Submission on the Environmental Impact Statement for the Warragamba Dam Raising Project (Prepared by WaterNSW on behalf of the NSW Government, September 2021)

Submission prepared by:

Blue Mountains City Council

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Submission on the Environmental Impact Statement (EIS) to the Warragamba Dam Raising Project

Blue Mountains City Council's (BMCC) comments on the Warragamba Dam Raising Project Environmental Impact Statement (EIS) are informed by the City of the Blue Mountain's unique position as a '*City within a World Heritage Area'*, through its role as a key gateway for tourists visiting the Greater Blue Mountains World Heritage Area (GBMWHA) and as a party to the Gundungurra Indigenous Land Use Agreement.

BMCC's strong sense of responsibility for the protection of the GBMWHA is reflected in its significant and ongoing investments in its environmental management programs and the stringent planning controls in Blue Mountains Local Environmental Plan 2015. These include some of most stringent stormwater provisions in the State and the only schedule of significant vegetation communities in a Local Environment Plan.

BMCC has strong collaborative working relationships with the Traditional Owners of the Gundungurra First Nation in Caring for *Ngurra* (Country), including a formal Native Title agreement, the Gundungurra Indigenous Land Use Agreement.

BMCC has significant concerns with the potential impacts of the Warragamba Dam Raising proposal on the Gundungurra First Nations cultural heritage, on the World Heritage listed National Park and the ecological values of the Blue Mountains National Park.

BMCC also has a number of significant concerns about the adequacy of the conclusions drawn in the Environmental Impact Statement including:

(i) the calculation methods used to determine the impact zone subject to flooding as a result of raising the Warragamba Dam Wall by 14m;

(ii) the calculation methods used to estimate the required biodiversity offsets under the NSW and Commonwealth Biodiversity Offsets schemes, should the project go ahead; and

(iii) The determination that the flooding does not represent a 'future act' under the *Native Title Act 1993* or a Class 1 Post Registration Act under clauses 14.3, 14.4 and 14.5 of the Gundungurra Indigenous Land Use Agreement.

In summary the key points of concern for Blue Mountains City Council in regards to the Warragamba Dam Wall Raising proposal as detailed in the EIS are:

- The unacceptable, significant and uncompensated damage to the cultural heritage, sacred sites and the Native Title rights of the Gundungurra First Nation;
- Whether fair and accurate calculation of the impacts on the biodiversity and world heritage values of the Greater Blue Mountains World Heritage Area and adjacent bushland has occurred;
- Whether fair and accurate calculation of the Biodiversity Offset compensations required under the NSW and Commonwealth Biodiversity Offsets schemes has occurred;
- The lack of integrity of the EIS caused by the pre-emptive watering down of environmental protections, in particular the passing of the *Water NSW*

Amendment (Warragamba Dam) Bill 2018, before the completion of the EIS to enable the project to proceed;

- The ongoing lack of consultation with the UNESCO World Heritage Committee about the impacts of the dam raising on the GBMWHA;
- The lack of consideration of the socio-economic impacts and reputational damage associated with the potential placement of the Greater Blue Mountains World Heritage Area on the List of World Heritage in Danger in accordance with Article 11 (4) of the Convention; and
- Application of the minimal public exhibition period of 45 days, which is inadequate to enable appropriately detailed review and preparation of a submission on the 1,500+ page EIS.

1.0. Unacceptable loss of Aboriginal Cultural Values of the Gundungurra First Nation

The Gundungurra Traditional Owners have advised BMCC that the areas subject to the periodic inundation from the Warragamba Dam Wall Raising, including the Coxs and Wollondilly Rivers and the Burragorang Valley, are a highly significant part of their Country, being the living embodiment of the significant creation stories about the formation of the landscape by ancestral beings.

This creation story, known as '*The Journey of Gurangatch and Mirrigan'* shapes how Gundungurra people understand this part of Country, and has been retold over countless generations.

In addition to these values, BMCC understands that innumerable, well preserved Gundungurra cultural sites have been identified within the proposed flood zone, and that these are considered by the Gundungurra people to be the tangible manifestations of their intangible ancestral creation story. This has been more fully expressed in the recent Aboriginal Place nomination lodged with the NSW Government by the Gundungurra people, which received the full support of BMCC but which has to date, been ignored by the Department of Planning, Industry and Environment.

Council notes that the majority of the Registered Aboriginal Parties (RAPs) consider the proposal to raise the dam for flood mitigation, as a further accumulation of impact to Aboriginal cultural heritage that has previously been affected by the original construction of Warragamba Dam and associated permanent upstream inundation from water storage. This includes nineteen (19) dreamtime story sites within the upstream area which were all at least partially impacted by the flooding of Lake Burragorang.

Blue Mountains City Council does not support the view of the EIS that the damage from the dam wall raising on the indigenous cultural values of the Gundungurra First Nation are acceptable and instead supports the view of the Gundungurra First Nation RAPs that the raising of the dam wall and the resultant predicted flood zones, poses a serious and irreparable threat to the significant tangible and intangible Aboriginal Cultural values of Gundungurra Country.

It is Council's view that the Warragamba Dam Wall Raising EIS will not only result in the loss of a spectacular and extant cultural landscapes, now so rare within close proximity to Sydney and as such an important cultural symbol, but that it will also

have a profound impact on the health and well-being of Gundungurra people suffering the resultant cultural loss.

Given the above, Council accepts the views of the Gundungurra people that the cultural heritage assessments done to support the EIS, whether anthropological or archaeological, are inadequate and not proportionate to the context and importance of this rich cultural landscape. BMCC's ongoing consultation with Gundungurra Traditional Owners on the Aboriginal Cultural Heritage Report indicates the Traditional Owner's dissatisfaction with the assessment process, the conclusions of the Aboriginal Cultural Heritage Report and the lack of compensation or redress for damage to loss of cultural sites and native title rights.

In particular, Traditional Owners have communicated their dissatisfaction publicly at the inadequate resources directed to the assessment of the Aboriginal Cultural values of the inundated area. This follows on from their earlier criticisms of the draft Aboriginal Cultural Heritage Assessment Report, described by Traditional Owners as "*inadequate*" and "*hard to follow*", in addition to only surveying a small, supposedly representative, proportion (26%) of the total area impacted. Symptomatic of the inadequate consultation was the 40 days provided to respond to a large and complex 2000 page draft report.

BMCC strongly urges the NSW Government to undertake a more complete cultural assessment of the impacted area in the final EIS, involving Traditional Owners, as well as providing longer periods for Traditional Owners to comment on subsequent Cultural heritage studies.

BMCC also notes that the EIS makes no reference to the Department of Planning, Industry and Environment *Draft Greater Sydney Water Strategy,* which was exhibited concurrently with the EIS. The EIS does not address the inherent contradictions of the Warragamba Dam Raising Proposal with the Draft Greater Sydney Water Strategy Priority Challenge 5: "Improving water management outcomes for Aboriginal people. *We need to plan for and manage water to support Aboriginal rights, interests and access."*

BMCC strongly believes that the above priority challenge in the *Draft Greater Sydney Water Strategy* is in direct contradiction to the proposed raising of Warragamba Dam, as the proposal poses an unacceptable loss of Aboriginal cultural values, infringes on Aboriginal rights and is based on inadequate anthropological and archaeological assessment. BMCC recommends that anomalies between the draft EIS and the Draft Greater Sydney Water Strategy are specifically addressed in the final EIS.

2.0 Inadequate Aboriginal Cultural Heritage assessment (**Chapter 18):**

Further investigation into the nature and significance of Aboriginal cultural heritage is required, beyond the existing documentation provided in Chapter 18 and Appendix K, as well as further detail on the extent of inundation and its associated impacts to Aboriginal cultural heritage, in order to adequately assess the impacts. The proposed raising of the dam wall will have an extensive impact throughout the upstream study area, including Lake Burragorang and its tributaries. This is an area which contains significant Aboriginal cultural values and numerous Aboriginal heritage sites. BMCC has the following specific concerns:

- The proposed raising of the dam wall will negatively impact the Aboriginal cultural heritage values of the Lake Burragorang area and its tributaries, including hundreds of registered and un-registered Aboriginal cultural heritage

sites on AHIMS and an Aboriginal Place nomination. The cultural landscape is assessed in the Archaeological Report to be of very high significance. The potential impacts to the Aboriginal cultural heritage values (both tangible and intangible) of the area are considered unacceptable, as referenced above.

- The assessment process undertaken to date as documented in Chapter 18 and Appendix K, does not adequately identify, investigate or assess the impacts to Aboriginal cultural heritage. For example, the limited desktop research and small surveyed area. Potential site distribution or predictive modelling reasoning is not adequately provided. Further archaeological field survey is required to appropriately investigate the Aboriginal cultural heritage within the study area. In addition the extent of the inundation and its associated impacts to Aboriginal cultural heritage at different water levels is unclear from the EIS documentation.

- The archaeological assessment of significance is not clearly supported or evidenced, for example, Aboriginal sites are identified as having 'low' significance without clear reasoning or explanation. There is very limited archaeological investigation (and no sub-surface test excavation) to truly understand and consider the Aboriginal cultural heritage values of individual sites to be impacted, nor the broader cultural landscape as a whole.

- Consultation with Registered Aboriginal Parties indicates overall objection to the assessment and proposal, which is noted in the report and referenced to confirm that consultation has been undertaken in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* 2010. However, the proposal does not adequately address the concerns raised throughout the consultation process, rather instead noting that consultation occurred.

- The Aboriginal Cultural Values Assessment (CVAR) attempts to identify the cultural values of the areas to be impacted and outlines mitigation measures for the project, however the appendix identifies that the methodology was limited by Aboriginal cultural knowledge holders who chose not to participate at the time, and the majority of RAPs declined to nominate Aboriginal cultural knowledge holders on the basis that they did not trust the intent of the Proponent or the assessment process.

  While identifying 45 locations of cultural value in the study area, the methodology utilised does not sufficiently address the identification and understanding of Aboriginal cultural heritage values of the area, nor do the recommendations adequately address the proposed impacts to Aboriginal cultural heritage.

- Many of the management recommendations identified should be undertaken irrespective of the project or its impacts. The CVAR states that "all thirteen recommendations should be adopted and implemented by Water NSW irrespective of whether the proposed Project is proceeded with or not." (p.125). Specifically:

  - Cultural heritage awareness training for all Water NSW staff (Recommendation 1) is expected, regardless of the project, as well as Aboriginal cultural heritage awareness training packages for contractors and maintenance personnel (Recommendation 6);

- Similarly, developing a formal agency specific process and policy for undertaking cultural heritage assessments and engaging with the Aboriginal community, consider engaging in-house archaeological specialist, is also a standard expectation, irrespective of the project (Recommendation 2 and 3).;
- Improved access for Aboriginal community members to the area (Recommendation 4) and bi-annual on-country visits (Recommendation 9) post-construction does little to prevent or mitigate the impacts to the Aboriginal cultural heritage values of the place and should be granted irrespective of the project given the cultural connections to the place;
- An Aboriginal Heritage Management Plan (Recommendation 5) and the establishment of an Aboriginal Advisory Group (Recommendation 8) are considered appropriate recommendations although the extent of involvement and effectiveness of the AHMP and Advisory Group in enabling the Aboriginal community's input is unclear. It is also unclear who will be invited to participate and 'speak for Country'; and
- Detailed archaeological recording of all known archaeological sites within the Project Upstream Impact Area (PUIA) and all art sites within the probable maximum flood area (PMF) is also considered an appropriate recommendation and should involve members of the Aboriginal community, however it does little to mitigate against the potential damage and loss of the sites (Recommendation 7). This should not be undertaken without further field survey coverage (not currently adequate coverage) to ensure that it can also be undertaken for all unknown sites that will be potentially impacted within the study area.

Overall BMCC considers the EIS documentation in relation to Aboriginal cultural heritage incomplete and recommends that further investigation and assessment is required to better identify Aboriginal cultural heritage and provide clearer information to understand the extent of impact, which is not currently provided.

3.0 Native Title issues inadequately addressed

Both BMCC and the NSW Government, including NPWS and WaterNSW, are party to the Gundungurra Indigenous Land Use Agreement (GILUA), established under the *Native Title Act 1993* (NT Act). Despite the area proposed to be inundated being subject to this agreement, the EIS is largely silent on the GILUA and its implications.

It is suggested that the inundation as proposed would have significant potential to be a *Future Act* under the NT Act, and to potentially extinguish Native Title. As such, BMCC would like the matter specifically addressed in the EIS and a determination made as to whether the Warragamba Dam Wall Raising Proposal represents a *Class 1 Post Registration Act* under the GILUA. This would take the action outside of the *Alternative Regime* established under the GILUA, and require it to be dealt with under the *Negotiation* provisions of the NT Act.

BMCC notes that EIS does not even acknowledge this as a potential issue and that the NSW Government is yet to commence any negotiation under the NT Act in that regard, and cautions that proceeding with the action in the absence of adequate negotiation under the NT Act could expose it, and consequently the tax payers of NSW, to significant compensation. BMCC draws the NSW Government's attention to

the recent Australian High Court finding regarding Timber Creek in the Northern Territory. Of particular interest in the matter is the significant compensation payable for the loss of intangible, spiritual values resulting in part from inundation of sacred areas. https://aiatsis.gov.au/explore/articles/timber-creek-compensation-case

BMCC strongly recommends that any action by the NSW Government in this matter complies with the GILUA and that the issue of Native Title is explicitly addressed in the EIS. Council's view is that the State Government is obliged to consider, and to demonstrate how it has considered, whether the proposed inundation is a Class 1 Post Registration Act under clauses 14.3, 14.4 and 14.5 of the ILUA.

BMCC's view is that there is a high likelihood that the proposed action would result in the extinguishment of Native Title and as such, there is no leave to carry out the act other than through dealing with the Native Title interests through the relevant provisions of the Native Title Act 1993. As a minimum the EIS should be open and transparent about this matter, including how the proposal, and by extension the State Government, intends to address the implications of the GILUA and the extinguishment of Native Title. BMCC urges the State Government to most importantly, meet its legal and moral obligations to the Gundungurra Native Title interests, and to be mindful of the potential for compensation to be triggered in this matter, and its fiscal obligations to the tax-payers of NSW.

GILUA Extract:

14. ALTERNATIVE REGIME

14.1 The Parties acknowledge that this clause only applies to land within the Agreement Area and only has effect with respect to acts which occur after the date this Deed is Registered.

14.2 The Parties agree that in the event that a proposed act affects land outside the Agreement Area as well as land within the Agreement Area, for the purposes of this clause the act shall be treated as only affecting land outside the Agreement Area and as such the Alternative Regime shall not apply.

14.3 The Parties agree that to the extent that a future act falls within more than one category of Post Registration Act, that future act is covered by the Post Registration Act with the greater procedural rights.

Authorisation of Class 1 Post Registration Acts

14.4 The Parties agree that the following Classes of Post Registration Acts lawfully undertaken in the Agreement Area are Class 1 Post Registration Acts:

(a) A compulsory acquisition of the whole or any part of any native title rights and interests (if any) under a law of the State that permits compulsory acquisition, to which the Right to Negotiate applies;

(b) The grant of a freehold estate.

14.5 The Parties agree that Class 1 Post Registration Acts will be subject to the provisions of the *NTA*.

Significant Indigenous cultural values and Native Title issues have been summarily dismissed or ignored, with a routine archaeological survey and the offer to relocate artefacts and provide a biannual bus trip for elders to visit the water catchment area,

without any discussion of just compensation. This is in direct conflict with the stated priority Challenge in the Draft Greater Sydney Water Strategy to:

"Improve water management outcomes for Aboriginal people- *We need to plan for and manage water to support Aboriginal rights, interests and access*."

It is unclear how placing an extensive and rich cultural landscape at risk of being flooded, including identified sacred sites belonging to the Gundungurra people, is compatible with addressing this priority challenge identified by DPIE in collaboration with WaterNSW and Sydney Water.

BMCC recommends that the EIS specifically addresses how the Warragamba Dam Raising Proposal is compatible with the Draft Greater Sydney Water Strategy, which it is noted has been open for public consultation over the same time period as the Warragamba Dam Raising EIS.

4.0 Integrity issues in the development of the EIS

BMCC has significant concerns regarding the integrity of the Environmental Impact Statement. The intent of the EIA process is to assess the environmental impacts of a project to determine whether it should proceed, proceed with modifications or conditions or not proceed at all, based on the outcomes of the assessment.

However, NSW Government's actions have consistently pre-empted the outcomes of the EIS. This is exemplified in the passing of the *Water NSW Amendment (Warragamba Dam) Bill 2018*, which has the effect of amending the *National Parks and Wildlife Act 1974* to allow the temporary flooding of the World Heritage listed Blue Mountains National Park. The passing of such a significant and highly specific enabling piece of legislation should have been informed by the EIS, and not enacted prior to the completion, or indeed the commencement of, the assessment process.

Pushing legislation through to allow this project, before environmental, cultural, or economic impacts have been assessed has made a mockery of due process and risks the assessment becoming little more than a box-ticking exercise, with the NSW government making clear they will press ahead regardless of the findings.

5.0 Inadequate investigation of alternatives to the Dam Raising Proposal

An informed assessment of whether or not the dam wall raising proposal should go ahead requires a thorough exploration of alternative approaches to flood mitigation and adaptation in the EIS. In addition the EIS should consider what additional benefits could be achieved beyond flood mitigation alone. This is currently lacking from the project proposals and the EIS.

Potential alternatives that have been inadequately explored include lowering the dam storage level to increase flood mitigation capacity while at the same time coupling this with the development of rainfall independent water sources such as increasing water recycling and renewable energy powered desalination plants. Building this increased capacity in rainfall independent water supply sources is consistent with the Objective Two of the Draft Greater Sydney Water Strategy "to build resilience to drought and a changing climate" by 'planning for new infrastructure with a focus on rainfall-independent supply, enabling an 'enduring supply' during drought and managing storage depletion to reduce the risk of reaching extremely low dam levels."

Blue Mountains City Council would recommend that independently run hydrological modelling is undertaken to assess the degree of flood mitigation that could be

achieved with major investment in rainwater and stormwater harvesting and reuse in the multitude of urban and extensively cleared catchments that feed into the Greater Hawkesbury Nepean catchment. For example, could largescale stormwater and rainwater harvesting & reuse initiatives throughout the catchment, in combination with other flood mitigation measures and flood adaptation measures (such as improved evacuation routes, property buyback and a moratorium on development in flood affected areas), negate the need for the dam wall to be raised. Implementing water sensitive initiatives throughout the multitude of urbanised and highly cleared landscapes that feed floodwater into the Hawkesbury Nepean floodplain would also have many environmental and community benefits in addition to flood mitigation.

Blue Mountains City Council strongly advocates for further detailed investigation of alternatives in the EIS and of the possibilities for reallocation of the estimated $2 billion in construction and biodiversity offset costs, to flood mitigation downstream of the dam and water sensitive initiatives in the upstream urbanised and highly cleared catchments that feed into the Hawkesbury Nepean floodplain. This could include initiatives such as better flood evacuation infrastructure, the buyback of flood prone liable lands and the creation of a green band of public land in the Hawkesbury Nepean floodplain for biodiversity and public recreation and to act as the green lungs for the City of Sydney.

In addition funding could be provided to the councils within the Greater Hawkesbury Nepean catchment to develop water sensitive city strategies such as the award winning Blue Mountains Water Sensitive City Strategic Plan, and to fund the delivery of water sensitive urban design projects to help capture, infiltrate and/or reuse stormwater locally. This would both decrease local water demand and reduce the flood surges from all the hard surfaces of the urbanised areas within the Greater Hawkesbury Nepean catchment.

Supporting local governments to create stormwater harvesting reuse schemes and build green infrastructure may result in significant flood mitigation outcomes but will also result in significant water savings, increase water literacy in the community, combat extreme heat days and the heat island effect, support clean healthy waterways suitable for community recreational pursuits and create green liveable cities for present and future generations. This flood mitigation approach would be consistent with the stated objective in the Draft Greater Sydney Water Strategy: “Putting water at the heart of our city and communities-*We need to make our city cooler and greener, and maintain healthy waterways and ecosystems*.”

WaterNSW should also consider viable alternatives like improved catchment management in cleared farmland areas, particularly in the highly cleared Mulwaree, Wollondilly and Coxs catchments, which contain municipal and farm dams that could be enlarged to provide floodwater detention with limited biodiversity impacts, and in fact, if done well, biodiversity benefits. Over-cleared catchments could be strategically revegetated to reduce erosion and runoff. Highly eroded and degraded streams could be reconstructed to reinstate the ‘chain of ponds’ morphology that is believed to be their natural state (in lower order streams). This would retain more water, including floodwaters, in those catchments and their floodplains, potentially improving landscape productivity for farming and biodiversity outcomes, if appropriately managed.

Rather than investing in a higher Warragamba Dam, which also represents a single point of failure, funds could be invested in improvement of many smaller dams in highly modified landscapes, and in stormwater management of urban centres (e.g. Goulburn, Lithgow, Moss Vale, Mittagong/Bowral, Blue Mountains) where runoff

could be detained in tanks and artificial wetlands, reducing peak flows into the Warragamba catchment. This approach would foster regional employment, improve water quality, improve biodiversity values and rural productivity, and spread the risk of failure across many structures and areas, rather than concentrating risk at one point, where failure could be catastrophic.

The flooding extent maps shown at the end of Chapter 15 highlight that the dam wall raising project would achieve only minimal reductions in flood extent – i.e. large areas would still flood around Penrith, Richmond, Windsor etc, even if the dam wall was raised. There is particularly minimal difference in the probable maximum flood (PMF) scenario, which presumably poses the greatest risks to human life and property.

The EIS reveals that the proposal would not and cannot prevent significant flooding on the Hawkesbury-Nepean floodplain, not least because the Warragamba catchment is only one source of floodwaters to the Hawkesbury Nepean Floodplain. At best, the project is a partial flood mitigation measure, and a very economically, ecologically, and culturally expensive one. It represents a worst-case example where a technological 'fix' is applied to a problem without adequate regard to what might be done to reduce the problem in a more systematic manner.

Blue Mountains City Council would recommend an independently run cost-benefit analysis of different flood management and adaptation scenarios to clearly investigate whether this minor reduction in flood extents warrants the massive financial, cultural and environmental costs of the proposed project and whether there is a better and more holistic big picture solution. Within this analysis consideration should also be given to the potential loss of capacity at Lake Burragorang due to sedimentation caused by erosion of a de-vegetated FMZ (due to loss of vegetation caused by inundation), and also erosion of upstream catchments and waterways, due to failure to effectively manage erosive forces such as urban and farmland runoff in an era of climate change induced extreme weather events.

6.0 Creative accounting lacks credibility

Another significant concern is the creative accounting utilised in the EIS, which enables the project through the **'watering down'** of the environmental compensations payable under the NSW and Commonwealth Biodiversity Offsets schemes, as well as significantly downplaying the associated impact on the Greater Blue Mountains World Heritage Area.

Despite acknowledging in the EIS that the Dam wall will be technically raised by 14m, the upstream 'Impact Zone' (defined as the additional area flooded above existing levels periodically inundated by floodwaters,) has been conveniently calculated to be the equivalent of a mere net increase of 7.5m of water level rise in terms of impact. This net water level rise impact figure has been achieved by subtracting the temporary flood inundation suggested to be occurring behind the existing dam wall during flooding events, from the known 14m that the dam wall will actually raise flood waters.

In addition the EIS has elected to use averaged 1:20 year flood data for these calculations, rather than 1:100 year flood data as was used previously in the preliminary EIA, to estimate the predicted 'Impact Zone'. Interestingly, by contrast, whenever the EIS is promoting the flood mitigation values of the dam e.g. in the executive summary and in the flooding chapters, the authors have reverted to using 1:100 year event data, and even 1:500 year and 1:1000 year event data, rather than

the 1:20 year flooding averages selectively chosen for calculations of the impact zone and required Biodiversity Offsets.

The cynical use of these two creative accounting techniques has had the effect of minimising compensation costs payable by the NSW government by artificially reducing the environmental impact zone by >50% and the subsequent compensation payable by more than $1 Billion as well as reducing the area impacted within the World Heritage Area to a mere 304ha.

Assessing the upstream biodiversity and World Heritage Area impacts using averaged 1:20 year flood data and thereby generating relatively small impact areas, while conversely assessing downstream economic benefits using much less likely and much more extreme flood potentials is indicative of the inconsistency and bias that typifies this EIS.

The role of an EIS is to provide an objective assessment of environmental impact. However, this assessment reads more like a marketing exercise to promote the perceived benefits of the proposal, rather an objective assessment made to inform the proponent, the assessing government agencies and the public.

6.1 Significantly understated 'Impact Zone'

The 'Impact Zone" in the EIS is significantly understated. Despite the raised Dam providing a flood mitigation zone of 14 metres above Full Supply Level (FSL) , the EIS is based on 'an average or likely' upstream inundation level of just 10.3 metres above FSL – i.e. 3.7 metres less:

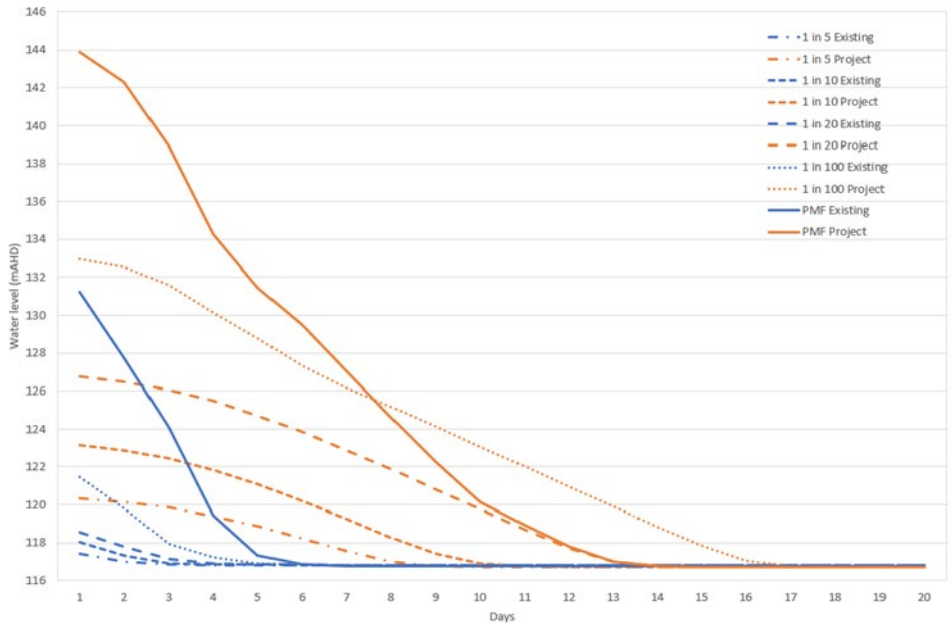
"Building on previous hydrological modelling carried out for the Project, further modelling was undertaken (using Monte Carlo technique) to generate around 20,000 flood events. These events would represent around 200,000 years period of time. This was then analysed by selecting the peak inundation level for each 20-year period to determine the 'average' or likely inundation. Using these thousands of modelled flood events, it was determined the likely inundation level with the raised dam is about 10.3 metres above the full supply level."

The EIS further reduces this understated impacted area by regarding the first 2.8 metres above FSL as already being destroyed by past inundations, which the EIS suggests is currently occurring behind the existing dam wall during flooding events. This results in the impacted area being just the 7.5m strip of land between the existing maximum inundation of 2.8m and 10.3m above FSL, amounting to 1,400 hectares:

"*Based on the modelling, and validation by living record, the area between 2.8 metres and 10.3 metres above full supply level has been adopted as the upstream impact area. The size of this area is about 1,400 hectares and a conservative assumption of 100% loss for the impact area has been applied to the assessment approach for all environmental values."*

However in reality, the raised Dam will contain inflows above 10.3m, up to the crest of the central spillway, 12m above FSL. A mega-flood will result in significantly higher inundation levels as indicated in Figure 15-30 (copied below), with depths for a 1 in 100-year flood and the Probable Maximum Flood (PMF) of 16 metres and 27 metres above FSL, respectively.

Figure 15-30. Dam wall: Depth-duration curves



During significant flood events, which are predicted to become more common with climate change, the inundation area will likely be many times larger than for the 'average/likely inundation', especially due to the flatter upstream topography.

6.2 Significantly understated Biodiversity Offsets

As stated above, the EIS bases its compensatory Biodiversity Offsets payable on the average/likely inundation of 10.3m above FSL, not the full FMZ depth of 14m or the maximum depths for a 1 in 100-year flood and the Probable Maximum Flood (PMF) of 16m and 27m above FSL, respectively. This is further reduced by regarding the first 2.8m above FSL as already being destroyed by past inundations, which the EIS suggests is currently occurring behind the existing dam wall during flooding events:

"*The likely inundation area between the existing inundation level and the Project inundation level defines the 'Project upstream impact area' of around 1,400 hectares (including 304 Ha of Greater Blue Mountains World Heritage Area).*"

As a consequence the compensatory Biodiversity Offsets payable by the NSW government have been effectively reduced to less than half the area that will be periodically inundated over time. The choice of these assumptions has the effect of reducing the subsequent compensation payable by the NSW government by more than $1 Billion.

Blue Mountains City Council believes that the assumptions underlying these calculations are not credible, that the assumptions and associated calculations have been conveniently calibrated to enable the Dam Raising Proposal, by substantially reducing the project's Biodiversity Offset responsibilities and that substantially greater environmental impacts than what has been assessed are likely to occur, warranting much higher biodiversity offset payments.

Blue Mountains City Council would recommend that the EIS Biodiversity Offset calculation assumptions are reviewed by an independent panel of experts to assess their credibility, particularly given the significant financial advantages to the NSW Government associated with downplaying the flooding impacts and the biodiversity offsets payable.

6.3 Understated inundation durations

The EIS states that upstream inundation will increase from up to 4 days at present to up to 14 days with a raised wall:

As stated throughout the EIS, flood events vary widely as do the appropriate responses. The key issue is whether the proposed drawdown procedure would result in the full capacity of the FMZ being restored and the upstream inundation being released within the claimed 14 days. The proposed FMZ drawdown procedure is described in Chapter 15:

"*15.8.4 Discharge during flood events*

The timing and rate of discharge during flood events would be determined on a case-by-case basis. Generally, the discharge of water from the FMZ during a flood event would only occur:

- *when there was a reliable prediction of significant future rainfall*
- *when the discharge would not cause unacceptable downstream flooding impacts."*

The pragmatic decision of governments during flooding would be to delay any releases until downstream flooding had subsided to the extent that FMZ releases would not add to or prolong any flooding. The priority would be to not add to downstream flooding rather than minimise the duration of upstream inundation. Such delaying of FMZ releases would result in upstream inundation for significantly longer than 14 days.

7.0 Inadequate assessment of aquatic ecology and water quality impacts

To adequately assess the potential impacts of the proposal on aquatic ecology in Lake Burragorang and its tributaries (i.e. 'upstream impacts'), more detail, description and quantification is required in Chapter 11-Aquatic ecology. This includes responses to the following questions and statements:

- Exactly what area/length of riffle/pool/run sequences in the Lake Burragorang tributaries (the many different creeks and rivers) will be inundated during temporary flooding?
- Exactly what habitat niches exist in these reaches, and what aquatic fauna (invertebrates & vertebrates) depend on those particular niches?
- Even though flooding of riffles, pools, runs etc. may be temporary (up to 2 weeks according to the EIS), the effects of that inundation may be long-lasting. For instance cobble/boulder riffle zones may be smothered with sediment during periods of inundation. This would not recede with floodwaters and may cause permanent damage to these habitat niches, meaning the loss

from the area of species dependent on those niches, such as certain families of caddisfly, mayfly, stonefly and other macroinvertebrates (with knock-on effects through aquatic and terrestrial food webs).

- BMCC's aquatic scientists have advised that the macroinvertebrate results are not adequately described. Exactly which taxa are found in the reaches that will be inundated? Which rare taxa occur? Which taxa are dependent on particular niches such as cobble/boulder riffles that will disappear during inundation and that will be permanently altered by sedimentation remaining after floodwaters recede?

- The effects on Platypus, Rakali and other aquatic vertebrates are not mentioned. What will happen when their burrows are inundated under 14 metres of water and smothered in layers of sediment?

In addition the EIS does not mention the high potential for 'blackwater' events and associated fish kills and impacts on other aquatic fauna (https://www.waterquality.gov.au/issues/blackwater-events). Raising the dam wall would cause inundation of huge areas of terrestrial vegetation and associated leaf litter and other organic material in the flood management zone (FMZ).

This in turn is very likely to cause decomposition of that organic matter, raising dissolved organic carbon (DOC) levels and causing dissolved oxygen (DO) to crash as the organic matter is consumed by microbes. This could result in mass fish kills across Lake Burragorang, as well as knock-on effects on water quality, potential blue-green-algal blooms and rising treatment costs for raw water to meet drinking water standards. A similar situation occurred at Glenbrook Lagoon in the lower Blue Mountains in March 2020 (extreme rain event after prolonged low water levels inundated vegetation that had colonised the 'mudflats' during the dry years), causing almost complete depletion of dissolved oxygen across the entire waterbody and mass mortality in native fish species. While blackwater events are considered 'natural' phenomena in some areas, this would not be the case for such events caused by the raising of the Warragamba Dam wall.

The risks outlined in Chapter 27 – Water quality are focused on raw water supply for human drinking water consumption, and fail to take into account likely ecological water quality impacts. The water quality risk analysis at the end of the chapter is flawed. The 'surrogate events' used to determine the likely upstream water quality impacts of the dam wall raising (from inundation of vegetation etc):

- are based on past events (1998 and 2012) during which the largely unvegetated full supply level (FSL) zone was inundated, unlike the proposed flood mitigation zone (FMZ), which contains densely forested vegetation communities that will contribute much higher organic loads that will decompose (raising DOC and dropping DO) during inundation.

- do not analyse or report on dissolved organic carbon levels or dissolved oxygen levels. These extremely significant parameters are absent from the EIS analysis.

The statement within the risk assessment in Chapter 27 – Water quality, that the "*rapid filling of the FMZ may result in reduced water quality, however this was assessed as being relatively minor and no significant upstream water quality changes would occur*" is flawed. The assessment mentioned did not take into account two of the most significant water quality parameters that will be impacted by the inundation.

In addition this chapter asserts (p. 27.5) that the water quality impacts from past inundation of the denuded FSL (the 'surrogate events') would likely be worse than water quality impacts from future inundation of the heavily vegetated FMZ if the dam wall is raised. While this may be true for parameters such as turbidity, the converse is the likely reality for parameters such as DOC and DO – i.e. the ecological water quality (and by extension drinking water quality) impacts of inundation of the FMZ are actually likely to be far worse than rapid inundation of the unvegetated 'mudflats' up to the FSL.

The potential for oxygen-depleted, high-DOC 'blackwater' to spill and degrade water quality downstream of the dam wall is not explored at all. Section 27.5.3.2 (pg 27-43) does talk about the potential for increased levels of DOC/ "natural organic matter" (NOM) resulting from decay of inundated vegetation. Associated human health risks arise from the reaction between disinfection agents (e.g. chlorine) and NOM, producing disinfection by-products (trihalomethanes), which can be carcinogenic.

While the EIS acknowledges this human health risk resulting from decay of inundated vegetation, it fails to mention the associated crashes in dissolved oxygen and aquatic fauna impacts that would inevitably result from such decay of inundated vegetation. An adequate assessment is needed to establish how far downstream these impacts could potentially extend. In addition a post-bushfire flooding scenario (such as occurred in 2020) should be considered to understand potential compounding effects in addition to inundation of vegetation in the FMZ alone.

As provided in the detail above, it is suggested that the Warragamba Dam Raising proposal is again in conflict with the Draft Greater Sydney Water Strategy priority 4 which states that:

"*Our waterways and landscapes are healthy and 4.1 Maintain and improve ecosystem health*".

8.0 Inadequate assessment of the impact on the World Heritage values of the Greater Blue Mountains National Park

The EIS does not adequately assess the impacts on the Greater Blue Mountains World Heritage Area (GBMWHA). BMCC is of the opinion that the use of creative accounting (see 6.0 for further details) enables the project through 'watering down' and significantly downplaying of the associated impacts on the GBMWHA. Particularly disappointing is the lack of evidence of consultation with the UNESCO World Heritage Committee or acknowledgment of the fact that the proposal is contrary to Objective 1 of the Strategic Plan for the WHA ("maintain, and wherever possible, improve the current and future integrity of the GBMWHA").

To further underline the lack of consultation with the UNESCO's World Heritage Committee, the Committee is not even listed as one of the key stakeholders in Chapter 6-Consultation. Consultation with the GBMWHA Advisory Committee is mentioned briefly in Chapter 21 –Socio-economic impacts although no details of the intensity of the consultation or the nature of their advice is provided in the EIS.

BMCC notes that the UNESCO World Heritage Committee's significant concern that an increasing number of World heritage properties are facing potential threats from major dam projects, considers that the construction of dams with large reservoirs within the boundaries of World Heritage properties is incompatible with their World Heritage status, and urges States Parties to ensure that the impacts from dams that

could affect properties located upstream or downstream within the same river basin are rigorously assessed in order to avoid impacts on the Outstanding Universal Value (OUV).'

These concerns are reflected in the position of UNESCO's World Heritage Committee, which has specific requested that the NSW Government submit their Environmental Impact Statement for review by the committee before any final decision about the project going ahead is made. BMCC notes with concern that in a recent United Nations report, the World Heritage Centre, which advises the UN committee in charge of world heritage properties, has stated that "the inundation of areas within the property resulting from the raising of the dam wall are likely to have an impact on the Outstanding Universal Value (OUV) of the property".

Despite the UNESCO's World Heritage Committee clearly stating that raising the dam wall and the subsequent flooding of areas of World Heritage Area will "likely have an impact on the outstanding universal value" of the GBMWHA, the EIS does not acknowledge the UNESCO's World Heritage Committee concerns that the proposal would damage or destroy components of listed Outstanding Universal Values for which the WHA was declared in Appendix J-World Heritage Assessment. Nor does the EIS detail any specific consultation to address or allay the UNESCO's World Heritage Committee concerns.

BMCC's concerns on the Warragamba Dam Raising Project World Heritage Area impacts are informed by the City of the Blue Mountain's unique position as a '*City within a World Heritage Area'* and through its role as a key gateway for tourists visiting the Greater Blue Mountains World Heritage Area (GBMWHA). BMCC's strong sense of responsibility for the protection of the GBMWHA is reflected in its significant and ongoing investments in its environmental management programs and the stringent planning controls in Blue Mountains Local Environmental Plan 2015, including some of most stringent stormwater provisions in the State.

BMCC is deeply concerned by lack of consideration of the socio-economic impacts and reputational damage associated with the potential placement of the Greater Blue Mountains World Heritage Area on the List of World Heritage in Danger in accordance with Article 11 (4) of the Convention in Chapter 21-Socio-economic Impacts. The potential placement of the GBMWHA on the List of World Heritage in Danger would have a significant impact on its vibrant nature and culture based tourism economy, which is based in no small part on its World Heritage branding.

As 'The City within a World Heritage National Park', the Blue Mountains region attracts a large number of domestic and international visitors each year, seeking to experience the Outstanding Universal Value for which the Blue Mountains were inscribed in the World Heritage List. BMCC strongly suggests that the NSW Government gives due consideration to the economic impacts associated with any compromising of the Blue Mountains World Heritage brand, which is not adequately identified and addressed in the EIS .

As raised above in this submission, there is concern that the EIS process is being considered as a formality rather than fundamental to the decision making process and consideration of environmental impact. This is also reflected in the position of UNESCO's World Heritage Committee, which has requested that the NSW Government submit their Environmental Impact Statement for review by the committee before any final decision about the project going ahead is made. BMCC would recommend that the comments received from the UNESCO's World Heritage Committee review of the EIS are treated very seriously in the context of the potential placement of the Greater Blue Mountains World Heritage Area on the List of World

Heritage in Danger in accordance with Article 11 (4) of the Convention. Furthermore BMCC reiterates its previous recommendations that WaterNSW must consider the full range of flood mitigation and catchment management options (see 5.0 for more details), which would assist WaterNSW in coming to the logical conclusion that enlarging Warragamba Dam simply does not stack up and that the unavoidable conflict with the GBMWHA and associated values is one more reason to abandon the proposal.

9.0 Concerns with significant biodiversity impacts and adequacy of the biodiversity assessment.

BMCC is of the opinion that the EIS does not adequately assess the impacts of the project on biodiversity. Many areas potentially impacted by inundation, either by the current proposal or by future augmentations of the proposal in response to climate change, were not surveyed at all including the Kowmung River, Cedar Creek, Lacys Creek, Green Wattle Creek, Werriberri Creek, Brimstone Creek and Ripple Creek.

Raising the dam wall by 14 m has the potential to desecrate up to 65 kilometres of pristine rivers, including up to 5km of the Kowmung River, a designated wild river and even by this EIS's very conservative Impact Zone estimates (see 6.0 for more details), 1400ha of high conservation value bushland (more than 4.5 x the area of Sydney CBD). The land to be flooded includes lands of the highest conservation value, including some of the most highly-protected and significant natural landscapes in Australia: in or adjacent to World Heritage-listed; National Park; declared wilderness; declared wild river; and National Heritage status.

BMCC notes ecologists have confirmed that the critically endangered Regent Honeyeater both feeds and nests in areas of old growth forest slated to be drowned by the dam wall raising in Burragorrang Valley. Therefore the project will impact on one of a handful of known breeding site for one of the rarest birds on earth, and the most threatened bird in NSW of which just 400 remain in the wild. In addition large areas of predicted habitat of the Critically Endangered Regent Honeyeater, which would be impacted by flooding were not surveyed. These areas may provide critical breeding and feeding areas for this critically endangered species and loss of these irreplaceable habitats may not be able to be realistically offset.

In a similar vein to the inadequate Aboriginal and Non–Aboriginal Heritage Assessment, the amount of survey effort for threatened fauna for the large area to be impacted was very low given the scale of the impact, with the limited use of remote cameras, ultrasonic detectors, audiometers and spotlighting to detect rare and threatened fauna, especially in remote locations.

Limited survey was undertaken for a range of threatened fauna including threatened microbats including the Southern Myotis (Fishing Bat), the threatened gliders such as the Squirrel Glider, Yellow-bellied Glider and the Greater Glider, the Macquarie Perch, and other threatened species such as the Eastern Pygmy Possum, Brush-tailed Phascogale, Brush-tailed Rock Wallabies and Koalas. Very limited amphibian surveys and no targeted searches for the threatened Booroolong Frog and Stuttering Frog were undertaken. Consideration of the Booroolong Frog was dismissed on the basis it does not occur in easterly flowing streams which contradicts the findings of the *Terrestrial Vertebrate Fauna of the Southern Sydney Region* report (DECC 2007) and known records from the Kowmung River (DPIE, 2021). The Stuttering Frog is known from the western part of the catchment and modelling suggests a broader distribution through the catchment and consideration of impacts on this species should also be made.

Insufficient survey was undertaken in creeks and rivers impacted by the proposal for the Platypus and Water Rat (Rakali) with the result that the impact of the proposal on these iconic species also remains largely unknown. In conclusion BMCC would like to highlight that threatened fauna species surveys were substantially less than guideline requirements, field surveys were generally inadequate and when field surveys were acknowledged to be inadequate expert reports were often not obtained. BMCC would recommend that further threatened fauna species surveys are undertaken to assess the full impact of the proposal and to determine if the impacts on threatened fauna species, several of which are very rare or occur nowhere else can be realistically offset.

Likewise flora survey efforts were low, with only 95 survey plots done and less than 50% of the study area subject to ground truthing. Inundations will impact on one of the two major sub populations of the vulnerable Camden White Gum (Eucalyptus benthamii), up to several hundred hectares of the critically endangered White Box-Yellow Box Blakleys Red Gum Woodland Threatened Ecological Community (TEC), and Hakea dohertyi (Kowmung Hakea).

Considering the very significant upstream and construction site impacts on threatened biota (including Critically Endangered ecological communities and species), even within the limited impact zone calculated by the EIS, the proposal is in strong conflict with the aims of NSW and Commonwealth biodiversity conservation laws and policies, and represents one arm of government investing in threatened biota conservation and another proposing to degrade those same assets, all with the same public funds.

BMCC also notes that upstream biodiversity impacts are assessed primarily using averaged 1 in 20-year flood data resulting in a relatively small impact zone (see 6.0 for more details) , but downstream economic benefits are assessed using much less likely and much more extreme flood potentials. This inconsistency is indicative of the bias and lack of objectivity that is evident throughout the EIS and when comparing the draft EIA with the final EIS.

10.0 The Project facilitates future dam wall raising in response to climate change

The EIS proposes raising the side walls by 17 metres. This extra 3 metres above the proposed auxiliary spillway height is to provide for another raising of the spillways to account for expected greater flood events due to climate change:

“Peer reviewed climate change research found that by 2090 it is likely an additional three metres of spillway height would be required to provide similar flood mitigation outcomes as the current flood mitigation proposal. Raising the dam side walls and roadway by an additional three metres may not be feasible in the future, both in terms of engineering constraints and cost. The current design includes raising the dam side walls and roadway by 17 metres now to enable adaptation to projected climate change. Any consideration of raising spillway heights is unlikely before the mid to late 21st century and would be subject to a separate planning approval process.”

“*If rainfall were to increase by 9.1 percent, the Project FMZ would need to be raised by three metres by 2090 to have about the same flood mitigation capacity as the Project FMZ under existing rainfall conditions*.”

Thus, whilst this EIS proposes an increased upstream inundation of 14 metres now it actually facilitates an increased inundation of 17 metres, with even greater environmental impacts, the inundation impacts of which are not considered at all.

The proposal is arguably 'staged development' that does not disclose the impacts of what is a predicted second stage that is clearly identified as being likely to be necessary. On that basis alone, the EIS cannot inform the Minister of the proposal's true impacts on relevant values upstream and downstream of the dam.

Notably, the EIS claims the Probable Maximum Flood "is highly unlikely to occur in nature", so has no regard to it when considering upstream impacts on biodiversity, yet the EIS plans for the 3m future extension based on forecast climate extremity inclusive of a worsened PMF. Once again this selective use of assessment parameters is indicative of the inconsistency and bias that typifies this EIS and BMCC recommends that the EIS is redone to increase the assessments objectivity and credibility.

11.0 Climate Change risks using out of date data and methodologies (Chapter 14)

The assessment methodology being used in the EIS for the climate change risk assessment is out of date and does not meet current standards. Climate risk will often have unknown risk consequence and should be given higher ratings. As old methodologies are used in this EIS this best practice methodology has not been applied and reduces the validity of the assessment.

The standards that would give the best risk assessment would be:

1. ISO 14091:2021 Adaptation to Climate Change Guidelines on Vulnerability, impacts and risk assessment
2. ISO 31000: 2018 Risk Management guidelines Climate Risk Ready NSW guide – Practical guidance for the NSW Government Sector to assess and manage climate change impacts.

The use of these standards would provide a much improved climate risk assessment that meets with current practice and expectations. It is recommended that these assessments should be redone using the latest standards.

In addition on pg 14-2 the risk assessment only considered activities or outcomes where the Proponent had ownership, direct control, or influence. Impacts of climate change to activities or outcomes out of the Project's influence were not assessed. This significantly reduces the scope of the assessment and fails to acknowledge that climate risks have a range of interdependencies and they need to be assessed holistically. This raises significant concerns as to the robustness and reliably of this assessment.

12.0 Sustainability Assessment flawed (Chapter 20)

The sustainability assessment is entirely inadequate for a project of this magnitude. It fails to set any robust action, targets and shows now ambition to even deliver on current government policy.

Major flaws in the assessment include:

- The use of ISv1.2. This is an outdated tool that sets a significantly lower bar than ISv2.0. The justification for using ISv1.2, being that other projects across Australia still use it, is not a valid reason for using outdated methodologies;

- According the Infrastructure Sustainability Council (who developed the tool) ISv2.0 is a step change for the industry as the benchmark for sustainability performance has shifted what once was considered innovative is now becoming business as usual;

- Using a target performance of 'Commended' the lowest possible rating requiring a score of only 25 out of a possible 110 to reach. Noting this is already in an older and weaker tool (see above comment). This demonstrates a lack of ambitions and will essentially allow the project to deliver outcomes that are lower than current standard practices;

- The GREP assessment is done against the 2014 version of the policy. The current version is 2019 and sets increase standards in a range of relevant areas such as waste, electrical appliances and plant emission. The current actions proposed don't meet all criteria of the new GREP essentially setting sustainability targets below the current baseline used in government agencies; and

- The assessment commits the project to no tangible actions or outcomes as the entire assessment is subject to reassessment after approval, meaning there is no guarantee that even commended under an outdate tool will be achieved. The actions where credits are allocated often have non-committal vague language such as 'investigate', 'where practical', 'identify future', 'monitor'. The use of this language gives the project clear room to avoid delivering nearly every action suggested in the strategy.

The assessment is entirely inadequate and should be redone using the latest tools and policies while committing at a minimum standard of 'leading' with tangible clear actions identified to deliver this ambitions and enable the project to be held accountable for sustainability.

13.0 Concerns with the adequacy of the Non-Aboriginal Heritage assessment (Chapter 17):

BMCC recommends that further detail and investigation is required to supplement the existing documentation provided in Chapter 17 and Appendix I, in order to adequately assess the impacts on non-Aboriginal heritage. In terms of statutory heritage items located within the Blue Mountains LGA, these include the UNESCO 'The Greater Blue Mountains Area' which is on both the World Heritage List and the National Heritage List, as well as the 'The Greater Blue Mountains Area Additional Values' nominated listing.

A total of 988 existing listed heritage items are noted within the study area (Section 17.3.4), including some instances where a single heritage item is listed on multiple lists. Other than the UNESCO 'The Greater Blue Mountains Area' (WHL and NHL) and 'The Greater Blue Mountains Area Additional Values' nominated listing, none are identified in the text of the report as being located within the Blue Mountains LGA. However, there are a number of local and state heritage listed items located within close proximity to the downstream study area within the Blue Mountains LGA that are listed in Schedule 5 of the Blue Mountains Local Environmental Plan 2015 and two on the NSW State Heritage Register, which are visible on Figure 17-10, that are not identified or adequately considered in the assessment.

Other key areas of concern identified include:

- This chapter states (Section 17.2.1) that only statutory lists have been considered as a part of the assessment process. There is no identification or assessment of any unlisted items of potential heritage significance (except for mention of Jooriland homestead, which also does not provide any investigation or assessment of its significance). This is a key area of concern and further investigation and assessment into non-Aboriginal heritage that is not listed is needed;

- The background research states that maps for s170 curtilages are not available for many items on the SHI database and the large number of items within the study area, however it is necessary to review the extent or curtilage of these heritage items as a part of the assessment process;

- The report indicates that the field survey was conducted in 2017 and 2018, over three and a half years ago, and was only undertaken for select listed items. Further investigation, including for non-listed non-Aboriginal heritage is necessary in order to identify whether any unidentified heritage will be impacted;

- The historical overview focuses mostly on Sydney's water supply and the construction of the dam and its associated upgrades. There is very little historical background on the early agricultural history, later referred to as Phase 1 and having nil-low archaeological potential without adequate background research or justification to support this;

- Limited archaeological assessment is provided and focuses only on the construction study area and not the upstream area, which will be impacted through water inundation;

- Site inspection limited to only include the Warragamba Supply Scheme, Warragamba Dam Haviland Park, Warragamba Emergency Supply Scheme, Convict Sites (Old Great North Road) and Ku-ring-gai Chase National Park listing. No site inspection undertaken to identify other non-Aboriginal heritage that may be impacted by the proposed works. Further investigation (both desktop and physical survey) is necessary as a part of the assessment process; and

- Mitigation measures outlined require further detail.

BMCC concerns about the adequacy of the assessment of the non–Aboriginal heritage is echoed by the Blue Mountains Heritage Advisory Committee, which has also expressed concerns in relation to the adequacy of the non-Aboriginal heritage

assessment, specifically in relation to the nature of the assessment and the limited amount of research undertaken and detail provided, reinforcing BMCC's recommendation that further assessment is necessary.

14.0 Insufficient time for comment

Allowing a 45 days submission period for an EIS that contains 29 chapters and over 1500 pages and which took over 4 years to compile is not considered adequate. By comparison BMCC's Gully Aboriginal Place Plan of Management, a significant document but only 145 pages long, was exhibited for 60 days. While two extensions have subsequently been granted to provide an additional 28 days for comment BMCC would like to point out that the provision of such a limited time for comment has been perceived by the community and impacted stakeholders as the NSW Government having already made up its mind, with the EIS process being considered an administrative formality. This has been reinforced by NSW Government's actions pre-empting the outcomes of the EIS, exemplified in the passing of the *Water NSW Amendment (Warragamba Dam) Bill 2018*, which has the effect of amending the National Parks and Wildlife Act 1974 to allow the temporary flooding of the World Heritage listed Blue Mountains National Park. The passing of such a significant and highly specific enabling piece of legislation should have been informed by the EIS, and not enacted prior to the completion of the assessment process. Pushing legislation through to allow this project, before environmental, cultural, or economic impacts have been assessed has reinforced the public perception that these assessments are little more than a box-ticking exercise, with the NSW government intending to press ahead regardless of the findings.

15.0 Conclusion

In closing, BMCC strongly urges the NSW Government to reconsider proceeding with this culturally insensitive, environmentally and reputational damaging Warragamba Dam Raising proposal, to look at the viable whole of catchment alternatives more closely and to cease pursuing its plans to inundate this highly valuable and significant area, most importantly for the Gundungurra First Nation, but also for the people of NSW, Australia and indeed the World.

References

DECC (2007) *Terrestrial Vertebrate Fauna of the Southern Sydney Region. Volume 1, 2 and 3.* A joint project between the Sydney Catchment Authority and Department of Environment and Climate Change (NSW) (DECC) under the Special Areas Strategic Plan of Management (SASPoM) by the Information and Assessment Section, Metropolitan Branch, Climate Change and Environment Protection Branch, DECC, Hurstville.

DPIE (2021) Bionet Atlas of NSW Wildlife. Database of Fauna and Flora records. Department of Planning, Industry, and the Environment.