17 December 2021

Warragamba Dam Assessment Team
Planning and Assessment
Department of Planning, Industry and Environment
Locked Bay 5022
Parramatta NSW 2124

Submisison sent by email only to: warragamba.damEIS@dpie.nsw.gov.au

Dear Assessment Team,

Submission – Warragamba Dam Raising Project – SSI - 8441

Thank you for the opportunity to provide a submission to the Warragamba Dam Raising Project (**the Proposal**) draft Environmental Impact Statement (**draft EIS**).

BirdLife Australia is an independent non-partisan science-based bird conservation charity with over 220,000 supporters. Our primary objective is to conserve and protect Australia's native birds and their habitat. Our organisation is the national partner of BirdLife International, the world's largest conservation partnership.

BirdLife Australia has a long history of collaborating with the Federal and NSW Governments, researchers, community groups, landowners, and the corporate sector to implement on-ground conservation projects to recover threatened bird populations and protect their habitat, including Regent Honeyeaters through our Woodland Birds Program.

BirdLife Australia strongly opposes the Proposal due to the unacceptable impacts the Proposal will have on woodland-dependent bird species, especially the Regent Honeyeater. We have provided detailed comments to the draft EIS (attached) but have summarised our priority concerns here:

- Regent Honeyeaters are nationally-listed as Critically Endangered under the NSW Biodiversity Conservation Act 2016 (BC Act), the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and under the criteria of the International Union for the Conservation of Nature (IUCN). The species has a current population estimate of as few as 250 mature individuals.
- The Proposal's impact area is within contemporary breeding habitat for Regent Honeyeater and during the Proposal's assessment period a total of twenty-one (~5% of the entire population estimate) Regent Honeyeaters, including active nests, were recorded within the Proposal's impact area.
- Breeding habitat is considered *habitat critical for survival* of Regent Honeyeaters under the National Recovery Plan for the Regent Honeyeater and it is unacceptable and inconsistent with the National Recovery Plan for any habitat critical to the survival of a species to be destroyed or degraded.
- The destruction or degradation of Regent Honeyeater breeding habitat would have dire consequences for the species as a whole and would exacerbate the species extinction risk.

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- There is no evidence that breeding habitat for Regent Honeyeaters can be successfully offset and as such any offset proposals would be unlikely to provide direct benefits for the species as a whole.

Please contact BirdLife Australia Woodland Bird Program Leader, Dean Ingwersen (dean.ingwersen@birdlife.org.au) or BirdLife Australia NSW Woodland Bird Program Manager, Mick Roderick (mick.roderick@birdlife.org.au) with any enquiries relating to this submission.

Yours sincerely

Samantha Vine

Head of Conservation

Disclaimer: BirdLife Australia has not made a reportable political donation in the past two years.

Specific Comments:

Appendix F1 Biodiversity Assessment Report Upstream	
Section Name (linked)	**Comments**
Chapter 1 Introduction	
1.5.7 - 2019-2020 bushfire event (pp 16-19)	BirdLife Australia strongly agree with the Report that the study area is likely to be an important refuge for fauna during major fire events. While the 2019/20 bushfires were unprecedented, the number of days with very high and extreme fire danger risks will continue to increase[i] and major bushfire events are predicted to become increasingly common[ii]. The Report's assessment that 10 - <30% of Regent Honeyeater habitat is fire-affected is conservative and could be higher than 40% if the analysis is restricted to contemporary breeding locations and aggregative nesting is accounted for[iii]. Modelling by BirdLife Australia suggests that up to 50% of contemporary Regent Honeyeater foraging and breeding habitat was burnt in the 2019/20 bushfires (see table below), and 78% of Regent Honeyeater Area of Occupancy (AOO) within the Greater Blue Mountains Key Biodiversity Area was burnt[iv].

	<table><tr><th></th><th>AOO sqkm</th><th>% AOO burnt</th></tr><tr><td>KBA Trigger Species, Commonwealth Priority and BirdLife Concern</td><td></td><td></td></tr><tr><td>Pilotbird</td><td>204</td><td>76</td></tr><tr><td>Regent Honeyeater</td><td>52</td><td>78</td></tr><tr><td>Rockwarbler</td><td>414</td><td>74</td></tr><tr><td>KBA Trigger Species of BirdLife concern</td><td></td><td></td></tr><tr><td>Flame Robin</td><td>78</td><td>68</td></tr><tr><td>Yellow-faced Honeyeater</td><td>1261</td><td>78</td></tr><tr><td>Not KBA Trigger Species but a Commonwealth Priority</td><td></td><td></td></tr><tr><td>Black-faced Monarch</td><td>206</td><td>80</td></tr><tr><td>Gang-gang Cockatoo</td><td>528</td><td>85</td></tr><tr><td>Red-browed Treecreeper</td><td>293</td><td>84</td></tr><tr><td>Superb Lyrebird</td><td>954</td><td>79</td></tr></table> Protecting remaining unburnt breeding habitat is of the highest conservation priority and is consistent with the Department of Agriculture, Water and the Environment's (DAWE) Management Interventions for 119 Priority Animal Species[v] following the 2019/20 bushfires, including specifically for Regent Honeyeaters: • The careful management of unburnt areas, including within or adjacent to recently burnt ground that provide refuges and also within unburnt areas that are not adjacent to burnt areas; and • Avoiding further clearing of habitat.
Chapter 4 – Alternatives	
6.1 Measures to avoid (pg 185)	There are many alternative options to raising the Warragamba Dam wall that would protect existing floodplain communities. A combined approach of multiple options has been recommended as the most cost-effective means of flood risk mitigation. Alternative options were not comprehensively assessed in the EIS. Any assessment of alternatives does not take into account the economic benefits that would offset the initial cost of implementation.
Chapter 5 – Threatened Species and Populations	

5.5.2.2 Fauna (pg 160)	**Table -10** - BirdLife Australia has serious concerns that there were no post-bushfire field surveys, especially for Regent Honeyeaters, which have had large areas of habitat impacted by the bushfires (as referenced above). Unburnt habitat is critically important for this species and the lack of post-bushfire field surveys is a systemic failure of the draft EIS. BirdLife Australia recommends at a minimum the same survey effort for Regent Honeyeater (24 hours and 40 minutes) should be repeated.
5.6.1 (pg 168)	BirdLife Australia recommends that this section should include a reference that Alluvial woodland is a priority habitat for Regent Honeyeaters.
Chapter 7 – Impact assessment	
7.2.4 Impacts on threatened fauna species and their habitat (pp 219)	Mistletoe is missing from this section. BirdLife Australia recommends that the following dot point is included as important fauna habitat features that may be impacted by the Project: Mistletoe species (including *Amyema pendula* and *Amyema cambagei):* used as a critical foraging resource during both breeding and non-breeding seasons when flowering, and as a site in which nests can be constructed by Regent Honeyeaters.
Table 7-4 (pg 220)	**Regent Honeyeater -** The text in the table has been considerably altered from the previous consultant 2020 report. BirdLife Australia recommends that the text for potential impacts should be edited to read as follows: "Impacts from temporary inundation **will** include **death of nesting and foraging trees** within areas of suitable breeding habitat, **potential** mortality of nestlings should a flood occur during a breeding event, and loss of suitable foraging habitat, specifically feed tree species such as *Eucalyptus melliodora*, *Eucalyptus albens*, and *Eucalyptus eugenioides*. Mistletoe species which Regent Honeyeaters use as a foraging and breeding resource including *Amyema pendula* and *Amyema cambagei* will suffer mortality through inundation due to the death of their host tree species." The table does not include two forest-dependent cockatoo species that would be impacted by the Proposal. Both Gang-gang Cockatoo (*Callocephalon fimbriatum)* and the South-eastern Glossy Black-Cockatoo (*Calyptorhynchus lathami lathami)* breed within the Proposal footprint and have been impacted by the 2019/20 bushfires. Following the bushfires both species have been reviewed by the Threatened Species Scientific Committee and are likely to be nationally listed as threatened species under the EPBC Act.

Table 7-5. (pg 224)	The Table significantly underestimates the potential impact of the project on Regent Honeyeater habitat and is inconsistent with the leaked draft documents. The proposed offset strategy does not account for Regent Honeyeater habitat located: • Between the current maximum supply level (MSL) and 2.78m above the MSL. Much of the remaining Regent Honeyeater habitat within the Burragorang Valley will fall within 2.78m of the MSL; and • From 10.25m above the current MSL to the new MSL (at least 14m) if the Warragamba Dam wall is raised at least 14m. In addition, plant community types occupying this higher impact zone such as ironbarks, stringybark and grey gum species will be less resilient to inundation than lower-lying PCTs.
Table 7-9. (pg 232)	Again, the text in this table has been diluted from the previous 2020 consultant report. BirdLife Australia recommends that this table is strengthened by replacing "The Project may impact on suitable breeding and foraging habitat for Regent Honeyeater" with "The Project **will** impact on suitable breeding and foraging habitat for Regent Honeyeater."
Chapter 8 – Impacts requiring offsetting	
Table 8-5 (pg 240)	The Table significantly underestimates the potential impact of the project on Regent Honeyeater habitat and is inconsistent with the leaked draft documents. The proposed offset strategy does not account for Regent Honeyeater habitat located: • Between the current maximum supply level (MSL) and 2.78m above the MSL. Much of the remaining Regent Honeyeater habitat within the Burragorang Valley will fall within 2.78m of the MSL. • From 10.25m above the current MSL to the new MSL (at least 14m) if the Warragamba Dam wall is raised at least 14m. In addition, plant community types occupying this higher impact zone such as ironbarks, stringybark and grey gum species will be less resilient to inundation than lower-lying PCTs.
Appendix G Likelihood of occurrence Table	
Link.	**Regent Honeyeater:**

	The Habitat and distribution section is incorrect. The remaining wild population of Regent Honeyeaters primarily occurs in the greater Blue Mountains, which includes breeding areas of the Capertee, Burragorang, Upper Hunter, Lower Hunter, Wolgan and Putty River Valleys. The most recent record is also incorrect and should be updated to 20/10/2020. **Pilotbird:** The Pilotbird (*Pycnoptilus floccosus*) is likely to occur in the impact area[vi] and has recently been nominated for threatened listing under the EPBC Act and should be updated accordingly.
Appendix K.1 Further Consideration of impacts to Regent Honeyeater.	
Link	General comments: This version of the draft EIS has been heavily censored and edited from the draft leaked to the ABC. The area of known and potential breeding habitat in hectares that would be impacted by the Project has been significantly reduced. Further, this version has removed important context and uses ambiguous language when describing both the impacts and the population of Regent Honeyeaters that would be impacted. Therefore, BirdLife Australia recommends that this Appendix restore the language from the original consultant report. Specifically:
Criteria (a)	• Restore the use of **global** when referring to population of Regent Honeyeaters so as to remove any doubt that the Project would impact the entire population and not just a local population within the study area. • Following the first paragraph, restore this section of text: "The Regent Honeyeater is highly likely to decline as a result of the modification, destruction, removal, isolation or decline in the availability and quality of the habitat in the Burragorang Valley. The decline or loss of a breeding population of the size of the Burragorang Valley population, irrespective of the degree of connectivity with the Greater Blue Mountains metapopulation size, would have serious ramifications for the Regent Honeyeater's entire population." • Following the second paragraph, restore this section of text: "Assuming that the Burragorang Valley forms a component of the Greater Blue Mountains metapopulation, which is reasonable, it is estimated that the population that may be indirectly impacted by the development could range from 21 to 200 individuals (i.e. corresponding to **approximately 5-50 % of the global population**)."

Criteria (b)	• Following the first paragraph, restore this section of text: "The majority of the highest quality Regent Honeyeater breeding habitat in the Burragorang Valley is largely restricted to below the 1%AEP level. Such areas would be subject to periodic inundation resulting in the loss or degradation of critical breeding habitat." • In the second paragraph remove this sentence "1,264.55 ha of potential breeding and foraging habitat occur within the impact area." And restore this section of text: "Approximately 761 ha of breeding habitat known to support a breeding population of at least 21-25 individuals is likely to be subject to periodic inundation (i.e. during 1% AEP flood events) which is expected to render such areas unsuitable for breeding Regent Honeyeater. Approximately a further 727 ha of potential breeding habitat is located below the 1% AEP level. Overall, a total of approximately 1488 ha of known or potential breeding habitat may be adversely impacted in the event of a 1% AEP flood. Approximately 1620 ha of confirmed breeding habitat and a further 1510 ha of potential (unsurveyed) breeding habitat may be impacted by inundation during a probable maximum flood event. Overall, a total of 2999 ha of known or potential breeding habitat may be adversely impacted in the event of a probable maximum flood." • Remove the entire last paragraph and restore this section of text: "The Regent Honeyeater is highly likely to decline as a result of the modification, destruction, removal, isolation or decline in the availability and quality of the habitat in the Burragorang Valley. The decline or loss of a breeding population of the size of the Burragorang Valley population, irrespective of the degree of connectivity with the Greater Blue Mountains metapopulation size, would have serious ramifications for the Regent Honeyeater's entire population."
Criteria (c)	This section is particularly misleading and minimises the likely impacts that the proposed development would have on Regent Honeyeaters. BirdLife Australia recommends that that the entirety of the original consultant report is restored to: Loss of breeding and foraging habitat in the impact area will affect habitat selection, foraging and nesting location and breeding success of the Regent Honeyeater population considerably. This will either: (1) force the population to occupy other breeding sites outside of the catchment, or (2) force the population to breed in less productive or marginal habitat areas within the catchment, which is likely to reduce the breeding output of nesting attempts. There is indirect evidence that survival and breeding success of Regent Honeyeaters declines with decreasing flock size (Crates et al. 2017 b). Thus, any reduction in

	breeding output or population size brought about by the proposed development is likely to create positive feedbacks to further reduce survival and breeding success of the remaining population. Considering that the local population likely forms an important component of the Greater Blue Mountains metapopulation, the cessation of successful breeding events in the Burragorang Valley may have significant implications for the Regent Honeyeater overall. The entire Regent Honeyeater population is dependent on the availability of multiple potential breeding sites throughout their range due to the high degree of spatial and temporal variation in key breeding resources such as flowering of preferred Eucalyptus species (Commonwealth of Australia 2016). This is significant because in any given year only one or two key breeding areas may provide conditions suitable for breeding. Hence, the reduction in size or **loss of a critical breeding area** such as the Burragorang Valley is likely to have a **significant adverse impact on the entire Regent Honeyeater population.** Given that a high proportion of suitable breeding available in the Warragamba Special Area is located in the impact area it is reasonable to consider that the proposed development could impact the breeding population. A severe decline or the loss of a key breeding population of this size would constitute a significant adverse impact on the ecology of the Regent Honeyeater population.
Criteria (d)	Again, this section is misleading and has removed critical context from the draft consultant report. BirdLife Australia recommends that that the entirety of the original consultant report is restored to: Whilst Regent Honeyeaters are known to exhibit a degree of breeding site fidelity when conditions allow (Geering and French 1998), the species is highly mobile and depends on a network of breeding habitat patches that they exploit irregularly in space and time (Commonwealth of Australia 2016). The proposed development will likely increase fragmentation of breeding habitat but is unlikely to significantly increase degree of isolation of the population overall. Loss or degradation of breeding habitat situated immediately adjacent to the lake edge will considerably fragment remaining breeding habitat available to the Regent Honeyeater in the Burragorang Valley. The population is likely to be negatively impacted by habitat fragmentation as areas of suitable habitat are affected by periodic inundation. However, such habitat fragmentation is unlikely to result in the isolation of the population given that Regent Honeyeaters can disperse large distances across highly fragmented landscapes to reach suitable habitat. Instead, removal and degradation of critical breeding habitat may lead to the loss of the local population which would represent a considerable increase in population fragmentation at the entire population scale.

Criteria (e)	Again, this section has removed critical context that is important in understanding the impacts the proposed development would have on the **global** population of Regent Honeyeaters. BirdLife Australia recommends that this section of text is restored as a final paragraph: Considerably more monitoring effort in time and space is required to further elucidate the relationship of the local population to other Regent Honeyeater populations. Furthermore, systematic surveys are required to determine the distribution, frequency and magnitude of breeding events in the Burragorang Valley as these factors are currently largely unknown. The size of the breeding population present in the impact area comprises a considerable proportion of the total wild Regent Honeyeater population. It is likely that the Burragorang Valley population represents a critical breeding population of the Greater Blue Mountains metapopulation upon which the species' long-term survival and potential recovery depends on. Individuals are likely to move between these core breeding areas in response to the condition of key resources such as flowering in each area. Further research would be required to better understand spatial-temporal variation in the relationship between breeding sites and the degree of connectivity between individuals breeding in the Burragorang Valley and across other known breeding locations.
Criteria (f)	Restore bracketed text in the first paragraph: It is unlikely that the proposed development will lead to an increase in threats and indirect impacts **(excluding all indirect impacts associated with direct loss or degradation of habitat)** that may in turn lead to a decrease in the viability of the population.
Criteria (g)	Amend this section regarding the national recovery plan to include: Habitat critical to the survival of the regent honeyeater includes: • Any breeding or foraging habitat in areas where the species is likely to occur; and • Any newly discovery breeding or foraging locations. It is essential that the highest level of protection is provided to these areas and that enhancement and protection measures target these productive sites. Identifies an action to protect intact (high quality) areas of regent honeyeater breeding and foraging habitat as described [as above]

Appendix F2 Downstream biodiversity assessment	
Chapter 6	
Table 6-6 Habitat for threatened fauna…	BirdLife Australia strongly agrees with Regent Honeyeater assigned with the highest level of Impact Risk.
Appendix F – Regent Honeyeater	BirdLife Australia strongly agrees with the conclusion of this Appendix that the Project has the potential to have a significant impact on the Regent Honeyeater.

Appendix F3 Biodiversity Assessment Report – Construction area	
Chapter 6	
1.5 - 2019-2020 bushfire event (pp 16-19)	BirdLife Australia strongly agree with the Report that the study area is likely to be an important refuge for fauna during major fire events. While the 2019/20 bushfires were unprecedented, the number of days with very high and extreme fire danger risks will continue to increase[vii] and major bushfire events are predicted to become increasingly common[viii]. The Report's assessment that 10 - <30% of Regent Honeyeater habitat is fire-affected is conservative and could be higher than 40% if the analysis is restricted to contemporary breeding locations and aggregative nesting is accounted for[ix]. Modelling by BirdLife Australia suggests that up to 50% of contemporary Regent Honeyeater foraging and breeding habitat was burnt in the 2019/20 bushfires (see table below), and 78% of Regent Honeyeater Area of Occupancy (AOO) within the Greater Blue Mountains Key Biodiversity Area was burnt[x].

	AOO sqkm	% AOO burnt
KBA Trigger Species, Commonwealth Priority and BirdLife Concern		
Pilotbird	204	76
Regent Honeyeater	52	78
Rockwarbler	414	74
KBA Trigger Species of BirdLife concern		
Flame Robin	78	68
Yellow-faced Honeyeater	1261	78
Not KBA Trigger Species but a Commonwealth Priority		
Black-faced Monarch	206	80
Gang-gang Cockatoo	528	85
Red-browed Treecreeper	293	84
Superb Lyrebird	954	79

Protecting remaining unburnt breeding habitat is of the highest conservation priority and is consistent with the Department of Agriculture, Water and the Environment's (DAWE) Management Interventions for 119 Priority Animal Species[xi] following the 2019/20 bushfires including specifically for Regent Honeyeaters:

- The careful management of unburnt areas, including within or adjacent to recently burnt ground that provide refuges and also within unburnt areas that are not adjacent to burnt areas; and
- Avoiding further clearing of habitat.

Appendix F5 Matters of National Environmental Significance - Biodiversity	
1.6 - 2019-2020 bushfire event	BirdLife Australia strongly agree with the Report that the study area is likely to be an important refuge for fauna during major fire events. While the 2019/20 bushfires were unprecedented, the number of days with very high and extreme fire danger risks will continue to increase[xii] and major bushfire events are predicted to become increasingly common[xiii].

The Report's assessment that 10 - <30% of Regent Honeyeater habitat is fire-affected is conservative and could be higher than 40% if the analysis is restricted to contemporary breeding locations and aggregative nesting is accounted for[xiv]. Modelling by BirdLife Australia suggests that up to 50% of contemporary Regent Honeyeater foraging and breeding habitat was burnt in the 2019/20 bushfires (see table below), and 78% of Regent Honeyeater Area of Occupancy (AOO) within the Greater Blue Mountains Key Biodiversity Area was burnt[xv].

	AOO sqkm	*% AOO burnt*
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- The careful management of unburnt areas, including within or adjacent to recently burnt ground that provide refuges and also within unburnt areas that are not adjacent to burnt areas; and
- Avoiding further clearing of habitat.
    -

Table 7-7 Fauna habitat characteristics upstream	BirdLife Australia recommends that this section should include a reference that Alluvial woodland is a priority habitat for Regent Honeyeaters.
Table 10-2 Assessment of potential significant impacts for listed threatened species.	BirdLife Australia strongly agrees with the assessment that the Project could likely have a significant impact to Regent Honeyeater.
Appendix A. Assessments of significance – Regent Honeyeater	BirdLife Australia strongly agrees with the entirety of this Appendix and that the Project is likely to have a significant impact on the Regent Honeyeater upstream of the Warragamba Dam and specifically that the Project: • has significant potential to lead to a long-term decrease in the size of Regent Honeyeater population; • is likely to adversely affect habitat critical to the survival of the Regent Honeyeater • is very likely to seriously disrupt each component of the breeding cycle of a population of Regent Honeyeater, and • would not be consistent with several Regent Honeyeater recovery actions and plans and is likely to substantially interfere with the recovery of the species. BirdLife Australia would also like to comment that this assessment is inconsistent with the final report in Appendix F2 which minimises the likely impacts to Regent Honeyeaters. BirdLife Australia has serious concerns that these inconsistencies could affect the public's understanding of the potential and likely impacts to the environment and threatened species. While BirdLife Australia has the time and resources to review this document in whole, average concerned citizens may take the assessment of F2 at face value and conclude that the project is unlikely to impact Regent Honeyeaters.

Appendix F6 Biodiversity Offset Strategy	
General Comments:	As detailed in BirdLife Australia's Offsets (Biodiversity & Native Vegetation) Policy[xvii]:

	• Offsets are rarely an appropriate response to proposed biodiversity loss and especially for critical habitat for the survival of a species, in this case breeding habitat for the Critically Endangered Regent Honeyeater. • There is no evidence that breeding habitat for Regent Honeyeaters can be successfully offset and any offsets would be unlikely to provide direct benefits for both the affected population and the species. Further, Regent Honeyeaters have specific habitat requirements when breeding and due to the fluctuations of flowering conditions this may mean that only one of these locations is suitable for breeding in any given year. Pressures at these remaining breeding sites put further strain on the species as they compete with aggressive native species for food resources and nesting locations and are at risk of rapid mortality from random events such as wildfire. Crucially, the specific habitat requirements of the Regent Honeyeater mean that birds cannot simply 'nest elsewhere' if key breeding habitat is lost. The loss of any breeding habitat would be detrimental to the viability of the species and the deliberate inundation or destruction of any remaining breeding habitat is incongruous with the National Recovery Plan and would contribute to the trajectory of extinction for the species.
NSW Biodiversity Offsets Policy for Major Projects Principle 2: Reliable and transparent assessment	Assessment of RHE credits in Table 3-7 is inconsistent with the leaked draft documents which calculated that RHE would require 216620 credits and there is no commentary on the significant differences.
NSW Biodiversity Offsets Policy for Major Projects Principle 3: Like for Like offsets	Unlikely to offset known breeding habitat within a World Heritage National Park.
EPBC Environmental Offsets Policy 1	Offsets would not adequately compensate for the loss of contemporary breeding habitat.
EPBC Environmental Offsets Policy 3	Offsets would not be in proportion to the level of statutory protection that applies to the protected matter – breeding habitat within a World Heritage listed National Park.

Principles for the use of biodiversity offsets in NSW Principle 4: Offsets will complement other government programs	Incongruous with government's captive breeding and release program for Regent Honeyeater.
Principles for the use of biodiversity offsets in NSW Principle 5 and 6	There is no evidence that breeding habitat for Regent Honeyeaters can be successfully offset, and any offsets would be unlikely to provide direct benefits for both the affected population and the species.
Regent HE Offset credits Table 3-7 Location – Area to be offset (ha) – Credit requirement Construction – 19.96 – 1537 Upstream – 1264.55 – 97370 Total – 1284.51 - 98907	The proposed offset strategy significantly underestimates the potential impact of the project on Regent Honeyeater habitat and is inconsistent with the leaked draft documents which calculated that RHE would require 216620 credits. The proposed offset strategy does not account for Regent Honeyeater habitat located: • Between the current maximum supply level (MSL) and 2.78m above the MSL. Much of the remaining Regent Honeyeater habitat within the Burragorang Valley will fall within 2.78m of the MSL. • From 10.25m above the current MSL to the new MSL (at least 14m) if the Warragamba Dam wall is raised at least 14m. In addition, plant community types occupying this higher impact zone such as ironbarks, stringybark and grey gum species will be less resilient to inundation than lower-lying PCTs. Further, the offsetable impact levels have been calculated based on the average inundation outcome of a 1 in 20 year flood event. This is inconsistent with the development proposal which is designed to mitigate impacts of a major flood event of at least 1 in 100 years. Finally, while BirdLife Australia has serious concerns that there are not enough suitable credits on the market to achieve the proposed offset strategy.

References:

[i] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.
[ii] Pitman AJ, Narisma GT & J McAneney J (2007) The impact of climate change on the risk of forest and grassland fires in Australia.Climatic Change, 84, 383 401.https://doi.org/10.1007/s10584-007-9243-6
[iii] Crates, R., Rayner, L., Stojanovic, D., Scheele, B. C., Roff, A., MacKenzie, J., & Heinsohn, R. (2021). Poor-quality monitoring data underestimate the impact of Australia's megafires on a critically endangered songbird. *Diversity and Distributions*, 00, 1– 9. https://doi.org/10.1111/ddi.13385
[iv] Todd, S. and Maurer, G. (2020). Bushfire recovery where it matters most. Impacts and actions in Key Biodiversity Areas affected by the 2019/20 Bushfire Crisis. BirdLife Australia, Melbourne. https://www.birdlife.org.au/documents/KBA-Bushfire-recovery-report-2020.pdf
[v] https://www.environment.gov.au/system/files/pages/a8d10ce5-6a49-4fc2-b94d-575d6d11c547/files/management-interventions-119-priority-animal-species.pdf
[vi] http://datazone.birdlife.org/site/factsheet/greater-blue-mountains-iba-australia/details
[vii] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.
[viii] Pitman AJ, Narisma GT & J McAneney J (2007) The impact of climate change on the risk of forest and grassland fires in Australia.Climatic Change, 84, 383 401.https://doi.org/10.1007/s10584-007-9243-6
[ix] Crates, R., Rayner, L., Stojanovic, D., Scheele, B. C., Roff, A., MacKenzie, J., & Heinsohn, R. (2021). Poor-quality monitoring data underestimate the impact of Australia's megafires on a critically endangered songbird. *Diversity and Distributions*, 00, 1– 9. https://doi.org/10.1111/ddi.13385
[x] Todd, S. and Maurer, G. (2020). Bushfire recovery where it matters most. Impacts and actions in Key Biodiversity Areas affected by the 2019/20 Bushfire Crisis. BirdLife Australia, Melbourne. https://www.birdlife.org.au/documents/KBA-Bushfire-recovery-report-2020.pdf
[xi] https://www.environment.gov.au/system/files/pages/a8d10ce5-6a49-4fc2-b94d-575d6d11c547/files/management-interventions-119-priority-animal-species.pdf
[xii] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.
[xiii] Pitman AJ, Narisma GT & J McAneney J (2007) The impact of climate change on the risk of forest and grassland fires in Australia.Climatic Change, 84, 383 401.https://doi.org/10.1007/s10584-007-9243-6
[xiv] Crates, R., Rayner, L., Stojanovic, D., Scheele, B. C., Roff, A., MacKenzie, J., & Heinsohn, R. (2021). Poor-quality monitoring data underestimate the impact of Australia's megafires on a critically endangered songbird. *Diversity and Distributions*, 00, 1– 9. https://doi.org/10.1111/ddi.13385
[xv] Todd, S. and Maurer, G. (2020). Bushfire recovery where it matters most. Impacts and actions in Key Biodiversity Areas affected by the 2019/20 Bushfire Crisis. BirdLife Australia, Melbourne. https://www.birdlife.org.au/documents/KBA-Bushfire-recovery-report-2020.pdf
[xvi] https://www.environment.gov.au/system/files/pages/a8d10ce5-6a49-4fc2-b94d-575d6d11c547/files/management-interventions-119-priority-animal-species.pdf
[xvii] https://birdlife.org.au/documents/POL-Offsets-Policy.pdf