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Attention: Mr Brian Restall

FIRST YEAR COMPLIANCE REPORT – NATIVE VEGETATION AND WEED AUDIT
LOCKYER ENERGY PROJECT, 2.5KM NORTH OF GATTON, QUEENSLAND (EPBC 2017/7994)

This report has been provided by S5 Environmental in response to Condition 13 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 specified in Attachment C of the EPBC Approval Notice for the Lockyer Energy Project, 2.5km north of Gatton, Queensland (EPBC 2017/7994) refer to **Figure 1** below.

S5 Environmental's Terrestrial Ecologist, Mr Ronnie Gardiner., BSc Environmental Science (Hons) and Environmental Scientist, Mr Sean Vlok, BSc (Geographical), Grad Cert Env Management, undertook a detailed site inspection on the 23rd of September 2022.

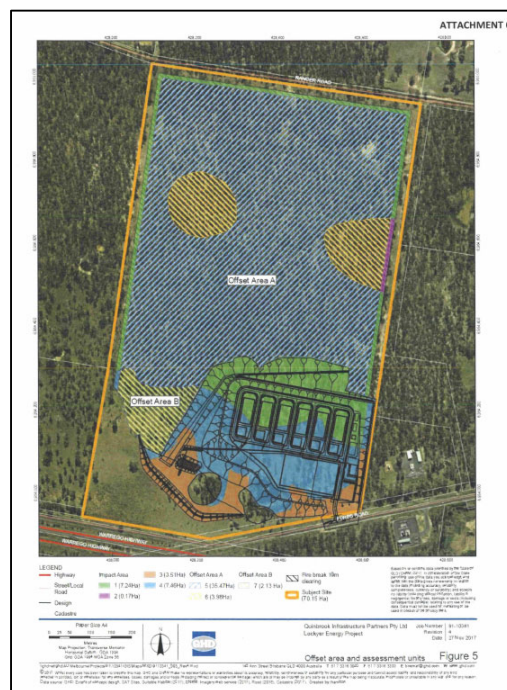


Figure 1. Attachment C of the EPBC Approval Notice for the Lockyer Energy Project, 2.5km north of Gatton, Queensland (EPBC 2017/7994) (Source: GHD drawing Offset Area and Assessment Unit Job 91-10341 Rev 4 dated 27/04/2017)

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</i> subsp. <i>Fibrosa</i> and <i>Corymbia citriodora</i> subsp. <i>Variegata</i> and generally reflected remnant RE 12.9-10.5: Woodland complex often with <i>Corymbia trachyphloia</i> subsp. <i>trachyphloia</i>, <i>Corymbia citriodora</i> subsp. <i>variegata</i>, <i>Eucalyptus crebra</i>, <i>E. fibrosa</i> subsp. <i>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</i> subsp. <i>variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks.</p> <p>Patches of dead canopy, or trees with poor health, were observed through the center to north-western extent of Offset Area A, refer Figure 2 below. Anecdotally, S5 Environmental was advised that this area was a result of storm activity through the region in August 2021.</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. Quinine bush (<i>Petalostigma pubescens</i>) was noted to be more heavily present through the north-west.</p> <p>Scattered infestations of lantana (<i>Lantana camara</i>) were observed, again mostly through the western extent of Offset Area A, as well as the occasional prickly pear (<i>Opuntia stricta</i>). Both of which are State Category 3 restricted matter 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 included winter apple (<i>Eremophola debilis</i>), native sarsaparilla (<i>Hardenbergia violacea</i>), yellow buttons (<i>Chrysocephalum apiculatum</i>), as well as the exotic, fireweed (<i>Senecio madagascariensis</i>). A ephemeral watercourse was observed across the northern extent and was dominated by lomandra and sedge species.</p> | <p>12.9-10.5</p> <p>And</p> <p>12.9-10.2</p> |

| | | |
|----------------------|--|------|
| | <p>The vegetation throughout this area 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, but generally contained very minimal weed presence.</p> <p>As discussed, patches of canopy appeared to be in poor health or dead, refer Figure 2 below for the approximate location and area. This occurrence could be due to recent storm events or a lack of nutrient availability or a pathogen and should be monitored into the future. Very few canopy species were observed to be returning, as saplings or juvenile trees, within these areas which indicates that the quality and diversity of vegetation present though these areas may continue to decline within the immediate future.</p> | |
| Offset Area B | <p>Offset Area B largely consisted of naturally regenerated spotted gum (<i>Corymbia citriodora subsp. Variegata</i>), which were approximately 8 metres tall, as well as dense patches of sickle wattle. Small bare areas were present, which may not currently meet the planting densities specified in the Landscape and Revegetation Plan (Litoria, 2022). The groundcover incorporated native and exotic pasture grass. Lantana and fireweed infestations were also observed.</p> <p>Offset Area B generally lacked diversity of native canopy, midstorey and groundcover species.</p> | None |

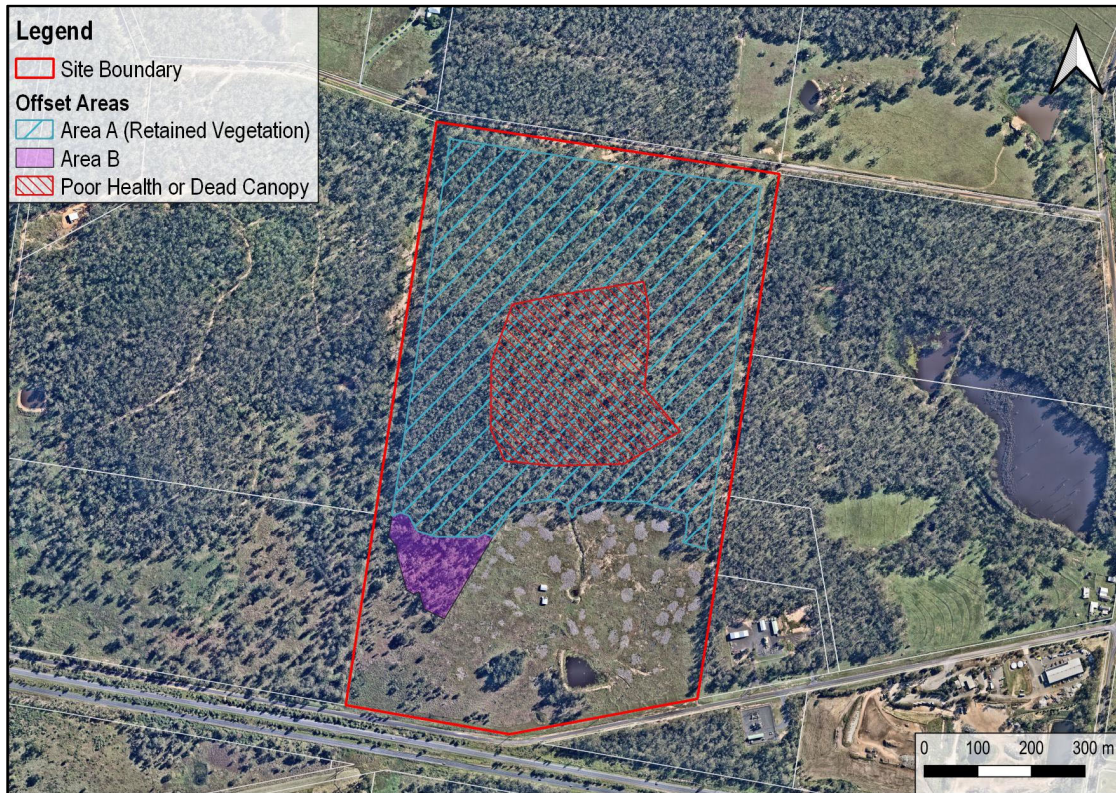


Figure 2. Approximate Location of Vegetation of Poor Health and dead Canopy within the Retained Vegetation





Plate 3: Photograph of the vegetation through the northern extent of Offset Area A.



Plate 4: Photograph of the vegetation surrounding a creek through the southern extent of Offset Area A.



Plate 5: Area of canopy trees displaying poor health present through the centre of Offset Area A.



Plate 6: Alternative image of canopy trees displaying poor health and old dead standing timber through the centre of Offset Area A..



Plate 7: Prickly pear, which was very sparsely present though Offset Area A.



Plate 9: Vegetation present though Offset Area B demonstrating sparse shub layer.

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 ongoing weed maintenance is to be undertaken to specifically control lantana and fireweed, but also any other weeds observed. The successfulness of the maintenance is to be monitored, should weeds become more prevalent than it is recommended maintenance events are increased;
- Some additional infill planting of native tube stock is recommended through Offset Area B to diversify the species and 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;
- Accordingly, for Offset Area B, S5 Environmental recommend the following quantity and species mix based on the Litoria Landscape & Revegetation Plan and an area for infill planting of approximately 19,000m², utilising 20% of ultimate density for infill planting:
 - Canopy Species – approximately 425 plants to include a mix of *Angophora leiocarpa*, *Corymbia intermedia*, *Eucalyptus crebra*, *Eucalyptus tessellaris*, *Eucalyptus tereticornis*;
 - Shrub Layer – approximately 1,300 plants to include a mix of *Acacia disparrima*, *Acacia leiocalyx*, *Acacia luehmannii*, *Acacia torulosa*, *Alphitonia excelsa*, *Brachychiton propulneus*, *Hovea acutifolia*, *Jacksonia scoparia*, *Pittosporum angustifolium*.



- An area of poor health and dead standing timber was observed through the Retained Vegetation. It is considered that this occurrence could be the result of storm activities, past agricultural practices or the like. It is recommended that this occurrence is monitored annually to determine if regrowth or improved health occurs or if additional infill planting of a suitable native species mix is required.

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

Sincerely,

A handwritten signature in grey ink, appearing to read 'Ronnie Gardiner', with a long horizontal flourish extending to the right.

Ronnie Gardiner
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