

Submission in response to

Belsar–Yungera and Hattah Lakes North Floodplain Restoration Projects Environment Effects Statement

prepared on behalf of Environment Victoria

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Submitted to: Victorian Murray Floodplain Restoration Project Standing Inquiry and Advisory Committee

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A. Introduction and summary

1. Environmental Justice Australia (**EJA**) is instructed to make this submission on behalf of Environment Victoria (**EV**) in relation to the Belsar-Yungera and Hattah Lakes North Floodplain Restoration Projects (the **Project**) Environment Effects Statement (**EES**). EV is a Victorian incorporated association which formed following the success of a group of people who came together to protect an area of land in Western Victoria which later became the Little Desert National Park. EV's purpose is to bring about a sustainable society living in a healthy environment. EV has campaigned for years in relation to reviving the rivers of the Murray-Darling Basin, including specifically in relation to the Basin Plan.
2. The purpose of this submission is to highlight EV's concerns in relation to the EES and the Project, translated into recommendations to the Victorian Murray Floodplain Restoration Project (**VMFRP**) Standing Inquiry and Advisory Committee (the **Committee**) in relation to the Project.
3. We would like to further develop some of these issues by participating in the hearing in relation to this matter and reserve the right to raise additional matters, beyond the scope of this submission, at the hearing. This may include having regard to further information provided by the proponent or other interested parties.
4. EV's key submissions in relation to the Project are:
 1. **The Project must be assessed in its broader factual and legislative context. That is:**
 - a. **The Sustainable Diversion Limit Adjustment Mechanism (SDLAM) enables more water from the Murray-Darling Basin to be allocated for consumptive use, such as irrigation. The Project is a component of the SDLAM. The Project must be assessed in light of the fact that it is a mechanism to reduce environmental water which would otherwise flow through the Murray River and inundate the adjacent floodplain under the Basin Plan 2012 (Cth) (Basin Plan).**
 - b. **The EES documents do not engage with the findings of the South Australian Murray-Darling Basin Royal Commission. The findings of the Royal Commission provide compelling grounds on which to conclude that the EES relies upon invalid and unlawful assumptions.**
 - c. **Deficiencies in the EES in relation to identifying and assessing the requirements of all relevant legislation must be addressed.**
 2. **The Committee must consider and make findings in relation to the cumulative, facilitated and indirect impacts of the Project as part of the VMFRP and the SDLAM, including findings in relation to the likelihood of the SDLAM and VMFRP delivering the outcomes they predict for the environment.**
 3. **The Committee must require the proponent to address the significant deficiencies in scientific analysis identified by notable experts in this submission process.**

4. **In relation to environmental water and climate change, the Committee should find that:**
 - a. **to approve the Project, further information, including but not limited to completion of the explicit representation of the VMFRP projects in the Source Murray Model, is required to enable appropriate assessment of the impacts of climate change and availability of environmental water on the environmental effects of the Project; and**
 - b. **the number of assumptions made in relation to the availability of environmental water and climate change mean the Project is unable to be approved in its current form as it has failed to adequately address the Scoping Requirements for the Hattah Lakes North and Belsar-Yungera Floodplain Restoration Projects Environment Effects Statement (Scoping Requirements).¹**
5. **The Committee must seek to understand from Traditional Owners whether VMFRP Objective 2 has been met and, if it considers that it has not been met, to understand from the proponent how it considers that the Project can proceed to meet its objectives in the circumstances.**
5. This submission is divided into the following sections:
 - Part B: Legislative context and requirements
 - Part C: Cumulative, facilitated and indirect impacts
 - Part D: Biodiversity, ecology and surface water
 - Part E: Availability of required environmental water and climate change impacts
 - Part F: Traditional Owner rights and consultation

¹ Department of Environment, Land, Water and Planning (Vic), *Scoping Requirements Hattah Lakes North and Belsar-Yungera Floodplain Restoration Projects Environment Effects Statement (2021)* ('Scoping Requirements').

B. Legislative context and requirements

6. This section covers:
 - a. the Federal and State legislative regimes for environmental protection and assessment;
 - b. the legislative regime governing the Murray-Darling Basin;
 - c. other relevant legislation; and
 - d. conclusions about the required approach for assessing environmental effects of the Project.
7. The purpose of considering this detail is two-fold. Firstly, this detail, some of which is lacking in the EES documentation provided by the proponent, is crucial for the processes of the Committee and the Minister.
8. Secondly, an exploration of this legislative context supports one of our key submissions, that the Committee must make findings in relation to the VMFRP as a whole, in the context of the Basin Plan and related legislative instruments, to ensure the Project can deliver the benefits it claims for the environment and to adequately scrutinise impacts of the Project on the environment.

Victorian Environment Effects process

9. The Project was referred by the proponent for assessment under the *Environment Effects Act 1978* (Vic) (the **EE Act**). The EE Act enables assessment of proposed projects which may have significant effects on the environment by enabling the relevant Minister to decide that an EES should be prepared. On 6 December 2020 the Minister for Planning determined that an EES must be prepared for the Project.²
10. Section 10 of the EE Act enables the Minister to make guidelines in relation to the EE Act, the current form of which are the Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978 (Seventh Edition, 2006) (the **Guidelines**). The following components of the Guidelines are instructive in considering the scope of the task of environmental assessment under the EES process:
 - a. Cumulative effects: “An EES should identify the potential for cumulative effects, i.e. where a project, in combination with one or more other proposed projects... may have an overall significant effect **on the same environmental asset. A regional perspective can be helpful in this regard**, by putting the potential effects of a project in a wider context.”³ (emphasis added)

² Minister for Planning (Vic), *Reasons for Decision under Environment Effects Act 1978* (Referral Numbers 2020-R02 and 2020-R13) (6 December 2020).

³ Department of Sustainability and Environment (Vic), *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (7th ed, 2006) 18.

- b. Indirect effects: “Projects may give rise to environmental effects... through more complex, indirect pathways... The extent to which assessment of indirect effects is needed as part of an EES will depend on these factors:
- are the effects reasonably foreseeable?
 - how strong is the causal link or nexus between the project and the effects of concern?
 - are the effects capable of being accurately assessed?
 - could the effects be significant enough, in the context of relevant policy, to impinge on the acceptability of the project?
 - are there other statutory mechanisms through which these effects will be addressed?”⁴

- c. Systems and risk-based approach: “... EES documentation should be prepared in the context of the principles of a systems approach and proportionality to risk. A systems approach involves the consideration of potentially affected environmental systems and interacting environmental elements and processes. This will enable potential interdependencies to be identified, helping to focus relevant investigations and identify opportunities to avoid, mitigate or manage adverse effects...

A risk-based approach should be adopted in the assessment of environmental effects so that suitable, intensive, best practice methods can be applied to accurately assess those matters that involve relatively high levels of risk of significant adverse effects and to guide the design of strategies to manage these risks.”⁵

11. The Scoping Requirements set out the proposed specific matters to be investigated and documented in the EES for the Project. The following components of the Scoping Requirements are instructive in considering the scope of the task of environmental assessment under the EES process:

- a. “The EES needs to put forward a sound rationale for the level of assessment and analysis undertaken for any environmental effect or combination of environmental effects arising from all components and stages of the project.”⁶
- b. “Effects include direct, indirect, combined, facilitated, consequential, short and long-term, beneficial and adverse effects.”⁷
- c. “The investigations and assessments are to include feasible project alternatives and design refinements (e.g. alternative project layouts, siting of infrastructure, management measures, project staging and timing and/or extent of inundation events) to avoid, minimise and manage effects, particularly for:

⁴ Ibid.

⁵ Ibid 14.

⁶ Scoping Requirements (n 1) 10.

⁷ Ibid.

- adverse effects on biodiversity and ecological values within and near the project area, including effects of exacerbated threatening processes, on native vegetation listed threatened ecological communities and species;
 - intended ecological benefits and how they relate to the predicted adverse effects on specific biodiversity values;
 - effects on Aboriginal and historic cultural heritage values;
 - effects on land uses and socioeconomic values;
 - potential effects on water environments and related beneficial uses;
 - effects on groundwater that may result in adverse changes to salinity or groundwater depending ecosystems; and
 - potential cumulative effects on threatened species, surface water and groundwater, with particular consideration of the currently operating, approved or proposed environmental watering projects in the region.”⁸
12. In *Scurr v Brisbane City Council*, the High Court observed that the minimum standard applicable to procedures for public notification of development proposals is “substantial compliance” with the relevant statutory requirements and regulations.⁹ That standard has been applied by the Supreme Court of Victoria.¹⁰
13. In *Prineas v Forestry Commission of New South Wales*¹¹, the New South Wales Land and Environment Court set out the test to determine the adequacy of an environmental assessment with reference to *Scurr*.¹² Specifically, the Court held that an environmental impact statement must be, “sufficiently specific to direct a reasonably intelligent and informed mind to the possible or potential environmental consequences of the carrying out or not carrying out of that activity.”¹³
14. In relation to the scope of an assessment and the meaning of substantial compliance, the Court observed:
- provided an environmental impact statement is comprehensive in its treatment of the subject matter, objective in its approach and meets the requirement that it alerts the decision-maker and members of the public and the [relevant] Department... to the effect of the activity on the environment and the consequences to the community inherent in the carrying out or not carrying out of the activity, it meets the standards imposed by the regulations.¹⁴
15. The Court observed that there is no difference, in principle, between a failure to prepare an environmental impact statement that substantially complies with the regulations, and a failure to prepare an environmental impact statement at all.¹⁵

⁸ Ibid 4.

⁹ *Scurr v Brisbane City Council* (1973) 133 CLR 242 (*'Scurr'*).

¹⁰ *No 2 Pitt Street Pty Ltd v Wodonga Rural City Council (No. 4)* (1999) 107 LGERA 237, [30].

¹¹ (1983) 49 LGRA 402 (*'Prineas'*).

¹² Ibid 417-18.

¹³ Ibid 417.

¹⁴ Ibid.

¹⁵ Ibid.

16. These authorities stand for the proposition that statements of environmental impacts and environmental assessment processes must accord with certain minimum standards, namely that they must be sufficiently specific such that a reasonably intelligent and informed mind is directed to the possible or potential environmental consequences of the activity in question. Failure to do so results in invalidity and unlawfulness. We submit that, for the reasons outlined below, there is a real likelihood that the EES does not meet these required minimum standards.

Commonwealth Environmental Approvals

17. A delegate of the Commonwealth Minister for the Environment determined that the Hattah Lakes North and Belsar-Yungera projects were each a 'controlled action' requiring assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) on 19 May 2020 and 29 September 2020 respectively.¹⁶
18. The relevant controlling provisions for the Hattah Lakes North project relate to Ramsar wetlands¹⁷ and listed threatened species and communities.¹⁸
19. The relevant controlling provisions for the Belsar-Yungera project relate to listed threatened species and communities.¹⁹ The Belsar-Yungera controlled action decision statement of reasons detailed that:
- a. the Department's advice stated "a key impact from the proposed project would be the creation of blackwater events in which decomposing organic matter encourages rapid bacterial growth which consumes dissolved oxygen in the water. I noted that debris from River Red Gums is particularly problematic as it contains a large amount of dissolved organic carbon, and that this could reduce the dissolved oxygen to very low levels that are fatal to aquatic organisms."²⁰ The advice identified the following key impacts of the proposed project:
 - i. habitat degradation from in-river works, resulting in increased sedimentation which can smother silver perch eggs;
 - ii. mortality due to stranding on the floodplain;
 - iii. mortality of adults and loss of eggs due to entrainment in pump infrastructure;
 - iv. reduced recruitment due to drifting eggs or larvae being delivered to unsuitable conditions; and
 - v. increased abundance of pest species e.g. Carp (*Cyprinus carpio*).
 - b. "... both the Murray Cod and Silver Perch have experienced population declines of greater than 80 percent in the last 50 years, and that the consequence of a severe

¹⁶ Victorian Murray Floodplain Restoration Project, *Environment Effects Statement: Belsar-Yungera and Hattah Lakes North Floodplain Restoration Projects* (2022) III.4 ('EES: Belsar-Yungera and Hattah Lakes').

¹⁷ *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ss 16 and 17B.

¹⁸ *Ibid* ss 18 and 18A.

¹⁹ *Ibid*.

²⁰ Department of Agriculture, Water and the Environment (Cth), *Statement of reasons for a decision on Controlled Action under the Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2020/8744, 7 December 2020) 8 ('Statement of Reasons').

blackwater event from the proposed action flowing into the Murray River could result in a significant impact for both species through adverse impacts on habitat critical for their survival.”²¹

- c. “...the proposed action area encompasses an area in which breeding habitat for Regent Parrots is likely to occur according to the Protected Matters Report.”²²
 - d. for the Murray Cod, Silver Perch and Regent Parrot, although mitigation measures had been proposed, they had not been finalised and so the proposed action would have a significant impact on these species.
20. The reasons for decision for the Belsar-Yungera controlled action decision included a decision that there was not a reasonable basis for refusal, despite a finding that the proposed action was part of a larger action, because:

... each of the other Floodplain Restoration Project referrals to date have been determined to be controlled actions, the acceptance of this referral will not reduce the ability to achieve the objects of the EPBC Act as **further assessment would allow consideration of impacts arising from the Belsar-Yungera Floodplain Restoration Project in the context of the larger Victorian Murray Floodplain Restoration Project.**²³ (emphasis added)

21. We submit that the controlled action decisions and the Scoping Requirements require assessment of the Project within the context of the entire VMFRP. The controlled action decisions and the Scoping Requirements also require assessment of the Project within the context of the SDLAM and the Basin Plan.

Legislative regime governing the Murray-Darling Basin

22. The EES is clear about the problem faced in relation to the Murray River floodplain:

Victoria’s Murray River floodplains hold significant ecological, cultural, social and economic value. They provide refuge and habitat for wildlife, connection to Country, and vast recreational opportunities. However, these iconic floodplains are in severe ecological decline, along with the many native trees, animals and plants that depend on them.²⁴

23. To solve this problem, in 2007 the *Water Act 2007* (Cth) (**Water Act**) mandated that:

... we, Australians and humans, had to reduce the amount of water being taken for (mainly) irrigation in the Basin. As enacted law, the solemn and binding expression of our democratic will was (and remains) that we have taken too much, and must stop doing so. Thus, a legislated national program of reduced water for irrigation. It is simply impossible to reduce that agricultural input without having some effect, sometimes grievous, on pre-existing or planned private enterprises. That is why market sales (the vilified ‘buybacks’), compensation and adjustment provisions are critical to a socially just approach.

But it would be absurd, and against all central requirements of the Water Act outlined above, for the national program to halt or falter in the face of demonstrated consequences of reduced water for irrigation leading to adverse impact on some farming enterprises. The Water Act requires less water to be taken, and so provisions in it recognizing the interests that may thereby be harmed (at least, financially) have to be read as fitting into the

²¹ Ibid 9.

²² Ibid 10.

²³ Ibid 7.

²⁴ *EES: Belsar-Yungera and Hattah Lakes* (n 16) 1.2.

scheme's defining characteristic, its cardinal feature, that less water will be taken than in the past — measured from an historical baseline (in 2009).²⁵

24. The objects of the Water Act are, amongst other things: to enable the Commonwealth in conjunction with the Basin States to manage Basin water resources in the national interest; to ensure the return to environmentally sustainable levels of extractions; and to protect, restore and provide for the ecological values and ecosystem services of the Murray-Darling Basin.²⁶
25. The Basin Plan was made under the Water Act in 2012. The EES for the Project notes, “[i]n 2012, the State Governments of the Murray-Darling Basin agreed to implement the Basin Plan to manage water and protect the Murray-Darling Basin for future generations. The aim of the Basin Plan was to restore the Murray-Darling Basin back to a healthier and sustainable level, while continuing to support farming and other industries for the benefit of the Australian community. The Basin Plan sets out Sustainable Diversion Limits which are the amount of water that can be taken from the Murray-Darling Basin each year.”²⁷
26. For clarity, s 5.02 of the Basin Plan provides:
 - (1) The objectives for the Basin Plan as a whole are:
 - (a) to give effect to relevant international agreements through the integrated management of Basin water resources; and
 - (b) to establish a sustainable and long-term adaptive management framework for the Basin water resources, that takes into account the broader management of natural resources in the Murray-Darling Basin; and
 - (c) to optimise social, economic and environmental outcomes arising from the use of Basin water resources in the national interest; and
 - (d) to improve water security for all uses of Basin water resources.
 - (2) The outcome for the Basin Plan as a whole is a healthy and working Murray-Darling Basin that includes:
 - (a) communities with sufficient and reliable water supplies that are fit for a range of intended purposes, including domestic, recreational and cultural use; and
 - (b) productive and resilient water-dependent industries, and communities with confidence in their long-term future; and
 - (c) healthy and resilient ecosystems with rivers and creeks regularly connected to their floodplains and, ultimately, the ocean.
27. Sections 23A and 23B, added to the Water Act in 2012, enabled the Basin Plan to provide for adjustments to be proposed to the Sustainable Diversion Limits (**SDL**). The stated objective of this part of the Basin Plan is, “to allow surface water SDLs to be adjusted to reflect the effects of measures that increase the supply of water or the efficiency of water use.”²⁸ In practice, this means that the SDLAM allows the Basin States and the Murray-Darling Basin Authority (**MDBA**) to seek to use infrastructure and other measures to achieve equivalent environmental outcomes with less environmental water, resulting in more water for consumptive use (such as irrigation).

²⁵ Bret Walker, *Murray-Darling Basin Royal Commission* (Report, 29 January 2019) 20.

²⁶ *Water Act 2007* (Cth) s 3.

²⁷ *EES: Belsar-Yungera and Hattah Lakes* (n 16) 2.2.4.

²⁸ *Basin Plan 2012* (Cth) s 7.09.

28. The purpose of the SDLAM is to achieve the Basin Plan's SDL using less water. It purports to do so via efficiency measures (improved irrigation efficiency to increase environmental water availability) and supply measures (for example by manipulating the floodplain via construction of levees and regulators to justify requiring less water for the environment).
29. The 36 SDLAM supply measure projects, adopted through amendments to the Basin Plan in 2018, have been determined by the MDBA to enable a 605 GL/year reduction in actual water available for the environment under the Basin Plan. The purpose of the projects, as they sit within the SDLAM, are to provide more water for consumptive uses, such as irrigation, than was originally considered possible under the Basin Plan and Water Act and adjust the SDL accordingly.
30. The 36 SDLAM supply measure projects include 23 infrastructure construction projects, five constraints relaxation measures (a range of measures including flood easements on private land and modification or adjustment of physical infrastructure to enable flows onto floodplains) and eight rule change and system enhancement projects.
31. An integral part of the SDLAM is the VMFRP, a series of infrastructure works to enable flooding of sections of the Murray River floodplain in Victoria through pumped or controlled inundation of floodplain wetlands. The VMFRP projects are:
 - a. Lindsay Island Floodplain Restoration Project
 - b. Wallpolla Island Floodplain Restoration Project
 - c. Hattah North Floodplain Restoration Project
 - d. Belsar-Yungera Floodplain Restoration Project
 - e. Burra Creek Floodplain Restoration Project
 - f. Nyah Floodplain Restoration Project
 - g. Vinifera Floodplain Restoration Project
 - h. Guttrum and Benwell Floodplain Restoration Project
 - i. Gunbower Floodplain Restoration Project
32. The Committee must assess the Project in the context that:
 - a. to date, no constraints relaxation project has been implemented.²⁹ It has been argued that the design of constraints relaxation programs under government business cases contain significant shortcomings and they have failed to fully assess cost-benefit calculations.³⁰ In its Inquiry Report in December 2018, the Productivity Commission observed that the 2024 timeframe for these projects under current policy settings is "ambitious and most likely unrealistic".³¹

²⁹ For findings on this proposition, see Walker (n 25) Ch 8.

³⁰ Georgia Kahan, Matt Colloff and Jamie Pittock, 'Using an ecosystems approach to re-frame the management of flow constraints in a major regulated river basin' (2020) 25(2) *Australasian Journal of Water Resources* 222, 233.

³¹ Productivity Commission, *Productivity Commission Inquiry Report: Murray Darling Basin Plan: Five Year assessment* (Report No 90, December 2018) 2.

- b. a ‘status assessment’ of the package of SDLAM projects prepared for the Commonwealth Department of Agriculture, Water and the Environment in 2021³² found that 30 projects (81%) ‘should’ be delivered by the statutory deadline of mid-2024, representing 444 GL (73.5%) of SDLAM offsets, and 7 projects (19%) are ‘unlikely’ to be delivered representing an estimated 160.5 GL (26.5%) of the SDLAM offsets intended.
 - c. as at 2022, therefore, it appears highly likely that, aside from the merits or otherwise of the SDLAM, projects representing more than a quarter of the volumes of water purported to be offset by the SDLAM (water not to be recovered for the environment) will not eventuate by the time of the statutory reconciliation date.
 - d. these shortcomings and a broad range of risks to ecological conditions associated with the SDLAM projects were elaborated at length in the final report of the South Australian Royal Commission³³ and the Productivity Commission.³⁴
 - e. the Wentworth Group of Concerned Scientists published a study in 2018³⁵ of all SDLAM projects against requisite statutory or policy conditions (necessary to achieving ‘ecological equivalence’) which found that one project met all conditions, 11 projects did not include sufficient information to enable proper assessment (representing 150–270 GL/yr of purported water savings), and 25 projects did not meet the conditions that are or should be the basis of the projects proceeding (representing 316–436 GL/yr of water).
 - f. the modelled notion of ‘equivalent ecological outcomes’ between the ‘benchmark’ scenario of the Murray-Darling Basin with water recovery of 2750 GL/yr and an adjusted scenario based on 605 GL/yr less³⁶ was and remains based on a relatively limited data set, a narrow set of variables (ecological components), a high degree of uncertainty, a general absence of accounting for ecological risks, and questionable conformity with statutory or policy preconditions.
 - g. a headline finding of the South Australian Royal Commission was that the amount of water recovery for the environment set under the Basin Plan (and forming the ‘benchmark’ conditions of the SDLAM, 2750 GL) does not reflect an ‘environmentally sustainable level of take’ and that consequently that foundation to the Basin Plan is itself unlawful.³⁷
33. The types of works proposed for the Project are generally known as ‘supply measures’ and may be characterised as a form of infrastructure works analogous to irrigation works intended to divert water from natural watercourses (the Murray River) onto river

³² Peter Boettcher, *Status Assessment: Sustainable Diversion Limit Adjustment Mechanism Program* (Indec, 2021).

³³ Walker (n 25) 302-322.

³⁴ Productivity Commission (n 31) 267-294.

³⁵ Wentworth Group of Concerned Scientists, *Requirements of SDL adjustment projects to ensure they are consistent with the Water Act 2007, Basin Plan 2012, MDBA policies and intergovernmental agreements* (2018).

³⁶ Or 543 GL/yr assuming water efficiencies and recovered environmental water to meet the overall 5% limit on SDL adjustment in the Basin Plan: s 7.19.

³⁷ Walker (n 25) 54.

floodplains in a controlled and engineered manner with the aim of mimicking natural flooding regimes, albeit confined to certain anticipated zones of inundation.³⁸

34. The Project areas are a part of the larger Murray River floodplain, which can be broadly characterised as extensive, connected water-dependent forest and woodland ecosystems from the foothills of the Great Dividing Range to the Murray Lower Lakes. Under natural conditions those floodplain ecosystems are served by annual, seasonal flooding regimes (lateral connectivity to the river) across the length of the river system (longitudinal connectivity). These flooding regimes are intrinsic and essential elements of ecosystem health and function.
35. Additionally, the Project areas are part of the broader Murray-Darling Basin, especially as connected to other major water systems of the Murray-Darling Basin such as the Darling/Baaka, Murrumbidgee, and Goulburn River basins.
36. The situation of the Project areas as subsidiary ecological assets within the Murray River sub-catchment and the Murray-Darling Basin is intrinsic to proper consideration and assessment of environmental effects.

Other relevant legislation

37. The Scoping Requirements include that the EES must identify relevant legislation, policies, guidelines, and standards and assess their specific requirements or implications for the Project.³⁹ We submit that the EES is notably deficient in its failure to adequately address this requirement in relation to matters including:
 - a. the Ramsar Convention;⁴⁰
 - b. the Convention on Biological Diversity;⁴¹
 - c. the *National Parks Act 1975* (Vic) (**National Parks Act**); and
 - d. the International Union for the Conservation of Nature (**IUCN**) List of Protected Areas.⁴²
38. Ramsar Convention: Designation of a wetland as a Ramsar site carries with it certain obligations, including managing the site to maintain its ecological character and detect and manage any threatening processes that are likely to alter its ecological character.⁴³ The proposed works at Hattah Lakes North, which include the construction of stop banks, may result in a change in the ecological character of the wetland. The EES has not conclusively quantified that potential direct and indirect impacts of the Project at Hattah Lakes North are acceptable and can be managed to avoid interfering with the site's ecological character.

³⁸ Ibid 56-57.

³⁹ Scoping Requirements (n 1) 12.

⁴⁰ *Convention on Wetlands of International Importance especially as Waterfowl Habitat*, opened for signature 2 February 1971, 996 UNTS 245 (entered into force 21 December 1975) (*the Ramsar Convention*).

⁴¹ *Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993).

⁴² International Union for Conservation of Nature and Natural Resources, '1993 United Nations List of National Parks and Protected Areas' (Document 20.500.11822/22735, 1994).

⁴³ The Ramsar Convention (n 40).

39. Convention on Biological Diversity: The Convention on Biological Diversity provides a framework for Australia's management of environment and biodiversity. The objectives require signatories to apply the principles of ecologically sustainable development, including the precautionary principle,⁴⁴ and develop and implement national biodiversity strategies.⁴⁵ It appears that the Convention and Australia's Strategy for Nature 2019-2030 have not been considered in the assessment.
40. National Parks Act: The National Parks Act establishes the legal framework for the protection, use and management of national parks in Victoria. Under the *Parks Victoria Act 2018* (Vic), Parks Victoria must prepare and implement a management plan for each national park in accordance with the objectives in the National Parks Act. The management plan for Hattah-Kulkyne National Park is the Red Gum Parks Management Plan. While the EES documents refer to this plan in the Legislative and policy framework attachment, the impacts of the Project on the conservation values of Hattah-Kulkyne National Park have not been adequately assessed.
41. IUCN List of Protected Areas: Hattah-Kulkyne National Park is a Category II protected area under the IUCN List of Protected Areas. Category II protected areas (National Parks) are large natural or near-natural areas with large-scale ecological processes and characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, education, recreational and visitor opportunities.⁴⁶ Each category has a corresponding primary objective. The primary objective for category II areas is, "to protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation."⁴⁷ Other recognised objectives include the management of the area in order to perpetuate unimpaired natural processes and conserve ecosystem integrity and resilience in the long-term.⁴⁸ As a member of the IUCN, Australia has committed to advancing its mission of conserving the integrity and diversity of nature.⁴⁹ The EES does not explain how the construction and implementation of the Project will be managed to meet IUCN objectives at Hattah-Kulkyne National Park.

The required approach for assessing environmental effects of the Project

42. **It is our submission that the Project must be considered in the broader factual and legislative context set out above. That is:**
- a. **The SDLAM enables more water from the Murray-Darling Basin to be allocated for consumptive use, such as irrigation. The Project must be assessed in light of the fact that it is a mechanism to reduce environmental water which would otherwise flow through the Murray River and inundate the adjacent floodplain under the Basin Plan.**
 - b. **The EES documents do not engage with the findings of the South Australian Murray-Darling Basin Royal Commission. The findings of the Royal**

⁴⁴ *Convention on Biological Diversity* (n 41) 1 (Preamble).

⁴⁵ *Ibid* art 6.

⁴⁶ Nigel Dudley (ed), *Guidelines for applying the IUCN protected area management categories to marine protected areas* (IUCN, 2008) 16.

⁴⁷ *Ibid*.

⁴⁸ *Ibid*.

⁴⁹ IUCN National Committee Australia, *The Australian Committee for IUCN Strategic Plan 2021-2025* (Report, 2021) 2.

Commission provide compelling grounds on which to conclude that the EES relies upon invalid and unlawful assumptions.

- c. **Deficiencies in the EES in relation to identifying and assessing the requirements of all relevant legislation must be addressed.**

C. Cumulative, facilitated and indirect impacts

Cumulative, facilitated and indirect impacts in the EES

43. As detailed above, the Scoping Requirements and the Guidelines require consideration of the cumulative, facilitated and indirect impacts of the Project.
44. The Scoping Requirements note that the assessment should provide a clear, objective and well-integrated analysis of the potential effects of the proposed Project, including proposed avoidance, mitigation and management measures, as well as feasible alternatives, including an assessment of cumulative impacts with other existing and proposed developments in the region (including other VMFRP projects).⁵⁰
45. The EES considers cumulative effects in the context of the seven other proposed VMFRP sites, the NSW SDLAM Projects and other existing projects in the vicinity of the proposed works. It concludes that, considering the magnitude, duration and extent of potential effects, either no or negligible material cumulative effects are expected.
46. The assessment of the Project's cumulative effects with the other seven VMFRP projects is that:
- the removal of native vegetation and terrestrial fauna habitat during the construction phase will result in an initial cumulative loss of native vegetation and terrestrial fauna habitat across the region.⁵¹
 - there is potential for cumulative adverse effects on water quality in the Murray River if multiple sites were constructed at the same time, in that construction activities may result in adverse water quality effects through construction dewatering and subsequent disposal of saline groundwater to surface water, or soil disturbance and runoff with high turbidity/sediments and/or other contaminants.⁵²
 - if managed inundation has an adverse effect on downstream water quality in the Murray River, there is the potential for cumulative effects associated with watering multiple sites at the same time. Possible adverse effects are associated with the return flows that are low in dissolved oxygen and/or high in salinity. The potential for adverse water quality effects increases as flows in the Murray River decrease due to the reduced mixing and dilution potential.⁵³
 - if all sites were inundated at the same time this would likely coincide with higher river flows, so the cumulative load in return flows from the floodplains would represent a much lower percentage of the Murray River passing load at the time. As sites are long distances apart, processing and assimilation within the river

⁵⁰ Scoping Requirements (n 1) 10-11.

⁵¹ *EES: Belsar-Yungera and Hattah Lakes* (n 16) 9.1.7, 14.1.7.

⁵² *Ibid* 10.1.7, 15.1.7.

⁵³ *Ibid*.

means that nutrients input at an upstream location will have been processed and transformed by the time that parcel of water makes it to the next site. Catchment activities/other inflows will have a greater influence on nutrient loads and concentrations than inundation of project sites.⁵⁴

- e. as part of the EES assessment, it was determined that staging of the nine VMFRP projects to avoid cumulative effects with each other was not necessary due to the significant geographical distance between the VMFRP project locations.⁵⁵
47. The EES notes that the assessment of cumulative effects is based on completed assessments for Matters of National Environmental Significance (**MNES**) that are available at the time of publication; and will be supplemented with MNES assessments from other VMFRP projects as they become available to inform EPBC Act approval decisions.⁵⁶

Alternatives considered by the EES

48. In considering project alternatives, as required by the Scoping Requirements, the EES considers policy alternatives to the VMFRP (including 'no intervention' and additional Commonwealth water recovery from consumptive users) and design alternatives for the Project.⁵⁷ In considering "alternatives" and project benefits, the EES states a number of times that if the VMFRP does not proceed, a Commonwealth purchase of 120 GL will be required and this will cost \$628 million.⁵⁸ The Committee should find that this framing of the alternatives: (a) further illustrates the need to properly assess the Project in the context of the Basin Plan; (b) brings into question the extent to which the VMFRP was developed as a 'restoration' project; and (c) should not distract from the focus of the EES process on environmental impacts.
49. Additionally:
- a. The source of the 120 GL figure is unclear in the EES. The supply measures were modelled as a package to determine the final adjustment volume.⁵⁹ The VMFRP advised EJA that:

... There is currently no method for assessing the contribution of the nine individual Victorian Basin Plan Environmental Works projects to the overall 605 GL offset.

The site environmental benefits generated by a project can only be determined through a long-term program of environmental monitoring once the projects are operational. As it will take some years to realise the ecological benefits of the projects due to the time required for vegetation to adapt to new inundation conditions, the targets established in the 2015 project business case relate to expected outcomes in 2025 and 2040. To assess value for money produced by individual projects and the level of benefits realisation, hydrologic models for individual projects will be required to form a basis (pending actual outcomes) to project and evaluate the expected environmental outcomes at a program level.

⁵⁴ Ibid.

⁵⁵ Ibid 5.7.

⁵⁶ Ibid 9.1.7, 14.1.7.

⁵⁷ Ibid VI.28.

⁵⁸ See e.g. *EES: Belsar-Yungera and Hattah Lakes* (n 16) 3.45.

⁵⁹ See: Murray-Darling Basin Authority, *Sustainable Diversion Limit Adjustment Mechanism: Draft Determination Report* (MDBA Publication No 37/17, 2 October 2017).

- b. The individual contribution of the SDLAM projects will not be determined until 'reconciliation' in 2024.⁶⁰ The components of the reconciliation framework, like the model, remain undetermined.⁶¹
- c. There is significant variability in the price of water entitlements. High reliability water shares on the Goulburn average \$4,084/ML while below Barmah, prices climbed 27% last year to \$7,111/ML.⁶² \$628 million may be an inflated figure. If water is purchased for \$4,500/ML (a higher price than most recent years) through open tender buybacks, the buyback figure could be \$540 million.⁶³ It should also be noted that this money would be paid to landowners resulting in consequential positive impacts of spending within the relevant communities.
- d. The alternatives assessment in the EES asserts a different basis for the Project than the objectives stated elsewhere, that is, aligning the frequency, duration and timing of managed inundation events and improving resilience to threats such as climate change. Alternatives that would achieve these objectives are increased water recovery for the environment and removal of constraints on environmental water delivery. Full delivery of the Basin Plan with constraints relaxation offers the opportunity to inundate 375,000 ha of floodplain wetlands.⁶⁴
- e. Other Project objectives, including social and economic benefits, Traditional Owner aspirations, and minimising floodplain impacts, may be better achieved through alternative approaches which remove impediments on the floodplain while offering potential early warning systems for floods and improved natural outcomes. For example, constraints relaxation minimises blackwater risks.⁶⁵
- f. Buybacks and water recovery also have potential wider community benefits. Research suggests that buyback compensation stays in the local economy. Many irrigators who have previously sold water have continued farming, as they have predominantly sold surplus or buffer water not used in production. Proceeds were often used to reduce debt, restructure and reinvest on farm.⁶⁶
- g. There is not a proportionate relationship between farm production and compensated reduction in water available for consumptive use. In reality, farms adapt to lower water availability. Understanding the connection between water recovery and farm revenue requires a more nuanced assessment, utilising micro-

⁶⁰ See: Murray-Darling Basin Authority, *Sustainable Diversion Limit Adjustment Mechanism Reconciliation Framework* (MDBA Publication No 11/21, May 2021). It is noted that only an estimate of individual project contributions has been undertaken. See: Boettcher (n 32).

⁶¹ Basin Officials Committee, *Communique – 21 July 2022 – Out of the BOCs* (Web Page, 25 August 2022) <<https://www.mdba.gov.au/news-media-events/newsroom/media-centre/basin-officials-committee-communique-21-july-2022-out-bocs>>.

⁶² Erin Smith et al, *Aither Australian Water Markets Report: 2021-22 Review and 2022-23 Outlook* (Report, August 2022) 27.

⁶³ See: Bureau of Meteorology, *Water Information* (Web Page) <<http://www.bom.gov.au/water/dashboards/#/water-markets/mdb/et>>.

⁶⁴ Kahan, Colloff and Pittock (n 30) 8.

⁶⁵ Environment, Natural Resources and Regional Development Committee, Parliament of Victoria, *Inquiry into the management, governance and use of environmental water* (Report, June 2018) 82.

⁶⁶ Sarah Ann Wheeler, Alec Zuo and Henning Bjornlund, 'Investigating the delayed on-farm consequences of selling water entitlements in the Murray-Darling Basin' (2014) 145 *Agricultural Water Management* 72; Sarah Ann Wheeler and Jeremy Cheesman, 'Key Findings from a Survey of Sellers to the Restoring the Balance Programme' (2013) 32(3) *Economic Papers* 273.

economic concepts of input level changes, input type substitutes and output mix changes.⁶⁷

- h. In terms of value for money, the VMFRP is a \$320 million project intended to water 14,000 ha of floodplain, while the proposed constraints projects propose to benefit 375,000 ha at a cost of \$864 million. The VMFRP are nearly ten times more expensive, costing an additional \$20,000 per hectare.
- i. It is necessary that the proponent provide an alternatives assessment that acknowledges the intended outcome of the Project, namely cost-effective water recovery, achieving environmental outcomes, inundating the greatest floodplain area at the lowest value and local-scale climate adaptation.

Cumulative, facilitated and indirect impacts

50. The use of environmental works (including pumping into floodplain wetlands) has been considered in scientific and scholarly opinion, with findings including:
- a. infrastructure-based approaches to environmental watering (typical of the VMFRP) achieve some environmental benefits but present significant risks to non-targeted wetlands which are the overwhelming majority of ecosystems not inundated by this approach.⁶⁸
 - b. environmental works effect 'default triage', whereby environmental watering is prioritised mostly to in-channel flows, smaller wetlands and a fraction of the lower-lying parts of large wetlands that can be flooded with the limited volume of water available to maintain their condition, while other wetland sites tend to miss out.⁶⁹
 - c. environmental works cannot replace the function of natural overbank flows, repair ecosystems deprived of that flooding regime, or be relied as a restoration technique. Sole reliance on this technique includes likely to high risks. These risks include risks to biodiversity associated with the extensive works required to implement them, absent consideration of any other strategies, as indicated in the extent and nature of loss of native vegetation (i.e. vegetation clearing) identified in the EES. Environmental works should be 'relegated' to emergency measures.⁷⁰
 - d. offset water may mean acute damage for ecosystems like the Coorong. "Only the provision of larger volumes (up to 3200 GL) reduces the number and duration of consecutive years when salinity thresholds are exceeded."⁷¹

⁶⁷ Wheeler, Zuo and Bjornlund (n 66).

⁶⁸ Jamie Pittock, Max Finlayson and Julia Howitt, 'Beguiling and risky: 'environmental works and measures' for wetland conservation under a changing climate' (2013) 708(1) *Hydrobiologia* 111.

⁶⁹ Isobel Bender et al, 'Unfortunate diversions: a policy discourse analysis on the adjustment of the volume of water returned to the environment in the Murray-Darling Basin, Australia' (2022) *Australasian Journal of Water Resources* DOI: 10.1080/13241583.2022.2077685, 10; Vivienne Schweizer, Matthew Colloff and Jamie Pittock, 'The Dammed and the Saved: a Conservation Triage Framework for Wetlands under Climate Change in the Murray–Darling Basin, Australia' (2022) 70 *Environmental Management* DOI: 10.1007/s00267-022-01692, 549–564.

⁷⁰ Todd Wallace et al, '*Natural' versus 'artificial' watering of floodplains and wetlands* (Final Report, June 2011).

⁷¹ Jason S Higham, *An analysis of MDBA modelling outputs for the draft Basin Plan: Hydrodynamic modelling of the Coorong and Murray Mouth* (DENR Technical Report, 2012) ii; Murray Darling Basin Authority, *Hydrologic modelling of the relaxation of operational constraints in the southern connected system: Methods and results* (MDBA Publication No 76/12, October 2012).

- e. “[a]s water scarcity increases under climate change, attempting to conserve wetlands (including rivers) with less water while maintaining or increasing irrigation diversions is likely to prove maladaptive.”⁷²
 - f. it is likely that SDLAM (VMFRP) type projects are only viable from an ecological perspective where combined with a range of other techniques in the context of regulated river systems, such as ‘constraints relaxation’ and achievement of appropriate flow targets.⁷³
 - g. the Environmental Equivalence Method that the MDBA and Victorian Government are using to argue that more intensive management of the VMFRP sites offsets the loss of environmental water to other wetlands remains scientifically highly questionable as the evidence base has not been developed to determine if the modelled outcomes are reflected as real-world environmental outcomes. The method has not been published in international peer reviewed literature and has not been through sufficient on-ground field trials to determine if it is fit for purpose. The approach is based on Schedule 6 of the Basin Plan.⁷⁴ The method was described in the report of the Murray–Darling Basin Commission as ‘experimental and unprecedented’ and with ‘alarming shortcomings’, including ‘a great deal of uncertainty in the results produced by the modelling’ and that ‘...the current Ecological Elements Scoring Method and the modelling behind it is inconsistent with the requirement that the MDBA have regard to the principles of ESD. Further...there is real doubt whether the supply measure SDL adjustment process can be considered to be based on ‘the best available scientific knowledge’.⁷⁵
 - h. the ecological elements spatial scoring system does not enable spatial trade-offs between environmental outcomes to be made without significant uncertainty and risk. The ecological elements framework was described by its proponents as ‘a highly simplified hydro-ecological model’ and ‘not intended for site-scale planning or assessment of works and measures scenarios’.⁷⁶
51. It is reasonably foreseeable that effects and risks of the Project extend to large areas of the Murray River floodplain and downstream wetlands. In particular, the Project, as part of the wider SDLAM, will facilitate managed overbank flows to only a small part of the Murray River floodplain and consequently large sections of the Murray River floodplain ecosystems will be stranded from a managed flooding regime. That is, those ecosystems will receive little benefit from the water recovered under the Basin Plan, and instead the flood-dependent ecosystems that lie outside the proposed works will depend on unmanaged flood events to maintain their health. These flood events are predicted to

⁷² Bender et al (n 69) 1.

⁷³ See, eg, Murray Darling Basin Authority, *Hydrologic Modelling of the Relaxation of Operational Constraints in the Southern Connected System: Methods and Results* (2012); Kahan, Colloff and Pittock (n 30); Wallace et al (n 70).

⁷⁴ IC Overton et al, *SDL Adjustment Ecological Elements Method Trial Implementation Review* (Report, July 2015) 1.

⁷⁵ Walker (n 25) 57.

⁷⁶ IC Overton et al, *Development of the Murray-Darling Basin Plan SDL Adjustment Ecological Elements Method* (Report, 2014) iv, 145; Peter Davies et al, *Murray-Darling Basin Plan SDL Limits of Change Review – Independent Expert Advisory Panel Report* (Report, September 2017) 7.

become less frequent in a changing climate. Such a consequence poses a very high risk to the integrity of the Murray River floodplain ecosystems as a whole.⁷⁷

52. The EES fails to adequately consider these kinds of drastic impacts upon areas of the Murray River floodplain which are connected to the Project sites. It does not consider, for example, the crucial views of Traditional Owners about sites of significance for them outside the Project area and then appropriately consider the impacts of the Project on the future health and viability of these sites from an ecological perspective.
53. A key issue in the Scoping Requirements is the “[p]otential for adverse effects on nearby and downstream water environments (including listed Ramsar wetlands) due to changed flow regimes, water quality, or waterway conditions during construction and operation, in the context of climate change projections.”⁷⁸ Specialist Assessment C Surface Water in the EES concludes that “[t]he Project will not reduce inundation frequency for any of the Ramsar Wetlands as it does not propose to divert any water from these wetlands or prevent flows to these wetlands.”⁷⁹ However, the EES fails to adequately assess the overall impact of reduced environmental water due to the VMFRP on downstream water environments. This assessment must be completed to enable the key issue of adverse effects on nearby and downstream water environments, as set out in the Scoping Requirements, to be dealt with.
54. Further, the EES documents fail to interact with key mechanisms for environmental protection built into the Basin Plan. For example, the EES does not consider how the Project will impact upon indicator sites or flow targets. Flow targets are a key measure of riverine health which inform conclusions about required environmental water in the Basin Plan are made. Such analysis is particularly necessary in the context of studies which have found that environmental flow targets set by the MDBA and required to provide environmental improvements under the Basin Plan have not been achieved.⁸⁰
55. **The Committee must consider and make findings in relation to the cumulative, facilitated and indirect impacts of the Project as part of the VMFRP and the SDLAM, including findings in relation to the likelihood of the SDLAM and VMFRP delivering the outcomes they predict for the environment.**

D. Biodiversity, ecology and surface water

56. In preparing this submission, we have had the benefit of access to a number of important submissions prepared by and/or incorporating the evidence of experts in the fields of botany, ecology and surface water. We reiterate their conclusions that:
 - a. pooling water in areas in place of natural flooding that recedes and disperses across the landscape will result in ecological changes. This will impact on the natural function of the ecosystems.

⁷⁷ C.M.M. Steinfeld and R.T. Kingsford, ‘Disconnecting the floodplain: Earthworks and their ecological effect on a dryland floodplain in the Murray-Darling Basin, Australia’ (2011) 29(2) *River Research and Applications* 206.

⁷⁸ Scoping Requirements (n 1) 20.

⁷⁹ *EES: Belsar-Yungera and Hattah Lakes* (n 16) 268.

⁸⁰ Wentworth Group of Concerned Scientists, *Water flows in the Murray-Darling Basin: Observed versus expected* (Summary Report, February 2019).

- b. the Project is likely to lead to significant changes in vegetation which may include ecological simplification and species loss.
 - c. the EES has not adequately considered the impact of the hollow bearing trees proposed to be removed as part of the Project.
 - d. Ecological Vegetation Communities that will be impacted and converted to new or different communities must be clearly identified.
 - e. if the VMFRP and the Project were genuine attempts at floodplain and wetland restoration based on scientific best practice, the EES would include a range of matters not currently present in the documentation.
 - f. there is doubt that 605 GL of offsets per year can be achieved.
 - g. the Project includes stop banks which affect ecological character which would be in breach of Australia's obligations under the Ramsar Convention. The projects will essentially desiccate areas of wetlands and convert them to dryland ecosystems.
 - h. there is no consideration of how the Project interfaces with the Murray-Darling Basin Constraints Management Strategy or the Basin Plan and its streamflow indicators.
 - i. the method for determining achievement of environmental objectives lacks scientific rigour and is not appropriate. The EES includes questionable modelling of environmental flows.
 - j. Victorians were the beneficiaries of the projects under the Living Murray that have been inappropriately rolled over and double-counted in the SDLAM program.
 - k. if the Project was focussed on wetland restoration, the EES would include an evaluation of how the earlier tranche of projects under the Living Murray had performed.
57. We have had the benefit of receiving the high-level expert opinion of wetland ecologist Damien Cook via a video conference with Environmental Justice Australia lawyers Ellen Maybery and Natalie Hogan on 11 November 2022.
58. Damien Cook is the Director and Senior Restoration Ecologist at Wetland Revival Trust. Mr Cook's expertise is in wetland restoration, grassland and woodland restoration, and ecological monitoring, focused primarily in North-Western Victoria. Mr Cook is a recognised expert in wetland, riparian and terrestrial ecology, particularly in the factors affecting the establishment and management of aquatic and wetland plants, and the revegetation of terrestrial grassland and woodland ecosystems. Damien has been instrumental in planning and delivering some of the largest and most complex ecological restoration projects to date in Victoria and currently works with Traditional Owner groups restoring wetlands, grasslands, and woodlands in and around the Kerang Wetlands and Gunbower Island Ramsar sites in Northern Victoria.
59. Having reviewed relevant materials in the EES, Mr Cook considers that:
- a. The project benefits to specific species, including EPBC Act listed species, are overstated and dubious. For example, the EES states that the project will benefit 1,351 hectares of growling grass frog habitat and potentially impact only 32 hectares of habitat. Critical growling grass frog habitat consists of deep, semi-permanent wetlands. It is unclear how this data is qualified noting that it is highly

unlikely that there are 1,351 hectares of suitable growing grass frog habitat available across the floodplain in the Belsar-Yungera study area.

- b. The proposed project sites represent a small fraction of the entire riverine floodplain ecosystems in Victoria. Only focusing efforts to restore a natural hydrological regime to areas covered by the VFMRP will condemn the rest of the floodplain to continued degradation. The projects should not be used as a way to justify the degradation of the rest of the floodplain.
- c. There is a question about what economic value has been placed on the large old trees that will be removed if the project proceeds. From an ecological standpoint these trees are irreplaceable in the short to medium term and are therefore priceless. Mr Cook queries whether the ecological value of these trees and the floodplain ecosystems outside of the VMFRP project area has been included in a project cost/benefit analysis.
- d. Once the infrastructure exists, potential for delays in delivering water to the floodplains due to administrative processes and approvals required to release water, and the consequence of delivering water at inopportune times (e.g. in warmer months), could result in either no environmental benefit, as the water would evaporate and/or be absorbed into the ground, or, alternatively, environmental damage (e.g. by causing blackwater events or failing to appropriately manage carp).
- e. Regular controlled flooding has the potential to disrupt the natural wetting and drying process in floodplain ecosystems and can result in forests or wetlands experiencing flooding for longer than is necessary or healthy. Drying is equally as important to environmental watering in order to effectively manage weeds and pests, for example, and there is concern that this will not be given proper consideration in the implementation and ongoing management of the projects.
- f. More droughts and extreme storm events causing flooding will occur due to climate change. Releasing stored water to make space in reservoirs during major flood events increases the depth and duration of flooding, which can have detrimental effects on wetlands and other floodplain ecosystems. The EES only mentions the detrimental effect of river regulation on decreasing flood frequency and intensity.

60. Further, we note:

- a. that Belsar-Yungera construction will result in loss of up to 50.304 ha of native vegetation and 692 large trees, with clearing removing 19 threatened flora species and 44 protected flora species and resulting in permanent and temporary loss of habitat for listed species.⁸¹ Hattah Lakes North construction will result in loss of up to 18.9 ha of native vegetation and 55 large and 95 very large trees, with clearing removing 15 threatened flora species and 26 protected flora species.⁸² The Project will result in permanent and temporary loss of habitat for listed species.⁸³ The EES states that, as the Project is expected to have an overall benefit on ecological values, if agreed with the Secretary of the Department of Environment, Land, Water and Planning, the Project would be exempt from requiring offsets for the impacts on native vegetation and fauna habitat.⁸⁴ If this is to be the case, the Project will result in loss of native vegetation that will not be offset or compensated

⁸¹ *EES: Belsar-Yungera and Hattah Lakes* (n 16) 8.18.

⁸² *Ibid* 13.19.

⁸³ *EES* *Ibid* 8.18.

⁸⁴ *Ibid* 9.91, 14.100.

in the terms of ordinary native vegetation clearing regulation, other than via reference to broad, existing Project outcomes. In respect of matters such as loss of large or very large old trees (likely keystone species such as Red Gum) these losses are effectively irreplaceable and not compensable through any generalised claim of ecological benefit. The testing of such losses against alternative watering strategies (for whole or part of the land at issue), such as via 'constraints relaxation' strategies, appears not to be canvassed in the EES.

- b. that the EES confirms that "further expert elicitation is being undertaken on tolerable and optimal ranges for water regimes for selected Ecological Vegetation Classes relevant to VMFRP. The results will inform the assessment of overall biodiversity improvement for consideration as part of the Conservation work exemption through the Planning Scheme Amendment process, and be provided to the VMFRP Standing Inquiry and Advisory Committee."⁸⁵ In light of this statement, overall biodiversity improvement cannot be assessed prior to receipt of this information. It is also critical that this information is made available for members of the public to adequately direct them to the possible or potential environmental consequences of the activity. The VMFRP has advised that it has not determined timeframes for receipt of this information.
- c. a matter of process. The EnSym Native Vegetation Regulation (**NVR**) tool is used by the EES to predict net gain for rare and threatened species in the Project area. The EnSym NVR tool does not exist for this purpose. It was developed to assist proponents to establish offset sites in relation to proposed land clearing.⁸⁶ Further detail should be sought from the proponent to understand the reason for the use of this tool in this context, and its appropriateness and accuracy to support the conclusions reached in the EES.

61. **It is submitted that the Committee must require the proponent to address the significant deficiencies in scientific analysis identified by notable experts in this submission process.**

E. Availability of required environmental water and climate change impacts

- 62. The Scoping Requirements require consideration of potential climate change scenarios and the potential for adverse effects on nearby and downstream water environments due to changed flow regimes, water quality, water conditions during construction and operation and in the context of climate change.⁸⁷ Squarely within these Scoping Requirements are key matters that the EES leaves unaddressed, these being: (a) key questions in relation to the availability of environmental water for the VMFRP into the future; and (b) the impact of climate change on the environmental impacts of the Project.
- 63. The EES makes the following statements in relation to the topics of availability of environmental water and climate change:

⁸⁵ Ibid E.25.

⁸⁶ Department of Environment, Land, Water and Planning (Vic), 'EnSym Native Vegetation Tool' (Web Page) <<https://ensym.biodiversity.vic.gov.au/cms/>>.

⁸⁷ *Scoping Requirements* (n 1) 20.

- a. the 2020-21 Victorian Environmental Water Holder (**VEWH**) Annual Report indicates that the VEWH holds more than 185 GL of high reliability, 298 GL of low reliability and 83 GL of unregulated Murray and Goulburn Valley system water entitlements that can be used to water the VMFRP projects.⁸⁸
 - b. as of 28 February 2022, the Commonwealth Environmental Water Holder (**CEWH**) held more than 524 GL of high reliability and 470 GL low reliability entitlements on the Murray (DAWE, 2022) and 318 GL high reliability and 42 GL of low reliability entitlements on the Goulburn (DAWE, 2022). Water entitlements held on the Goulburn could be used to supply or part supply the VMFRP projects.⁸⁹
 - c. it is anticipated that approximately 73 GL of accounted environmental water would be required for the nine projects in the VMFRP in any given year, based on current climatic conditions.⁹⁰
 - d. to consider the potential implications of climate change, the MDBA completed a climate change stress test which noted that the works provide “operational flexibility to enable managed watering to occur more often than is likely to occur with climate change”.⁹¹
 - e. climate change will result in a reduction in allocation. However, the large volume of available water, even under reduced allocations, the use of carry over water to ensure sufficient water is available from year to year, operational adjustments to make the most efficient use of environmental water delivery, and if required, the ability to purchase annual allocations (non-permanent trade) means there are a range of mechanisms available to ensure the watering requirements of high priority sites and the environmental values they support can be met.⁹²
64. The MDBA’s final ‘Victorian Murray Floodplain Restoration Project Climate Change Stress Test’ (October 2022)⁹³ states:
- a. the Stress Test provides a “**broad imprecise indication** of how the Victorian Murray Floodplain Restoration Project (VMFRP) will be impacted by a changing climate”⁹⁴ (emphasis added).
 - b. “[t]he frequency of flow events either equivalent to operation or required to operate Victorian Murray Floodplain Restoration SDLAM projects is projected to decrease when the impact of changing climate is considered.”⁹⁵
 - c. “[c]limate change projections under a dry scenario demonstrate that the flows required to inundate the areas of floodplain proposed to be managed under the

⁸⁸ Victorian Environmental Water Holder, *Annual Report 2020-21* (Report, 2021) 2.19.

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ Ibid, 2.19.

⁹² *EES: Belsar-Yungera and Hattah Lakes* (n 16) V.9 (Attachment V – Belsar-Yungera Assessment of overall improvement for biodiversity); VI.11 (Attachment VI – Hattah Lakes North Assessment of overall improvement for biodiversity).

⁹³ Murray-Darling Basin Authority, *Victorian Murray River Restoration Project Climate Change Stress Test* (MDBA Publication No 18/22, October 2022).

⁹⁴ Ibid ii.

⁹⁵ Ibid.

VMFRP will be substantially reduced in frequency and duration, well below the optimal ecological flood targets.”⁹⁶

- d. that operational flexibility will be required to meet the challenges posed by climate change and that the ecological utility of SDLAM projects will increase with reduced flows, based on the assumption that the projects will “enable the provision of water to these floodplain ecosystems”.⁹⁷
 - e. “[e]xplicit representation of the VMFRP projects with watering intervention behaviours in Source Murray model (SMM) will offer further insights into climate change impacts. This will also highlight interactions between different projects including use of limited environmental water allocation. This representation in SMM is currently being undertaken, but is not anticipated to be completed until 2023.”⁹⁸
 - f. “[t]here is a pressing need for water planning processes to better incorporate projections of a future climate into decision making processes. The MDBA is currently working towards developing a robust, consistent, and Basin-wide approach to representing future climate projections into river system models however this process is not expected to be finalised in the short term.”⁹⁹
 - g. “... the availability and deliverability of environmental water remains uncertain.”¹⁰⁰
 - h. “while works can assist with achieving greater frequency of events it still may not be possible to achieve desired ecological targets, particularly if dry climate scenario projections eventuate.”¹⁰¹
65. Climate change will impact the volume of water for the environment in the Murray-Darling Basin drastically more than entitlement water.¹⁰² Environmental flows also piggyback on natural flows¹⁰³ and these natural flows are also decreasing due to climate change.¹⁰⁴
66. The EES does not adequately interrogate climate change and availability of environmental water.
67. To contextualise the EES references to water held by the VEWH and CEWH (replicated above at para 63), it should be noted that actual allocations are generally much lower than holdings.¹⁰⁵
68. Further, whilst the EES concludes that “[i]n summary the environmental management framework created for the Basin Plan requires Commonwealth Environmental Water

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ Ibid 1.

¹⁰⁰ Ibid.

¹⁰¹ Ibid 5.

¹⁰² Professor Barry Hart, ‘Policy changes are needed to better protect environmental water from climate change in the Murray-Darling Basin’ (Web Page) Goyder Institute for Water Research (Web Page, 29 September 2022) <<http://www.goyderinstitute.org/news/2022/policy-changes-are-needed-to-better-protect-environmental-water-from-climate-change-in-the-murray-darling-basin/>>.

¹⁰³ EES: *Belsar-Yungera and Hattah Lakes* (n 16) Appendix A, 9.

¹⁰⁴ Dr Avril Horne et al, *Kaiela (Lower Goulburn River) Environmental Flows Study* (Final Report, 24 November 2020).

¹⁰⁵ Department of Climate Change, Energy, the Environment and Water (Cth), ‘Managing water for the environment’ (Web Page) <<https://www.dcceew.gov.au/water/cewo/about-commonwealth-environmental-water>>.

Office and VEWH to prioritise the provision of water to the nine VMFRP projects”,¹⁰⁶ it is not clear how this statement contemplates the flexibility that exists in this framework for future change and reprioritisation. As one example, it is reasonably foreseeable that it would be entirely appropriate for the Victorian treaty process to include negotiations in relation to water allocations to Traditional Owners, an aspect not currently factored into this framework. It is also worth noting that the prioritisation of the VMFRP has been an iterative process over many years.

69. In terms of availability of environmental water, we also note:

- a. The CEWH has a good neighbour policy meaning, “[t]he CEWH has not, and will not, place water orders that would flood private land without the consent of the landholder. An appropriate share of the channel capacity in a river system is used by the CEWH for environmental watering so as not to impact on agricultural producers.”¹⁰⁷ The EES is premised on, and claims benefits due to, inundation frequency and operational flexibility without explaining how this can be guaranteed in the context of the good neighbour policy.
- b. There are formal constraints in the Goulburn Inter-Valley Trade (IVT) rule.¹⁰⁸ The shift in timing to earlier delivery of IVTs (i.e. IVT delivery in spring) is more likely to coincide with the delivery of held environmental water in the lower Goulburn (which is critical for local and downstream environmental outcomes).

70. In short, in relation to the question of water availability (under circumstances of ‘deliverable’ environmental water as distinct from large-scale natural flooding events):

- a. There is a high degree of risk and uncertainty that, under climate change scenarios currently unfolding, there will be sufficient water holdings to implement watering outcomes contemplated under the VMFRP (including this specific Project).
- b. It appears the response to these risks contained in the EES is ‘operational flexibility’ and ‘prioritisation’ of water planning, for which specific planning arrangements or models (for example, water planning by the VEWH) do not appear to be available, including how ‘prioritisation’ would be expected to function where all floodplain ecosystems require delivery of environmental water concurrently as may occur in drying periods.
- c. Further to the above point, there appears to be no insight into contingencies or arrangements for use of environmental water outside of the VMFRP projects, such as appears to be contemplated under Victorian Government policy for use of environmental water to meet Aboriginal water management outcomes¹⁰⁹ or, more widely, in achievement of treaty outcomes.

¹⁰⁶ EES: *Belsar-Yungera and Hattah Lakes* (n 16) 2.3.1.

¹⁰⁷ House of Representatives Standing Committee on the Environment and Energy, *Report on the inquiry into the management and use of Commonwealth environmental water* (December 2018, Canberra) 26.

¹⁰⁸ Goulburn-Murray Water, ‘Goulburn to Murray trade rule operating plan’ (Web Page) <<https://www.g-mwater.com.au/water-resources/goulburn-to-murray-trade-rule>>.

¹⁰⁹ Department of Environment, Land, Water and Planning (Vic), *Water is Life: Aboriginal Water Roadmap* (2022).

- d. The fate of floodplain ecosystems in the Murray system outside of the VMFRP sites is at best uncertain and more likely disregarded under the works strategy integral to the VMFRP.
- e. The compounding climate crisis and its effects on water availability and water-dependent ecosystems represents a pervasive underlying condition affecting projects intended already to reduce water available to protect and restore floodplain environments.
- f. A proportionate approach requires, at least, further investigation and scrutiny of the VMFRP program in light of water availability for environmental purposes across the Murray floodplain ecosystem (as consistent with the objectives and purposes of the Basin Plan and Water Act).¹¹⁰

71. **It is submitted that the Committee should find that:**

- a. **to approve the Project, further information, including but not limited to completion of the explicit representation of the VMFRP projects in the Source Murray Model, is required to enable appropriate assessment of the impacts of climate change and availability of environmental water on the environmental effects of the Project.**
- b. **the number of assumptions made in relation to the availability of environmental water and climate change mean the Project is unable to be approved in its current form as it has failed to adequately address the Scoping Requirements.**

F. Traditional Owner rights and consultation

72. Objective 2 of the VMFRP is to “facilitate Traditional Owner aspirations for restoration of floodplain ecosystems by: (a) Engaging and collaborating with Traditional Owners to integrate their knowledge into the planning, delivery and evaluation of VMFRP; and (b) Creating opportunities for enhancing and sharing cultural connections to Country.”¹¹¹
73. The EES notes that Traditional Owners and interested parties were contacted by VMFRP and provided with information. Some have chosen not to be involved. A number of groups advised VMFRP of their aspirations for Country. The EES fails to demonstrate a proper understanding of the difference between rights of Traditional Owners for Country and the legislative requirements of the *Aboriginal Heritage Act 2006* (Vic). The EES does not provide sufficient detail on how the Traditional Owner aspirations detailed in Chapter 3 of the EES for restoration of floodplain ecosystems have been or will be met.
74. As part of this submission, we relay to the Committee a summary of the views of individual Traditional Owners Brendan Kennedy and Melissa Kennedy who assert rights

¹¹⁰ This reflects a minimum precautionary response and consistent with the ‘risk-based approach’ required under the Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978: see p 14. Additionally, absent further assessment of watering and ecosystem health outcomes across the Murray River floodplain ecosystems the assessment can be said to meet a standard of ‘reasonably informing’ decision-makers and the general public.

¹¹¹ *EES: Belsar-Yungera and Hattah Lakes* (n 16) 1.6.

to the Country in which the Project will take place. Brendan and Melissa are the Director and CEO of Tati Tati Kaiejjin, respectively. Their views are:

- a. They do not agree with the Project and reiterate previous opposition of some Traditional Owners to the SDLAM projects. The conceptual basis for the Project is at odds with their approach to making decisions about Country.
 - b. The Project seeks to colonise and engineer some of the remaining untouched Country in Victoria which may otherwise be available for the realisation of Traditional Owner aspirations for Country.
 - c. Artificial engineering of floodplains is not a culturally appropriate way to manage Country and they have outstanding questions about the impact of the Project on the health of the water and native animals. The Project will prevent water from reaching floodplains, including in areas outside of the Project area.
 - d. Whilst the EES speaks of project benefits, VMFRP has not assessed project benefits from a cultural lens, informed by Traditional Owners. Traditional Owner groups have their own frameworks for measuring benefits which must be applied to the Project if it is to ensure an appropriate assessment of benefits.
 - e. They have concerns about the impact of the Project on burial sites and other cultural sites within the Project area.
 - f. That a choice not to be involved in consultation processes is in no way a reflection of a lack of interest or cultural responsibility in caring for wetlands on Tati Tati Country. It does, however, reflect Tati Tati's deliberate shift to only engaging organisations that demonstrate a commitment to upholding cultural safety. Tati Tati will continue to look to the future to partner with organisations transitioning to First Nations empowerment – not engagement.
75. The EES documentation does not establish that the VMFRP has met Objective 2. In light of domestic (e.g. *Advancing the Treaty Process with Aboriginal Victorians Act 2018 (Vic)*) and international (e.g. Article 19 of the United Nations Declaration on the Rights of Indigenous Peoples) legislative and policy requirements, it is submitted that **the Committee must seek to understand from Traditional Owners whether VMFRP Objective 2 has been met and, if it considers that it has not been met, to understand from the proponent how it considers that the Project can proceed to meet its objectives in the circumstances.**
76. We note that the Committee has stated that it would greatly benefit from hearing the views of Traditional Owners and wants to ensure that interested groups can engage with the process. We are advised that Tati Tati Traditional Owner Brendan Kennedy is available to appear, and wishes to be heard, at the EES hearing for this Project.