| ent 1 DI | EPARTMENT OF AGRICULTURE, WATER AND | | |
|-----------------------|---|-----------------------------------|--|
| To: Kyl | ie Calhoun (for decision) | 1 | |
| | 2(1)(ii) , Acting Director, PAS | | |
| s22(1)(ii) 2 | 3 / 6 / 2020 | | |
| | 838 – Request to suspend approval – Meadow igh value cropping, south of Mt Garnett, Quee | - | |
| Timing: There | e is no deadline for this matter. The request was i | made on 26 July 2019. | |
| Recommend | dations: | | |
| 1. That you | That you consider the contents of this brief, including all attachments | | |
| 2 | | Considered / Please disc | |
| specified | agree that you do not believe on reasonable grou in section 144(2) of the <i>Environment Protection</i> a (EPBC Act) are satisfied in relation to this reque | and Biodiversity Conservatio | |
| | | Agree / Not agi | |
| approval requested | ree with recommendation 2, that you agree that y 2016/7838 – Meadowbank Station vegetation cle d by Ms McKinnon, on the basis that you have no PBC Act to do so. | earing (the approval), as | |
| | | Agreed / Not agi | |
| | ree with recommendation 3, that you sign the letternon of your decision. | er at Attachment A advising | |
| | | Signed / Not sig | |
| | agree there is no basis for you to require, under a C Act, variation to the conditions attached to the a | | |
| | Kylu Cal | Agreed / Not agr | |
| Signatory: | Kylie Calhoun Assistant Secretary Assessments (WA, SA, NT), Post Approvals and Policy Branch | Date: 31 July 20 | |
| Comments: | | | |
| | | | |

Request for suspension of the approval

- 1. On 26 July 2019, Ms McKinnon of the Australian Conservation Foundation, wrote to the Minister for the Environment, requesting that the Minister exercise the power under section 144 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to suspend the approval for EPBC 2016/7838: Meadowbank Station vegetation clearing for high value cropping, south of Mt Garnet, Queensland.
- 2. The request is comprised of a letter summarising the grounds to the request and a report titled '*Nocturnal survey for Greater Gliders (Petauroides volans) Meadowbank Road*

Reserve, Minnammoolka, Far North Queensland (June 2019)' (survey report) ^{2 of 13} (Attachment B).

- 3. The survey report is of survey work undertaken over two days and nights in June 2019, on land adjacent to the project area to be cleared. The survey results are given as evidence supporting the grounds to the request.
- 4. The request is based on the assertion that the approved action will have a significant impact to the EPBC Act listed vulnerable Greater Glider (*Petauroides volans*) that was not properly identified during the assessment of the proposed action and that approval would not have been granted if the information in the survey report was available at the time of the approval decision.

Project Approval

- 5. On 9 February 2018, a delegate of the Minister approved with conditions the Meadowbank Station vegetation clearing for high value cropping (EPBC 2016/7838), to clear 1,365 hectares for the production of forage and grain crops on Lot 537, SP132224, Meadowbank Station, 100 km south of Mount Garnett, Queensland (<u>Attachment C</u>).
- 6. The approval contains conditions to protect EPBC Act listed threatened species and ecological communities, specifically the vulnerable Greater Glider (*Petauroides volans*). The assessment of the action identified that the action may include clearance of habitat for the Greater Glider, namely *E. tereticornis* dominated woodland. To manage the impacts on the Greater Glider, condition 1 was imposed requiring that the person taking the action must not clear more than 1,365 ha of vegetation, and condition 2 was imposed requiring that the person taking the action must not clear more than 1,365 ha of vegetation.
- 7. On 23 December 2019, the approval was varied to substitute conditions 1 and 2, the definition of clearing and Attachment A (a map showing areas that may be cleared and not to be cleared) in relation to Greater Glider habitat (<u>Attachment D</u>). The relevant effect of this variation was that the habitat protected from clearance was increased from 106.8 ha to 113 ha.

Relevant legislation in relation to Ms McKinnon's request

- 8. Section 144 of the EPBC Act allows the Minister to suspend an approval if certain criteria are met. The following outlines the relevant legislative provisions in relation to the request from Ms McKinnon.
- 9. Section 144(1) of the EPBC Act allows you, as the Minister's delegate, to suspend an approval given under Part 9 for the purposes of a specified provision of Part 3 if you believe on reasonable grounds that:
 - a) a significant impact on the matter protected by the provision has occurred because of the contravention of a condition attached to the approval¹; or
 - b) the conditions specified at section 144(2) are satisfied.
- 10. The conditions specified at section 144(2) are:
 - a) the action has had, or the Minister believes that the action will have, a significant impact that was not identified in assessing the action on a matter protected by a provision of Part 3 for which the approval has effect; and
 - b) the approval would not have been granted if information that the Minister has about that impact had been available when the decision to approve the action was made.
- 11. The power to suspend an approval under section 144(1)(b) is both conditional and discretionary. This means:
 - a) if you do not believe on reasonable grounds that the conditions specified in section 144(2) are satisfied, you do not have the power to suspend the approval; and

¹ The request does not seek suspension on these grounds.

b) if you do believe on reasonable grounds that the conditions specified in section³ 144(2) are satisfied, you must decide whether to exercise your power to suspend the approval. In making this decision, you must comply with administrative law principles. In addition, in deciding whether or not to suspend the approval, section 144(3) allows you to take the approval-holder's environmental history into account.

Departmental analysis of the request against section 144(2)(a)

- 12. Section 144(2)(a) of the EPBC Act relates to whether 'the action has had, or the Minister believes that the action will have, a significant impact that was not identified in assessing the action on a matter protected by a provision of Part 3 for which the approval has effect.'
- 13. The information provided by Ms McKinnon in her request, that is relevant to application of section 144(2)(a), is contained in the survey report (<u>Attachment B</u>). Key statements in the report that are relevant to whether the action has had, or will have, a significant impact on a matter protected by a provision of Part 3 for which the approval has effect (being the Greater Glider) are summarised as follows:
 - a) the clearing will impact a population of Greater Glider;
 - b) key habitat attributes including a mix of tall stands of eucalypt trees and hollows suitable for dens will be lost; and
 - c) clearing will fragment suitable habitat within the region and impact on the local population of this species.

a) Population of Greater Glider

- 14. As part of its evaluation of the survey report, the Department noted that diurnal and nocturnal surveys were conducted along a road reserve adjacent to the area to be cleared. The report specified the coordinates from which Greater Glider was detected, however the direction and approximate distance from which Greater Glider were detected are not specified in the report. The Department considers direction and distance information relevant to assessing the findings of the survey report.
- 15. The Department is unable to locate published guidelines on a reliable distance from which to detect Greater Glider by nocturnal survey using spotlights, in far north Queensland. However, the following guidance was considered:
 - the Department's EPBC Act Survey Guidelines for Australia's threatened mammals (2011) notes that 'the probability of detecting arboreal mammals during spotlight surveys is similar for distances up to 50 metres from the transect line ... therefore, transects placed 100 metres apart are optimal for arboreal mammal spotlight surveys' (<u>Attachment E</u>, page 26); and
 - the Queensland Government's Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (June 2018, V3.0) recommends spotlighting along 'the middle 100 m transect in sparsely vegetated sites, or spotlighting up one side of the 100 m x 100 m area and then spotlighting back the other side of the 100 m x 100 m area in more densely vegetated sites' (<u>Attachment F</u>, page 48).
- 16. The above guidance suggests that an effective spotlighting-detection distance in sparsely vegetated sites, such as the project site, may be up to 50m.
- 17. The Meadowbank Impact Assessment (<u>Attachment G</u>), conducted by a local consulting ecologist considered that 'greater gliders have a very clean eye shine that can be clearly seen up to 150m away in open woodland' and that 'LED spotlights were used to observe 125m into the open forest' at the project site (p.13). It is relevant that the proponent and Department accepted Landline Consulting's spotlighting methodology. Figure 1 shows the spotlight transects and glider detections at Meadowbank Station.

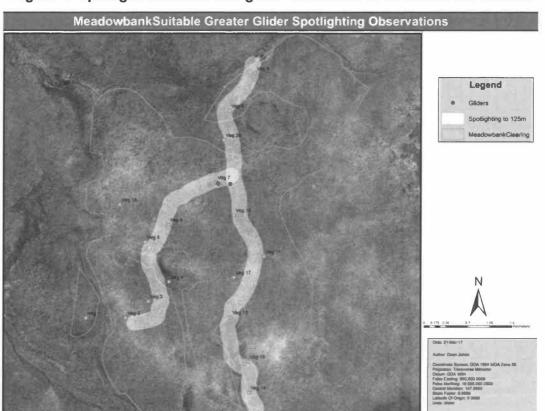


Figure 1: Spotlight transects and glider detections at Meadowbank Station. ^{4 of 13}

- 18. To account for uncertainty regarding maximum effective detection distance, and for consistency with the project assessment method, the Department assumed the maximum effective detection distance to be 125m from the point of observation.
- 19. As mentioned above, the survey report contained the coordinates at which Greater Glider were detected. The Department plotted the coordinates, and a 125m buffer around those coordinates, on a map showing the area approved for clearing (Attachment H).
 - The map shows that the detections were made in, or adjacent to, the north-west corner of the clearing area.
 - The distance from the point of Greater Glider observation to the project clearing boundary ranged from 13m to 545m (see Table 1).
 - Two observations are within 125m (13m and 104m) from the boundary of approved clearing and at the southern end of the transect.
 - One observation was from a distance of 148m, at the maximum detection distance proposed by a local consulting ecologist ('greater gliders have a very clean eye shine that can be clearly seen up to 150m away in open woodland'). This detection is at the most north-western point of the approved clearing.
 - The survey report specifies that observations were made in the direction of the approved clearing. Given the generally north-south clearing boundary and proximity of the two observations to the project area, the Department considers these observations are likely to be of Greater Glider in or immediately adjacent to the approved clearing.
 - The two observations within 125m were of an individual '*emerging from an obvious hollow*' approximately 15m above ground in a *E. melanophloia* tree, and of '*two adults together in tree feeding on the blossom*' approximately 12m above ground in a *E. tereticornis* tree.
 - The observation at approximately 148m of the clearing boundary is of 'one adult resting on the tree trunk about half way up a very large, mature eucalypt' (*E. tereticornis*).

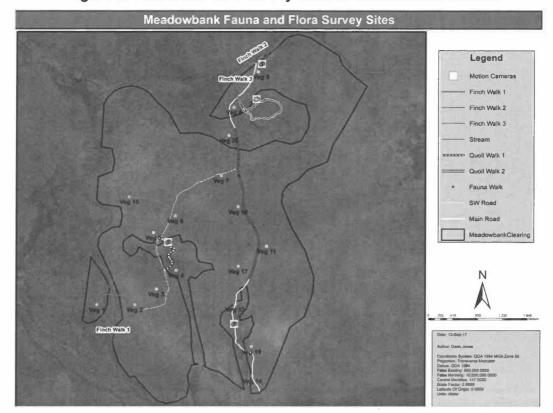
- However, the Department considers the remaining four observations, being⁵2^f43^m, 310m, 325m and 545m, are too distant from the approved clearing area to be accepted as Greater Glider observations within the approved clearing area.
- 20. Based on the above information, statements in the survey report, and assumptions regarding effective detection distances, the Department considers that Greater Glider individuals were likely to have been present within or immediately adjacent to the north west corner of the clearing area, when the approval decision was made. However, the Department considers that it is not possible to determine, based on the observations in the survey report, whether Greater Glider were likely to be present in other areas of the approved clearing area.

b) Key habitat attributes for Greater Glider

- 21. The request is also based on claims that key habitat attributes, including a mix of tall stands of eucalypt trees and hollows suitable for dens, were present throughout the entire approved clearing area.
- 22. However, as discussed above, Greater Glider were observed in suitable habitat within or adjacent to only the north-west corner of the project area.
- 23. The impact assessment report (<u>Attachment G</u>) emphasises the importance of woodland dominated by *E. tereticornis* as an indicator of suitable habitat for Greater Glider, stating:
 - As suggested by Wormington et al. 2002, the most important factor in the presence of greater gliders and yellow-bellied gliders within the dry sclerophyll forests of South East Queensland are the higher proportions of spotted gum (Corymbia citriodora) and forest red gum (Eucalyptus tereticornis also known as Queensland bluegum); and
 - Whereas for those locations dominated by E. tereticornis, 70% of surrounding trees were within gliding range. Therefore there are at least twice as many opportunities to move from one tree to the next within the E. tereticornis woodland.
- 24. All Greater Glider detections in the survey report were within 540m of the north-west corner of the project area, including four detections in *E. tereticornis* and feeding on blossom, and one of an adult '*emerging from an obvious hollow*' in *E, melanoploia*.
 - The presence of foraging and denning resources, and individuals using those resources, is evidence of suitable habitat within, and adjacent to, the north-west corner of the project area.
- 25. **Figure 2** shows the location of sites used for vegetation assessment and regional ecosystem mapping during the project impact assessment. The impact assessment report states:

Seventeen sites were selected to evaluate the flora in the proposed clearing against current regional ecosystem mapping (Figure 2). Each site was evaluated for its dominant tree, understory and grass species. Observations were made within a 100m radius of the observer.

26. Following the flora and fauna surveys in the impact assessment report, an area of *E. tereticornis* dominated woodland, based on detections of Greater Glider at site 7, was excluded from the proposed clearing area (see Attachment A of <u>the approval</u> as varied, and as shown in **Figure 3** below).



- 27. Sites 15 and 20 (see Figure 2) are the sites nearest to the north-west corner of the project area, which the Department estimates to be 1.5 to 2 kms distant. The Department therefore considers that flora and fauna in the north-west corner of the project area may not have been adequately mapped and assessed during the project impact assessment process. The Department also notes, based on imagery in Figure 2, that tree canopy density in the north-west corner of the project area may be:
 - greater than at Site 15, which was assessed as unsuitable habitat for Greater Glider;
 - similar to Site 20, which was mapped as containing *E. tereticornis* dominated woodland, which is suitable habitat for Greater Glider and is protected from clearing under the conditions of approval; and
 - similar in density to a contiguous patch of vegetation connecting the north-west corner of the project area to the *E. tereticornis* dominated woodland protected from clearing under the conditions of approval.
- 28. Given the above, the Department considers the survey report presents new information on habitat values, and that at the time of approval the north-western corner of the clearing area may have contained Greater Glider and key habitat attributes that support a Greater Glider population.
- 29. The Department considers the survey report suggests an increased likelihood of the presence of suitable habitat and Greater Glider in the north-west corner of the project area, than what was considered by the original assessment.
 - Despite the above, the Department cannot be certain, based on information provided in the survey report, as to the extent and value of Greater Glider habitat in the north-west corner of the project area.
 - The Department notes the north-west corner of the project area has, since the survey was conducted, been cleared of vegetation (see <u>Attachment H</u>). There is therefore no opportunity for the Department to conduct a detailed assessment of the values of the north-west corner or to take any action on grounds of additional loss of Greater Glider habitat.

c) Habitat loss and fragmentation within the region

30. Lastly, the request is based on claims that clearing will fragment suitable habitat within the region, impacting on the local population of this species at the northern limit of its range. Specifically, the request notes:

"The greater glider population within the area to be cleared at Meadowbank is near the limit of the northern range of the species. Furthermore, the area is likely to be an important breeding area for the species in the region. Modelling suggests that greater gliders require native forest patches of at least 160 km² to maintain viable populations (Eyre, 2002). The proposed clearing of this greater glider habitat is therefore likely to lead to a long-term decrease in this population at the northern limit of the species range and will fragment much of the suitable habitat within the region, and is therefore likely to have devastating impacts on the local community of this species"

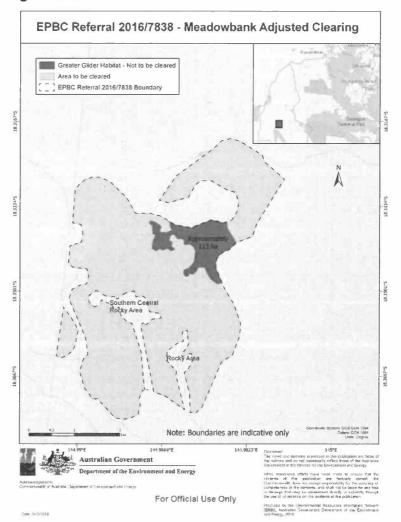
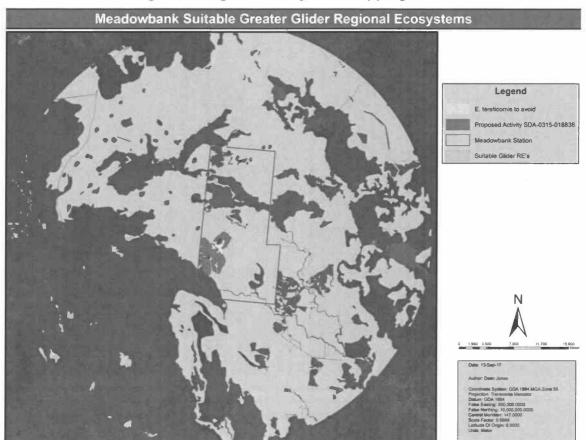


Figure 3: Greater Glider habitat not to be cleared.

- 31. However, the request provides no evidence to substantiate these claims, for example:
 - whilst the Greater Glider population may be near the northern limit of its range, there is no information or analysis of the extent of the Greater Glider population or remnant suitable habitat in the region and/or at the northern limit of its range;
 - while there are suitable foraging trees, a den and pairs of animals, there is no information or analysis that supports the claim the area to be cleared is an important breeding area in the region; and
 - though modelling published in 2002 may suggest Greater Glider require native forest patches of at least 160 km² to maintain viable populations, there is no consideration or analysis of the impacts of the proposed clearing in retaining a contiguous patch of native forest that will maintain a viable population/s.



- 32. Notwithstanding the lack of evidence to support the above claims, the Department cannot be confident that the action will not have a significant impact on the regional population of Greater Glider. This is in part because:
 - the request is supported by evidence of Greater Glider and suitable habitat on the north-western boundary of the proposed clearing;
 - it is likely the proposed clearing, which has since been conducted in the north-west corner of the property, has impacted some suitable habitat and Greater Glider in the project area; and
 - based on aerial imagery, the north-west corner of the property may form part of a corridor connecting Greater Glider habitat from the west to the north and east (including to the area of *E. tereticornis* dominated woodland protected under the approval conditions).
- 33. In forming a view on this matter, the Department also notes information provided in the impact assessment report (<u>Attachment G</u>) that supports the potential for significant impacts to suitable habitat for Greater Glider in the region.
 - Figure 4, which is at p17 of the report, purports to represent regional ecosystems supporting greater glider populations based on suitable habitat tree species, as evidence that the proposed clearing represents a negligible proportion of the overall regional habitat suitable to the Greater Glider.
 - The report states (p.16) that within 30km of Meadowbank Station there is 147,000 ha (i.e. 1,470 km²) of suitable habitat for the Greater Glider, and that the proposed clearing represents less than 1% of that habitat.
 - proposed clearing at Meadowbank Station, referred as 1,475 ha (see <u>Attachment I</u>) was assessed as comprising only 113 ha of suitable habitat. Therefore less than 10% of Meadowbank Station is suitable habitat;
 - if Meadowbank Station is representative of the Greater Glider habitat in the region, there may be less than 160 km² of habitat required to sustain a Greater Glider population within 30km radius of Meadowbank Station; and

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- given the above, the loss of any significant patches of *E. tereticornis* given the above, the loss of any significant patches of *E. tereticornis* dominated woodland containing Greater Glider, such as the 113 ha protected zone shown at Figure 4 may be an unacceptable risk to the regional population of Greater Glider. However, the small area of potential habitat that may have been impacted in the north-west corner (in the order of 1-20ha) is unlikely to be sufficient in area and connectivity to represent a significant impact on the regional population.
- 34. The Department notes that section 144(1)(a) requires you to form the belief, on reasonable grounds, that the action 'has had', or 'will have', a significant impact that was not identified. This is a higher standard than forming the belief, on reasonable grounds, that the action 'may' or 'is likely to' have a significant impact that was not identified. The Department considers that, although there is evidence to support a finding that the action may have a significant impact that was not identified in assessing the action on a matter protected by a provision of Part 3 for which the approval has effect, this evidence is largely circumstantial. While it is possible that this evidence suggests that there *is likely to* be a significant impact, it is not sufficient to indicate that, as a matter of certainty, there has been or will be a significant impact.
- 35. Further, given that the general loss of habitat to the Greater Glider was identified at the time of assessment, the Department does not consider that the evidence indicates there is a significant impact that was not identified at the time of assessment.
- 36. Consequently, the Department considers there is not a sufficient basis for the Department to form the belief, on reasonable grounds, that the action has had, or will have, a significant impact that was not identified during assessment.

Departmental analysis of the request for suspension against section 144(2)(b)

- 37. Section 144(2)(b) of the EPBC Act relates to whether 'the approval would not have been granted if information that the Minister has about that impact had been available when the decision to approve the action was made.'
- 38. Given the Department's view that s 144(2)(a) has not been met, it would not be necessary to consider section 144(2)(b). Nonetheless, the Department has proceeded to consider the request against section 144(2)(b).
- 39. It is the Department's view that, if the information in the request had been available when the decision to approve the action was made, and there was sufficient information to definitively demonstrate that the action would have a new significant impact, the project would still have been approved by the Minister. This is because:
 - a) the information in the request can only be considered relevant to the north-west corner of the project area;
 - b) information provided in the impact assessment report (<u>Attachment G</u>) assesses the majority of the proposed clearing area as containing habitat unsuitable for the Greater Glider;
 - c) where Greater Glider habitat was identified as part of the impact assessment process, that habitat was protected from clearing. It is therefore plausible that if this information had been available when making the decision, and further information was obtained to confirm this new information, a portion of the northwest corner of the proposed clearing area may also have been protected from clearing; and
 - d) the area of potential Greater Glider habitat in the north-western portion of the project, that is approved to be cleared, does not in itself represent a significant impact to Greater Glider at the regional level.
- 40. Therefore, the Department does not believe that the approval would not have been granted if information that the Minister (or delegate) now has about that impact had been available when the decision to approve the action was made.

Conclusion on request for suspension

- 41. Based on this information, the Department considers that:
 - a) there is an insufficient basis for you to form a belief on reasonable grounds that the action has had, or will have, a significant impact that was not identified in assessing the action; and
 - b) there is an insufficient basis for you to form a belief on reasonable grounds that the approval would not have been granted if information that the Minister (or delegate) has about that impact had been available when the decision to approve the action was made.
- 42. For this reason, the Department considers there is an insufficient basis for you to form a belief on reasonable grounds that the conditions specified in section 144(2) of the EPBC Act are satisfied. Therefore, the Department considers you do not have the power to suspend the approval under section 144(1)(b) of the EPBC Act.

Variation to conditions attached to approval

- 43. Given the above information and analysis, the Department has considered whether the conditions of approval continue to be necessary or convenient for the ongoing protection of the Greater Glider.
- 44. There is scope for the Minister for the Environment, or delegate, under certain circumstances, to vary the conditions of approval to protect the matter (here Greater Glider) from a significant impact that was not identified in assessing the action, or where the impact is substantially greater than the impact identified in assessing the action.
- 45. Relevantly, section 143(1) of the EPBC Act provides that the '*Minister may, by written instrument, revoke, vary or add to any conditions (other than the condition referred to in subsection 134(1A)) attached to an approval under this Part of an action if*
 - (a) ...; or
 - (b) both of the following conditions are satisfied:
 - (i) the action has had a significant impact that was not identified in assessing the action on any matter protected by a provision of Part 3 for which the approval has effect, or the Minister believes the action will have such an impact;
 - (ii) the Minister believes it is necessary to revoke, vary or add a condition to protect the matter from the impact; or
 - (ba) all of the following conditions are satisfied:
 - (i) the action has had a significant impact on a matter protected by a provision of Part 3 for which the approval has effect, or the Minister believes the action will have such an impact;
 - (ii) the Minister is satisfied that the impact is substantially greater than the impact that was identified in assessing the action;
 - (iii) the Minister believes it is necessary to revoke, vary or add a condition to protect the matter from the impact.
- 46. The Department has reviewed the information provided in the request, and considers:
 - that there is insufficient information that the action has had or will have <u>a</u> significant impact that was not identified in assessing the action on any matter protected by a provision of Part 3 for which the approval has effect. The test for this is substantially the same as the test for suspension in s144(2), which is discussed above (paras 12-40).
 - that the impact is not substantially greater than the impact that was identified in assessing the action. This is because:

- there is limited direct evidence of Greater Glider and its habitat in the north-west corner of the approved clearing area. However, the information indicates that, through proximity to Greater Glider and suitable habitat, Greater Glider and suitable habitat may be located within the project area; and
- the area of Greater Glider habitat in the north-west corner of the approved clearing that may be present, and was not identified during the assessment, is likely to be in the order of 1-20ha. The Department does not consider this impact to be substantially greater than the impact that was identified (106.8ha) and mitigated during the assessment, when the approval was made.
- 47. For these reasons, the Department considers there is insufficient basis for you to consider that the conditions specified in sections 143(1)(b) and (ba) of the EPBC Act are satisfied. Therefore, the Department considers you do not have the power to vary the approval under sections 143(1)(b) or (ba) of the EPBC Act.

Recommendations

- 48. For the reasons set out in this brief, the Department recommends that you agree that:
 - a) you do not have the power under section 144(1)(b), as shown in paragraph 39, to suspend the approval for EPBC 2016/7838, as requested by Ms McKinnon, on the basis that the conditions specified in section 144(2), as shown in paragraph 38, are not satisfied; and
 - b) as shown in paragraph 44, you do not have the power under section 143(1)(b) or (ba) to revoke, vary or add a condition to protect the Greater Glider from the impacts of the action.
- 49. If you decide, consistently with the Department's advice, that you have no power to suspend the approval, it is recommended that you sign the letter to Ms McKinnon at **Attachment A**.

Consultation:

50. Environment Legal Branch

s22(1)(ii) Assistant Director Post Approvals Section Ph: s22(1)(ii)

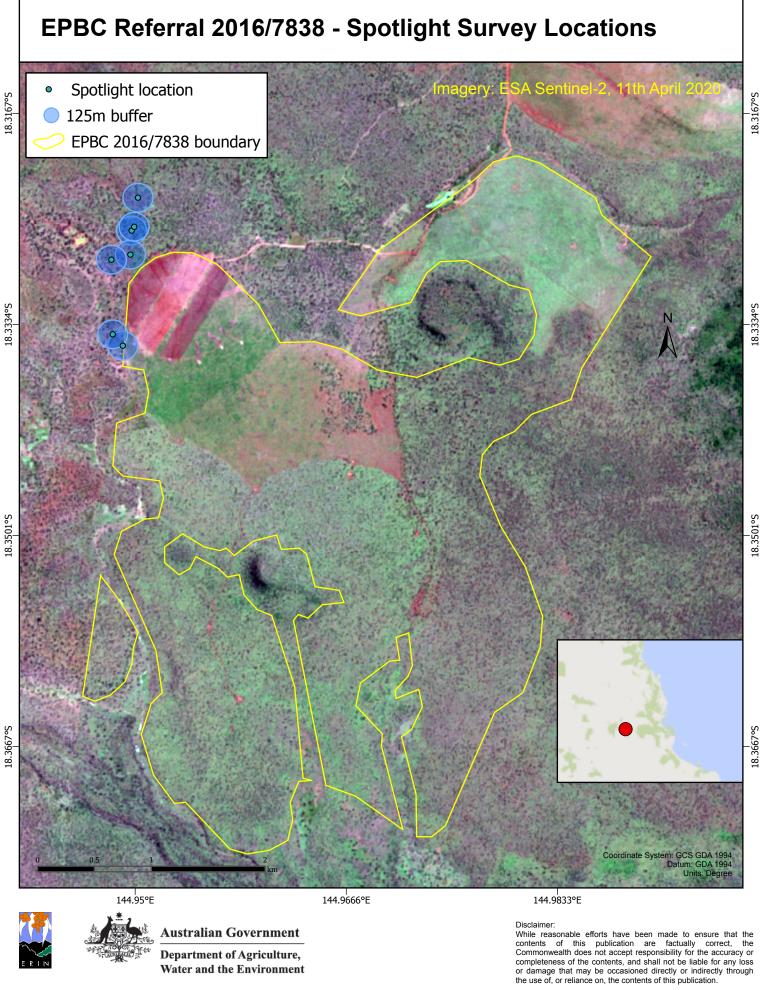
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Attachments

- A. Response letter (for signature)
- B. Request to suspend Meadowbank Station Approval (2016/7838)
- C. Approval notice for EPBC 2016/7838 (9 February 2018)
- D. Variation notice for EPBC 2016/7838 (23 December 2019)
- E. EPBC Act Survey Guidelines for Australia's threatened mammals (2011)
- F. <u>Queensland Government's Terrestrial Vertebrate Fauna Survey Guidelines for</u> <u>Queensland (June 2018, V3.0)</u>
- G. Meadowbank Impact Assessment 17 October 2017
- H. EPBC Referral 2016/7838 Spotlight Survey Locations
- I. 2016/7838 referral of proposal to clear 1,475 ha

 Table 1. Greater Glider detections and associated information

| Detection date | Lat/Long (N to S) | Distance from project boundary | Tree height/species, notes |
|-------------------|-----------------------|-----------------------------------|--|
| 3 June 2019 | -18.3233, 144.9504 | 545m | 20m/ <i>E. melanoploia</i> , emerging from an obvious hollow (height in tree 15m). |
| 4 June 2019 | -18.3256, 144.9499 | 325m | 10m/dead tree, one adult in a dead tree (height in tree 25-30m). |
| 3 June 2019 | -18.3259, 144.9497 | 310m | 15m/ <i>E. tereticornis</i> , two adults together in tree feeding on the blossom (height in tree 12m). |
| 3 June 2019 | -18.3278, 144.9496 | 148m | 10m/dead tree, one adult in a dead tree. |
| 4 June 2019 | -18.3282, 144.9481 | 243m | 20m/ <i>E. tereticornis,</i> one adult feeding on eucalypt blossom high up in the canopy of a large, mature eucalypt (height in tree 25m). |
| 4 June 2019 | -18.3341, 144.9482 | 104m | 3m/ <i>E. tereticornis,</i> one adult feeding on eucalypt blossom (height in tree 6m). |
| 4 June 2019 | -18.3350, 144.9490 | 13m | 20m/ <i>E. tereticornis,</i> one adult feeding on eucalypt blossom high up in the canopy of a large, mature eucalypt (height in tree 15-18m). |



Note: Boundaries are indicative only For Official Use Only

Produced by the Environmental Resources Information Network (ERIN), Australian Government Department of Agriculture, Water and the Environment, 2020.