Compliance Report – Eton Range Realignment Project, May 2020

EPBC Approval 2015/7552

May 2019 - April 2020

Australian Government

BUILDING OUR FUTURE

Queensland Government

Creative Commons information

Document control options

Departmental approvals

Refer to the appropriate Risk Assessment Tool for relevant reviewer and approver

Date	Name	Position	Action required *(Review/endorse/approve)*
24/05/2020	Tim Dalton	Senior Environmental Officer (Contractor)	Document for Review and Approval
	Patrick Aprile	District Director (Mackay/Whitsunday)	Approve

Prepared by	Tim Dalton
Title	Senior Environmental Officer (Contractor)
District & Region	Mackay/Whitsunday
Branch & Division	PDO
Project/program	Eton Range Realignment Project
Project number	242/33B/8
Project location	Mackay Regional Council
Status	Revision 1
DMS	450/642

Proponent and Approved Action

Detail	Applicable details
EPBC Reference Number:	2015/7552
Project Name:	Eton Range Realignment Project
Proponent:	Department of Transport and Main Roads
ABN:	39 407 690 291
Proposed Action:	To realign the Peak Downs Highway at Eton Range between Mackay and Nebo, Queensland
Reporting Period:	May 2019 – April 2020
Date Prepared:	May 2020

Declaration of Accuracy

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

Signed

Full name Patrick Aprile

Position District Director (Mackay/Whitsunday District)

Organisation

Department of Transport and Main Roads (ABN - 39 407 690 291)

Date 28/05/2020

Contents

Table of Figures

Table of Tables

1. Introduction

The Department of Transport and Main Roads (TMR) is currently constructing the Eton Range Realignment Project (herein referred to as 'the Project'). TMR submitted a referral for the Project to the former federal Department of the Environment (now Department of the Agriculture, Water and the Environment, DAWE) for impacts to matters of national environmental significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 27 August 2015.

In September 2015 DoE determined the Project a controlled action under the EPBC Act due to potential significant impacts MNES protected under Section 18 and 18A, Part 3 of the EPBC Act. In March 2016 DoE granted the Project approval with conditions. Construction commenced on the 4 April 2016.

Condition 16 of the approval requires that TMR prepares and publishes an annual report that assesses compliance with each of the conditions of the approval. This report is prepared for the period from May 2019 - April 2020.

2. Description of Activity

2.1 Project location

The Project is located approximately 35km south west of Mackay on the Peak Downs Highway. The Peak Downs Highway is part of the State Strategic Road Network in recognition of its importance to the economy of both Mackay and Queensland. The highway is part of the Emerald to Mackay freight corridor supporting the mining and agricultural industries of the Bowen and Galilee Basins (refer to Figure 1). The Eton Range is the main transport corridor across the Clarke – Connors Range.

2.2 Description of the Project

Key elements of the Project include the following:

- Sequential clearing of vegetation and ground preparation works to accommodate construction activities;
- Installation of drainage infrastructure including new culverts ranging in size from 1/600RCP to 3/2100RCP, as well as a culvert specifically for use as a fauna passage;
- General bulk earthworks which include approximately 400,000m^3 of road excavation and 280,000 m^2 of road embankment;
- Installation of complex longitudinal drainage systems in the centre median ranging in size from 1/450 RCP to 1/1500RCP, approximately 1 km long, with numerous branch pits and grated inlet pits;
- Excavation and concrete lining of an elaborate surface catch and batter drainage system to intercept and direct overland flow to controlled outlet points, over 3200 m^3 of reinforced concrete;
- Rehabilitation of approximately 950 m of existing roadway;
- Installation of an elaborate barrier system which includes w-beam, thriebeam and concrete barriers and other road furniture including road signs; and
- 6.4 hectares of landscaping/revegetation works, with approximately 4 hectares of 1:1 slope to stabilise and vegetate.

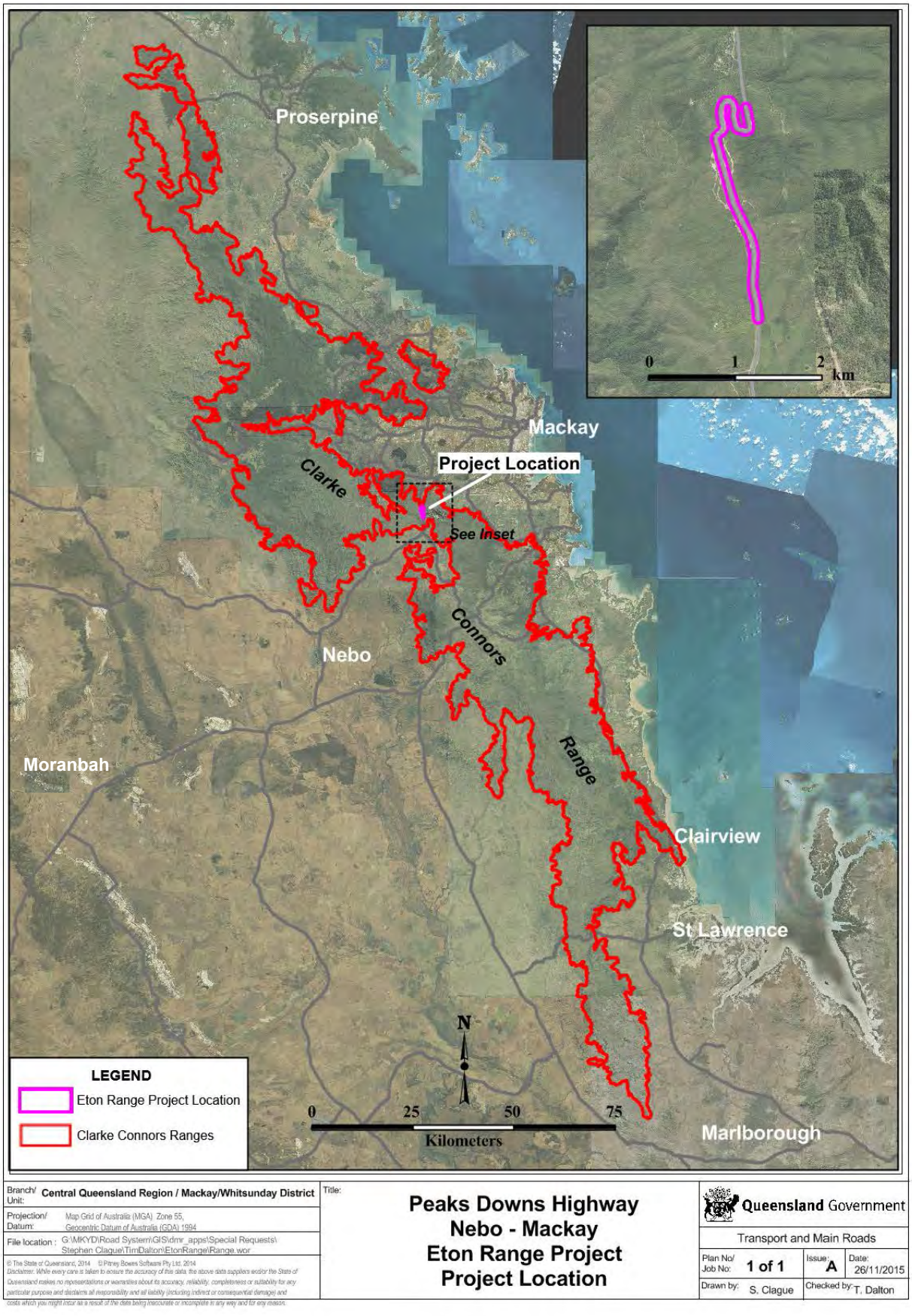

Figure 1: Project Locality

2.3 Project progress

Project progress between May 2019 and April 2020 includes:

- Completion of almost all remaining clearing activities;
- 95% of drainage structured completed including 12A culvert in Cut Creek;
- Completion of 100% of temporary stabilisation and 97% of permanent stabilisation works;
- 1500m of kerbing completed out of 2700m in total;
- Completion of 90% of permanent fauna exclusion fencing and installation of fauna crossing logs at the Project's specially designed fauna culvert;
- Four earthworks blasts at various locations across the Project (all project blasting is now complete);
- Completion of 90% of earthworks with 32,000 tonnes of material imported and over 125,000m^3 of in situ material processed;
- 20% of permanent landscaping works completed during this period (overall 80% completed);
- Completion of last major reinforced earth embankments (all reinforced embankment construction is now completed).
- 30% of hand placed concrete works (IE bench drains, catch drains) completed during this time;
- 100m of cast in situ barrier construction completed during this time (all now completed);
- 500m of extruded barrier completed during this time (all now complete);
- 30% of electrical and ITS works completed during this time (overall 60%);
- 50% of pavement works (Cement Treated Base application) completed during this time (overall 70%);
- 30,000m^3 concrete placed to date; and
- Two major traffic switches (Stage 1B and Stage 2) completed during this time.

Upcoming significant project milestones include:

- Minor Peak Downs Highway traffic switch (Contraflow on South Bound alignment) scheduled for July 2020;
- Final completion of the Project scheduled for late 2020.

2.4 Matters of national environmental significance (MNES)

The Project was assessed as having the potential to have a significant impact on the following MNES:

- Koala (*Phascolarctos cinereus*).

3. Compliance with Approval Conditions

Table 1 provides details of the compliance with the Project's EPBC Act approval conditions during the reporting period.

Table 1 Compliance with EPBC Approval

Condition number	Condition	Compliance				Evidence/comments/notable events
		Compliant	Observation	Non-Compliant	Non Applicable	
1	During **construction,** there must be no **koala** mortality attributable to **construction activity.**		✓			No koala fatalities have occurred during clearing or project related activities. One koala fatality occurred on the existing Peak Downs Highway in the vicinity of the Project during the reporting period. The koala was reported deceased by Fauna Rescue Whitsundays on the 05/10/2019. The female koala had been hit overnight by a member of the public on the existing Peak Downs Highway. An incident reported completed by the Contractor determined that the koala had been attempting to cross the highway. The incident investigation found no evidence that project related activities had impacted the animal's ability to successfully complete the highway crossing. To reduce the likelihood of additional fauna fatalities at this location, temporary fauna exclusion fencing was installed along the project boundary. Permanent fauna exclusion fencing at this location will be completed in late 2020. Several Koalas were sighted within the Project extent during the reporting period. In November 2019 multiple koalas were observed by the Project's fauna spotter catcher within the boundaries of areas requiring vegetation clearing and subsequent blasting activities. In consultation with DAWE and the Department of Environment and Science (DES), the Project's fauna spotter catcher identified, monitored, and safely relocated koalas deemed to be in harm's way. A summary is provided in **Attachment A – November 2019 Post Clearing Report**. Additional permanent fauna exclusion fencing has been constructed around the project boundary to reduce the likelihood of further animals entering the Project area during construction and subsequent operation of the highway.

Condition number	Condition	Compliance				Evidence/comments/notable events
		Compliant	Observation	Non-Compliant	Non Applicable	
2	The **approval holder** must not clear **koala** habitat outside the **project clearing limits** shown in the clearance plans at Appendix 1.	✓	✓			All approved project clearing has now been completed. Additional minor project clearing is required for the following activities: - Fauna exclusion fencing maintenance. This will consist of maintaining a 4-5m clearzone on either side of the Project's fauna exclusion fenceline. This is required to ensure that the Project's koala protection measures are effective during operation of the new road. Consultation regarding this is current underway with the DAWE post approvals team; and - Construction of a small concrete pad and CCTV camera. This will involve some minor (approx. 100m^2) clearing and grubbing of vegetation for construction of the pad and for line of sight requirements. Note that this vegetation is located within the confines of the Project's fauna exclusion fencing (IE no koalas will not be able to access) and is therefore not being considered as koala habitat. This work will be undertaken in mid-late 2020. The Contractor will comply with management actions specified within the Project's Fauna Management Plan.
3	For the ongoing protection of the **koala** in the **project area,** the **approval holder** must design, construct and implement **koala** protection measures, including fencing and a fauna underpass, prior to **completion.** These protection measures must be maintained by the **approval holder** for the **life of approval.**	✓				Construction on the dedicated fauna underpass has commenced and is ongoing. Fauna exclusion fencing erection is nearing completion. Vegetation maintenance works are required along the Project's fencelines to manage vegetation regrowth.
4	To inform adaptive management after **completion,** the **approval holder** must monitor the use of the fauna underpass and road kill within the **project area,** sufficient to assess the level of **koala** mortality from road strike and the ability of **koalas** to safely cross the Peak Downs Highway within the **project area.**				✓	Required to be undertaken after Project completion.
5	For the duration of the monitoring undertaken under Condition 4, the approval holder must publish the results of the monitoring for koala at least annually on the approval holder's website.				✓	Required to be undertaken after Project completion.

Condition number	Condition	Compliance				Evidence/comments/notable events
		Compliant	Observation	Non-Compliant	Non Applicable	
6	To compensate for residual impacts to the **koala,** the **approval holder** must within two years of **commencement,** provide a financial contribution of not less than $270,942 for research and research related work by **suitably qualified experts** that will contribute to the better protection and long term conservation of the **koala.** The research and research related work must include, but is not limited to: a. The provision of $47,300 to study **koala** population management units across the Clarke-Connors Range. b. The provision of $64,468 to undertake landscape analysis and modelling to predict future **koala** road-kill hotspots along the Nebo stretch of the Peak Downs Highway. c. The provision of $138,014 to study **koala** habitat use and movement patterns in the vicinity of the Eton-Nebo stretch of the Peak Downs Highway. d. The provision of $21,160 for investment planning for the installation of wildlife barriers and underpasses on the Peak Downs Highway between Eton and Nebo.	✓				Research and research related work commenced on the 21st July 2016. On ground surveys began in August 2016 and were completed in September 2018. TMR received the drafted koala research reports from CQ University in November 2018. The final CQ University invoice was processed upon receipt of these drafted reports. A total of $287,442.00 was provided to CQ University for the research project.
7	Within six months of **commencement,** the **approval holder** must provide to the **Department** a time-line of the proposed expenditure on research and research related work described in Condition 6.	✓				The time-line of proposed expenditure was provided to DoE on the 16th June 2016.
8	During the conduct of the research and research related work, progress must be reported to the **Department** annually and published on the **approval holder's** website.	✓				Research commenced in July 2016. The first annual report was published in July 2017. No summary report was published after the completion of the second and final year of the research as the data was to be shortly included in the published reports.

Condition number	Condition	Compliance				Evidence/comments/notable events
		Compliant	Observation	Non-Compliant	Non Applicable	
9	The **approval holder** must provide the results of the research and research related work to the **Department** and publish a summary of the results of the research on the **approval holder's** website within 12 months of the completion of the research. The summary of the results of the research must remain on the **approval holder's** website for the **life of approval.**	✓				Data collection and on ground surveys were completed in September 2018. Drafted reports were provided to TMR for review in November 2018. Finalised reports were submitted to TMR in March 2019 (which is considered formal completion of the research). The reports were distributed to stakeholders and uploaded to TMR's website in April 2019 https://www.tmr.qld.gov.au/Projects/Name/E/Eton-Range-Peak-Downs-Highway/Eton-Range-Realignment-Koala-Research-Project
10	The research described under Condition 6 must be peer reviewed.	✓				The research has been split up into individual publications all of which will be peer reviewed and submitted to Scientific Journals. The first of the publications is currently in review stage with submission expected for late 2020.
11	To compensate for residual impacts to the **koala,** the **approval holder** must, within 12 months of the research being completed, expend not less than $200,000 in applying the findings of the research and research related work described under Condition 6 by designing, constructing, and implementing wildlife protection and/or diversion infrastructure on existing parts of the Peak Downs Highway between Eton and Nebo.			✓		A total of $134,232.75 (inc GST) has been spent installing fauna exclusion fencing along the Peak Downs Highway at Denison Creek as recommended by the undertaken koala research. The remaining $65,767.25 is to be spent on fauna exclusion fencing works at Stockyard Creek. The fencing at Stockyard Creek were not completed by March 2020 due to matters out of TMR's control. Discussions are occurring with DAWE's Post Approvals team to address this non-conformance.
12	Within 12 months of expending funds to design, construct and implement wildlife protection and/or diversion infrastructure as described under Condition 11, the approval holder must provide to the Department and publish on the approval holder's website, a report on the nature of the wildlife protection and/or diversion infrastructure funded and a plan for monitoring and assessing the effectiveness of this infrastructure in delivering a conservation gain for the koala. The published report must remain on the approval holder's website for the life of approval.	✓				The Wildlife Protection - Monitoring and Assessment Plan was provided to DAWE on the 10/02/2020. The report was also distributed to stakeholders and uploaded to TMR's website. It will be updated once the fauna exclusion fencing works at Stockyard Creek are complete. https://www.tmr.qld.gov.au/Projects/Name/E/Eton-Range-Peak-Downs-Highway/Eton-Range-Realignment-Koala-Research-Project

Condition number	Condition	Compliance				Evidence/comments/notable events
		Compliant	Observation	Non-Compliant	Non Applicable	
13	Within six months of the conclusion of monitoring activity under the plan described under Condition 12, the approval holder must provide to the Department and publish on the approval holder's website, a report on the outcomes of the monitoring and assessment in delivering conservation gain (if any) for the koala. The published report must remain on the approval holder's website for the life of approval.	✓				Required to be provided and uploaded after the formal completion of monitoring. An interim report on the results of the first year on monitoring at Denison Creek was provided to DAWE on the 10/02/2020.
14	Within 20 days after the commencement of construction, the proponent must advise the Department in writing of the actual date of commencement of construction.	✓				TMR advised DAWE on the 4th April 2016 of the date of construction commencement.
15	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	✓				All records are maintained by the construction contractor and are being summarised and reported to TMR on a monthly basis. At completion of construction all documentation will be transferred to TMR. The records are available for review at any time and TMR's Contract Administrator and Senior Environmental Officer regularly inspect and audit the documentation.
16	Within three months of every 12 month anniversary of the commencement of construction, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval over the previous 12 months. The published report must remain on the approval holder's website for the life of approval. Non-compliance with any of the conditions of this approval must be reported to the Department at the same time as the compliance report is published.	✓				This report is the fourth compliance report for the Project and will be published on TMR's website.

Condition number	Condition	Compliance				Evidence/comments/notable events
		Compliant	Observation	Non-Compliant	Non Applicable	
17	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.				✓	To date, there has been no direction from the Minister to complete an independent audit.
18	If, at any time after five years from the date of this approval, the approval holder has not commenced construction, then the approval holder must not commence construction without the written agreement of the Minister.	✓				The Project commenced on the 4th April 2016.

4. Site Photos

Figure 2: New MC002 (southbound) alignment under construction

Figure 3: Northbound traffic on the MC001 alignment completed in 2019

Figure 4: Pavement and shotcrete works at upper hairpin

Figure 5: Koala sensitive infrastructure prior to landscaping activities

Attachment A – November 2019 Post Clearing Report

Kleinfelder Australia Pty Ltd
10/156 Boundary Street
WEST END QLD 4101
T| 0488 267 022

www.kleinfelder.com.au
ABN: 23 146 082 500

BRISBANE OFFICE

15 November 2019
Ref: NCA19R103394

Fulton Hogan Pty Ltd
Garden City Office Park,
8 / 2404 Logan Road
Eight Mile Plains, QLD 4113

Attention: Whitney Heiniger

Email: whitney.heiniger@fultonhogan.com.au

Subject: Fauna Spotter Catcher Services – Eton Range Realignment Project

This letter is to confirm that Fauna Spotter Catcher services, and specific risk-reduction actions for koalas, on the Eton Range Re-alignment Project were completed in October-November 2019.

The Eton Range Re-alignment Project, to upgrade the Peak Downs Highway where it crosses the Clarke-Connors Range, is a major civil infrastructure scheme being undertaken by Fulton Hogan Pty Ltd on behalf of the Queensland Government's Transport and Main Roads department (TMR). A significant population of koalas (*Phascolarctos cinereus*) exists in the area surrounding the project, and extensive research, planning and mitigation measures were undertaken before commencement of work to minimise harm to this species and its habitat.

Kleinfelder was then engaged to provide koala-spotting services for tree clearing works, as well as standard fauna spotter catcher services. The presence of a number of koalas within the project boundary then necessitated further management measures. In consultation with Fulton Hogan, TMR and the Department of Environment and Science (DES), Kleinfelder was granted specific permission to identify, monitor, and safely relocate koalas deemed to be in harm's way. Work was carried out under Kleinfelder's Rehabilitation Permit WA0005492. A summary of the work undertaken is provided below.

PROJECT UNDERSTANDING

Kleinfelder was commissioned by Fulton Hogan to undertake a vegetation pre-clearance assessment, Koala presence survey and fauna habitat identification for the purpose of vegetation clearing as well as provide fauna spotter catcher services to observe tree clearing work and mitigate impacts on wildlife. The final stage of tree clearing was timetabled for late October 2019, after which blasting was scheduled in this area of the project site.

PRE-CLEARANCE ASSESSMENT

The pre-clearance assessment was designed to identify potential fauna habitat within the supplied clearing boundaries. The results were then to be used to ascertain appropriate fauna management requirements during the works. This action was in accordance with Queensland legislation, specifically Section 88 of the *Nature Conservation Act 1992* (NCA) and Section 332 of the *Nature Conservation (Wildlife Management) Regulation 2006* (NC(WM)R) on tampering with animal breeding places, as well as site-specific environmental management plans.

Specifically, the pre-clearance survey involved:

- Field assessment of all vegetation subject to clearance under Fulton Hogan's specifications;
- The identification and marking of all trees with potential habitat in the form of hollows, nests, roosts, or other sign indicating the presence of fauna; and
- Presence/ absence of koalas within the vegetation clearing zones.

This report presents the survey results, describes points of interest and management processes with fauna.

DESKTOP ASSESSMENT

A desktop assessment was conducted on the study area prior to the commencement of field work. Desktop reviews give field staff an understanding of the Regional Ecosystems likely to be encountered and can provide information pertaining to threatened fauna and flora, climatic conditions, and habitat structures/areas, e.g. tree species likely to bear hollows. This information also assists field staff in the preparation of materials and resources likely to be used on species within the clearing footprint. Information was obtained from the following databases:

- Department of Environment and Science (DES) wildlife search tool https://www.qld.gov.au/environment/plants-animals/species-list
- EPBC Act Protected Matters search tool http://environment.gov.au/epbc/protected-matters-search-tool
- Department of Natural Resources and Mines https://www.dnrm.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form

Further information was ascertained from previous impact assessments;

- *Importance of Koala Habitat Associated with the Eton Range Realignment Project* Koala Research – Central Queensland University
- *Eton Range Realignment Project – Fauna Assessment Report* Ecological Survey & Management

Regional Ecosystems (REs) have been described under the Queensland *Vegetation Management Act 1999* for the subject site being;

RE 8.12.5a: *Lophostemon confertus* and/or *Eucalyptus portuensis* (or *E. exserta*) open forest. Occasional co-dominant or associated species include *E. drepanophylla*; and

RE 8.12.12a: *Corymbia intermedia +/- Eucalyptus platyphylla* open forest/woodland with co-dominant eucalypts including *E. drepanophylla, E. tereticornis.*

FIELD RESULTS

A preclearance site assessment for koalas and fauna habitat value was completed on 10 October. Vegetation was noted to be consistent with REs mentioned above. A number of trees were noted as potentially containing hollows, and marked with hi visibility tape and a GPS waypoint in preparation for clearing. Habitat points are presented in **Figure 1.** No Koalas were observed at this time. Site vegetation and habitat is displayed in **Plates 1 & 2.**

Immediately prior to scheduled clearing on 29 October a young Koala was located in a *Eucalyptus drepanophylla* (ironbark tree). Further surveying of the area resulted in another two koalas being detected within the vegetation clearing area. Remaining vegetation and koalas were also within 100m of the scheduled blasting area.

Metres
0 10 20 40 60 80 100

N

PROJECT REFERENCE: 20181758

DATE DRAWN: 2019/11/15 14:01 Version 1

DRAWN BY: GJoyce

DATA SOURCE:
© State of Queensland (Department of Environment and Resource Management) - 2010

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

Habitat Features

Fulton Hogan
Fauna Management
Eton Range Realignment
Peak Downs Highway

FIGURE:

1

L:\GIS FOLDER\00 CLIENT FILES\127661_FultonHogan\20181758_EtonRange_Fauna_WeedMgmt\Mapping\P20181758_Fig1_HabitatFeatures.mxd

Plate 1: Reserved vegetation containing koalas

Plate 2: Construction traffic/ hazards

FAUNA SPOTTER CATCHER SERVICES

Vegetation clearance and habitat removal was conducted in the presence of a suitability qualified fauna spotter catcher (FSC). The use of excavators for vegetation clearing and methods of 'soft fell practices' were applied for marked habitat. Immediate inspection before and after felling was conducted in accordance with TMR's SMP for habitat disturbance and Standard Operating Procedures for FSC activities. All fauna captured during clearing operations were recorded via GPS unit.

Table 1: Fauna interaction

Common Name	Species	Count	Capture	Release
Coastal Carpet Python	*Morelia spilota*	1	-21.33214 148.93912	-21.34005 148.93231

KOALA MANAGEMENT

With the known presence of koalas within the clearing boundary, standardised protocols for koalas on clearing sites, and Fulton Hogan's own koala protocols were enacted. Specifically, a 30 metre exclusion zone from the koala tree with zero vegetation impact was established. Blasting operations were postponed to allow the animals to move out of the impact zone of their own volition. Two out of three koalas left the clearing area of their own accord overnight, one remained for several days. Temporary exclusion fencing was erected in a manner to direct the individual towards reserved vegetation.

A survey of other vegetation areas (to be reserved) within the project works boundary noted a further two koalas. These areas were deemed high risk to fauna as they were between the Peak Downs Highway and new sections of highway under construction. Koalas were

specifically of concern in these vegetation islands because they lacked a treed path to allow self-relocation, were at risk of harm from machinery operating nearby, and of straying onto the downhill carriageway of the highway.

Due to the tree clearing and blasting being part of the critical path works for the project, and because the other area harbouring koalas was subjecting them to potential risk, Kleinfelder was requested to assist Fulton Hogan in exploring other avenues to allow works to continue without negatively impacting the animals. Koalas within high risk areas are displayed in **Plates 3 & 4.**

Plate 3: Koala in trees due to be cleared

Plate 4: Koala in high risk area

RELEVANT LIGISLATION AND APPROVALS

In consultation with DES and TMR, Fulton Hogan and Kleinfelder sought relevant permissions to reduce risk to all koalas within the project boundary. Additionally, Fulton Hogan carried out interim risk-reduction and night-camera monitoring work. This joint activity consisted of;

- Consultation with DES to determine if capturing and relocating a koala in these circumstances was appropriate and lawful under Kleinfelder's wildlife rehabilitation permit.
- Consultation with TMR to determine if clearing trees within the 30m exclusion zone would in this case reduce rather than increase risk to a koala, by encouraging it to leave a dangerous area.
- Seeking advice from a wildlife carer organisation about passive trapping options and equipment.
- Installation of temporary fencing around trees containing koalas to guide them away from the area when they descended.
- Installation of monitoring cameras to record koala movement in relevant trees.
- Installation of metal sheeting around trunks of trees due to be cleared to discourage koalas from climbing them.

Written authorisation from Senior Wildlife Officers at DES granted permission under Kleinfelder's rehabilitation permit (spotter catcher) WA0005492, noting that: permit activity authorises the capture of Vulnerable wildlife under Schedule 3 with specific conditions relevant to Koala's – RRPC08 and PLR06 for planned human activities within Koala Mapped Habitat District C.

Following clarification of the legislative position and granting of the relevant approvals, two main actions were implemented:

- Cautious clearing of trees within 30m of the tree containing the koala in the clearing zone; and
- Deployment of a safe trapping method for koalas.

Tree clearing was observed by a Kleinfelder fauna spotter catcher who closely monitored the koala and advised on its movements. Mobile plant ceased operating if this animal showed signs of stress or descended to the ground before ascending nearby trees. Removal of vegetation reduced the attractiveness of the area to the koala. Further encouragement to disperse if it descended to the ground was created using fencing to funnel it off the project site and into close, suitable linked habitat.

A purpose-built trap for capturing an adult koala unharmed was sourced from Fauna Rescue Whitsundays and installed under the relevant tree. This trap was also deployed under other trees occupied by koalas deemed to be at risk of harm. It consists of a box with a clear Perspex back, containing a trip board which activates a sliding door if a koala tries to pass through the box. The trap is positioned so it as to form the only exit from a corflute cordon set up around the base of the tree. Shade was provided using a piece of material, with the trap being checked twice daily. **Plate 5** displays trap method and installation.

Plate 5: Trap method/ installation

On 6 November one of the three koalas known to be inside the project boundary was captured unharmed. This individual was successfully relocated to suitable koala habitat outside the project site and beyond the fauna exclusion fencing. A second koala was encouraged to descend from a small tree using a “flagging” method recommended by experienced koala rehabilitators, and ushered off site. A third koala was successfully trapped overnight on 6/7 November and was successfully relocated unharmed. The koala occupying a tree in the tree-clearing zone left the area on the same night, allowing remaining trees to be cleared under observation by a fauna spotter catcher, after which blasting was also carried out.

Kleinfelder was subsequently asked to survey all pockets of trees within the project boundary, which revealed the presence of two koalas, one of which was thought to be the animal from the tree-clearing area, which had moved into less disturbed vegetation but was still within the hazardous areas of the work site. This animal was successfully trapped overnight on 8/9 November and relocated. Koala capture and relocation coordinates are presented in **Table 2.** **Plate 6 & 7** display trapped koalas and release.

Table 2: Koala Capture/ Relocation

Date	Species	Capture	Relocation
6.11.19	*Phascolarctos cinereus*	-21.33539 148.93719	-21.34005 148.93231
6.11.19	*Phascolarctos cinereus*	-21.33509 148. 93764	Assisted Self-Relocation
7.11.19	*Phascolarctos cinereus*	-21.33709 148.93716	-21.34005 148.93231
9.11.19	*Phascolarctos cinereus*	-21.33613 148.93687	-21.33885 148.93301

Plate 6: Trapped koala

Plate 7: Koala release

All koalas captured were inspected for health before release. Further checks did not locate any more koalas within the project site. Two were observed in trees outside the project boundary and temporary fencing was installed to prevent them accessing the site.

Should you require any further information regarding the delivery of our services for this project, please let me know.

Sincerely,

Kleinfelder Australia Pty Ltd

Nick Malmstedt B AppSc

Ecologist; Fauna Spotter Catcher Coordinator