

Submission in response to

Burra Creek Restoration Project Environment Report

prepared on behalf of Environment Victoria

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For further information on this submission, please contact:

Ellen Maybery, Senior Specialist Lawyer, Environmental Justice Australia

T: 03 8341 3100

E: ellen.maybery@envirojustice.org.au

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

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 Burra Creek Floodplain Restoration Project (the **Project**) and the June 2023 Addendum Report: Burra Creek to the Environment Report – Vinifera, Nyah and Burra Creek Floodplain Restoration Projects (**ER**).
2. 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.
3. The purpose of this submission is to highlight EV's concerns in relation to the ER 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.
4. EV submits that, to the extent that the issues raised in this submission are not resolved in the course of the proposed roundtable, a supplementary ER addressing these deficiencies must be required by the Minister for Planning (the **Minister**) and prepared by the proponent prior to the Committee finalising its recommendations to the Minister on the Project.
5. EV's key submissions are:
 - (1) The Project must be assessed in its broader factual and legislative context and deficiencies in the ER must be addressed to ensure all key instruments are sufficiently considered.
 - (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 Sustainable Diversion Limit Adjustment Mechanism (**SDLAM**).
 - (3) The Committee must require further analysis and investigation of feasible alternatives, including proper assessment of the crucial role of constraints relaxation measures.
 - (4) The Committee must consider the environmental impacts of the Project on biodiversity. This requirement cannot be considered met based on general statements of overall project benefit which are predicted and currently unrealised.
 - (5) The Committee must require the proponent to properly interrogate critical assumptions that underpin assessments, including the extent to which adaptive management measures are appropriate to respond to uncertainties.
6. EV notes that the proposed works at Burra Creek were intended to be assessed together with the projects proposed at Nyah and Vinifera. However, subsequent to the preparation

and exhibition of the original ER, it was identified that “river levels in the vicinity of the Burra Creek Project Area may be higher than what would be expected”¹.

7. EV submits that the fact that further analysis was required to properly assess Burra Creek demonstrates the highly experimental and uncertain nature of these projects, which have the potential to irreversibly change the ecological character of the areas in which they are proposed and the river system and ecosystems that rely on it.
8. Accordingly, EV advocates for further scrutiny of feasible alternatives and cumulative impacts within and outside of the maximum inundation areas.
9. EV seeks to rely on its submission dated 10 March 2023 responding to the Environment Report for Nyah and Vinifera and original assessment documentation for Burra Creek insofar it deals with matters relevant across all projects, including the legislative context and requirements under the *Basin Plan 2012* (Cth) and related instruments.

B. Cumulative, facilitated and indirect impacts

10. The Scoping Requirements require consideration and analysis of:
 - a. The “potential cumulative effects of the project and other Victorian Murray Floodplain Restoration Project projects and other existing or planned projects in the area, particularly in relation to downstream aquatic environments and beneficial water uses”;² and
 - b. The “nature, extent and significance of direct, indirect and cumulative residual impacts on environmental values including matters of state or national environmental significance.”³
11. Potential cumulative effects “include where a project, in combination with one or more other proposed projects, or existing activities in an area, may have an overall significant effect on the same environmental asset, value or use.”⁴
12. The ER considers cumulative effects in the context of the 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.⁵
13. The ER does not sufficiently consider cumulative impacts:
 - a. in relation to the impact of all nine VMFRP projects on floodplain ecosystems that exist outside of the nine maximum inundation areas; and

¹ Victorian Murray Floodplain Restoration Project, *Addendum Report: Burra Creek 3* (‘*Addendum Report: Burra Creek*’).

² Department of Environment, Land, Water and Planning (Vic), Scope for the environment report under EPBC Act Bilateral (Assessment) Agreement 2014 and EE Act: Nyah, Vinifera and Burra Creek Floodplain Restoration Projects (July 2021) Appendices A to C (‘*Scoping Requirements*’).

³ *Ibid.*

⁴ *Victorian Murray Floodplain Restoration Project, Environment Report: Vinifera, Nyah and Burra Creek Floodplain Restoration Projects* (2022) III.4 (‘*ER: Vinifera, Nyah and Burra Creek*’).

⁵ *Ibid.*

- b. in the context of other non-VMFRP planned projects in the area, including constraints relaxation measures, which are intended to facilitate overbank flows within the same region.
14. The assessment of the Project's cumulative effects with the other eight VMFRP projects is largely limited to:
 - a. the removal of native vegetation and terrestrial fauna habitat during construction and initial cumulative loss of native vegetation and terrestrial fauna habitat across the region;⁶ and
 - b. the potential for cumulative adverse effects on water quality in the Murray River if multiple sites were constructed at the same time, contributing to soil disturbance, erosion and/or increased contaminants and salinity.⁷
 15. The ER also does not adequately assess cumulative impacts on Murray River floodplain ecosystems outside of the VMFRP floodplain sites, which will likely receive less water and potentially become stranded from a managed flooding regime. That is, without sufficiently relaxed constraints and sufficient held environmental water (considering the volumetric offset through SDLAM), these flood-dependent ecosystems may not receive sufficient benefit from the water recovered under the Basin Plan. Instead, these ecosystems will depend on unmanaged flood events to maintain their health. These flood events are predicted to become less frequent in a changing climate.⁸ Such a consequence poses a very high risk to the integrity of the Murray River floodplain ecosystems as a whole.⁹
 16. It is reasonably foreseeable that effects and risks of the Project will extend to large areas of the Murray River floodplain and downstream wetlands. For example, offset water may mean acute damage for ecosystems like the Coorong. Salinity is a "well-defined and accepted indicator" of the health of the Coorong and analysis indicates that "only the provision of larger volumes (up to 3200 GL) reduces the number and duration of consecutive years when salinity thresholds are exceeded."¹⁰
 17. The further assessment of flows at Burra Creek revealed that return flows will likely result in an increase in salinity and there will be a small increase in cumulative salt load to the Murray River as a result of the amended Project Description.¹¹
 18. The assessment concludes that the increase is insignificant "in the context of the cumulative salt load as a result of all VMFRP projects".¹² EV submits that, in order to

⁶ Ibid 17.1.1 (Burra Creek).

⁷ Ibid 18.1.7 (Burra Creek).

⁸ Ibid E.3.

⁹ 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.

¹⁰ 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).

¹¹ *Addendum Report: Burra Creek* (n 1) 11.

¹² Ibid.

satisfy the Scoping Requirements, further analysis must be done to investigate this cumulative impact.

19. It is reasonably foreseeable that effects and risks of the Project will extend to large areas of the Murray River floodplain and downstream wetlands.
20. **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.**

C. Feasible alternatives

21. The Scoping Requirements provide that the ER must assess the likely environmental effects of feasible alternatives, particularly where these offer a potential to minimise and/or avoid significant environmental effects whilst meeting the objectives of the Project.¹³
22. EV seeks to rely on its written submission dated 10 March 2023 in relation to feasible alternatives, such as constraints relaxation measures, that must be assessed in accordance with the Scoping Requirements.

D. Impacts on biodiversity

23. The Scoping Requirements provide that the ER must assess predicted impacts (direct and indirect) on biodiversity values particularly associated with species and communities listed under the *Flora and Fauna Guarantee Act 1988* (the **FFG Act**) and EPBC Act, native vegetation, in particular large old trees and endangered ecological vegetation classes, and identify threatening processes.
24. The potential impacts on biodiversity as a result of the Project are significant and include the removal of native vegetation¹⁴ and resulting permanent and temporary loss of suitable habitat or loss of habitat connectivity for species and communities listed under the FFG Act and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) that are known to exist, or may exist, within the Project area, including the South-eastern Long-eared Bat, Painted Honeyeater, Regent Parrot, Growling Grass Frog, Murray Code and Silver Perch.¹⁵
25. EV notes that the residual risk rating for arboriculture has increased as a result of the further assessment of expected flows at Burra Creek, such that it is now a 'medium' risk.¹⁶ This is attributed to the further analysis of hydrological regime which indicates that areas currently mapped as Lingum Swamp Woodland may revert to Lingum Swamp and result in the drowning of additional large trees.
26. The further assessments notes that this change is likely to impact upon some of the vegetation communities, flora and fauna species, and habitats currently present at the

¹³ Scoping Requirements (n 2) 5.

¹⁴ *ER: Vinifera, Nyah and Burra Creek* (n 4) Specialist Assessment B, p 222.

¹⁵ *Ibid.*

¹⁶ *ER: Vinifera, Nyah and Burra Creek* (n 4) Attachment 2 - Updated Specialist Assessments, pp 60-61.

site¹⁷ and “the updated operational scenarios will result in some EVCs being inundated at frequencies above their recommended ranges.”¹⁸

27. The changes are expected to result in a “decrease in the amount of the Maximum Inundation Area that is expected to have a positive or positive-neutral response from 400.79 ha to 398.36 ha, an increase in the area of EVCs expected to have a negative response from 0 to 4.48 ha and a decrease in the area of EVCs expected to have a neutral response from 2.06 ha to 0.24 ha.”¹⁹
28. The stated purpose of the Project is to restore ecosystems, however potential adverse impacts to biodiversity within the construction footprint are significant, particularly in relation to the removal of Large and Very Large Trees which provide vital habitat and can take decades to reach maturity.
29. The ER fails to meet the specific Scoping Requirements relating to the provision of a proposed native vegetation offset strategy in circumstances where the potential loss and adverse impacts to biodiversity are significant and will have broader consequences for the river system as a whole.
30. **It is submitted that the Committee must consider the environmental impacts of the Project on biodiversity. This requirement cannot be considered met based on general statements of overall project benefit which are predicted and currently unrealised. Such benefits may take many years to realise, and have co-dependencies on other river management solutions, such as sufficient allocation and capacity to deliver environmental water.**

E. Assumptions and adaptive management

31. The Scoping Requirements require evaluation and identification of:
 - a. management measures that, in addition to the project design, could assist in maximising potential project benefits to ecological values.
 - b. further management measures where avoidance and mitigation measures do not adequately address effects on environmental assets, including specific details of how the measures address any relevant policies.
 - c. identification of proposed contingency measures to be implemented in the event of adverse residual effects on flora, fauna, or community values or if risks to achieving project benefits/objectives are identified and require further management.
 - d. details of any statutory or policy basis for the measures proposed.²⁰
32. The ER states that all watering events will involve an adaptive management approach to enable water to be differentially targeted to the upper margins of the Maximum Inundation Area.

¹⁷ *Addendum Report: Burra Creek* (n 1) 13.

¹⁸ *Ibid.*

¹⁹ *Addendum Report: Burra Creek* (n 1) Attachment 2 - Updated Specialist Assessments, p 92.

²⁰ Scoping Requirements (n 2) 10.

33. The ER cites operational flexibility and adaptive management as the method to manage and respond to a broad range of crucial environmental matters, including:
- a. climatic conditions²¹;
 - b. water quality and risk of erosion²², including to minimise risks associated with sediment and nutrient loads from inundation of the floodplain to receiving waters and algal bloom development²³;
 - c. rising groundwater levels, or groundwater levels that are outside the expected or acceptable range of response as a result of inundation²⁴;
 - d. impacts on the loss of habitat connectivity, including the stranding of fish on the floodplain, and the need to trigger the movement of fish downstream via a fish exit strategy²⁵ ;
 - e. increases in weeds, pest animals and invasive species²⁶;
 - f. low cover and diversity of understory wetland plants;²⁷
 - g. potential impacts of surface water on Aboriginal heritage places²⁸;
 - h. ‘local knowledge when planning for the future’ and ‘new information’²⁹.
34. The ER was required by the Minister to address “key uncertainties” and EV submits that reliance on adaptive management must not replace the required assessment of impacts to properly understand and resolve these issues.
35. The proponent must address, in sufficient detail, how proposed adaptive management measures and EDSs, which presently require different, and potential conflicting, approaches can be delivered effectively and cohesively to achieve the environmental outcomes and benefits predicted.
36. **It is submitted that the Committee should find that the adaptive management and operational flexibility currently proposed by the ER is not appropriate as an alternative to proper assessment of Project uncertainties.**

²¹ ER: *Vinifera, Nyah and Burra Creek* (n 4) E.38.

²² Ibid 16.20 (Burra Creek).

²³ Ibid Specialist Assessment C, p 144.

²⁴ Ibid, Specialist Assessment D, p 180.

²⁵ Ibid 16.27 (Burra Creek).

²⁶ Ibid E.40.

²⁷ Ibid Specialist Assessment B, p 247.

²⁸ Ibid Specialist Assessment F, p 163.

²⁹ Ibid 16.20 (Burra Creek).