



BEMROSE
WILDLIFE MANAGEMENT SERVICES

Site: Lockyer Energy Project. Ranger road. Adare

Date of service: 06/09/2021

2021

**Fauna Management and Consultancy
Fauna and habitat compliance inspection.
Arche energy/New England Link Pty Ltd.
Pre-clearance report.**



Dean Bemrose.

Bemrose Wildlife Management Services.

6th September. 2021

Arche Energy Pty Ltd.

Copyright. ©

TABLE OF CONTENTS

1.0 Scope of Works.....	2-9
2.0 Project Description.....	10,11
3.0 Fauna and Habitat Project Description.....	11-13
4.0 Legislative Framework.....	13
5.0 Koala Spotter Scope of Works.....	13-15
6.0 General Site Observations – Fauna and Habitat.....	15-16
7.0 Conclusions.....	16,17
Disclaimer	18
Photographic plates: 19-26	

1.0

SCOPE OF WORKS

Bemrose Wildlife Management Services (Queensland Government Rehabilitation Permit number WA0021286) was engaged by Arche Energy Pty Ltd to conduct the onsite fauna management and habitat compliance inspection (pre-clearance fauna and habitat compliance phase) - Fauna/Koala Spotter scope of works service at the authorised developmental site, specifically pertaining to the proposed Lockyer energy Project scope of works site, situated at the scope of works site address Ranger Road, Adare. To note, the access point for this specific site is via Fords Road, Gatton. The foundation of the project is to facilitate the expansion of energy assets for the immediate region.

A Gas turbine facility is proposed to be constructed within the impact area delineated by impact areas:

1. 7.24Ha
2. 0.17Ha
3. 3.51Ha
4. 7.46Ha

Offset areas A and B will not be impacted.

Clearance phases 1 and 4 as per the GHD Vegetation Management Plan contains the primary footprint for the facility. These zones have been assessed with no EVNT fauna located, nor any active breeding places of low or high ecological significance. Vegetation in zone 1 has dominant canopy floristic variances of *Corymbia* (Iron Bark species) and *Eucalyptus* (Spotted Gum). The understory is dominated by *Acacia* species. Very low volumes of invasive weed species were observed throughout the site proper. Zone 2 is indicative of minor works along the firebreak trail and zone 3 is primarily focused on the forward perimeter of the site (Fords Road). Critical positive information relayed is that hyper vigilante vegetation clearance protocols have been enacted that will directly result in only selective clearance within the boundaries. Indicated by the VMP is two separate polygons of habitat retention in addition to low level ephemeral swamp areas located SSW area of the site. Critical information and supporting documents have been forwarded to Bemrose Wildlife Management Services.

Possible Special Least Concern species (Short-beaked Echidna) is possible within the greater scope of works site as indicated by excavations of terrestrial termite mounds scattered randomly throughout the site. Robust protocols inclusive of searches in and around the termite mounds will be conducted to ensure no fauna is inhabiting the structures. If Echidna/s are located, they will be translocated into the Ecological Protection Zones that are held in perpetuity as these zones contain a high level of suitable analogue habitat features

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

critical for Echidna to maintain survivorship potentials. Assessments of the translocation areas will focus on potential indicators of predators that have the potential to inhabit the area (feral dogs). It is known to be the breeding season for Echidna, therefore strong observations will be occurring whilst vegetation management is mobilised. Protocols activated for this site entail pre-start check and clear fauna management programs. Koala active searches will be maintained during the duration of vegetation management works. The general site area is open wooded Eucalypt Forest of mature age. It was observed during the stipulated compliance fauna and habitat inspection transects that the Forest has been utilised as a mixed usage (Cattle and livestock grazing). Observations indicated that the bulk of the vegetation assets did not contain hollows. Comprehensive check and clear protocols have been activated to ensure all trees as inspected for hollows.

Activation of stipulated regulations required fauna friendly fencing to be installed. The fencing was observed and is deemed suitable and accepted. This aspect of the program will enable a fauna management program, where suitable, to afford fauna natural egress off site. A direct positive if this does occur under controlled conditions, is that minimal stressors are imposed, thus reducing myopathy consequences. Sequential clearance as scheduled will dictate that the vegetation clearance program moves in a general Northerly direction into the EPZ offset areas. No unauthorised movements will impact the EPZ's.

The firebreak trail is relatively cleared of vegetation (buffer zone 10m wide) and will not be significantly impacted. Vehicle access is available with minimal impact.

The proposed methodology of vegetation management will mobilise (1) 30t excavator to conduct the clearance program in collaboration with chainsaw feeling along the TPZ's in order to not impact tree root zones. Shearing and mulching is to occur at a relative rapid pace to ensure no vegetation stockpiles are fallow for periods greater than 24 hours. Check and clear protocols are activated to assess stockpiles as necessary. It is evident that a strong general strategy has been activated for this scope of works site to ensure maximum productivity with a robust Fauna and habitat management and welfare program being activated. Downtime in between clearance days will afford respite for fauna inhabiting the environ.

This phase of habitat and fauna management once authorised clearance is affirmed will be supervised and managed by Bemrose Wildlife Management Services to comprehensively maintain the fauna and habitat integrity and assets within the scope of works site. Translocation sites will be determined for habitat features of ecological significance to be transported in conjunction with suitable analogue habitat for the proposed translocation of fauna species. EVNT fauna species if located will be managed in accordance with legislative and policy frameworks. It is noted that this document pertains to the scheduled and

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

qualified vegetation specimens that are proposed to be removed that did not contain any anecdotal fauna evidence of significance nor any ecological functionality of significance.

Upon inspection of the site, required Tree Protection (environmental Protection/ecological protection) fences and delineation of these zones has been established via the principal contractor for the site. It is noted that no observations in specific reference to EVNT fauna or ecologically significant (low or high breeding places of concern) was observed throughout the site. Should any fauna be located, the species will be captured and relocated as required into suitable and protected analogue habitat. Anticipated fauna species to be potentially encountered are - Brush-tailed Possum, Ring-tailed Possum, S.E Qld Bearded Dragon, S.E Qld Water Dragon, S.E. Qld Coastal or Carpet Python, Common Green Tree snake.

The scope of works site does afford suitable EPZ's within the site and may be referenced for potential relocation points. Open egress potentials is available for natural egress by fauna leading to suitably treed areas. The site vegetation is to be dismantled utilising professional Chainsaw felling crews and directional sequential clearance felling mechanisms. All vegetation assets and floristic communities will be comprehensively checked and cleared prior to the removal phase.

It is a positive mechanism within this framework that a site specific retain/remove program has been enacted in order to preserve as many vegetation assets as possible and maintaining a floristic diversity for the immediate environ.

In reviewing the VMP for this scope of works site, adjacent areas may be utilised as translocation refugia. Within these areas Non-Juvenile Koala Habitat Trees are located. Fauna load reduction mechanisms may be implemented to manage and enhance potential fauna survivorship; however, it is anticipated that the sedentary and potential vagile species will have egress points that will lead into analogue habitat features. Macro and micro habitats will and have been assessed to determine refugia for vagile fauna that may be encountered during the fauna management program. Robust fauna species inclusive of Carpet Python to Brush-tailed Possum will be relocated with a strong probability of adapting to areas external to the scope of works site. The fauna management and habitat inspection of the highly selective trees within the scope of works site were isolated and consisted of minor groves with no ecologically significant terrestrial stratum level. Native tussocks of grass were observed throughout the site and around the basal regions of the trees. No herpeto-fauna, or any alternate fauna species was observed. Wren, Manakin and Finch species are highly probable to be observed. Any active breeding site (Avian nesting site) will be maintained until vacated. The aforementioned species do construct nests within grassed areas approximately 500mm and above.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

The Dam located within the works zone will not be primarily affected, with the primary methodology of clearance being chainsaw at the basal areas and stumps left in situ below ground level to assist in stabilising the dam wall. Australasian Bee-eaters were audible (not observed), therefore any embankment structure will be assessed before impacted to determine activity presence of earthen breeding tunnels and chambers.

Primarily, the age of the scheduled selective clearance of NJKHT's is not phyto-morphologically at an age whereby hollows should have developed. Therefore, in theory restricting the observations and breeding places of arboreal mammals.

Hollows generally form when a suitable tree reaches an age of 80 years. This is highly dependent on the species of tree. Ironbark species, utilising field experience and knowledge do not develop hollow bearing natural assets as frequently as – for example – Scribbly Gum species. This is due to the greater density of the Ironbark wood. Arboreal termitaria, however, is active within this site. It is known via research models and infield experience morphologically Ironbark species have deep furrows (trench like vertical indentations of the bark) that enable termite species to mobiles relatively low impacts to survivorship as the furrows provide direct cover from predation with minimal sunlight penetration. Excavations to arboreal Termitaria via Greater Kingfisher species (Kookaburra) is frequently observed. These excavations can be inhabited by Brush-tail Possum and or Lace Monitors. When any hollow bearing natural asset is removed at least one habitat box applicable to the gauge of the removed habitat hollow should be installed. Salvageable hollows can be re-installed in adherence with a translocation strategy.

Uninhibited line of sight potentials from the basal areas of scheduled trees to the upper canopy stratum levels is common throughout the site. Techniques that were utilised during the pre-clearance phase involved standard Bemrose Wildlife protocols for observing arboreal fauna. Basal searches of the selective areas were carried out to determine Koala presence in conjunction with 360° basal to upper canopy Koala searches. No Koala anecdotal evidence (Koala climbing evidence and scat trace) was observed. No physical observations of Koala occurred at any stage of the program, inclusive of the pre-clearance inspections carried out the day before. Dique et al and S.P.O.T fauna management mechanisms were adopted for this project.

Prior to the compliance offered regarding fauna and habitat management of the selective trees, site instructions were relayed via representatives of Arche Energy to categorically confirm the proposed program and to affirm via Bemrose Wildlife a concise action and implementation fauna and habitat management program.

No arboreal or terrestrial fauna was observed. No fauna, inclusive of EVNT fauna was observed at any stage.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

Concise actions were afforded by the pro-active involvement of all parties to enact a program that was geared towards the safe outcome of fauna and a no injuries or deaths to any fauna within the scope of works site.

No Avian breeding places were observed – active or inactive. No arboreal termitaria was observed to have excavated breeding chamber/resting/sheltering access points. No EVNT fauna was observed. No Special Least concern fauna – Echidna or Platypus was observed. Within this scope of works site, no riparian zones or encroachment into creek systems did occur. No earthen embankments are to be affected during the scope of works that would affect potential breeding chambers constructed by Striated Pardalote.

Check and clear protocols enacted to observe any fauna or habitat features of significance.

A strong commitment is maintained by all parties concerned and associates to enhance and preserve the environmental attributes on all sites when possible. This is a strong pro-active involvement to preserving and conserving critical Australian habitat. A proactive engagement by the shire of the Lockyer Valley is noted for the greater engagement and welfare of fauna and potential refugia ecological habitat features.

Strong positive communication between the Scope of works delegate/s, and Bemrose Wildlife has occurred to develop a suitable mitigation strategy.

It is widely accepted that this strategy is suitable and approved via the Dept of D.E.S.

No anecdotal climbing indicators were observed on any of the potential Non-juvenile Koala Habitat Trees. High vigilance regarding Koala observations will be enforced by Bemrose Wildlife and activated on this site.

No RAMSAR wetland sites or any alternate trigger documents or places of significance was detected or observed throughout the scope of works site. No Special Least Concern fauna species were physically observed, or audible call indicators recorded. No ephemeral or permanent water bodies are located onsite, therefore no Platypus was recorded. No threatened species was detected via the pre-clearance fauna and habitat compliance inspections conducted on the primary day of vegetation management assessment. Under this legislative document all pertinent clients were advised of the obligations under this scope of works. No medium or large herpeto-fauna was observed. Egress points are located at the rear of the perimeter as potential short range relocation sites. This will be evaluated on a situation-by-situation relocation program.

Under the Queensland state legislative pieces inclusive of the *Animal Care and Protection Act 2001 (ACP Act)*, *Nature Conservation Act (NC Act)* and subordinate legislation, *Biosecurity Act 2014*, *Environmental Protection Act 1994 (EP Act)*, *Planning Act 2016 (Koala Conservation)* and the *Vegetation Management Act 1999 (VM Act)* (essential habitat) has

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

been assessed as per protocols and in addition to pertinent data that has been forwarded to assess. The Code of Practice – Care of Sick, Injured or Orphaned Protected Animals in Queensland is acknowledged via the Department of Environment and Heritage Protection 2013a.

Active diurnal check and clear grid and linear transects were activated during the fauna and habitat onsite compliance phase.

Protocols adopted by the fauna management and consultancy program adhered to by Bemrose Wildlife has developed a site VMP/FMP that does allow vegetation assets within the greater framework of the design plan to retain biodiversity values via understorey and canopy movement opportunities with the strong potential for protection from potential elevated risk posed by predatorial fauna.

Fauna aggregation of risk and distribution should not be significantly affected within the greater system/s post vegetation removal. Allogenic succession is a potential within the scope of works general Civil program, however, the potential affects have been significantly reduced via the retention of habitat values.

A fauna friendly composition of existent RE values is located surrounding the scope of works site which will be activated as a release point should any fauna be required to be captured and relocated. Translocation of terrestrial based refugia into these zones will create a terrestrial based ecosystem value.

Vagile fauna - Possums, Crows etc may be encountered within the scope of works site. No significant level of arboreal termitaria was encountered. No Varanid species was observed at any location of the site (Goannas can and do utilise arboreal fauna as breeding and resting locations. During this phase of operations, medium to large Varanid species are possible to be in the phase of breeding.

There is a strong commitment by the contracted fauna consultant- Bemrose Wildlife, consultancy recommendations and stipulations via the Shire, Government, principal contractor in optimising the potential for habitat enrichment and retention. Specifically, the implementation and action and implementation plan in installing functional and salvageable naturally occurring habitat hollows that are located within the scope of works envelope and translocated into suitable analogue areas. Any salvageable and suitable organic refugia that could serve as potential habitat values will be translocated into the EPZ with the common goal of retaining any habitat value suitable. This action provides the opportunity in reducing potential intra-specific and or inter-specific fauna competition. This implementation will allow the opportunity for breeding places of low and high ecological feature significance to occur. Non-Juvenile Koala Habitat Trees are observed within the greater envelope. Appropriate and authorised fauna management mechanisms have been engaged to mitigate

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

the vegetation management process. No Avian nesting sequences or fauna behaviours were observed on the day of fauna and habitat inspection.

Potential EVNT fauna assemblages or individual species now have a greater potential in maintaining the biodiversity values for the immediate environ primarily with the assistance of the management and mitigation planning in effect. In addition to the positive environmental enrichment, it will allow the FSC program to utilise the EPZ (fauna friendly areas) to great effect. The transects that were adhered to and conducted as per Bemrose Wildlife and local government stipulations during the fauna and habitat walk through was beneficial in ascertaining the habitat values. The potential for micro bat colonies is registered and will be managed accordingly, however the probability is low. As per protocols and if required an EWP will be actioned to secure the asset and evaluate the fauna within.

As per the directives of Bemrose Wildlife felled vegetation stockpiles will be inspected prior to being chipped or mulched. The area within the scope of works site is heavily grassed and is a suitable habitat for Bandicoots. Therefore, comprehensively checked and cleared prior to operational works occurring. Transient Ave species were observed intermittently during the phases of fauna management. Specific attention was directed towards Koala activity presence or anecdotal evidence that would indicate recent activity within the scope of works footprint.

An open and unobstructed egress pathways will be maintained during the scope of works program can be provided into the EPZ if required, however not anticipated

This pre-clearance fauna and habitat report will be filed with the client to subsequently forward to the applicable delegate/s in order to fulfill the fauna management compliance (fauna and habitat inspection pre-clearance inspection service).

The area of proposed vegetation clearance was traversed via the senior Koala Spotter/Fauna consultant (Bemrose Wildlife) to categorically observe the clearance lines that were installed under the strict governance of the State Governmental overlays in correlation with the strict D.E.S (Koala Team assessment of document and Koala protection policy frameworks). No changes to the structure and floristic composition is anticipated to occur prior to or during the clearance activities.

Non-Juvenile Koala Habitat Trees were located within the scheduled vegetation management areas. Standard FSC control mechanisms are enforced for this project and will always be managed with an onsite presence during the phase of vegetation removal. Comprehensive toolbox meetings have been activated for this project to ensure complete transparency and continuity.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

All pertinent Governmental authorities have been communicated with as per the enforced stipulations. The program has been scrutinised and is categorised as within areas of the bioregion that is essential and within a core Koala area mapping zone.

Bemrose Wildlife conducted the comprehensive fauna management inspection compliance works during this vegetation management phase. *Eucalyptus* and *Corymbia* species are scheduled to be removed. As Non-Juvenile Koala Habitat and potential food and home trees were located within the footprint, all precautionary principles of fauna/EVNT management were observed and enforced during this phase.

During the transect walkthrough mechanisms, no fauna was observed and no ecological values of significance that would suspend the site clearance works in specific regard to the fauna/Koala spotter and consultancy perspective. Comprehensive check and clear grid transect inspections did occur on the days of service, activating the fulfilment of the fauna and habitat clearance compliance at the scope of works site known as the Lockyer Energy Project. No clearance other than that certified will occur during the onsite works program. Toolbox pre-clearance talks did occur to inform those onsite pertinent to the program of the program implementation.

The level of vegetation removal is confined to the actual property and has been assessed. This action is for the delineation and categorical transparency of vegetation to be removed and is acknowledged by Bemrose Wildlife Management Services and is in accordance with the specified due diligence compliance framework stipulated by the governing authority.

No levels of floristic or structural variations or levels of high ecological significance was observed. Potential Koala home and food trees are existent on the property in general, however no indicators of recent active utilisation of the native and endemic floristic varieties was observed.

All levels of due diligence were afforded by the site owner. Onsite inspections of the site involved observations of habitat trees and the terrestrial stratum levels.

Plant machinery operators are authorised to slow fell habitat assets onsite. Vegetation was lowered in the direction stipulated by the fauna consultant and design plan in order to afford maximum safe egress pathways for fauna that is deemed not be required to be captured. Habitat retention during this phase is to be maximised when feasible allowing a continued endemic ecological population dynamic.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

2.0

PROJECT DESCRIPTION

Floristic variances within the scope of works are inclusive of minor presence of *Eucalyptus* and non-juvenile Koala habitat trees. The site is a progressive site that is to be terraformed for an expansion of assets for energy functionality and economic progression. Primarily to aide in the greater expansion of assets to accommodate general population and residential catchment growth for the Shire and general region.

General structure and floristic ecological significance within the corridors was not determined to be of a high ecological or floristic level, therefore selective vegetation removal was permitted under the direction and supervision of a fauna consultant. No alterations to the initial planning did occur from a fauna management perspective. Prior to works progressing on any one day, the site will be traversed to establish fauna movements and activity within the delineated zones. It was noted that during this general phase maximum opportunities for fauna to naturally or with assistance egress of site into the remnant vegetation unperturbed or affected can occur. Additional relocation points that are deemed safe and do have suitable analogue refugia has been sourced.

The terrestrial stratum level was consistent with a disturbed and remnant S.E.Qld RE with a very low level fragmented stratum level.

An unobstructed line of sight is afforded along all transects of the site. Observations of herpeto-fauna, terrestrial Avian species and terrestrial mammals was the focus of the fauna and habitat management program. A low to medium load of vegetative felled leaf and debris, which is natural for this class of Regional Ecosystem was also present. Minor terrestrial based refugia is present on the site and was checked and searched accordingly when the works are authorised. Minor shrubbery – or low-level vegetation is present on site, dominated by *Acacia* regrowth.

All stratum levels of flora within the site is to be managed according to the regulations. Control mechanisms for the site in determining the vegetation clearance zones were activated under the appropriate D.A. The onsite management inspection and onsite protocols that were activated was to conduct a walk through to categorically determine the vegetation assets that are approved to be managed.

All vegetation removal works will be monitored and supervised by a suitably qualified and experienced Koala Spotter – Bemrose Wildlife Management Services. All actions and instructions will be adhered to corresponding to the stipulations.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

Mitigation measures are activated as per regulations. Anecdotal evidence indicating Possum and Glider inhabitation was of a low value. No Dray structures were observed. Vegetation on site that can be conducive for dray construction will be checked and cleared.

As with sites that do have NJKHT's within the scope correlated to the Koala habitat mapping zones, Koala's are possible, however no Koala was observed during the inspection. No EVNT fauna species were observed.

3.0

FAUNA AND HABITAT PROJECT DESCRIPTION

The immediate site offers viability for Koala inhabitation in correlation with the alternate areas especially with the proximity to strong analogue habitat. During this phase of works, Koala/s are known to be dispersing and travelling significant distances in search of breeding partners. Positive outcomes for this project is the 35 hectares and greater suitable Koala habitat for populations to maintain survivorship potentials, whilst allowing natural dominance hierarchy to be maintained without relocation to alternate areas of unknown quantities. The greater region is renown to have robust remnant Koala populations extending to historical records decades old. There is a divergence of Koala food and home trees within the greater site. At no time of the fauna management program were Koala's observed onsite or transitioning through the site. It is noted that critically, there is a medium connectivity of highly suitable refugia for Koalas within adjacent regional ecosystems.

No current, recent historical anecdotal Koala evidence was observed during the immediate pre-daily works inspections of the site. The habitat that was present on the site does potentially conform with accessible Koala habitat or connectivity corridors. As a precautionary principle, relevant and con-current observational management techniques actioned were 360° Basal to Canopy (inclusive of Canopy over-lapping) the remaining grids predominately contained narrow gauge individual NJKHTs. Koala focused searches, with the aim of locating Koala, Koala scat and or evidence of climbing scratches did occur during the scheduled clearance. Grid and randomized transect search techniques were additionally utilized inclusive of Dique et al Koala search methodologies and S.P.O.T mechanisms. Non-Juvenile Koala Habitat trees on this site have been assessed and approved for removal via State and Shire regulations and compliance systems. As no scheduled or listed species of higher significance were observed correspondingly no specific FMP or SMP documents were constructed.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

During the phase of operational works – between the date of inspection to the dates of vegetation clearance works no transitional variance of vegetation structure and floristic variations is anticipated to be observed.

No terrestrial based Masked-Lapwing (Avian species) was identified during the pre-clearance phase to have nesting terrestrial structures. If a nest is to be located mitigation translocation into the green zone would be a probable outcome in maintaining the incubation and survivorship of the eggs. No alternate ground nesting Avian species – Quail – were observed.

No Echidna or Pardalote or Migratory Avian species were observed. Solid/not excavated arboreal termitaria was observed, field experience indicates the probability of encountering arboreal mammals or herpeto-fauna that commonly utilise or excavate arboreal termitaria should remain at a low-medium probability level. All termitaria assets were checked and cleared during the pre-clearance phase. Lace Monitor are known to utilise termitaria assets to lay the clutch of eggs, with the resident termites cementing the access/egress points. The juvenile Lace Monitors then self-extricate.

No fauna derived habitat burrows were identified. A static watch and observe technique was activated to determine activity or active presence during the clearance phase. No breeding chamber activity was recorded. No alternate breeding sites were identified. No herpeto-fauna was identified – inclusive of sedentary or highly transient species was observed at any location during the transects. Action and Implementation plans are in effect to capture and relocate fauna. The proposed clearance methodology does allow maximum line of sight to successfully manage the objective. No Antechinus hides or alternate endemic or native small mammal hides, or nests were observed.

Minor observations of Common Garden skinks were observed, relocating into habitat garden areas not scheduled for vegetation clearance, therefore considered safe. No commonly encountered S.E. Qld Bearded Dragon, S.E Qld Water Dragon or S.E Qld Blue-tongue species were observed. A potential to observe the species is possible and managed accordingly. Staff managing this site are hyper-vigilant and pro-fauna preservation. Therefore, the commitment in preserving habitat and fauna is very high with this company.

It is determined that the bulk of the vegetation was at an age whereby phyto-morphologically, the potential for suitable hollow bearing natural assets was correspondingly a low volume. This assumption was proven during the pre-clearance program. Inhabitation by Glider, Phascogale, Possum, Micro-bat, Herpeto-fauna and or Psittaciformes (Parrot species) is possible, however observations did not occur.

The site works offer a relatively positive outcome, in that a minimal level of significance regarding habitat values of low to high ecological significance are to be interfered with.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

No significant shrubbery or herbaceous stratum levels were observed at any location. The general site dimensions were minor in comparison with larger broadscale clearance sites throughout S.E.QLD. Therefore, maximum control mechanisms were managed successfully.

4.0

LEGISLATIVE FRAMEWORK

This report acknowledges the principles and values regarding the Koala-sensitive Design Guideline. A guide to Koala-sensitive design measures for planning and development activities prepared by: Koala Conservation Unit, Department of Environment and Heritage Protection © State of Queensland (Department of Environment and Heritage Protection) 2012. All Koala based guidelines and Policy frameworks were adhered to, inclusive of counts pertaining to Non-Juvenile Koala Habitat Trees that were required to be removed.

Acknowledgement is accepted, pertaining to the Queensland Animal Care and Protection Act 2001 which provides legislative protection to animals generally, and the relevant Legislature: Queensland Nature Conservation Act 1992, the Queensland Vegetation Management Act 1999, and the Federal Environmental Protection and Biodiversity Conservation Act 1999, inclusive of the legislature piece: Nature Conservation (Koala) Conservation Plan 2017 were referred to.

5.0

KOALA SPOTTER SCOPE OF WORKS

A Non-Juvenile Koala Habitat Tree is an individual tree that is greater than 300mm diameter at 1.3 meters above ground level and 4 meters above ground level. This was activated regardless of if the tree is singular or bifurcated. Minor continuous over-lapping potential NJKHT canopy cover was located within a grid transect.

Koala/s do potentially inhabit this site, as potential habitat trees and home trees are potentially existent. Koala Doe's and Bucks during the month of the scope of works vegetation clearance if observed should be forming semi-independence. It should be highly unlikely to encounter joeys on their backs, however sightings over the last month have observed joeys on backs of maternal Koala. Spring is a known breeding behavioural activity for Koala within South-east Queensland, correspondingly, due to the risk of Doe and joey and mobilised Koala searching for mates, extended 'no entry Koala zones may be activated. Protocol check and clear implementation will be enforced to ascertain the observable condition of the animal. Should any trace of Chlamydia or Koala retro virus be observed immediate Koala management capture and Veterinarian support be activated. It is noted

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

that between the months of July and December Koala dispersal has been recorded and generally acknowledged.

If a Koala is demonstrating facets of myopathy in general, actions to re-mobilise the plant machinery to an area that is a suitable distance away from the Koala will also be activated if the site area allows this protocol. Contact points for Koala rescue and Veterinarian support has been sourced if required. No activations occurred during this program.

It is a fundamental role of the Koala Spotter to maintain and traverse linear transects where vegetation removal is scheduled and to stay onsite until vegetation checks had been completed by an accredited Fauna/Koala Spotter. These actions are to determine and enact fauna mitigation strategies to maximise fauna survivorship whilst minimizing potential myopathy concerns. Habitat retention and assessment is a component of this program in order to maximise potential fauna habitat.

The role of the Fauna/Koala manager (Spotter) for this site, requires onsite management, controlled under the general VMP for the site for observable fauna, anecdotal evidence, analogue habitat assessment and correlated consultancy and direction about the potential on-site fauna that may be encountered and the subsequent fauna management. Fauna management actions are comprehensively scheduled in direct correlation to fauna species observed and habitat anecdotal evidence acquired.

No Koala observations in observance of the regulatory legal protection offered by the Queensland government and Commonwealth government were recorded within this scope of works site. No anecdotal evidence to indicate present activity was observed on any vegetation, specifically on any NJKHT. Techniques utilised to investigate Koala presence entailed a 360° basal to upper canopy of all NJKHT's and scat search around the basal regions and drip line of the canopies. Over-hanging canopy searches did occur to ensure no Koala activity. Continual Koala searches did occur during vegetation transect clearance.

No significant native trees, specifically pertaining to Non-juvenile Koala Habitat trees (*Angophora*, *Corymbia*, *Eucalyptus*, *Melaleuca*) were in abundant flower or seed. The scheduled trees did not indicate any Koala activity.

This report pertains to the activities that were conducted lawfully at the aforementioned scope of works site, specifically the onsite pre-clearance fauna and habitat phase and the subsequent vegetation management program that has been activated, where fauna management is required for compliance and to supervise vegetation removal (not delineate where clearance lines have been established prior to works commencing) as approved within the Developmental Approval phase issued by the governing Council and approved by the QPWS and DES. A Koala Spotter /Fauna Consultant with over 15 years of experience monitored this site.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

Comprehensive check and clear protocols were enacted to ensure all potential hollows are lowered safely and with maximum control mechanisms activated. No EVNT colonial breeders, inclusive of micro-bat, arboreal mammal (Glider species), nor any Avian species was observed within any NJKHT's.

6.0

GENERAL SITE OBSERVATIONS – FAUNA AND HABITAT

The site offers minor RE (Regional Ecosystem) vegetation communities observed throughout S.E.Qld. Predominantly, the site vegetation floristically is commonly associated urbanised plantings, with a strong floristic presence of Slash Pine. Vegetation species assets are evident and will be checked and cleared for fauna inclusive of terrestrial Herpeto-fauna and small mammal species. Flora onsite is established and mature, however were not in flower, reducing the probability of encountering nectivore dependent fauna. When in flower provide an energy source for endemic and native fauna throughout this ecosystem.

No Avian species were observed egressing from the transects and transitioning into alternate habitat values.

No amphibian species were observed throughout the site. Precautionary principle checks and clear protocols were activated and focused within all areas of site. Relocation points were sourced within the immediate R.E.

Ephemeral water bodies can pool and run-off attributing to potential assemblages of small to medium amphibians within the classed EVNT ranges and scheduled classes of abundance. No acid frogs, Wallum frogs or tusked frog species were observed via visual searches nor was audible resonance heard. This process continued during the full program design of vegetation management. The riparian zones will be utilised for amphibian relocation points. It is not anticipated that EVNT amphibians will be impacted by this phase of operations.

No migratory Avian species or sedentary Avian species was observed to be breeding or utilising naturally occurring assets as breeding chambers or roosts. Inclusive of RAMSAR Avian species. Works were authorised to proceed, with a strict purpose to minimise disturbance impacts to any zone where active Straited Pardalote or Australasian Rainbow Bee-eater zones are possible during vegetation management and supervision. It is recorded that no earthen banks are located onsite.

Maximum precautionary human safety was observed on-site as the potential for observing potentially venomous snakes is evident. Specifically, Eastern Brown, Red-Bellied Black, Yellow-faced Whip and was possible. During the broader program inclusive of the

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

inspection, any potential ground hollow and sedge/tussock grass clumping was checked and cleared. Extreme caution and precautionary fauna management principles were also enacted in order to maximise human and animal safety. All areas were subsequently probed utilizing specialized PPE.

The area did not appear at the time of fauna management to contain a significant active biodiversity level to be critically significant or halt the minor works from progressing.

7.0

CONCLUSIONS

Information pertaining to the site and the pro-active influence of the site owners, governing authorities Arche Energy has activated for the greater conservation and protection of fauna that inhabits the general scope of works footprint. Entailed within the information was the commitment to habitat preservation and protection where feasible. No EVNT fauna, no breeding places of ecological significance, no levels of high concern to suspend the site was observed.

Working positive communication relationships have been activated on this site.

Strong observational techniques were activated to ensure the health and behavioural parameters of fauna management will be adhered to when felling was scheduled.

The aim of the on-site fauna management was to minimize any event that would potentially injure or displace mammals, herpeto-fauna or Avian species. For this to be achieved a pre-clearance toolbox talk was activated for all those involved with this process to be fully aware of the protocols and actions that were required to be achieved for a successful program to occur. Actions such as a high level of positive communication is necessary.

Concise actions were afforded on this site due to the interaction of all those on site and the methodology enacted; subsequently the vegetation clearance schedule was managed by an experienced, fauna value conscience operator.

All on-site management guidelines and protocols have been enacted to ensure minimal myopathy events, whilst ensuring the highest level of survivorship potential for all fauna potentially inhabiting the site on the days of the scope of works and for the immediate habitat values of the site. It should be noted that all care and due diligence regarding the habitat values and immediate fauna ethical values has been observed by all staff on ground allowing a highly vigilant and successful fauna management program.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

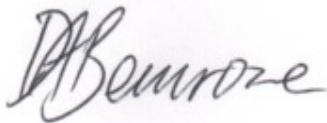
©

At all times of the vegetation clearance program a strong level of positive communication will be maintained by the Contractor, onsite Fauna Manager and the Vegetation felling crews in order to maintain the integrity of the site and potential habitat retention possibilities.

Slow and controlled tree felling techniques and specialist management are authorized to be utilised by the vegetation clearance contractor under the direction of Arche Energy and Bemrose Wildlife Management Services to successfully lower potential habitat trees on site. All protocols have been adhered to by in order to satisfy the approval requirements. Arche Energy has engaged a registered Rehabilitation permit holder to complete this program and to provide certification. The management and instructions given by Bemrose Wildlife Management Services and Arche Energy will be adhered to during the fauna management program along the designated and approved sections of the scope of works site for a successful fauna management program.

Kind regards,

Dean Bemrose.



Diplomawildernessreservesandwildlifemanagement.

Senior Koala Spotter and Fauna Consultant.

Rehabilitation Permit. WA0021286. EHP. DES. QPWS.

Bemrose Wildlife Management Services.

Mobile: 0438 667 750

www.bemrosewildlife.com.au

email: dean@bemrosewildlife.com.au

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©

DISCLAIMER

This report has been prepared by Dean Bemrose Trading as Bemrose Wildlife Management Services in accordance with the terms and conditions as detailed in the quotation and agreed to by both parties upon offer and acceptance of an order for services as per that quotation.

The survey results are accurate at the time that the onsite compliance scope of works was completed. However, no responsibility or liability is taken for any actions or works occurring at the site post the completion of the on-site compliance survey or fauna consultancy scope of works. The information as detailed in the report is for the sole use of the contracted parties and not for reproduction, reliance or supply to any other party without express consent of Bemrose Wildlife Management Services.

To the extent that it can be shown that the survey results and report was not accurate at the time of the on-site survey, this company's liability shall be strictly restricted to re-performance of the on-site survey and supply of an update report. Should you have any queries regarding this report or require additional copies please contact Dean Bemrose at Bemrose Wildlife Management Services.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©



Heavily grassed terrestrial level, regrowth *Eucalyptus* and *Corymbia* with an understory primarily of *Acacia*.



NIL Koala located.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©



Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©



Small Avian species were observed during the pre-clearance survey.



Demarcation flagging tape and alternate indicators has been installed.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©



Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©



Wooded area extending into Ironbark Forest.

Fauna and Habitat compliance Pre-clearance report.

Bemrose Wildlife Management Services.

Lockyer City Council

Author: Dean Anthony Bemrose

Site: Ranger Road, Adare

Date of service: 6th September 2021

Client: Arche Energy Pty Ltd

©



Short-beaked Echidna anecdotal evidence of ant nest excavation – nutritional value for and primary food source.