i>) and White-tailed Black Cockatoos (<i>Calyptorhynchus baudinii</i> and <i>C. latirostris</i>).	Compliant	RMP Rev2 was submitted on 20 March 2017 and was approved on 29 March 2017 (Appendix 3).
	 The revised RMP must be prepared in accordance with the Department's <i>Environmental Management Plan Guidelines (2014)</i>, and must include: 1. The following milestones; By 31 December 2017 achieve and maintain an overall plant density: of 1500 stems per hectare in the Western Rehabilitation Area and Eastern Rehabilitation Areas. of 380 stems per hectare within the Sumpland Rehabilitation Area. 2. The following outcomes; By 30 June 2021, the Rehabilitation Areas will achieve: a self-sustaining vegetation community that, in the longer term, will provide habitat for the Western Ringtail Possum (<i>Pseudocheirus occidentalis</i>) and White-tailed Black Cockatoos (<i>Calyptorhynchus baudinii</i> and <i>C. latirostris</i>). a species diversity of at least 80% of the appropriate species. an average live weed cover of less than 50%. 3. Environmental management actions to achieve the above milestones and outcomes, including; site planting activities. ongoing site maintenance. 		



Condition Number*	Condition	Compliance from 17/01/2018 to 16/01/19	Evidence/Comments
2 cont.	 A monitoring program, which must include: performance indicators comprised of clear and concise criteria which are capable of accurate and reliable measurement, against which achievement of outcomes will be determined. monitoring requirements, including the timing and frequency of monitoring activities to detect changes in the performance indicators, to determine if outcomes are being achieved, and to inform adaptive implementation of the RMP. Trigger values, and corrective actions where trigger values are reached, reporting requirements, and how environmental incidents and emergencies will be managed. Effort and resources to ensure outcomes and milestones are achieved when monitoring results indicate that outcomes or milestones are not on track to being achieved. Annual reporting requirements including a commitment to notify the Department within 14 		
	days following a failure to meet milestone targets outlined in condition 2. If the Minister approves the revised RMP the revised RMP must be implemented.		
3	Within 5 years of the commencement of the action, the person taking the action must implement all of the activities and meet all of the completion criteria in the Rehabilitation Management Plan at Condition 2 above to the satisfaction of the Minister. Any changes to the outcomes to be achieved in the Rehabilitation Management Plan must be approved by the Minister.	Not applicable	Condition revoked in Variation to Conditions (December 2016).
4	Within 30 days of commencement of the action, the person taking the action must advise the Department in writing the actual date of commencement.	Not relevant to reporting period	Action substantially commenced in 2011.
5	If at any time after 5 years from the date of this approval, the Minister notifies, in writing, the person taking the action that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without written agreement of the Minister.	Not relevant to reporting period	Action substantially commenced in 2011.
6	If the person taking the action wishes to carry out any activity otherwise than in accordance with the plan, as specified in Condition 2, the person taking the action must submit to the Department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the revised plan in writing. The Minister will not approve a revised plan unless the revised plan would result in an equivalent or improved environmental outcome. If the Minister approved.	Not relevant to reporting period	There was no need to carry out activity otherwise than in accordance with RMP Rev2 (March 2017).



Condition Number*	Condition	Compliance from 17/01/2018 to 16/01/19	Evidence/Comments
7	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the RMP required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	Relevant records attached to this Annual Compliance Report (Appendix 3 to Appendix 11). No records requested by the Department during the Reporting Period.
8	Within three months of every 12 month anniversary of the commencement of the action, the approval holder must publish a compliance report and provide documentary evidence providing proof of the date of publication to the Department by email (to EPBCMonitoring@environment.gov.au or another email address agreed to in writing by the Minister). The first compliance report must cover the period beginning on the day of the commencement of the action through 12 months, and subsequent compliance reports must cover the 12 month period after the previous compliance report. The approval holder may cease preparing compliance reports required by this condition with written agreement of the Minister. Compliance reports must: consider the Department's Annual Compliance Report Guidelines; and must address any contraventions of the conditions of this approval including requirements of the RMP; and must address whether outcomes and milestones required by these conditions have been met or are likely to be achieved.	Compliant	Annual Compliance Report 2017 was submitted to the Department on 16 April 2018 with a screen shot of the school's website to show that the report had been made public on the same day (Appendix 4). Annual Compliance Reports for 2016, 2017 and 2018 were prepared in accordance with the Department's guidelines and address any contraventions of the conditions of the approval relevant to the reporting period.
9	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Not relevant to reporting period	The Minister has not made such a request during the Reporting Period.
10	The revised RMP must be published on the approval holder's website within 1 month of being approved by the Minister.	Compliant	RMP Rev2 (March 2017) was approved on 29 March 2017 and posted on the school's website on 6 April 2017 (Appendix 5).
11	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species to do so, the Minister may request that the person taking the action make specified revisions to the plan/s specified in the conditions and submit the revised plan/s for the Minister's written approval. The person taking the action must comply with any such request. The revised approved plan/s must be implemented. Unless the Minister has approved the revised plan/s, then the person taking the action must continue to implement the plan/s originally approved, as specified in the conditions.	Not relevant to reporting period	The Minister has not made such a request during the Reporting Period.



* Conditions 1, 4 and 5 of the original EPBC 2007/3333 approval did not change and are included in this table. Other conditions either changed, were revoked or added as detailed in EPBC 2007/3333 Variation to Conditions (December 2016).



APPENDIX 2: COMPLIANCE ASSESSMENT - REHABILITATION MANAGEMENT PLAN REV2 (MARCH 2017)



RMP Section	Key Management Measures	Compliance from 17/01/18 to 16/01/19	Evidence/Comments
6.2.3 Fencing	The remaining boundary fencing (north, east, south sides) will be maintained to prevent livestock access from neighbouring properties. Trials involving additional fencing will be considered for the highest mortality areas to reduce grazing impact of kangaroos	Compliant	Fence monitoring was undertaken and no issues with fence were identified (Appendices 6 and 7). Livestock access was detected from the westem side (where there should be no livestock) and addressed. No damage to rehabilitation was recorded. A trial fenced enclosure in high mortality area was maintained and continued to exclude kangaroos (Appendices 6 and 7).
6.2.6 Weed Management	Two main control rounds per year (for winter and summer weeds respectively) unless site conditions indicate no benefit. Annual control of any Declared Pest species will also continue.	Compliant	Weed control was undertaken in September and October 2018 as per School wage records (Appendix 8). This covered Declared Pest species. Site conditions indicated that the second round of weed control was not necessary (Appendix 6). Evidence of effective weed control was low live weed cover recorded in rehabilitation monitoring (Appendices 6 and 7).
	Plant 10,538 seedlings in 2017	Not relevant to reporting period	Relates to 2017 and has been previously reported on.
	Further infill planting will be undertaken in 2018 and subsequent years as necessary.	Compliant	Infill planting undertaken as per seedling invoice (Appendix 9) and rehabilitation monitoring (Appendices 6 and 7)
	Planting will be undertaken during the late autumn – winter period following commencement of substantial seasonal rainfall.	Compliant	Planting undertaken in May-July 2018 (Appendix 8) following commencement of substantial winter rains.
6.2.7	Seedlings will be planted with a slow release native fertiliser pill.	Compliant	As per invoice (Appendix10).
Planting	Plastic corflute tree guards will be used to protect young seedlings.	Compliant	Photos in monitoring report (Appendix 7). Previous guards were reused.
	In the areas of very poor success rates, trials of additional treatments (e.g. water crystals and mulching) will be considered.	Compliant	Trials were considered. Soil wetter and lime were applied in selected areas (Appendix 10).
	BCGS will consider undertaking student planting days at the site.	Compliant	Student planting day was considered but not undertaken in 2018. Student planting day was undertaken on 29 June 2017 as reported last year.
6.2.9 Revegetation Species	Species for plantings will be chosen from list in Table 7 (of RMP Rev2).	Compliant	Monitoring results show that appropriate species were planted (Appendices 6 and 7).

Table A2:	Compliance Assessment	- Rehabilitation Management Plar	n Rev2 (March 2017)
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RMP Section	Key Management Measures	Compliance from 17/01/18 to 16/01/19	Evidence/Comments
	Completion criteria (environmental outcome by latest 30 June 2021)	Not applicable to the reporting period	Not required to be achieved within the reporting period.
7 Performance and Completion Criteria (Table 9 of RMP Rev2).	Milestones (by 31 December 2017)	Partly non-compliant	The milestones are required to be maintained. Stem density milestone of 1,500 stems/ha was not maintained in Eastern and Westem Rehabilitation Areas over the 2017/2018 summer period, as noted in the autumn 2018 monitoring report (Appendix 6). However, the milestone was again achieved by spring 2018 in all rehabilitation areas (Appendix 7). All other milestones were maintained.
	Performance targets	Compliant	Only weed control performance target was relevant for the reporting period and this was met. Weed control was undertaken in September and October 2018 as per School wage records (Appendix 8). Site conditions indicated that the second round of weed control was not necessary (Appendix 6). Effectiveness of weed control was shown in the monitoring results (Appendices 6 and 7).
8	Photo monitoring	Compliant	Monitoring undertaken as per autumn and spring 2018
Monitoring	Fence monitoring	Compliant	monitoring reports (Appendices 6 and 7).
Program (Table 13 of RMP Rev2)	Vegetation monitoring	Compliant	
9 Contingency	Contingency measures for fencing	Compliant	No contingency measures needed for fencing (Appendices 6 and 7).
Measures (Table 14 of RMP Rev2)	Contingency measures for vegetation	Compliant	Necessary contingency measures identified and implemented as per autumn and spring 2018 monitoring reports (Appendices 6 and 7).
10 Risk of Failure (Table 15 of RMP Rev2)	Contingency measures and monitoring (as per RMP Rev2 Section 8 and 9.	Compliant	As per comments for RMP Sections 8 and 9 above.



RMP Section	Key Management Measures	Compliance from 17/01/18 to 16/01/19	Evidence/Comments
12 Incidents and Emergencies	Environmental incidents will be reported to the BCGS as soon as possible. Depending on the nature of the incident, the BCGS may inform the landowner (WAPC) and seek appropriate advice to mitigate the matter. Records will be kept of any environmental incidents and response measures. In case of any emergency, the first point of contact will be triple zero (call 000). BCGS should be informed of any emergency as soon as possible when safe to do so. BCGS will then inform the landowner (WAPC). Records will be kept of any emergencies and response measures.	Not relevant to reporting period	No incidents or emergencies occurred during the reporting period.
13 Record keeping	Accurate records will be maintained substantiating all activities associated with approval conditions and the implementation of the RMP Rev2.	Compliant	Records were inspected and utilised in preparation of this Annual Compliance Report 2018.



RMP Section	Key Management Measures	Compliance from 17/01/18 to 16/01/19	Evidence/Comments
	The latest version of the RMP will be published on the website of BCGS within one month of being approved by the Minister.	Compliant	RMP Rev2 (March 2018) was approved on 29 March 2017 and posted on the school's website on 6 April 2017 (Appendix 5).
	Annual Compliance Reports (ACR) will be prepared in accordance with the Department's Annual Compliance Report Guidelines.	Compliant	Annual Compliance Reports for 2016, 2017 and 2018 were prepared in accordance with the Department's guidelines.
	The ACR is required to be published on BCGS website within three months of the end of the reporting period (17 April) each year and evidence of publication submitted to the Department.	Compliant	Annual Compliance Report 2017 was submitted to the Department on 16 April 2018 with a screen shot of the school's website to show that the report had been made public on the same day (Appendix 4).
14	The ACR will address any contraventions of the conditions of the EPBC approval including requirements of the RMP Rev2 and will detail whether outcomes and milestones required by these conditions have been met or are likely to be achieved.	Compliant	Annual Compliance Reports for 2016, 2017 and 2018 address any contraventions of the conditions of the approval relevant to the reporting period.
14 Reporting and Public Availability	Monitoring results will be summarised in a report twice yearly, with spring monitoring results reported by the end of December and autumn monitoring results by end of May. These reports will remain internal BCGS documents until included as evidence in the relevant ACR.	Compliant	Monitoring results for autumn and spring 2018 reported on time (Appendices 6 and 7).
	Approval EPBC 2007/3333 Variation 2016 requires that the Department will be notified within 14 days following failure to meet milestones detailed in Table 9. The achievement and maintenance of the milestones will be determined on the basis of the biannual monitoring rounds (spring and autumn). The spring monitoring results will be analysed and reported by the end of December and the Department notified by 14 January of any failure to meet the milestones. The autumn monitoring results will be analysed and reported by the end of May and the Department notified by 14 June of any failure to meet the milestones.	Compliant	The Department was notified of a failure to meet a milestone within the agreed timeframe following the autumn monitoring round. This was done via email on 14 June 2018 (Appendix 11) that contained the autumn 2018 monitoring report and a cover letter describing the issue and the proposed solution.
16 Auditing	Internal desktop audits of compliance with the latest version of the RMP and associated approval conditions will be undertaken in preparation of Annual Compliance Report annually.	Compliant	Desktop audit of compliance with RMP Rev2 (March 2017) has been undertaken by MBS Environmental during preparation of the Annual Compliance Report for 2018.



RMP Section	Key Management Measures	Compliance from 17/01/18 to 16/01/19	Evidence/Comments
17 Plan Review	RMP Rev2 will be reviewed on an annual basis during the preparation of the Annual Compliance Report.	Compliant	RMP Rev2 was reviewed by MBS Environmental during preparation of Annual Compliance Report for 2018. No changes are necessary.
	 Specific instances that will trigger an immediate review of RMP Rev2 include: Monitoring reports indicate milestones or performance targets may not be achieved. Following a significant environmental incident (any incident that would kill or remove large portion of plants e.g. bushfire). 	Compliant	One of the milestones (stem density) was not maintained in all rehabilitation areas and this was considered by MBS Environmental as part of preparing the monitoring reports and this Annual Compliance Report. No immediate changes were considered necessary at the time of autumn reporting and by spring reporting the milestone was achieved again. Consequently no changes to the RMP Rev2 are proposed.
	If RMP review indicates changes to the plan are necessary, a revision of the RMP will be prepared and submitted to the Department to obtain the Minister's written approval of the revision. The Minister may also ask for a specific revision in which case a revised RMP will be prepared and submitted for approval. The varied activity shall not commence until the Minister has approved the revised plan in writing.	Not relevant to reporting period	No changes to the RMP were considered necessary.



APPENDIX 3: RMP Rev2 APPROVAL LETTER





Australian Government Department of the Environment and Energy

Ms Jennifer Nobbs Bursar Bunbury Cathedral Grammar School PO BOX 1198 BUNBURY WA 6230

Bunbury Cathedral Grammar School, Gelorup, WA – Construction of New Sporting Field (EPBC 2007/3333)

Dear Ms Nobbs,

Thank you for your letter dated 20 March 2017 requesting approval of the *Rehabilitation Management Plan. Revision 2* (Plan) submitted in accordance with condition 2 of EPBC Act approval 2007/3333.

Officers of this Department have reviewed the Rehabilitation Management Plan and advised me on the requirements of condition 2 of the approval. As delegate of the Minister for the Environment and Energy, I have decided to approve the Plan in accordance with condition 2 of EPBC Act approval 2007/3333. The Plan must now be implemented.

In accordance with condition 10 of EPBC Act approval 2007/3333, the Plan must be published on your website within one month of approval and must remain on the website for the period in which the EPBC Act approval has effect. As you are aware, the Department has an active monitoring program which includes monitoring inspections, desk top document reviews and audits.

Should you require any further information, including whether to submit the revised Plan for approval, please contact Justin Williams, on (02) 6275 9492 or by email: <u>postapproval@environment.gov.au</u>.

Yours sincerely

Matthew Dutkiewicz Acting Assistant Secretary Compliance & Enforcement Branch Environment Standards Division

29 March 2017

APPENDIX 4: SUBMISSION OF ACR 2017



Kirsi Kauhanen

From:	Jenny Nobbs <jenny.nobbs@bcgs.wa.edu.au></jenny.nobbs@bcgs.wa.edu.au>
Sent:	Monday, 16 April 2018 12:45 PM
То:	EPBCMonitoring@environment.gov.au
Cc:	post.approvals@environment.gov.au; Kirsi Kauhanen
Subject:	EPBC Compliance Report 2017 - 2007/3333
Attachments:	EPBC Compliance Report 2017 - BCGS.pdf; Website post BCGS.pdf

Good Afternoon,

Please find attached the EPBC Compliance Report 2017 for 2007/3333 and a screenshot to show that the School has posted the report on its website.

Please direct any enquiries to me.

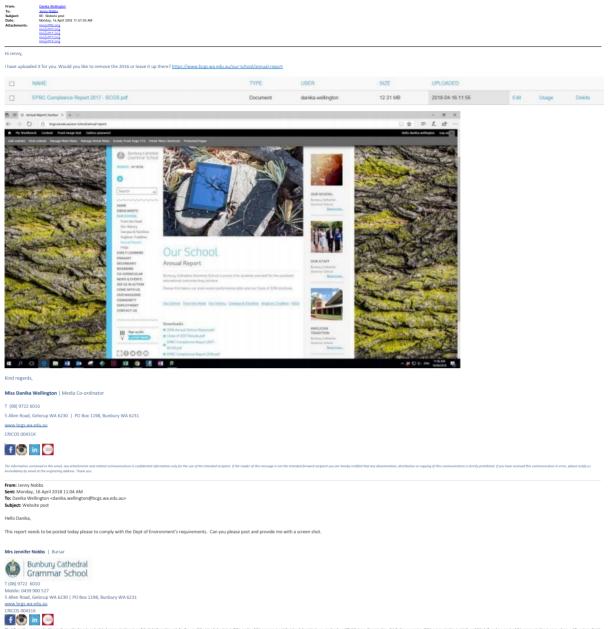
Mrs Jennifer Nobbs | Bursar



T (08) 9722 6010 Mobile: 0439 900 527 5 Allen Road, Gelorup WA 6230 | PO Box 1198, Bunbury WA 6231 www.bcgs.wa.edu.au CRICOS 00431K



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APPENDIX 5: POSTING OF RMP ON WEBSITE



From: Jenny Nobbs [mailto:jenny.nobbs@bcgs.wa.edu.au] Sent: Friday, 23 March 2018 9:04 AM To: Kirsi Kauhanen Subject: Posting of report

Hello Kirsi,

Confirmation of posting on our website.

Mrs Jennifer Nobbs | Bursar



8, Bunbury WA 6231



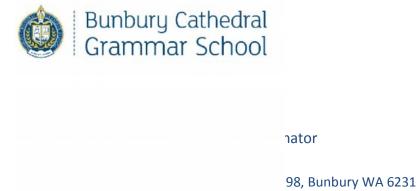
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From: Danika Wellington Sent: Friday, 23 March 2018 8:57 AM To: Jenny Nobbs <jenny.nobbs@bcgs.wa.edu.au> Subject: RE: Please

Hi Jenny,

Sorry I forgot to look into this yesterday. Yes I was:

NAME	TYPE	USER	SIZE	UPLOADED
Rehabilitation Management Plan EPBC 2007-3333.pdf	Document	danika wellington	5.92 MB	2017-04-06 11:14
EPBC Compliance Report 2016.pdf	Document	danika.wellington	2.39 MB	2017-03-17 13:47



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From: Jenny Nobbs Sent: Thursday, 22 March 2018 4:56 PM To: Danika Wellington <<u>danika.wellington@bcgs.wa.edu.au</u>> Subject: Please Hello Danika,

Were you able to find the date of posting for that report please?

Mrs Jennifer Nobbs | Bursar



8, Bunbury WA 6231



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APPENDIX 6: REHABILITATION MONITORING AUTUMN 2018



REHABILITATION MONITORING REPORT AUTUMN 2018

STRATHAM OFFSET REHABILITATION (EPBC 2007/3333)

PREPARED FOR:

BUNBURY CATHEDRAL GRAMMAR SCHOOL ABN: 36 007 093 540

May 2018

PREPARED BY:

Martinick Bosch Sell Pty Ltd 4 Cook Street West Perth WA 6005 Ph: (08) 9226 3166 Fax: (08) 9226 3177 Email: <u>info@mbsenvironmental.com.au</u> Web: <u>www.mbsenvironmental.com.au</u>





environmental and geoscience consultants

EPBC No 2007/3333 REHABILITATION MONITORING AUTUMN 2018

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1. INTRODUCTION

In accordance with approval EPBC 2007/3333 granted under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the associated Rehabilitation Management Plan (RMP Rev2, March 2017), Bunbury Cathedral Grammar School is undertaking an offset rehabilitation program on Lot 9 on Plan 43302 in Stratham (Figure 1). The rehabilitation is subject to biannual monitoring as detailed in RMP Rev2. This report summarises the results of monitoring undertaken in autumn 2018.





2. Methods

Monitoring was undertaken between 12 March and 3 April 2018 by Ms Kirsi Kauhanen (Senior Environmental Scientist) of MBS Environmental. The monitoring included photo monitoring, fence monitoring and vegetation monitoring and followed methods detailed in RMP Rev2.

Photo monitoring was undertaken at eight permanent locations (Table 1) that have been monitored since 2011.

Dhoto Doint ID	UTM GDA 9	94 (Zone 50)	Rehabilitation Area
Photo Point ID	Easting	Northing	
ST1	369021	6298362	Western Area
ST2	369100	6298465	Western Area
ST3	369177	6298571	Western Area
ST4	369253	6298487	Sumpland
ST5	369308	6298487	Eastern Area
ST6	369259	6298417	Eastern Area
ST7	369179	6298399	Sumpland
ST8	369159	6298327	Eastern Area

Table 1:Photo Monitoring Point Locations

Fence monitoring comprised opportunistic visual inspection of fences and the rehabilitation areas for any signs of livestock access and was undertaken concurrently with vegetation monitoring.

Vegetation monitoring comprised surveying of 11 permanent and 10 random quadrats (each 10 m by 10 m) in the Western Area, three permanent and three random belt transects (2 m by 100 m) in the Eastern Area and three permanent and one random belt transects (2 m by 100 m) in the Sumpland. The locations of the quadrats and transects are shown in Figure 2. Opportunistic observations on vegetation were also be made. Data collection and analysis is summarised in Table 2.

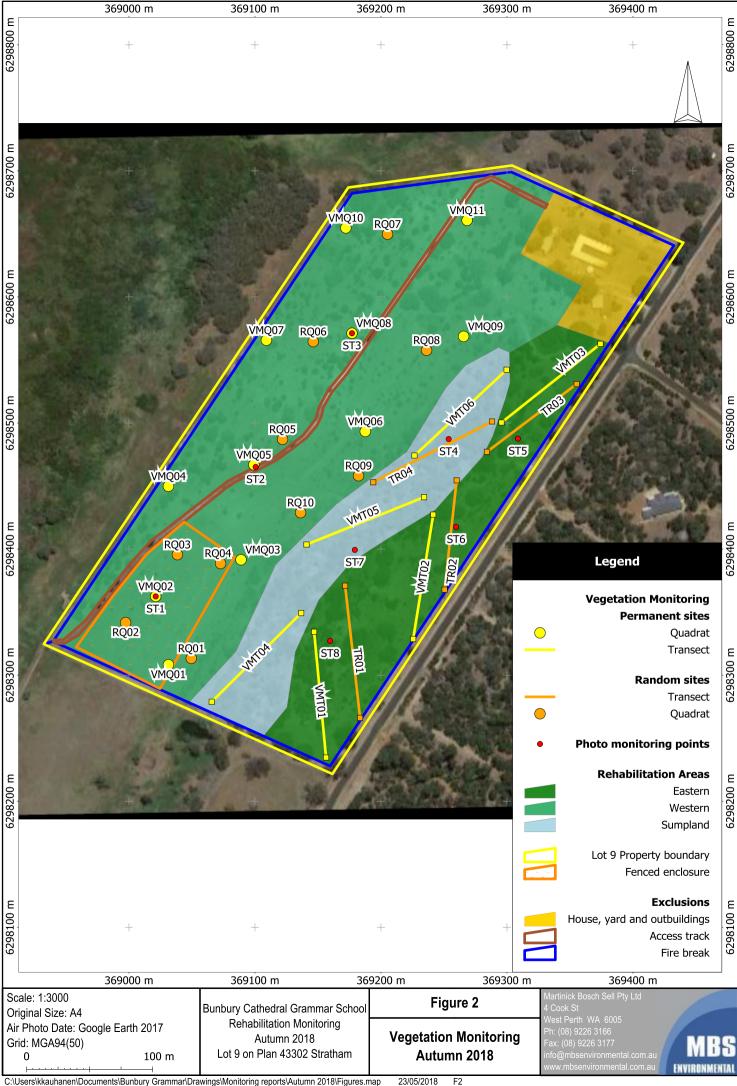


Table 2:	Vegetation	Monitoring	Data	Collection	and Analysis
----------	------------	------------	------	------------	--------------

ltom	Data Collection Method							
Item	Quadrats	Transects	Opportunistic					
Data Collection	 Number of native plants (planted or naturally recruited). Species of native plants (planted or naturally recruited). Maximum height for each native species. Native vegetation structure. Species of weeds. Estimated live % foliage cover of weeds. Qualitative assessment of grazing impact. Location coordinates and photograph. 	 Number of native plants (planted or naturally recruited). Species of native plants (planted or naturally recruited). Maximum height for each native species. Native vegetation structure (note any significant changes along transect). Species of weeds. Estimated live % foliage cover of weeds (average of estimates at 20m interval). Qualitative assessment of grazing impact. Start and end location coordinates and photograph. 	Native or weed species not observed in quadrats/transects.					
Data Analysis	Native species composition.Native vegetation structure.	following will be calculated/described for per hectare, standard error of mean and						
	Weed species composition.Average live weed % foliage coveGrazing impact.	r, standard error of mean and relative sta	ndard error (SE/mean as %).					

The monitoring results were also assessed against trigger values specified in RMP Rev2 (Table 14), to determine whether contingency measures were necessary.





C:\Users\kkauhanen\Documents\Bunbury Grammar\Drawings\Monitoring reports\Autumn 2018\Figures.map 23/05/2018

3. RESULTS

3.1 PHOTO MONITORING

Plates 1 - 11 provide a selection of photos for each monitoring site, showing change from August 2011 to March/April 2018. Some photo monitoring points, particularly ST8 show significant establishment of native vegetation whereas others, such as ST1 illustrate the patches of high seedling mortality. Photo points ST4 and ST7 are located in the Sumpland Area and show little change as remnant vegetation dominates the view.

3.2 FENCE MONITORING

Fence monitoring in March/April 2018 identified no issues requiring contingency measures. Lot 9 boundary fence remained in place on three sides (north, east, south) and was sufficient to prevent access by livestock from adjacent grazing properties (north and south sides). The western boundary fence was removed in 2016 to incorporate the property to the Muddy Lakes Regional Open Space.

The fenced enclosure in the Western Area, shown in Figure 2, remained in good condition and continued to exclude kangaroos.

3.3 VEGETATION MONITORING

Photographs of each quadrat and transect surveyed in March/April 2018 are provided in Plates 9 - 11.

3.3.1 Native Species Composition

A summary of native species composition results is provided in Table 3 that relates the results to the species composition requirements set in RMP Rev2. Complete results on native species recorded in March/April 2018 are provided in Appendix 1.



	Fac	stern	Sumpland					
	EdS		We	stern	Jumpianu			
Scientific Name	Listed in RMP Rev2	Recorded in March/ April 2018	Listed in RMP Rev2	Recorded in March/ April 2018	Listed in RMP Rev2	Recorded in March/ April 2018		
Trees								
Agonis flexuosa	Yes	Yes	Yes	Yes	Yes	Yes		
Banksia attenuata	Yes	Yes	No	(Yes)	No	(No)		
Banksia grandis	Yes	Yes	No	(Yes)	No	(No)		
Banksia littoralis	No	(No)	No	(No)	Yes	No		
Corymbia calophylla	Yes	Yes	Yes	Yes	No	(No)		
Eucalyptus gomphocephala	Yes	Yes	Yes	Yes	No	(No)		
Eucalyptus marginata	Yes	Yes	Yes	Yes	No	(No)		
Eucalyptus rudis	Yes	Yes	Yes Yes		Yes	Yes		
Melaleuca preissiana	No	(No)	No (Yes)		Yes	Yes		
Melaleuca rhaphiophylla	No	(No) No (No)		(No)	Yes	Yes		
Xylomelum occidentalis	Yes	Yes	No	(Yes)	No	(No)		
Shrubs								
Acacia cyclops	Yes	Yes	Yes	Yes	Yes	Yes		
Acacia saligna	Yes	Yes	Yes	Yes	Yes	Yes		
Bossiaea eriocarpa	Yes	No	Yes	No	No	(No)		
Hakea prostrata	Yes	Yes	Yes	Yes	No	(No)		
Hibbertia cuneiformis	Yes	Yes	Yes	Yes	No	(Yes)		
Jacksonia furcellata	Yes	Yes	Yes	Yes	No	(No)		
Macrozamia riedlei	Yes	Yes	No	(No)	No	(No)		
Rhagodia baccata	Yes	Yes	Yes	Yes	Yes	Yes		
Spyridium globulosum	Yes	Yes	Yes	Yes	Yes	Yes		
Viminaria juncea	No	(No)	No	(No)	Yes	Yes		
Herbs and Creepers								
Acacia pulchella	Yes	Yes	Yes	Yes	No	(No)		
Conostylis aculeata	Yes	Yes	Yes	No	No	(No)		
Hardenbergia comptoniana	Yes	No	Yes	No	No	(No)		
Sedges and Rushes								
Lepidosperma gladiatum	No	(No)	No	(No)	Yes	Yes		
Juncus pallidus	No	(No)	No	(No)	Yes	Yes		
Total	20	18	16	13	12	11		
% of species listed in	% of species listed in RMP Rev2		81%		92	2%		

Brackets for Yes and No were used for March/April 2018 to indicate that the species was not listed as likely suitable for that particular rehabilitation area in the RMP Rev2 and regardless of presence/absence, the species would not count towards the species composition milestones or outcomes for that particular area.



3.3.2 Native Vegetation Structure

Native vegetation structure in the rehabilitation areas during March/April 2018 was as per the following:

- Eastern Area:
 - Upper storey (up to 10 15 m): Few remnant mature Agonis flexuosa and Eucalyptus gomphocephala.
 - Middle storey (1 7 m): Rehabilitation comprising juvenile Eucalyptus spp. (Eucalyptus gomphocephala, E. marginata, E. rudis, Corymbia calophylla), Agonis flexuosa, Acacia saligna and Jacksonia furcellata with occasional Acacia cyclops.
 - Understorey (up to 1 m): Rehabilitation comprising juvenile Hakea prostrata, Rhagodia baccata, Macrozamia riedlei, Conostylis accuelata, Spyridium globulosum, Acacia pulchella and young individuals of Acacia spp., Agonis flexuosa, Eucalyptus spp., Banksia spp., and Xylomelum occidentale. Some Pteridium esculentum was also present. Groundcover was mainly introduced weed species.
- Western Area:
 - Upper storey (up to 10 m): Few remnant mature *Agonis flexuosa*.
 - Middle storey (1 7 m): Rehabilitation comprising juvenile *Eucalyptus* spp. (mainly *Eucalyptus* gomphocephala and *E. rudis*, but also *E. marginata* and *Corymbia calophylla*), Agonis flexuosa, Acacia cyclops, Acacia saligna and Jacksonia furcellata.
 - Understorey (up to 1 m): Rehabilitation comprising juvenile Hakea prostrata, Rhagodia baccata, Spyridium globulosum, Acacia pulchella and young individuals of Acacia spp., Agonis flexuosa, Eucalyptus spp., Banksia spp. and Xylomelum occidentale. Groundcover was mainly introduced weed species.
- Sumpland:
 - Upper storey (10 15 m): Remnant mature *Melaleuca rhaphiophylla* and *Eucalyptus rudis*.
 - Middle storey (1 7 m): Remnant *Viminea juncea* with rehabilitation comprising mainly juvenile *Eucalyptus rudis, Agonis flexuosa, Melaleuca rhapiophylla, Viminea juncea* and *Acacia* spp.
 - Understorey (up to 1 m tall): Occasional remnant sedges and rushes with rehabilitation comprising Juncus pallidus and young individuals of *Melaleuca* spp., *Eucalyptus rudis, Agonis flexuosa, Viminea* juncea and Acacia spp. Groundcover was mainly introduced weed species.

Further details on height of native species in each quadrat/transect are provided in Appendix 2.

3.3.3 Native Plant Stem Density

A summary of native plant stem density from October 2012 to March/April 2018 is provided in Table 4. The reliability measure (SE/Mean) that was introduced in the RMP Rev2 was within target (<30%) for all rehabilitation areas in March/April 2018. Detailed results for each quadrat and transect surveyed in March/April 2018 are provided in Appendix 1.



	Stems per Hectare											
Monitoring Occasion		,	Western Area				Sumpland					
	Mean	SE ¹	n²	SE/Mean ³	Mean	SE	n	SE/Mean	Mean	SE	n	SE/Mean
Oct. 2012	1,500	204	4	-	320	193	5	-	2,300	-	1	-
March 2013	775	397	4	-	490	99	10	-	1,400	-	1	-
Nov. 2013	1,650	318	4	-	940	111	10	-	1,300	-	1	-
March 2014	740	258	5	-	600	99	13	-	950	250	2	-
Oct. 2014	975	119	8	-	953	84	15	-	1,700	200	2	-
March 2015	2,033	672	12	-	778	97	23	-	7,183	2,703	6	-
Oct. 2015	1,140	175	5	-	853	110	15	-	7,300	1,900	2	-
April 2016	1,410	544	10	-	594	69	18	-	3,340	1,447	5	-
Oct. 2016	1,619	695	8	-	503	85	18	-	2,767	1,271	3	-
May 2017 ⁴	1,158	245	6	21%	409	63	21	15%	2,163	468	4	22%
Oct/Nov 2017	1,536	129	7	8%	1,759	131	22	7%	2,038	464	4	23%
Mar/Apr 2018	1,275	189	6	15%	1,376	122	21	9%	2,063	377	4	18%

 Table 4:
 Native Plant Stem Density

¹ SE = standard error ² n = number of quadrats/transects ³ '-' = not applicable

⁴ Change in methods from May 2017 onwards in Eastern Area and Sumpland.

3.3.4 Weeds

The most common weed species recorded in all three rehabilitation areas were *Cynodon dactylon* (couch grass) and various pasture grasses. Other relatively common species included *Trachyandra divaricata* and *Lupinus sp.*, however these were mainly dead during this monitoring occasion. Few individuals of Declared Pest species *Zantedeschia aethiopica* (DP) and *Gomphocarpus fruticosus* (DP) were also recorded.

Live percentage weed cover for each rehabilitation area in March/April 2018 is presented in Table 5. The reliability measure (SE/Mean), that was introduced in RMP Rev2, was within target (<30%) for all rehabilitation areas. Complete results on weed species recorded in March/April 2018 are provided in Appendix 3.

		Live Weed % Cover										
Monitoring Occasion	Eastern				Western			Sumpland				
	Mean	SE	n²	SE/Mean	Mean	SE	n²	SE/Mean	Mean	SE	n²	SE/Mean
May 2017	7.88	0.85	6	11%	16.05	2.35	21	15%	25.53	7.36	4	29%
Oct/Nov 2017	19.69	3.82	7	19%	21.23	3.19	22	15%	44.88	1.43	4	3%
Mar/Apr 2018	2.17	0.73	6	29%	10.71	1.86	21	17%	26.00	2.27	4	9%

Table 5:Live Percentage Weed Cover



3.3.5 Grazing Impact

Evidence of kangaroo and rabbit grazing on seedlings was recorded across all rehabilitation areas in March/April 2018. Their scats, tracks, foot prints and diggings were observed across the site. Snail grazing was also observed in Eastern and Western Areas. While tree guards were protecting the youngest planted seedlings from grazing by kangaroos and rabbits, grazing was having a significant impact on plant survival overall.

3.4 ASSESSMENT AGAINST TRIGGER VALUES

An assessment of monitoring results against trigger values specified in RMP Rev2 is presented in Table 6. Photo monitoring was undertaken to maintain a visual record of revegetation progress, however photo monitoring is not linked to any trigger values or contingency measures.

Parameter	Performance Indicator	Trigger Value (RMP Rev2)	Assessment	Contingency Measures
	Fence condition	Fence condition does not prevent livestock access	Not triggered	None necessary
Fencing Signs of livestock access		Signs of livestock access	Not triggered	None necessary
	Native species composition	Less than 85% of target flora species for a Rehabilitation Area present in that area (target species listed in Table 7 of RMP Rev2)	Triggered for Western Area (Western = 81%, however above the completion criteria of 80%).	Undertake infill planting during winter 2018 to increase species diversity in accordance with RMP Rev2.
Manatalian	Native plant density	 In 2017 and 2018: Less than 1,650 stems per hectare on average in Eastern and Western Areas 	Triggered for Eastern and Western Areas (Eastern = 1,275 stems per hectare; Western = 1,376 stems per hectare)	Undertake infill plantings during winter 2018 that increase the stem densities in accordance with RMP Rev2.
Vegetation		 Less than 420 stems per hectare on average in Sumpland 		
	Weed species composition		Triggered for all rehabilitation areas	Continue targeted weed control of the Declared Pest species in accordance with RMP Rev2.
	Live weed % foliage cover	 In 2017 and 2018: Average live weed % foliage cover 40% or higher 	Not triggered	None necessary

 Table 6:
 Assessment Against Management Trigger Values



4. Assessment Against Milestones and Performance Targets

An assessment of monitoring results against milestones and performance targets specified in RMP Rev2 is presented in Table 7. The milestone of 1,500 stems per hectare in Eastern and Western Areas was achieved by end of 2017, however mortality over summer reduced numbers to 1,275 in Eastern and 1,376 in Western Area by March/April 2018. Infill planting during winter 2018 will address this shortfall.



Completion Criteria - Environmental Outcome Latest by 30 June 2021	Milestone ¹	Assessment Against Milestone	Performance Target	Assessment Against Performance Target
At least 80% of the species listed in RMP Rev2 Table 7 for a particular Rehabilitation Area are present in that Rehabilitation Area ²	By 31 December 2017, achieve and maintain at least 80% of the species listed in RMP Rev2 Table 7 for a particular rehabilitation area ²	Milestone of 80% target species achieved in all rehabilitation areas as shown in Table 3.	None applicable (2017 targets addressed in previous monitoring reports).	Not applicable
Achieve a self-sustaining vegetation community that, in the longer term, will provide habitat for the Western Ringtail Possum (<i>Pseudocheirus</i> <i>occidentalis</i>) and White-tailed Black Cockatoo (<i>Calyptorhynchus baudinii</i> and <i>C. latirostris</i>)	By 31 December 2017, achieve and maintain on average at least 1,500 stems per hectare in the Western and Eastern Areas ² By 31 December 2017, achieve and maintain on average at least 380 stems per hectare in the Sumpland ²	Milestone of 1,500 stems per hectare achieved by end of 2017, but mortality over summer reduced numbers to 1,275 stems per hectares in Eastern and 1,376 in Western area by March/April 2018 as shown in Table 4. Milestone of 380 stems per hectare achieved and maintained in the Sumpland as shown in Table 4.	None applicable (2017 targets addressed in previous monitoring reports).	
The average live weed cover is <50%	By 31 December 2017, achieve and maintain the average live weed cover of <50%	Milestone of <50% live weed cover achieved in all rehabilitation areas as shown in Table 5.	Undertake weed control biannually	Performance target met. Spraying undertaken for summer and winter weeds.

 Table 7:
 Assessment Against RMP Rev2 Milestones and Performance Targets

1 These milestones will be assessed on the basis of rehabilitation monitoring scheduled for October 2017 (see RMP Rev2 Section 8).

2 Including planted seedlings and native regrowth.



5. DISCUSSION AND CONCLUSION

While all milestones set in RMP Rev2 were achieved by the end of 2017, one of them (minimum stem density of 1,500 per hectare in Eastern and Western Areas) was not maintained over the subsequent summer period. In March/April 2018 stem density in the Eastern Area was estimated at 1,275 per hectare and in the Western Area as 1,376 per hectare. Failure to comply with milestones triggers requirement to notify the Commonwealth Department of Environment and Energy (DoEE) within 14 days of the monitoring report being due, that is by 14 June 2018. Planting of seedlings scheduled for winter 2018 will address the shortfall in stem density so that the minimum density of 1,500 will again be achieved during the next monitoring occasion in spring 2018.

Assessment against management trigger values indicated that contingency measures were required to address species composition in the Western Area and native plant density in the Eastern and Western Areas. The management trigger values are for operational purposes only and provide a safety margin against potential future compliance issues. The management trigger values will not be taken into consideration in determining whether the final completion criteria have been met.

The Sumpland area continues to consistently meet the final completion criteria and it is recommended that communication with DoEE is commenced to relinquish any further rehabilitation obligation in regards to this area.



PLATES



PLATE 1: VIEW NORTHEAST FROM ST1 – WESTERN REHABILITATION AREA

Plate 1: View Northeast from ST1 - Western Rehabilitation Area

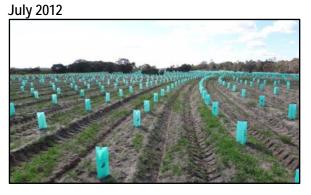
August 2011



February 2012



October 2012





March 2013



March 2014







October 2014





April 2016









May 2017



March/April 2018





October/November 2017





PLATE 2: VIEW NORTHEAST FROM ST2 – WESTERN REHABILITATION AREA

Plate 2: View Northeast from ST2 - Western Rehabilitation Area

August 2011



February 2012



October 2012



March 2013

July 2012



March 2014



November 2013



October 2014







April 2016









May 2017



October/November 2017



March/April 2018





PLATE 3: VIEW NORTHEAST FROM ST3 – WESTERN REHABILITATION AREA

Plate 3: View Northeast from ST3 - Western Rehabilitation Area

August 2011



February 2012





October 2012









March 2014







October 2014







April 2016



October 2015







October/November 2017



March/April 2018





PLATE 4: VIEW NORTHEAST FROM ST4 – SUMPLAND AREA



Plate 4: View Northeast from ST4 - Sumpland Area

August 2011



February 2012



October 2012



November 2013



March 2014





October 2014







April 2016









May 2017



October/November 2017



March/April 2018





PLATE 5: VIEW NORTHEAST FROM ST5 – EASTERN HABILITATION AREA

Plate 5: View Southwest from ST5 - Eastern Rehabilitation Area

August 2011



February 2012



October 2012



March 2013



March 2014





November 2013







October 2015

October 2016







May 2017





March/April 2018







PLATE 6: VIEW NORTHEAST FROM ST6 – EASTERN HABILITATION AREA

Plate 6: View Southwest from ST6 - Eastern Rehabilitation Area

August 2011



February 2012



October 2012



March 2013

No data (incorrect view)



November 2013



March 2014



October 2014







October 2015

October 2016







May 2017













PLATE 7: VIEW NORTHEAST FROM ST7 – SUMPLAND AREA



Plate 7: View Southwest from ST7 - Sumpland Area

August 2011



February 2012

No data (incorrect view)

July 2012



March 2013



March 2014





November 2013











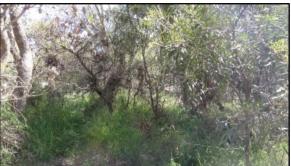
October 2015







October 2016



May 2017



March/April 2018







PLATE 8: VIEW NORTHEAST FROM ST8 – EASTERN REHABILITATION AREA

Plate 8: View Southwest from ST8 - Eastern Rehabilitation Area

August 2011



.



February 2012



October 2012



March 2013



March 2014



November 2013



October 2014





March 2015



April 2016



October 2015







May 2017



March/April 2018







PLATE 9: EASTERN AREA



EPBC 2007/3333 Rehabilitation Monitoring Autumn 2018





PLATE 10: WESTERN AREA



Plate 10:

Western Area

VMQ01



VMQ02



VMQ04



VMQ05



VMQ07





VMQ06



VMQ08





VMQ09



VMQ11



VMQ10



RQ02



RQ04





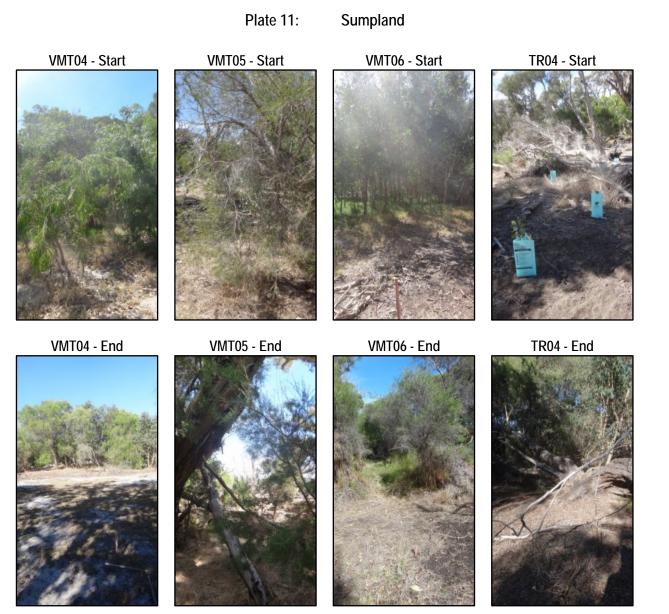






PLATE 11: SUMPLAND







Monitoring Report Autumn 2018 Plates

APPENDICES



APPENDIX 1: NATIVE SPECIES RECORDED



Creation	Number of Individuals per Transect (2 by 100 m)											
Species	VMT01	VMT02	VMT03	TR01	TR02	TR03	- Obs.*					
Acacia cyclops	0	1	1	0	5	2	Y					
Acacia pulchella	0	0	1	0	0	0	Y					
Acacia saligna	0	3	0	0	4	0	Y					
Agonis flexuosa	17	2	6	20	3	7	Y					
Banksia attenuata	0	0	0	0	0	0	Y					
Banksia grandis	1	0	1	0	1	0	Υ					
Bossiaea eriocarpa	0	0	0	0	0	0	Ν					
Conostylis acuelata	0	0	0	0	0	0	Υ					
Corymbia calophylla	0	0	1	3	2	1	Υ					
Eucalyptus gomphocephala	6	6	3	8	7	5	Υ					
Eucalyptus marginata	0	3	0	1	1	0	Υ					
Eucalyptus rudis	9	3	2	2	1	0	Υ					
Hakea prostrata	3	0	0	1	2	0	Υ					
Hardenbergia comptoniana	0	0	0	0	0	0	Ν					
Hibbertia cuneiformis	0	0	0	0	0	0	Υ					
Jacksonia furcellata	0	0	1	0	0	0	Υ					
Macrozamia riedlei	0	0	0	0	0	0	Υ					
Rhagodia baccata	0	0	1	0	0	1	Υ					
Spyridium globulosum	0	0	0	2	0	2	Υ					
Xylomelum occidentalis	0	0	0	0	1	0	Υ					
Total per 200 m ² transect	36	18	17	37	27	18						

Table A1.1: Native Species Recorded in March/April 2018 - Eastern Area

*Obs. = Opportunistic observation within the Eastern Area.

Y = Yes, observed.

N = No, not observed.



	Number of Individuals per Quadrat (10 by 10 m)																					
Species	VMQ01	VMQ02	VMQ03	VMQ04	VMQ05	VMQ06	VMQ07	VMO08	VMQ09	VMQ10	VMQ11	RQ01	RO02	RQ03	RO04	RO05	R006	RQ07	RO08	RO09	RQ10	Obs.*
Acacia cyclops	1	0	0	1	2	1	0	0	0	0	0	0	0	0	1	1	0	3	0	4	2	Y
Acacia pulchella	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Acacia saligna	0	0	1	0	0	1	1	0	2	1	2	0	0	0	3	0	2	4	1	0	2	Y
Agonis flexuosa	1	6	3	3	1	7	1	2	0	10	2	3	3	4	1	4	2	3	3	5	1	Y
Banksia attenuata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Banksia grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Bossiaea eriocarpa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ν
Conostylis acuelata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ν
Corymbia calophylla	0	0	0	0	2	1	1	0	0	3	0	4	0	0	0	2	2	2	0	2	0	Y
Eucalyptus gomphocephala	1	7	4	4	8	0	3	3	3	6	4	9	10	8	3	5	5	3	3	3	0	Y
Eucalyptus marginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Y
Eucalyptus rudis	0	0	8	0	1	4	0	0	1	1	0	8	0	0	0	2	0	0	0	7	5	Y
Hakea prostrata	2	0	2	0	0	0	0	0	0	0	1	0	2	2	3	0	1	0	1	0	0	Y
Hardenbergia comptoniana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ν
Hibbertia cuneiformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Jacksonia furcellata	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Melaleuca preissiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Rhagodia baccata	0	0	1	2	0	1	0	0	0	0	0	0	0	0	2	0	1	0	1	0	1	Y
Spyridium globulosum	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	1	0	3	4	0	Y
Xylomelum occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Total per 100m ²	5	14	19	11	14	18	6	8	6	21	9	24	15	14	13	14	14	15	12	26	11	

Table A1.2: Native Species Recorded in March/April 2018 - Western Area

*Obs. = Opportunistic observation within the Western Area.

Y = Yes, observed.

N = No, not observed.



Crusica	Numb	er of Individuals p	er Transect (2 by 100 n	n)	Ohe *
Species	VMT04	VMT05	VMT06	TR04	- Obs.*
Acacia cyclops	0	0	0	0	Y
Acacia saligna	4	0	0	1	Y
Agonis flexuosa	1	6	7	2	Y
Banksia littoralis	0	0	0	0	Ν
Eucalyptus rudis	17	12	43	28	Y
Juncus pallidus	1	0	5	1	Y
Lepidosperma gladiatum	0	1	0	0	Y
Melaleuca preissiana	0	0	0	0	Y
Melaleuca rhaphiophylla	11	1	2	2	Y
Rhagodia baccata	0	0	0	0	Y
Spyridium globulosum	0	4	0	0	Y
Viminaria juncea	0	5	6	5	Y
Total per 200m ² transect	34	29	63	39	

 Table A1.3:
 Native Species Recorded in March/April 2018 - Sumpland

*Obs. = Opportunistic observation within the Sumpland. Y = Yes, observed.

N = No, not observed.



APPENDIX 2: NATIVE SPECIES HEIGHTS



Crustian			Plant Heig	ght (up to m)		
Species	VMT01	VMT02	VMT03	TR01	TR02	TR03
Acacia cyclops	0	0.6	0	0	1	0.7
Acacia pulchella	0	0	0.5	0	0	0
Acacia saligna	0	0.6	0.3	0	1.1	0
Agonis flexuosa	6	2.5	0.2	3	2.5	1.8
Banksia attenuata	0	0	0	0	0	0
Banksia grandis	0	0	0	0	0.4	0
Bossiaea eriocarpa	0	0	0	0	0	0
Conostylis acuelata	0	0	0	0	0	0
Corymbia calophylla	0	0	0.5	1	0	0.6
Eucalyptus gomphocephala	6.3	6	3.5	4	6	6
Eucalyptus marginata	0	2	0	2.5	0	0
Eucalyptus rudis	7	3.5	6	0	2.5	0
Hakea prostrata	0.5	0	0	0	0.6	0
Hardenbergia comptoniana	0	0	0	0	0	0
Hibbertia cuneiformis	0	0	0	0	0	0
Jacksonia furcellata	0	0	2	0	0	0
Macrozamia riedlei	0	0	0	0	0	0
Rhagodia baccata	0	0	0.4	0	0	1
Spyridium globulosum	0	0	0	0	0	0
Xylomelum occidentalis	0	0	0	0	0.5	0

Table A2.1: Native Species Heights Recorded in March/April 2018 - Eastern Area

0 = Species Not recorded.



	Plant Height (up to m)																				
Species	VMQ01	VMQ02	VMQ03	VMQ04	VMQ05	VMQ06	VMQ07	VMQ08	VMQ09	VMQ10	VMQ11	RQ01	RQ02	RQ03	RQ04	RQ05	RQ06	RQ07	RQ08	RQ09	RQ10
Acacia cyclops	0.2	0	0	0.3	0.5	1	0	0	0	0	0	0	0	0	0.3	1	0	2.5	0	1	0.8
Acacia pulchella	0	0	0	0.4	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acacia saligna	0	0	0	0	0	1.1	0.3	0	0.3	1.2	1	0	0	0	1	0	0.7	4	0.7	0	1.2
Agonis flexuosa	0.4	0.7	0.6	4	0.4	0.7	0	0.3	0	3.5	1.2	0.4	0.3	0.5	0.4	1.2	0.8	0.4	0.5	3	2
Banksia attenuata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Banksia grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bossiaea eriocarpa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conostylis acuelata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corymbia calophylla	0	0	0	0	0.7	0.6	0.4	0	0	0.6	0	0.5	0	0	0	0.7	0.6	1.8	0	0.8	0
Eucalyptus gomphocephala	0.8	0.9	2.8	7	6.5	0	6	6.5	1.5	6.5	4.5	0.6	0.8	0.5	2.5	3.5	0.8	3.5	3	1.2	0
Eucalyptus marginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0
Eucalyptus rudis	0	0	1.5	0	1.5	3	0	0	2.2	0.5	0	3	0	0	0	1.1	0	0	0	2.5	1.3
Hakea prostrata	0.4	0	0.5	0	0	0	0	0	0	0	2.8	0	0.4	0.3	0.3	0	1.1	0	0.4	0	0
Hardenbergia comptoniana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hibbertia cuneiformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jacksonia furcellata	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Melaleuca preissiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhagodia baccata	0	0	0.5	0.7	0	0.4	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	1.2
Spyridium globulosum	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0.3	0	0.4	0.5	0
Xylomelum occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A2.2:	Native Species Heig	hts Recorded i	n March/April 20	018 - Western Area

0 = Species Not recorded.



Creation	Plant Height (up to m)										
Species	VMT04	VMT05	VMT06	TR04							
Acacia cyclops	0	0	0	0							
Acacia saligna	2.5	0	0	0.5							
Agonis flexuosa	2.5	3	5	2.5							
Banksia littoralis	0	0	0	0							
Eucalyptus rudis	4.5	1.5	7	4							
Juncus pallidus	1.5	0	2	1.5							
Lepidosperma gladiatum	0	0.5	0	0							
Melaleuca preissiana	0	0	0	0							
Melaleuca rhaphiophylla	2	0.5	2	2							
Rhagodia baccata	0	0	0	0							
Spyridium globulosum	0	0.5	0	0							
Viminaria juncea	0	2.5	2.5	1.5							

Table A2.3:	Native Species Heights Recorded in March/April 2018 - Sumpland

0 = Species Not recorded.



APPENDIX 3: WEED SPECIES AND LIVE % COVER



Table A3.1: Weed Species and Live % Cover Recorded in March/April 2018 - Eastern Area

Species		Weed Species Present and Live % Cover											
Species	VMT01	VMT02	VMT03	TR01	TR02	TR03							
Cynodon dactylon	р	р	р	р	р	р							
Lupinus sp.	а	р	р	а	р	а							
Trachyandra divaricata	р	р	р	а	а	р							
Other grasses	р	р	р	р	р	р							
Live % Cover	1	1	3	1	4	5							

p = *present a*= *absent*



Table A3.2: Weed Species and Live % Cover Recorded in March/April 2018 - Western Area

		Weed Species Present and Live % Cover																			
Species	VMQ01	VMQ02	VMQ03	VMQ04	VMQ05	VMQ06	VMQ07	VMQ08	VMQ09	VMQ10	VMQ11	R001	RO02	RQ03	RO04	R005	R006	RQ07	RQ08	RQ09	RQ10
Cynodon dactylon	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р
Lupinus sp.	а	р	а	а	а	р	а	а	р	а	а	а	а	а	а	а	а	а	а	а	а
Trachyandra divaricata	р	р	а	а	а	а	а	а	а	а	а	а	р	р	р	а	а	а	а	а	а
Verbascum virgatum	а	р	а	а	а	а	а	а	а	а	а	а	р	а	а	а	а	а	а	а	а
Other grasses	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р
Live % Cover	15	15	2	5	10	5	5	1	5	10	2	15	35	25	15	15	10	5	5	20	5

p = *present a*= *absent*



Table A3.3:Weed Species and Live % Cover Recorded in March/April 2018 -
Sumpland

Species	Weed Species Present and Live % Cover									
Species	VMT04	VMT05	VMT06	TR04						
Atriplex prostrata	р	р	а	а						
Cynodon dactylon	р	р	р	р						
Solanum nigrum	р	р	р	р						
Sonchus sp.	р	р	а	р						
Zantedeschia aethiopica (DP)	а	р	а	а						
Other grasses	р	р	р	р						
Live % Cover	21	26	32	25						

p = *present a*= *absent*



APPENDIX 7: REHABILITATION MONITORING SPRING 2018



REHABILITATION MONITORING REPORT SPRING 2018

STRATHAM OFFSET REHABILITATION (EPBC 2007/3333)

PREPARED FOR:

BUNBURY CATHEDRAL GRAMMAR SCHOOL ABN: 36 007 093 540

DECEMBER 2018

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EPBC No 2007/3333 REHABILITATION MONITORING SPRING 2018

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PLATES

- Plate 1: View Northeast from ST1 Western Rehabilitation area
- Plate 2: View Northeast from ST2 Western Rehabilitation area
- Plate 3: View Northeast from ST3 Western Rehabilitation area
- Plate 4: View Northeast from ST4 Sumpland Area
- Plate 5: View Northeast from ST5 Eastern Rehabilitation Area
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- Plate 7: View Northeast from ST7 Sumpland Area
- Plate 8: View Northeast from ST8 Eastern Rehabilitation Area
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- Plate 10: Western Area
- Plate 11: Sumpland

APPENDICES

- Appendix 1: Native Species Recorded
- Appendix 2: Native Species Heights
- Appendix 3: Weed Species and Live % Cover



1. INTRODUCTION

In accordance with approval EPBC 2007/3333 granted under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the associated Rehabilitation Management Plan (RMP Rev2, March 2017), Bunbury Cathedral Grammar School is undertaking an offset rehabilitation program on Lot 9 on Plan 43302 in Stratham (Figure 1). The rehabilitation is subject to biannual monitoring as detailed in RMP Rev2. This report summarises the results of monitoring undertaken in spring 2018.





2. Methods

Monitoring was undertaken between 1 – 30 November 2018 by Ms Kirsi Kauhanen (Senior Environmental Scientist) of MBS Environmental. The monitoring included photo monitoring, fence monitoring and vegetation monitoring and followed methods detailed in RMP Rev2.

Photo monitoring was undertaken at eight permanent locations (Table 1) that have been monitored since 2011.

Dhata Daint ID	UTM GDA S	94 (Zone 50)	Rehabilitation Area				
Photo Point ID	Easting	Northing					
ST1	369021	6298362	Western Area				
ST2	369100	6298465	Western Area				
ST3	369177	6298571	Western Area				
ST4	369253	6298487	Sumpland				
ST5	369308	6298487	Eastern Area				
ST6	369259	6298417	Eastern Area				
ST7	369179	6298399	Sumpland				
ST8	369159	6298327	Eastern Area				

 Table 1:
 Photo Monitoring Point Locations

Fence monitoring comprised opportunistic visual inspection of fences and the rehabilitation areas for any signs of livestock access and was undertaken concurrently with vegetation monitoring.

Vegetation monitoring comprised surveying of 11 permanent and eight random quadrats (each 10 m by 10 m) in the Western Area, three permanent and three random belt transects (2 m by 100 m) in the Eastern Area and three permanent and one random belt transects (2 m by 100 m) in the Sumpland. The locations of the quadrats and transects are shown in Figure 2. Opportunistic observations on vegetation were also be made. Data collection and analysis is summarised in Table 2.

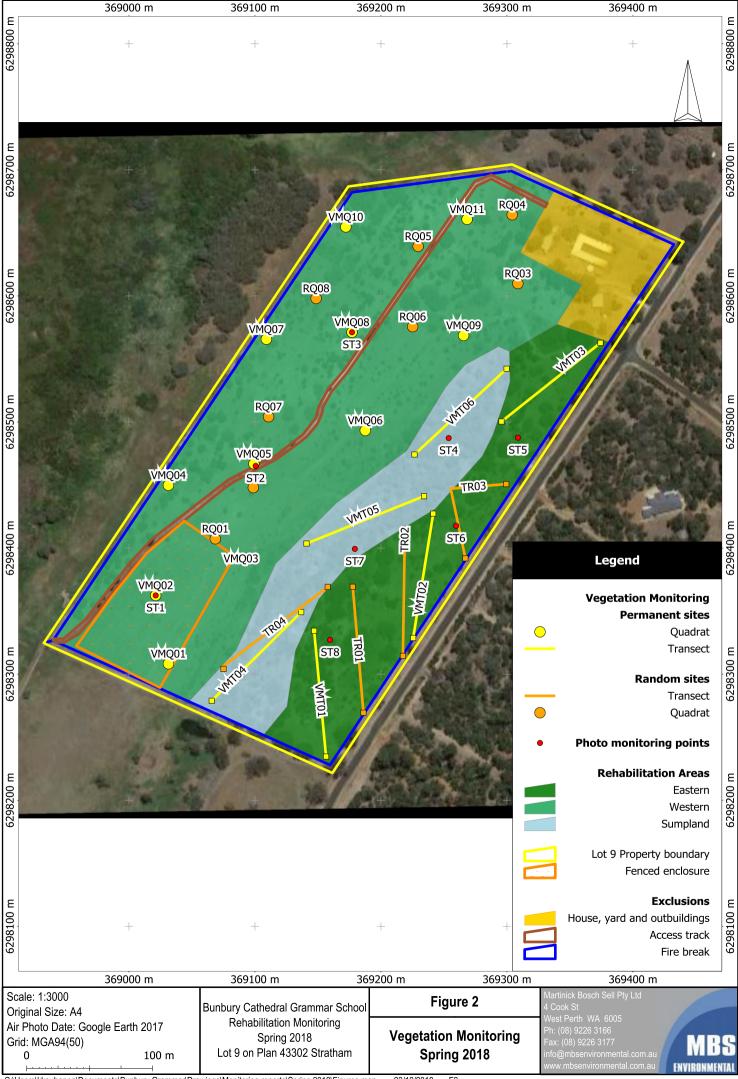


Table 2:	Vegetation Monitoring Data Collection and Analysis
----------	--

ltom	Data Collection Method									
ltem	Quadrats	Transects	Opportunistic							
Data Collection	 Number of native plants (planted or naturally recruited). Species of native plants (planted or naturally recruited). Maximum height for each native species. Native vegetation structure. Species of weeds. Estimated live % foliage cover of weeds. Qualitative assessment of grazing impact. Location coordinates and photograph. 	 Number of native plants (planted or naturally recruited). Species of native plants (planted or naturally recruited). Maximum height for each native species. Native vegetation structure (note any significant changes along transect). Species of weeds. Estimated live % foliage cover of weeds (average of estimates at 20m interval). Qualitative assessment of grazing impact. Start and end location coordinates and photograph. 	 Native or weed species not observed in quadrats/transects. 							
Data Analysis	 On the basis of the data collected, the following will be calculated/described for each Rehabilitation Area: Native species composition. Native vegetation structure. Average native plant stem density per hectare, standard error of mean and relative standard error 									

The monitoring results were also assessed against trigger values specified in RMP Rev2 (Table 14), to determine whether contingency measures were necessary.





C:\Users\kkauhanen\Documents\Bunbury Grammar\Drawings\Monitoring reports\Spring 2018\Figures.map 23/12/2018 F2

3. RESULTS

3.1 PHOTO MONITORING

Plates 1 - 8 provide a selection of photos for each monitoring site, showing change from August 2011 to November 2018. Some photo monitoring points, particularly ST8 show significant establishment of native vegetation whereas others, such as ST1 illustrate the patches of high seedling mortality. Photo points ST4 and ST7 are located in the Sumpland Area and show little change as remnant vegetation dominates the view.

3.2 FENCE MONITORING

Fence monitoring in November 2018 identified no issues requiring contingency measures. Lot 9 boundary fence remained in place on three sides (north, east, south) and was sufficient to prevent access by livestock from adjacent grazing properties (north and south sides). The western boundary fence was removed in 2016 to incorporate the property to the Muddy Lakes Regional Open Space.

The fenced enclosure in the Western Area, shown in Figure 2, remained in good condition and continued to exclude kangaroos.

3.3 VEGETATION MONITORING

Photographs of each quadrat and transect surveyed in November 2018 are provided in Plates 9 - 11.

3.3.1 Native Species Composition

A summary of native species composition results is provided in Table 3 that relates the results to the species composition requirements set in RMP Rev2. Complete results on native species recorded in November 2018 are provided in Appendix 1.



	Eas	stern	Wes	stern	Sum	pland		
Scientific Name	Listed in RMP Rev2	Recorded in Nov 2018	Listed in RMP Rev2	Recorded in Nov 2018	Listed in RMP Rev2	Recorded in Nov 2018		
Trees								
Agonis flexuosa	Yes	Yes	Yes	Yes	Yes	Yes		
Banksia attenuata	Yes Yes		No	(Yes)	No	(No)		
Banksia grandis	Yes	Yes	No	(Yes)	No	(No)		
Banksia littoralis	No	(No)	No	(No)	Yes	No		
Corymbia calophylla	Yes	Yes	Yes	Yes	No	(No)		
Eucalyptus gomphocephala	Eucalyptus gomphocephala Yes		Yes	Yes	No	(No)		
Eucalyptus marginata	Yes	Yes	Yes	Yes	No	(No)		
Eucalyptus rudis	Yes	Yes	Yes	Yes	Yes	Yes		
Melaleuca preissiana	No	(No)	No	(Yes)	Yes	Yes		
Melaleuca rhaphiophylla	No	(No)	No	(No)	Yes	Yes		
Xylomelum occidentalis Yes		Yes	No	(Yes)	No (No)			
Shrubs			<u> </u>		<u> </u>			
Acacia cyclops	Yes	Yes	Yes	Yes	Yes	Yes		
Acacia saligna	Yes	Yes	Yes	Yes	Yes	Yes		
Bossiaea eriocarpa	Yes	No	Yes	No	No	(No)		
Hakea prostrata	Yes	Yes	Yes	Yes	No	(No)		
Hibbertia cuneiformis	Yes	Yes	Yes	Yes	No	(Yes)		
Jacksonia furcellata	Yes	Yes Yes Yes Yes		Yes	No	(No)		
Macrozamia riedlei	Yes	Yes	No	(No)	No	(No)		
Rhagodia baccata	Yes	Yes	Yes	Yes	Yes	Yes		
Spyridium globulosum	Yes	Yes	Yes	Yes	Yes	Yes		
Viminaria juncea	No	(No)	No	(No)	Yes	Yes		
Herbs and Creepers								
Acacia pulchella	Yes	Yes	Yes	Yes	No	(No)		
Conostylis aculeata	Yes	Yes	Yes	No	No	(No)		
Hardenbergia comptoniana	Yes	No	Yes	No	No	(No)		
Sedges and Rushes					• 			
Lepidosperma gladiatum	No	(No)	No	(No)	Yes	Yes		
Juncus pallidus	No	(No)	No	(No)	Yes	Yes		
Total	20	18	16	13	12	11		
% of species listed in	RMP Rev2	90%	8	1%	92%			

Table 3:	Native	Species	Composition

Brackets for Yes and No were used for November 2018 to indicate that the species was not listed as likely suitable for that particular rehabilitation area in the RMP Rev2 and regardless of presence/absence, the species would not count towards the species composition milestones or outcomes for that particular area.



3.3.2 Native Vegetation Structure

Native vegetation structure in the rehabilitation areas during November 2018 was as per the following:

- Eastern Area:
 - Upper storey (up to 10 15 m): Few remnant mature Agonis flexuosa and Eucalyptus gomphocephala.
 - Middle storey (1 7 m): Rehabilitation comprising juvenile Eucalyptus spp. (Eucalyptus gomphocephala, E. marginata, E. rudis, Corymbia calophylla), Agonis flexuosa, Acacia saligna and Jacksonia furcellata with occasional Acacia cyclops.
 - Understorey (up to 1 m): Rehabilitation comprising juvenile Hakea prostrata, Rhagodia baccata, Macrozamia riedlei, Conostylis accuelata, Spyridium globulosum, Acacia pulchella and young individuals of Acacia spp., Agonis flexuosa, Eucalyptus spp., Banksia spp., and Xylomelum occidentale. Some Pteridium esculentum was also present. Groundcover was mainly introduced weed species.
- Western Area:
 - Upper storey (up to 10 m): Few remnant mature Agonis flexuosa.
 - Middle storey (1 7 m): Rehabilitation comprising juvenile Eucalyptus spp. (mainly Eucalyptus gomphocephala and E. rudis, but also E. marginata and Corymbia calophylla), Agonis flexuosa, Acacia cyclops, Acacia saligna and Jacksonia furcellata.
 - Understorey (up to 1 m): Rehabilitation comprising juvenile Hakea prostrata, Rhagodia baccata, Spyridium globulosum, Acacia pulchella and young individuals of Acacia spp., Agonis flexuosa, Eucalyptus spp., Banksia spp. and Xylomelum occidentale. Groundcover was mainly introduced weed species.
- Sumpland:
 - Upper storey (10 15 m): Remnant mature *Melaleuca rhaphiophylla* and *Eucalyptus rudis*.
 - Middle storey (1 7 m): Remnant Viminea juncea with rehabilitation comprising mainly juvenile Eucalyptus rudis, Agonis flexuosa, Melaleuca rhapiophylla, Viminea juncea and Acacia spp.
 - Understorey (up to 1 m tall): Occasional remnant sedges and rushes with rehabilitation comprising Juncus pallidus and young individuals of *Melaleuca* spp., *Eucalyptus rudis, Agonis flexuosa, Viminea* juncea and Acacia spp. Groundcover was mainly introduced weed species.

Further details on height of native species in each quadrat/transect are provided in Appendix 2.

3.3.3 Native Plant Stem Density

A summary of native plant stem density from October 2012 to November 2018 is provided in Table 4. The reliability measure (SE/Mean) that was introduced in the RMP Rev2 was within target (<30%) for all rehabilitation areas in November 2018. Detailed results for each quadrat and transect surveyed in November 2018 are provided in Appendix 1.



	Stems per Hectare											
Monitoring Occasion		Western Area				Sumpland						
	Mean	SE ¹	n²	SE/Mean ³	Mean	SE	n	SE/Mean	Mean	SE	n	SE/Mean
Oct. 2012	1,500	204	4	-	320	193	5	-	2,300	-	1	-
March 2013	775	397	4	-	490	99	10	-	1,400	-	1	-
Nov. 2013	1,650	318	4	-	940	111	10	-	1,300	-	1	-
March 2014	740	258	5	-	600	99	13	-	950	250	2	-
Oct. 2014	975	119	8	-	953	84	15	-	1,700	200	2	-
March 2015	2,033	672	12	-	778	97	23	-	7,183	2,703	6	-
Oct. 2015	1,140	175	5	-	853	110	15	-	7,300	1,900	2	-
April 2016	1,410	544	10	-	594	69	18	-	3,340	1,447	5	-
Oct. 2016	1,619	695	8	-	503	85	18	-	2,767	1,271	3	-
May 20174	1,158	245	6	21%	409	63	21	15%	2,163	468	4	22%
Oct/Nov 2017	1,536	129	7	8%	1,759	131	22	7%	2,038	464	4	23%
Mar/Apr 2018	1,275	189	6	15%	1,376	122	21	9%	2,063	377	4	18%
Nov 2018	1,633	183	6	11%	1,505	81	19	5%	1,938	360	4	19%

 Table 4:
 Native Plant Stem Density

¹ SE = standard error

 2 n = number of quadrats/transects 3 '-

drats/transects ³ '-' = not applicable

⁴ Change in methods from May 2017 onwards in Eastern Area and Sumpland.

3.3.4 Weeds

The most common weed species recorded in all three rehabilitation areas were *Cynodon dactylon* (couch grass) and various pasture grasses. Other relatively common species included *Trachyandra divaricata* and *Lupinus sp.,* however these were mainly dead during this monitoring occasion. Few individuals of Declared Pest species *Zantedeschia aethiopica* (DP) and *Gomphocarpus fruticosus* (DP) were also recorded.

Live percentage weed cover for each rehabilitation area in November 2018 is presented in Table 5. The reliability measure (SE/Mean), that was introduced in RMP Rev2, was within target (<30%) for all rehabilitation areas. Complete results on weed species recorded in November 2018 are provided in Appendix 3.

					Live V	Veed %	o Cov	ver				
Monitoring Occasion	Eastern			Western				Sumpland				
	Mean	SE	n²	SE/Mean	Mean	SE	n²	SE/Mean	Mean	SE	n²	SE/Mean
May 2017	7.88	0.85	6	11%	16.05	2.35	21	15%	25.53	7.36	4	29%
Oct/Nov 2017	19.69	3.82	7	19%	21.23	3.19	22	15%	44.88	1.43	4	3%
Mar/Apr 2018	2.17	0.73	6	29%	10.71	1.86	21	17%	26.00	2.27	4	9%
Nov 2018	5.68	1.63	6	29%	9.42	1.48	19	16%	23.63	2.64	4	11%

 Table 5:
 Live Percentage Weed Cover



3.3.5 Grazing Impact

Evidence of kangaroo and rabbit grazing on seedlings was recorded across all rehabilitation areas in November 2018. Their scats, tracks, foot prints and diggings were observed across the site. Snail grazing was also observed in Eastern and Western Areas. While tree guards were protecting the youngest planted seedlings from grazing by kangaroos and rabbits, grazing was having a significant impact on plant survival overall.

3.4 ASSESSMENT AGAINST TRIGGER VALUES

An assessment of monitoring results against trigger values specified in RMP Rev2 is presented in Table 6. Photo monitoring was undertaken to maintain a visual record of revegetation progress, however photo monitoring is not linked to any trigger values or contingency measures.

Parameter	Performance Indicator	Trigger Value (RMP Rev2)	Assessment	Contingency Measures
Fencing	Fence condition	Fence condition does not prevent livestock access	Not triggered	None necessary
	Signs of livestock access	Signs of livestock access	Not triggered	None necessary
Vegetation	Native species composition	Less than 85% of target flora species for a Rehabilitation Area present in that area (target species listed in Table 7 of RMP Rev2)	Triggered for Western Area (Western = 81%, however above the completion criteria of 80%).	Undertake infill planting during winter 2019 to increase species diversity in accordance with RMP Rev2.
	Native plant density	 In 2017 and 2018: Less than 1,650 stems per hectare on average in Eastern and Western Areas Less than 420 stems per hectare on average in Sumpland 	Triggered for Eastern and Western Areas (Eastern = 1,633 stems per hectare; Western = 1,505 stems per hectare; however both above the completion criteria of 1,500 stems per hectare)	Undertake infill plantings during winter 2019 that increase the stem densities in accordance with RMP Rev2.
	Weed species composition	Presence of Declared Pest species	Triggered for all rehabilitation areas	Continue targeted weed control of the Declared Pest species in accordance with RMP Rev2.
	Live weed % foliage cover	 In 2017 and 2018: Average live weed % foliage cover 40% or higher 	Not triggered	None necessary

 Table 6:
 Assessment Against Management Trigger Values



4. ASSESSMENT AGAINST MILESTONES AND PERFORMANCE TARGETS

An assessment of monitoring results against milestones and performance targets specified in RMP Rev2 is presented in Table 7. All milestones and relevant performance targets were achieved in November 2018.



Completion Criteria - Environmental Outcome Latest by 30 June 2021	Milestone ¹	Assessment Against Milestone	Performance Target	Assessment Against Performance Target	
At least 80% of the species listed in RMP Rev2 Table 7 for a particular Rehabilitation Area are present in that Rehabilitation Area ²	By 31 December 2017, achieve and maintain at least 80% of the species listed in RMP Rev2 Table 7 for a particular rehabilitation area ²	Milestone of 80% target species achieved in all rehabilitation areas as shown in Table 3.	None applicable (2017 targets addressed in previous monitoring reports).	Not applicable	
Achieve a self-sustaining vegetation community that, in the longer term, will provide habitat for the Western Ringtail Possum (<i>Pseudocheirus</i> <i>occidentalis</i>) and White-tailed Black Cockatoo	By 31 December 2017, achieve and maintain on average at least 1,500 stems per hectare in the Western and Eastern Areas ²	Milestone of 1,500 stems per hectare achieved by end of 2017 and achieved again in November 2018 in Eastern (1,633) and Western (1,505) areas as shown in Table 4.	None applicable (2017 targets addressed in previous monitoring reports).		
(Calyptorhynchus baudinii and C. latirostris)	By 31 December 2017, achieve and maintain on average at least 380 stems per hectare in the Sumpland ²	Milestone of 380 stems per hectare achieved and maintained in the Sumpland as shown in Table 4.			
The average live weed cover is <50%	By 31 December 2017, achieve and maintain the average live weed cover of <50%	Milestone of <50% live weed cover achieved in all rehabilitation areas as shown in Table 5.	Undertake weed control biannually	Performance target met. Spraying undertaken for summer and winter weeds.	

 Table 7:
 Assessment Against RMP Rev2 Milestones and Performance Targets

1 These milestones will be assessed on the basis of rehabilitation monitoring scheduled for October 2017 (see RMP Rev2 Section 8).

2 Including planted seedlings and native regrowth.

5. DISCUSSION AND CONCLUSION

All milestones and relevant performance targets set in RMP Rev2 were achieved in November 2018 and consequently no reporting to the Commonwealth Department of the Environment and Energy (DoEE) is required at this stage.

Assessment against management trigger values indicated that contingency measures were required to address species composition in the Western Area and native plant density in the Eastern and Western Areas. The management trigger values are for operational purposes only and provide a safety margin against potential future compliance issues. The management trigger values will not be taken into consideration in determining whether the final completion criteria have been met.

The Sumpland area continues to consistently meet the final completion criteria and it is recommended that communication with DoEE is commenced to relinquish any further rehabilitation obligation in regards to this area.



PLATES



PLATE 1: VIEW NORTHEAST FROM ST1 – WESTERN REHABILITATION AREA



Plate 1: View Northeast from ST1 - Western Rehabilitation Area

August 2011



February 2012



October 2012





March 2013



March 2014













April 2016



May 2017



March/April 2018









October/November 2017









PLATE 2: VIEW NORTHEAST FROM ST2 – WESTERN REHABILITATION AREA



Plate 2: View Northeast from ST2 - Western Rehabilitation Area

August 2011







October 2012





March 2013



March 2014



November 2013









April 2016



May 2017



March/April 2018









October/November 2017









PLATE 3: VIEW NORTHEAST FROM ST3 – WESTERN REHABILITATION AREA



View Northeast from ST3 - Western Rehabilitation Area Plate 3:

August 2011



February 2012



July 2012



October 2012



March 2013



March 2014













April 2016









May 2017



March/April 2018





October/November 2017









PLATE 4: VIEW NORTHEAST FROM ST4 - SUMPLAND AREA



Plate 4: View Northeast from ST4 - Sumpland Area

August 2011



February 2012



July 2012



October 2012



March 2013



March 2014



November 2013









April 2016



October 2016

October 2015



May 2017



March/April 2018



October/November 2017



November 2018





PLATE 5: VIEW NORTHEAST FROM ST5 – EASTERN REHABILITATION AREA



Plate 5: View Southwest from ST5 - Eastern Rehabilitation Area

August 2011



February 2012



October 2012



March 2013



March 2014











April 2016



May 2017



March/April 2018









October/November 2017









PLATE 6: VIEW NORTHEAST FROM ST6 – EASTERN REHABILITATION AREA



Plate 6: View Southwest from ST6 - Eastern Rehabilitation Area

August 2011



February 2012



October 2012



March 2013

No data (incorrect view)



November 2013



March 2014









October 2015







May 2017



March/April 2018





October/November 2017



November 2018





PLATE 7: VIEW NORTHEAST FROM ST7 - SUMPLAND AREA



Plate 7: View Southwest from ST7 - Sumpland Area

August 2011



February 2012

No data (incorrect view)

July 2012



March 2013



March 2014







November 2013











October 2015







May 2017



March/April 2018



October/November 2017









PLATE 8: VIEW NORTHEAST FROM ST8 – EASTERN REHABILITATION AREA



Plate 8: View Southwest from ST8 - Eastern Rehabilitation Area

August 2011



July 2012



March 2013



March 2014



February 2012





November 2013



October 2014







April 2016



October 2016

October 2015



May 2017



March/April 2018



October/November 2017



November 2018





PLATE 9: EASTERN AREA



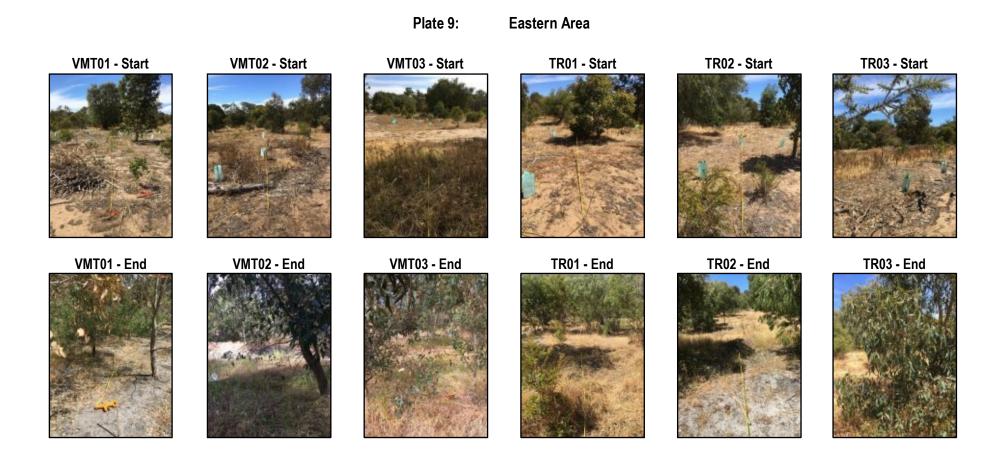




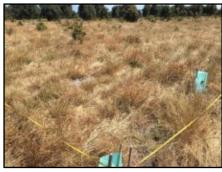
PLATE 10: WESTERN AREA



Plate 10:

Western Area

VMQ01



VMQ03



VMQ05



VMQ07







VMQ04



VMQ06



VMQ08





VMQ09



VMQ11



RQ02



RQ04



VMQ10



RQ01



RQ03



RQ05





RQ06



RQ08



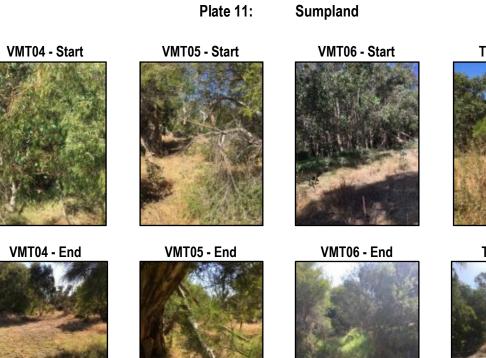
RQ07





PLATE 11: SUMPLAND







Sumpland















APPENDICES



APPENDIX 1: NATIVE SPECIES RECORDED



Oracias		Num	ber of Individuals	per Transect (2 by 1	00 m)		Oha t
Species	VMT01	VMT02	VMT03	TR01	TR02	TR03	Obs.*
Acacia cyclops	1	1	1	0	2	5	Y
Acacia pulchella	0	0	2	0	0	0	Y
Acacia saligna	1	4	3	12	5	4	Y
Agonis flexuosa	15	5	4	23	8	8	Y
Banksia attenuata	0	0	0	0	0	0	Y
Banksia grandis	1	0	0	0	0	0	Y
Bossiaea eriocarpa	0	0	0	0	0	0	Ν
Conostylis acuelata	0	0	0	1	0	0	Y
Corymbia calophylla	1	2	3	2	2	2	Y
Eucalyptus gomphocephala	12	8	5	5	4	4	Y
Eucalyptus marginata	0	2	0	0	1	0	Y
Eucalyptus rudis	5	3	2	1	0	0	Y
Hakea prostrata	3	2	7	2	1	1	Y
Hardenbergia comptoniana	0	0	0	0	0	0	Ν
Hibbertia cuneiformis	0	0	0	0	0	0	Y
Jacksonia furcellata	0	0	1	0	0	1	Y
Macrozamia riedlei	0	0	0	0	1	0	Y
Rhagodia baccata	0	0	1	2	0	0	Y
Spyridium globulosum	0	1	0	0	1	2	Y
Xylomelum occidentalis	0	0	0	0	0	0	Y
Total per 200 m ² transect	39	28	29	48	25	27	

 Table A1.1:
 Native Species Recorded in November 2018 - Eastern Area

*Obs. = Opportunistic observation within the Eastern Area.

Y = Yes, observed.

N = No, not observed.

	Number of Individuals per Quadrat (10 by 10 m))						
Species	VMQ01	VMQ02	VMQ03	VMQ04	VMQ05	VMQ06	VMQ07	VMQ08	VMQ09	VMQ10	VMQ11	RQ01	RQ02	RQ03	RQ04	RQ05	RQ06	RQ07	RQ08	Obs.
Acacia cyclops	1	0	0	1	2	2	0	0	2	0	0	1	2	3	0	0	4	4	2	Y
Acacia pulchella	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Acacia saligna	1	1	2	1	0	1	2	3	2	2	2	0	4	2	6	2	5	3	2	Y
Agonis flexuosa	3	5	3	3	1	7	3	2	2	9	2	7	1	1	3	3	4	0	3	Y
Banksia attenuata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Banksia grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Bossiaea eriocarpa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ν
Conostylis acuelata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ν
Corymbia calophylla	0	0	0	0	2	1	1	2	0	3	0	0	3	0	0	1	0	0	0	Y
Eucalyptus gomphocephala	1	6	4	6	7	0	7	З	3	5	4	4	5	4	2	5	3	3	2	Y
Eucalyptus marginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Eucalyptus rudis	0	0	6	0	2	3	0	0	1	1	0	0	1	0	0	0	1	0	0	Y
Hakea prostrata	2	1	2	0	0	1	1	2	0	0	1	2	1	3	1	1	1	4	1	Y
Hardenbergia comptoniana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ν
Hibbertia cuneiformis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	Y
Jacksonia furcellata	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	Y
Melaleuca preissiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Rhagodia baccata	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	Y
Spyridium globulosum	0	0	1	1	0	0	1	0	1	0	0	0	2	4	4	1	1	4	1	Y
Xylomelum occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Total per 100m ²	8	14	18	15	14	17	18	12	11	21	9	14	19	17	16	14	19	18	12	

Table A1.2: Native Species Recorded in November 2018 - Western Area

*Obs. = Opportunistic observation within the Western Area.

Y = Yes, observed.

N = No, not observed.

Ornarias	Numl	m)	Oh e t		
Species	VMT04	VMT05	VMT06	TR04	Obs.*
Acacia cyclops	0	0	0	0	Y
Acacia saligna	5	0	0	5	Y
Agonis flexuosa	1	6	7	3	Y
Banksia littoralis	0	0	0	0	Ν
Eucalyptus rudis	17	12	40	19	Y
Juncus pallidus	1	0	5	0	Y
Lepidosperma gladiatum	0	1	0	0	Y
Melaleuca preissiana	0	0	0	0	Y
Melaleuca rhaphiophylla	12	2	2	1	Y
Rhagodia baccata	0	0	0	1	Y
Spyridium globulosum	0	2	0	1	Y
Viminaria juncea	1	5	6	6	Y
Total per 200m ² transect	37	28	60	36	

 Table A1.3:
 Native Species Recorded in November 2018 - Sumpland

*Obs. = Opportunistic observation within the Sumpland. Y = Yes, observed.

N = No, not observed.

APPENDIX 2: NATIVE SPECIES HEIGHTS



			Plant Hei	ght (up to m)		
Species	VMT01	VMT02	VMT03	TR01	TR02	TR03
Acacia cyclops	0.5	0.6	0	0	0.5	1.5
Acacia pulchella	0	0	1	0	0	0
Acacia saligna	0.5	1	0.5	2	1	1
Agonis flexuosa	6	3	1	3	1.2	5
Banksia attenuata	0	0	0	0	0	0
Banksia grandis	0	0	0	0	0	0
Bossiaea eriocarpa	0	0	0	0	0	0
Conostylis acuelata	0	0	0	0.15	0	0
Corymbia calophylla	0.5	0.5	0.8	4	0.5	3.5
Eucalyptus gomphocephala	7.5	7	5	2.5	4	6
Eucalyptus marginata	0	2	0	0	3.5	0
Eucalyptus rudis	7.5	4	6	3	0	1.8
Hakea prostrata	0.5	0.5	0.5	1	0.5	0.4
Hardenbergia comptoniana	0	0	0	0	0	0
Hibbertia cuneiformis	0	0	0	0	0	0
Jacksonia furcellata	0	0	2	0	0	2.5
Macrozamia riedlei	0	0	0	0	1	0
Rhagodia baccata	0	0	0.8	0.6	0	0
Spyridium globulosum	0	0	0	0	0.4	0.6
Xylomelum occidentalis	0	0	0	0	0	0

Table A2.1: Native Species Heights Recorded in November 2018 - Eastern Area

0 = Species Not recorded.

	Plant Height (up to m)																		
Species	VMQ01	VMQ02	VMQ03	VMQ04	VMQ05	VMQ06	VMQ07	VMQ08	VMQ09	VMQ10	VMQ11	RQ01	RQ 02	RQ03	RQ04	RQ05	RQ06	RQ07	RQ08
Acacia cyclops	0.2	0	0	1	2	0.6	0	0	0.3	0	0	1.7	0.4	0.4	0	0	0.5	0.3	0.4
Acacia pulchella	0	0	0	0.4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Acacia saligna	0	0	0	0.6	0	1.5	0.3	0.3	0.5	2.5	1	0	2	0.6	2.5	2	0.8	0.6	0.5
Agonis flexuosa	0.5	1	0.6	4	1	1	0.5	0.4	0.4	3.5	1.5	1	1	2.5	2	2.5	2.5	0	1
Banksia attenuata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Banksia grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bossiaea eriocarpa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conostylis acuelata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corymbia calophylla	0	0	0	0	1.5	1	0.4	0.3	0	1	0	0	1.2	0	0	0.5	0	0	0
Eucalyptus gomphocephala	1.2	1	2.8	7	7	0	7	7	2.8	7	4.5	1.8	5	5	0.8	6	1.8	1	0.5
Eucalyptus marginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eucalyptus rudis	0	0	1.8	0	1.5	3	0	0	3	1	0	0	0.8	0	0	0	1	0	0
Hakea prostrata	0.4	0	0.4	0	0	0.3	0	0.4	0	0	2.5	0.5	0.3	0.3	0.5	0.5	0.5	0.5	0.5
Hardenbergia comptoniana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hibbertia cuneiformis	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0
Jacksonia furcellata	0	1	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0
Melaleuca preissiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhagodia baccata	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0	0	0	1	0	0	0.3
Spyridium globulosum	0	0	0.25	0.5	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.3	0.5	0.5	0.5
Xylomelum occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A2.2: Native Species Heights Recorded in November 2018 - Western Area

0 = Species Not recorded.

Quanta		Plant Height	(up to m)	
Species	VMT04	VMT05	VMT06	TR04
Acacia cyclops	0	0	0	0
Acacia saligna	2.5	0	0	1.2
Agonis flexuosa	3	3	5	3
Banksia littoralis	0	0	0	0
Eucalyptus rudis	5	2	7.5	4.5
Juncus pallidus	1.5	0	2	0
Lepidosperma gladiatum	0	0.5	0	0
Melaleuca preissiana	0	0	0	0
Melaleuca rhaphiophylla	2	1	2	2
Rhagodia baccata	0	0	0	0.8
Spyridium globulosum	0	0.5	0	0.5
Viminaria juncea	0	3	2.5	2

 Table A2.3:
 Native Species Heights Recorded in November 2018 - Sumpland

0 = Species Not recorded.

APPENDIX 3: WEED SPECIES AND LIVE % COVER



Table A3.1:Weed Species and Live % Cover Recorded in November 2018 - Eastern
Area

Species		Weed	Species Pre	sent and Live	% Cover	
Species	VMT01	VMT02	VMT03	TR01	TR02	TR03
Arctotheca calendula	р	р	а	р	р	а
Crassula sp.	а	р	а	р	р	р
Cynodon dactylon	р	р	р	р	р	р
Erodium sp.	р	р	а	а	р	а
Hypochaeris sp.	а	а	р	а	р	а
Lupinus sp.	р	р	р	р	р	р
Oenothera mollissima	а	р	а	а	р	а
Trachyandra divaricata	р	р	р	р	р	р
Wahlenbergia capensis	р	а	р	р	а	а
Other grasses	р	р	р	р	р	р
Live % Cover	13	7	5	3	2	5

p = present

a= absent



Table A3.2:	Weed Species and Live % Cover Recorded in November 2018 - Western
	Area

Species						Wee	d Sp	ecie	s Pre	sent	and	Live	% C	over	,				
Species	VMQ01	VMQ02	VMQ03	VMQ04	VMQ05	VMQ06	VMQ07	VMQ08	VMQ09	VMQ10	VMQ11	RQ01	RQ02	RQ03	RQ04	RQ05	RQ06	RQ07	RQ08
Arctotheca calendula	а	а	р	р	а	а	а	а	а	а	р	а	а	а	а	а	а	р	р
Crassula sp.	р	а	р	р	а	р	а	р	а	а	р	р	р	р	а	р	а	р	а
Cynodon dactylon	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р
Lupinus sp.	р	р	р	р	р	р	р	р	р	р	р	а	р	р	а	р	р	р	р
Malva parviflora	а	а	а	р	а	а	а	а	а	а	а	а	а	а	а	а	а	р	а
Oenothera mollissima	р	р	а	а	а	а	а	а	а	а	а	р	а	а	а	а	а	а	а
Solanum nigrum	а	а	а	р	а	а	а	а	а	а	а	а	а	а	а	а	а	а	а
Trachyandra divaricata	р	р	а	а	а	а	а	а	а	а	а	р	а	а	а	а	а	а	а
Verbascum virgatum	а	р	а	а	а	а	а	а	а	а	а	а	а	а	а	а	а	а	а
Other grasses	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р	р
Live % Cover	10	10	30	20	5	5	10	10	10	10	5	10	10	2	2	5	10	5	10

p = present

a= absent



Table A3.3: Weed Species and Live % Cover Recorded in November 2018 - Sumpland

Species	Weed S	pecies Prese	nt and Live %	Cover
Species	VMT04	VMT05	VMT06	TR04
Atriplex prostrata	р	р	а	а
Cynodon dactylon	р	р	р	р
Oxalis sp.	а	а	а	р
Solanum nigrum	р	р	р	р
Sonchus sp.	р	р	а	а
Zantedeschia aethiopica (DP)	а	р	а	а
Other grasses	р	р	р	р
Live % Cover	19	23	31	22

p = present

a= absent



APPENDIX 8: SCHOOL WAGES RECORD



		Sta	iff Working				Hours Work	ed					Salary per Day			Work Undertaken
Dates No. of Staf	f Employed				Nikki	Dave	Dave Wood	Paul Davey	Terry Letts	Nikki		Dave	Dav	e Wood	Paul Davey	
21/05/2018	2 Nikki	Dave			6	6	i			\$	160.89	\$	169.01 \$	-	\$-	Preparation for planting
22/05/2018	2 Nikki	Dave			6	6 6	;			\$	160.89	\$	169.01 \$	-	\$ -	Preparation for planting
23/05/2018	2 Nikki	Dave			6	6	i			\$	160.89	\$	169.01 \$	-	\$-	Preparation for planting
24/05/2018	2 Nikki	Dave			6	6	i			\$	160.89	\$	169.01 \$	-	\$-	Preparation for planting
25/05/2018	2 Nikki	Dave			6	6 6	j .			\$	160.89	\$	169.01 \$	-	\$-	Preparation for planting
26/05/2018										\$	-	\$	- \$	-	\$-	
27/05/2018										\$	-	\$	- \$	-	\$-	
28/05/2018	2	Dave				6	i			\$	-	\$	169.01 \$	-	\$-	Planting
29/05/2018	2 Nikki	Dave			6	6 6	i			\$	160.89	\$	169.01 \$	-	\$ -	Planting
30/05/2018	2 Nikki	Dave			6	6 6	;			\$	160.89	\$	169.01 \$	-	\$ -	Planting
31/05/2018	2 Nikki	Dave			6	6 6	i			\$	160.89	\$	169.01 \$	-	\$ -	Planting
1/06/2018										\$	-	\$	- \$	-	\$ -	-
2/06/2018										\$	-	\$	- \$	-	\$ -	
3/06/2018										\$	-	\$	- \$	-	\$ -	
4/06/2018										\$	-	\$	- \$	-	\$ -	
5/06/2018										\$	-	\$	- \$	-	\$ -	
6/06/2018										\$	- 1	\$	- \$	-	\$ -	
7/06/2018	1	Dave				6	;			\$		\$	169.01 \$	-	\$ -	Planting
8/06/2018	2 Nikki	Dave			6	6	;			Ś	160.89	\$	169.01 \$	-	\$ -	Planting
9/06/2018										Ś		Ś	- \$	-	\$ -	
10/06/2018										Ś	-	\$	- \$	-	\$ -	
11/06/2018	2 Nikki	Dave			6	6				Ś	160.89	\$	169.01 \$	-	\$ -	Planting
12/06/2018	2 Nikki	Dave			6	-				Ś	160.89	\$	169.01 \$	-	\$ -	Planting
13/06/2018	2 Nikki	Dave			6	-				\$	160.89		169.01 \$	-	\$ -	Planting
14/06/2018	2 Nikki	Dave			6	-				\$		\$	169.01 \$	-	\$ -	Planting
15/06/2018	2 Nikki	Dave			6	-				\$	160.89	т	169.01 \$	-	\$ -	Planting
16/06/2018	2 111100	Dure								Ś		\$	- \$	-	\$ -	
17/06/2018										Ś		<u>\$</u>	- \$	_	\$ -	
18/06/2018	2 Nikki	Dave			6	6				\$	160.89		169.01 \$	-		Planting
19/06/2018	3 Nikki	Dave	Dave Wood		6	-				Ś	160.89		169.01 \$	156.39		Planting
20/06/2018	3 Nikki	Dave	Dave Wood		6	-	6			\$	160.89		169.01 \$	156.39		Planting
21/06/2018	3 Nikki	Dave	Dave Wood		6	-	6			\$	160.89		169.01 \$	156.39		Planting
22/06/2018	3 Nikki	Dave	Dave Wood		6	-	6			Ś	160.89		169.01 \$	156.39		Planting
23/06/2018	5 11110	Dave	Dave wood							Ś	-	\$ \$	- Ś	-	\$ -	
24/06/2018										Ś		<u>,</u> \$	- \$	_	\$ -	
25/06/2018	3 Nikki	Dave	Dave Wood		6	6 6	6			\$	160.89	т	169.01 \$	156.39		Planting
26/06/2018	3 Nikki	Dave	Dave Wood			6 6	6			\$	160.89		169.01 \$	156.39		Planting
27/06/2018	3 Nikki	Dave	Dave Wood		6		6			\$	160.89		169.01 \$	156.39		Planting
28/06/2018	3 Nikki	Dave	Dave Wood		6		6			\$	160.89		169.01 \$	156.39		Planting
29/06/2018	3 Nikki	Dave	Dave Wood		6		6			Ś	160.89		169.01 \$	156.39		Planting
30/06/2018		Dave					0			\$	- 2		- \$	- 150.55	\$ -	
1/07/2018										\$		\$ \$	- \$	-	\$ -	
2/07/2018	3 Nikki	Dave	Dave Wood		6	5 6	6			\$ \$	160.89		169.01 \$	156.39		Planting
3/07/2018	3 Nikki	Dave	Dave Wood		6		6		-	ب د	160.89		169.01 \$	156.39		Planting
4/07/2018	3 Nikki	Dave	Dave Wood		6		6			ب د	160.89		169.01 \$	156.39		Planting
5/07/2018	4 Nikki	Dave	Dave Wood Dave Wood	Paul Davov	6		6	C	:	ب خ	160.89		169.01 \$			Planting
6/07/2018	4 Nikki 4 Nikki					6 6	6	-	:	ې د	160.89			156.39		-
0/0//2018	4 INIKKI	Dave	Dave Wood	raui Davey	6	6	6		'	ې د			169.01 \$	156.39		Planting
								TOTAL		>	4,665.90	ə 5	5,239.23 \$	<mark>2,189.46</mark>	<mark>\$ 413.69</mark>	
								Add Clayton	Walton		854.99 2	29 Casual	hours in June			
								Total May - J	July 2018	\$	13,363.27					

		Staff Working				Hours Worked		Salary per Day Salary per Day Dave Dave Wood Paul Davey				Work Undertaken		
Dates	No. of Staff Employed			Nikki	Dave	Dave Wood Paul Davey	Terry Letts	Nikki		Dave		Dave Wood	Paul Davey	
17/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
18/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
19/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
20/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
21/09/2018	2		Paul and Terry			6	6	5\$	204.80	\$	182.94			Weeding - hand around trees
22/09/2018								\$	-	\$	-			
23/09/2018								\$	-	\$	-			
24/09/2018	2		Paul and Terry			8	8	3\$	273.06	\$	243.92			Weeding - hand around trees
25/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
26/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
27/09/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - hand around trees
28/09/2018	2		Paul and Terry			6	6	5 \$	204.80	\$	182.94			Weeding - hand around trees
15/10/2018	2		Paul and Terry			8	8	3\$	273.06	\$	243.92			Weeding - spraying
16/10/2018	2		Paul and Terry			8	8	3\$	273.06	\$	243.92			Weeding - spraying
17/10/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - spraying
18/10/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - spraying
19/10/2018	2		Paul and Terry			6	6	5\$	204.80	\$	182.94			Weeding - spraying
20/10/2018								\$	-	\$	-			
21/10/2018								\$	-	\$	-			
22/10/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - spraying
23/10/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - spraying
24/10/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - spraying
25/10/2018	2		Paul and Terry			8	8	\$	273.06	\$	243.92			Weeding - spraying
26/10/2018	2		Paul and Terry			6	6	5\$	204.80	\$	182.94			Weeding - spraying
			Paul and Terry			TOTAL		\$	5,188.17	\$	4,634.40			
						Total Sep - O	ct 2018	Ś	9,822.57					

APPENDIX 9: SEEDLINGS INVOICE



Boyanup Botanical

A.B.N.: 42 357 780 939 Lot 14 South West Highway Boyanup WA 6237 Phone: 0897315470 Fax: 0897315471

Quote

7170	Date:	18/12/2017	Custom P/O 7900545	
	Expiry Date:	26/02/2018		
Active			Served By : Raelene	
Bunbury Cathedral Grammar School P.O. Box 1198 BUNBURY WA 6231 AUSTRALIA		Del	iver To:	
	Active Bunbury Cathedral Gra P.O. Box 1198 BUNBURY WA 6231	Expiry Date: Active Bunbury Cathedral Grammar School P.O. Box 1198 BUNBURY WA 6231	Expiry Date: 26/02/2018 Active Del Bunbury Cathedral Grammar School Del P.O. Box 1198 BUNBURY WA 6231	Expiry Date: 26/02/2018 Active Served By : Bunbury Cathedral Grammar School Deliver To: P.O. Box 1198 BUNBURY WA 6231

PH: 97226000

Description	Тах	Qty	Price \$	Total \$
Agonis flexuosa Single	GST	189	0.88	166.32
Corymbia calophylla Single	GST	252	0.88	221.76
Eucalyptus gomphocephala Single	GST	252	0.88	221.76
		504		443.52
	GST	504		443.52
		1		339.57
	GST			277.20
	Agonis flexuosa Single Corymbia calophylla Single	Agonis flexuosa SingleGSTCorymbia calophylla SingleGSTEucalyptus gomphocephala SingleGSTAcacia saligna SingleGSTAcacia cyclops SingleGSTHakea prostrata SingleGST	Agonis flexuosa SingleGST189Corymbia calophylla SingleGST252Eucalyptus gomphocephala SingleGST252Acacia saligna SingleGST504Acacia cyclops SingleGST504Hakea prostrata SingleGST315	Agonis flexuosa SingleGST1890.88Corymbia calophylla SingleGST2520.88Eucalyptus gomphocephala SingleGST2520.88Acacia saligna SingleGST5040.88Acacia cyclops SingleGST5040.88Hakea prostrata SingleGST3151.078

No. of Items (2331)

Payment Details	Quote Totals	
	Subtotal Discount Rounding Tax TOTAL inc GST	\$2,113.65 \$0.00 \$0.00 \$192.15 \$2,113.65

WE HOPE YOU ENJOYED YOUR VISIT TO BOYANUP BOTANICAL

(duplicate copy, printed 21/05/2018)

Boyanup Botanical

A.B.N.: 42 357 780 939 Lot 14 South West Highway Boyanup WA 6237 Phone: 0897315470 Fax: 0897315471

Tax Invoice

Invoice No	107500) Date	25/05/2018 12:13PM	Custo	m		P/O 7900545
Invoiced To	Bunbury Cathedral P.O. Box 1198 BUNBURY WA 623 AUSTRALIA		Delive	r To:			
Customer ABN	: 36 PH: 97226000	6-007-093-540					
Bar code	Description			Тах	Price \$	Qty	Total
28 1191 209 15 1457 8 1422	Agonis flexuosa Si Corymbia calophyl Eucalyptus gomph Acacia saligna Sin Hakea prostrata Si Acacia cyclops Sir Spyridium globulos	la Single ocephala Single gle ngle sum Single GUP RES	3292 07500 9005265 71140 2005.54 (0) 2.172	GST GST GST GST GST	0.80 0.80 0.80 0.98 0.68 0.68	189 252 252 504 315 504 315	151.2 201.6 201.6 403.2 308.7 342.7 214.2
r	h	Antoleone () () () () () () () () () (Strounds			ms (2331)	

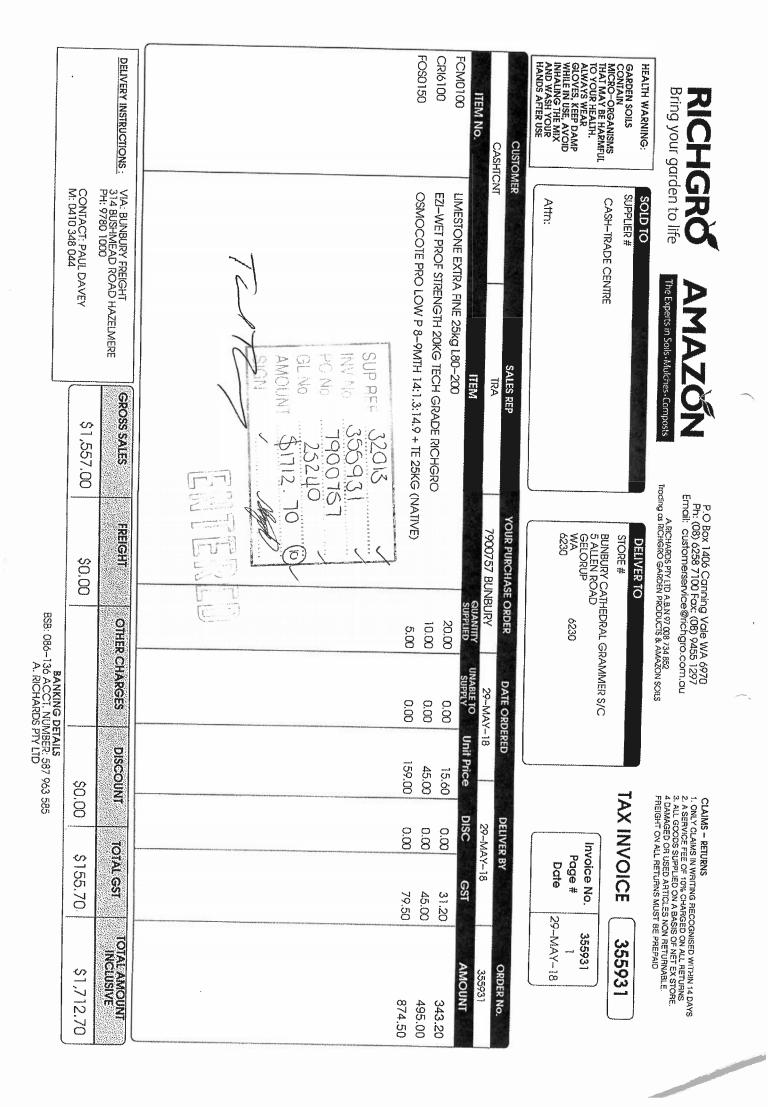
Invoice & Account Details		count Details	Invoice T	otals
Invoice No.	Payment Due	Account ID	Sub Total	\$1,823.22
107500	24/6/2018	960	Тах	\$182.32
Account Manager	count Manager Barb(served by Raelene)		Rounding	\$0.00
Invoice Received by	y			
Name		Signature	TOTAL inc GST	\$2,005.54

Account Terms & Conditions

BANKING DETAILS - WESTPAC BSB 036-122 A/C 27-8515

APPENDIX 10: INVOICE FOR FERTILISER AND OTHER TREATMENTS





APPENDIX 11: SUBMISSION OF AUTUMN MONITORING REPORT



Kirsi Kauhanen

From:	Jenny Nobbs <jenny.nobbs@bcgs.wa.edu.au></jenny.nobbs@bcgs.wa.edu.au>
Sent:	Thursday, 14 June 2018 1:28 PM
То:	post.approvals@environment.gov.au
Cc:	Kirsi Kauhanen
Subject:	Rehabilitation Autumn Monitoring Report EPBC 2007/333
Attachments:	BCGS Autumn Report 2007 3333 Letter.pdf; BCGS EPBC 2007 3333 Rehabilitation
	Monitoring Autumn 2018.pdf

Good Afternoon,

Please find attached the School's Autumn Monitoring Report, with accompanying letter for EPBC 2007/3333.

Mrs Jennifer Nobbs | Bursar



T (08) 9722 6010 Mobile: 0439 900 527 5 Allen Road, Gelorup WA 6230 | PO Box 1198, Bunbury WA 6231 www.bcgs.wa.edu.au





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