



Dieback Management Plan – Bannister Offset Site

WA Limestone

Report

JBS&G 62543 | 157,331

22 March 2024





We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.

Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte



Table of Contents

Executive Summary.....	3
1. Introduction	4
1.1 Project description	4
1.2 Dieback in the Offset Area	6
1.3 Purpose of this report	6
2. Environmental objectives, targets and performance indicators	7
2.1 Aspects of Offset Site requiring management.....	7
2.2 Environmental objectives, targets and performance indicators	7
2.3 Roles and responsibilities.....	8
3. Dieback Management actions	8
4. Monitoring.....	10
5. Remedial actions	10
6. Review and revision.....	11
7. Limitations	11
8. References	12

List of Tables

Table 1.1. List of MNES with the potential to be impacted by the proposed action.

Table 2.2: Environmental targets and key performance indicators for dieback management.

Table 3.3: Dieback management actions.

Table 4.4: Dieback monitoring program.

Table 5.5: Remedial actions for the dieback and topsoil management actions

List of Figures

Figure 1.1: Development site boundary and regional location.

Figure 1.2: Offset site

Executive Summary

This Dieback Management Plan has been prepared to provide management recommendations to minimise the risk of introduction and spread of *Phytophthora cinnamomi* (dieback) at Lot P011005 6, 8772 Albany Highway, Bannister. This site has been identified as a potential offset site (and advanced offset) for proposed clearing at WA Limestone's quarrying operation at WA Mining Lease 70/1240 in Whitby in Western Australia.

No dieback has been identified on site however the vegetation type is considered highly susceptible to impact should the pathogen be introduced. Dieback has been identified in State Forest approximately 7km to the west of this site. The key management actions relate to:

1. Signs.
2. Inductions and procedures.
3. Access and vehicular/ machinery movement.
4. Bulk earth work within conservation area.
5. Drainage.
6. Basic raw material/borrow pits (source of fill, etc) and construction materials.
7. Mulching.
8. Clean down points and procedures.
9. Dust management.

The Western Australian Department of Biodiversity, Conservation and Attractions (DBCA) is proposed to take management responsibility for the offset site and will be responsible for ensuring the implementation of the management recommendations. WA Limestone, as the entity responsible for undertaking the action in relation to EPBC 2021/9045, will retain legal responsibility for ensuring any EPBC conditions are satisfied.

1. Introduction

Ransberg Pty Ltd (WA Bluemetal) are proposing to undertake clearing associated with the Byford (Whitby) Quarry operations. The proposed works will necessitate the clearing of 13.2 ha of vegetation within a boundary of the same size. The clearing will take place within Mining Tenement M70/1240 Karrakup (the Project) for storage purposes (Figure 1-1). The Project is located within the Serpentine - Jarrahdale approximately 40 km southeast of Perth.

As part of the approvals for the project an environmental offset site has been identified at 8772 Albany Highway, Bannister that will offset the potential environmental impacts to the Matters of National Environmental Significance (MNES) from the project. To ensure the protection of the environmental values of the site, this Dieback Management Plan (DMP) has been prepared to minimise the risk of introduction and spread of *Phytophthora cinnamomi* across the highly susceptible vegetation on-site (South Coast Natural Resource Management, 2024).

1.1 Project description

The proposed clearing will facilitate construction of the following elements:

- Storage and laydown areas;
- Access tracks/roads; and
- Associated quarry infrastructure.

The proposed action was referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 5 October 2021 and it was determined that the proposed action is a controlled action and will be assessed by preliminary documentation on the basis of the potential impacts to Matters of National Environmental Significance described in Table 1-1.

Table 1.1. List of MNES with the potential to be impacted by the proposed action.

MNES	Impact
Carnaby's Black Cockatoo (<i>Zanda latirostris</i> formerly <i>Calyptorhynchus latirostris</i>) – Endangered	Clearing of 13.2 ha of high-quality foraging habitat which may support potential roosting and breeding habitat for Carnaby's Black Cockatoo, Baudin's Black Cockatoo and the Forest Red-tailed Black Cockatoo.
Forest Red-tailed Black Cockatoo (<i>Calyptorhynchus banksii naso</i>) – Vulnerable	
Baudin's Black Cockatoo (<i>Calyptorhynchus baudinii</i>) – Endangered	
Chuditch, Western Quoll (<i>Dasyurus geoffroii</i>) – Vulnerable	Clearing of 13.2 ha of potential Chuditch habitat.



Figure 1.1: Development site boundary and regional location.

Due to the residual environmental impacts after avoidance, minimisation and rehabilitation had been implemented, an environmental offset site was required. The property at 8772 Albany Highway, Bannister Figure 1.2 was identified as suitable for offsetting this project and the remainder of the site used as an advanced environmental offset. To protect the environmental values of the site from potential dieback infestation into the future, this DMP has been prepared.

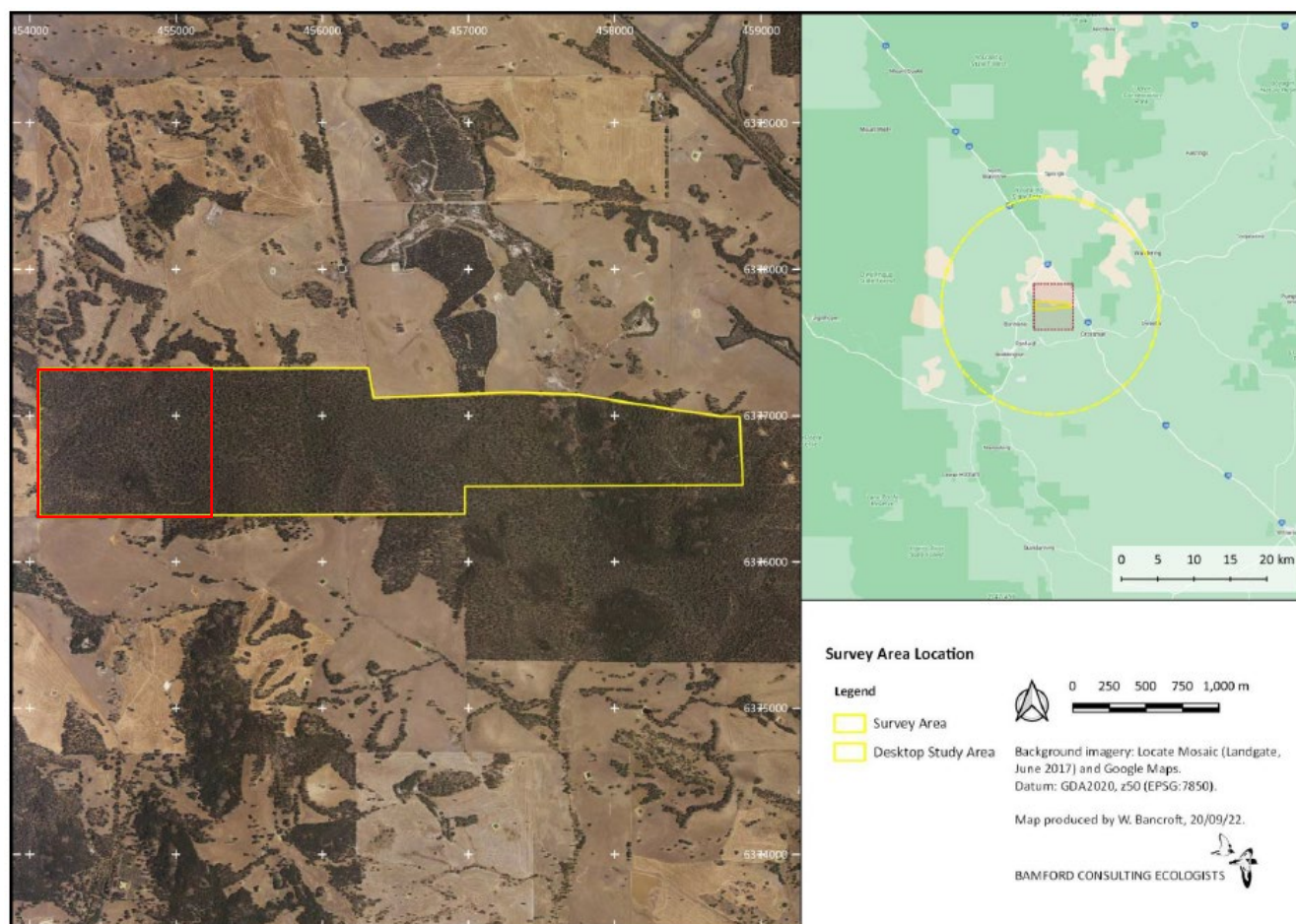


Figure 1.2: Offset site property including advanced offset.

1.2 Dieback in the Offset Area

Dieback is a term referring to the plant disease (and the effect) caused by a microscopic ‘water mould’ (Oomycete) of the genus *Phytophthora*, which survives on the root and stem tissue of living plants. It is spread through the movement of contaminated vegetation or soil on vehicles, equipment and footwear. It can also be spread through the movement of soil by water erosion or via soil root zones in vegetated areas. Dieback destroys the structure and diversity of vegetation communities, ultimately affecting native fauna through reduction in food and habitat. Residual dieback in soil can also kill non-native landscaping and agricultural species if they are planted in infested soil.

No dieback has been identified on site however the vegetation type is considered highly susceptible to impact should the pathogen be introduced. Dieback has been identified in State Forest approximately 7km to the west of the offset site.

1.3 Purpose of this report

The purpose of the DMP is to assist WA Limestone (and potentially the Department of Biodiversity Conservation and Attractions (DBCA)) to implement dieback protection measures to minimise the risk of introduction or spread of dieback (if exclusion measures fail) within the offset area. This includes on-going monitoring and vigilance within this site and the adjacent property to the south.

2. Environmental objectives, targets and performance indicators

2.1 Aspects of Offset Site requiring management

Dieback could potentially be introduced or spread into the Offset Site by the following activities:

- Vehicles, equipment clothing and boots from other sites importing dieback into the Offset Site if not washed down of soil before arriving.
- import of road building materials, mulch or fill containing infected soil or vegetative material.
- surface (alterations to drainage lines) or subsurface flow washing soil from affected areas to unaffected areas.
- If introduced to the site, movement of topsoil, mulch and fill from dieback infested areas spreading dieback from infested areas on-site to uninfested areas on-site and other sites outside of the Offset Site.
- Unauthorised vehicles (trail bikes, mountain bikes etc) could also bring infested soil into the site.
- Feral animals (eg pigs) could potentially transport infested soil in to the Offset Site (DCCEEW, 2024).

2.2 Environmental objectives, targets and performance indicators

With these aspects in mind, the environmental objectives, targets and key performance indicators for dieback management at the Bannister Offset site are detailed in Table 2.1.

Table 2.1: Environmental targets and key performance indicators for dieback management

Management objective	Target	Key performance indicator
Ensure no introduction of dieback from outside the Project Area.	Any soil, gravel or fill used for road construction and imported into Project Area shall be certified or otherwise verified as dieback free.	Certificates from imported material documented as being dieback free.
	Maintain fencing and site access restrictions to prevent unauthorised access through the Site.	No reported unauthorised access.
	Implement feral animal control program	Reduction in number of large feral animals traversing the site.
	All vehicles and machinery are free of soil before arriving on site.	Vehicle/machinery logs confirm mandatory check for soil material before proceeding beyond the carpark at the eastern end of the property.
If established, prevent the spread of dieback from existing infected areas.	No movement of soil or mulch from known infected areas into uninfected or uninterpretable areas.	Vehicle/machinery logs indicate either no movement from dieback infested area to other areas (preferred), or recorded clean down on designated hard stand between vehicle/machinery use in infested area in the uninfested areas.

Management objective	Target	Key performance indicator
	No events relating to vehicles or machinery entering retained bushland areas without authorisation and unless for rehabilitation purposes during construction.	Inspections of clearing boundaries and fencing around retained bushland areas.
	No new areas of dieback infestation in retained bushland areas.	No decline in vegetation health due to dieback in previously uninfested retained bushland areas.

2.3 Roles and responsibilities

DBCA will be responsible for on ground management of the site. WA Limestone will retain responsibility for compliance with any conditions of approval of the project.

All personnel undertaking constructions activities on-site (road constructions, fencing, etc) will undergo some basic induction which will include hygiene training to ensure they are aware of the requirements to prevent the spread of weeds and diseases both into and out of the Offset site.

3. Dieback Management actions

Primary hygiene measures shall be focussed on clean on entry, maintenance of border fencing and control of materials arriving on site.

Table 3.1: Dieback management actions.

Procedure	Action	Timing	Responsibility
1. Fencing and Signs.	Install fencing around the site and signs at the site entrance indicating the dieback controls in place. Signage will include the requirement that all vehicles and personnel must report to the DBCA office for inspection (location of inspection bay to be determined when fencing alignment determined).	Prior to fencing / road works.	DBCA
	Install signs on fencing demarcating unauthorised entry prohibited.	After fencing installed.	DBCA
2. Inductions and procedures.	Induct any construction staff in the hygiene requirements of the site to prevent the introduction of weeds and diseases. Include in the induction procedures for topsoil and dieback management, appropriate training for site personnel on the importance of site hygiene and the correct use of hygiene facilities (e.g. wash / clean down prior to entry to site).	Prior to personnel commencing work on-site.	Construction Manager and DBCA

Procedure	Action	Timing	Responsibility
3. Access and vehicular/ machinery movement.	Conduct clean down of plant, machinery, material, equipment, tools and footwear prior to arrival.	During any site works.	All personnel.
	All vehicles, personnel and equipment will only enter and exit conservation area via the entry and exit inspection point.	During any site works.	Construction Manager and HSE Officer.
4. Bulk earth workswithin conservation area.	Minimise the transport of bulk earth works around the site to minimise the risk of spread of unidentified dieback.	During any site works.	Construction Manager and HSE Officer.
5. Drainage.	Maintain natural drainage pathways on-site with any road/ track improvements.	During any site works.	Construction Manager and HSE Officer.
6. Basic raw material/borrow pits (source of fill, etc) and construction materials.	Obtain certification confirming the pathogen-free status of borrow pits used as sources of fill, limestone and other raw materials.	During any site works.	Construction Manager and HSE Officer.
	Ensure construction materials (pipes, stone pitching etc) are free of mud and soil when brought on to site.	During any site works.	Construction Manager and HSE Officer.
	Store construction materials on a hard, dry, well drained surface that does not drain towards vegetation.	During any site works.	Construction Manager and HSE Officer.
7. Mulching	Obtain certification confirming, or otherwise verify, any mulch sourced from outside the site will be certified or otherwise verified as Dieback free.	During any site works.	Construction Manager and HSE Officer.
	Use on-site mulched material only from areas that are dieback free.	During any site works.	Construction Manager and HSE Officer.
8. Clean down points and procedures	Inspect all machinery, light and heavy vehicles prior to entry to the Conservation area. Any equipment with soil, weeds or seeds attached are to be denied entry to site until cleaned.	Prior to and during any site works.	Construction Manager and HSE Officer.
9. Dust management	Source water for dust suppression only from scheme, bore or sterilised water.	During construction	Construction Manager and HSE Officer.

4. Monitoring

Table 4.1 provides monitoring actions to enable an assessment of the effectiveness of the dieback management actions in place.

Table 4.1: Dieback monitoring program

Parameter	Frequency/ Duration	Location	Purpose	Responsibility
Visible signs of dieback	Weekly.	Conservation area.	Visual inspection of potential signs of dieback introduction.	Ranger.
Fencing and signage.	Monthly.	Conservation area.	To maintain integrity of fencing and signage around the site to prevent unauthorised access.	Ranger
Erosion and water accumulation.	Monthly.	Conservation area.	To ensure natural drainage patterns are maintained to minimise potential spread of dieback, if introduced.	Ranger
Hygiene inspection station and register.	Weekly.	Entry and exit hygiene point into Conservation area.	Ensure inspection point is clear of vegetation and soil and register is up to date.	Ranger

5. Remedial actions

Remedial actions have been developed to be enacted if monitoring indicates that the environmental objectives and targets for dieback management are not going to be achieved (Table 5.1).

Table 5.1: Remedial actions for the dieback and topsoil management actions

Trigger	Action	Responsibility
Observations suggest that dieback has been introduced or spread into conservation area.	1. Confirm that visible signs are the result of dieback. 2. Identify potential sources of dieback introduction and determine likely cause (using suitably qualified specialist). 3. Update mapped distribution of dieback affected areas. 4. Review treatment and control methods, seeking further advice from relevant authorities if required. Control methods may include phosphate treatment to minimise the spread of dieback. 5. Implement revised dieback control methods and continue monitoring.	Ranger, DBCA officers
Non-adherence to hygiene procedure, or weekly environmental inspection indicates an	1. Review procedures, which could include: ◦ review of hygiene measures to determine the requirement for modification / actions additional to current requirements.	Ranger

issue e.g. vehicles not washed down as required, machinery access across TMZ without clean down, etc.	◦ improvement of induction for staff/contractor ◦ improvement to fencing and demarcation of soil quarantine areas. 2. Assess need for remedial action (e.g. removal of infected soil) to avoid infection areas across the site. 3. Monitor the effectiveness of remedial action (i.e. monitor up to five years to assess whether new dieback infestation results).	
Fencing and signage not in place.	Reinstate fencing or signage as per management action requirements.	Ranger
Erosion or water accumulation observed within the conservation area.	Reshape surface of the area in concern, or re-install / cleanout drain to ensure maintenance of existing drainage lines.	Ranger

6. Review and revision

Implementation will continue to be predominantly managed by the on-site Ranger from DBCA.

The management plan should be reviewed for compliance and effectiveness every 5 years (for at least 20 years) or more frequently if required. Upon review, the document shall be revised and re-issued where appropriate. In addition, continued improvement of the plan will occur in response to environmental incident resolutions and monitoring findings.

7. Limitations

Scope of services

This report ("the report") has been prepared by JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. JBS&G has also not attempted to determine whether any material matter has been omitted from the data. JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to JBS&G. The making of any assumption does not imply that JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

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

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

8. References

Department of Climate Change, Energy, the Environment and Water (2024) "Feral Pigs". Found here: <https://www.dcceew.gov.au/environment/invasive-species/feral-animals-australia/feral-pigs#SnippetTab>, Perth, WA.

Department of Environment and Conservation, 2004, Best practice guidelines for the management of *Phytophthora cinnamomi*. Public Consultation Draft, DEC, WA.

Dieback Working Group (2021) "Best Practice Guidelines for the Management of *Phytophthora* Dieback in the Basic Raw Materials Industries" Dieback Working Group, WA.

South Coast Natural Resource Management (2024) From WA Dieback Map found here: "[Dieback Public Map - Project Dieback](#)", Perth, WA.

© JBS&G

This document is and shall remain the property of JBS&G. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited

Document Distribution

Rev No.	Copies	Recipient	Date
2	Electronic	DCCEEW	4/4/2024

Document Status

Rev No.	Author	Reviewer Name	Approved for Issue Name	Signature	Date
1	Ben Hollyock	A Latto	A Latto		16/2/2024
2	Ben Hollyock	A Latto	A Latto		4/4/2024

© JBS&G

This document is and shall remain the property of JBS&G. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited

Document Distribution

Rev No.	Copies	Recipient	Date
0	1	Roger Stephens	18/10/2023
1	1	Roger Stephens	26/10/2023
2	1	DCCEEW	16/2/2024
3	1	DCCEEW	4/4/2024
4	1	DCCEEW	9/4/2024

Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
0	J.Raees	B. Hollyock	B. Hollyock		18/10 2023
1	J.Raees	B. Hollyock	B. Hollyock		26/10 2023
2	B Hollyock	A Latto	A Latto		16/02 2024
3	B Hollyock	A Latto	A Latto		04/04 2024
4	B Hollyock	A Latto	A Latto		09/04 2024

