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Attention: Mr Andrew Robson

**2023 ANNUAL NATIVE VEGETATION AND WEED COMPLIANCE AUDIT AND 5 YEAR MILESTONE REPORTING
LOCKYER ENERGY PROJECT, 2.5KM NORTH OF GATTON, QUEENSLAND (EPBC 2017/7994)**

This report has been provided by S5 Environmental in response to Attachment B of the Australian Government's Approval package for the Lockyer Energy Project, 2.5km North of Gatton, Queensland (EPBC 2017/7994). This report provides comments, recommendations and photographic records of any weed incursion and the general health and diversity of native vegetation through the Offset Area A and Offset Area B as specified in Attachment C of the EPBC Approval Notice for the Lockyer Energy Project, 2.5km north of Gatton, Queensland (EPBC 2017/7994) and a response to the 5-year Milestone Performance Indicators. Refer to **Figure 1** below.

S5 Environmental's Director and Principal, Rob Siddle, BSc. (Environmental) and Environmental Scientist, Joanne Day, B.EnvSc., undertook a detailed site inspection on the 15th of November 2023.

Conditions on the day of the inspection were hot and clear with a maximum temperature recorded of 37.3°C. Available rainfall observations at the Bureau of Meteorology weather station 40082 (University of Queensland Gatton), for the three months prior to the inspection were below the long-term mean with 6.0mm total recorded in August (mean: 26.2mm), September recorded 32.4mm (mean: 34.7mm) and October recorded 3.6mm. (mean: 65.3mm). In the six months prior to August, a total of 237.6mm was recorded against a long term mean of 457.1mm (BOM, 2023).

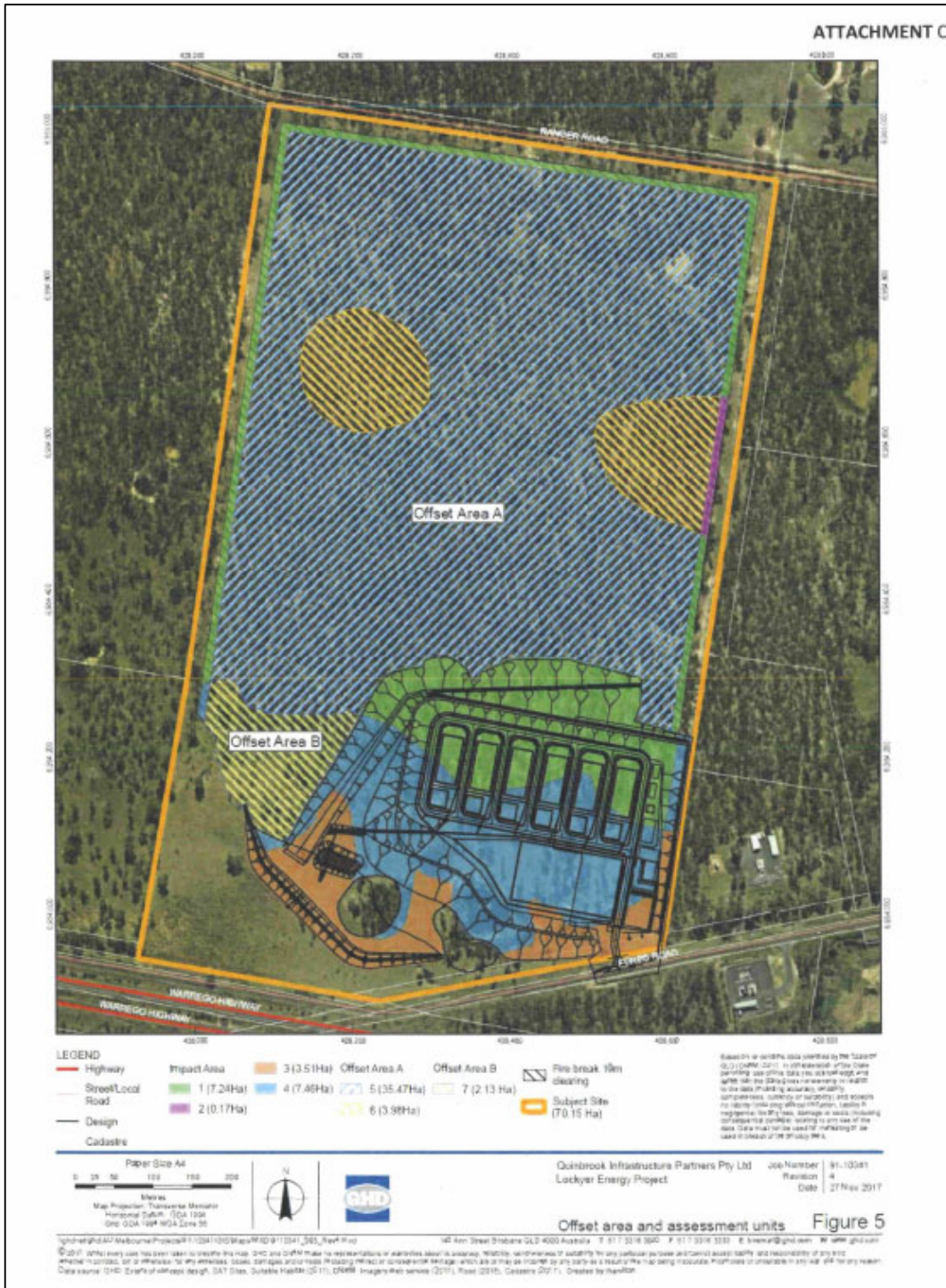


Figure 1. Attachment C of the EPBC Approval Notice for the Lockyer Energy Project, 2.5km north of Gatton, Queensland (EPBC 2017/7994) (Source: GHD drawing Offset Area and Assessment Unit Job 91-10341 Rev 4 dated 27/04/2017)

Table 1. Vegetation and Landscape Condition

Area	Description	RE
Offset Area A	<p>Canopy through Offset Area A appeared to be dominated by <i>E. fibrosa subsp. Fibrosa</i> and <i>Corymbia citriodora subsp. Variegata</i> and generally reflected remnant RE 12.9-10.5: Woodland complex often with <i>Corymbia trachyphloia subsp. trachyphloia</i>, <i>Corymbia citriodora subsp. variegata</i>, <i>Eucalyptus crebra</i>, <i>E. fibrosa subsp. fibrosa</i> on quartzose sandstone, with a small patch to the north-west which was consistent with RE 12.9-10.2 <i>Corymbia citriodora subsp. variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks.</p> <p>Patches of dead canopy was observed through the center to north-western extent of Offset Area A, refer Figure 2 below. Anecdotally, S5 Environmental has previously been advised that this area was a result of storm activity through the region in August 2021 which correlates with this area being situated on an elevated ridgeline through the center of the site which would expose it to extreme weather conditions. Some of the eucalyptus species trees are exhibiting regrowth and there is natural regeneration of eucalyptus and wattle species apparent throughout the area.</p> <p>Associated with the western edge of the rocky ridgeline, numerous small grass trees (<i>Xanthorrhoea sp.</i>) are regenerating through this area.</p> <p>The shrub and midstorey layers tendered to be less dense to the east, however the shrub layer, dominated by sickle wattle (<i>Acacia falcata</i>), was dense through the centre and western extent of Offset Area A.</p> <p>Scattered infestations of lantana (<i>Lantana camara</i>) were observed, again mostly through the northern and western extent of Offset Area A. Due to the dry conditions, the lantana was in poor condition and defoliated, S5 Environmental understand that lantana, particularly along the western boundary, has been sprayed with herbicide as a control measure within the last year. An occasional prickly pear (<i>Opuntia stricta</i>) was also observed through Offset Area A. Both are State Category 3 restricted matters under the <i>Biosecurity Act 2014</i>.</p> <p>A dense native groundcover was present through much of the Offset Area A and was often dominated by one species, such as threeawn speargrass (<i>Aristida vagans</i>), wiry panic (<i>Entolasia stricta</i>) and kangaroo grass (<i>Themeda triandra</i>). Other species that were more sparsely present</p>	<p>12.9-10.5</p> <p>And</p> <p>12.9-10.2</p>

	<p>included winter apple (<i>Eremophola debilis</i>), native sarsaparilla (<i>Hardenbergia violacea</i>), yellow buttons (<i>Chrysocephalum apiculatum</i>).</p> <p>An ephemeral watercourse transects the site from west to east across the northern extent of Offset Area A with some sections of this waterway showing signs of erosion. Some areas along the watercourse contained isolated balloon cotton bush (<i>Gomphocarpus physocarpus</i>) but were dominated by lomandra and sedge species.</p> <p>The vegetation throughout this northern portion of Offset Area A was generally in good health, given the high proportion of native canopy, shrub and groundcover. The shrub layer lacked diversity and likely reflects a woodland with an increasing presence of sickle wattle, as a pioneer shrub species and generally contained very minimal weed presence with the exception of the scattered lantana plants.</p>	
<p>Offset Area B</p>	<p>Offset Area B largely consisted of naturally regenerated spotted gum (<i>Corymbia citriodora subsp. Variegata</i>), which were approximately 8m tall, as well as emergent canopy and dense patches of sickle wattle. Small bare areas were present which should be monitored until they meet the planting densities specified in the Landscape and Revegetation Plan (Litoria, 2022). The groundcover incorporated native and exotic pasture grass. Lantana plants were also observed, particularly in the centre of the Offset Area B. One area the south-west of Offset Area B had a number of dead small trees and saplings, possibly as a result of the recent drought like conditions.</p> <p>Offset Area B overall is less dense than Area A and it generally displayed a lower diversity of native canopy, midstorey and groundcover species. However, it did appear to be progressively regenerating with an emergent canopy layer of native canopy trees. Ongoing natural regeneration, assuming improved growth conditions, i.e. rainfall, is considered likely over the coming years.</p>	<p>None</p>

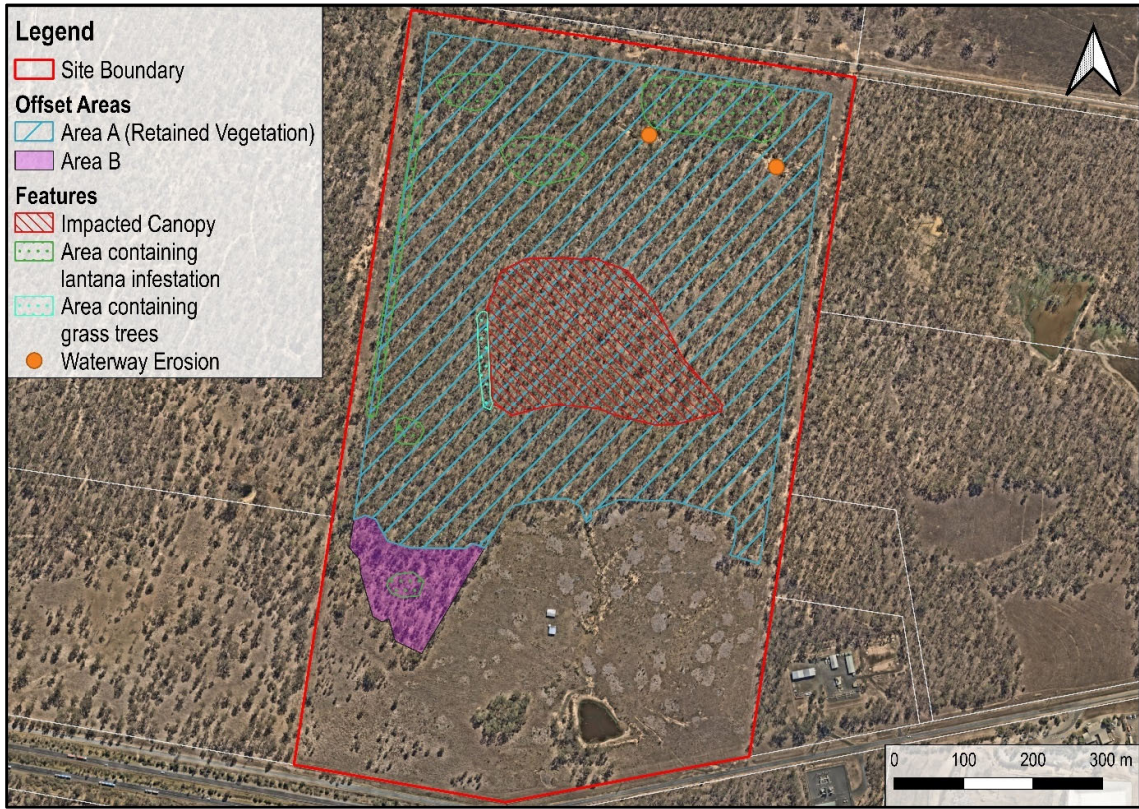


Figure 2. Approximate Location of Previously Impacted Vegetation (poor health/dead and regenerating) within the Retained Vegetation and other site features within the Offset Areas.



Plate 1: Photograph of the woodland vegetation through the eastern extent of Offset Area A.



Plate 2: Photograph of the woodland vegetation through the southern extent of Offset Area A.



Plate 3: Scattered regenerating grass trees (*Xanthorrhoea*) on the western slope of the ridgeline through Offset Area A.



Plate 4: Regrowth through the eastern portion of Offset Area A.



Plate 5: Dead trees in the northern portion of the Impacted Area in Offset Area A.



Plate 6: Regenerating canopy trees through the centre of Offset Area A.



Plate 7: Area of erosion on eastern extent of the waterway through the north of Offset Area A.



Plate 8: Lantana infestation in north-western portion of Offset Area A (south of the waterway).



Plate 9: View through Offset Area B to the south-west. Regrowth wattle and emergent canopy.



Plate 10: Lantana in the central portion of Offset Area B.

Based on the findings of the audit of vegetation within Offset Areas A and B, S5 Environmental recommend the following ongoing maintenance and management actions to ensure ongoing compliance with the Approval Package:

- It is understood that weed maintenance has been undertaken to control lantana. Lantana observed appeared to be dead or in poor condition with heavy defoliation, which is likely due to herbicide application, dry conditions, or both. Ongoing weed maintenance is to be undertaken to specifically control lantana, but also any other weeds observed. The success of this ongoing maintenance is to be monitored, should weeds become more prevalent, then it is recommended maintenance events are increased;
- Natural regeneration is occurring within Offset Area B and should be monitored over time. Assuming improved growth conditions, i.e. rainfall, over the next 12 months, this regeneration should continue and improve. However, should no improvement in the diversity of species be evident over the next 12 to 24 months, infill planting of tube stock may be required to ensure target densities are met. Refer Table 1 on LRP06 of the Litoria Landscape & Revegetation Plan (Ref:

20076 LRP01-08 dated 27/02/2022) for planting schedules including proposed species mix and target densities; and

- An area of poor health and dead standing timber was again observed in the approximate centre of Offset Area A (refer **Figure 2**) as identified in the previous annual inspection undertaken by S5 Environmental in 2022 (S522202EL001v1.3 dated 26 October 2022). It is noted that this area being situated on a ridgeline, is the most elevated and exposed part of the site. It is considered that this occurrence may have been the result of storm activities, past agricultural practices, or the like. It is noted that there has been regrowth on some of the impacted canopy trees and there is natural regeneration of eucalyptus and wattle species, in particular. It is recommended that this area continues to be monitored annually to determine if regrowth or improved health continues to occur over the next 12 to 24 months.

5 Year Milestone Reporting

The Federal Government Approval Notice for the Lockyer Energy Project, 2.5km north of Gatton, Queensland (EPBC 2017/7994) includes in Appendix C a number of management measures and milestone reporting requirements. S5 Environmental understand that the 16th of November 2023 is the 5-year milestone for the Offset.

Table 2 below provides responses to the Performance Indicators detailed in the Offset Management Strategy and aims to satisfy the 5-year Milestone reporting requirement for the project. S5 Environmental have monitored the Offset over the past two years and confirm the following.

Table 2. Response to Performance Indicators

Performance Indicator	Response
<i>Density and abundance of koala food trees is maintained or increased</i>	S5 Environmental can confirm that the number of koala food trees have been maintained. However, some damage/death to mature canopy within the exposed central portion of Offset Area A had occurred in August 2021 (anecdotally advised to S5 Environmental) as a result of storm damage, had occurred. Observations as part of the 2023 Audit indicates that this area is now naturally regenerating with some trees experiencing regrowth and native shrub and canopy species saplings observed throughout the damaged area.
<i>Threats that have been identified have not spread or increased</i>	Whilst a number of infestations of lantana were observed in both Offset Area A and B, they did not appear to be increasing with some die back observed as a result of a combination of climatic conditions and weed treatments. No domestic animals, or grazing animals were observed across the site. No feral animals were observed in either of the past two annual audits.



Should you wish to discuss, please do not hesitate to contact me on (07) 3505 3053.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Rob Siddle', is positioned above a horizontal line.

Rob Siddle

Director

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