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Lots 4 and 5 Ludlow Rd, Myalup - Proposed Limestone Extraction
EPBC 2019/8388 Response to Public Submissions

September 2020

Contents

1. INTRODUCTION

B&J Catalano Pty Ltd (Catalano) is proposing to expand its limestone operation at Lot 4 and 5 Ludlow Road, Myalup which will increase the project footprint by 13.5ha area (reduced from 25ha). The expansion will result in 8.3ha of clearing native vegetation.

In accordance with the *Environment Protection and Biodiversity Conservation Act 1999 (*the Act*)-Section 95B (1&2)*, B & J Catalano Pty Ltd are required to respond to public comments received on the controlled action 2019/8388 and then publish these responses.

1.1 Assessment on Preliminary Documentation

On April 29, 2019, the proposed action was determined to be a controlled action under the Act, based on the following factors:

- listed threatened species and communities (s. 18 and 18A),
- listed migratory species (s. 20 and 20A) and
- the ecological character of a declared Ramsar wetland (s. 16 and 17B).

The Commonwealth Minister determined that the proposed action will be assessed by Preliminary Documentation.

Information required for the Preliminary Documentation, as requested by the Department of Agriculture, Water and the Environment (DAWE) (formally Department of the Environment and Energy, DoEE) (EPBC Ref 2019/8388, 24 June 2019, September 26, 2019 and February 7, 2020) was provided as Appendixes A1, A2 and A3 of the Preliminary Documentation that was submitted to DAWE in March 2020 and released for a two week public comment period for a period of 20 business days concluding on 11 June 2020.

Information previously submitted to the Commonwealth Minister, and made publicly available, in relation to the action included the following documents:

Referral Information

- 0. EPBC Act Referral - Lots 4 & 5 Ludlow Road, Myalup - Proposed Limestone Extraction
- 1. 2019-8388 Referral Appendix attachment 1 please refer to Prelim Doc
- 2. 2019-8388 Referral Appendix attachment 2 Certificate of Confidence 14001-2015
- 3. 2019-8388 Referral Appendix attachment 3 please refer to Prelim Doc
- 4. 2019-8388 Referral Appendix attachment 4 Part 001 of Lot 4 Ludlow Rd_2018 EIL
- 5. 2019-8388 Referral Appendix attachment 5 Part 002 of Lot 4 Ludlow Rd_2018 EIL
- 6. 2019-8388 Referral Appendix attachment 6 Signed Environmental Policy 2019

Preliminary Documentation

- Additional Information Report Rev B Lots 4 and 5 Ludlow Rd, Myalup: Proposed Limestone Extraction EPBC 2019/838
- APPENDIX A1 - 2019_8388 Assessment Decision PD
- APPENDIX A2 - 2019-8388 Additional information request

- APPENDIX A3 2019-8388 Catalano PD response letter
- APPENDIX B - Environmental Management Plan
- APPENDIX C - Revegetation Report Lot 4 Ludlow Rd
- APPENDIX D - Water Management Plan
- APPENDIX E - Targeted Veg and Flora Report
- APPENDIX F - Fauna Assessment Report Nov 2019 V3a
- APPENDIX G - Shorebird and Cockatoo Review Aug 2019
- APPENDIX H - Weed Management Plan

2. SUMMARY OF THE PROPOSAL

Catalano are proposing to expand its limestone extraction operation on Lots 4 and 5 on Deposited Plan 15419 Ludlow Road, Myalup, Shire of Harvey, Western Australia. Existing operations cover an area of 21 ha with an annual extraction volume of 55,000m3.

It is proposed to expand the limestone extraction operations in a westerly direction. The new pit area will be developed over a 13.5ha area (reduced from 25ha). The expansion will result in the removal of 8.3ha of degraded to completed degraded Eucalyptus woodland and Melaleuca shrubland with a predominantly pasture grass understorey. Operational activities in the new pit area will be the same as existing operations.

An annual extraction volume of 95,000 tonnes is planned over a 5-year period. The day to day operations will be conducted using one bulldozer and up to two front-end loaders, which will load trucks (off-site equipment anticipated to generate an average of 14 truck movements per working day).

The final land surface will be at 6m AHD with pit batters of 1:6, which is not dissimilar to slopes occurring naturally within the surrounding landscape. The area will be rehabilitated upon cessation of extraction activity and will be required to meet defined completion criteria as detailed in the rehabilitation section of the Environmental Management Plan and in the Revegetation Report.

A recommended buffer of approximately 300m from Lake Preston will be maintained throughout the operational life of the extraction activities. Proposed activities will not directly impact this conservation area.

No major servicing, which could lead to fuel and oil spills, will take place on the site.

In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner Lundstrom Environmental Consultants Pty Ltd Page 15 Lot 4 and Lot 5 Ludlow Rd, Myalup: Proposed Limestone Extraction (EPBC 2019/8388) Additional Information Report (Rev B, March 2020) for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. All vehicles must be serviced and refuelled in a contained and bunded area. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other

contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. There will be no chemicals or other hazardous materials stored on-site.

3. PUBLIC SUBMISSIONS RECEIVED

A total of 11 submissions were received by B&J Catalano Pty Ltd during the public comment period. Details of those persons or entities that made submissions are reported in t Table 1. All comments received and the responses from Catalano are reported in Table 2.

Table 1. Submission Summary

Submission Reference	Contact Person	Contact Details
1	Carolyn Boyle, Conservation Council WA Citizen Science Network	Conservation Council, WA Citizen Science Network carolynb@iinet.net.au
2	Sue Della	sueldella@gmail.com 045 5884 769
3	Greg Della	gregm.della@gmail.com
4	Sue Kalab	suekalab@hotmail.com
5	Tony France	28 Manning Street, Myalup WA 6220 Tel: (08) 97201115 anthonyfrance32@bigpond.com
6	Suzanne Sloan	48 Valentine Rd, Binningup 6233 sloan.sue@bigpond.com
7	Mark and Jenny Callaghan	Wellington Location 1149, Shire of Harvey mark@lostcow.com
8	John and Vicki Buchanan	Lot 1149, Reading Road, Myalup (Shire of Harvey) Email: john.buchanan@health.wa.gov.au Ph: 0404 894 394
9	Joseph and Carolyn Caruso	1133 Lake Preston Road, Myalup 6220 Email: carolynm@iinet.net.au
10	Margie & Paul Haas	pmhaas19@aol.com
11	C M Gray, Chairperson, Urban Bushland Council WA Inc.	Urban Bushland Council WA Inc. ubc@bushlandperth.org.au celiagray@bigpond.com

4. CONSEQUENT CHANGES TO THE ACTION

There were no consequent changes, amendments or additions made to the proposed action or the Preliminary Documentation following receipt of public comments. Responses provided draw on information already contained with the Preliminary Documentation.

5. PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide responses to issues in submissions made during the public comment period that relate to the content of the Preliminary Documentation. In accordance with Section 95B(2) of the EPBC Act, the preliminary documentation and a summary of responses to the public submissions must be made publicly available.

This document will be available for 20 business days from 10 September 2020 at the following:

- Catalano website; www.catalano.com.au
- the Library of the Shire of Harvey, 7 Mulgara St, Australind, WA.
- the Library of the Department of Biodiversity Conservation and Attractions; 17 Dick Perry Avenue, Technology Park Precinct, Kensington, WA.

Additional copies can be provided at a reasonable cost, and/or persons with a disability, or limited English may seek assistance by contacting Michael Lundstrom via the contact email mikelund1@bigpond.com.

Table 2. Response to Submissions

Item	Key Comment	Response
1. Conservation Council		
1-01	This action forms part of a 13.5ha proposed expansion of existing limestone extraction pit with a previously cleared pit area of approx. 46ha on Lots 4 & 5 Ludlow Road. This accumulative cleared footprint will amount to approx. 60ha, none of these previously mined areas have been rehabilitated to date	Previous extraction area is 21.2ha, bringing the total cleared footprint to 34.7ha.
1-02	The proposed site lies within an ESA the catchment of Yalgorup Lakes system, on western boundary Lake Preston, with Yalgorup National Park to the north.	The site is outside the ESA area. At its closest point, the ESA is approx. 220m west of the proposed extraction area, with a limestone ridge separating the proposed works and the ESA boundary.
1-03	Proposed footprint: 13.5ha which includes clearing request for 8.5ha native vegetation trees consisting of mature Tuart (TEC), Banksia Atenuata, Jarrah and Eucalyptus Dicipiens woodlands.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. None of the Jarrah trees recorded in the disturbance footprint have hollows considered possibly suitable for nesting black cockatoos. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed. Attached please find a figure illustrating the vegetation types within the current extent of the action (Attachment A). It should be noted that four Jarrah individuals does not make up a Jarrah Woodland. The four jarrah trees are marked on the attachment.

<table>
<tr><th>Item</th><th>Key Comment</th><th>Response</th></tr>
<tr><td>1-04</td><td>Groundwater flow, in a westerly direction from the site, will permeate through transmissive sands into Lake Preston, the proposed extractive operations have potential to negatively impact the lakes water quality and ecosystems function.</td><td>Using the Geomorphic Wetlands of the south west and swan coastal plain as a base layer reference, at its closest point, the proposed extraction area is approximately 300m east of conservation category Lake Preston wetland (220m east of Lake Prestons ESA boundary). The nearest wetland to the east of the proposal area is approximately 1.2km away and is a multiple use category dampland. The nearest conservation category wetland east of the proposal area is a conservation category dampland (no name) that is approximately 1.8km east north east of the site. The next closest conservation category wetland is a conservation category sumpland (no name), 5.9km east south east of the site.

The western boundary of the site is approximately 300m from the shoreline of Lake Preston and is separated by the wetland by a limestone ridge.

More specifically, the question relates to the scale of the potential impacts associated with the activities proposed at this site. It is agreed that water quality of the Lake could be altered if large hydrocarbon spills or other pollution are to be expected, or if dewatering and operating below the water table were proposed. However, this is not the case and as stated in 1-07 “The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again……”

Just to reiterate the scale of the project (as set out in 1-07), groundwater discharge from the eastern shore of Lake Preston takes place along a 28km front whilst the width of this pit, parallel to the Lake, is 700m (2.5%) and groundwater will not be exposed. Furthermore, the existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed.

Potential impacts include the following:

<table><tr><td>Potential Impact</td><td>Mitigating/Avoidance measure</td></tr></table></td></tr>
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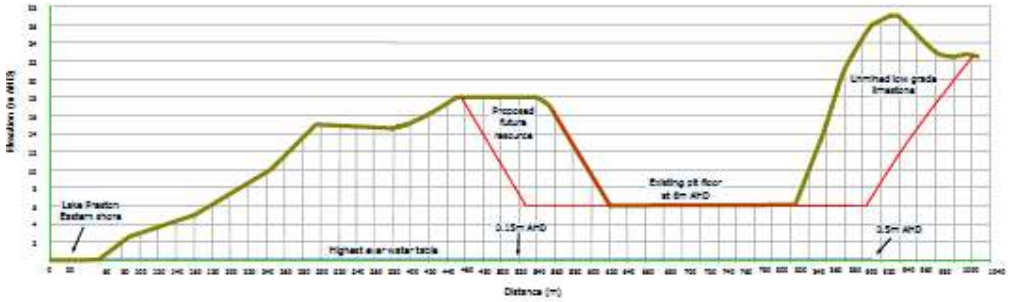
Item	Key Comment	Response	
		Increasing the salinity of groundwater below the site by exposing groundwater at the base of the pit and allowing evaporation to occur.	Maintain the base of the pit at least 4m above the water table.
		Pollution of the groundwater below the site by way of major hydrocarbon spills.	This has already been fully discussed below, but is copied here as follows: "*There will be no chemicals or other hazardous materials stored on-site. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. All vehicles must be serviced and refuelled in a contained and bunded area. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately*

Item	Key Comment	Response
		licensed waste facility. Spill kits will be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. "
1-05	Lake Preston is a groundwater dependant ecosystem and its ecology is sensitive to water quality changes, therefore potential environmental impacts from runoff and accidental chemical spill - contaminants may contribute to significant long term environmental impacts to the lake. Sensitivity of Lake Preston - Myalup Agriculture Irrigation Precinct. Data Gaps Analysis 2015. Report for Department of Water - Myalup Irrigation Agriculture Precinct, 61/31870: The sensitivity of the lake ecology to changes in water quality is not known. The ecology of Lake Preston is partially understood, but key components of the system are the microbialites and macro invertebrates, which support water birds and other higher life forms (UWA works in prep)	There will be no chemicals or other hazardous materials stored on-site. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24thApril 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. All vehicles must be serviced and refuelled in a contained and bunded area. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. (Section 1.3.2.3). The fringing vegetation of Lake Preston is positioned on the other side of a limestone ridge approximately 300m from the proposed disturbance.

Item	Key Comment	Response
	The fringing vegetation communities are deemed critical. Given the complexity and state of change between the interaction between Lake Preston's surface water and groundwater regime (hypersalinity), the current lack of knowledge precludes an understanding of the risks of hypersaline groundwater intrusion into the superficial aquifer, and groundwater discharge into the lake/water balance	
1-06	Lake Preston is part of the Peel Yalgorup system of wetlands, lies on the western boundary of the proposed extraction site.	The project area is approximately 300m from the Ramsar site and is separated from the project area by a limestone ridge that is approximately 18m higher in elevation than the lake shore.
1-07	Likely significant impact to groundwater quantity and quality will be incurred during clearing, construction and extractive site works. Vegetation clearing and alteration to natural topography can significantly impact groundwater chemistry. Groundwater flows in a westerly direction to Lake Preston. Any contamination to Lake Preston's hydrology from surface runoff, pollutants or groundwater discharge will significantly impact the health of the Lake and sensitive ecosystems.	Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal.

Item	Key Comment	Response
		Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively.  (Figure 5 concept in report) Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapo-transpiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels.

Item	Key Comment	Response
		• In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. • The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. No dewatering activities will be undertaken. No groundwater will be exposed by this development since the final land surface will be 6m AHD, which is well above the maximum winter high groundwater table, and is in keeping with the DoW recommended minimum separation depth of 300mm between the base of the pit and the likely maximum season groundwater level (Groundwater Management Plan).
1-08	No servicing of vehicles, storage of fuels, chemicals or refuelling should be allowed on Lots 4 or 5.	Section 5.3.1 (Avoid) • No fuels, lubricants or other toxic or hazardous chemicals will be stored on site. (Section 5.3.1) • The Western Australian Water Quality Protection Guidelines No's 6, 7, 10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. (Section 5.3.1). Section 5.3.2 (Minimise) • Reduce the risk of hydrocarbon spills by refuelling using a mobile refuelling vehicle that is equipped with a "snap-on snap-off, fast-fill and auto shut-off" facility.

Item	Key Comment	Response
		• Reduce the risk of leaks and spills by leaving vehicles almost empty overnight and refuelling each morning • Reduce the risk of hydrocarbon spills by servicing vehicle at least 300m from the shore of Lake Preston. This is in accordance with EPBC 2008/3956 conditions: deemed not a controlled action if undertaken in a particular manner for (24th April 2017) - 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Other vehicle servicing related actions include: using a spill mat or drip tray; direct vacuuming of waste fluids to a waste oil tank on the service truck; any waste material captured during servicing will be disposed of at an appropriately licensed waste facility; and spill kits on all service truck(s).
1-09	Lake Preston's water composition governs the growth of microbial mats which provide the habitat and breeding ground for the several invertebrates that form the principle diet of migratory birds that stop over at the lake on arrival and later before their departure north. Run-off from precipitation into the lake on the east side occurs faster than from the dunes lens at the east side of the lake which latter runoff visibly endures longer and well into mid-summer. Research has shown that the nutrients of the microbial mats largely depend on fresh water run- off into the lake. Reference: M Whitehead Any pollution at any part of the lake would in time adversely affect the entire lake's water composition and ecosystems. Survey Information as requested by DAWE monitoring groundwater bores or onsite data	It is thought that due to the setback of greater than 200m, the lack of any fuel being stored on site and the 4m separation (at least) between the base of the pit and the water table; together with the relatively small scale of this operation, that very limited impacts will be incurred.

Item	Key Comment	Response
	for the site has not been provided. This monitoring should include seasonal groundwater quantity and quality reporting to the boundary of Lake Preston	
1-10	Terrestrial linkages: The site displays native vegetation consistent with that of Yalgorup National Park. Vegetation listed as Tuart/Banksia/Marri/Jarrah/ Coastal Peppermint assemblages are referred to as degraded. But it must be recognised that even degraded native vegetation provides critical habitat linkages across the site. Mature Tuarts in any condition, have extremely high conservation value and must be preserved.	All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. Eucalyptus decipiens are widely distributed throughout the south west, occurring in the Avon Wheatbelt, Esperance Plains, Geraldton Sandplains, Jarrah Forest and Swan Coastal Plain IBRA bio-regions. *Melaleuca systena* are widely distributed throughout the coastal south west, occurring Geraldton Sandplains, Jarrah Forest, Swan Coastal Plain, Warren IBRA bio-regions.
1-11	Tuart trees develop nesting hollows only after scores of mature years. So, any young younger trees cleared today on Lots 4 and 5 would reduce even further the threatened Tuart population along the Swan Coastal Plain.	No *Eucalyptus gomphocephala* (tuart) woodlands are found in the clearing footprint.
1-12	Survey Information as requested by DAWE, for current targeted surveys to determine potential for habitat trees, has not been provided for Lots 4 and 5. Rigorous scientific survey methods and seasonal monitoring data for the site to the boundary of Lake Preston, must be provided.	Section 2.2 describes the terrestrial fauna surveys, with a focus on national environmental significance). Section 2.2 includes a description of the methods and outcomes for both desktop and field components of the assessment, including: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines); • Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat); • Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals);

Item	Key Comment	Response
1-13	Carnaby's Cockatoo on the Swan Coastal Plain primarily feed on Jarrah and Banksia, which are critical to their breeding survival. – These feed trees, all present on the site should not be removed.	The proposal area is surrounded by vegetation in a similar condition and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F). The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. As detailed in Section 4.2.4, the proposal footprint does not represent quality black cockatoo habitat: • No *Eucalyptus gomphocephala* (tuart) woodlands are found in the clearing footprint. • Peppermints are only foraged rarely. • There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. • There are no Banksia woodlands mapped on site, with *Banksia attenuata* the only *Banksia* tree species recorded, albeit sparely distributed. • No existing roosting trees (trees used at night by black cockatoos to rest) were positively identified during the survey. • No trees within the proposal footprint contain hollows with large entrances (greater than ~10cm), big enough to allow the entry of a black cockatoo. Trees with these characteristics are located approximately over 170m south west of the proposal area and will be avoided.
1-14	Survey Information as requested by DAWE for current targeted surveys to determine presence of black cockatoos foraging onsite or seasonal surveys to determine likely direct/indirect impact to cockatoo onsite and	Section 2.2 describes the terrestrial fauna surveys, with a focus on species of national environmental significance). Section 2.2 includes a description of the methods and outcomes for both desktop and field components of the assessment, including: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines);

Item	Key Comment	Response
	to the boundary of Lake Preston (west) and Yalgorup N.P (north) have not been provided.	• Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat); • Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals);
1-15	Sharp-tailed Sandpiper. The little sharp-tailed sandpiper is often seen in large flocks on Lake Preston - Hooded Plover are recorded breeding and feeding along the sandy shores of Lake Preston (status Vulnerable)	The western boundary of the site is approximately 300m from the shoreline of Lake Preston and is separated by the wetland by a limestone ridge. The Sharp-tailed plover or the hooded plover (as these names are listed) do not seem part of the list of MNES that required more information. The migratory species discussed include the Bar-tailed Godwit (*Limosa lapponica baueri*) (section 3.1.2); Curlew Sandpiper (*Calidris ferruginea*) (section 3.1.3); Great Knot (*Calidris tenuirostris*) (section 3.1.4); Greater Sand Plover (*Charadrius leschenaultia*) (section 3.1.5); Lesser Sand Plover (*Charadrius mongolus*) (section 3.1.6); Eastern Curlew (*Numenius madagascariensis*) (section 3.1.7); and the Red-necked Stint (*Calidris ruficolis*) (section 3.2.1). An environmental noise model was constructed using Sound Plan 4. This model illustrates that the 45 dB contour has a maximum extent of the eastern lakeshore and that the 40 dB contour crosses into the Lake. These contours have been simulated with 5 pieces of crushing and ancillary equipment operating in the pit simultaneously. These values are very low when viewed in the context of the noise produced by wind on water in the coastal zone. The noise model has been included with this document (attachment B). In addition, results of research conducted by Institute of Estuarine & Coastal Studies, University of Hull (Cutts et al 2013), suggest that construction noise of less than 50dB have a Low impact on estuarine waterbirds.
1-16	Survey Information as requested by DAWE for current targeted surveys to determine presence of waterbirds, migratory and resident wading species foraging within the site fringing vegetation on Lake Preston boundary. Seasonal monitoring surveys are required to determine nesting activity to the boundary of	The proposed action area contains no habitat suitable for any of the listed threatened/migratory shorebird species to utilise and none would ever occur under normal circumstances. The proposed action area mainly contains a low woodland of limestone marlock (*Eucalyptus decipiens*) over scattered shrubs and bare limestone. The eucalyptus woodland habitat is totally unsuitable for the shorebirds in question and therefore none are considered as likely to occur (Harewood 2019).

Item	Key Comment	Response
	Lake Preston's fringing vegetation. Have not been provided.	Lundstrom Environmental questioned to need of the seasonal migratory bird surveys with DAWE. Following two telephone conversations and an email (on 21st and 24th of October 2019) with officers at DAWE, LEC was advised that, given the distance from the Lake and the unsuitable habitat, seasonal migratory bird surveys would not be necessary.
1-17	Survey Information as requested by DAWE for current targeted spring surveys, to determine presence of Western Ringtail Possum onsite or transecting through the site, have not been provided. The report states 3 days for surveys, with 2 conducted in May and June- Autumn to Winter surveys will not provide evidence of scat activity due to winter weeds and ground too wet. More targeted Spring surveys, to observe grazing activity to Coastal Peppermint and Nuytsia Floribunda, including targeted night stalking. Surveys also to determine nesting activity to the boundary of Lake Preston (west) and Yalgorup N.P (north) are required. I have surveyed Lake Prestons's fringing vegetation and observed WRP activity through Coastal Peppermint understory of sedges and grasses.	Western ringtails are known to occur in the general area, based on desktop assessment and as such they were targeted for fauna surveys. No evidence of western ringtail possums using the project area was found during the day or night surveys i.e. no fresh dreys, no scats and no individuals). The generally poor quality of the habitat present (e.g. lack of favoured foraging species) and the results of the survey work suggest that they do not occur in the project area. (Section 2.2.4.4). In some instances, it is necessary to survey beyond the proposal area if there is a risk that the proposal will result in indirect impacts (i.e. groundwater drawdown or contamination plumes etc). However, this proposal is not expected to result in such indirect impacts because there will be no interaction with the groundwater (pit bottom is at least 4m above the water table, as per Figure 5), the proposed pit is approximately 300m away from the edge of the Lake (with a limestone ridge between the lake and the proposed pit), and the site will drain internally. It is not necessary to survey the fringing vegetation of Lake Preston as the Lake is positioned on the other side of a limestone ridge approximately 300m from the proposed disturbance. The terrestrial fauna survey area (~25.2ha) is already twice as large as the proposed disturbance area (~12.6ha). There will be no chemicals or other hazardous materials stored on-site. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24thApril 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. All vehicles must be serviced and refuelled in a contained and bunded area. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or

Item	Key Comment	Response
		drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. (Section 1.3.2.3). In regards to surveys and survey effort: 1: There is no preferred timing for WRP surveys and this is reflected in state and federal government survey guidelines where no mention is made of the need/preference for seasonal surveys. Contrary to the comments made in the public submission there was no request made by DAWE to the proponent to carry out a "spring" WRP survey. Because of these facts the surveys were not carried out at any specific time, just at a time concurrent with other fauna survey work (i.e. Winter and Spring). Western ringtail possums are active all year round (i.e. they do not have long periods of inactivity aligned with seasonal conditions) and therefore their presence can be determined using a range of appropriate techniques in any season/month. 2. Scats can indeed be difficult to locate if ground vegetation is long and dense especially if scat density is low however this can apply all year round where ever ground vegetation is dense. The area in question (proposed extraction area in Lot 4) does not have dense ground cover (in any month) as most of the area is characterised by areas of outcropping limestone with patchy thin quality soil. A such ground cover was not a limitation in searching for scats at this specific site at the time of the surveys. Also it should be noted that searching for scats in exposed locations can overcome this limitation to a certain extent (if it exists) i.e. looking on the exposed surface of fallen hollow logs, tree stumps and in tree forks under/within favoured foraging plant species or under active dreys. Scat surveys are only one aspect of a detailed WRP survey and should not be relied upon solely to detect the presence/absence of the species. The WRP survey carried out in this case also involved searching for dreys, documenting tree hollows in addition to a night survey. Camera traps were also deployed for a period of time. In all cases no evidence of WRP activity was noted. The lack of WRP activity was

Item	Key Comment	Response
		attributed to the very marginal quality of the WRP habitat present within the proposed extraction area. It is acknowledged that WRPs occur in the wider area but habitat in these locations is completely different to that that found with the proposal area. 3: Contrary to the comments made in the public submission "grazing" and "nesting" activity can be detected at any time of the year. They do not need to be carried in spring as both activities occur all year round (It is assumed that "nesting" activity term used by the person(s) providing comment is in reference to the construction of dreys for day time refuge). 4: Survey work was carried out by Greg Harewood, a south west based zoologist, with many years' experience in surveying for western ringtail possums. Greg has carried out over 700 surveys at over 200 unique locations across SW WA in the last 17 years. During this time he has recorded over 12,250 WRPs. Greg Harewood, is an experienced zoologist, and has carried out many WRP surveys of this type.
1-18	The proposed westerly expansion of this quarry should be refused, based on the lack preliminary documentation to enable a thorough DAWE assessment process, where significant direct or indirect impacts are likely to occur, the enormous lack of evidential survey data cannot support the consultants "no impact" statement.	**Flora and Vegetation** A comprehensive reconnaissance and targeted survey of the area was undertaken by very experienced and competent botanists (Section 2.1.2.2). The survey included: 1) a transect-based targeted flora survey; and 2) a quadrat-based vegetation survey; and 3) a vegetation condition assessment. The targeted search was conducted by walking in parallel transects approximately 10–20 m apart, depending on the density of the understory vegetation. **Target survey** A search was undertaken to target significant flora and vegetation with the potential to occur in the Survey Area, based on desktop study. The targeted search was conducted by walking in parallel transects approximately 10–20 m apart (depending on the density of the understory vegetation) across the entire survey area. **Quadrat survey**

Item	Key Comment	Response
		The survey of the vegetation within the site was undertaken at 3 sampling points, each 100 m2 (10 m x 10 m) and located in the best condition vegetation. Within each plot, all observable vascular plant species were recorded. The species data recorded was qualitative (presence/absence) as this was the type of data used in the original Swan Coastal Plain survey (Gibson et al., 1994). Quadrat sampling is the most appropriate technique for determining and describing vegetation during detailed vegetation surveys. Three 10m x 10m quadrats were installed across representative vegetation units. **Condition assessment** The condition of vegetation was assessed and mapped using the vegetation condition scales outlined in Keighery (1994). **Data analysis** The remnant vegetation of the southern Swan Coastal Plain was surveyed by Gibson et al. (1994) to provide an understanding of the major floristic gradients across the region. The major plant communities (or FCTs) were defined by classifying the data according to the similarities in species composition between plots. When determining the FCT of a new record, a floristic analysis of species composition provides the most robust method that is consistent with the original classification. Presently, a single consistent method for the determination of FCTs for vegetation data in the Swan Coastal Plain is not available. Therefore, it is preferable to use multiple methods and compare the output for the most likely result. All analyses described below were undertaken using R packages Cluster, Vegclust and Vegan. **Matters of NES** The scope of works was to conduct a Level 1 fauna survey as defined by the EPA (EPA 2016). Because the general area is known to be utilised by black cockatoos and western ringtail possums, the scope of

Item	Key Comment	Response
		the survey work was expanded to include a baseline assessment of the site's significance to these species as well. The fauna assessment has therefore included: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines); • Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat); • Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals); • An assessment of the likelihood of occurrence of any other significant fauna species and their habitat; and • Report summarising results, methods and conclusions.
1-19	The proposed westerly expansion, impacting Lake Preston's ecological linkages and the proposed changes to topography - soil excavation and removal of mature Eucalypt woodlands including Banksia, Jarrah and Tuarts will significantly impact onsite groundwater chemistry into Lake Preston and subsequently threaten the decline of vital food sources necessary for international migratory birds – such impact would be felt worldwide	Section 4.3.2. The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, http://lbp.asn.au/module/enviro#map) (Molley et al 2009). The same database also identifies the project area's regional connectivity as part of a 'large, regionally well-connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009). Based on available vegetation mapping it is estimated that there is approximately 9,514 ha of native vegetation within 10 km of the project area. Remnant native vegetation present within the project area (total ~8.3 ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos.

Item	Key Comment	Response
		The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F).
1-20	Any environmental assessment must include whole of landscape values and ecosystem function across Lot 4 and 5 Ludlow Road, to Lake Preston. Adverse impacts to wetlands of Peel-Yalgorup system threatens to breach our responsibilities and management conditions under Ramsar convention. The consultant has failed to provide measures of avoidance being for the likelihood of direct or indirect impacts to listed MNES in this submission.	Section 5 (Avoidance) The report provides a detailed list of mitigation measures that relate to black cockatoos, shorebirds, the Peel-Yalgorup System Ramsar Site and other Measures (Section 5). These mitigatyions measures include: **Black Cockatoo** • The two trees identified as potential cockatoo nest hollows within the original proposed clearing area will be avoided and removed from the proposed pit area. • Clearly demarcate black cockatoo habitat to be retained in the project area (i.e. with star pickets, coloured tape and/or bunting). • Reduce indirect dust impacts on habitat trees through the implementation of the Environmental Management Plan (Appendix B), including dust management measures outlined in Section 8.6. • The species composition of revegetation will include a suite of preferred habitat plant species for black cockatoos, including potential foraging, roosting and nesting plants (i.e. Eucalyptus, Banksia and Hakea species). • Installation of artificial nesting boxes in adjacent undisturbed vegetation. • Revegetation (infill planting) of foraging plant species in adjacent undisturbed vegetation.

Item	Key Comment	Response
		Shorebirds • A buffer of approximately 300m from the nearest shorebird habitat at Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • Reduce potential (although unlikely) indirect impacts to hydrology at Lake Preston through the implementation of a Water Management Plan (Appendix D). • Reduce potential (although unlikely) indirect impacts to the quality of shorebird habitat through the implementation of the Weed Management Plan (Appendix H). **Peel-Yalgorup Systems RAMSAR Site** • A buffer of approximately 300m from Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • No surface water runoff from the working areas will be discharged to the surrounding unaltered landscape, with all stormwater runoff contained in the base of the extraction area. • No fuels, lubricants or other toxic or hazardous chemicals will be stored on site. • The Western Australian Water Quality Protection Guidelines No's 6, 7, 10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. • Continue to adhere to Groundwater Licence conditions for the existing Licence on the site (GWL162560), which has an existing allocation identified for dust suppression of 22,000kl.

Item	Key Comment	Response
		• A Water Management Plan has been prepared for this project, which identifies all the management issues to be implemented, including key management actions listed below (but not limited to): ○ Minimise the risk of unintentional groundwater exposure during excavation through the development and promotion of contingency measures (i.e. if groundwater is exposed operations will cease until pit is refilled to achieve a 2m buffer distance above the water table). ○ Reduce the risk of hydrocarbon spills by refuelling using a mobile refuelling vehicle that is equipped with a "snap-on snap-off, fast-fill and auto shut-off" facility. ○ Reduce the risk of leaks and spills by leaving vehicles almost empty overnight and refuelling each morning. ○ Reduce the risk of hydrocarbon spills by servicing vehicle at least 300m from the shore of Lake Preston. This is in accordance with EPBC 2008/3956 conditions: deemed not a controlled action if undertaken in a particular manner for (24th April 2017) - 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Other vehicle servicing related actions include: using a spill mat or drip tray; direct vacuuming of waste fluids to a waste oil tank on the service truck; any waste material captured during servicing will be disposed of at an appropriately licensed waste facility; and spill kits on all service truck(s). ○ Spill kits contained on site will be maintained and spills recorded. ○ Adhere to conditions required in relevant groundwater abstraction licences. ○ Adhere to the dust management procedures as prescribed in the Environmental Management Plan (Appendix B). ○ Adhere to all other the actions as prescribed in the Water Management Plan (Appendix D). ○ Adhere to the actions prescribed in the Weed Management Plan (Appendix H).

Item	Key Comment	Response
		○ The final rehabilitated land surface will be 5m above the maximum winter high groundwater level. **Other Measures** • Visual inspection of site and access road for dust generation that is moving off site. • All loads covered before leaving the property. • Speed limits on all vehicles entering the site. • Induct all employees and contractors working on site about dust management. • Provide a contact number for dust complaints. • Undertake rehabilitation on completed areas immediately to manage dust.
1-21	Precautionary Principle – the proponent has failed to satisfy with any degree of certainty, this principle, with claims of no suitable habitat or MNES species impacted, by failing to provide thorough scientific surveys data or monitoring as his evidence and has resorted to assumptions, despite DAWE repeated requests for information.	The precautionary principle has been considered. The capitalisation of an existing operation has considerable benefits in terms of footprint reduction, reuse of infrastructure and water from neighbouring site and the overall containment of impacts to one location. Environmental investigations (including flora and fauna) have shown that the proposal area is not considered to contain any significant areas of key habitat for EPBC Act listed species of the area. Impacts to the site can be avoided (i.e. exclude potential roosting and nesting trees and setting the proposal back from Lake Preston), managed and offset (i.e. improve the current state of foraging habitat for black cockatoos within the local area) to produce an acceptable outcome.
Sue Della		
2-01	Negative impacts including noise, dust and visual, on the amenity of land west of Lake Preston.	Noise, dust and visual amenity impacts have all been assessed as part of the EPBC Act approval process. Noise emissions (Section 4.3.4), dust emissions 4.3.3 (Visual amenity (4.3.13). Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately

Item	Key Comment	Response
		12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. The dust and wind rose results suggest that dust emissions are not impacting sensitive environments west of the project area at Lake Preston and shorebird habitat. The EPA guidance "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). There are no dust sensitive premises located within 1km of the proposed operations, except for the landowner's premises. The landowner's residence is screened from the extraction area by a belt of native vegetation and the landowner has no objections to the proposed operations. The proposed extraction activities will create some operational noise, the majority of which will be generated by bulldozers, screening, loaders and haulage trucks. This noise is expected to be localised and create minimal nuisance beyond the boundary of the extraction area. The nearest noise sensitive premise is a residence owned by the landowner, located approximately 240m to the west of the proposed extraction operations. No other residences are located within 1km of the proposed activity. A vegetation buffer exists between the landowner's residence and the extraction area. During previous quarrying on the property no noise issues were recorded. No offsite noise impacts are anticipated due to the surrounding vegetation and distance to residential areas. The proposed extraction is unlikely to create a visual impact due to remnant topography on either side of the proposed extraction area, and the natural undulation of the landscape. The nearest main road, Forrest Highway, is located approximately 2.5km east of the proposed extraction area. There is an existing 40m buffer zone of native vegetation between Ludlow Road and extraction activities on the property. Since the extraction area is well screened by existing vegetation on the

Item	Key Comment	Response
		property and on neighbouring properties, no visual impact will occur. Previous extraction activities at the site have not resulted in any significant visual impact. No visual impacts are therefore anticipated.
2-02	Negative impacts on groundwater, especially risks to 'soaks' through disturbance of the groundwater.	Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapo-transpiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. No dewatering activities will be undertaken. No groundwater will be exposed by this development since the final land surface will be 6m AHD, which is well above the maximum winter high groundwater table, and is in keeping with the DoW recommended minimum separation depth of 300mm between the base of the pit and the likely maximum season groundwater level (Groundwater Management Plan).
2-03	The fauna studies 'low level density survey' is thought to be insufficient as there is an abundance of endemic wildlife and the proposal will have a negative direct and indirect impact on native wildlife within and around the extraction area.	The scope of works was to conduct a Level 1 fauna survey as defined by the EPA (EPA 2016). Because the general area is known to be utilised by black cockatoos and western ringtail possums, the scope of the survey work was expanded to include a baseline assessment of the site's significance to these species as well. The fauna assessment has therefore included: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines);

Item	Key Comment	Response
		• Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat); • Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals); • An assessment of the likelihood of occurrence of any other significant fauna species and their habitat; and • Report summarising results, methods and conclusions. Detailed description of the methods and results of the surveys in the Matters of National Environmental significance (terrestrial fauna) is proved in Section 2.2. A general summary of the species found is provided below: No evidence of black cockatoo roosting within trees located within the project area was observed. No evidence of western ringtail possums using the project area was found during the day or night surveys (i.e. no fresh dreys, no scats and no individuals). Six fauna recorded from motion careras (western grey kangaroo, *Macropus fuliginosus*; common brushtail possum, *Trichosurus vulpecula*; Australian magpie, *Cracticus tibicen*; Australia raven, *Corvus coronoides*; red fox, *Vulpes vulpes*; rabbit, *Oryctolagus cuniculus*). The habitat assessment and other observations made during the field reconnaissance survey does suggest that some fauna species of conservation significance are likely to persist in the general area. The total size of the project area is relatively small and therefore any fauna species present are only likely to be represented by a small number of individuals at any one time. A summary of those species considered likely to be present is provided in Table 8 of the report. Furthermore, the risk matrix Table (Table 28) address potential indirect impacts and provides management and mitigation measures. Key measures are provided below. The development

<table>
<tr><th>Item</th><th>Key Comment</th><th>Response</th></tr>
<tr><td></td><td></td><td>Environmental Management Plan (Appendix B to document) also details specific management and monitoring actions for each key impact.
<table>
<tr><th>Potential indirect impacts</th><th>Mitigation/management measure</th></tr>
<tr><td>Habitat degradation through the introduction of dieback and/or weeds</td><td>Hygiene management practices to be introduced to site prior to clearing</td></tr>
<tr><td>Disruption to behavior through noise and vibrations emissions</td><td>Provide small scale, short-term clearing operation (one bulldozer for no more than 1 week each year).

Limestone ridge divides operations are from lake shore</td></tr>
<tr><td>Habitat degradation through dust emissions</td><td>Dust suppression practices to be implemented as per environmental management plan</td></tr>
<tr><td>Contamination through hydrocarbon spills and leaks</td><td>Strict hydrocarbon management procedures will be established including a Spill Management Plan (as documented in the Environmental Management Plan, Appendix B), and will include but not be limited to the following:

No fuel or lubricant storage will occur on the site. Refueling will take place using a mobile refueling vehicle which is equipped with a “snap-on snap-off, fast-fill and auto shut-off” facility.</td></tr>
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<table>
<tr><th>Item</th><th>Key Comment</th><th>Response</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>No major servicing, which could lead to fuel and oil spills, will take place on the site.

Water monitoring bores will be installed which will allow for easy water table monitoring.</td></tr>
<tr><td>Groundwater reduction</td><td>Water is abstracted under strict conditions of the RIWI Act groundwater abstraction licence</td></tr>
</table>
</td></tr>
<tr><td>2-04</td><td>Vegetation offsets and mitigation measures do not compensate for the environmental damage of a proposal such as this. Avoidance measures must be adhered to.</td><td>Section 5 (Avoidance)

The report provides a detailed list of mitigation measures that relate to black cockatoos, shorebirds, the Peel-Yalgorup System Ramsar Site and other Measures (Section 5). These mitigation measures include:

Black Cockatoo

• The two trees identified as potential cockatoo nest hollows within the original proposed clearing area will be avoided and removed from the proposed pit area.

• Clearly demarcate black cockatoo habitat to be retained in the project area (i.e. with star pickets, coloured tape and/or bunting).

• Reduce indirect dust impacts on habitat trees through the implementation of the Environmental

Management Plan (Appendix B), including dust management measures outlined in Section 8.6.

• The species composition of revegetation will include a suite of preferred habitat plant species for black cockatoos, including potential foraging, roosting and nesting plants (i.e. Eucalyptus, Banksia and Hakea species).

• Installation of artificial nesting boxes in adjacent undisturbed vegetation

• Revegetation (infill planting) of foraging plant species in adjacent undisturbed vegetation</td></tr>
</table>

Item	Key Comment	Response
		Shorebirds • A buffer of approximately 300m from the nearest shorebird habitat at Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • Reduce potential (although unlikely) indirect impacts to hydrology at Lake Preston through the implementation of a Water Management Plan (Appendix D). • Reduce potential (although unlikely) indirect impacts to the quality of shorebird habitat through the implementation of the Weed Management Plan (Appendix H). **Peel-Yalgorup Systems RAMSAR Site** • A buffer of approximately 300m from Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • No surface water runoff from the working areas will be discharged to the surrounding unaltered landscape, with all stormwater runoff contained in the base of the extraction area. • No fuels, lubricants or other toxic or hazardous chemicals will be stored on site. • The Western Australian Water Quality Protection Guidelines No's 6, 7, 10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. • Continue to adhere to Groundwater Licence conditions for the existing Licence on the site (GWL162560), which has an existing allocation identified for dust suppression of 22,000kl.

Item	Key Comment	Response
		• A Water Management Plan has been prepared for this project, which identifies all the management issues to be implemented, including key management actions listed below (but not limited to): ○ Minimise the risk of unintentional groundwater exposure during excavation through the development and promotion of contingency measures (i.e. if groundwater is exposed operations will cease until pit is refilled to achieve a 2m buffer distance above the water table). ○ Reduce the risk of hydrocarbon spills by refuelling using a mobile refuelling vehicle that is equipped with a "snap-on snap-off, fast-fill and auto shut-off" facility. ○ Reduce the risk of leaks and spills by leaving vehicles almost empty overnight and refuelling each morning ○ Reduce the risk of hydrocarbon spills by servicing vehicle at least 300m from the shore of Lake Preston. This is in accordance with EPBC 2008/3956 conditions: deemed not a controlled action if undertaken in a particular manner for (24th April 2017) - 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Other vehicle servicing related actions include: using a spill mat or drip tray; direct vacuuming of waste fluids to a waste oil tank on the service truck; any waste material captured during servicing will be disposed of at an appropriately licensed waste facility; and spill kits on all service truck(s). ○ Spills will be contained on site, mitigated and recorded. ○ Adhere to conditions required in relevant groundwater abstraction licences. ○ Adhere to the dust management procedures as prescribed in the Environmental Management Plan (Appendix B). ○ Adhere to all other the actions as prescribed in the Water Management Plan (Appendix D).

Item	Key Comment	Response
		○ Adhere to the actions prescribed in the Weed Management Plan (Appendix H). ○ The final rehabilitated land surface will be 5m above the maximum winter high groundwater level. **Other Measures** • Visual inspection of site and access road for dust generation that is moving off site. • All loads covered before leaving the property. • Speed limits on all vehicles entering the site. • Induct all employees and contractors working on site about dust management. • Provide a contact number for dust complaints. • Undertake rehabilitation on completed areas immediately to manage dust. LEC note that there are inconsistencies which have arisen due to cut and paste from various reports written for different purposes over the period of operation of the pit. In order to rectify these, the statement "operations will always be at least 4m above the water table" should be taken as correct and this then means that this will cater for the majority of the base of the pit which has been surveyed as being at 6m AHD. As can be seen from the Figure in 1-07, our calculations show that highest winter water table has a hydraulic gradient below the pit which is from 0.5m AHD in the East to 0.15m AHD in the West. The base of the pit will thus vary between 5.5m and 5.85m above the winter water table. There will be no interaction with groundwater. In order to ensure that water quality is monitored during and after the operation of the proposed pit, it is proposed to install a monitoring bore between the western edge of the pit and the Lake with regular samples being taken and analysed for water quality purposes. The position of the proposed bore is illustrated on the attached Figure (Attachment C).

Item	Key Comment	Response
2-05	The Banksia Woodlands of the Swan Coastal Plain are an endangered TEC under EPBC Act.	There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
2-06	The need to recognise that even degraded native vegetation provides critical habitat linkages across the site. Mature Tuart (TEC) in any condition have extremely high conservation value and must be preserved. Tuarts with hollows are critical habitat for Black Cockatoos, Western Ringtail possum, Phascogale and assist species to persist. Carnaby's Cockatoo on the Swan Coastal Plain primarily feed on Marri, Jarrah, and Banksia and are critical to their breeding survival. These feed trees are all present on the site, thus this vegetation should not be removed.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. None of the Jarrah trees recorded in the disturbance footprint have hollows considered possibly suitable for nesting black cockatoos. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
2-07	Clearing of any native vegetation on this site is not recommended and is strongly opposed, because it increases fragmentation and contributes to increased predation of native wildlife, potentially pushing vulnerable species to extinction Flora and Fauna surveys –Rigorous scientific seasonal survey results have not been provided.	The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, http://lbp.asn.au/module/enviro#map) (Molley et al 2009). The same database also identifies the project area's regional connectivity as part of a 'large, regionally well connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009). Based on available vegetation mapping it is estimated that there is approximately 9,514ha of native vegetation within 10 km of the project area. Remnant native vegetation present within the project area

Item	Key Comment	Response
		(total ~8.3ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos. The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F).
2-08	Lake Preston is an Environmentally Sensitive Area (ESA) and the allocated ESA distance of 200m is inadequate. It is also a Ramsar wetland. The boundary adjacent to Lake Preston shoreline shares fringing vegetation and birdlife (Melaleuca, sedges, grasses etc.) highly valuable conservation assets, habitat critical for survival and persistence of shorebirds.	A clearing permit, granted under section 51E of the Environmental Protection Act 1986 (Purpose Permit number: CPS 8057/1) has been granted (duration 28 May 2020 – 28 May 2030), and as such assessment by DWER has determined the 200m distance setback from the ESA is adequate. The proposed activity is located at a minimum of 300m from the shorebirds habitat. A natural limestone ridge will buffer the shoreline and the mining activities, with mining occurring at the site for over 20 years. No blasting will occur on site and the limestone is considered relatively 'soft', which ensures that extraction requires less force than other locations. All activities will be conducted east of the ridge and noise is not expected to impact shorebirds at Lake Preston.
2-09	The subject land adjoins a Conservation Category Wetland and Ramsar Wetland of the Peel-Yalgorup System, as well as an "Environmentally Sensitive Area, declared in Regulation 6 in Government Gazette No. 115 – 'Environmental Protection (Clearing of Native Vegetation) Regulations 2004' - Department of Water and Environmental Regulation (DWER).	See above re ESA

Item	Key Comment	Response
2-10	Hydrocarbons from the refuelling and repair of machinery have the potential to leach into the groundwater may cause significant risk of contamination to Lake Preston, Ramsar wetland	Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively.

Item	Key Comment	Response
2-11	Lack of systematic method for monitoring and rehabilitation across previously quarried areas of Lots 4 and 5, given the numerous extractive industry licences and associated rehabilitation requirements. The environmental values are likely to be impacted by the continuation of the proposed limestone extraction	As per Section 5.4.4, the following rehabilitation management measures will be implemented: • Adhere to management and mitigation measures as prescribed in the Revegetation Report (Appendix C) • All batters behind the active working face will be contoured to achieve a slope gradient of no more than 1:6. The final rehabilitated pit floor will be at 6m AHD; • Stockpiled topsoil/ overburden will be respread over completed areas; • The pit floor and batters will be ripped to alleviate compaction, improve filtration, attenuate stormwater runoff and facilitate rapid root penetration; • The base of the pit will be seeded with pasture grasses which will be used for cattle grazing; • An area of batter slopes of approximately 13ha will be revegetated using endemic species of local provenance using both direct seeding and planted seedlings. • Rehabilitation work will only be carried out just prior to, or during winter, within 6 months of cessation of extraction activity; • Due to the internally draining nature of the pit, no offsite sedimentation issues are anticipated; and • Stormwater within the pit will continue to infiltrate to the underlying water table. **Maintenance and contingency measures** Revegetation areas will need to be inspected and managed after initial planting/seeding as initial success is often compromised by weeds, feral animals, human activities, fire and drought. Maintenance procedures will be carried out where necessary and may include: • Repair of any erosion damage

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		• Replanting/seeding areas in subsequent years that may not have established • Weed control – weed inspections should be undertaken in autumn, spring and summer by a suitably qualified contractor and appropriate treatment undertaken when required.
2-12	The proposal has the potential to impact on matters of national environmental significance and requested the application be formally referred under the EPBC Act.	The proposed action was referred under the EPBC Act on the 20 February 2020. On April 29, 2019, the proposed action was determined to be a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), based on the following factors: • listed threatened species and communities (s. 18 and 18A); • listed migratory species (s. 20 and 20A); and • the ecological character of a declared Ramsar wetland (s. 16 and 17B). It determined that the proposed action will be assessed by Preliminary Documentation. The information required for the Preliminary Documentation, as requested by the Department of Agriculture, Water and the Environment (DAWE) (formally Department of the Environment and Energy, DoEE) (EPBC Ref 2019/8388, 24 June 2019) is provided in Appendix A1. Following the submission of preliminary documents in August 2019, further information was requested (on September 26, 2019) and is provided in Appendix A2. This further information requested has been added to this document. A further request for more information was made by DAWE on February 7, 2020 (Appendix A3), to which a response was provided March 4, 2020.
2-13	Conclusion The proposal represents the removal of 13.5ha of vegetation that forms part of the Tuart TEC and possibly forms part of the Banksia TEC, both of which are protected under the EPBC Act, and is in close	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands.

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	proximity to an ESA also protected under the EPBC Act.	There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
Greg Della		
3-01	Negative impacts including noise, dust and visual, on the amenity of land west of Lake Preston.	Noise, dust and visual amenity impacts have all been assessed as part of the EPBC Act approval process. Noise emissions (Section 4.3.4), dust emissions 4.3.3 (Visual amenity (4.3.13). Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. The dust and wind rose results suggest that dust emissions are not impacting sensitive environments west of the project area at Lake Preston and shore bird habitat. The EPA guidance "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). There are no dust sensitive premises located within 1km of the proposed operations, except for the landowner's premises. The landowner's residence is screened from the extraction area by a belt of native vegetation and the landowner has no objections to the proposed operations. The proposed extraction activities will create some operational noise, the majority of which will be generated by bulldozers, screening, loaders and haulage trucks. This noise is expected to be localised and create minimal nuisance beyond the boundary of the extraction area. The EPA environmental assessment guideline "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). The nearest noise sensitive premise is a residence owned by the

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		landowner, located approximately 240m to the west of the proposed extraction operations. No other residences are located within 1km of the proposed activity. A vegetation buffer exists between the landowner's residence and the extraction area. During previous quarrying on the property no noise issues were recorded. No offsite noise impacts are anticipated due to the surrounding vegetation and distance to residential areas. The proposed extraction is unlikely to create a visual impact due to remnant topography on either side of the proposed extraction area, and the natural undulation of the landscape. The nearest residence is owned by the landowner who has no objections to the proposed extraction operations. The nearest main road, Forrest Highway, is located approximately 2.5km east of the proposed extraction area. There is an existing 40m buffer zone of native vegetation between Ludlow Road and extraction activities on the property. Since the extraction area is well screened by existing vegetation on the property and on neighboring properties, no visual impact will occur. Previous extraction activities at the site have not resulted in any significant visual impact. No visual impacts are therefore anticipated.
3-02	Negative impacts on groundwater, especially risks to 'soaks' through disturbance of the groundwater.	Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapotranspiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow

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		system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. No dewatering activities will be undertaken. No groundwater will be exposed by this development since the final land surface will be 6m AHD, which is well above the maximum winter high groundwater table, and is in keeping with the DoW recommended minimum separation depth of 300mm between the base of the pit and the likely maximum season groundwater level (Groundwater Management Plan).
3-03	The fauna studies 'low level density survey' is thought to be insufficient as there is an abundance of endemic wildlife and the proposal will have a negative direct and indirect impact on native wildlife within and around the extraction area.	The scope of works was to conduct a Level 1 fauna survey as defined by the EPA (EPA 2016). Because the general area is known to be utilised by black cockatoos and western ringtail possums, the scope of the survey work was expanded to include a baseline assessment of the site's significance to these species as well. The fauna assessment has therefore included: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines); • Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat); • Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals); • An assessment of the likelihood of occurrence of any other significant fauna species and their habitat; and • Report summarising results, methods and conclusions. Detailed description of the methods and results of the surveys in the Matters of National Environmental significance (terrestrial fauna) is proved in Section 2.2. A general summary of the species found is provided below: ○ No evidence of black cockatoo roosting within trees located within the project area was observed. ○ No evidence of western ringtail possums using the project area was found during the day or night surveys (i.e. no fresh dreys, no scats and no individuals).

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		○ Six fauna recorded from motion careras (western grey kangaroo, *Macropus fuliginosus*; common brushtail possum, *Trichosurus vulpecula*; Australian magpie, *Cracticus tibicen*; Australia raven, *Corvus coronoides*; red fox, *Vulpes vulpes*; rabbit, *Oryctolagus cuniculus*). The habitat assessment and other observations made during the field reconnaissance survey does suggest that some fauna species of conservation significance are likely to persist in the general area. The total size of the project area is relatively small and therefore any fauna species present are only likely to be represented by a small number of individuals at any one time. A summary of those species considered likely to be present is provided in Table 8 of the report.
3-04	Vegetation offsets and mitigation measures do not compensate for the environmental damage of a proposal such as this. Avoidance measures must be adhered to.	Section 5 (Avoidance) The report provides a detailed list of mitigation measures that relate to black cockatoos, shorebirds, the Peel-Yalgorup System Ramsar Site and other Measures (Section 5). These mitigatyions measures include: **Carnaby's Black Cockatoo** • The two trees identified as potential cockatoo nest hollows within the original proposed clearing area will be avoided and removed from the proposed pit area. • Clearly demarcate black Cockatoo habitat to be retained in the project area (i.e. with star pickets, coloured tape and/or bunting). • Reduce indirect dust impacts on habitat trees through the implementation of the Environmental Management Plan (Appendix B), including dust management measures outlined in Section 8.6. • The species composition of revegetation will include a suite of preferred habitat plant species for black cockatoos, including potential foraging, roosting and nesting plants (i.e. Eucalyptus, Banksia and Hakea species). • Installation of artificial nesting boxes in adjacent undisturbed vegetation. • Revegetation (infill planting) of foraging plant species in adjacent undisturbed vegetation.

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		Shorebirds • A buffer of approximately 300m from the nearest shorebird habitat at Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • Reduce potential (although unlikely) indirect impacts to hydrology at Lake Preston through the implementation of a Water Management Plan (Appendix D). • Reduce potential (although unlikely) indirect impacts to the quality of shorebird habitat through the implementation of the Weed Management Plan (Appendix H). • Peel-Yalgorup Systems RAMSAR Site. • A buffer of approximately 300m from Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • No surface water runoff from the working areas will be discharged to the surrounding unaltered landscape, with all stormwater runoff contained in the base of the extraction area. • No fuels, lubricants or other toxic or hazardous chemicals will be stored on site. • The Western Australian Water Quality Protection Guidelines No's 6, 7, 10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. • Continue to adhere to Groundwater Licence conditions for the existing Licence on the site (GWL162560), which has an existing allocation identified for dust suppression of 22,000kl.

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		• A Water Management Plan has been prepared for this project, which identifies all the management issues to be implemented, including key management actions listed below (but not limited to): ○ Minimise the risk of unintentional groundwater exposure during excavation through the development and promotion of contingency measures (i.e. if groundwater is exposed operations will cease until pit is refilled to achieve a 2m buffer distance above the water table). ○ Reduce the risk of hydrocarbon spills by refuelling using a mobile refuelling vehicle that is equipped with a "snap-on snap-off, fast-fill and auto shut-off" facility. ○ Reduce the risk of leaks and spills by leaving vehicles almost empty overnight and refuelling each morning ○ Reduce the risk of hydrocarbon spills by servicing vehicle at least 300m from the shore of Lake Preston. This is in accordance with EPBC 2008/3956 conditions: deemed not a controlled action if undertaken in a particular manner for (24th April 2017) - 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Other vehicle servicing related actions include: using a spill mat or drip tray; direct vacuuming of waste fluids to a waste oil tank on the service truck; any waste material captured during servicing will be disposed of at an appropriately licensed waste facility; and spill kits on all service truck(s). ○ Spills will be contained on site, mitigated and recorded. ○ Adhere to conditions required in relevant groundwater abstraction licences. ○ Adhere to the dust management procedures as prescribed in the Environmental Management Plan (Appendix B). ○ Adhere to all other the actions as prescribed in the Water Management Plan (Appendix D).

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		○ Adhere to the actions prescribed in the Weed Management Plan (Appendix H). ○ The final rehabilitated land surface will be 5m above the maximum winter high groundwater level. **Other Measures** • Visual inspection of site and access road for dust generation that is moving off site. • All loads covered before leaving the property. • Speed limits on all vehicles entering the site. • Induct all employees and contractors working on site about dust management. • Provide a contact number for dust complaints. • Undertake rehabilitation on completed areas immediately to manage dust.
3-05	The Banksia Woodlands of the Swan Coastal Plain are an endangered TEC under EPBC Act.	There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
3-06	The need to recognise that even degraded native vegetation provides critical habitat linkages across the site. Mature Tuarts(TEC) in any condition have extremely high conservation value and must be preserved. Tuarts with hollows are critical habitat for Black Cockatoos, Western Ringtail possum, Phascogale and assist species to persist. Carnaby's Cockatoo on the Swan Coastal Plain primarily feed on Marri, Jarrah, and Banksia and are critical to their breeding survival.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.

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	These feed trees are all present on the site, thus this vegetation should not be removed.	
3-07	Clearing of any native vegetation on this site is not recommended and is strongly opposed, because it increases fragmentation and contributes to increased predation of native wildlife, potentially pushing vulnerable species to extinction Flora and Fauna surveys – Rigorous scientific seasonal survey results have not been provided.	The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, http://lbp.asn.au/module/enviro#map) (Molley et al 2009). The same database also identifies the project area's regional connectivity as part of a 'large, regionally well connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009). Based on available vegetation mapping it is estimated that there is approximately 9,514ha of native vegetation within 10 km of the project area. Remnant native vegetation present within the project area (total ~8.3ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos. The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F).
3-08	Lake Preston is an Environmentally Sensitive Area (ESA) and the allocated ESA distance of 200m is inadequate. It is also a Ramsar wetland. The boundary adjacent to Lake Preston shoreline shares fringing vegetation and birdlife (Melaleuca, sedges, grasses etc.)	A clearing permit, granted under section 51E of the Environmental Protection Act 1986 (Purpose Permit number: CPS 8057/1) has been granted (duration 28 May 2020 – 28 May 2030), and as such assessment by DWER has determined the 200m distance setback from the ESA is adequate.

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	highly valuable conservation assets, habitat critical for survival and persistence of shorebirds.	The proposed activity is located at a minimum of 300m from the shorebirds habitat. A natural limestone ridge will buffer the shoreline and the mining activities, with mining occurring at the site for over 20 years. No blasting will occur on site and the limestone is considered relatively 'soft', which ensures that extraction requires less force than other locations. All activities will be conducted east of the ridge and noise is not expected to impact shorebirds at Lake Preston. Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again.
3-09	The subject land adjoins a Conservation Category Wetland and Ramsar Wetland of the Peel-Yalgorup System, as well as an "Environmentally Sensitive Area, declared in Regulation 6 in Government Gazette No. 115 – 'Environmental Protection (Clearing of Native Vegetation) Regulations 2004' - Department of Water and Environmental Regulation (DWER).	See above re ESA
3-10	Hydrocarbons from the refuelling and repair of machinery have the potential to leach into the groundwater may cause significant risk of contamination to Lake Preston, Ramsar wetland	Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight.

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		No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively.
3-11	Lack of systematic method for monitoring and rehabilitation across previously quarried areas of Lots 4 and 5, given the numerous extractive industry licences and associated rehabilitation requirements. The environmental values are likely to be impacted by the continuation of the proposed limestone extraction	As per Section 5.4.4, the following rehabilitation management measures will be implemented: • Adhere to management and mitigation measures as prescribed in the Revegetation Report (Appendix C) • All batters behind the active working face will be contoured to achieve a slope gradient of no more than 1:6. The final rehabilitated pit floor will be at 6m AHD; • Stockpiled topsoil/ overburden will be respread over completed areas;

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		• The pit floor and batters will be ripped to alleviate compaction, improve filtration, attenuate stormwater runoff and facilitate rapid root penetration; • The base of the pit will be seeded with pasture grasses which will be used for cattle grazing; • An area of batter slopes of approximately 13ha will be revegetated using endemic species of local provenance using both direct seeding and planted seedlings. • Rehabilitation work will only be carried out just prior to, or during winter, within 6 months of cessation of extraction activity; • Due to the internally draining nature of the pit, no offsite sedimentation issues are anticipated; and • Stormwater within the pit will continue to infiltrate to the underlying water table. **Maintenance and contingency measures** Revegetation areas will need to be inspected and managed after initial planting/seeding as initial success is often compromised by weeds, feral animals, human activities, fire and drought. Maintenance procedures will be carried out where necessary and may include: • Repair of any erosion damage. • Replanting/seeding areas in subsequent years that may not have established. • Weed control – weed inspections should be undertaken in autumn, spring and summer by a suitably qualified contractor and appropriate treatment undertaken when required.
3-12	The proposal has the potential to impact on matters of national environmental significance and requested the application be formally referred under the EPBC Act.	The proposed action was referred under the EPBC Act on the 20 February 2020. On April 29, 2019, the proposed action was determined to be a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), based on the following factors:

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		• listed threatened species and communities (s. 18 and 18A), • listed migratory species (s. 20 and 20A) and • the ecological character of a declared Ramsar wetland (s. 16 and 17B). It determined that the proposed action will be assessed by Preliminary Documentation. The information required for the Preliminary Documentation, as requested by the Department of Agriculture, Water and the Environment (DAWE) (formally Department of the Environment and Energy, DoEE) (EPBC Ref 2019/8388, 24 June 2019) is provided in Appendix A1. Following the submission of preliminary documents in August 2019, further information was requested (on September 26, 2019) and is provided in Appendix A2. This further information requested has been added to this document. A further request for more information was made by DAWE on February 7, 2020 (Appendix A3), to which a response was provided March 4, 2020.
3-13	The proposal represents the removal of 13.5ha of vegetation that forms part of the Tuart TEC and possibly forms part of the Banksia TEC, both of which are protected under the EPBC Act, and is in close proximity to an ESA also protected under the EPBC Act	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
Sue Kalab		
4-01	There must be no clearing of any Tuart trees on this site.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to

Item	Key Comment	Response
		be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands.
4-02	It is also important to note that the vegetation mix onsite is maintaining soil salinity, and once the site is cleared, the potential that this will mobilize therefore altering groundwater chemistry, impacting hydrology of Lake Preston as part of the Ramsar management agreement.	As per Section 4.3.10, a description of the impact assessment of groundwater at the site, considering the larger scale environmental fluxes such as Lake evapo-transpiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. The following points provide an assessment of groundwater impact associated with vegetation clearing: • There are approximately 160 trees within the clearing area, of which 25 have a girth of 50cm or greater (Harewood, G. 2019). It is estimated that a mature Eucalypt (eg tuart) tree transpires at an average of 0.05Ml per year (Dept Primary Industries Victoria, 1999). This means that 160 tuarts transpire a total of 160 x 0.05= 8Ml per year (broad estimate). The closest rainfall station (Bunbury) has a mean annual rainfall of 870mm. It has been estimated by the Department of Water (Kearn. A, 1998) that the annual groundwater recharge from rainfall is 30%. Since the trees occupy an area of 13ha, the amount of recharge to the aquifer from rainfall is therefore 30% x 870mm x 13ha = 27Ml. • The groundwater throughflow calculated for the Lake Preston flow system is 10,500Ml per annum calculated over the 22km length of the 2m groundwater contour (Commander D. P. 1988). Since the width of the property over which the trees are situated is 629m, this means that the extrapolated throughflow at this point is 629/22000 x 10,500Ml = 320Ml (assuming the same general aquifer parameters apply). Thus, the transpiration from the trees represents 2.5% of the throughflow across the width of the property. Taking the direct recharge from rainfall into account as well, the likely impact of clearing 8ha on the water table is very low. • The owner of the property has a licence to pump 420Ml per year for irrigation (although he does not use the full allocation). This represents 130% of the throughflow estimated in 2 above.

Item	Key Comment	Response
		• A cross section through the property is illustrated in Figure 5 and Figure 6 and the elevation of the water table has been taken from the closest Department of Water monitoring bores as explained in the Water Management Plan in Appendix D. • There is a general pattern of declining water table and a downward trend in Lake water levels. These declining water levels are illustrated in the hydrographs for monitoring bores E1B and E2B (contained in Appendix D). This has been ascribed to declining rainfall over the past 30 years as well as increased groundwater abstraction (Rockwater 2009). Modelling indicates that a declining trend will continue in the South West of Western Australia into the foreseeable future (Australian Government, Dept of Climate Change and Energy Efficiency, 2012). This is likely to further impact the salinity increases within the Lake very significantly. • Lake Preston is a groundwater sink and, other than direct rainfall, receives all its freshwater from shallow aquifers to the west and east of its shores. It has been estimated the water inputs to Lake Preston are 64% from direct rainfall, 29% from the eastern shoreline inflows and 7% from western shoreline inflows (Whitehead, M. 2012). • The geological evolution of the Lake, being cut off from the ocean by a barrier dune, has given rise to hyper salinity with a steep salinity gradient between the surface and the underlying hyper saline water. Baseline calculations of the Lake water budget illustrate that the Lake's salinity is increasing due to evapo-concentration (Commander, 1988). Subsequent reviews of this water budget indicate that recent climate change will further increase the rate at which this evapo-concentration is occurring (Noble, C. 2010) (Whitehead, M. 2012). • The environmental values of the Ramsar site are associated largely with the quality of the water that occurs on the surface of the Lake, since it is in this zone that the food organisms live that the migrating birds feed on. Significant changes to the water quality at the surface can alter the productivity of these food organisms and thus impact the numbers of birds that visit the area (Whitehead, M. 2012).

Item	Key Comment	Response
		• In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed.
4-03	Water quality must be maintained - avoiding contamination is part of the criteria.	The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, maintained and spills recorded.

Item	Key Comment	Response
		The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively.
4-04	This is my main objection - the expanded extraction pit moving in a westerly direction is closer to Lake Preston, and poses a greater risk of significant impact to the Lake's fringing vegetation, which is habitat for wetland species and to food source for international migratory birds - Lake Preston provides a critical food supply for migratory birds to enable their long flight to breeding grounds of Asia. There can be no offset for destruction of Ramsar wetlands	The western boundary of the site is approximately 300m from the shoreline of Lake Preston and is separated by the wetland by a limestone ridge. The proposed action area contains no habitat suitable for any of the listed threatened/migratory shorebird species to utilise and none would ever occur under normal circumstances. The propose action area mainly contains a low woodland of limestone marlock (*Eucalyptus decipiens*) over scattered shrubs and bare limestone. The eucalyptus woodland habitat is totally unsuitable for the shorebirds in question and therefore none are considered as likely to occur (Harewood 2019).
Tony France		
5-01	Any pollution at any part of the lake would in time adversely affect the entire lake's water composition	As per Section 4.3.11, the limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight.

Item	Key Comment	Response
		No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively. As per section 5.3 of the report, the Peel-Yalgorup Systems RAMSAR Site will not be impacted by the proposed action based on the following management measures: • A buffer of approximately 300m from Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • No surface water runoff from the working areas will be discharged to the surrounding unaltered landscape, with all stormwater runoff contained in the base of the extraction area.

Item	Key Comment	Response
		• No fuels, lubricants or other toxic or hazardous chemicals will be stored on site. • The Western Australian Water Quality Protection Guidelines No's 6, 7, 10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. • Continue to adhere to Groundwater Licence conditions for the existing Licence on the site (GWL162560), which has an existing allocation identified for dust suppression of 22,000kl. • A Water Management Plan has been prepared for this project, which identifies all the management issues to be implemented, including key management actions listed below (but not limited to): o Minimise the risk of unintentional groundwater exposure during excavation through the development and promotion of contingency measures (i.e. if groundwater is exposed operations will cease until pit is refilled to achieve a 2m buffer distance above the water table). o Reduce the risk of hydrocarbon spills by refuelling using a mobile refuelling vehicle that is equipped with a "snap-on snap-off, fast-fill and auto shut-off" facility. o Reduce the risk of leaks and spills by leaving vehicles almost empty overnight and refuelling each morning. o Reduce the risk of hydrocarbon spills by servicing vehicle at least 300m from the shore of Lake Preston. This is in accordance with EPBC 2008/3956 conditions: deemed not a controlled action if undertaken in a particular manner for (24th April 2017) - 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Other vehicle servicing related actions include: using a spill mat or drip tray; direct vacuuming of waste fluids to a waste oil tank on the service truck; any waste material captured during servicing will be disposed of at an appropriately licensed waste facility; and spill kits on all service truck(s).

Item	Key Comment	Response
		○ Spills will be contained on site, mitigated and recorded. ○ Adhere to conditions required in relevant groundwater abstraction licences. ○ Adhere to the dust management procedures as prescribed in the Environmental Management Plan (Appendix B). ○ Adhere to all other the actions as prescribed in the Water Management Plan (Appendix D). ○ Adhere to the actions prescribed in the Weed Management Plan (Appendix H). ○ The final rehabilitated land surface will be 5m above the maximum winter high groundwater level.
5-02	Much Tuart has already been lost to approved developments, commonly because respective Shire Councils considered each land-clearing planning application in isolation. The result has created incremental Tuart losses that have had a hugely accumulative adverse impact over time.	Agree. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. *Eucalyptus decipiens* are widely distributed throughout the south west, occurring in the Avon Wheatbelt, Esperance Plains, Geraldton Sandplains, Jarrah Forest and Swan Coastal Plain IBRA bio-regions. *Melaleuca systena* are widely distributed throughout the coastal south west, occurring Geraldton Sandplains, Jarrah Forest, Swan Coastal Plain, Warren IBRA bio-regions.
Suzanne Sloan		
6-01	Negative impacts including noise, dust and visual, on the amenity of land west of Lake Preston.	• Noise, dust and visual amenity impacts have all been assessed as part of the EPBC Act approval process. Noise emissions (Section 4.3.4), dust emissions 4.3.3 (Visual amenity (4.3.13). The dust and wind rose results suggest that dust emissions are not impacting sensitive environments west of the project area at Lake Preston and shorebird habitat. The EPA guidance "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015).

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		There are no dust sensitive premises located within 1km of the proposed operations, except for the landowner's premises. The landowner's residence is screened from the extraction area by a belt of native vegetation and the landowner has no objections to the proposed operations. The proposed extraction activities will create some operational noise, the majority of which will be generated by bulldozers, screening, loaders and haulage trucks. This noise is expected to be localised and create minimal nuisance beyond the boundary of the extraction area. The nearest noise sensitive premise is a residence owned by the landowner, located approximately 240m to the west of the proposed extraction operations. No other residences are located within 1km of the proposed activity. A vegetation buffer exists between the landowner's residence and the extraction area. During previous quarrying on the property no noise issues were recorded. No offsite noise impacts are anticipated due to the surrounding vegetation and distance to residential areas. The proposed extraction is unlikely to create a visual impact due to remnant topography on either side of the proposed extraction area, and the natural undulation of the landscape. The nearest residence is owned by the landowner who has no objections to the proposed extraction operations. The nearest main road, Forrest Highway, is located approximately 2.5km east of the proposed extraction area. Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There is an existing 40m buffer zone of native vegetation between Ludlow Road and extraction activities on the property. Since the extraction area is well screened by existing vegetation on the property and on neighbouring properties, no visual impact will occur. Previous extraction activities at the site have not resulted in any significant visual impact. No visual impacts are therefore anticipated.

Item	Key Comment	Response
6-02	Negative impacts on groundwater, especially risks to 'soaks' through disturbance of the groundwater	Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapo-transpiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. • In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. • The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. • No dewatering activities will be undertaken. No groundwater will be exposed by this development since the final land surface will be 6m AHD, which is well above the maximum winter high groundwater table, and is in keeping with the DoW recommended minimum separation depth of 300mm between the base of the pit and the likely maximum season groundwater level (Groundwater Management Plan).
6-03	The fauna studies 'low level density survey' is thought to be insufficient as there is an abundance of endemic wildlife and the proposal will have a negative direct and indirect impact on native wildlife within and around the extraction area.	• The scope of works was to conduct a Level 1 fauna survey as defined by the EPA (EPA 2016). Because the general area is known to be utilised by black cockatoos and western ringtail possums, the scope of the survey work was expanded to include a baseline assessment of the site's significance to these species as well. The fauna assessment has therefore included: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines);

Item	Key Comment	Response
		• Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat); • Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals); • An assessment of the likelihood of occurrence of any other significant fauna species and their habitat; and • Report summarising results, methods and conclusions. Detailed description of the methods and results of the surveys in the Matters of National Environmental significance (terrestrial fauna) is proved in Section 2.2. A general summary of the species found is provided below: • No evidence of black cockatoo roosting within trees located within the project area was observed. • No evidence of western ringtail possums using the project area was found during the day or night surveys (i.e. no fresh dreys, no scats and no individuals). • Six fauna recorded from motion careras (western grey kangaroo, *Macropus fuliginosus*; common brushtail possum, *Trichosurus vulpecula*; Australian magpie, *Cracticus tibicen*; Australia raven, *Corvus coronoides*; red fox, *Vulpes vulpes*; rabbit, *Oryctolagus cuniculus*). • The habitat assessment and other observations made during the field reconnaissance survey does suggest that some fauna species of conservation significance are likely to persist in the general area. The total size of the project area is relatively small and therefore any fauna species present are only likely to be represented by a small number of individuals at any one time. A summary of those species considered likely to be present is provided in Table 8 of the report.
6-04	Vegetation offsets and mitigation measures do not compensate for the environmental	Section 5 (Avoidance)

Item	Key Comment	Response
	damage of a proposal such as this. Avoidance measures must be adhered to.	The report provides a detailed list of mitigation measures that relate to black cockatoos, shorebirds, the Peel-Yalgorup System Ramsar Site and other Measures (Section 5). These mitigations measures include: **Black Cockatoo** • The two trees identified as potential cockatoo nest hollows within the original proposed clearing area will be avoided and removed from the proposed pit area. • Clearly demarcate black cockatoo habitat to be retained in the project area (i.e. with star pickets, coloured tape and/or bunting). • Reduce indirect dust impacts on habitat trees through the implementation of the Environmental • Management Plan (Appendix B), including dust management measures outlined in Section 8.6. • The species composition of revegetation will include a suite of preferred habitat plant species for black cockatoos, including potential foraging, roosting and nesting plants (i.e. Eucalyptus, Banksia and Hakea species). • Installation of artificial nesting boxes in adjacent undisturbed vegetation. • Revegetation (infill planting) of foraging plant species in adjacent undisturbed vegetation. **Shorebirds** • A buffer of approximately 300m from the nearest shorebird habitat at Lake Preston will be maintained throughout the operational life of the extraction activities. • No dewatering activities will be undertaken. • Reduce potential (although unlikely) indirect impacts to hydrology at Lake Preston through the implementation of a Water Management Plan (Appendix D).

Item	Key Comment	Response

		• Reduce potential (although unlikely) indirect impacts to the quality of shorebird habitat through the implementation of the Weed Management Plan (Appendix H).
		
		Peel-Yalgorup Systems RAMSAR Site
		
		• A buffer of approximately 300m from Lake Preston will be maintained throughout the operational life of the extraction activities.
		
		• No dewatering activities will be undertaken.
		
		• No surface water runoff from the working areas will be discharged to the surrounding unaltered landscape, with all stormwater runoff contained in the base of the extraction area.
		
		• No fuels, lubricants or other toxic or hazardous chemicals will be stored on site.
		
		• The Western Australian Water Quality Protection Guidelines No's 6, 7, 10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland.
		
		• Continue to adhere to Groundwater Licence conditions for the existing Licence on the site (GWL162560), which has an existing allocation identified for dust suppression of 22,000kl.
		
		• A Water Management Plan has been prepared for this project, which identifies all the management issues to be implemented, including key management actions listed below (but not limited to):
		
		  ○ Minimise the risk of unintentional groundwater exposure during excavation through the development and promotion of contingency measures (i.e. if groundwater is exposed operations will cease until pit is refilled to achieve a 2m buffer distance above the water table).
		
		  ○ Reduce the risk of hydrocarbon spills by refuelling using a mobile refuelling vehicle that is equipped with a "snap-on snap-off, fast-fill and auto shut-off" facility.

Item	Key Comment	Response
		○ Reduce the risk of leaks and spills by leaving vehicles almost empty overnight and refuelling each morning ○ Reduce the risk of hydrocarbon spills by servicing vehicle at least 300m from the shore of Lake Preston. This is in accordance with EPBC 2008/3956 conditions: deemed not a controlled action if undertaken in a particular manner for (24th April 2017) - 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Other vehicle servicing related actions include: using a spill mat or drip tray; direct vacuuming of waste fluids to a waste oil tank on the service truck; any waste material captured during servicing will be disposed of at an appropriately licensed waste facility; and spill kits on all service truck(s). ○ Spill will be contained on site, mitigated and recorded. ○ Adhere to conditions required in relevant groundwater abstraction licences. ○ Adhere to the dust management procedures as prescribed in the Environmental Management Plan (Appendix B). ○ Adhere to all other the actions as prescribed in the Water Management Plan (Appendix D). ○ Adhere to the actions prescribed in the Weed Management Plan (Appendix H). ○ The final rehabilitated land surface will be 5m above the maximum winter high groundwater level. **Other Measures** • Visual inspection of site and access road for dust generation that is moving off site. • All loads covered before leaving the property. • Speed limits on all vehicles entering the site.

Item	Key Comment	Response
		• Induct all employees and contractors working on site about dust management. • Provide a contact number for dust complaints. • Undertake rehabilitation on completed areas immediately to manage dust.
6-05	The Banksia Woodlands of the Swan Coastal Plain are an endangered TEC under EPBC Act.	There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
6-06	The need to recognise that even degraded native vegetation provides critical habitat linkages across the site. Mature Tuarts (TEC) in any condition have extremely high conservation value and must be preserved. Tuarts with hollows are critical habitat for Black Cockatoos, Western Ringtail possum, Phascogale and assist species to persist. Carnaby's Cockatoo on the Swan Coastal Plain primarily feed on Marri, Jarrah, and Banksia and are critical to their breeding survival. These feed trees are all present on the site, thus this vegetation should not be removed.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. None of the Jarrah trees recorded in the disturbance footprint have hollows considered possibly suitable for nesting black cockatoos. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
6-07	Clearing of any native vegetation on this site is not recommended and is strongly opposed, because it increases fragmentation and contributes to increased predation of native wildlife, potentially pushing vulnerable species to extinction Flora and Fauna surveys — Rigorous scientific seasonal survey results have not been provided.	• The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, http://lbp.asn.au/module/enviro#map) (Molley et al 2009). • The same database also identifies the project area's regional connectivity as part of a 'large, regionally well connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009).

Item	Key Comment	Response
		• Based on available vegetation mapping it is estimated that there is approximately 9,514 ha of native vegetation within 10km of the project area. Remnant native vegetation present within the project area (total ~8.3ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos. • The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. • Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F).
6-08	Lake Preston is an Environmentally Sensitive Area (ESA) and the allocated ESA distance of 200m is inadequate. It is also a Ramsar wetland. The boundary adjacent to Lake Preston shoreline shares fringing vegetation and birdlife (Melaleuca, sedges, grasses etc.) highly valuable conservation assets, habitat critical for survival and persistence of shorebirds.	A clearing permit, granted under section 51E of the Environmental Protection Act 1986 (Purpose Permit number: CPS 8057/1) has been granted (duration 28 May 2020 – 28 May 2030), and as such assessment by DWER has determined the 200m distance setback from the ESA is adequate. The proposed activity is located at a minimum of 300m from the shorebirds habitat. A natural limestone ridge will buffer the shoreline and the mining activities, with mining occurring at the site for over 20 years. No blasting will occur on site and the limestone is considered relatively 'soft', which ensures that extraction requires less force than other locations. All activities will be conducted east of the ridge and noise is not expected to impact shorebirds at Lake Preston.
6-09	The subject land adjoins a Conservation Category Wetland and Ramsar Wetland of the Peel-Yalgorup System, as well as an "Environmentally Sensitive Area, declared in Regulation 6 in Government Gazette No. 115	See above re ESA

Item	Key Comment	Response
	— 'Environmental Protection (Clearing of Native Vegetation) Regulations 2004' - Department of Water and Environmental Regulation (DWER).	
6-10	Hydrocarbons from the refuelling and repair of machinery have the potential to leach into the groundwater may cause significant risk of contamination to Lake Preston, Ramsar wetland	• Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. • There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. • Plant will be refuelled each morning, leaving the vehicles almost empty overnight. • No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded.

Item	Key Comment	Response
		• The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. • Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively.
6-11	Lack of systematic method for monitoring and rehabilitation across previously quarried areas of Lots 4 and 5, given the numerous extractive industry licences and associated rehabilitation requirements. The environmental values are likely to be impacted by the continuation of the proposed limestone extraction	As per Section 5.4.4, the following rehabilitation management measures will be implemented: • Adhere to management and mitigation measures as prescribed in the Revegetation Report (Appendix C); • All batters behind the active working face will be contoured to achieve a slope gradient of no more than 1:6. The final rehabilitated pit floor will be at 6m AHD; • Stockpiled topsoil/ overburden will be respread over completed areas; • The pit floor and batters will be ripped to alleviate compaction, improve filtration, attenuate stormwater runoff and facilitate rapid root penetration; • The base of the pit will be seeded with pasture grasses which will be used for cattle grazing; • An area of batter slopes of approximately 13ha will be revegetated using endemic species of local provenance using both direct seeding and planted seedlings. • Rehabilitation work will only be carried out just prior to, or during winter, within 6 months of cessation of extraction activity; • Due to the internally draining nature of the pit, no offsite sedimentation issues are anticipated; and

Item	Key Comment	Response
		• Stormwater within the pit will continue to infiltrate to the underlying water table. **Maintenance and contingency measures** Revegetation areas will need to be inspected and managed after initial planting/seeding as initial success is often compromised by weeds, feral animals, human activities, fire and drought. Maintenance procedures will be carried out where necessary and may include: • Repair of any erosion damage. • Replanting/seeding areas in subsequent years that may not have established. • Weed control – weed inspections should be undertaken in autumn, spring and summer by a suitably qualified contractor and appropriate treatment undertaken when required.
6-12	The proposal has the potential to impact on matters of national environmental significance and requested the application be formally referred under the EPBC Act.	The proposed action was referred under the EPBC Act on the 20 February 2020. On April 29, 2019, the proposed action was determined to be a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), based on the following factors: • listed threatened species and communities (s. 18 and 18A), • listed migratory species (s. 20 and 20A), and • the ecological character of a declared Ramsar wetland (s. 16 and 17B). It determined that the proposed action will be assessed by Preliminary Documentation. The information required for the Preliminary Documentation, as requested by the Department of Agriculture, Water and the Environment (DAWE) (formally Department of the Environment and Energy, DoEE) (EPBC Ref 2019/8388, 24 June 2019) is provided in Appendix A1.

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		Following the submission of preliminary documents in August 2019, further information was requested (on September 26, 2019) and is provided in Appendix A2. This further information requested has been added to this document. A further request for more information was made by DAWE on February 7, 2020 (Appendix A3), to which a response was provided March 4, 2020.
6-13	The proposal represents the removal of 13.5ha of vegetation that forms part of the Tuart TEC and possibly forms part of the Banksia TEC, both of which are protected under the EPBC Act, and is in close proximity to an ESA also protected under the EPBC Act	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
Mark and Jenny Callaghan		
7-01	Weed propagation One of our concerns is the propagation of weeds due to disturbance of soil. The lake edge on the western side is already under threat from declared weeds (predominantly Narrow Leaf Cotton Bush), presumably with seed blown from the eastern side. Any further soil disturbance with a narrowed buffer to the lake is likely to increase this problem. As people familiar with the area, we are disappointed with the lack of action on this issue by the body responsible for the RAMSAR	As described in Section 4.3.6, a Weed Management Plan (Appendix H to the report) have been developed. Three habitat types were identified during field Surveys (Harewood 2019, Appendix G), all of which contained weeds are in a degraded condition following decades of cattle grazing. Two weed species present on the property, *Gomphocarpus fruiticosus* (Cotton Bush) and *Solanaum linneanum* (Apple of Sodom) are declared under the Biosecurity and Agriculture Management Act 2007 and require control methods associated with them (DAF 2014), as outlined in the Weed Management Plan (Appendix H). Existing approvals stipulate that Catalano comply with the endorsed Weed Management Plan as described in Appendix H.

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	wetland (DPaW). This may be due to lack of resources. We have implemented extensive control measures on our property, but remain daunted by weeds encroaching from the National Park and from the east side of the lake. Any additional drivers of weed propagation should be avoided.	A Weed Management Plan has been developed for the project (Appendix H), which will ensure that weeds are not introduced and/or spread to adjacent vegetation. The management plan includes procedures such as machinery/vehicle clean down, weed treatments and restrictions on vehicle/machinery movements. Development of topsoil management procedures in the Revegetation Report (Appendix C) will also ensure topsoil health for re-use and to mitigate the risk of introducing weeds into the Proposal Area and surrounds. The management plan will include the development and implementation of a system to allow for traceability of disposed weed infested topsoil, predetermined stockpile locations and instructions on topsoil management procedures. The project is not expected to exacerbate the threat of weeds on shorebird habitat. The shorebird habitat is at least 300m from the project and no vehicles or staff from the project area will access Lake Preston from the project area. Hygiene management procedures, described in the Environmental Management Plan (Appendix B), the Revegetation Plan (Appendix C) and the Weed Management Plan (Appendix H), will be implemented for construction and operation of the project to minimise risk of the impact of spread of weeds. As per section 5.4.5 of the document, weed management measures are based on management actions prescribed in the Weed Management Plan (Appendix H), including key actions provided in the following subheadings. **Weed Management Zones** • Zone A: This is all the land within the active extraction area and includes the base of the excavation, roadways and stockpiles of topsoil, overburden and all product stockpiles. • Zone B: This is all land that is at natural level and which extends 100 meters beyond the perimeter of the active extraction areas and includes any stockpiles of soil or overburden created by the excavation.

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		Weed Emergence Monitoring • Monitoring of the emergence of weeds in Zones A and B will be undertaken by an experienced and licensed weed management contractor on a six-monthly basis (i.e. after the first seasonal rains and at the end of spring). • B&J Catalano Pty Ltd personnel on-site will be instructed to report any weed infestations that may occur on other occasions. • Based on the type of weed that emerges, a control plan will be formulated by the licensed weed management contractor. • Import and Export of Weeds. • All plant and equipment either entering or leaving the site will be clean and free of any soil. Any quarry products imported to the site will be free of weeds. **Weed Control Program** • If a weed infestation occurs within Zones A and B the licensed weed management contractor will apply the appropriate method of control, in accordance with the guidelines published by the DAF, whether chemical or mechanical, at the appropriate time.
7-02	Vegetation buffer to edge of RAMSAR wetlands We note that the proposed operations will result in narrowing of the (already degraded) vegetation corridor along the edge of the lake. The extraction is in Tuart woodland, albeit degraded by farming operations. Should we permit further degradation of this Threatened Ecological Community? And given the already	All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands. Eucalyptus decipiens are widely distributed throughout the south west, occurring in the Avon Wheatbelt, Esperance Plains, Geraldton Sandplains, Jarrah Forest and Swan Coastal Plain IBRA bio-regions. *Melaleuca systena* are widely distributed throughout the coastal south west, occurring Geraldton Sandplains, Jarrah Forest, Swan Coastal Plain, Warren IBRA bio-regions.

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	degraded nature of the woodland, is 200m of buffer sufficient to protect the wetlands on the edges of the lake? And does this degraded narrow buffer/corridor have an impact on movement of fauna (including several endangered specis, as mentioned in the original submission #3933) along the edges of the lake?	The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, http://lbp.asn.au/module/enviro#map) (Molley et al 2009). The same database also identifies the project area's regional connectivity as part of a 'large, regionally well connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009). Based on available vegetation mapping it is estimated that there is approximately 9,514 ha of native vegetation within 10 km of the project area. Remnant native vegetation present within the project area (total ~8.3 ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos. The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F). No shorebird individuals, populations or their suitable habitat have been recorded within the proposal area.
7-03	Impact of lowered ground level above the water table With the removal of a large part of the limestone layer, will the reduced soil thickness above the groundwater lead to increased	In order to place the impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2 . The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2 . The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2 . The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure

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	leaching of farming operation nutrients into the water table and the RAMSAR wetland? The RAMSAR wetland edges of the lake are particularly vulnerable to increased nutrients flowing from the water table.	approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. Based on this, it is unlikely that major ecological changes from this source will be incurred.
7-04	Noise and Dust What is the impact on migratory species from dust, noise and vehicle movements? With the sparse buffer to the Lake, are the proposed operations likely to reduce the effective area available to migratory species? What is the effect of limestone dust on the surround areas?	As described in section 4.3 of the report: Noise, dust and visual amenity impacts have all been assessed as part of the EPBC Act approval process. Noise emissions (Section 4.3.4), dust emissions 4.3.3 (Visual amenity (4.3.13). The dust and wind rose results suggest that dust emissions are not impacting sensitive environments west of the project area at Lake Preston and shorebird habitat. The EPA guidance "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). There are no dust sensitive premises located within 1km of the proposed operations, except for the landowner's premises. The landowner's residence is screened from the extraction area by a belt of native vegetation and the landowner has no objections to the proposed operations. The proposed extraction activities will create some operational noise, the majority of which will be generated by bulldozers, screening, loaders and haulage trucks. This noise is expected to be localised and create minimal nuisance beyond the boundary of the extraction area. The nearest noise sensitive premise is a residence owned by the landowner, located approximately 240m to the west of the proposed extraction operations. The landowner has no objections to the proposed extraction operations. No other residences are located within 1km of the proposed activity. A vegetation buffer exists between the landowner's residence and the extraction area. During previous quarrying on the property no noise issues were recorded. No offsite noise impacts are anticipated due to the surrounding vegetation and distance to residential areas.

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		The proposed extraction is unlikely to create a visual impact due to remnant topography on either side of the proposed extraction area, and the natural undulation of the landscape. The nearest main road, Forrest Highway, is located approximately 2.5km east of the proposed extraction area. There is an existing 40m buffer zone of native vegetation between Ludlow Road and extraction activities on the property. Since the extraction area is well screened by existing vegetation on the property and on neighboring properties, no visual impact will occur. Previous extraction activities at the site have not resulted in any significant visual impact. No visual impacts are therefore anticipated. Furthermore, an environmental noise model was constructed using Sound Plan 4. This model illustrates that the 45 dB contour has a maximum extent of the eastern lakeshore and that the 40 dB contour crosses into the Lake. These contours have been simulated with 5 pieces of crushing and ancillary equipment operating in the pit simultaneously. These values are very low when viewed in the context of the noise produced by wind on water in the coastal zone. The noise model has been included with this document (Attachment B). In addition, results of research conducted by Institute of Estuarine & Coastal Studies, University of Hull (Cutts et al 2013), suggest that construction noise of less than 50dB have a Low impact on estuarine water birds.
John and Vicki Buchanan		
8-01	Noise and Dust with the prevailing wind conditions, and Visual Pollution (the current extraction noise and dust levels are tolerated; a significant enjoyment for us on this coastline is the lack of noise)	Noise, dust and visual amenity impacts have all been assessed as part of the EPBC Act approval process. Noise emissions (Section 4.3.4), dust emissions 4.3.3 (Visual amenity (4.3.13). The dust and wind rose results suggest that dust emissions are not impacting sensitive environments west of the project area at Lake Preston and shore bird habitat. The EPA guidance “Separation Distances between Industrial and Sensitive Land Uses” lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). There are no dust sensitive premises located within 1km of the proposed operations, except for the landowner’s premises. The landowner’s residence is screened from the extraction area by a belt of native vegetation and the landowner has no objections to the proposed operations.

Item	Key Comment	Response
		The proposed extraction activities will create some operational noise, the majority of which will be generated by bulldozers, screening, loaders and haulage trucks. This noise is expected to be localised and create minimal nuisance beyond the boundary of the extraction area. The EPA environmental assessment guideline "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). The nearest noise sensitive premise is a residence owned by the landowner, located approximately 240m to the west of the proposed extraction operations. No other residences are located within 1km of the proposed activity. A vegetation buffer exists between the landowner's residence and the extraction area. During previous quarrying on the property no noise issues were recorded. No offsite noise impacts are anticipated due to the surrounding vegetation and distance to residential areas. The proposed extraction is unlikely to create a visual impact due to remnant topography on either side of the proposed extraction area, and the natural undulation of the landscape. The nearest residence is owned by the landowner who has no objections to the proposed extraction operations. The nearest main road, Forrest Highway, is located approximately 2.5km east of the proposed extraction area. There is an existing 40m buffer zone of native vegetation between Ludlow Road and extraction activities on the property. Since the extraction area is well screened by existing vegetation on the property and on neighboring properties, no visual impact will occur. Previous extraction activities at the site have not resulted in any significant visual impact. No visual impacts are therefore anticipated.
8-02	The Toxic Weeds we now have under control, after decades of work, will be at risk when the existing buffers are reduced on the west side of the lake	As described in Section 4.3.6, a Weed Management Plan (Appendix H to the report) have been developed. Three habitat types were identified during field Surveys (Harewood 2019, Appendix G), all of which contained weeds are in a degraded condition following decades of cattle grazing.

Item	Key Comment	Response
		Two weed species present on the property, *Gomphocarpus fruiticosus* (Cotton Bush) and *Solanaum linneanum* (Apple of Sodom) are declared under the Biosecurity and Agriculture Management Act 2007 and require control methods associated with them (DAF 2014), as outlined in the Weed Management Plan (Appendix H). Existing approvals stipulate that Catalano comply with the endorsed Weed Management Plan as described in Appendix H. A Weed Management Plan has been developed for the project (Appendix H), which will ensure that weeds are not introduced and/or spread to adjacent vegetation. The management plan includes procedures such as machinery/vehicle clean down, weed treatments and restrictions on vehicle/machinery movements. Development of topsoil management procedures in the Revegetation Report (Appendix C) will also ensure topsoil health for re-use and to mitigate the risk of introducing weeds into the Proposal Area and surrounds. The management plan will include the development and implementation of a system to allow for traceability of disposed weed infested topsoil, predetermined stockpile locations and instructions on topsoil management procedures. The project is not expected to exacerbate the threat of weeds on shorebird habitat. The shorebird habitat is at least 300m from the project and no vehicles or staff from the project area will access Lake Preston from the project area. Hygiene management procedures, described in the Environmental Management Plan (Appendix B), the Revegetation Plan (Appendix C) and the Weed Management Plan (Appendix H), will be implemented for construction and operation of the project to minimise risk of the impact of spread of weeds. As per section 5.4.5 of the document, weed management measures are based on management actions prescribed in the Weed Management Plan (Appendix H), including key actions provided in the following subheadings. **Weed Management Zones**

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		• Zone A: This is all the land within the active extraction area and includes the base of the excavation, roadways and stockpiles of topsoil, overburden and all product stockpiles. • Zone B: This is all land that is at natural level and which extends 100 meters beyond the perimeter of the active extraction areas and includes any stockpiles of soil or overburden created by the excavation. **Weed Emergence Monitoring** • Monitoring of the emergence of weeds in Zones A and B will be undertaken by an experienced and licensed weed management contractor on a six-monthly basis (i.e. after the first seasonal rains and at the end of spring). • B&J Catalano Pty Ltd personnel on-site will be instructed to report any weed infestations that may occur on other occasions. • Based on the type of weed that emerges, a control plan will be formulated by the licensed weed management contractor. **Import and Export of Weeds** • All plant and equipment either entering or leaving the site will be clean and free of any soil. Any quarry products imported to the site will be free of weeds. **Weed Control Program** • If a weed infestation occurs within Zones A and B the licensed weed management contractor will apply the appropriate method of control, in accordance with the guidelines published by the DAF, whether chemical or mechanical, at the appropriate time.
8-03	The Yarloop Fires and the fire damage to our property was a poignant moment when there	The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data

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	was no wildlife, insects or migratory birds for quite some time; there is no assurance this extraction proposal and the vegetation clearance undertaken will not interfere with this ecosystem.	indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, http://lbp.asn.au/module/enviro#map) (Molley et al 2009). The same database also identifies the project area's regional connectivity as part of a 'large, regionally well connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009). Based on available vegetation mapping it is estimated that there is approximately 9,514 ha of native vegetation within 10 km of the project area. Remnant native vegetation present within the project area (total ~8.3 ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos. The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F).
8-04	This proposal does not provide any EPA assessed evidence to proceed on this scale.	The proposed action was referred under the EPBC Act on the 20 February 2020. On April 29, 2019, the proposed action was determined to be a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), based on the following factors: • listed threatened species and communities (s. 18 and 18A), • listed migratory species (s. 20 and 20A) and • the ecological character of a declared Ramsar wetland (s. 16 and 17B).

Item	Key Comment	Response
		It determined that the proposed action will be assessed by Preliminary Documentation. The information required for the Preliminary Documentation, as requested by the Department of Agriculture, Water and the Environment (DAWE) (formally Department of the Environment and Energy, DoEE) (EPBC Ref 2019/8388, 24 June 2019) is provided in Appendix A1. Following the submission of preliminary documents in August 2019, further information was requested (on September 26, 2019) and is provided in Appendix A2. This further information requested has been added to this document. A further request for more information was made by DAWE on February 7, 2020 (Appendix A3), to which a response was provided March 4, 2020. A clearing permit, granted under section 51E of the Environmental Protection Act 1986 (Purpose Permit number: CPS 8057/1) has been granted (duration 28 May 2020 – 28 May 2030), and as such assessment by DWER has determined the 200m distance setback from the ESA is adequate.
Joseph and Carolyn Caruso		
9-01	While we appreciate the clearing footprint has been reduced to 13.5 hectares, we still consider the project to have an unacceptable impact on matters of national significance (MNES) covered by the EPBC Act, as well as on the amenity of the National Park and our home.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha.
9-02	Impact to Ramsar Wetland - Lake Preston The proposal will have a direct and indirect impact to the ecological character of a Ramsar wetland and it is incorrect for the proponent to claim otherwise. Negative impacts that have not adequately been modelled by the proponent include:	Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapotranspiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2.

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	• Negative impacts on groundwater, especially risks to 'soaks' through disturbance of the groundwater.	The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. No dewatering activities will be undertaken. No groundwater will be exposed by this development since the final land surface will be 6m AHD, which is well above the maximum winter high groundwater table, and is in keeping with the DoW recommended minimum separation depth of 300mm between the base of the pit and the likely maximum season groundwater level (Groundwater Management Plan).
9-03	Lake Preston is a Ramsar wetland and an Environmentally Sensitive Area (ESA). The allocated ESA distance of 200m is inadequate.	A clearing permit, granted under section 51E of the Environmental Protection Act 1986 (Purpose Permit number: CPS 8057/1) has been granted (duration 28 May 2020 – 28 May 2030), and as such assessment by DWER has determined the 200m distance setback from the ESA is adequate. The proposed activity is located at a minimum of 300m from the shorebirds habitat. A natural limestone ridge will buffer the shoreline and the mining activities, with mining occurring at the site for over 20 years.
9-04	The boundary adjacent to Lake Preston shoreline shares fringing vegetation and birdlife (Melaleuca, sedges, grasses etc.) which are highly valuable conservation assets and habitat critical for survival and persistence of shorebirds.	No shoreline, fringing vegetation will be disturbed by the proposed action. The proposed action area contains no habitat suitable for any of the listed threatened/migratory shorebird species to utilise and none would ever occur under normal circumstances. The propose action area mainly contains a low woodland of limestone marlock (*Eucalyptus decipiens*) over scattered shrubs and bare limestone. The eucalyptus woodland habitat is totally unsuitable for the shorebirds in question and therefore none are considered as likely to occur (Harewood 2019).
9-05	The subject land adjoins a Conservation Category Wetland and Ramsar Wetland of the Peel-Yalgorup System, as well as an "Environmentally Sensitive Area, declared in	Using the Geomorphic Wetlands of the south west and swan coastal plain as a base layer reference, at its closest point, the proposed extraction area is approximately 300m east of conservation category Lake Preston wetland (220m east of Lake Prestons ESA boundary).

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	Regulation 6 in Government Gazette No. 115 – 'Environmental Protection (Clearing of Native Vegetation) Regulations 2004' - Department of Water and Environmental Regulation (DWER).	The western boundary of the site is approximately 300m from the shoreline of Lake Preston and is separated by the wetland by a limestone ridge.
9-06	Hydrocarbons from the refueling and repair of machinery have the potential to leach into the groundwater may cause significant risk of contamination to Lake Preston, Ramsar wetland	Section 4.3.11.1. The limestone quarrying operations are small scale and most of the time the only plant that is on site is a front-end loader. A bulldozer and crusher are only on the site for approximately 12 weeks of the year. Once the stockpiles of lime have been created, trucks will access the site to be loaded and then leave again. There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site. Any spills will be contained on site, mitigated and recorded. The Western Australian Water Quality Protection Guidelines No's 6,7,10 and 11 will be adhered to, to prevent hydrocarbons or other contaminants from being spilled into the Peel-Yalgorup System Ramsar Wetland. Although the potential for large scale spillage is low, it is nevertheless proposed to ensure that no groundwater will be exposed on the site by extraction and that operations will always be at least 4m

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		above the water table as illustrated in the cross-section contained in Figure 5 and Figure 6. The highest-ever seasonal groundwater high has been calculated to be 0.015m AHD and 0.5m AHD below the pit floor, from west to east respectively.
9-07	Lake Preston is part of the Peel Yalgorup system of wetlands. This wetlands lies on the western boundary of proposed extraction site.	The western boundary of the site is approximately 300m from the shoreline of Lake Preston and is separated by the wetland by a limestone ridge.
9-08	Likely significant impact to groundwater quantity and quality will be incurred during clearing, construction and extractive site works. Vegetation clearing and alteration to natural topography will significantly impact the groundwater chemistry. Groundwater flows in a westerly direction to Lake Preston.	As per Section 4.3.10, a description of the impact assessment of groundwater at the site, considering the larger scale environmental fluxes such as Lake evapo-transpiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. The following points have been evaluated in order to provide an assessment of groundwater impact associated with vegetation clearing: • There are approximately 160 trees within the clearing area, of which 25 have a girth of 50cm or greater (Harewood, G. 2019). It is estimated that a mature Eucalypt (eg tuart) tree transpires at an average of 0.05Ml per year (Dept Primary Industries Victoria, 1999). This means that 160 tuarts transpire a total of 160 x 0.05= 8Ml per year (broad estimate). The closest rainfall station (Bunbury) has a mean annual rainfall of 870mm. It has been estimated by the Department of Water (Kearn. A, 1998) that the annual groundwater recharge from rainfall is 30%. Since the trees occupy an area of 13ha, the amount of recharge to the aquifer from rainfall is therefore 30% x 870mm x 13ha = 27Ml. • The groundwater throughflow calculated for the Lake Preston flow system is 10,500Ml per annum calculated over the 22km length of the 2m groundwater contour (Commander D. P. 1988). Since the width of the property over which the trees are situated is 629m, this means that the extrapolated throughflow at this point is 629/22000 x 10,500Ml = 320Ml (assuming the same general aquifer parameters apply). Thus, the transpiration from the trees represents 2.5% of the

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		throughflow across the width of the property. Taking the direct recharge from rainfall into account as well, the likely impact of clearing 8ha on the water table is very low. • The owner of the property has a licence to pump 420Ml per year for irrigation (although he does not use the full allocation). This represents 130% of the throughflow estimated in 2 above. • A cross section through the property is illustrated in Figure 5 and Figure 6 and the elevation of the water table has been taken from the closest Department of Water monitoring bores as explained in the Water Management Plan in Appendix D. • There is a general pattern of declining water table and a downward trend in Lake water levels. These declining water levels are illustrated in the hydrographs for monitoring bores E1B and E2B (contained in Appendix D). This has been ascribed to declining rainfall over the past 30 years as well as increased groundwater abstraction (Rockwater 2009). Modelling indicates that a declining trend will continue in the South West of Western Australia into the foreseeable future (Australian Government, Dept of Climate Change and Energy Efficiency, 2012). This is likely to further impact the salinity increases within the Lake very significantly. • Lake Preston is a groundwater sink and, other than direct rainfall, receives all its freshwater from shallow aquifers to the west and east of its shores. It has been estimated the water inputs to Lake Preston are 64% from direct rainfall, 29% from the eastern shoreline inflows and 7% from western shoreline inflows (Whitehead, M. 2012). • The geological evolution of the Lake, being cut off from the ocean by a barrier dune, has given rise to hyper salinity with a steep salinity gradient between the surface and the underlying hyper saline water. Baseline calculations of the Lake water budget illustrate that the Lake's salinity is increasing due to evapo-concentration (Commander, 1988). Subsequent reviews of this water budget indicate that recent climate change will further increase the rate at which this evapo-concentration is occurring (Noble, C. 2010) (Whitehead, M. 2012). • The environmental values of the Ramsar site are associated largely with the quality of the water that occurs on the surface of the Lake, since it is in this zone that the food organisms live that the

Item	Key Comment	Response
		migrating birds feed on. Significant changes to the water quality at the surface can alter the productivity of these food organisms and thus impact the numbers of birds that visit the area (Whitehead, M. 2012). • In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed.
9-09	Any contamination to Lake Preston's hydrology from surface runoff, pollutants or groundwater discharge will significantly impact the health of the Lake and sensitive ecosystems. No servicing of vehicles, storage of fuels, chemicals or refuelling should be allowed on Lots 4 or 5.	There will be no storage of fuels, lubricants or other toxic or hazardous chemicals on site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a "Snap-On snap-off, fast-fill and auto shut-off" facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight. No major servicing, which could lead to fuel and oil spills, will take place on the site. In accordance with the currently approved Reconsideration Decision – not a controlled action if undertaken in a particular manner for EPBC 2008/3956 dated 24th April 2017, 'Servicing of any vehicle must take place at least 100 metres from the shore of Lake Preston'. Prior to servicing, a suitably sized spill mat or drip tray will be placed under the vehicle to capture any leaks or spills. Servicing of vehicles will consist of the direct vacuuming of and waste fluids from the engine of the vehicle being serviced to a waste oil tank on the service truck. A drum will be placed under the oil filter of the vehicle being serviced prior to its removal. Any material captured in the drip tray or drum during servicing will be disposed of into the waste facility of the service truck, removed off site and disposed of at an appropriately licensed waste facility. Spill kits will always be kept on all service truck(s) when servicing vehicles on site.

Item	Key Comment	Response
		Any spills will be contained on site, mitigated and recorded.
9-10	Lake Preston's water composition governs the growth of microbial mats which provide the habitat and breeding ground for the several invertebrates that form the principle diet of migratory birds that stop over at the lake on arrival and later before their departure north. Run-off from precipitation into the lake on the east side occurs faster than from the dunes lens at the east side of the lake which latter runoff visibly endures longer and well into mid-summer. Research has shown that the nutrients of the microbial mats largely depend on fresh water run- off into the lake. Reference: M Whitehead	Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapo-transpiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. In order to place the cumulative impacts associated with limestone extraction in context, the following geographical dimensions are pertinent: Lake Preston is 28km long and has an area of approximately 30km^2. The groundwater flow system that feeds Lake Preston from the east has an area of 230km^2. The area of the groundwater flow system that is to the west of the Old Coast Road is approximately 57km^2. The area of Lake Preston that is exposed during seasonal groundwater lows is 3km^2. The existing and old limestone pits that occur between Lake Preston and Old Coast Rd measure approximately 130ha in total. This represents 0.00043% of the Lake area, 0.00006% of the Lake Preston groundwater flow system, 0.00023% of the area between the Lake and Old Coast Road and 0.0043% of the area within Lake Preston that is seasonally exposed. No dewatering activities will be undertaken. No groundwater will be exposed by this development since the final land surface will be 6m AHD, which is well above the maximum winter high groundwater table, and is in keeping with the DoW recommended minimum separation depth of 300mm between the base of the pit and the likely maximum season groundwater level (Groundwater Management Plan).
9-11	Any pollution at any part of the lake would in time adversely affect the entire lake's water composition and ecosystems.	There are no direct impacts on Lake Preston from this operation. The limestone pit itself is further than 300m away from the edge of the Lake and it will be completely internally draining. The only infrastructure associated with this project is a haul road and the closest that this road gets to the Lake is 750m away. It is therefore not possible for stormwater erosion or sedimentation to occur in areas outside of the pit void due to this.

Item	Key Comment	Response
9-12	Survey Information as requested by DAWE monitoring groundwater bores or onsite data for the site has not been provided. This monitoring should include groundwater quantity and quality reporting to the boundary of Lake Preston.	No additional water requirement for dust suppression will be required. The existing Licence on the site GWL162560 has an existing allocation identified for dust suppression of 22,000kl and this will not be exceeded. Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapotranspiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels.
9-13	Further to these points we are very concerned regarding the ground water that supplies our wells. Given the impacts of global warming and the possibility of future droughts and longer, hotter, drier summers in the future, anything that could affect the water table and ground water to our wells is of serious concern, not only for our drinking but could also greatly affect the value of our properties.	No additional water will be required for this proposed action. The existing Licence on the site GWL162560 has an existing allocation identified for dust suppression of 22,000kl and this will not be exceeded. Regarding impacts on groundwater level change, considering the larger scale environmental fluxes such as Lake evapotranspiration, climate change, decreasing Lake and groundwater levels and the large amount of abstraction for horticulture in the surrounding area, there is no evidence that the removal of 8ha of vegetation will have any negative effects on groundwater levels. The project area is approximately 300m from the Ramsar site, separated from the project area by a limestone ridge and approximately 18m higher in elevation than the lake shore. At its deepest point, the pit will not be less than 4m from the highest groundwater level (see Figure 5), as such there will be no contact with the local groundwater.
9-14	During the last rain, when our friends who live up the road drove into the paddock, they were amazed to see that they were driving in a temporary lake as they couldn't see any grass, just water. This makes us concerned about contamination of our water, and the impact to our wetlands/soaks. I didn't realize that our properties have wetlands on our eastern border as seen in the attached map.	This is most likely due to changes in rainfall patterns rather than the small-scale mining occurring approximately 2km away.

Item	Key Comment	Response
	I would like to question the results of the tests to water in the bores in the Report as they don't paint an accurate picture of what is happening as they are too far away.	
9-15	It's impossible to accurately determine how many tuarts will be cleared, the only reference to the number of Tuarts is "33 Tuart trees were mapped within the pit area and 50m buffer" (Table 10, page 50), however elsewhere in the Report the proponent mentions the presence of 160 tuarts (Page 74)	Apologies for the confusion. Table 10 of the report shows that there are 33 recorded tuart trees within the clearing and buffer area. Section 4.3.10 describes that there are 160 trees in the project area (including, but not limited to tuarts), as counted by Harewood (2019).
9-16	The Tuart Woodlands of the Swan Coastal Plain were recently listed as a threatened ecological community at the highest level of threat (ie - critically endangered).	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands.
9-17	The proposal includes the removal of 13.5ha of vegetation that forms part of the Tuart Threatened Ecological Community (TEC) and possibly forms part of the Banksia TEC, both of which are protected under the EPBC Act, and is in close proximity to an Environmentally Sensitive Area (ESA) also protected under the EPBC Act.	All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. There are no *Banksia* woodlands mapped on site, with *Banksia attenuata* the only Banksia tree species recorded, albeit sparely distributed.
9-18	The need to recognise that even degraded native vegetation provides critical habitat linkages across the site. Mature Tuarts (TEC) in any condition have extremely high conservation value and must be preserved.	No Marri trees have been recorded within the project area. There are no Jarrah woodlands mapped at the site, with only four individual *Eucalyptus marginata* recorded within the pit area. Although some *Banksia attenuata* was recorded sparsely within the project area, no *Banksia* woodlands mapped on site.

Item	Key Comment	Response
	Tuarts with hollows are critical habitat for wildlife species including Black Cockatoos, Western Ringtail possum and Phascogales and assist species to persist. Carnaby's Cockatoo on the Swan Coastal Plain primarily feed on Marri, Jarrah, and Banksia and are critical to their breeding survival. These feed trees are all present on the site, thus no further of this vegetation should not be removed.	
9-19	Clearing of any native vegetation on this site is not recommended and is strongly opposed, because it increases fragmentation and contributes to increased predation of native wildlife, potentially pushing vulnerable species to extinction.	Section 4.3.2, Habitat fragmentation The South West Regional Ecological Linkages Project, delivered by the South West Biodiversity Project in 2009, identified and mapped Regional Ecological Linkages across the South West Region. These data indicate that the project area has a density value of 5.4, which categorises the area as 'least fragmented', within a broader 13,836ha polygon (WALGA EPT 2019, .http://lbp.asn.au/module/enviro#map) (Molley et al 2009). The same database also identifies the project area's regional connectivity as part of a 'large, regionally well-connected patch', and its connectivity reach score is rated as 'part of a large network (Molley et al 2009). Based on available vegetation mapping it is estimated that there is approximately 9,514 ha of native vegetation within 10 km of the project area. Remnant native vegetation present within the project area (total ~8.3 ha) makes up ~0.087% of this total. It can be reasonably expected that these areas contain numerous "habitat trees", many of which are likely to provide breeding opportunities for black cockatoos. The Yalgorup National Park is located to the west (Lake Preston), east and north of the project area and these areas are likely to harbor much more biodiversity and represents much better habitat for fauna species in general. Overall, the project area is surrounded by vegetation and does not represent a key "linkage" or "corridor" for wildlife movement and the relatively small amount of clearing likely to be required is not

Item	Key Comment	Response
		likely to create any significant barriers to fauna movement on a local or regional scale (Harewood 2019, Appendix F).
9-20	There has also been a lack of systematic method for monitoring and rehabilitation across previously quarried areas of Lots 4 and 5, given the numerous extractive industry licences and associated rehabilitation requirements. The environmental values are likely to be impacted by the continuation of the proposed limestone extraction.	As per Section 5.4.4, the following rehabilitation management measures will be implemented: • Adhere to management and mitigation measures as prescribed in the Revegetation Report (Appendix C). • All batters behind the active working face will be contoured to achieve a slope gradient of no more than 1:6. The final rehabilitated pit floor will be at 6m AHD; • Stockpiled topsoil/ overburden will be respread over completed areas; • The pit floor and batters will be ripped to alleviate compaction, improve filtration, attenuate stormwater runoff and facilitate rapid root penetration; • The base of the pit will be seeded with pasture grasses which will be used for cattle grazing; • An area of batter slopes of approximately 13ha will be revegetated using endemic species of local provenance using both direct seeding and planted seedlings; • Rehabilitation work will only be carried out just prior to, or during winter, within 6 months of cessation of extraction activity; • Due to the internally draining nature of the pit, no offsite sedimentation issues are anticipated; and • Stormwater within the pit will continue to infiltrate to the underlying water table. Maintenance and contingency measures Revegetation areas will need to be inspected and managed after initial planting/seeding as initial success is often compromised by weeds, feral animals, human activities, fire and drought. Maintenance procedures will be carried out where necessary and may include:

Item	Key Comment	Response
		• Repair of any erosion damage. • Replanting/seeding areas in subsequent years that may not have established. • Weed control – weed inspections should be undertaken in autumn, spring and summer by a suitably qualified contractor and appropriate treatment undertaken when required.
9-21	Tuart trees develop nesting hollows only after scores of mature years. So, any young trees cleared today on Lots 4 and 5 would reduce even further the threatened Tuart population along the Swan Coastal Plain.	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint. The remaining vegetation types to be cleared include 6.3ha of *Eucalyptus decipiens* woodlands and 1.1ha of *Melaleuca systena* shrublands.
9-22	Native Vegetation on Lots 4 and 5 consist of remnant Tuart woodlands complex of Eucalyptus Dicipiens, Melaleuca, Banksia, Jarrah, Coastal Peppermint and Nyutsia Floribunda combined form part of an essential, habitat linkage Lake Preston to Yalgorup National Park. Remnant habitat linkages have been critically impacted by clearing.	Based on available vegetation mapping it is estimated that there is approximately 9,514ha of native vegetation within 10km of the project area. Remnant native vegetation present within the project area (total ~8.3ha) makes up ~0.087% of this total.
9-22	Survey Information as requested by DAWE, for current targeted surveys to determine potential for habitat trees have not been provided for Lots 4 and 5. Rigorous scientific survey methods and seasonal monitoring data for the site to the boundary of Lake Preston, have not been provided.	The scope of works was to conduct a Level 1 fauna survey as defined by the EPA (EPA 2016). Because the general area is known to be utilised by black cockatoos and western ringtail possums, the scope of the survey work was expanded to include a baseline assessment of the site's significance to these species as well. The fauna assessment has therefore included: • Level 1 fauna assessment (in accordance with EPA (2016) guidelines); • Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat);

Item	Key Comment	Response
		• Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge and dispersal habitat and individuals); • An assessment of the likelihood of occurrence of any other significant fauna species and their habitat; and • Report summarising results, methods and conclusions.
9-23	Our concerns have not been addressed in the Additional Information Report. We therefore once again question the confidence of the survey results, given that no hollows or potential sites for hollows were identified above ground level.	As stated in Stection 2.2.3.2, the methods employed during the black cockatoo habitat assessment to comply with the defined scope of works and are based on guidelines published by the DotEE (Commonwealth of Australia 2012) which states that surveys for Carnaby's, Baudin's and forest red-tailed black cockatoo habitat should: • be done by a suitably qualified person with experience in vegetation or cockatoo surveys, depending on the type of survey being undertaken; • maximise the chance of detecting the species' habitat and/or signs of use; • determine the context of the site within the broader landscape—for example, the amount and quality of habitat nearby and in the local region (for example, within 10 km); • account for uncertainty and error (false presence and absences); and • include collation of existing data on known locations of breeding and feeding birds and night roost locations. Habitat used by black cockatoos have been placed into three categories by the DotEE (Commonwealth of Australia 2012) these being: • Breeding Habitat; • Foraging Habitat; and • Night Roosting Habitat.

Item	Key Comment	Response
9-24	Survey Information as requested by DAWE for current targeted spring surveys to determine presence of Western Ringtail Possum onsite or transecting through the site have not been undertaken. The report states 3 days for surveys, with 2 conducted in May and June. Autumn to Winter surveys will not provide evidence of scat activity due to winter weeds and ground too wet. More targeted Spring surveys, to observe grazing activity to Coastal Peppermint and Nuytsia Floribunda, including targeted night stalking would be needed. Surveys also to determine nesting activity to the boundary of Lake Preston (west) and Yalgorup N.P (north) are required. Our neighbours have personally surveyed Lake Prestons's fringing vegetation and observed WRP activity through Coastal Peppermint understory of sedges and grasses.	There was no request for further information requested on the WRP.
9-25	The impact of noise, dust, vibration, and operation of heavy machinery within 200m of the wetlands to the migratory birds has not been measured at all by this proposal, in fact the fauna survey contains no information or modelling on the impact of the project.	The proposed extraction activities will create some operational noise, the majority of which will be generated by bulldozers, screening, loaders and haulage trucks. This noise is expected to be localised and create minimal nuisance beyond the boundary of the extraction area. The EPA environmental assessment guideline "Separation Distances between Industrial and Sensitive Land Uses" lists the generic buffers for sand and limestone pits as 300-500m depending on the extent of the processing (EPA 2015). The nearest noise sensitive premise is a residence owned by the landowner, located approximately 240m to the west of the proposed extraction operations. No other residences are located within 1km of the proposed activity. A vegetation buffer exists between the landowner's residence and the extraction area. During previous quarrying on the property no noise issues were recorded.

Item	Key Comment	Response
		No offsite noise impacts are anticipated due to the surrounding vegetation and distance to residential areas. Furthermore, an environmental noise model was constructed using Sound Plan 4. This model illustrates that the 45dB contour has a maximum extent of the eastern lakeshore and that the 40dB contour crosses into the Lake. These contours have been simulated with 5 pieces of crushing and ancillary equipment operating in the pit simultaneously. These values are very low when viewed in the context of the noise produced by wind on water in the coastal zone. The noise model has been included with this document (Attachment A) report. In addition, results of research conducted by Institute of Estuarine & Coastal Studies, University of Hull (Cutts et al 2013), suggest that construction noise of less than 50dB have a Low impact on estuarine water birds.
9-26	If the expansion is approved, at the very least the proponent should have made the West side of the proposed mine wall HIGHER than the East side wall in an effort to reflect noise and dust to the East direction (towards pastureland and highway) rather than towards the pristine Lake Preston, homes and the internationally recognized RAMSAR bird migratory area.	The east side will be higher as illustrated in sections and drawings associated with the report. The eastern side of the pit is higher than the western side due largely to the existence of a stockpile of low-grade material. It is the intention to push this material back into the pit on completion in order to smooth out the batters and to prepare them for topsoil placement and rehabilitation planting. Attached to this document is a revised Figure 4a (Attachment D) which provides an estimate of the amount that the eastern edge of the pit will be lowered after rehabilitation. This material is currently being removed and any impacts associated with the current height of the eastern face will slowly disappear. This situation will improve as revegetation is implemented. On completion of the elevation of the top edge of the pit will be similar around its perimeter
9-27	(v) Consideration of Alternatives Limestone mining is an energy intensive, high impact activity to create products including road base, for which there are now more sustainable alternatives available. These include diversion of building and construction waste and even plastics. Also	Noted

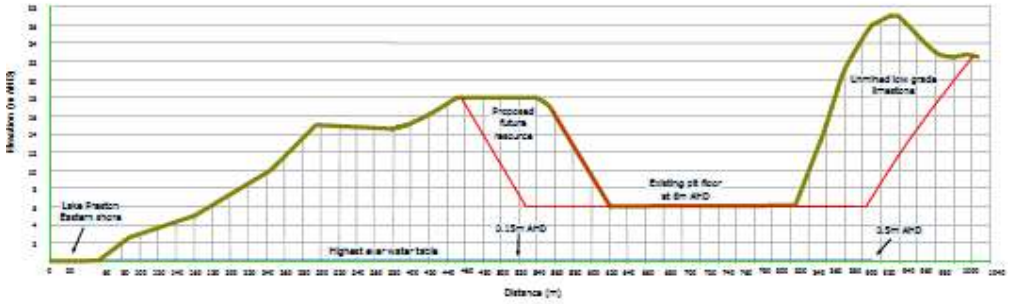
Item	Key Comment	Response
	'hard rock' raw material - ie granite and basalt, as opposed to the 'soft rock' that is limestone. These materials can found/mined in 'non sensitive' environmental areas. We urge the Department to consider an alternative to the expansion of the mine.	
9-28	There is also the potential for increased psychological (mental) health issues related to stress, anxiety and depression due to the real or perceived impact of a variety of associated factors, including, but not limited to noise, dust, water supply pollution, health issues, reduced social enjoyment of personal home environment, and realisation of impact on habitat destruction consequences for wildlife species. We therefore raise the question has WorkSafe WA (Department of Mines, Industry Regulation and Safety) been notified to investigate all health mitigation issues, and has the administration of the Occupational Safety and Health Act 1984, (OHS) been implemented?	Noted
9-29	The surveys were inadequate and were not done at the appropriate time, ie carried out during winter months! Bird studies were done during a time when the birds had migrated elsewhere!	Following discussions with DAWE, it was decided that shore bird surveys were not required. Lundstrom Environmental questioned to need of the seasonal migratory bird surveys with DAWE. Following two telephone conversations and an email (21st and 24th of October 2019), DAWE advised LEC that, given the distance from the Lake and the unsuitable habitat, seasonal migratory bird surveys would not be necessary.

Item	Key Comment	Response
9-30	Further destruction of significant vegetation ie endangered Tuart trees and loss of other habitat which animal and bird species call "home". Related information also backing this up can be obtained from Samantha Pickering, Environmental Officer for the Shire of Harvey	There has been a 1ha reduction in the native vegetation component of the clearing area. The current proposed clearing area for native vegetation represents 7.4ha. All areas of *Eucalyptus gomphocephala* (tuart) woodlands have been removed from the clearing footprint.
9-31	Monitoring of airborne dust generation levels and mitigation and suppression measures have not been adequately addressed	Dust Management issues are addressed in the Environmental Management Plan and in Section 5.4.1 of the report.
9-32	Potential for increased impact on - or development of - both mental and physical health issues related to the impact of a variety of issues surrounding this project. And is the project being monitored by WorkSafe WA and OHS	Noted
9-33	Reduced enjoyment of home environment related to intensity of increased noise, dust, vehicle movements etc...as applicable to the 12hours of working time/6 days per week	Noted
9-34	Monetary consideration re de-valuation of our property	No Comment
9-35	Weeds, seed and pathogens transmission. There is no addressing of any these potentially harmful and invasive species.	Three habitat types were identified during field Surveys (Harewood 2019, Appendix G), all of which contained weeds are in a degraded condition following decades of cattle grazing. Two weed species present on the property, *Gomphocarpus fruiticosus* (Cotton Bush) and *Solanaum linneanum* (Apple of Sodom) are declared under the Biosecurity and Agriculture Management Act 2007 and require control methods associated with them (DAF 2014), as outlined in the Weed Management Plan (Appendix H).

Item	Key Comment	Response
		Existing approvals stipulate that Catalano comply with the endorsed Weed Management Plan as described in Appendix H. A Weed Management Plan has been developed for the project (Appendix H), which will ensure that weeds are not introduced and/or spread to adjacent vegetation. The management plan includes procedures such as machinery/vehicle clean down, weed treatments and restrictions on vehicle/machinery movements. Development of topsoil management procedures in the Revegetation Report (Appendix C) will also ensure topsoil health for re-use and to mitigate the risk of introducing weeds into the Proposal Area and surrounds. The management plan will include the development and implementation of a system to allow for traceability of disposed weed infested topsoil, predetermined stockpile locations and instructions on topsoil management procedures.
9-36	Post mining rehabilitation lacks specific definite details as it is written as a generic narrative only and does not address monitoring the progress of habitat rehabilitation following five years post quarry closure	Rehabilitation and Revegetation is described in Section 6, with monitoring and maintenance of rehabilitation described in Section 6.3.7.
9-37	Lack of addressing water surface runoff and potential flooding	Groundwater Hydrology is descried in section 1.4.2 and hydrogeology is described in section 1.4.4. Assessments of impacts as they relate to altered surface water flow and altered groundwater levels is described in 4.3.9 and 4.3.10 respectively.
9-38	Risk registrar is flawed. We consider All the risks are considered “highly likely”, as opposed to the proposal stating as ranked “low risk”	Unclear. A ‘highly likely’ rating refers to the likelihood column and the ‘low’ risk refers to the consequence’ column – both scenarios are possible in a risk assessment.
9-39	There is no post mining monitoring proposal (non-existent) for rehabilitation growth, or post mining effects on the surrounding vegetation or wildlife habitats	Section 5.6 described the monitoring and reporting requirements and commitments, designed to measure the effectiveness of mitigations and identify if maintenance and contingency actions are required. Reporting will be based on requirements of licence conditions and occurrences of noncompliance.

Item	Key Comment	Response
9-40	No provision for Carbon offsets and emissions	Not required by DAWE.
9-41	The orientation of the mine facing in a westerly direction, when an easterly direction would have less impact relating the noise, dust, pollution, etc	Noted
9-42	Precautionary Principle – the proponent has failed to satisfy with any degree of certainty, this principle, with claims of no suitable habitat or MNES species impact by failing to provide thorough scientific surveys data or monitoring as his evidence. Instead resorting to assumptions in response to DAWE repeated requests for information	The precautionary principle has been considered. The capitalisation of an existing operation has considerable benefits in terms of footprint reduction, reuse of infrastructure and water from neighboring site and the overall containment of impacts to one location. Environmental investigations (including flora and fauna) have shown that the proposal area is not considered to contain any significant areas of key habitat for EPBC Act listed species of the area. Impacts to the site can be avoided (i.e. exclude potential roosting and nesting trees and setting the proposal back from Lake Preston), managed and offset (i.e. improve the current state of foraging habitat for black cockatoos within the local area) to produce an acceptable outcome.
Margie and Paul Haas		
10-1	The true impact of the mine can't really be represented from an aerial view. A view ACROSS the lake to the mine really shows the scale of the size of the mine. What I tried to do the best I could was to move the "C" reference to reflect your new most southern point of the mine which is at the "pink point" on your aerial map. So, from what we can tell is that the width of the view of the mine from the farthest northern point "D" to the new most southern point "C" is about 12% shorter/more narrow view from our property if my measurements/ calculations are right..... these are not exact	The proposed action was referred under the EPBC Act on the 20 February 2020 and on April 29, 2019, the proposed action was determined to be a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), based on the following factors: • listed threatened species and communities (s. 18 and 18A), • listed migratory species (s. 20 and 20A) and • the ecological character of a declared Ramsar wetland (s. 16 and 17B). Visual impacts were not part of the key factors provided by DAWE. The proposed extraction is unlikely to create a visual impact due to remnant topography on either side of the proposed extraction area, and the natural undulation of the landscape.

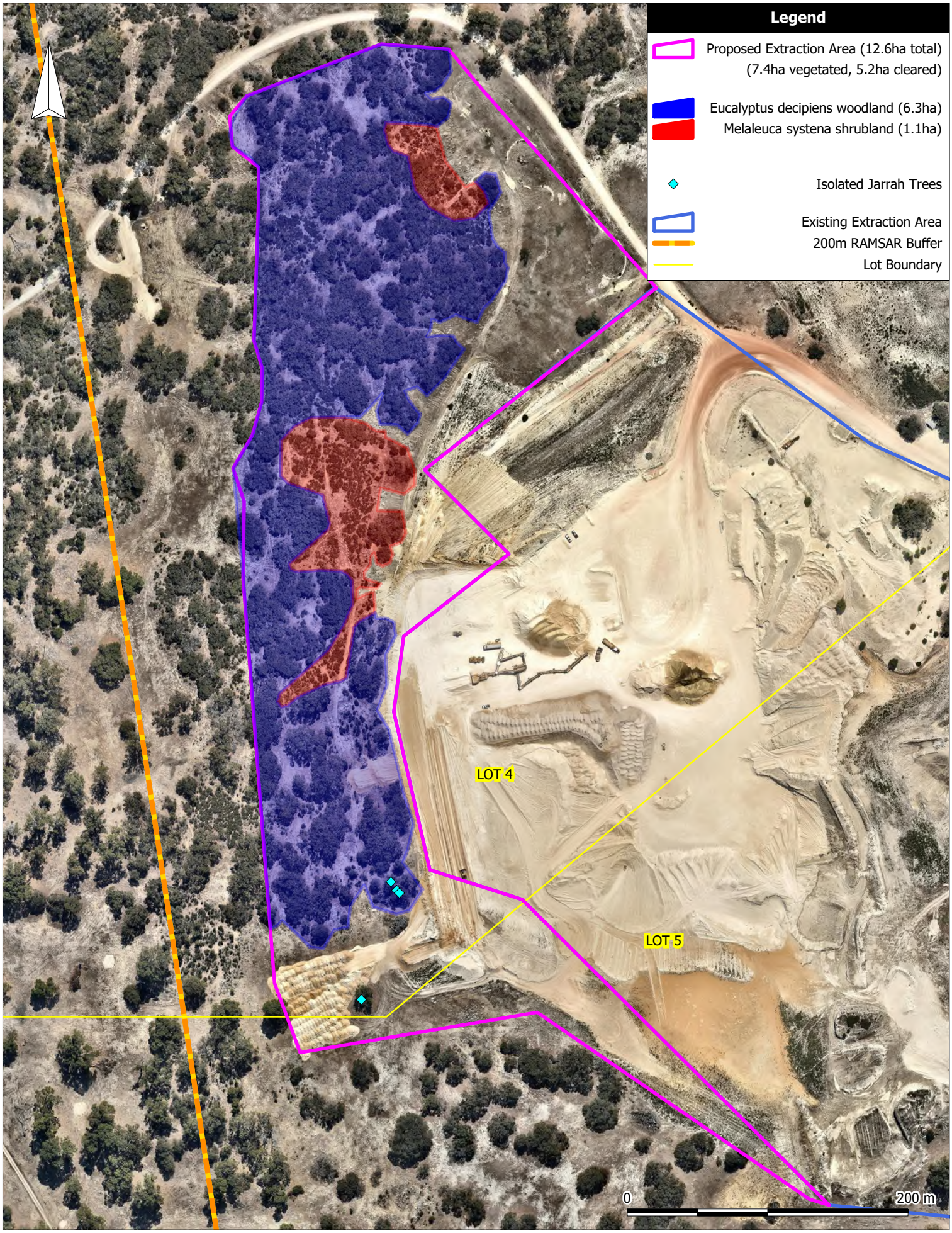
Item	Key Comment	Response
	but gives you a pretty good idea of the visual impact.	The nearest residence is owned by the landowner who has no objections to the proposed extraction operations. The nearest main road, Forrest Highway, is located approximately 2.5km east of the proposed extraction area. There is an existing 40m buffer zone of native vegetation between Ludlow Road and extraction activities on the property. Since the extraction area is well screened by existing vegetation on the property and on neighboring properties, no visual impact will occur. Previous extraction activities at the site have not resulted in any significant visual impact. No visual impacts are therefore anticipated. Rehabilitation will commence once extraction within the area is complete with the following steps being implemented: • All batters behind the active working face will be contoured to achieve a slope gradient of no more than 1:6. The final rehabilitated pit floor will be at 6m AHD; • Stockpiled topsoil/ overburden will be respread over completed areas; • The pit floor and batters will be ripped to alleviate compaction, improve filtration, attenuate stormwater runoff and facilitate rapid root penetration; • The base of the pit will be seeded with pasture grasses which will be used for cattle grazing; • An area of batter slopes of approximately 13ha will be revegetated using endemic species of local provenance using both direct seeding and planted seedlings. • Rehabilitation work will only be carried out just prior to, or during winter, within 6 months of cessation of extraction activity; and • Due to the internally draining nature of the pit no offsite sedimentation issues are anticipated. • The proposed final land surface is shown in Figure 5.

Item	Key Comment	Response
		 Image below is based on Figure 5 in report

6. TABLES

7. FIGURES

8. APPENDIXES



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Leeming WA 6149
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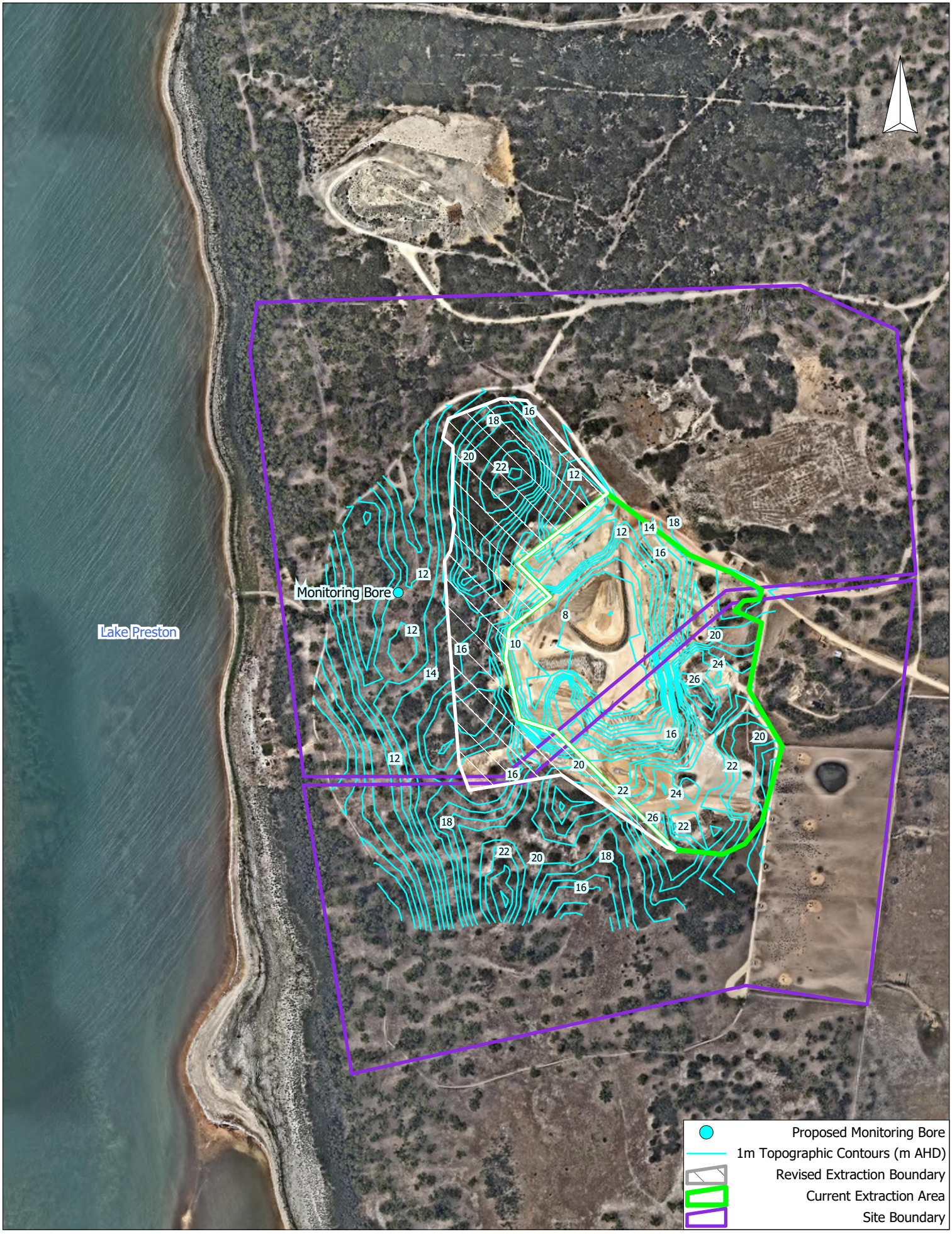
Scale: 1:3400
Original Size: A4
Air Photo Source: Nearmap Mar 2019
Datum: GDA94
Projection: Australia MGA94 (50)

Client: B & J Catalano
Project: Limestone Extraction
Location: Lots 4 & 5 Ludlow Road Myalup

Figure 1: Vegetation Types

Z:\Catalano\Ludlow Road Lot 4_Myalup_SoH_Limestone\2020 revised clearing footprint\drawing\Vegetation only.map



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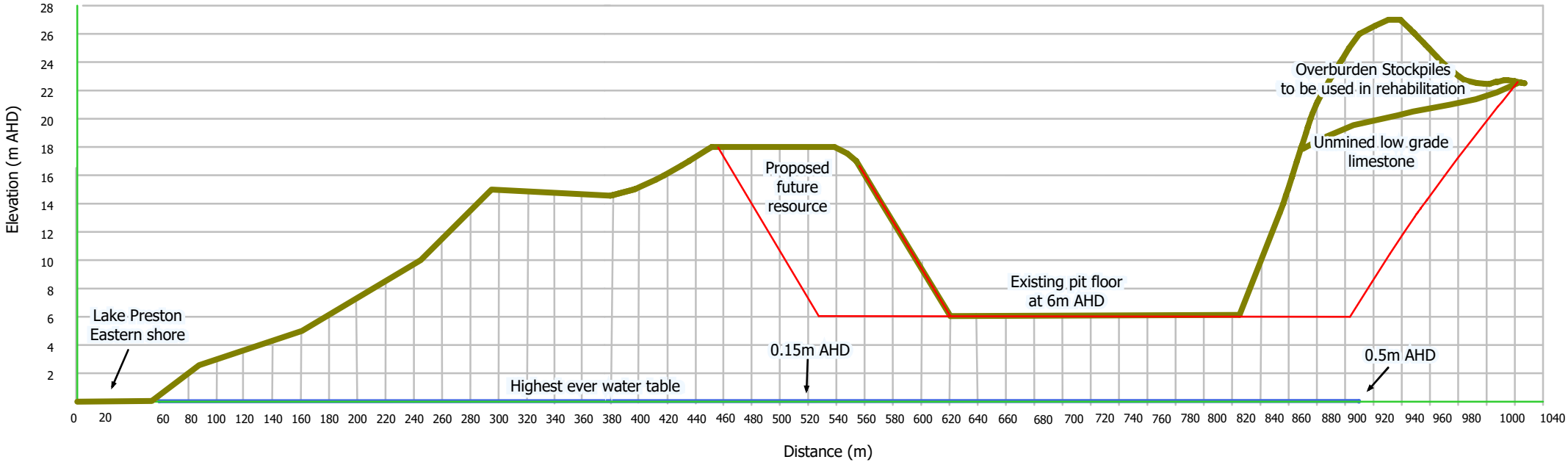
Projection: Australia MGA94 (50)

Client: B & J Catalano
Project: Limeston Extraction
Location: Lots 4 & 5 Ludlow Rd Myalup

Proposed Monitoring Bore Location



Legend

- Existing Landsurface
- Watertable
- Final EIL Landsurface

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Vertical Exaggeration: 1:10

B&J Catalano Pty Ltd
Lots 4 & 5 Ludlow Rd
Limestone Extraction

Cross Section WE

Figure 4a

C:\DATA\Catalano\Ludlow Road Lot 4_Myalup_SoH_Limestone\EPBC\Drawings\EW cross section after rehab.map 12/08/2020 Layout 2

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NOISE MANAGEMENT PLAN

Prepared for B&J Catalano Pty Ltd
Lots 4 and 5, Ludlow Road, Myalup
Shire of Harvey

1. INTRODUCTION

This Noise Management Plan (NMP) has been prepared in accordance with guidelines published by Department of Environmental Protection, Government of Western Australia *Environmental Protection (Noise) Regulations 1997*. This NMP should be read in conjunction with the report entitled "Extractive Industries Licence Application and Environmental Management Plan, Lots 4 & 5 Ludlow Road, Myalup, Shire of Harvey (April 2020)" prepared for B & J Catalano Pty Ltd by Lundstrom Environmental Consultants Pty Ltd.

2. LOCALITY AND OWNERSHIP

Locality: Lots 4 and 5, Ludlow Road, Myalup, Shire of Harvey

Ownership: Geoffrey Thomas Pearson T/A
Pearson Nominees Pty Ltd

3. THE DEVELOPMENT PROPOSAL

B & J Catalano Pty Ltd has been operating a limestone extraction operation in the area since 2009. It is proposed to continue extracting limestone from a 21 ha area on the site. Upon completion of extraction, the area will be returned primarily for use as pasture for cattle grazing.

Figure 1 is a recent aerial photograph showing the property and its surrounds.

4. CRITERIA

4.1 The Regulations

Environmental noise in governed in Western Australia by the *Environmental Protection (Noise) Regulations 1997* (the Regulations). The Regulations set noise standards to ensure that noise from other premises is kept to assigned noise levels as follows:

"7. (1) Noise emitted from any premises or public place when received at other premises —

(a) must not cause, or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and

(b) must be free of –

i. tonality; and
ii. impulsiveness; and
iii. modulation"

"9. (3) Noise is taken to be free of the characteristics of tonality, impulsiveness and modulation if —

(a) the characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of the noise emission; and

(b) the noise emission complies with the standard prescribed under regulation 7(1)(a) after the adjustments in the table (Table 1.) to this sub regulation are made to the noise emission as measured at the point of reception."

Table 1: Adjustments for intrusive characteristics

Adjustment where noise emission is not music		
Tonality	Modulation	Impulsiveness
+5 dB	+5 dB	+10 dB

4.2 Assigned Noise Levels

The Regulation 8 describes assigned levels for sensitive areas for day and night time as follows:

Table 2: Assigned noise levels

Type of premises receiving noise	Time of day	Assigned level (dB)		
		L_{A10}	L_{A1}	$L_{A\ MAX}$
Noise sensitive premises: highly sensitive area	0700 to 1900 hours Monday to Saturday	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holiday	35 + influencing factor	45 + influencing factor	55 + influencing factor
Noise sensitive premises: any other are other than highly sensitive area	All hours	60	75	80
Commercial premises	All hours	60	75	80
Industrial and utility premises	All hours	65	80	90

Extractive industry due to the use of bulldozers may incur tonality penalty. In this case, the limestone is fairly soft and the tonality impacts are anticipated as being low.

5. METHODOLOGY

5.1 Software

This model has been developed using the software Sound Plan Essential ver. 4.0. This software is a version of Sound Plan which can be used for acoustic modelling and simulations for small projects where noise is emanating from a single source.

5.2 Modelling assumptions and input data

- Outdoor noise propagation has been modelled using international standard ISO 9613-2 model. The model includes the influence of meteorological information.
- The ground surface was developed using contour lines in 5m intervals and 2m intervals.
- Due to the rural location, the ground surface was assumed to be acoustically absorptive.
- Source sound power levels from manufacturers' data or from previous experience have been used.
- For modelling purposes, it has been assumed that all equipment works simultaneously to show the worst-case scenario.

6. PROPOSED WORKS AND POTENTIAL IMPACTS

6.1 Proposed Mining Actions

B&J Catalano Pty Ltd intends to continue extracting limestone from the 21 ha site (Figure 1), by using a D8 bulldozer and CAT 988 front-end loader. The bulldozer will rip and blade raw material to a stockpile where it will be loaded into Finlay crusher and processed. This will result in the extraction of approximately 55 000 m^3 annually, but this will depend on demand. It is intended to progressively rehabilitate the area to a mix of native vegetation and pastures for cattle grazing.

Table 3 provides a description of all activities, their duration and an assessment of potential for noise impacts.

Table 3: Summary of Noise Generating Activities

Activity	Duration	Equipment to be used	Comments
Strip and stack topsoil. Excavate limestone to processing site.	6 week per year from commencement	D8 Bulldozer CAT 988 front end loader (FEL)	No impact as specified by Noise Regulations to closest residents
Screening and stockpiling of limestone.	8 weeks from commencement	Finlay Screen 693 Striker 25m Stacker	No impact as specified by Noise Regulations to closest residents
Loading of trucks from stockpiles.	4 years at an average of 14 trucks per day	Single Semi-loader (24 tonnes) CAT 988 FEL	No impact as specified by Noise Regulations to closest residents
Rehabilitation of completed stages.	2 weeks per year from commencement	D8 Bulldozer CAT 988 FEL	No impact as specified by Noise Regulations to closest residents

6.2 Plant and Equipment to be used

Equipment to be used and the estimated maximum sound pressure of the equipment are summarized in Table 4.

Table 4: Equipment used on Site and source sound power levels

Equipment	Sound Power Level dB(A)
D8 Bulldozer[1]	116
Caterpillar 988[1]	111
Mobile Finlay Crusher[2]	113
Mobile Stacker[2]	100
Truck[1]	100

X[1] manufacturers noise data
X[2] noise data estimated from previous experience

6.3 Potentially Sensitive Receptors

6.3.1 Residential Dwellings

There is one residence within the impact zone of a 1000m from the extraction area (measured from the closest point) which can be exposed to some noise impacts. This sensitive receptor (Holiday Cottage Res 1) is owned by Geoffrey Thomas Pearson who is the landowner of the property. Residence 2 is located more than a 1000m to the west of the extraction area. Based on Sound Plan modelling for the limestone extraction operation, the 45dB contour occurs at about 500m from the noise source. Noise received at the two residences are shown in Table 5 and illustrated in Figure 2.

Table 5: Dwellings within 1500 m of the extraction area

Reference No. on Figure 1	Street/ Lot No.	Occupants Name	Distance to closest area of pit (metres)	L_{Amax}
1	Lot 4	Holiday Cottage (owned by landowner)	480	40-45
2	1815	Unknown	>1500	<40

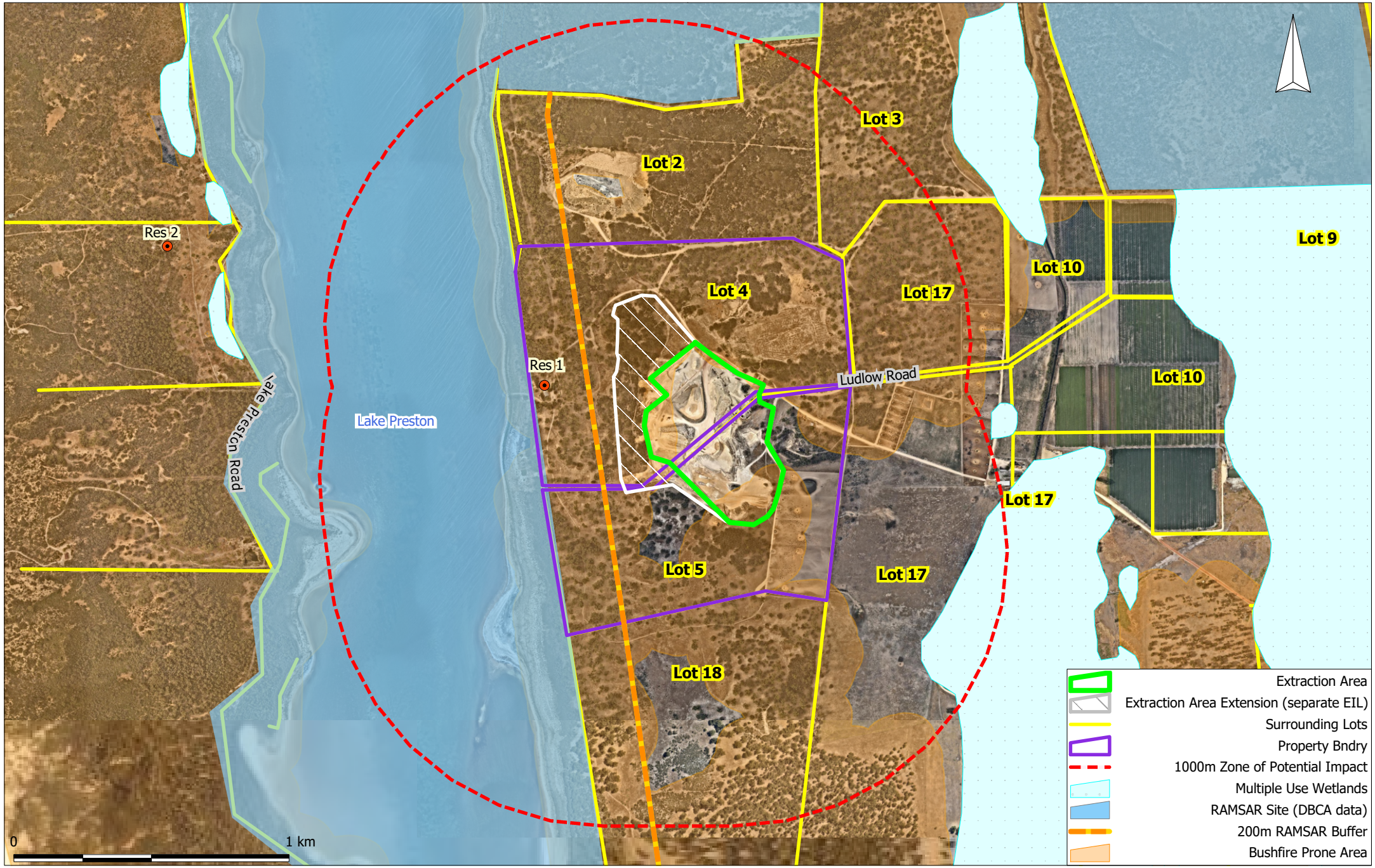
7. CONCLUSION

Based on modelling conducted there will be no noise impacts associated with this project.

8. REFERENCES

Department of Environmental Protection, Government of Western Australia. *Environmental Protection (Noise) Regulations 1997.*

FIGURES



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Project: Limestone Extraction
Location: Lots 4 & 5 Ludlow Rd, Myalup

Figure 1:
Site and Surrounds

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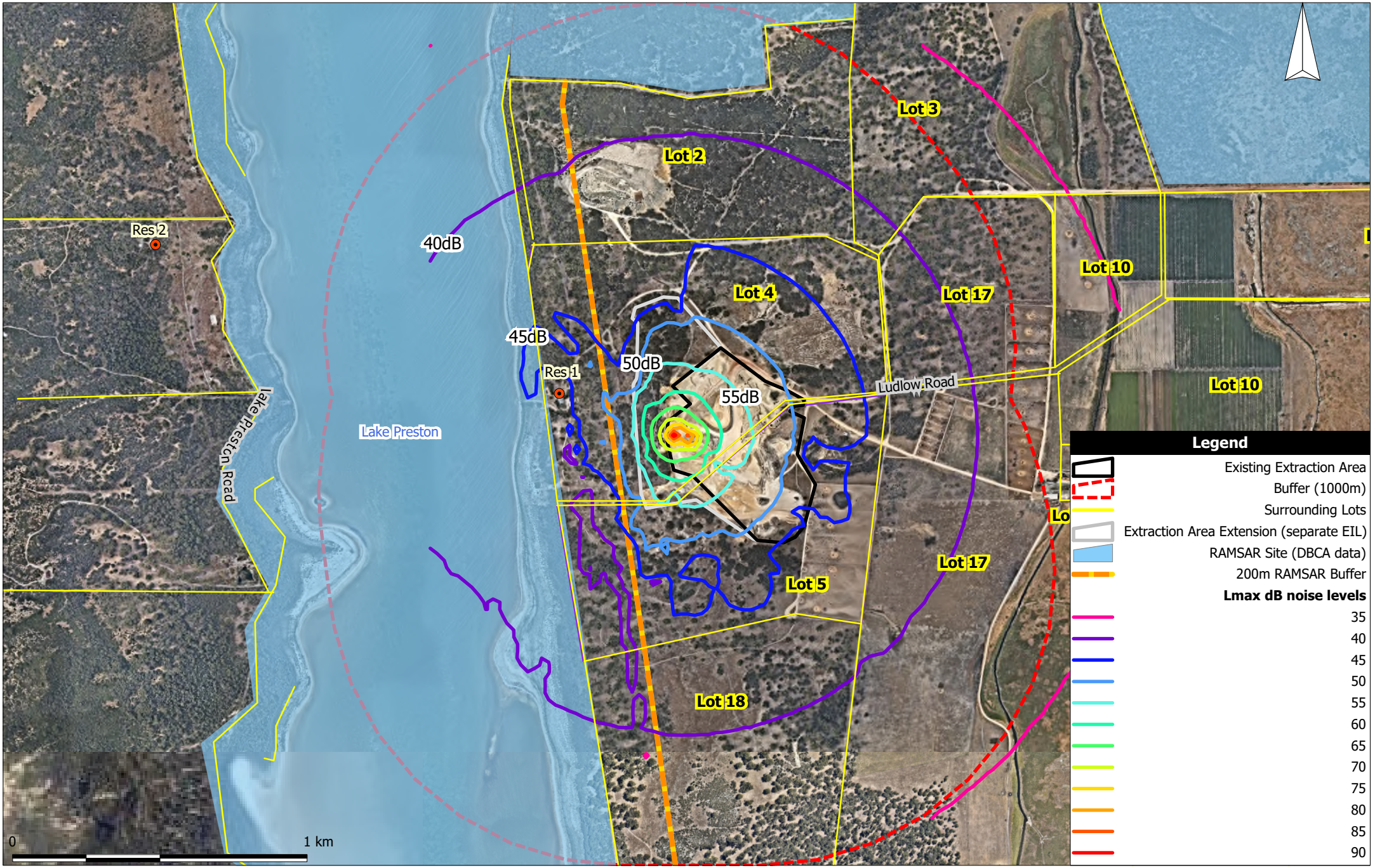

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Figure 2:
Noise Contour Map

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