



LEGISLATIVE COUNCIL

PORTFOLIO COMMITTEE NO. 7

# Rationale for, and impacts of, new dams and other water infrastructure in NSW

Part 1



Report 5

March 2021

7



Portfolio Committee No. 7 - Planning and Environment

# **Rationale for, and impacts of, new dams and other water infrastructure in NSW**

## **Part 1**

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## Table of contents

	<b>Terms of reference</b>	<b>v</b>
	<b>Committee details</b>	<b>vi</b>
	<b>Chair’s foreword</b>	<b>vii</b>
	<b>Findings</b>	<b>viii</b>
	<b>Recommendations</b>	<b>ix</b>
	<b>Conduct of inquiry</b>	<b>x</b>
<b>Chapter 1</b>	<b>Introduction and overview of the new dams and water infrastructure program</b>	<b>1</b>
	<b>Purpose of the first report</b>	<b>1</b>
	<b>Background to the new dams and water infrastructure program</b>	<b>1</b>
	<b>The role of WaterNSW in delivering the proposed projects</b>	<b>4</b>
<b>Chapter 2</b>	<b>Impact and ramifications of large-scale water storage infrastructure</b>	<b>7</b>
	<b>The role of dams in ensuring water security</b>	<b>7</b>
	<b>Impact of climate change on dams</b>	<b>8</b>
	<b>Ecological impact of dams</b>	<b>10</b>
<b>Chapter 3</b>	<b>Wyangala Dam wall Raising Project</b>	<b>15</b>
	<b>Identification of the Wyangala Dam wall raising project</b>	<b>15</b>
	<b>Status of the Wyangala Dam wall raising project</b>	<b>19</b>
	Commitment to the planning and delivery of the Project	19
	Environmental approvals for the proposed project	21
	Stakeholder views on decision making process	22
	<b>Arguments for raising the Wyangala Dam wall</b>	<b>29</b>
	Improving water security in the Lachlan region	29
	Flood mitigation	31
	<b>Arguments against raising the Wyangala Dam wall</b>	<b>32</b>
	Estimated project costs and funding arrangements	32
	Value and effectiveness of raising the dam wall	33
	Infrequency of the filling of Wyangala Dam	34
	Impacts on Sustainable Diversion Limits	36
	<b>Ecological impacts of the proposed project</b>	<b>37</b>

	Impact on wetlands	37
	Impact on birds	39
	<b>Impact on Traditional Custodians of the land</b>	<b>40</b>
	Negative impact on downstream producers	42
	<b>Alternatives to raising the Wyangala Dam wall</b>	<b>43</b>
<b>Appendix 1</b>	<b>WaterNSW timeline of proposed water infrastructure projects</b>	<b>47</b>
<b>Appendix 2</b>	<b>Submissions</b>	<b>49</b>
<b>Appendix 3</b>	<b>Witnesses at hearings</b>	<b>55</b>
<b>Appendix 4</b>	<b>Minutes</b>	<b>60</b>
<b>Appendix 5</b>	<b>Dissenting statements</b>	<b>85</b>

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## Terms of reference

1. That Portfolio Committee No.7 - Planning and Environment inquire into and report on the rationale for, and impacts of, new dam and mass water storage projects proposed by Water NSW including Wyangala, Mole River and Dungowan Dam projects, the Macquarie River re-regulating storage project, the Menindee Lakes Water Savings Project and the Western Weirs project, particularly:
  - (a) the need for the projects, including the historical allocation of water and consideration of other options for ensuring water security in inland regions,
  - (b) the economic rationale and business case of each of the projects, including funding, projected revenue, and the allocation and pricing of water from the projects,
  - (c) the environmental, cultural, social and economic impacts of the projects, including their impact on any national or state water agreements, or international environmental obligations,
  - (d) the impacts of climate change on inland waterways, including future projections, and the role of dams and other mass water storage projects in ensuring security of water supply for social, economic and environmental outcomes
  - (e) water infrastructure technologies that may promote enhanced environmental outcomes,
  - (f) any other related matter.
2. That the committee table Part 1 of the report by 22 March 2021 and Part 2 of the report by 15 June 2021.

The terms of reference were self-referred by the committee on 12 August 2020.<sup>1</sup>

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<sup>1</sup> *Minutes*, NSW Legislative Council, 25 August 2020, p 2889.

## Committee details

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### Committee members

<b>Ms Cate Faehrmann MLC</b>	<b>The Greens</b>	<i>Chair</i>
<b>Hon Mark Pearson MLC</b>	<b>Animal Justice Party</b>	<i>Deputy Chair</i>
<b>Hon Mark Buttigieg MLC</b>	<b>Australian Labor Party</b>	
<b>Hon Catherine Cusack MLC</b>	<b>Liberal Party</b>	
<b>Hon Ben Franklin MLC</b>	<b>The Nationals</b>	
<b>Hon Shayne Mallard MLC</b>	<b>Liberal Party</b>	
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## Chair's foreword

This inquiry was established to examine a number of new water infrastructure projects proposed by the NSW Government. This Part 1 report examines the proposed raising of the Wyangala Dam wall project. Part 2 will examine the other projects identified in the inquiry terms of reference.

The NSW Government's water infrastructure program was established in the context of the severe recent drought, where towns in regional NSW were alarmingly close to running out of water, and the ecological sustainability of riverine systems was and continues to be under severe threat. The Wyangala Dam wall project was proposed to address water security issues in the Lachlan Valley. There is no doubt that there is a need to ensure reliable water supply for the Lachlan Valley, however, it became clear during the inquiry that it is yet to be demonstrated that this project is the best way of achieving this.

The commitment to this project by the Minister for Water, Property and Housing was made before a business case or Environmental Impact Statement (EIS) were finalised, and without adequately exploring alternative options to address water security. The estimated cost of the project at the time of the commitment was \$650 million. However, as the preparation of the final business case and EIS progressed, there have been reports that the cost has significantly increased. The committee has concerns about the high cost of the project, and the estimated limited water security benefits of an additional annual average of 21 gigalitres.

Wyangala Dam has only been full and spilled twice in the last 20 years, and climate change modelling has shown the dam may fill even less frequently than it historically has done. These facts make it difficult to see why this project has been pursued by the Government as the most effective way of guaranteeing water security for the Lachlan Valley at the expense of other options.

This inquiry also established the severe ecological damage that could potentially occur if the project goes ahead. The impact on the floodplains of the lower Lachlan would mean that the critical bird breeding events that occur in the wetlands would be threatened, and many species would suffer.

The proposed project would also have significant negative impacts on First Nations people, specifically the Traditional Owners of the impacted Wiradjuri land. Further disrupting the sacred relationship between First Nations people and the environment would be an inevitability of the project.

This report recommends that the NSW Government address these significant concerns in the final business case and any environmental studies. This recommendation was passed with the support of all members after a recommendation for the Government to not proceed with the project due to the significant and persuasive arguments against it did not receive majority support. I will refer to this recommendation in further detail in my dissenting statement.

On behalf of the committee, I would like to thank all participants for their contribution to this important inquiry, including the many organisations, community groups and individuals who made submissions and gave evidence at public hearings. I would also like to thank those who assisted the committee during its visit to Wyangala Dam and surrounding areas. Finally, I extend my thanks to my fellow committee members for their cooperation and commitment to this inquiry, as well as to the committee secretariat for their assistance.



Cate Faehrmann MLC  
**Committee Chair**

## Findings

- Finding 1** **10**  
That climate change will increasingly impact the utility of mass water storages due to rising temperatures, irregular rainfall and river inflows, resulting in decreased overall water inflow and increased evaporation losses.
- Finding 2** **13**  
That without large dams, millions of people in NSW would have run out of water at least once over the past twenty years. However, bulk water supply infrastructure, like dams and weirs, has significant negative impacts on rivers, including disrupting native fish breeding and migration, the quality of fish habitat, and on general river health and floodplain sustainability. In order to manage climate change risks to our bulk water supply, existing infrastructure – much of which was built between the 1940s and 1970s – may need to be rebuilt, upgraded, modernised and improved.
- Finding 3** **18**  
That the claimed economic and water security benefits of the election commitment to raise the Wyangala Dam wall are yet to be demonstrated.
- Finding 4** **29**  
That WaterNSW has not sufficiently consulted local Aboriginal communities in the Lachlan region regarding the proposed raising of the Wyangala Dam wall.
- Finding 5** **36**  
That the Government is pursuing the raising of the Wyangala Dam wall as a solution to water insecurity in the Lachlan Valley, however, is yet to demonstrate the cost effectiveness and water yield benefits of the project.
- Finding 6** **36**  
That the annual yield available as a result of increasing Wyangala Dam’s capacity by 50 per cent by raising its wall provides only a 21 gigalitre increase in water security.
- Finding 7** **40**  
That the proposed raising of Wyangala Dam wall may have an impact on the ecology of the Lachlan River, including the floodplains and wetlands, and various fish species and migratory bird species which Australia is obligated to protect, which will be known once the environmental impact statement is finalised.
- Finding 8** **42**  
That raising the Wyangala Dam wall is likely to have a significant detrimental impact on Aboriginal cultural heritage sites and artefacts.

## Recommendations

### Recommendation 1

19

That the NSW Department of Planning, Industry and Environment finalise the Lachlan Regional Water Strategy and investigate how it can expedite funding and policy proposals for projects which improve water security and sustainability, and help mitigate the impacts of climate change.

### Recommendation 2

29

That the NSW Government should continue to improve the ways it provides information to individuals and communities regarding the Wyangala Dam wall raising project, especially as new reports become available.

### Recommendation 3

44

That the NSW Government investigate the funding and implementation of water efficiency measures such as the upgrading of Jemalong Irrigation infrastructure, upgrading piping, stock and domestic channels and removing banks across floodplains along the Lachlan Valley.

### Recommendation 4

45

That the NSW Government address significant concerns raised during this inquiry in the business case and environmental impact studies. The Government must take into consideration both the arguments for and against the project, with particular emphasis given to:

- its high cost
- limited water yielded
- impact of climate change reducing inflows into Wyangala Dam, meaning less frequent filling of the dam
- impacts on First Nations people, cultural sites and artefacts
- ecological impacts on floodplains, fish and bird species and general river health.

## Conduct of inquiry

The terms of reference for the inquiry were self-referred by the committee on 12 August 2020.

The committee received 170 submissions and 2 supplementary submissions.

The committee also received 210 responses to two pro formas.

The committee held 5 public hearings: 2 at Parliament House in Sydney and 1 in Broken Hill.

The committee also conducted 1 site visit to Wyangala Dam, Menindee Lakes and Sunset Strip on 9 and 10 February 2021.

Inquiry related documents are available on the committee's website, including submissions, hearing transcripts, tabled documents and answers to questions on notice.

## Chapter 1 Introduction and overview of the new dams and water infrastructure program

This Chapter reviews the context for the NSW Government's new dams and water infrastructure program, and acknowledges the significant impact of the recent drought on regional water security. It also sets out the roles and responsibilities of the relevant government agencies involved in the planning and delivery of the water infrastructure projects included in the inquiry terms of reference.

### Purpose of the first report

- 1.1 The terms of reference for this inquiry shown on page v identified six water infrastructure projects proposed by WaterNSW for the committee to examine. These projects were:
  - Wyangala Dam project
  - Mole River Dam project
  - Dungowan Dam project
  - Macquarie River re-regulating storage project
  - Menindee Lakes Water Savings Project
  - Western Weirs project
- 1.2 The committee resolved on 10 February 2021 to deliver a first report addressing the Wyangala Dam wall raising project by 22 March 2021, and to deliver a second report addressing the remaining water infrastructure projects by 15 June 2021.
- 1.3 In addition to examining the Wyangala Dam wall raising project, the first report will also provide an overview of the scientific evidence it received regarding the purpose for, and impacts of, mass water storage projects, such as dams.
- 1.4 The second report will examine the remaining five projects identified in the terms of reference. It will also review the evidence received regarding the future of water security, including any new and alternative water infrastructure technologies.

### Background to the new dams and water infrastructure program

- 1.5 The terms of reference required the committee to examine a series of water infrastructure projects which have been proposed by WaterNSW.
- 1.6 This section will provide an overview of the general rationale for investment in water infrastructure in NSW. The specific detail of each of the individual projects will be examined in subsequent chapters.

- 1.7** The projects referred to in the terms of reference are part of the NSW Government's new dams and water infrastructure program. The committee heard that these commitments are part of the Government's attempts to ensure 'long-term water security for communities and businesses right across the State'.<sup>2</sup>
- 1.8** WaterNSW described the projects as being in the 'investigatory phase', and as having been selected for future development due to their 'potential to improve long-term water security' in the relevant regions.<sup>3</sup>
- 1.9** WaterNSW noted that to support 'fast-tracked delivery'<sup>4</sup> in order to address water security issues, the '3 Regional Dams Projects', being the Wyangala, Dungowan and the Mole River Dam projects, and the Western Weirs project have been 'declared Critical State Significant Infrastructure under Schedule 3 of the *Water Supply (Critical Needs) Act 2019*'.<sup>5</sup>
- 1.10** The Macquarie River Re-Regulating Storage Project is considered a State Significant Infrastructure Project under clause 1 of Schedule 3 of the *State and Regional Development State Environmental Planning Policy 2011* (NSW).<sup>6</sup>
- 1.11** WaterNSW explained to the committee that regional NSW has witnessed one of the worst droughts in recorded history in the past few years. They referred to the extremely low inflows into rivers and storages, and noted that the Northern Murray Darling Basin received its lowest annual inflows on record in both 2018 and 2019.<sup>7</sup>
- 1.12** WaterNSW noted that the 'acute lack of water'<sup>8</sup> had wide ranging impacts, including on the environment, on towns and communities, and on economic activity across NSW.
- 1.13** When describing the severity of the recent drought, WaterNSW stated that most catchments were at stage 4 critical drought status in February 2020, at which point the drought had been going on for more than three years. They told the committee that many rivers had stopped flowing, and some dams had been exhausted.<sup>9</sup>
- 1.14** Without significant rainfall events in 2020, WaterNSW noted that 'most regional storages would have run dry, with supplies exhausted'. This would have had major ramifications on the environment, and on regional economies, specifically on the agricultural and industrial sectors.<sup>10</sup>
- 1.15** WaterNSW stressed the 'catastrophic'<sup>11</sup> impacts that running out of water would have on those towns which rely on surface supply, and do not have access to other alternative water supply options. Water NSW stated:

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<sup>2</sup> Submission 152, NSW Government, p 2.

<sup>3</sup> Submission 50, WaterNSW, p 2.

<sup>4</sup> Submission 152, NSW Government, p 2.

<sup>5</sup> Submission 152, NSW Government, p 2.

<sup>6</sup> Submission 50, WaterNSW, p 3.

<sup>7</sup> Submission 50, WaterNSW, p 9.

<sup>8</sup> Submission 50, WaterNSW, p 9.

<sup>9</sup> Submission 50, WaterNSW, pp 9-10.

<sup>10</sup> Submission 50, WaterNSW, p 10.

<sup>11</sup> Submission 50, WaterNSW, p 10.

Should entire water supplies be exhausted, one extreme outcome would be for entire towns to evacuate. Such a traumatic event would have devastating and lasting impacts on towns and communities.<sup>12</sup>

- 1.16** WaterNSW told the committee that without the existing bulk water assets, like dams, weirs and pipelines, the impact of the drought would have been even more severe:

The storage of inflows captured in WaterNSW dams during floods from previous years, and released during drought conditions, maintained flows in rivers for longer than would otherwise have been the case. In addition, the effective management of existing assets, and the delivery of emergency assets built in response to the drought (such as the Chaffey to Dungowan Pipeline), helped prolong supplies for critical human needs.<sup>13</sup>

- 1.17** The impacts of the recent drought were referred to by WaterNSW as a key reason to develop a response to the risks associated with the 'unavoidable' elements of the Australian climate, being long periods of drought. It was also noted that given these impacts will likely become increasingly severe as a result of climate change, there is an even greater need to develop 'operational, asset and policy responses' to mitigate these risks.<sup>14</sup>

- 1.18** When summarising why the impacts of the recent drought have led to an increased commitment to address water security issues, WaterNSW stated that:

Indeed, the adversity experienced by regional and rural communities during the current drought highlights the pressing need to explore all these options. This is to better prepare our communities for the next drought and contribute to safe, healthy and prosperous regional communities.<sup>15</sup>

- 1.19** The Minister for Water, Property, the Hon. Melinda Pavey MP reiterated this point, and stressed the significance of investing in water infrastructure in response to water security issues. The Minister told the committee that:

Storage levels in northern New South Wales are still quite low compared to the rest of the State. History has taught us time and time again that the time for talking about improving key water conservation infrastructure is over. Any delays to upgrading key infrastructure is time we do not have. We also have to look at the policy settings to ensure that we have them aligned with our infrastructure to run rivers as efficiently as possible. It is no secret that our dams and water infrastructure is ageing because successive governments over the last 50 years have failed to invest in upgrading key water infrastructure.<sup>16</sup>

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<sup>12</sup> Submission 50, WaterNSW, p 10.

<sup>13</sup> Submission 50, WaterNSW, p 10.

<sup>14</sup> Submission 50, WaterNSW, p 10.

<sup>15</sup> Submission 50, WaterNSW, p 10.

<sup>16</sup> Evidence, Minister for Water, Property and Housing, the Hon. Melinda Pavey MP, 4 December 2020, p 33.

## The role of WaterNSW in delivering the proposed projects

- 1.20** WaterNSW is a State-Owned Corporation, which was established in 2014 under the *Water NSW Act 2014* (NSW), as the 'state's bulk water services and infrastructure provider'.<sup>17</sup>
- 1.21** WaterNSW noted that one of its principal objectives, as per the establishing legislation, is to 'provide for the planning, design, modelling and construction of water storages and other water management works in NSW'.<sup>18</sup> WaterNSW explained to the committee that in executing this function:
- WaterNSW works closely with other State and Commonwealth Government agencies, who have defined accountabilities and functions in relation to the planning and delivery of water infrastructure. This includes DPIE Water, who set policy objectives and water strategies, and INSW, which provides oversight and coordination, among others.<sup>19</sup>
- 1.22** When outlining the role of WaterNSW, Mr Andrew George, A/CEO, WaterNSW, explained that it operates the state's water assets, but does not set policy:
- We operate the State's water assets including more than 40 dams and over 300 weirs and regulators for all customers, including farmers, local communities, industries and the environment. We do so in a manner that is consistent with the policy directions of the New South Wales Government, in particular the Department of Planning, Industry and Environment Water, and the relevant water sharing plans for each valley. That is, WaterNSW does not set policy or the water management rules.<sup>20</sup>
- 1.23** During Budget Estimates for the Water, Property and Housing Portfolio, the committee heard evidence about the role of the water infrastructure unit within the Department of Planning, Industry and Environment (DPIE). When discussing the newly formed unit, the Minister said that it was 'overseeing the construction of the dams and the safe and secure water supplies'.<sup>21</sup>
- 1.24** The Minister went on to state that there is 'better overarching management' of the relevant projects as a result of being 'led out of' the new water infrastructure unit. She also noted that Water NSW will 'continue to work within that remit of providing advice and information'.<sup>22</sup>
- 1.25** Mr Jim Betts, Secretary of DPIE, clarified that the water unit within DPIE has replaced the previous Department of Primary Industries Water.<sup>23</sup>
- 1.26** The role of WaterNSW with regard to the projects identified in the terms of reference was identified as follows:

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<sup>17</sup> Submission 50, WaterNSW, p 5.

<sup>18</sup> *Water NSW Act 2014* (NSW), section 6(1)(d).

<sup>19</sup> Submission 50, WaterNSW, p 7.

<sup>20</sup> Evidence, Mr Andrew George, A/Chief Executive Officer, WaterNSW, 29 October 2020, p 2.

<sup>21</sup> Evidence, Minister for Water, Property and Housing, the Hon. Melinda Pavey MP, 1 March 2021, p 5.

<sup>22</sup> Evidence, Minister for Water, Property and Housing, the Hon. Melinda Pavey MP, 1 March 2021, p 5.

<sup>23</sup> Evidence, Mr Jim Betts, Secretary, Department of Planning, Industry and Environment, 1 March 2021, p 59.

- WaterNSW have been directed under section 20P of the State Owned Corporation Act to advance the planning and early works for the '3 Regional Dams Projects', being Wyangala Dam, Dungowan Dam and Mole River Dam. Funding has been allocated for the first stage of this program, which will fund the development of the three business cases, and pre-construction activities for the Wyangala and Dungowan projects.<sup>24</sup>
- WaterNSW have been funded by the NSW Government to deliver a Final Business Case for a new re-regulating storage on the Macquarie River;<sup>25</sup>
- WaterNSW and the Department of Planning, Industry and Environment – Water, have been funded by the NSW Government to 'investigate the feasibility of the Western Weirs Project.'<sup>26</sup>

**1.27** WaterNSW was also involved in the development of a range of studies and strategic documents which have been identified as underpinning the decisions made by the NSW and Commonwealth Governments to progress the proposed projects. These studies included:

- The NSW Government's State Infrastructure Strategy Priority Catchment studies;
  - The 2014 State Infrastructure Strategy (SIS) identified 'priority catchments' in regional valleys, in addition to 'projects for further investigation'.<sup>27</sup>
  - The 2014 and 2018 SIS listed several 'high priority catchments for the delivery of critical infrastructure projects'.<sup>28</sup>
  - Following the SIS, the NSW Government funded WaterNSW to undertake studies that investigated 'infrastructure options for each valley'.<sup>29</sup> This included the Lachlan and Macquarie Valleys.
  - WaterNSW conducted investigative studies as part of this work, including engineering studies, and 'high-level preliminary cost/benefit analyses'.<sup>30</sup>
  - It was noted that these were initial studies, which were 'used to inform decisions in relation to whether to proceed to undertake more detailed studies or prepare a Final Business Case'.<sup>31</sup>
- Water NSW's 20 Year Infrastructure Options Studies (rural valleys); and
  - This study arose following a recommendation in the 2014 SIS Update, which recommended that WaterNSW 'develop a best-practice 20-year capital plan for bulk water supply to provide the evidence base for pricing applications going forward'.<sup>32</sup>

<sup>24</sup> Submission 50, WaterNSW, p 16.

<sup>25</sup> Submission 50, WaterNSW, p 15.

<sup>26</sup> Submission 50, WaterNSW, p 16.

<sup>27</sup> Submission 50, WaterNSW, p 11.

<sup>28</sup> Submission 50, WaterNSW, p 11.

<sup>29</sup> Submission 50, WaterNSW, p 11.

<sup>30</sup> Submission 50, WaterNSW, p 12.

<sup>31</sup> Submission 50, WaterNSW, p 12.

<sup>32</sup> Submission 50, WaterNSW, p 12, quoting Infrastructure NSW, *State Infrastructure Strategy Update 2014*, November 2014, p 80.

- It explored 'bulk water infrastructure options to improve customer Levels of Service and respond to future challenges'.<sup>33</sup>
- WaterNSW stated that the study 'provided a robust strategic approach for infrastructure development and informed discussion on broader NSW Government and WaterNSW investment priorities'.<sup>34</sup>
- It was noted that the study identified preliminary options for addressing water security, and identified a 'series of preferred options warranting further consideration'. These options were then refined and analysed further.<sup>35</sup>
- WaterNSW stated that technical analysis on the preferred options identified in this study have been undertaken since its finalisation.<sup>36</sup>
- Commonwealth-funded feasibility studies.
  - The Commonwealth Government established the National Water Infrastructure Development Fund (NWIDF) in 2015. Their role was to deliver 'planning and construction of water infrastructure projects that will deliver new and reliable water to enhance water security and underpin regional economic growth, including irrigated agriculture and other primary industries'.<sup>37</sup>
  - WaterNSW was contracted and funded, by DPIE Water, acting on behalf of the Commonwealth, to undertake two investigations.<sup>38</sup>
  - The first was the feasibility of building the Dungowan Dam, which resulted in the Border Rivers National Water Infrastructure Development Fund Feasibility Study.<sup>39</sup>
  - The second study was a 'financial and technical feasibility of a major water storage on the Mole River', which resulted in the Peel Valley National Water Infrastructure Development Fund Feasibility Study.<sup>40</sup>

**1.28** The detail of these studies, with regard to how they addressed each of the specific projects, will be addressed in later chapters of this report.

**1.29** The committee also heard that DPIE is in the process of preparing and finalising 12 Regional Water Strategies. These strategies 'will bring together the best and latest climate evidence with a wide range of tools and solutions to plan and manage the water needs in each NSW region over the next 20-40 years'.<sup>41</sup>

**1.30** WaterNSW included a timeline that identified relevant studies, approvals and commitments relating to the proposed projects. This timeline is included as Appendix A to this report.

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<sup>33</sup> Submission 50, WaterNSW, p 12.

<sup>34</sup> Submission 50, WaterNSW, p 13.

<sup>35</sup> Submission 50, WaterNSW, p 13.

<sup>36</sup> Submission 50, WaterNSW, p 14.

<sup>37</sup> Submission 50, WaterNSW, p 14.

<sup>38</sup> Submission 50, WaterNSW, p 14.

<sup>39</sup> Submission 50, WaterNSW, p 15.

<sup>40</sup> Submission 50, WaterNSW, p 15.

<sup>41</sup> Department of Industry, *About regional water strategies*, <https://www.industry.nsw.gov.au/water/plans-programs/regional-water-strategies/about>.

## Chapter 2 Impact and ramifications of large-scale water storage infrastructure

This Chapter examines the scientific evidence regarding the general impact and operation of dams. It commences with a review of some of the articulated benefits of dams, and then looks at the long-term ramifications of large-scale water storage infrastructure on the environment, including biodiversity impacts and the overall health of the river.

### The role of dams in ensuring water security

**2.1** The committee heard evidence about the importance of dams, and why they have been utilised in NSW as a way of addressing water security and reliability issues.

**2.2** Mr Jim Bentley, Chief Executive Officer (Deputy Secretary), Department of Planning, Industry and Environment, explained that during times of drought, water storages such as dams mean that the connectivity of river systems can be maintained for longer, because the held environmental water can be managed. He noted that dams provide confidence to people to 'take water when it is available because they can see that they are likely to have it available later on as well. You are able to give more security to towns and you are able to maintain the connectivity of the system for longer'.<sup>42</sup>

**2.3** The Hon. Melinda Pavey MP, Minister for Water, Property and Housing, stated: 'We would not have survived the last drought without our dams and pipelines'.<sup>43</sup> The government noted that with the recent drought, river flow was maintained by releasing water from dams:

While it is not possible to identify exactly when rivers would have run dry during the last drought without dams, most major rivers in the Northern Basin and the Lachlan would have lost connectivity and flowed intermittently. River flow was only sustained and prolonged by the presence of major dams.<sup>44</sup>

**2.4** The committee heard further evidence about the importance of dams during the Millennium drought, specifically in regard to the Murray system. Ms Claire Miller, CEO, NSW Irrigators' Council, observed that without the existing headwater storage in the southern basin, the Murray River would have 'stopped running for several months during the summer in 2008 and 2009'.<sup>45</sup>

**2.5** The NSW Irrigators' Council argued that mass water storage is a uniquely important way of ensuring water security in Australia: 'As a fundamental principle in a nation with such a variable climate we need the ability to store water in which times to endure the dry times'.<sup>46</sup>

<sup>42</sup> Evidence, Mr Jim Bentley, Chief Executive Officer (Deputy Secretary), Department of Planning, Industry and Environment, 29 October 2020, p 11.

<sup>43</sup> Evidence, Minister for Water Property and Housing, the Hon. Melinda Pavey MP, 4 December 2020, p 33.

<sup>44</sup> Submission 152, NSW Government, p 6.

<sup>45</sup> Evidence, Ms Claire Miller, Chief Executive Officer, NSW Irrigators' Council, 27 November 2020, p 24.

<sup>46</sup> Evidence, Ms Miller, 27 November 2020, p 21.

- 2.6** The Irrigators' Council also referred to the significant impact climate change has had, and will continue to have, on rainfall and inland waterways. The Council concluded that 'dams and other mass water storage projects will have an ever-increasing importance to ensure the security of water supply for social, economic and environmental outcomes'.<sup>47</sup> The NSW Farmers Association presented a similar argument.<sup>48</sup>
- 2.7** The NSW Irrigators' Council also argued that given recent water reforms, such as the Murray-Darling Basin Plan, and the subsequent increase in held environmental water, dams have an increased role in ensuring this water supply for those environmental outcomes.<sup>49</sup>
- 2.8** The committee also heard evidence about the economic importance of dams and ensuring water security for irrigation purposes. Ms Claire Miller, CEO, NSW Irrigators' Council, stressed the importance of the irrigation industry in providing food and fibre to the community:
- Recent Australian Bureau of Statistics statistics show that irrigation provides Australia with more than 90 per cent of our fruit, nuts and grapes, more than 76 per cent of our vegetables, 100 per cent of our rice and more than 50 per cent of our dairy and sugar.<sup>50</sup>
- 2.9** Minister Pavey noted that whilst new water technologies and diversifying water security options is important, she concluded: 'It is not just about dams. But dams are an important part – and have been through civilisation – in ensuring that we can manage food production throughout the world, as well as town water supplies and civilised communities'.<sup>51</sup>

## Impact of climate change on dams

- 2.10** As noted above, the committee heard evidence regarding how climate change will impact mass water storage infrastructure, such as dams. While the NSW Irrigators' Council told the committee that dams will be increasingly important due to a drier climate and more unpredictable rainfall, this view was disputed by others.
- 2.11** Some stakeholders told the committee that the impacts of climate change mean that dams will become increasingly less efficient, and other options for ensuring water security should be prioritised.
- 2.12** Professor Jamie Pittock, Fenner School of Environment & Society, Australian National University, articulated this point, and told the committee that the 'climate is changing and that means water infrastructure needs to change as well'.<sup>52</sup> Professor Pittock explained why a changing climate means lower dam inflows:

There is a great deal of evidence that rainfall and inflows in the southern Murray-Darling Basin are declining. There are a number of pieces of evidence from the Southern

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<sup>47</sup> Submission 144, NSW Irrigators' Council, p 5.

<sup>48</sup> Submission 142, NSW Farmers' Association, p 1.

<sup>49</sup> Submission 144, NSW Irrigators' Council, p 6.

<sup>50</sup> Evidence, Ms Miller, 27 November 2020, p 21.

<sup>51</sup> Minister for Water, Property and Housing, 4 December 2020, p 45.

<sup>52</sup> Evidence, Professor Jamie Pittock, Professor, Fenner School of Environment & Society, Australian National University, 2 November 2020, p 11.

Tablelands, in the region I live in, where we are already seeing statistically significant declines in rainfall, particularly—not this year—in spring and that is based on Bureau of Meteorology data. Then unanimity in the academic research that even small declines in rainfall lead to much higher declines in river inflow. That is because of the higher evapotranspiration leading to reduced inflows into the actual rivers.<sup>53</sup>

**2.13** Professor Pittock explained that the decrease in rainfall and subsequent decrease in river inflow has increased the threat to water security in the regions. He argued that the best way of 'spreading that risk' of water insecurity is to 'diversify the water sources and the water infrastructure used to diversify the risk'.<sup>54</sup>

**2.14** With regard to why he recommended this kind of diversity, and moving away from dams and traditional water infrastructure, Professor Pittock argued that this would increase the community's drought resilience:

That is one reason why I would say that building more surface water storages, traditional storages is unwise as opposed to complementing the existing water supply with other measures, such as better conjunctive use of groundwater, more water recycling and off river pump storages that are able to retain water for longer. Those sorts of measures are likely to improve our resilience in drought.<sup>55</sup>

**2.15** Other stakeholders also spoke about their concerns regarding the impact of climate change on dams, specifically referring to increased evaporation losses. Ms Maryanne Slattery, a director of water consultancy firm, Slattery & Johnson, described building dams as 'very last century'.<sup>56</sup>

**2.16** Professor Richard Kingsford, Professor of Environmental Science, School of Biological, Earth and Environmental Sciences, University of New South Wales, observed that increasing temperatures results in more evaporation from water storages, meaning that overall, less water is retained. He noted that this is in addition to changing rainfall and runoff patterns, which cause existing storages to not full up as regularly as they once did.<sup>57</sup>

### **Committee comment**

**2.17** The committee accepts the evidence that climate change will seriously impact water security in regional NSW. Evidence regarding decreased rainfall, decreased river inflow and increasing temperatures were convincing, and the committee accepts that these factors mean that the utility of more mass water storage infrastructure like new or larger dams will have to be reassessed.

**2.18** Based on this evidence, the committee agrees with the argument that there is a need to continue to diversify approaches to water storage and water use.

<sup>53</sup> Evidence, Professor Pittock, 2 November 2020, p 11.

<sup>54</sup> Evidence, Professor Pittock, 2 November 2020, p 11.

<sup>55</sup> Evidence, Professor Pittock, 2 November 2020, p 11.

<sup>56</sup> Evidence, Ms Maryanne Slattery, Director, Slattery & Johnson, 29 October 2020, p 19.

<sup>57</sup> Submission 99, Professor Richard Kingsford, p 13.

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**Finding 1**

That climate change will increasingly impact the utility of mass water storages due to rising temperatures, irregular rainfall and river inflows, resulting in decreased overall water inflow and increased evaporation losses.

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**Ecological impact of dams**

- 2.19** The construction and operation of dams can negatively impact river health, natural flows and various native fish and terrestrial species.
- 2.20** Professor Martin Mallen-Cooper, Adjunct Research Professor, Institute for Land, Water and Society, Charles Sturt University, explained that there is a fundamental division in river ecology between flowing water and still water. Flowing water is typified by 'riffles' but includes any flow that is visibly moving, while still water includes pools and lakes. Professor Mallen-Cooper noted that this division is the basis of river ecology, as different animals exist in these two habitats.
- 2.21** Professor Mallen-Cooper explained that the survival of fish larvae and young fish is dependent on flowing water habitats and the diverse food webs that these provide. In contrast, dams and weirs create backwater and pool-like conditions, and where this happens, flowing water habitats are reduced and biodiversity declines. This can lead to species becoming locally extinct – they cannot survive in the permanent or semi-permanent pool-like conditions. Dr Mallen-Cooper noted that this important ecological concept applies to any new or enlarged dam or weir, which all increase backwater and inundate flowing streams.<sup>58</sup>
- 2.22** Professor Mallen-Cooper noted that river flows that are 'uninterrupted by dams and weirs have extremely high ecological value, compared to flows that are stored in dams and weirs and re-released'.<sup>59</sup> Uninterrupted river flows pick up nutrients, which generates 'natural productivity of plankton, which is the essential food source of fish larvae'. This was described as the 'fundamental process of river ecosystems that sustains native fish populations'.<sup>60</sup>
- 2.23** Dr Lee Baumgartner, Professor of Fisheries and River Management, Institute for Land, Water and Society, Charles Sturt University, explained the various ways in which a dam or a weir can impact fish. He noted that big dams can cause thermal pollution, where cold water is released in the middle of summer, impacting fish habitat.<sup>61</sup> Additionally, water diversion as a result of large-scale infrastructure can also have a significant impact:

...things like extraction of water and diverting water—we know that in a single diversion up to 12,000 fish a day can be taken out of the river. Those fish cannot get back to the river.<sup>62</sup>

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<sup>58</sup> Submission 87, Dr Martin Mallen-Cooper, p 3.

<sup>59</sup> Submission 87, Dr Martin Mallen-Cooper, p 6.

<sup>60</sup> Submission 87, Dr Martin Mallen-Cooper, p 6.

<sup>61</sup> Evidence, Dr Lee Baumgartner, Professor of Fisheries and River Management, Institute for Land Water and Society, Charles Sturt University, 29 October 2020, p 55.

<sup>62</sup> Evidence, Dr Baumgartner, 29 October 2020, p 57.

- 2.24** The negative impact of dams on river health and native fish was also identified by Professor Richard Kingsford, including the lack of river flushing:

We have abundant scientific evidence that what is causing a lot of that unsustainable degradation is that the water we are capturing in our large dams is water that flushes out those rivers, flushes salt from those rivers, and delivers nutrients and water to downstream ecosystems. So, one of the relatively poor understandings about rivers is that they require large flood plains, which is where native fish breed and where invertebrates are.<sup>63</sup>

- 2.25** Professor Jamie Pittock explained that the lack of flooding or flushing of rivers due to water storages has had an impact on the breeding and migration habits of native fish in the Murray. This is because fish are missing their cues to breed and spread out without the changing flows.<sup>64</sup>

- 2.26** Professor Kingsford also explained that new dams and other water infrastructure projects will have a significant impact on floodplains, as a result of disrupting the natural flood events that would reach these areas. He stated that:

Most of these new projects will have the effect of taking water from the rivers. They will exacerbate the loss of floodplain forests. They will increase the incidences of blue-green algal blooms and salinity in rivers. They will ensure that more floodplain graziers will have their livelihoods affected as a result of reduced flooding. They will increase the impacts on species already severely under pressure, such as platypus.<sup>65</sup>

- 2.27** The committee heard that there has been 'long-term declines in the condition and extent of floodplain eucalypt forests, such as river red gums as a result of declining flooding, caused by historical allocations and this is expected to continue'.<sup>66</sup>

- 2.28** This was reiterated by Professor Pittock, who explained that because water is being held in the dam, it is not going 'onto the floodplain to recharge groundwater to keep red gum floodplain forests alive'.<sup>67</sup>

- 2.29** The committee also heard from Professor Pittock that Australia has 'obligations to conserve migratory species under four international treaties, and to conserve freshwater biodiversity under the Convention on Biological Diversity and Ramsar Convention on Wetlands'.<sup>68</sup>

- 2.30** The obligations under international agreements were also referred to by the Inland Rivers Network, which stated that Australia's compliance with these agreements 'will be impacted by the new dams'.<sup>69</sup>

<sup>63</sup> Evidence, Professor Richard Kingsford, Professor of Environmental Science, Director of Centre for Ecosystem Science, School of Biological, Earth and Environmental Sciences University of New South Wales, 27 November 2020, p 3.

<sup>64</sup> Evidence, Professor Pittock, 2 November 2020, p 7.

<sup>65</sup> Submission 99, Professor Kingsford, p 8.

<sup>66</sup> Submission 99, Professor Kingsford, p 5.

<sup>67</sup> Evidence, Professor Pittock, 2 November 2020, p 7.

<sup>68</sup> Submission 115, Professor Pittock, p 5.

<sup>69</sup> Submission 116, Inland Rivers Network, p 16.

- 2.31** The Network explained that 'The environmental damage to key wetlands, water bird habitat, threatened species and native fish habitat will cause a failure to meet Australia's international obligations'.<sup>70</sup>
- 2.32** Professor Pittock noted that while dams can be used to 'sustain the flow of the river', that is 'not necessarily environmentally beneficial'.<sup>71</sup> Professor Pittock provided an example of this occurring, telling that committee that the River Murray would naturally have high flows in late winter and spring, and low flows in summer and autumn. He noted that now, because of the dams, the river is run 'bank-full' much of the year. He explained that the river ecology was used to the natural highs and lows, and the changes have led to riverbank erosion.<sup>72</sup>
- 2.33** Professor Kingsford concluded that the construction of large water infrastructure projects goes against the aim of improving the health of the rivers in the Murray-Darling Basin.<sup>73</sup>

#### **Committee comment**

- 2.34** The committee finds the evidence from scientific experts regarding the ecological impact of dams particularly compelling. The committee commends the work being done to advance the understanding of the impacts of water infrastructure projects on river health, various native species of fish and the environment.
- 2.35** The majority of evidence to the inquiry was that dams and weirs are detrimental to river health. The committee appreciates the evidence from Dr Baumgartner and Dr Mallen-Cooper on fish and river ecology, and gives much weight to their findings on the high ecological value of uninterrupted river flow, and the consequences of a disrupted flow. These impacts included changing water temperatures, inability for fish to migrate and fish missing natural cues to breed.
- 2.36** Additionally, the impact of dams limiting water overflow onto floodplains is concerning. The committee agrees that these floodplains and wetlands should be protected, and recognises the severe and permanent consequences of altering natural flows as a result of water infrastructure.
- 2.37** The committee also stresses the obligations Australia has in relation to being a signatory of various international agreements, which include protecting various fish and bird species, floodplains and wetlands. The committee believes that it is important that Australia continue to observe these obligations to protect migratory species and floodplains.

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<sup>70</sup> Submission 116, Inland Rivers Network, p 16.

<sup>71</sup> Evidence, Professor Pittock, 2 November 2020, p 7.

<sup>72</sup> Evidence, Professor Pittock, 2 November 2020, p 7.

<sup>73</sup> Evidence, Professor Kingsford, 27 November 2020, p 3.

**Finding 2**

That without large dams, millions of people in NSW would have run out of water at least once over the past twenty years. However, bulk water supply infrastructure, like dams and weirs, has significant negative impacts on rivers, including disrupting native fish breeding and migration, the quality of fish habitat, and on general river health and floodplain sustainability. In order to manage climate change risks to our bulk water supply, existing infrastructure – much of which was built between the 1940s and 1970s – may need to be rebuilt, upgraded, modernised and improved.

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## Chapter 3 Wyangala Dam wall Raising Project

This Chapter focusses on the proposed Wyangala Dam wall raising project. The Chapter will first examine how the project was identified, and what processes were undertaken leading up to the commitment to the project. It then examines the current status of the project, and the planning and approvals processes that are taking place. The estimated costs and benefits of the project are identified, as well as an examination of the arguments for and against the raising of the Wyangala Dam wall. Finally, alternative options for addressing water security in the relevant region of the Lachlan Valley are explored. This is in addition to the examination of future approaches to water infrastructure and technology which will be contained in Part 2 of this report.

### Identification of the Wyangala Dam wall raising project

- 3.1** The Wyangala Dam wall raising project is one of the NSW Government's major infrastructure projects currently in the 'investigatory phase'.<sup>74</sup> The project proposes raising the dam wall by approximately 10 meters to increase water storage capability, and has been selected 'to improve long-term water security in the Lachlan Valley'.<sup>75</sup>
- 3.2** WaterNSW noted that this project had been selected for 'future development'<sup>76</sup> following a range of regional water security studies that have been undertaken since 2014.
- 3.3** Mr Andrew George, A/CEO, WaterNSW explained that Infrastructure NSW's 2014 State Infrastructure Strategy Update identified the Lachlan Valley as having particularly low levels of water security.<sup>77</sup> Mr George explained that this prompted the NSW Government to fund WaterNSW to undertake feasibility studies on improving water security in the region.<sup>78</sup>
- 3.4** The subsequent report was titled *Water Security for Regions: Belubula and Lachlan River Dam Investigation Report (December 2014)*.<sup>79</sup>
- 3.5** When referring to the 2014 study, Mr George explained:
- The first study undertaken was a feasibility study to improve water security and reliability in the Lachlan Valley. It was done at a time when there was an earlier announcement about a new dam at Cranky Rock in the Belubula and the study was initiated to look at alternatives or other options to the option.<sup>80</sup>
- 3.6** The 2014 water security study identified the raising of the Wyangala Dam wall 'as having the largest water security benefit at the time compared to the other 15 dam options that were

<sup>74</sup> Submission 50, Water NSW, p 2.

<sup>75</sup> Submission 50, Water NSW, p 2.

<sup>76</sup> Submission 50, Water NSW, p 2.

<sup>77</sup> Evidence, Mr Andrew George, A/Chief Executive Officer, WaterNSW, 29 October 2020, p 16.

<sup>78</sup> Evidence, Mr George, 29 October 2020, p 3.

<sup>79</sup> Answers to questions on notice, Minister for Water, Property and Housing, the Hon. Melinda Pavey MP, 15 January 2021, p 3.

<sup>80</sup> Evidence, Mr George, 4 December 2020, p 34.

identified'.<sup>81</sup> The Minister described the Wyangala Dam wall raising project as 'the standout option'<sup>82</sup> for improving water security in the region.

**3.7** It is also important to note that whilst the 2014 study looked at water security options, the scope of it was limited to just water storage, and expressly excluded other water security options such as water demand management and efficiency measures. The report stated that the 'scope of this study is limited to consideration of storage options to improve water security, the assessment of these alternative options [water efficiency projects] could be progressed in parallel with any recommended actions related to the development of additional storage in the Lachlan Valley'.<sup>83</sup>

**3.8** The committee heard that following the 2014 study, a second study was undertaken in 2017 which 'narrowed down'<sup>84</sup> the potential options and projects identified in 2014. When describing the remit of the 2017 study, Mr George stated:

It only looked at, for example, the Wyangala Dam, we looked at other the options at Cranky Rock and we looked at the pipeline between Lake Carcoar and Lake Rowlands. It also looked at water efficiency schemes in the lower Lachlan amongst other operational options as well.<sup>85</sup>

**3.9** In addition to the 2014 and 2017 studies, which examined options to improve water security in the Lachlan region, the NSW Government released a *20 Year Infrastructure Options Study* in 2018. This was in response to a recommendation made in the 2014 State Infrastructure Strategy, which stated that WaterNSW 'develop a best practice 20-year capital plan for bulk water supply to provide the evidence base for pricing applications going forward'.<sup>86</sup>

**3.10** WaterNSW noted that the Options Study made clear that it is not a Capital Investment Plan, but rather, 'a baseline to guide future decision making and benchmark future investments'.<sup>87</sup> Further, the Options Study noted that its cost estimates were 'strategic (pre-feasibility) level estimates, and so carry inherent uncertainty commensurate with the level of detail of this work'.<sup>88</sup>

**3.11** The Options Study identified the Wyangala Dam wall raising project as a 'preferred option(s) under consideration' to address water availability in the Lachlan Valley. In this document, the preliminary capital cost was estimated at \$650 million.<sup>89</sup>

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<sup>81</sup> Evidence, Mr George, 4 December 2020, p 35.

<sup>82</sup> Evidence, Minister for Water Property and Housing, the Hon. Melinda Pavey MP, 4 December 2020, p 34.

<sup>83</sup> NSW Water, *Water Security for Regions: Belubula and Lachlan River Dam Investigation Report* December 2014, p 23.

<sup>84</sup> Evidence, Mr George, 4 December 2020, p 34.

<sup>85</sup> Evidence, Mr George, 4 December 2020, pp 34-35.

<sup>86</sup> Submission 50, WaterNSW, p 12, quoting InfrastructureNSW, *State Infrastructure Strategy Update 2014*, November 2014, p 80.

<sup>87</sup> Submission 50, Water NSW, p 13.

<sup>88</sup> Submission 50, Water NSW, p 2.

<sup>89</sup> WaterNSW, *20 Year Infrastructure Options Study, Rural Valleys, Summary Report*, June 2018, p 37.

- 3.12** The 2018 Options Study noted that the Lachlan Valley Water Security Study was underway, and that this study would assess a number of potential options to improve water availability in the region.<sup>90</sup>
- 3.13** The NSW Government also noted that the Lachlan Regional Water Strategy was being prepared, and that the Draft Strategy had been available for public exhibition from October 2020.<sup>91</sup>
- 3.14** However, some inquiry participants, such as Ms Maryanne Slattery, representing water consultancy Slattery & Johnson, challenged the extent to which the relevant strategic planning documents endorsed the raising of Wyangala Dam wall as the best option for addressing water security in the region.
- 3.15** Ms Slattery noted that the studies undertaken in 2014 and 2018 were both options studies, and were explicitly not feasibility studies regarding the raising of the Wyangala Dam wall. Ms Slattery observed that the 20-Year Options Study stated:
- ...it is not a feasibility study and that further work needs to be done scoping out projects and options, particularly in terms of consultation and prioritisation from stakeholders' perspective from that consultation.<sup>92</sup>
- 3.16** Slattery & Johnson also quoted directly from the 20-Year Options Study which stated that it was not an investment plan:
- This document is not an investment plan because it does not address core government major investment processes. Most of the options identified in this strategy will need to be studied in more detail and will require major Business Case review before investment decisions can be made.<sup>93</sup>
- 3.17** Additionally, some stakeholders expressed concern with the project being announced and planned for prior to the finalisation of the Lachlan Regional Water Strategy.
- 3.18** When discussing the raising of the Wyangala Dam wall in the context of the Lachlan Regional Water Strategy Professor Jamie Pittock, Fenner School of Environment & Society, Australian National University, told the committee that:
- It is only one of 48 options. I guess I am rather surprised that the State Government, has announced, says it is going ahead with the Wyangala Dam raising, when the broader strategy that sets that context has not yet been finalised.<sup>94</sup>
- 3.19** Professor Pittock concluded that the water strategy should be finalised first:
- ...my recommendation to the New South Wales Government would be to finalise the regional water strategy first to seek community agreement on what are the reforms the

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<sup>90</sup> WaterNSW, *20 Year Infrastructure Options Study, Rural Valleys, Summary Report*, June 2018, p 38.

<sup>91</sup> Evidence, Mr Jim Bentley, Chief Executive Officer (Deputy Secretary), Department of Planning, Industry and Environment, 29 October 2020, p 6.

<sup>92</sup> Evidence, Ms Maryanne Slattery, Director, Slattery & Johnson, 29 October 2020, p 19.

<sup>93</sup> Submission 147, Slattery & Johnson, p 9.

<sup>94</sup> Evidence, Professor Jamie Pittock, Professor, Fenner School of Environment & Society, Australian National University, 2 November 2020, p 9.

community genuinely wants and makes sense in the Lachlan Valley before making any decision on the Wyangala Dam raising. I advocate that the Wyangala Dam raising project be put on hold.<sup>95</sup>

**3.20** With this background, it is pertinent to note that in October 2019, the Prime Minister and NSW Premier announced the planning and delivery of the Wyangala Dam wall raising project, in addition to the Dungowan Dam project and the Mole River Dam project.<sup>96</sup>

**3.21** The Minister for Water Hon Melinda Pavey MP described this decision as a 2019 NSW State Election commitment, due to the project being identified as a 'standout'<sup>97</sup> in the studies undertaken in 2014 and 2017.

### **Committee comment**

**3.22** The committee notes that there have been various options studies that include examination of raising the Wyangala Dam wall. Without a full feasibility study, business case and environmental impact statement, these studies should not be regarded as endorsements of the project.

**3.23** The committee is of the view that while the relevant strategic studies identified the Wyangala Dam project as one option for addressing water security in the Lachlan, they did not recommend that this project proceed without significant further analysis. Despite this, the Minister for Water the Hon Melinda Pavey MP announced the raising of the Wyangala Dam wall as an election commitment.

**3.24** The 2014 study was limited to examining bulk water storage options to address water security in the Lachlan Valley. The study did not examine other more environmentally sustainable water security options. Given the narrow scope of this initial study, it is not accurate to describe this work as identifying the project as the best option, given the study was restricted to only looking at bulk water storage options.

**3.25** The committee is also very concerned that decisions about the project were being made prior to the finalisation of the Lachlan Regional Water Strategy. It is clear that this strategy should be finalised prior to the project being progressed to ensure any action taken is the most effective, efficient and sustainable option.

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### **Finding 3**

That the claimed economic and water security benefits of the election commitment to raise the Wyangala Dam wall are yet to be demonstrated.

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<sup>95</sup> Evidence, Professor Pittock, 2 November 2020, p 9.

<sup>96</sup> Submission 50, Water NSW, p 2.

<sup>97</sup> Evidence, Minister for Water Property and Housing, 4 December 2020, p 36.

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### Recommendation 1

That the NSW Department of Planning, Industry and Environment finalise the Lachlan Regional Water Strategy and investigate how it can expedite funding and policy proposals for projects which improve water security and sustainability, and help mitigate the impacts of climate change.

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## Status of the Wyangala Dam wall raising project

### Commitment to the planning and delivery of the Project

- 3.26** WaterNSW explained that following the announcement of the Wyangala Dam project as an election commitment, the Minister subsequently provided a Direction to the Board of WaterNSW to advance the planning and early works for the Wyangala Dam wall raising project, in addition to the Dungowan Dam and Mole River Dam projects.<sup>98</sup>
- 3.27** This direction was made under section 20P of the *State Owned Corporations Act 1989* (NSW). This part provides that a portfolio Minister, with the approval of the Treasurer, 'may give the board of a statutory SOC a written direction in relation to the SOC and its subsidiaries if the portfolio Minister is satisfied that, because of exceptional circumstances, it is necessary to give the direction in the public interest'.<sup>99</sup>
- 3.28** Once a direction is given, the board must ensure it is carried out, and that the direction is complied with.<sup>100</sup>
- 3.29** The Direction, dated 13 May 2020, directs the Board of WaterNSW to:
- a. Use its best endeavours to:
    - i. Submit final business cases for the Wyangala Dam... projects for investment decision under the Infrastructure NSW Infrastructure Investor Assurance Framework by July 2021;
    - ii. Deliver pre-construction activities for the Wyangala Dam... projects so that they are ready for construction to commence by October 2021;
    - iii. Deliver an early works package including the...relocation of the Wyangala Reflections Holiday Park
  - b. Raise funds through debt to cover the expenses not funded by way of grant from the NSW Government for matters set out in paragraph a. above;
  - c. To the extent applicable, ensure the new regional climate modelling being undertaken by the Department of Planning, Industry and Environment (DPIE) is

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<sup>98</sup> Submission 50, Water NSW, p 16.

<sup>99</sup> *State Owned Corporations Act 1989* (NSW), s 20P(1).

<sup>100</sup> *State Owned Corporations Act 1989* (NSW), s 20P(2).

used to inform the work underpinning the Cost Benefit Analysis of the relevant Business Cases;

- d. Establish and chair an interagency Project Consultative Committee for the development of the three projects with the terms of reference for the committee to be agreed between the WaterNSW CEO and the DPIE Water Deputy Secretary;
- e. Provide reports on a monthly basis to the Regional Water Strategy Executive Committee, chaired by the Secretary of DPIE, on progress of the three projects.<sup>101</sup>

**3.30** The Minister's notice of reasons for giving the Direction state that this work is necessary, given 'the severity of the current drought and the significant water security issues for large parts of regional NSW constitute exceptional circumstances'.<sup>102</sup>

**3.31** Further, the Direction goes on to state that it will ensure that 'business cases are prepared, and pre-construction activities carried out, so that the projects are brought to a stage where they are ready for construction as soon as possible'.<sup>103</sup>

**3.32** \$245 million has been allocated for the first stage of the dams program. This will fund the development of the business cases for the projects, as well as pre-construction activities and early works.<sup>104</sup>

**3.33** The funding arrangements for this \$245 million was clarified in Budget Estimates for the Water, Property and Housing Portfolio on 1 March 2021. The Minister stated that the preparation of the business cases for Wyangala, Dungowan and Mole River Dam are being debt funded by WaterNSW, in addition to financial support being provided from the Commonwealth.<sup>105</sup>

**3.34** Mr Bentley provided additional detail about this funding arrangement, and what would occur if the projects did not go ahead. He said that:

The Commonwealth component is a grant, and the way those funding agreements work for this first phase of the work is if the project did not go ahead—which is the hypothetical that we are discussing—actually more than half of the underwrite, if you like, comes from the Commonwealth instead of the State. So it is perfectly normal that when WaterNSW is directed to do something that is not within its normal SOC activity,

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<sup>101</sup> Direction to the Board of WaterNSW (responsibility for progressing the Wyangala, Dungowan and Mole River Dam Projects) 2020, under the *State Owned Corporations Act 1989* (NSW), 13 May 2020.

<sup>102</sup> Notice of reasons for giving the Direction: *Direction to the Board of WaterNSW (responsibility for progressing the Wyangala, Dungowan and Mole River Dam Projects) 2020*, under the *State Owned Corporations Act 1989* (NSW), 13 May 2020.

<sup>103</sup> Notice of reasons for giving the Direction: *Direction to the Board of WaterNSW (responsibility for progressing the Wyangala, Dungowan and Mole River Dam Projects) 2020*, under the *State Owned Corporations Act 1989* (NSW), 13 May 2020.

<sup>104</sup> Submission 152, NSW Government, p 2.

<sup>105</sup> Evidence, Minister for Water, Property and Housing, the Hon. Melinda Pavey MP, 1 March 2021, p 32.

with that direction comes that they would be repaid if the project did not go ahead, otherwise you would be putting at risk their credit ratings and those sorts of things.<sup>106</sup>

- 3.35** In its submission, WaterNSW noted that in addition to being subject to a Direction to advance the planning and early works for the project, the Wyangala Dam wall raising project has been declared a Critical State Significant Infrastructure (CSSI) under Schedule 3 of the *Water Supply (Critical Needs Act) 2019* (NSW).<sup>107</sup>
- 3.36** This classification means that the Project is subject to 'accelerated timelines for delivery by WaterNSW'.<sup>108</sup> In practice, this allows the 'procurement and design phases to progress in parallel with the EIS (Environmental Impact Statement) and Final Business Case development'.<sup>109</sup> Similar to the reasons for the Minister's Direction, WaterNSW noted that this approach ensures the project will be ready to commence construction work, pending relevant approvals and finalisation of pre-construction works.<sup>110</sup>
- 3.37** However, WaterNSW reiterated that despite this status, the project will need to meet all relevant planning requirements and approvals.<sup>111</sup>
- 3.38** During Budget Estimates, it was emphasised that the project will also be subject to the approval of the Expenditure Review Committee (ERC) of Cabinet. The Minister stated that this process will require ERC to 'ensure that the dam provides the benefits'.<sup>112</sup>

### Environmental approvals for the proposed project

- 3.39** Ms Anissa Levy, CEO, Water Infrastructure NSW, Department of Planning, Industry and Environment (DPIE), referred to the necessary environmental assessments that must be undertaken in relation to the project. Ms Levy noted that full Environmental Impact Statement approvals will be required in alignment with the Secretary's Environmental Assessment Requirements (SEARs) for this project. Ms Levy also told the committee that there may be a separate environmental approvals process for the early works packages, which would occur outside the full EIS process.<sup>113</sup>
- 3.40** The NSW Government submission also explained that due to the likely impacts to 'Matters of National Environmental Significance', the project is a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). This means that the environmental impacts

<sup>106</sup> Evidence, Mr Bentley, 1 March 2021, p 65.

<sup>107</sup> Submission 50, Water NSW, p 3.

<sup>108</sup> Submission 50, Water NSW, p 3.

<sup>109</sup> Submission 50, Water NSW, p 3.

<sup>110</sup> Submission 50, Water NSW, p 3.

<sup>111</sup> Submission 50, Water NSW, pp 7-8.

<sup>112</sup> Evidence, Minister for Water, Property and Housing, the Hon. Melinda Pavey MP, 1 March 2021, p 20.

<sup>113</sup> Evidence, Ms Anissa Levy, Chief Executive Officer, Water Infrastructure NSW, Department of Planning, Industry and Environment, 29 October 2020, p 10.

of the project must also be assessed under the relevant bilateral agreement between the NSW and Commonwealth Government, in addition to the EIS process.<sup>114</sup>

- 3.41** Ms Levy summarised the approvals and decision-making processes for the project, and noted that both an environmental approval and then an investment approval is required:

The role of making those decisions is two-part. There is an environmental approval, which is a matter for the Secretary of the Department of Planning, Industry and Environment, the planning Minister and the Commonwealth Government, in terms of the EPBC approval. That would take into account the environmental impacts as part of that approvals process. Then there is a decision by the New South Wales Government, in terms of an investment decision if it believes that the business case stacks up and that the investment in delivering these dam projects represents good value for money and a good expenditure of the New South Wales Government's funding.<sup>115</sup>

### **Stakeholder views on decision making process**

#### *Concerns expressed regarding the fast-tracking of the project*

- 3.42** The committee also heard evidence that conflicted with the view of Government witnesses regarding the decision to proceed with the planning and delivery of the project, and the meaningfulness of the planning and approvals process.
- 3.43** This argument was made by the Inland Rivers Network, who said that the commitment to the project without having a finalised business case and EIS was premature.<sup>116</sup>
- 3.44** Ms Maryanne Slattery made a similar point, and described the decision to proceed with project planning as 'extraordinary'<sup>117</sup>. She told the committee that:

I would challenge making this decision to go ahead and expand the dam by 10 metres without a business case. That is \$650 million of taxpayer money that we have announced that we are going to spend on this project with no business case.<sup>118</sup>

- 3.45** This concern about the commitment to fast-track the proposed project without sufficient information was put to the committee by a number of inquiry participants. For example, the Central West Environment Council similarly took issue with the fast-tracking of the project, describing the process as 'very disturbing'.<sup>119</sup>
- 3.46** This was reiterated by Dr James Fitzsimons, The Nature Conservancy Australia, who stated:

We are concerned that no business case or cost-benefit analysis has been made publicly available to justify the proposal from an economic perspective, nor have other options

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<sup>114</sup> Submission 152, NSW Government, p 2.

<sup>115</sup> Evidence, Ms Levy, 29 October 2020, p 15.

<sup>116</sup> Submission 116, Inland Rivers Network, p 8.

<sup>117</sup> Evidence, Ms Slattery, 29 October 2020, p 18.

<sup>118</sup> Evidence, Ms Slattery, 29 October 2020, p 18.

<sup>119</sup> Submission 19, Central West Environment Council, p 1.

been considered. The same is true for justification on flood protection benefits being suggested.<sup>120</sup>

**3.47** These views were acknowledged by Mr Bentley on behalf of DPIE, who told the committee that:

...there is some concern expressed about fast tracking, and fast tracking is the overlapping of approvals stages. It is not the avoidance of those stages. We are still carrying out the assessments that would ordinarily be carried out. It is just a matter of decision made to fast track by overlapping some of these things.<sup>121</sup>

***Concerns regarding the decision to proceed with the project having been made prematurely***

**3.48** In addition to concerns about decision-making occurring prior to the business case being finalised, stakeholders also expressed doubt regarding the meaningfulness of the planning and approvals process. Some inquiry participants expressed a view that in substance, the decision to proceed with the raising of the dam wall was already made, and construction would go ahead despite what the business case or EIS stated.<sup>122</sup>

**3.49** This view was articulated by Ms Slattery, who stated that in the Lachlan Draft Regional Water Strategy, which was released for exhibition in October 2020, the raising of the Wyangala Dam wall was treated as 'a given and talks about other infrastructure options without even questioning the expansion'.<sup>123</sup>

**3.50** Mr John Webster and Mrs Kerri Webster are owners of Webster Pastoral Co., and told the committee that parts of their property will be compulsorily acquired if the project goes ahead. When asked if it was their understanding that the dam wall would certainly be raised, and that their property would be subject to compulsory acquisition as a result, Mr Webster stated that: 'Yes, that is definitely what we have been told'.<sup>124</sup>

**3.51** This issue was put to the Minister, who was asked if the commitment to the project meant it would proceed regardless of the content of the business case and EIS. In response, the Minister said that:

It is a commitment that we are working towards. We are doing the due diligence. We are doing our homework. We are doing final business cases, strategic business cases. We have done the initial analysis. There is a very, very strong economic case for this dam, and we will be working towards that end.<sup>125</sup>

**Committee comment**

<sup>120</sup> Evidence, Dr James Fitzsimons, Director of Conservation and Science, The Nature Conservancy Australia, 2 November 2020, p 13.

<sup>121</sup> Evidence, Mr Bentley, 29 October 2020, p 2.

<sup>122</sup> Evidence, Ms Slattery, 29 October 2020, p 19.

<sup>123</sup> Evidence, Ms Slattery, 29 October 2020, p 19.

<sup>124</sup> Evidence, Mr John Webster, Owner, Webster Pastoral Co., 4 December 2020, p 31.

<sup>125</sup> Evidence, Minister for Water Property and Housing, 4 December 2020, p 38.

- 3.52** The committee is concerned that the government has given commitments to raise the wall of Wyangala Dam before it has completed environmental assessments or developed a business case. The committee is particularly troubled by suggestions, as evidenced by Minister Pavey's comments, that the project will go ahead, despite what is contained in the final business case and EIS.

*Preparation of the Final Business Case and Environmental Impact Statement*

- 3.53** As noted above, the Ministerial Direction to the WaterNSW Board required that a Business Case be prepared for the project by July 2021. However, in evidence to the committee, the Minister indicated that the Final Business Case is likely to be completed by September 2021.<sup>126</sup>
- 3.54** Mr George spoke to the progress of the business case, telling the committee that: 'We are still undertaking the design work, we are still undergoing the investigations. We are yet to engage with the construction market, which will contribute constructability input'.<sup>127</sup>
- 3.55** The committee heard that the final business case will set out the final cost of the project, with the initial estimate of \$650 million being described by Ms Levy as 'very preliminary—the roughest level of estimates that you would have at that point in time'.<sup>128</sup>
- 3.56** When discussing what is being taken into account to determine that cost, Ms Levy noted the range of costs to be considered, including construction, biodiversity offset and land acquisition:

Work is being done now to ascertain what the scope of the works would be and what that final design for that would be, getting construction sector input into developing those costs. We also have to look at what the environmental impacts are, what the costs of mitigating or avoiding those environmental impacts are and what costs may be associated with biodiversity offsets requirements. The cost of land acquisition is informed by modelling work that identifies potential inundation areas. All of this work is still proceeding. There is still modelling work being done. There is still design and scope work being done. All of these factors play into the costs that form part of the business case as well as the benefit side of the equation.<sup>129</sup>

- 3.57** The committee heard that decisions around the funding of the project will also be made once the business case has been finalised. When asked about funding for the proposed project, specifically in regard to the involvement of the Commonwealth Government, the Minister replied:

We have come to agreement with the Commonwealth at that level that it was going to be half a grant and then half a loan, but now it has come to the party with a 50-50 grant at the announced amount of \$650 million. We are working through that process and we will have a better idea of that number at the end of the final business case, which is September next year.<sup>130</sup>

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<sup>126</sup> Evidence, Minister for Water Property and Housing, 4 December 2020, p 37.

<sup>127</sup> Evidence, Mr George, 29 October 2020, pp 3-4.

<sup>128</sup> Evidence, Ms Levy, 29 October 2020, p 10.

<sup>129</sup> Evidence, Ms Levy, 29 October 2020, p 10.

<sup>130</sup> Evidence, Minister for Water Property and Housing, 4 December 2020, p 37.

**3.58** The committee also heard evidence regarding the progression of the Environmental Impact Statement (EIS), and the work that will be undertaken after its finalisation. Ms Michelle Dumazel, Executive Director, Biodiversity & Conservation, Environment, Energy and Science Group, Department of Planning Industry and Environment (DPIE), explained that in addition to the EIS, a biodiversity development assessment report is required to be prepared.<sup>131</sup> When describing how this assessment will work, Ms Dumazel stated:

We will do an assessment of the EIS and that biodiversity development assessment report that I was talking about and will provide advice to our Planning colleagues on our thoughts around the impacts of the proposal that is before us.<sup>132</sup>

**3.59** Ms Dumazel went on to explain that once this assessment has occurred, they will then work to determine how the Biodiversity Offset Scheme will apply, whereby DPIE will provide advice on how the impacts of the project could be mitigated, avoided or offset. Ms Dumazel outlined options that are available to project proponents to offset the relevant ecological impacts:

One is where you might have, for example, some other sites that you might have some biodiversity stewardship agreements on. You could also buy credits on the market with local landholders. For example, we have got the Biodiversity Conservation Trust. To pay for your credits, you could actually pay the Biodiversity Conservation Trust to find those credits for you, or there are certain environmental conservation projects that you could agree to fund.<sup>133</sup>

#### *Pre-construction works*

**3.60** The committee heard evidence regarding the status of the 'pre-construction activities'<sup>134</sup> referred to in the Ministerial Direction. Ms Levy explained that while pre-construction works are being planned, none are underway at the moment.<sup>135</sup>

**3.61** Specifically, Mr Bentley responded to concerns about possible relocation of the Wyangala Reflections Holiday Park, and noted that while that option was considered when determining appropriate early works, it was decided that it did not need to proceed as a matter of priority. The committee heard that that decision will be deferred until the business case has progressed, and the impact of any inundation has been determined.<sup>136</sup>

**3.62** WaterNSW was progressing 'no-regrets'<sup>137</sup> work scheduled to be undertaken before the end of 2020, which was described by Ms Levy as work that will be of benefit whether the raising of dam wall goes ahead or not.

<sup>131</sup> Evidence, Ms Michelle Dumazel, Executive Director, Biodiversity & Conservation, Environment, Energy and Science Group, Department of Planning Industry and Environment, 4 December 2020, pp 55-57.

<sup>132</sup> Evidence, Ms Dumazel, 4 December 2020, p 58.

<sup>133</sup> Evidence, Ms Dumazel, 4 December 2020, p 57.

<sup>134</sup> Direction to the Board of WaterNSW (responsibility for progressing the Wyangala, Dungowan and Mole River Dam Projects) 2020, under the *State Owned Corporations Act 1989* (NSW), 13 May 2020.

<sup>135</sup> Evidence, Ms Levy, 29 October 2020, p 13.

<sup>136</sup> Evidence, Ms Levy, 29 October 2020, p 6.

<sup>137</sup> Evidence, Ms Levy, 29 October 2020, p 6.

*Community consultation*

- 3.63** The committee heard conflicting evidence regarding the quality of the community consultation being undertaken regarding this project.
- 3.64** For instance, Mr George, WaterNSW, told the committee that there has been 'direct consultation with individuals and organisations'.<sup>138</sup> Mr George provided further detail about this process:
- ...for the Wyangala project we have held 10 community events so far. To date we have 11 registered Aboriginal parties, who we have been engaging with intensively and continue to engage with. We have held 59 individual stakeholder briefings and 83 face-to-face landholder meetings. We have had 269 local businesses register their interest in participating in the project and 11 of those have been engaged directly so far.<sup>139</sup>
- 3.65** Mr George also spoke about future consultation, and noted that community engagement will 'ramp up'<sup>140</sup> when the EIS and other studies are released.
- 3.66** In addition to outlining what community consultation has been undertaken, Mr George noted that a qualitative sentiment survey of over 800 people found that 78 per cent of respondents indicated support for the project.<sup>141</sup>
- 3.67** Mr Tom Green, Lachlan Valley Water outlined how he had been consulted by WaterNSW during this process, telling the committee that:
- In relation to WaterNSW, since 2014 when investigations started in phase one—initially looking at the Belubula catchment for a dam—we participated in consultation around that. That progressed in 2016 to phase two. There was a customer reference group and a community reference group set up, and it further investigated potential dam sites....Yes, there has been consultation through that and also through the WaterNSW customer advisory group for the Lachlan.<sup>142</sup>
- 3.68** Councillor Bill West described his experience of consultations with DPIE as 'quite good', telling the committee that individual councils in the Lachlan and Joint Organisations of Councils have had a 'good opportunity to have those conversations'.<sup>143</sup>
- 3.69** However, this evidence was in contrast to that received from some affected landholders and community groups in the area. Ms Maryanne Slattery described a 'dire lack of consultation', and stated that the results in the WaterNSW sentiment survey were 'not in line with what I am hearing on the ground'.<sup>144</sup>

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<sup>138</sup> Evidence, Mr George, 29 October 2020, p 9.

<sup>139</sup> Evidence, Mr George, 29 October 2020, p 9.

<sup>140</sup> Evidence, Mr George, 29 October 2020, p 10.

<sup>141</sup> Evidence, Mr George, 29 October 2020, p 3.

<sup>142</sup> Evidence, Mr Tom Green, Chairman, Lachlan Valley Water Inc., 2 November 2020, p 2.

<sup>143</sup> Evidence, Cr Bill West, Chair, Central NSW Joint Organisation of Councils, Regional Prosperity Portfolio, Mayor of Cowra, 27 November 2020, p 16.

<sup>144</sup> Evidence, Ms Slattery, 29 October 2020, p 20.

- 3.70** Mr Hugh McLean, Secretary of the Lachlan Floodplains & Wetlands Group, echoed this, telling the committee that 'there has been no community consultation in this region at all'.<sup>145</sup> Mr McLean strongly rejected the results of the WaterNSW sentiment survey, describing it as a 'disgrace and a joke'.<sup>146</sup>
- 3.71** Mr John Webster and Mrs Kerri Webster, owners of Webster Pastoral Co., described a lack of consultation with affected landowners. Mr Webster noted that a significant part of their productive land would be subject to compulsory acquisition should the proposal go ahead. When discussing any feedback given by affected landowners, Mrs Webster said that 'despite the fact that our family will be directly and severely impacted by the project, at no point have we been asked to participate in a survey'.<sup>147</sup>
- 3.72** When asked if there had been active efforts to reach out to affected landholders and inform them of options to give feedback, Mrs Webster stated that:
- It is only if we just happened to see something on social media, through word of mouth or neighbours. We are certainly not alone in this position. Other landowners in our area who are in the same situation and have experienced similar consultation—or lack thereof, I should say.<sup>148</sup>
- 3.73** The NSW Farmers' Association noted that while they understood the need to address water security, their members had concerns about the lack of engagement with local communities.<sup>149</sup> From a local perspective, Dr Robyn Alders, Chair of the Upper Lachlan Branch of the NSW Farmers' Association, reiterated this point, and implored that the government:
- ...engage with us—the local communities including farmers—who have intimate knowledge of the area where we live and work.<sup>150</sup>
- First Nations people consultation***
- 3.74** With regard to consultation with local Aboriginal people and representative groups, the committee heard evidence that this had been similarly lacking. Mr Rene Woods, Chair and Nari Delegate, Murray Lower Darling Rivers Indigenous Nations, identified a 'lack of respect for communication and consultation'.<sup>151</sup> Mr Woods stressed the need for First Nations people to be leading the discussions regarding the significance of Aboriginal cultural sites as they relate to the proposed project, and noted that to date, this had not been occurring.<sup>152</sup>
- 3.75** The Buyaan Trust, Wiradjuri Language and Culture, told the committee that there had not been adequate consultation with local, impacted Wiradjuri people. The Trust stated:

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<sup>145</sup> Evidence, Mr McLean, 29 October 2020, p 40.

<sup>146</sup> Evidence, Mr McLean, 29 October 2020, p 39.

<sup>147</sup> Evidence, Mrs Kerri Webster, Owner, Webster Pastoral Co., 4 December 2020, p 26.

<sup>148</sup> Evidence, Mrs Webster, 4 December 2020, p 30.

<sup>149</sup> Submission 142, NSW Farmers' Association, p 2.

<sup>150</sup> Evidence, Dr Robyn Alders, Chair of the Upper Lachlan Branch of the NSW Farmers' Association, 2 November 2020, p 21.

<sup>151</sup> Evidence, Mr Rene Woods, Chair and Nari Nari Delegate, Murray Lower Darling Rivers Indigenous Nations, 29 October 2020, p 26.

<sup>152</sup> Evidence, Mr Rene Woods, 29 October 2020, p 33.

We are aware that not all clans along the Lachlan river have been consulted and that other clans who will be directly and indirectly impacted have not been consulted at all.<sup>153</sup>

- 3.76** This was supported by the Murray Lower Darling Rivers Indigenous Nations (MLDRIN), who expressed a strong concern with the lack of consultation to date:

MLDRIN is troubled by the quality and quantity of communication to and consultation with First Nations regarding the proposed projects to date. It reflects a grossly inadequate and erroneous understanding by the proponent/s about First Nations people, their legal rights, and their obligations and interests in management of Country.<sup>154</sup>

- 3.77** Mr Ray Woods, Wiradjuri Council of Elders and Buyaan Trust, also described a lack of appropriate consultation with traditional landowners, telling the committee that:

...these people who have been consulted and given some of these approvals to this process and program of extension of this dam are not even from Wiradjuri country and are speaking on our behalf. I find that very disrespectful. I find it lazy by the government, not going out and consulting the right people. I do not know if that is deliberately lazy or just lazy.<sup>155</sup>

- 3.78** Further, Mr Woods told the committee that the method of consultation being used by WaterNSW and the NSW Government was not an effective way of engaging with the local Aboriginal community. Mr Woods said that many people were not aware of various information and surveys available on the internet, and there is a need to utilise local papers to ensure information is adequately distributed within communities.<sup>156</sup>

#### **Committee comment**

- 3.79** The committee is concerned by evidence from some witnesses that they believe community consultation on the Wyangala Dam wall raising project has been inadequate. The committee believes that community consultation is important and should be ongoing, given the significant impacts the project will have.
- 3.80** However, the committee notes that despite the challenges caused by the COVID-19 pandemic, some consultation for raising the Wyangala Dam wall did occur.
- 3.81** The evidence from Mr and Mrs Webster is compelling, and the committee expresses its sympathy with the distress the Webster's have experienced as a result of the uncertainty surrounding the future of their property and their business. The committee is disturbed to hear that they had not been sufficiently consulted and how little information they had, given how directly impacted they would be by the proposed project.
- 3.82** The committee is concerned to hear about the inadequacy of consultation with First Nations people and communities. The concerns expressed about a failure to consult with the appropriate First Nations people in effective ways is troubling to hear, given the general need

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<sup>153</sup> Submission 121, Buyaan Trust, p 1.

<sup>154</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 9.

<sup>155</sup> Evidence, Mr Ray Woods, Wiradjuri Council of Elders and Buyaan Trust, 29 October 2020, p 34,

<sup>156</sup> Evidence, Mr Ray Woods, 29 October 2020, p 39.

to consult with Traditional Owners of the land, in addition to the particular cultural significance of sites in the affected region.

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#### **Finding 4**

That WaterNSW has not sufficiently consulted local Aboriginal communities in the Lachlan region regarding the proposed raising of the Wyangala Dam wall.

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#### **Recommendation 2**

That the NSW Government should continue to improve the ways it provides information to individuals and communities regarding the Wyangala Dam wall raising project, especially as new reports become available.

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## **Arguments for raising the Wyangala Dam wall**

### **Improving water security in the Lachlan region**

- 3.83** The primary rationale for proceeding with the raising of the Wyangala Dam wall project was to address severe water security issues in the Lachlan region. This is consistent with the NSW Government's reasoning for the suite of major water infrastructure projects. The government stressed the significance of long-term water supply security in the regions:

We need to invest in long-term water security to build the resilience of our regional communities. This will assist with improving the surety of the environmental flows necessary to maintain the health of NSW's regional water catchments, as well as provide productivity benefits for regional economies.<sup>157</sup>

- 3.84** The need to address water security issues in the Lachlan Region was also referred to as the key reason to progress the project in the Minister's Direction. Specifically, the Direction stated:

The current drought situation in the Lachlan Region is now officially the most severe on record. The Lachlan and Belubula Rivers have experienced stage 3 severe drought and there have been unprecedented water shortages in many towns in the region. Increasing the capacity of the Wyangala Dam by raising the dam wall will ensure the long-term water security for towns including Cowra, Forbes and Parkes and provide flood mitigation for the Lachlan Region.<sup>158</sup>

- 3.85** WaterNSW referred to the impact of the Millennium drought and the current drought in the Lachlan, noting that the region has some of the poorest water security and reliability in NSW.

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<sup>157</sup> Submission 152, NSW Government, p 1.

<sup>158</sup> Direction to the Board of WaterNSW (responsibility for progressing the Wyangala, Dungowan and Mole River Dam Projects) 2020, under the *State Owned Corporations Act 1989* (NSW), 13 May 2020.

WaterNSW stated that the 'raised dam wall will contribute to a steep improvement in water security'.<sup>159</sup>

**3.86** The Draft Lachlan Regional Water Strategy, released in September 2020, explained that raising the dam wall would 'provide an additional 650 GL of storage capacity in the dam, improving water security and reliability in the Lachlan'.<sup>160</sup> This additional storage capacity would equate to about '21 gigalitres improvement on a long-term average basis for general security categories'.<sup>161</sup>

**3.87** Mr Jim Bentley stressed that the project was not about providing more water, but rather 'more reliability of water', which will be achieved by storing more water in periods of high rainfall than would have been otherwise possible.<sup>162</sup> Mr Bentley noted that the need to guarantee water security through additional storage mechanisms had become evident following the climate change modelling undertaken as part of the regional water strategies.<sup>163</sup> He explained the link between this work and the need for additional water storage to address water security concerns:

If we are to have periods where there is increased rainfall and periods where there is less rainfall, it is not a ridiculous assertion from that to say that being able to store more water when it rains so you have more security for when it does not, has some benefit.<sup>164</sup>

**3.88** Lachlan Valley Water Inc. also outlined the water security issues in the region, and observed that the high variability of inflows into Wyangala Dam was reflected in the allocations to water license holders. They noted that between 2002 and 2010, all Lachlan license holders, including local water utilities, stock and domestic, high security and general security, were subject to restrictions, with significantly fewer allocations to licenses.<sup>165</sup>

**3.89** Lachlan Valley Water Inc. argued that raising the dam wall would be an effective way of improving water reliability in the region. They provided the committee with an example of the variation in inflows from 2016/17 to 2018/2019. They noted that 'in 2016/17 the inflows to Wyangala Dam were 1,495,000 ML, but in 2017/18 the inflows were only 165,000 ML, and in 2018/19 fell even further to only 88,000 ML'.<sup>166</sup>

**3.90** The Central NSW Joint Organisation of Councils argued that water security is having an impact on economic growth in the region:

Water security has historically been a challenge in the Lachlan Valley and is limiting economic growth for the region. The valley has been subject to severe town water restrictions with long periods of little or no general security, agricultural water availability and restricted high security water.<sup>167</sup>

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<sup>159</sup> Submission 50, WaterNSW, p 18.

<sup>160</sup> NSW Department of Planning Industry and Environment, *Draft Regional Water Strategy, Lachlan: Strategy*, September 2020, p 30, [https://www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0019/324514/draft-rws-lachlan.pdf](https://www.industry.nsw.gov.au/__data/assets/pdf_file/0019/324514/draft-rws-lachlan.pdf).

<sup>161</sup> Evidence, Mr George, 4 December 2020, p 47.

<sup>162</sup> Evidence, Mr Bentley, 4 December 2020, p 47.

<sup>163</sup> Evidence, Mr Bentley, 29 October 2020, p 8.

<sup>164</sup> Evidence, Mr Bentley, 29 October 2020, p 8.

<sup>165</sup> Submission 98, Lachlan Valley Water Inc., p 5.

<sup>166</sup> Submission 98, Lachlan Valley Water Inc., p 8.

<sup>167</sup> Submission 167, Central NSW Joint Organisation, p 14.

- 3.91** Parkes Shire Council outlined the various positive economic impacts that could arise from increased water security as a result of raising the Wyangala Dam wall, and argued that increased water security could lead to more investor confidence, and allow significant growth in 'high-value agriculture'.<sup>168</sup>

### **Flood mitigation**

- 3.92** In addition to addressing issues regarding water security, the committee also heard that raising the dam wall would assist with flood mitigation in the Lachlan region. This was specifically referred to in the Minister's Direction when outlining the reasons for the project.
- 3.93** This was reiterated by the Central NSW Joint Organisation of Councils, which referred to the 2014 State Infrastructure Strategy which identified the Lachlan Valley as having low flood management capability.<sup>169</sup> Further, it noted that the 2018 State Infrastructure Strategy identified the Lachlan as being a priority for both drought security and flood management.<sup>170</sup>
- 3.94** When describing why flood management is significant in the Lachlan Valley, the Central NSW Joint Organisation referred to an incident where the Newell Highway was closed for 42 days due to a flood event in 2016. Their submission referred to the significant economic loss that resulted from the highway closure, estimating there was a loss of two million hours of work, and some loss of employment or underemployment of 5194 workers.<sup>171</sup>
- 3.95** Lachlan Valley Water Inc. provided additional detail on the breadth of the impact, referring to the NSW Government's Regional Recovery Coordinator's Report on the flooding. They stated that 1,316,316 hectares of crops were damaged as a result of the flooding, with a total value of \$740 million. Further, they identified damage to 285,408 hectares of pasture, with a total value of \$42.8 million, and damage to 2918 kilometres of fencing with a total value of \$29 million.<sup>172</sup>
- 3.96** However, the committee also heard from stakeholders who disputed the argument that the proposed project was necessary for the purposes of flood mitigation. For instance, Professor Jamie Pittock disputed that the 2016 flood event was an adequate reason to support the proposed project:

It had been reported that one of the purported flood damage problems was the inundation of the Newell Highway in 2016. Yet when I go to Transport for NSW's website and look at their 2015 Newell Highway upgrade program, while it does talk about flood mitigation measures it does not do so for the Lachlan Valley.<sup>173</sup>

- 3.97** Professor Pittock also noted that work was already being undertaken by Transport for NSW to manage flood impacts on the Newell Highway, referring to a project that will raise the highway on an embankment.<sup>174</sup> Professor Pittock concluded:

<sup>168</sup> Submission 127, Parkes Shire Council, p 9.

<sup>169</sup> Submission 167, Central NSW Joint Organisation, p 9.

<sup>170</sup> Submission 167, Central NSW Joint Organisation, p 9.

<sup>171</sup> Submission 167, Central NSW Joint Organisation, p 13.

<sup>172</sup> Answers to questions on notice, Lachlan Valley Water Inc., 1 December 2020, p 1.

<sup>173</sup> Evidence, Professor Pittock, 2 November 2020, p 4.

<sup>174</sup> Evidence, Professor Pittock, 2 November 2020, p 4.

So really I cannot find any evidence from any New South Wales Government document that provides a case that flooding in the Lachlan Valley is a problem that justifies a \$650 million dam.<sup>175</sup>

## Arguments against raising the Wyangala Dam wall

**3.98** This section outlines the arguments why the raising of the Wyangala Dam wall should not proceed. This includes the high cost of the project, the limited additional water that will be yielded, and that the dam will not be filled regularly enough to make the project worthwhile. This section will also address the concerns about the impact of the project on First Nations people, and then explore evidence regarding the extensive ecological impact of the proposed project.

### Estimated project costs and funding arrangements

**3.99** As noted earlier in this chapter, the initial estimated cost of this project at the time the commitment was made was approximately \$650 million. When discussing this figure, the Minister noted that this figure was based off work done in 2017, and that a final estimate would be established once the business case has been finalised in September 2021.<sup>176</sup>

**3.100** However, the committee heard evidence that although NSW Government representatives said they were unable to provide an updated estimate of the cost of the project prior to the business case being finalised, it is likely that it will significantly exceed the initial approximation of \$650 million.

**3.101** Media reporting in *The Guardian* in November 2020 stated that the cost of the project had 'blown out from \$650m to nearly \$1.5bn'. According to the article, this was in large part due to the significant cost of environmental offsets required for the project.<sup>177</sup>

**3.102** Further, the *Sydney Morning Herald* reported in January 2021 that the Department of Planning, Industry and Environment estimated the costs to complete the project was now estimated to be as high as \$2.1 billion, or 'triple the original estimate'.<sup>178</sup> In documents tabled during Budget Estimates for the Water, Property and Housing Portfolio on 1 March 2021, it was noted that funding has only been secured for \$650 million of the project cost, with the Commonwealth

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<sup>175</sup> Evidence, Professor Pittock, 2 November 2020, p 4.

<sup>176</sup> Evidence, Minister for Water, Property and Housing, 4 December 2020, p 38.

<sup>177</sup> Anne Davies, 'Cost blowout on Wyangala dam project doubles public bill to almost \$1.5 bn before NSW scheme approved', *The Guardian*, 3 November 2020, <https://www.theguardian.com/environment/2020/nov/03/cost-blowout-on-wyangala-dam-project-doubles-public-bill-to-almost-15bn-before-scheme-approved>.

<sup>178</sup> Peter Hannam, 'Expensive brain fart': Cost of dam project may triple, documents show', *Sydney Morning Herald*, January 21 2021, <https://www.smh.com.au/environment/sustainability/expensive-brain-fart-cost-of-dam-project-may-triple-documents-show-20210120-p56vk0.html>.

having committed \$325 million. The documents also noted a 'need to identify additional funding'.<sup>179</sup>

- 3.103** The Sydney Morning Herald additionally reported in February 2021 that a leaked Department of Planning, Industry and Environment brief to the incoming Government in 2019 would do little to improve water security and require 80 per cent of its costs to be subsidised by governments because of its small net benefits and large cost. The brief also stated that the project was chosen despite multiple less costly alternatives including changing market rules and river regulation.<sup>180</sup>
- 3.104** Water consultancy firm Slattery and Johnson outlined a number of issues which will have the effect of increasing the cost of raising the dam wall. This included the possible need to source material for the project off site. During the construction of the current dam, embankment rockfill material was obtained from quarries close to the embankment. To reopen the on-site quarries would be the cheapest option to source material, but would mean the reservoir water level of Wyangala would have to be reduced by 45% of its total storage capacity in order to use material from the on-site quarry.<sup>181</sup> This would have an impact on water supply for users for several years.
- 3.105** Slattery & Johnson noted that the alternative to this option, which is sourcing material from elsewhere, would have considerable financial impact on the project, in addition to other impacts like noise, traffic and possible dust on impacted communities.<sup>182</sup>

### **Value and effectiveness of raising the dam wall**

- 3.106** The committee heard evidence regarding the cost of the project compared to the estimated benefit of an additional 21 gigalitres of water that will be delivered per year for general security license holders.
- 3.107** Professor Pittock calculated the costs per additional gigalitre of water made available by the project. He concluded that based on the initial capital cost to supply an additional 21.05 GL/yr of general security water, the additional water yielded as a result of the project would cost \$30,879 / ML. In contrast, he noted that the maximum entitlement price for Lachlan general security water in June 2019 was \$1,100 / ML.<sup>183</sup>

<sup>179</sup> Tabled document, Ms Cate Faehrmann MLC, *Excerpts of document entitled 'Capital delivery program summary – FINAL DRAFT' and excerpt of index showing where document returned to an order of the House*, 1 March 2021.

<sup>180</sup> Peter Hannam, "High cost, small benefit': Document leak stokes Wyangala Dam doubts', *Sydney Morning Herald*, February 21 2021, <https://www.smh.com.au/environment/conservation/high-cost-small-benefits-document-leak-stokes-wyangala-dam-doubts-20210219-p5741e.html>.

<sup>181</sup> Submission 147a, Slattery & Johnson, p 7.

<sup>182</sup> Submission 147a, Slattery & Johnson, pp 10-11.

<sup>183</sup> Submission 115, Professor Pittock, p 3.

**3.108** A similar point was made by Slattery and Johnson, who noted that the current market prices for water in the Lachlan valley are approximately one-thirtieth of that of the water being made available through the expansion.<sup>184</sup>

**3.109** Ms Slattery also commented on the cost of the project and compared this to the amount of water yielded, and concluded that the project does not make any sense:

A 650 gegalitre proposed extra capacity yielding a 21 gegalitre amount of extra water based on a long-term average—before you get to the cost, that is just an extraordinarily poor rate of return. At the moment the proposed cost is \$650 million; that is more than \$30 million a gegalitre....It just does not stack up—the water yield versus capacity. And then, when you put a cost on that it just does not stack up at all.<sup>185</sup>

**3.110** Ms Slattery also argued that the water yielded from the additional storage capacity created by the project was not significant:

The point is though that, even by the Government's own modelling, you are only going to get a tiny 21 gegalitre yield out of a 650 gegalitre capacity. The model, for example, has a margin of error of 54 gegalitres. The increase in the dam capacity is less than half of the total error in the model.<sup>186</sup>

**3.111** Recent media reports regarding leaked NSW Cabinet documents noted that the Department of Industry had expressed concerns about the project's capacity to deliver substantial water security benefits. The Sydney Morning Herald reported that a document dated March 2019 stated that 'expanding on the dam's capacity is not expected to translate to higher average water allocations or significantly increased drought resilience'.<sup>187</sup>

### **Infrequency of the filling of Wyangala Dam**

**3.112** In addition to concerns regarding the cost of the project compared to the additional water yielded, some stakeholders argued that Wyangala Dam is not filled regularly enough to justify a project to raise the wall and create additional storage. For example, Professor Pittock told the committee that:

It is doubtful that the higher dam will regularly fill. Wyangala currently has a capacity of 1,220 GL and the proposal is to increase this by 650 GL or 53% ...In the past 20 years the dam has only been full and spilled twice.<sup>188</sup>

**3.113** Ms Slattery reiterated this position, telling the committee that the 'massive flood events' in the Lachlan are a one or two in 10 year event. Further, Ms Slattery went on to reason that based on the project providing an additional 21 gegalitres of water a year, and the current frequency of

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<sup>184</sup> Submission 147a, Slattery & Johnson, p 10.

<sup>185</sup> Evidence, Ms Slattery, 29 October, p 17.

<sup>186</sup> Evidence, Ms Slattery, 29 October, p 20.

<sup>187</sup> Peter Hannam, "High cost, small benefit': Document leak stokes Wyangala Dam doubts', *Sydney Morning Herald*, February 21 2021, <https://www.smh.com.au/environment/conservation/high-cost-small-benefits-document-leak-stokes-wyangala-dam-doubts-20210219-p5741e.html>.

<sup>188</sup> Submission 115, Professor Pittock, p 7.

large flood events, this additional yield would only be delivered by a one in 30 year type of event.<sup>189</sup>

- 3.114** Mr Ian Webster, NSW Farmers' Association, Upper Lachlan Branch, made a similar point, telling the committee that the dam has only filled twice in the last 10 years, and did not fill at all in the 10 years before that, due to the Millennium drought. In summarising, he said that:

So one cannot help but wonder, against the backdrop of things like warming temperatures and perhaps climate change effects and a raft of other things, whether the massive construction and cost will achieve the desired result from the economic and production point of view.<sup>190</sup>

- 3.115** Professor Richard Kingsford explained that given the impacts of climate change and decreased rainfall, it is likely that the dam will fill with even less regularity. Professor Kingsford summarised how this may impact the proposed project:

...climate change is altering rainfall and runoff patterns...This means that even current storages will not fill as often as they used to... Enlarging that storage and increasing the capacity does not translate to more water and improved water security. The number and size of the high flows may decrease in frequency and size with increased drying resulting from climate change. Doubling the water storage does not result in a doubling of the amount of water.<sup>191</sup>

- 3.116** This issue was also addressed in the previously referred to reports on leaked Cabinet documents in the Sydney Morning Herald. They reported that the March 2019 document stated that 'Wyangala 'historically rarely filled to capacity' and that increased supply 'may not provide large enough to support significant growth in the area'.<sup>192</sup>

- 3.117** The impacts of climate change on inflows into the Wyangala Dam were also noted in the Draft Lachlan Regional Water Strategy, which stated:

New data suggests that under long-term climate change projections, these inflows could be significantly lower than what has occurred in both the observed, and long-term paleoclimate records.<sup>193</sup>

- 3.118** The Strategy concluded that 'storage levels in Wyangala Dam could be consistently lower based on future climate predictions'.<sup>194</sup>

<sup>189</sup> Evidence, Ms Slattery, 29 October, p 18.

<sup>190</sup> Evidence, Mr Ian Webster, Member, Upper Lachlan Branch of the NSW Farmers Association, 2 November 2020, p 26.

<sup>191</sup> Submission 99, Professor Kingsford, p 13.

<sup>192</sup> Peter Hannam, "High cost, small benefit': Document leak stokes Wyangala Dam doubts', *Sydney Morning Herald*, February 21 2021, <https://www.smh.com.au/environment/conservation/high-cost-small-benefits-document-leak-stokes-wyangala-dam-doubts-20210219-p5741e.html>.

<sup>193</sup> NSW Department of Planning Industry and Environment, *Draft Regional Water Strategy, Lachlan: Strategy*, September 2020, p 46, [https://www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0019/324514/draft-rws-lachlan.pdf](https://www.industry.nsw.gov.au/__data/assets/pdf_file/0019/324514/draft-rws-lachlan.pdf).

<sup>194</sup> NSW Department of Planning Industry and Environment, *Draft Regional Water Strategy, Lachlan: Strategy*, September 2020, p 46, [https://www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0019/324514/draft-rws-lachlan.pdf](https://www.industry.nsw.gov.au/__data/assets/pdf_file/0019/324514/draft-rws-lachlan.pdf).

**Committee comment**

- 3.119** The committee is concerned about the potentially high cost of the project for the additional annual water yield of 21 gigalitres from an additional 650 gigalitres of storage.
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**Finding 5**

That the Government is pursuing the raising of the Wyangala Dam wall as a solution to water insecurity in the Lachlan Valley, however, is yet to demonstrate the cost effectiveness and water yield benefits of the project.

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**Finding 6**

That the annual yield available as a result of increasing Wyangala Dam's capacity by 50 per cent by raising its wall provides only a 21 gigalitre increase in water security.

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**Impacts on Sustainable Diversion Limits**

- 3.120** The committee heard evidence regarding how any additional water being made available through the proposed project will interact with existing Sustainable Diversion Limits established under the Murray-Darling Basin Plan.
- 3.121** Sustainable Diversion Limits (SDL) 'limit the amount of consumptive water that can be sustainably taken from the surface and groundwater resources of the Basin for use by towns and communities, irrigators and farmers'.<sup>195</sup> This framework seeks to 'strike a balance between access to water for Basin communities while also providing water for the environment for the benefit of all Australians'.<sup>196</sup>
- 3.122** When asked how the NSW Government planned to stay within the SDL cap, given the additional water that will be captured as a result of the project, Mr Jim Bentley, DPIE, told the committee that the cap will not be exceeded. He went on to explain that no additional water will be taken, but rather, more water will be stored at times when there is more rainfall to ensure there is water available during times of lower rainfall.<sup>197</sup>
- 3.123** The Minister reiterated this, who when referring to water allocations to general security license holders stated: 'They are not getting more allocation...They are just getting more reliability of when they get that'.<sup>198</sup>
- 3.124** However, Ms Maryanne Slattery told the committee that work would have to be done to ensure compliance with the SDL and the MDBA plan as a result of the dam expansion. She explained that the water that will be captured by the dam expansion would otherwise be flooding the lower
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<sup>195</sup> Submission 125, Murray-Darling Basin Authority, p 3.

<sup>196</sup> Submission 125, Murray-Darling Basin Authority, p 3.

<sup>197</sup> Evidence, Mr Bentley, 4 December 2020, p 47.

<sup>198</sup> Evidence, Minister for Water, Property and Housing, 4 December 2020, p 37.

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Lachlan wetlands, and that these flood waters have informed calculations regarding environmental levels of take, and the overall SDL. Ms Slattery argued that if the dam expansion occurs, the project proponent will have to purchase offsets to compensate for the water that is now not environmental water:

If you capture this extra water in the dam, you have to compensate with an equivalent amount of water that you can put out onto the flood plain. MDBA itself is basically saying that you cannot expand the dam and be consistent with the basin plan.<sup>199</sup>

### **Committee comment**

- 3.125** The committee notes evidence provided by WaterNSW and the Department of Planning, Industry and Environment regarding how the proposed project is consistent with the Murray Darling Basin Plan and the Sustainable Diversion Limits.
- 3.126** The committee has concerns about how any additional water stored as a result of the project would be classified under the plan, and if this water would be required to be offset. This is an important distinction both to ensure the legality of the project, and to understand any changes to water allocation and availability as a result of the project.

### **Ecological impacts of the proposed project**

- 3.127** The committee heard that there will be significant ecological impacts as a result of raising the Wyangala Dam wall. Specifically, stakeholders explained the ramifications that will occur as a consequence of capturing and diverting floodwaters that would otherwise travel downstream in the Lachlan Valley.

#### **Impact on wetlands**

- 3.128** Professor Jamie Pittock explained how capturing water in dams has a downstream impact in the Lachlan region. He noted that whilst dams in the region are designed to catch and hold small or medium sized floods, and to store that water for later release, those floods are beneficial for both ecological and human uses:

... They would enable, for example, the retention of wetlands...when they spill over the riverbanks onto the flood plain. They also enable things like recharge of groundwater and growth of pastures. Every time a dam captures a flood like that, there is a trade-off: It collects water for irrigation, but the pastoralists and others miss out.<sup>200</sup>

- 3.129** Professor Pittock explained that the existing Wyangala Dam has impacted wetlands, and how the proposed project may amplify these impacts:

There has been some shrinking already of the extent of wetlands in the valley because of Wyangala Dam. The proposed increase would greatly accelerate that. The reason is that raising the dam and increasing its capacity by 53 per cent would capture higher flood peaks. Those higher flood peaks fill up the river channel, spill over the riverbanks

<sup>199</sup> Evidence, Ms Slattery, 29 October, p 20.

<sup>200</sup> Evidence, Professor Pittock, 2 November 2020, p 2.

and sustain around six nationally significant wetlands downriver, as well as the pastoral communities, as well as the native fish that are the backbone of some of the tourism, as well as pastoral communities and Indigenous communities.<sup>201</sup>

**3.130** There are 470,000 hectares of flood plain wetlands downstream from Wyangala Dam, which are sustained largely due to 'unmanaged spills when the current dam fills up and spills'.<sup>202</sup> Professor Pittock stated that there were 'significant wetlands' in the valley that depend on inundation from the Lachlan, including the Booligal Wetlands and the Great Cumbung Swamp, which is the largest reed swamp and largest red gum forest in Australia.<sup>203</sup>

**3.131** The importance of the wetlands on certain bird and fish life was made clear to the committee, including the various species that are reliant upon the wetlands being maintained. Professor Richard Kingsford explained that it is the resources on the flood plains that will help maintain the river in between flood events:

Those flood plains are really where you get the resources that will carry that river over for the next five to 10 years. You get this big boom in the native fish breeding out on those flood plains, and waterbirds, and a whole range of different organisms, and the trees obviously start growing. That keeps things going as that river shrinks back during a dry period.<sup>204</sup>

**3.132** The committee heard that the floodplains are critical for waterbirds, or shorebirds, who migrate from North Asia to Australia. Professor Pittock explained to the committee that the waterbirds depend on the wetlands to provide them with sufficient energy and body fat to fly back to North Asia. Professor Pittock argued that if the project proceeds, and the floodplains are not inundated, there is a risk that more birds would die of starvation and dehydration, leading to progressive bird loss.<sup>205</sup> Professor Pittock noted that Australia has signed various bilateral treaties to protect these migratory shorebirds.<sup>206</sup>

**3.133** The committee also heard that limiting the floodplain water reaching the Booligal Creek system will significantly impact bird-breeding events, specifically with regard to the straw-necked Ibis. It was noted that the straw-necked Ibis is critical for pest control in the region. Professor Richard Kingsford explained the impact that capturing this flood water will have:

...further reduce breeding extent and success of straw-necked ibis on the Booligal Creek system which can support over 100,000 breeding pairs of birds. This means that these birds that reduce numbers of locusts, a pest reduction service they do for nothing will no longer have the same capacity.<sup>207</sup>

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<sup>201</sup> Evidence, Professor Pittock, 2 November 2020, p 2.

<sup>202</sup> Evidence, Professor Pittock, 2 November 2020, p 3.

<sup>203</sup> Evidence, Professor Pittock, 2 November 2020, pp 2-3.

<sup>204</sup> Evidence, Professor Kingsford, 27 November 2020, p 7.

<sup>205</sup> Evidence, Professor Pittock, 2 November 2020, p 3.

<sup>206</sup> Evidence, Professor Pittock, 2 November 2020, p 3.

<sup>207</sup> Submission 99, Professor Kingsford, p 9.

### Impact on birds

- 3.134** Professor Kingsford went on to note that there could be further ecological impacts on terrestrial biodiversity, as woodlands birds, such as honeyeaters, also depend on the productivity of floods as do small terrestrial mammals.<sup>208</sup>
- 3.135** Ms Elisabeth Dark, BirdLife NSW, told the committee about the impact on endangered woodland birds as a result of the proposed project. Ms Dark stated that only 400 regent honeyeaters survive in the wild and 2,000 swift parrots, and described them as being on 'race to extinction unless we do better than we have been doing'.<sup>209</sup>
- 3.136** Ms Dark explained that raising the dam wall would 'destroy' 1,319 hectares of box gum woodland, significantly impacting the possible habitats available for the regent honeyeaters. She also noted that the project would lead to a loss in eucalypt and mistletoe flowers, further limiting the available food sources for the honeyeaters.<sup>210</sup>
- 3.137** The impact on bird-breeding as a result of woodland losses was also explained to the committee. Ms Dark noted that birds need hollows in large trees to breed, with this often occurring in eucalypts in the impacted area. These trees are slow growing, being estimated that it may take a minimum of 100 years to be large enough to develop an adequate hollow. Ms Dark argued that due to how long it takes for a hollow to develop, every time a tree is lost as part of this project, a nesting hollow is 'gone and irreplaceable'.<sup>211</sup>
- 3.138** In addition to the impacts on bird and fish life, the committee heard that by limiting natural flood events, the general health of the river will be at risk. Mr Keith Hyde, Lachlandcare Inc., explained that without flood events, there will be increased sedimentation within the river, which negatively impacts river health. Mr Doyle said that:

Flooding is a natural phenomenon on those plains. It does not happen very often, but it helps to scour out the river and take the sedimentation out across the top of the river levees and out onto the flood plain. So we see it as a fairly natural phenomenon that happens on my farm quite regularly. It is part of the natural process within the whole of the Lachlan Valley.<sup>212</sup>

### Committee comment

- 3.139** The committee is concerned to hear about the potential ecologically damaging impacts of the proposed raising of the Wyangala Dam wall.
- 3.140** The evidence given by scientists that outlined the unique ecology of the Lachlan floodplains and wetlands was particularly compelling, and the committee agrees and supports the need to protect and respect the valuable ecological character of the Lachlan.

<sup>208</sup> Submission 99, Professor Kingsford, p 13.

<sup>209</sup> Evidence, Ms Elisabeth Dark, Convenor, Conservation Committee, Birdlife Southern NSW, 2 November 2020, p 14.

<sup>210</sup> Evidence, Ms Dark, 2 November 2020, p 16.

<sup>211</sup> Evidence, Ms Dark, 2 November 2020, p 16.

<sup>212</sup> Evidence, Mr Keith Hyde, Deputy Chair, Lachlandcare Inc., 2 November 2020, p 15.

- 3.141** The committee is troubled to hear about the possible impact on bird-breeding events, and the many threatened and native species that would be negatively affected by the proposed project.
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### **Finding 7**

That the proposed raising of Wyangala Dam wall may have an impact on the ecology of the Lachlan River, including the floodplains and wetlands, and various fish species and migratory bird species which Australia is obligated to protect, which will be known once the environmental impact statement is finalised.

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## **Impact on Traditional Custodians of the land**

- 3.142** Earlier evidence was presented that concluded that consultation with Aboriginal people was inadequate. This section presents evidence that the raising of the Wyangala Dam wall project will have direct impacts on First Nations people.
- 3.143** The committee heard evidence that expressed significant concerns about the impact of the proposed project on Aboriginal people and cultural heritage sites.
- 3.144** The Buyaan Trust told the committee that various Wiradjuri clan groups will be directly and indirectly affected by the project.<sup>213</sup>
- 3.145** The committee heard concerns about the ecological impacts of the project from Traditional Owners of the Wiradjuri Nation, who have 'cultural connections to and cultural obligations over areas of Country that are within the direct construction and inundation footprint of the proposed new dam projects'.<sup>214</sup>
- 3.146** The Buyaan Trust described the important relationship between the natural environment and the Wiradjuri people, emphasising the distress that has occurred as a result of the 'mismanagement and abuse of the natural environment'. Further, they told the committee that enlarging the dam will 'further harm country and continue to create the problems that we are experiencing'.<sup>215</sup>
- 3.147** The importance of connection and care for the natural environment was summarised by Mr Ray Woods, who explained the concept of *yindyamarra* to the committee:

"Yindyamarra" is a word of ours, a Wiradjuri word. That word is all around respect. Respect is one of the outcomes of yindyamarra. We Wiradjuri people use it as a holistic way of living. It is all about respect, courtesy, integrity, the whole lot. It is a way that we are taught as kids, as babies by our mothers. It is about...how we look after things and how we treat each other and the land. It is about understanding the country and taking everything in—listening to what the country is telling you...That is who they are; that

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<sup>213</sup> Submission 121, Buyaan Trust, p 1.

<sup>214</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 1.

<sup>215</sup> Submission 121, Buyaan Trust, p 1.

is their identity of being a Wiradjuri man, a young man or young boy...That is a part of their life, that responsibility of understanding and listening and taking in those things.<sup>216</sup>

**3.148** The Murray Lower Darling Rivers Indigenous Nations (MLDRIN) expressed concern regarding how Aboriginal cultural heritage matters were being assessed within the context of the proposed project. They said that:

Key concerns include the minimal on-site cultural heritage assessments that have occurred to date despite the advanced planning for some projects; the lack of commitment to conduct more rigorous and comprehensive assessments that engage local Traditional Owners with cultural authority to speak about cultural sites and appropriate management; and questionable and inappropriate assumptions about possible occurrences of cultural heritage artefacts.<sup>217</sup>

**3.149** MLDRIN also referred to a preliminary heritage scoping assessment which was undertaken by EMM Consulting to inform WaterNSW about the potential impacts the Wyangala Dam project would have on Aboriginal cultural heritage sites. The assessment report found that the project may impact a range of cultural artefacts, and a more extensive investigation into the effects of the dam and its impacts on cultural heritage should be undertaken.<sup>218</sup>

**3.150** MLDRIN told the committee that they had written to WaterNSW on 31 August 2020 seeking clarification about how these recommendations in the assessment would be progressed, but had not received a reply to date in October 2020.<sup>219</sup>

**3.151** When discussing the impacts of the proposed project on cultural heritage sites, MLDRIN specifically referred to the Great Cumbung Swamp, a culturally significant place for local Traditional Owners which could be severely impacted as a result of disrupted downstream flows.<sup>220</sup>

**3.152** They also noted a number of other possible impacts as a result of changes to river flow and local ecology, including:

- The lived knowledge and stories of Traditional Owners with cultural responsibilities and connection to areas downstream of the projects;
- Swimming spots and family gathering spots (including sites where numerous generations of Traditional Owners were taught to swim and dive);
- Flow dependencies of cultural sites and values, including unique waterholes with affiliations to key totem species;
- Sacred places with important flow dependencies, including Bunyip holes;
- Burial sites in proximity to rivers; and,
- Fish traps and other cultural modifications of waterways<sup>221</sup>

<sup>216</sup> Evidence, Mr Ray Woods, Wiradjuri Council of Elders and Buyaan Trust, 29 October 2020, pp 41-42.

<sup>217</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 1.

<sup>218</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 4.

<sup>219</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 4.

<sup>220</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 7.

<sup>221</sup> Submission 130, Murray Lower Darling Rivers Indigenous Nations, p 8.

**Committee comment**

- 3.153** The committee recognises the significant impact the proposed project will have on the Traditional Owners of the impacted land, the Wiradjuri people. The committee appreciates the evidence provided that detailed the important relationship between the Wiradjuri people and the land, and the need to protect it.
- 3.154** The committee acknowledges the diverse and wide-ranging cultural significance of river flows and the existing ecological environment to the Wiradjuri people, and stresses the importance of listening to Aboriginal people when considering any changes to the rivers and their surrounds.
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**Finding 8**

That raising the Wyangala Dam wall is likely to have a significant detrimental impact on Aboriginal cultural heritage sites and artefacts.

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**Negative impact on downstream producers**

- 3.155** The Lachlan River valley also supports a significant non-irrigation farming industry, such as grazing, which relies on flood waters to help maintain agricultural production. For instance, Mr Hugh McLean, Secretary, Lachlan Floodplain & Wetlands Group, explained that as a dryland lamb producer, in non-flood years he produced about five kilograms of lamb per hectare a year. However, during large flood events, lamb production will triple to 15 kilograms per hectare a year for two years. Mr McLean explained that these flood events help produce extra income for such things as education and reinvesting in the local community:

A kilogram of lamb to me is worth about \$7 so currently one in seven or one in 10 year events are like cream on the crop products. That is our little bit of extra income that will help us. It will help us put money back in the area, educate the kids.<sup>222</sup>

- 3.156** Mr McLean concluded that raising the Wyangala Dam wall 'is simply a redistribution of a natural resource away from environments and existing farm enterprises to be put into storage and to be redistributed to extractive industry. That is the fundamental issue with this whole project and I do not think it is ethical'.<sup>223</sup>
- 3.157** Floodplain grazing was also identified in the Draft Lachlan Regional Water Strategy as a significant part of the agricultural industry in the Lachlan region. The Strategy also noted that the floodplains are a necessary support for the grazing industry.<sup>224</sup>

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<sup>222</sup> Evidence, Mr McLean, 29 October 2020, p 36.

<sup>223</sup> Evidence, Mr McLean, 29 October 2020, p 35.

<sup>224</sup> NSW Department of Planning Industry and Environment, *Draft Regional Water Strategy, Lachlan: Strategy*, September 2020, p 52, [https://www.industry.nsw.gov.au/\\_\\_\\_data/assets/pdf\\_file/0019/324514/draft-rws-lachlan.pdf](https://www.industry.nsw.gov.au/___data/assets/pdf_file/0019/324514/draft-rws-lachlan.pdf).

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## Alternatives to raising the Wyangala Dam wall

**3.158** This section of the report will identify alternatives to the raising of Wyangala Dam wall that would address water security in the Lachlan Valley. New water infrastructure technologies will be examined in more detail in Part 2 of this report.

**3.159** While it was established during the inquiry that there is a need to address water security in the Lachlan Valley, stakeholders told the committee about options other than increasing storage capacity of Wyangala Dam as an effective response to the issue.

**3.160** Professor Jamie Pittock told the committee that in 2009, the Commonwealth Government commissioned an assessment of the potential for irrigation water efficiency in the Lachlan Valley. He explained:

My understanding is that investing in refurbishment of the inefficient irrigation schemes in the Lachlan Valley would provide more water for different users at around one-third of the price and have very little environmental impact, nor disadvantage communities further downstream.<sup>225</sup>

**3.161** Professor Pittock outlined the benefits of upgrading the irrigation systems in the Lachlan, stating that:

...the irrigation industry in the Lachlan could be upgraded to become as productive as its competitors in other parts of the Murray-Darling Basin. It would generate work that could be undertaken by businesses more local to the Lachlan Valley, compared to the sorts of big engineering firms in capital cities that would undertake the Wyangala Dam raising project. And, of course, the irrigation efficiency upgrades would be cheaper and leave funds available to pursue some of the more sensible other options for the New South Wales Government's Lachlan regional water sharing plan.<sup>226</sup>

**3.162** Mr Hugh McLean, Lachlan Floodplains and Wetlands Group, also expressed support for upgrading irrigation infrastructure. He made reference to Jemalong Irrigation, and noted that it 'has had no infrastructure upgrades and it is a very old system'<sup>227</sup>. He concluded that investing in irrigation infrastructure upgrades in the area would be a more cost effective way of creating water efficiencies.<sup>228</sup>

**3.163** The Murray Darling Basin Authority, in its profile of the Lachlan Irrigation District, discussed Jemalong Irrigation which holds a water entitlement of 100 GL, of which 80 GL is general security water entitlements. It noted that under normal operating conditions 80 GL is diverted from the Lachlan river to 155 landholdings within the district, but that around 23 percent of this water is lost during distribution. The Authority noted that Jemalong Irrigation has prepared an irrigation modernisation plan that would reduce water losses within the distribution system and on farm by 15–25 GL.<sup>229</sup>

<sup>225</sup> Evidence, Professor Pittock, 2 November, p 2.

<sup>226</sup> Evidence, Professor Pittock, 2 November, p 10.

<sup>227</sup> Evidence, Mr McLean, 29 October 2020, p 41.

<sup>228</sup> Evidence, Mr McLean, 29 October 2020, p 41.

<sup>229</sup> Murray–Darling Basin Authority, *Guide to the proposed Basin Plan: Technical background, Appendix C. Irrigation District Community Profiles, Lachlan Community Profile*, 2010, p 847.

- 3.164** In addition to upgrading irrigation infrastructure, Professor Pittock noted that the draft Lachlan Regional Water Strategy contained another 47 options for addressing water security in the region. While Professor Pittock rejected some of the options, he also noted that:

Many of the options represent common sense ways of enhancing the environment and local communities, for example, installing fish screens on pump offtakes (#18), and would enhance Indigenous peoples' access to water and recognition of their rights.<sup>230</sup>

#### **Committee comment**

- 3.165** As previously noted, the committee accepts that there is a need to address water security issues in the Lachlan valley. The committee notes that there are reliable and proven methods of addressing water security issues available as alternatives to the Wyangala Dam wall raising project.
- 3.166** The committee is particularly compelled by evidence regarding the benefits of upgrading irrigation infrastructure in the Lachlan valley, and the significant environmental and production benefits that could be yielded from such a project. We note the Murray Darling Basin Authority reports that Jemalong Irrigation could save 15 to 25 GL per year by modernising its infrastructure. The committee is convinced that water efficiency projects are an important part of the solution to addressing water security in the Lachlan region. The Government should investigate the funding and implementation of water efficiency measures such as the upgrading of Jemalong Irrigation infrastructure, upgrading piping, stock and domestic channels and removing banks across floodplains along the Lachlan Valley.
- 3.167** The committee also agrees that alternative options, such as managing aquifer recharge and water recycling should be investigated as part of exploring the full suite of options available to address water security in the Lachlan Valley.

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#### **Recommendation 3**

That the NSW Government investigate the funding and implementation of water efficiency measures such as the upgrading of Jemalong Irrigation infrastructure, upgrading piping, stock and domestic channels and removing banks across floodplains along the Lachlan Valley.

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#### **Committee comment**

- 3.168** The committee recommends that based on the evidence outlined in this chapter, the NSW Government must address the significant concerns raised during this inquiry in the business case and environmental impact studies.
- 3.169** The Government must take into consideration the arguments for and against the project, with particular concern given to the high cost of the project, limited water yielded and the impact of climate change on reducing inflows into Wyangala Dam, meaning less frequent filling of the dam. Additionally, the Government must consider the impacts on First Nations people, cultural

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[https://www.mdba.gov.au/sites/default/files/archived/guide\\_pbp/AppendixC\\_Lachlan\\_community\\_profile.pdf](https://www.mdba.gov.au/sites/default/files/archived/guide_pbp/AppendixC_Lachlan_community_profile.pdf)

<sup>230</sup> Submission 115a, Professor Jamie Pittock, p 1.

sites and artefacts, and any ecological impacts on floodplains, fish and bird species, and river health.

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**Recommendation 4**

That the NSW Government address significant concerns raised during this inquiry in the business case and environmental impact studies. The Government must take into consideration both the arguments for and against the project, with particular emphasis given to:

- its high cost
  - limited water yielded
  - impact of climate change reducing inflows into Wyangala Dam, meaning less frequent filling of the dam
  - impacts on First Nations people, cultural sites and artefacts
  - ecological impacts on floodplains, fish and bird species and general river health.
-



## Appendix 1 WaterNSW timeline of proposed water infrastructure projects

Year	Wyangala Dam Wall raising	Dungowan Dam and Pipeline	Mole River Dam	Macquarie River Re-Regulating Storage	Western Weirs Program
2014	<p><b>June</b> NSW Deputy Premier announces \$1M for feasibility study into Cranky Rock Dam</p> <p><b>October</b> Commonwealth identify new dam on Belubula River (Needles Gap) increasing water security in the Lachlan valley as suitable for further assistance to accelerate feasibility, CBA and design studies</p> <p><b>November</b> NSW Government identifies Lachlan as priority catchment under State Infrastructure Strategy (SIS)</p>		<p><b>October</b> Commonwealth identify Mole River Dam as suitable for further assistance to accelerate feasibility, CBA and design studies</p> <p><b>November</b> Government identifies Mole River Dam as possible solution improved flood management with water security benefits in Border Rivers.</p>	<p><b>November</b> NSW Government identifies Macquarie as priority catchment under State Infrastructure Strategy (SIS)</p>	
2015	<p><b>March</b> Feasibility study (phase 1) completed by WaterNSW – recommends further study into build and non-build options</p>				
2016		<p><b>June</b> Commonwealth announce funding for NWIDF study (\$850K)</p>	<p><b>June</b> Commonwealth announce funding for NWIDF study (\$850K)</p>		
2017		<p><b>September</b> NWIDF feasibility study completed by WaterNSW</p>	<p><b>September</b> Feasibility study completed by WaterNSW</p>		
2018	<p><b>April</b> Feasibility study (phase 2) completed by WaterNSW</p>	<p><b>June</b> Project identified in 20 year infrastructure options study</p>	<p><b>June</b> Project identified in 20 year infrastructure options study</p>	<p><b>June</b> Project identified in 20 year infrastructure options study</p>	<p><b>June</b> Need for strategy for unregulated weir assets identified in 20 year options study</p>

	<p><b>June</b> Project identified in 20 year infrastructure options study</p> <p><b>30 October</b> Minister Niall Blair announces intention to proceed with Wyangala dam wall raising project and fund a final business case</p> <p><b>October</b> Project included in Commonwealth and NSW Government's \$1bn commitment</p>			<p><b>October</b> Minister Blair announces future funding allocation for business case for a new regulator on the Macquarie River (\$1.2m)</p> <p><b>November</b> WaterNSW completes options report as part of Macquarie SIS study, which identifies feasible options for further detailed assessment – including confirming MRRRS project</p>	
2019	<p><b>October</b> Project included in Commonwealth and NSW Government's \$1bn commitment</p> <p><b>October</b> NSW Government lists project in schedule 3 of <i>Critical Needs (Water Supply) Act 2019</i> NSW</p>	<p><b>October</b> Project included in Commonwealth and NSW Government's \$1bn commitment</p> <p><b>October</b> NSW Government lists project in schedule 3 of <i>Critical Needs (Water Supply) Act 2019</i> NSW</p>	<p><b>October</b> Project included in Commonwealth and NSW Government's \$1bn commitment</p> <p><b>October</b> NSW Government lists project in schedule 3 of <i>Critical Needs (Water Supply) Act 2019</i> NSW</p>	<p><b>March</b> Project planning and investigations commence</p> <p><b>June</b> WaterNSW completes Firs Draft of Strategic Business Case that considered feasible options in response to the SIS</p>	<p><b>February</b> Minister Niall Blair announces \$4.2m for western weirs study</p> <p><b>October</b> NSW Government lists prjct in schedule 3 of <i>Critical Needs (Water Supply) Act 2019</i> NSW</p> <p><b>November</b> WaterNSW and DPIE Water contracted yto deliver study</p>
2020	<p><b>May</b> WaterNSW receives direction to progress planning and early works</p>	<p><b>May</b> WaterNSW receives direction to progress planning and early works</p>	<p><b>May</b> WaterNSW receives direction to progress planning and early works</p>	<p><b>May</b> Macquarie Strategic Business Case complete</p>	<p><b>January</b> Study commences</p>
<b>FUTURE</b>					
2020	<p><b>Late 2020</b> Commence early works Stage 1 of Wyangala Waters Holiday Park Relocation (Water Treatment Plant)</p>	<p><b>Late 2020</b> Commence early works</p>		<p><b>November 2020</b> Estimated time of completion of final business case</p>	
2021	<p><b>Mid 2021</b> Estimated completion of final business case</p> <p><b>Mid 2021</b> EIS on display</p>	<p><b>Mid 2021</b> Estimated completion of final business case</p> <p><b>Mid 2021</b> EIS on display</p>	<p><b>Mid 2021</b> Estimated completion of final business case</p> <p><b>Mid 2021</b> EIS on display</p>		<p><b>2021</b> Estimated completion of preliminary business case</p>

1 Submission 50, WaterNSW, Annexure B.

## Appendix 2 Submissions

No.	Author
1	Name suppressed
2	Mr Gordon Turner
3	Zero Mass Water
4	Mr Andrew McGlashan
5	Name suppressed
6	Mr Michael Davey
7	Miss Lucy Benjamin
8	Clarence Environment Centre
9	Mrs Jan Mitchell
10	Mr Rod Kashubin
11	Name suppressed
12	Lake Keepit Family Fishing Club
13	Dr Margaret Lorang
14	Mr David Harris
15	NSW Farmers' Association
16	Cr Craig Davies, Mayor Narromine Shire Council and Chair of the Orana Joint Organisation of councils
17	Mrs Kerrie O'Neill
18	Ms Vicky Grosser
19	Name suppressed
20	Ms Michele Smith
21	Name suppressed
22	Ms Victoria Bail
23	Mr Peter Tebbutt
24	Mr Maurice Perry
25	Mr Ian Onley
26	Mr Trevor Hoare
27	Mr Peter Roche
28	Confidential
29	Name suppressed
30	Mr Mark Merritt
31	Name suppressed
32	BirdLife Southern NSW

<b>No.</b>	<b>Author</b>
33	Ms Diana Palmer
34	Name suppressed
35	Ms Jacqueline Marks
36	Ms Marie Ngai-King
37	Mr Philip Spark
38	Confidential
39	Mr Flynn Webber
40	Peel Valley Water Users Association Inc.
41	Mr Craig Robinson
42	Mr Jim Walker
43	Ms Robyn Bird
44	Ms Cathy Merchant
45	Ms Hayley Talbot
46	Clarence Valley Council
47	Ms Debrah Novak
48	Bathurst Regional Council
49	The Nature Conservancy Australia
50	WaterNSW
51	Mr Dugald Bucknell
52	Mr Alan McGufficke
53	Macquarie River Food & Fibre
54	Name suppressed
55	Ms Wendy Hawes
56	Mr Ivan Kokotovic
57	Professor Uwe Proske
58	Name suppressed
59	Tamworth Regional Council
60	Environmentally Concerned Citizens of Orange
61	Mr David Metzenthén
62	Ms Susan Nichol
63	Ms Ifeanna Tooth
64	NSW Bird Atlassers Inc
65	Ms Mora Main
66	Mr Rick Banyard
67	Wentworth Shire Council

<b>No.</b>	<b>Author</b>
68	Mr David Smith
69	Mr David Gowing
70	Healthy Rivers Dubbo
71	Water for Rivers
72	Mrs Linda Said
73	Name suppressed
74	Mrs Yvonne Fessler
75	Wiradjuri Council of Elders
76	Lachlan Floodplain and Wetlands Group
77	Mudgee District Environment Group
78	Mr Bruce Norris
79	Mrs Rosie White
80	Mr John Simpson
81	Dr Lynette Allen
82	Name suppressed
83	Mr Garry Hall
84	Name suppressed
85	Mrs Vivien Smith
86	Macquarie Marshes Environmental Landholders Association (MMELA)
87	Dr Martin Mallen-Cooper
88	Ms Ruby Everett
89	Dr Annette (Tam) Smith
90	Mrs Georgia Green
91	Central West Environment Council
92	Ms Stephanie Canaway
93	Forbes Aboriginal and Community Working Party
94	Daroo Landcare
95	Name suppressed
96	Confidential
97	Lachlandcare Inc
98	Lachlan Valley Water Inc
99	Professor Richard Kingsford
100	Hovells Creek Landcare Group
101	Water Northern Rivers
102	Ms Kate Boyd

<b>No.</b>	<b>Author</b>
103	Mrs Katharine McBride
104	Confidential
105	Cr Mark Rodda
106	Name suppressed
107	Mole River Protection Alliance
108	Griffith City Council
109	Australian Floodplain Association
110	Name suppressed
111	Mr Rodney Jouning
112	Dharriwaa Elders Group
113	Mr Alexander Keeble
114	Latrobe Environmental Action Forum
115	Professor Jamie Pittock
115a	Professor Jamie Pittock
116	Inland Rivers Network
117	Name suppressed
118	Dr John Bardsley
119	Tolarno Station 1851 Pty Ltd
120	National Parks Association of NSW
121	Buyaan Trust
122	Friends of the Earth Australia
123	Orange Field Naturalist and Conservation Society
124	Mr Paul Leary
125	Murray Darling Basin Authority
126	Mr Peter Gill
127	Parkes Shire Council
128	Miss Sandra Smith
129	Mr Gill Boehringer
130	Murray Lower Darling Rivers Indigenous Nations (MLDRIN)
131	Western Paddlers NSW
132	Upper Lachlan Landcare
133	Professor Evan Leitch – Belubula Headwaters Protection Group Inc
134	Dr Anne Jensen
135	CSIRO
136	Mr Andrew Paul

<b>No.</b>	<b>Author</b>
137	Ms Maria Riedl
138	Name suppressed
139	Clarence Valley Conservation Coalition Inc
140	Nature Conservation Council of NSW
141	Severn River, Ngarabal and Kwiambal Aboriginal Corporation ICN9192
141a	Confidential
142	NSW Farmers Association
143	The Great Cumbung Pty Ltd as Trustee for The Great Cumbung Unit Trust
144	NSW Irrigators' Council
145	Mr Bruce Wilson
146	Webster Pastoral Co
147	Slattery & Johnson
147a	Slattery & Johnson
148	Bathurst Community Climate Action Network
149	Name suppressed
150	Dubbo Environment Group
151	Ms Cathy Merchant
151a	Ms Cathy Merchant
152	NSW Government
153	Mr Paul Van Den Boom
154	Patch Club
155	Belubula Headwaters Protection Group (inc)
156	Name suppressed
157	Confidential
158	Lachlan Valley Water Inc
159	Mrs Rosemary Hadaway
160	Ms Anne Reeves
161	Name suppressed
162	Mr Dugald Bucknell
163	Mr Bruce Norris
164	Ms Prudence Wawn
165	Confidential
166	Cowra Council
167	Central NSW Joint Organisation
168	Name suppressed

<b>No.</b>	<b>Author</b>
169	Name suppressed
170	Ms Rebecca Price – Belubula Headwaters
171	Proforma No 1 - 202 people
172	Proforma No 2 - 8 people
173	Broken Hill City Council
174	Central Darling Shire Council

## Appendix 3 Witnesses at hearings

<b>Date</b>	<b>Name</b>	<b>Position and Organisation</b>
<b>Thursday 29 October 2020 Jubilee Room Parliament House, Sydney</b>	Mr Andrew George	A/Chief Executive Officer, Water NSW
	Mr Jim Bentley	Chief Executive Officer (Deputy Secretary), Department of Planning, Industry and Environment
	Ms Anissa Levy	CEO, Water Infrastructure NSW, Department of Planning, Industry and Environment
	Ms Maryanne Slattery	Director, Slattery & Johnson
	Mr Rene Woods	Chair and Nari Delegate, Murray Lower Darling Rivers Indigenous Nations
	Mr Fred Hooper e	Chairperson, Northern Basin Aboriginal Nations
	Mr Hugh McLean	Secretary, Lachlan Floodplain & Wetlands Group
	Mr Ray Woods	Wiradjuri Council of Elders and Buyaan Trust
	Ms Bev Smiles	President, Inland Rivers Network
	Ms Sarah Moles	Secretary, Australian Floodplain Association
	Mr Terry Korn	Immediate Former President, Australian Floodplain Association
	Mr Garry Hall	President, Macquarie Marshes Environmental Landholders Association
	Dr Lee Baumgartner	Professor of Fisheries and River Management, Institute for Land Water and Society, Charles Sturt University
Dr Martin Mallen-Cooper	Adjunct Research Professor, Institute for Land Water and Society, Charles Sturt University, Director, OzFish Unlimited	

<b>Date</b>	<b>Name</b>	<b>Position and Organisation</b>
<b>Monday 2 November 2020 Macquarie Room Parliament House, Sydney</b>	Professor Jamie Pittock	Professor, Fenner School of Environment & Society, Australian National University (appearing via videoconference)
	Mr Matthew Doyle	Chairperson, Lachlandcare Inc.
	Mr Keith Hyde	Deputy Chair, Lachlandcare Inc
	Ms Jane Paul	Conservation Officer, Daroo Landcare
	Dr James Fitzsimons	Director of Conservation and Science, The Nature Conservancy Australia
	Ms Elisabeth Dark	Convenor, Conservation Committee, Birdlife Southern NSW
	Dr Robyn Alders	Chair, Upper Lachlan Branch of the NSW Farmers Association
	Mr Ian Webster	Member, Upper Lachlan Branch of the NSW Farmers Association
	Mr Tom Green	Chairman, Lachlan Valley Water Inc.
	Ms Mary Ewing	Executive Officer, Lachlan Valley Water Inc.
	Mr David Sherley	General Manager, Bathurst Regional Council
	Mr Darren Sturgiss	Director, Engineering Services, Bathurst Regional Council
	Mr Garry Styles	Project Manager, Bathurst Regional Council
	Mr Bruce Logan	Director, Water & Waste, Tamworth Regional Council
	Mr Robert Bartrop	Chief Revenue Officer. Source Global (formerly Zero Mass Water)
Mr John Richards	Vice President, Peel Valley Water Users Association Inc.	
Mr David Gowing	Committee Member, Peel Valley Water Users Association Inc.	
Mr Ildu Monticone	Committee Member, Peel Valley Water Users Association Inc.	

<b>Date</b>	<b>Name</b>	<b>Position and Organisation</b>
<b>Friday 27 November 2020 Jubilee Room Parliament House, Sydney</b>	Professor Richard Kingsford	Professor of Environmental Science Director of Centre for Ecosystem Science School of Biological, Earth and Environmental Sciences University of New South Wales
	Cr Bill West	Chair, Central NSW Joint Organisation of Councils, Regional Prosperity Portfolio, Mayor of Cowra
	Cr Craig Davies	Chairman, Orana Joint Organisation of Councils, Mayor of Narromine
	Ms Claire Miller	Chief Executive Officer, NSW Irrigators' Council
	Ms Christine Freak	Policy Manager, NSW Irrigators' Council
	Mr Greg Mashiah	Manager, Water Cycle, Clarence Valley Council
	Mr Ross McDonnell	Executive Member, National Parks Association of NSW
	Mr Gary Dunnett,	Executive Officer, National Parks Association of NSW
	Mr Chris Gambian	Chief Executive Officer, Nature Conservation Council of NSW
	Ms Jacqui Mumford	Organising Director, Nature Conservation Council of NSW
	Ms Kate Boyd	Convenor, Mole River Protection Alliance
	Mr Bruce Norris	Land Owner, Mole River Protection Alliance
	Ms Melissa Gray	Convenor, Healthy Rivers Dubbo

<b>Date</b>	<b>Name</b>	<b>Position and Organisation</b>
<b>Friday 4 December 2020 Macquarie Room Parliament House, Sydney</b>	Mr Michael Drum	Executive Officer, Macquarie River Food and Fibre
	Mr Tony Quigley,	Chairman, Macquarie River Food and Fibre
	Mr Rowan Cleaver,	Member, Macquarie Effluent Creeks Association
	Mr Phillip Spark	Individual
	Mr Mark Rodda	Individual
	Dr Declan Page	Principal Research Scientist, CSIRO Land and Water
	Dr Graham Bonnett	Interim Leader Drought Resilience Mission, CSIRO Agriculture and Food
	Mr John Webster	Owner, Webster Pastoral Co.
	Mrs Kerri Webster	Owner, Webster Pastoral Co.
	The Hon Melinda Pavey MP	Minister for Water, Property and Housing Water NSW
	Mr Andrew George	A/Chief Executive Officer, WaterNSW
	Mr Jim Bentley	Chief Executive Officer (Deputy Secretary), Department of Planning, Industry and Environment
	Ms Anissa Levy	CEO, Water Infrastructure NSW, Department of Planning, Industry and Environment
	Mr Derek Rutherford	Director Water for the Environment, Department of Planning, Industry and Environment
Ms Michelle Dumazel	Executive Director, Biodiversity and Conservation Environment, Energy and Science Group, Department of Planning, Industry and Environment	

<b>Date</b>	<b>Name</b>	<b>Position and Organisation</b>
<b>Wednesday 10 February 2021 Council Chambers Broken Hill, NSW</b>	Cr Marion Browne	Councillor, Broken Hill City Council
	Cr Tom Kennedy	Councillor, Broken Hill City Council
	Mr Greg Hill	General Manager, Central Darling Shire Council
	Cr Tim Elstone	Councillor, Wentworth Shire Council
	Mr Ken Ross	General Manager, Wentworth Shire Council
	Ms Jane MacAllister	Community Organiser (Water) Nature Conservation Council of NSW
	Mr Darryn Clifton	Vice-President, Darling River Action Group
	Mr Rob McBride	Owner, Tolarno Station
Mr Derek Hardman	CEO, Barkandji Native Title Group	

## Appendix 4 Minutes

### Minutes no. 31

Monday 10 August 2020

Portfolio Committee No. 7 – Planning and Environment

Via teleconference, 2.05 pm

#### 1. Members present

Ms Faehrmann, *Chair*

Mr Pearson, *Deputy Chair*

Mr Buttigieg

Ms Cusack

Mr Franklin

Ms Sharpe

#### 2. Apologies

#### 3. Previous minutes

Resolved on the motion of Ms Sharpe: That draft minutes no. 30 be confirmed.

#### 4. Correspondence

The Committee noted the following items of correspondence:

##### *Received*

- 3 July 2020 – Email from Mr David Paull, koala ecologist to the committee, noting his proposal for a Namoi National Park was not referenced in the final report of the inquiry into koala populations and habitat in New South Wales
- 29 July 2020 - Email from Mr David Paull, koala ecologist to the committee, providing a status update of koalas in the Pilliga area
- 5 August 2020 – Email from Ms Faehrmann, Mr Pearson and Ms Sharpe requesting a meeting of PC 7 to consider a proposed self reference into the rationale for, and impacts of, new dams and other water infrastructure in NSW.

#### 5. \*\*\*

#### 6. Consideration of terms of reference

The Chair tabled a letter proposing the following self reference:

##### **Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW**

1. That Portfolio Committee No.7 - Planning and Environment inquire into and report on the rationale for new dam and mass water storage projects proposed by Water NSW including Wyangala, Mole River and Dungowan Dam projects, the Macquarie River re-regulating storage project and the Western Weirs project, particularly:
  - (a) All factors which led to the projects being chosen by the Government including the allocation and management of water by local water utilities and Water NSW during the preceding years;
  - (b) The environmental impacts of dams on waterways, rivers, estuaries and wetlands, threatened fish populations, matters under international agreements and the overall health of the Murray-Darling Basin;

- (c) Cultural heritage implications and consultation processes;
  - (d) The impacts of the projects on the water security of affected communities, including both upstream and downstream communities;
  - (e) The impacts on agricultural industries and associated economies and details of how these communities have been consulted;
  - (f) Business case assumptions including impacts of climate change on future water availability and meaningful drought of record information;
  - (g) The impacts on achieving the outcomes and objectives of the Murray-Darling Basin Plan, the National Water Initiative, the Water Management Act (NSW), the Water Act (Cth) and any related Sustainable Diversion Limits (SDL's);
  - (h) The roles and responsibilities of government and private entities in each project including their capacity to undertake the projects.
2. Alternative options for ensuring water security for affected communities including the costs and benefits of each project, and environmental impacts.
  3. All contracts related to the design, assessment, consultation and construction of the dams and/or mass water storage projects.
  4. All financial implications regarding each project, including funding and revenue measures, ownership structures, depreciation methodology and the price of water.
  5. The allocation of each project's increased water storage capacity, including water held for agriculture, town supply, stock & domestic, Indigenous culture and/or Native Title rights, environmental flows, or other purposes.
  6. Net employment modelling including short terms job and long term jobs created, and jobs foregone or lost as a result of the projects.
  7. Any other related matter.
  8. That the committee report by 9 December 2020.

Resolved on the motion of Mr Buttigieg: That the reporting date of the inquiry be amended to 22 March 2021.

The committee deferred adoption of the new inquiry with a view to amending the terms of reference via email agreement.

## **7. Conduct of the inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW**

That upon any adoption of the terms of reference by the committee, the following resolutions apply:

### **7.1 Closing date of submissions**

Resolved on the motion of Ms Sharpe: That the closing date for submissions be 22 September 2020.

### **7.2 Stakeholder list**

Resolved on the motion of Mr Pearson: That the secretariat circulate to members the Chairs' proposed list of stakeholders to provide them with the opportunity to amend the list or nominate additional

stakeholders, and that the committee agree to the stakeholder list by email, unless a meeting of the committee is required to resolve any disagreement.

### 7.3 Advertising

The committee noted that all inquiries are advertised via Twitter, Facebook, stakeholder letters and a media release distributed to all media outlets in New South Wales.

### 7.4 Hearing dates

Resolved on the motion of Mr Pearson: That hearing dates be determined by the Chair after consultation with members regarding their availability.

### 7.5 Site visits

Resolved on the motion of Mr Pearson: That the committee conduct site visit/s to location/s on dates to be determined by the Chair after consultation with members regarding their availability.

## 8. Adjournment

The committee adjourned at 2.30 pm, *sine die*.

Stewart Smith

**Clerk to the Committee**

## Minutes no. 32

Wednesday 7 October 2020

Portfolio Committee No. 7 – Planning and Environment

Room 1043 and via teleconference, 8.02 am

### 1. Members present

Ms Faehrmann, *Chair*  
Mr Pearson, *Deputy Chair*  
Mr Buttigieg  
Ms Cusack  
Mr Franklin  
Mr Mallard  
Ms Sharpe

### 2. Previous minutes

Resolved on the motion of Ms Sharpe: That draft minutes no. 31 be confirmed.

### 3. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW

#### 3.1 Amended terms of reference

The Committee noted that on 17 September 2020, there had been agreement to amend the inquiry terms of reference. The Chair had proposed inserting the following location to paragraph 1 of the terms of reference, 'the Menindee Lakes Water Savings Project', so that paragraph 1 would then read as follows:

That Portfolio Committee No.7 - Planning and Environment inquire into and report on the rationale for, and impacts of, new dam and mass water storage projects proposed by Water NSW including Wyangala, Mole River and Dungowan Dam projects, the Macquarie River re-regulating storage project, the Menindee Lakes Water Savings Project and the Western Weirs project, particularly:...

Resolved on the motion of Ms Sharpe: That the terms of reference be amended, as previously agreed by the Committee.

#### 3.2 Closing date for submissions

The Committee noted that on 22 September 2020, there had been agreement to extend the submission closing date by two weeks, to 6 October 2020, given the inclusion of the Menindee Lakes Project in the terms of reference.

Resolved on the motion of Mr Pearson: That the closing date for submissions be extended to 6 October 2020.

### 3.3 Site visit

The Chair proposed that the Committee undertake a two-day site visit be undertaken on 29 October and 30 October.

This would include chartering a plane and inspecting and hearing from stakeholders at Wyangala Dam near Cowra, a flyover with commentary over the lower Lachlan region, with a stop overnight at Broken Hill. The following day would involve a site inspection at Menindee Lakes and a public hearing at Broken Hill, with a return to Sydney late in the afternoon.

Resolved on the motion of Ms Sharpe: That the Committee undertake a site visit on 29 October and 30 October, including visits to Cowra, Wyangala Dam, the lower Lachlan region and Menindee Lakes.

## 4. Adjournment

The committee adjourned at 8.12 am, *sine die*.

Madeleine Dowd  
Clerk to the Committee

## Minutes no. 34

Thursday 29 October 2020  
Portfolio Committee No. 7 – Planning and Environment  
Jubilee Room and via videoconference, 8.31 am

### 1. Members present

Ms Faehrmann, *Chair*  
Mr Pearson, *Deputy Chair*  
Mr Buttigieg  
Ms Cusack (*from 10.11 am*)  
Mr Franklin  
Mr Mallard  
Ms Sharpe

### 2. Previous minutes

Resolved on the motion of Mr Buttigieg: That draft minutes no. 32 be confirmed.

### 3. Correspondence

The committee noted the following items of correspondence:

#### *Received:*

- 22 October 2020 – Email from Dr Martin Mallen-Cooper to the secretariat advising the committee prior to his appearance as a witness that he is presently engaged as a consultant by WaterNSW to advise on Western Weirs and fish passage.

- 23 October 2020 – Email from Mr Owen Russell, Director, Murray-Darling Basin Authority to the secretariat declining the committee's invitation to the Murray-Darling Basin Authority to give evidence at a public hearing.

***Received:***

- 22 October 2020 – Email from Dr Martin Mallen-Cooper to the secretariat advising the committee prior to his appearance as a witness that he is presently engaged as a consultant by WaterNSW to advise on Western Weirs and fish passage.
- 23 October 2020 – Email from Mr Owen Russell, Director, Murray-Darling Basin Authority to the secretariat declining the committee's invitation to the Murray-Darling Basin Authority to give evidence at a public hearing.

#### **4. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW**

##### **4.1 Public Submissions**

The committee noted that the following submissions were published by the committee clerk under the authorisation of the resolution appointing the committee: submission nos. 1-11, 12-37, 39-42, 44-95, 97-100, 101-103, 105-138, 140-141, 142-148, 150-154, 159-161, 164 and 166-167.

##### **4.2 Partially confidential submissions**

Resolved on the motion of Mr Buttigieg: That the committee authorise the publication of submission no. 43, with the exception of identifying and/or sensitive information which are to remain confidential, as per the recommendation of the secretariat.

##### **4.3 Confidential submissions**

Resolved, on the motion of Mr Franklin: That the committee keep submission nos 28, 38, 96, 104, 141A, 157 and 165 confidential, as per the request of the author.

##### **4.4 Additional hearings and site visit**

The Committee noted that it previously agreed (via email) to conducting the following activities:

- Thursday 29 October – Public hearing (Parliament House and WebEx)
- Monday 2 November - Public hearing (Parliament House and WebEx)
- Friday 27 November - Public hearing (Parliament House and WebEx)
- Friday 4 December - Public hearing (Parliament House and WebEx)
- Tuesday 9 February and Wednesday 10 February 2021 (site visit and regional hearing)

##### **4.5 Public hearing**

###### ***Allocation of questioning***

Resolved on the motion of Mr Franklin: That the sequence of questions to be asked at hearings is to alternate between crossbench, government members and opposition in that order, with equal time allocated to each.

Witnesses and the public were admitted.

The Chair made an opening statement regarding the broadcasting of proceedings and other matters.

The following witnesses were sworn and examined:

- Mr Andrew George, A/Chief Executive Officer, Water NSW
- Mr Jim Bentley, Chief Executive Officer (Deputy Secretary), Department of Planning, Industry and Environment
- Ms Anissa Levy, CEO, Water Infrastructure NSW, Department of Planning, Industry and Environment

The evidence concluded and the witnesses withdrew.

The following witness was sworn and examined:

- Ms Maryanne Slattery, Director, Slattery & Johnson

The evidence concluded and the witness withdrew.

The following witnesses were sworn and examined:

- Mr Rene Woods, Chair and Nari Delegate, Murray Lower Darling Rivers Indigenous Nations
- Mr Fred Hooper, Chairperson, Northern Basin Aboriginal Nations

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Mr Hugh McLean, Secretary, Lachlan Floodplain & Wetlands Group
- Mr Ray Woods, Wiradjuri Council of Elders and Buyaan Trust

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Ms Bev Smiles, President, Inland Rivers Network
- Ms Sarah Moles, Secretary, Australian Floodplain Association
- Mr Terry Korn, Immediate Former President, Australian Floodplain Association
- Mr Garry Hall, President, Macquarie Marshes Environmental Landholders Association

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Dr Lee Baumgartner, Professor of Fisheries and River Management, Institute for Land Water and Society, Charles Sturt University
- Dr Martin Mallen-Cooper, Adjunct Research Professor, Institute for Land Water and Society, Charles Sturt University, Director, OzFish Unlimited

The evidence concluded and the witnesses withdrew.

The public hearing concluded at 4.31 pm.

The public and media withdrew.

### ***Tendered documents***

Resolved on the motion of Mr Pearson: That the committee accept and publish the following document(s) tendered during the public hearing:

- PowerPoint Presentation to committee by Professor Martin Mallen-Cooper and Professor Lee Baumgartner
- *Rearing experiments with five species of Australian freshwater fishes* authored by J.S. Lake
- *Environmental effects of flow regulation on the Lower River Murray, Australia* authored by K.F. Walker and M.C. Thomas
- *Ecological impacts of dams, water diversions and river management on floodplain wetlands in Australia* authored by R.T. Kingsford
- *Non-salmonids in a salmonid fishway: what do 50 years of data tell us about past and future fish passage?* Authored by M. Mallen-Cooper and D.A. Brad

- *Fish passage in the Murray-Darling Basin, Australia: Not just an upstream battle* authored by Lee Baumgartner, Brenton Zampatti, Matthew Jones, Ivor Stuart and Martin-Mallen Cooper
- *Mortality of larval Murray cod (*Maccullochella peelii pealii*) and golden perch (*Macquaria ambigua*) associated with passage through two types of low-head weirs* authored by Lee J. Baumgartner, Nathan Reynoldson and Dean M. Gilligan
- *Reducing the perversion of diversion: Applying world-standard fish screening practices to the Murray-Darling Basin* authored by Lee J. Baumgartner and Craig Boys
- *Review of cold water pollution in the Murray-Darling Basin and the impacts on fish communities* authored by Allan Lugg and Craig Copeland
- *Fish, floods and fallacy* authored by Martin Mallen-Cooper and Ivor Stuart
- Food and Agriculture Organisation of the United Nations – Fisheries and Aquaculture Circular, *An ecosystem approach to promote the integration and coexistence of fisheries within irrigation systems*
- *Mitigating the effects of barriers to freshwater fish migrations: The Australian experience* authored by J.H Harris, R.T. Kingsford, W. Peirson and L.J. Baumgartner

## 5. Adjournment

The committee adjourned at 4.35 pm until 10.15 am Friday 30 October 2020.

Madeleine Dowd

**Clerk to the Committee**

## Minutes no. 36

Thursday 29 October 2020

Portfolio Committee No. 7 – Planning and Environment

Macquarie Room and via videoconference, 9.01 am

### 1. Members present

Ms Faehrmann, *Chair (from 10.30 am – 1.15 pm)*

Mr Pearson, *Deputy Chair (Acting Chair from 9.01 am to 10.30 am and 2.15 pm to 3.45 pm)*

Mr Buttigieg

Mr Franklin

Mr Mallard

Ms Sharpe

Ms Boyd (*substituting for Ms Faehrmann from 9.01 am to 10.30 am and 2.15 pm to 3.45 pm*)

### 2. Apologies

Ms Cusack

### 3. Previous minutes

Resolved on the motion of Mr Franklin: That draft minutes no. 34 be confirmed.

## 4. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW

### 4.1 Public hearing

Witnesses were admitted.

The Acting Chair made an opening statement regarding the broadcasting of proceedings and other matters.

The following witness was sworn and examined:

- Professor Jamie Pittock, Professor, Fenner School of Environment & Society, Australian National University

The evidence concluded and the witness withdrew.

The following witnesses were sworn and examined:

- Mr Matthew Doyle, Chairperson, Lachlandcare Inc.
- Mr Keith Hyde, Deputy Chair, Lachlandcare Inc.
- Ms Jane Paul, Conservation Officer, Daroo Landcare
- Dr James Fitzsimons, Director of Conservation and Science, The Nature Conservancy Australia
- Ms Elisabeth Dark, Convenor, Conservation Committee, Birdlife Southern NSW

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Dr Robyn Alders, Chair, Upper Lachlan Branch of the NSW Farmers Association
- Mr Ian Webster, Member, Upper Lachlan Branch of the NSW Farmers Association
- Mr Tom Green, Chairman, Lachlan Valley Water Inc.
- Ms Mary Ewing, Executive Officer, Lachlan Valley Water Inc.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Mr David Sherley, General Manager, Bathurst Regional Council
- Mr Darren Sturgiss, Director, Engineering Services, Bathurst Regional Council
- Mr Garry Styles, Project Manager, Bathurst Regional Council
- Mr Bruce Logan, Director, Water & Waste, Tamworth Regional Council

The evidence concluded and the witnesses withdrew.

Ms Faehrmann and Mr Mallard departed at 1.17 pm.

The following witness was sworn and examined:

- Mr Robert Bartrop, Chief Revenue Officer, Source Global

The evidence concluded and the witness withdrew.

The following witnesses were sworn and examined:

- Mr John Richards, Vice President, Peel Valley Water Users Association Inc.
- Mr David Gowing, Committee Member, Peel Valley Water Users Association Inc.
- Mr Ildu Monticone, Committee Member, Peel Valley Water Users Association Inc.

The evidence concluded and the witnesses withdrew.

The public hearing concluded at 3.47 pm.

The public and media withdrew.

## 5. Adjournment

The committee adjourned at 3.48 pm until 8.45 am, Friday 13 November 2020, Report deliberative (Warnervale Airport inquiry), Room 1254.

Madeleine Dowd  
Clerk to the Committee

## Minutes no. 38

Friday 27 November 2020

Portfolio Committee No. 7 – Planning and Environment

Jubilee Room and via videoconference, 9.01 am

### 1. Members present

Ms Faehrmann, *Chair*

Mr Pearson, *Deputy Chair*

Mr Buttigieg

Ms Cusack

Mr Franklin

Mr Mallard

Ms Sharpe

### 2. Apologies

### 3. Previous minutes

Resolved on the motion of Mr Franklin: That draft minutes no. 36 and 37 be confirmed.

### 4. Correspondence

The committee noted the following item of correspondence:

- 19 November 2020 – Email from Ms Claudia Migotto, Assistant Auditor-General, Performance Audit, Audit Office of NSW, to the secretariat in response to an invitation to appear at a public hearing, noting that their report titled *Support for regional town infrastructure* does not look at issues contained in the inquiry's terms of reference.

### 5. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW

#### 5.1 Public submissions

The committee noted that the following submissions will be published by the committee clerk under the authorisation of the resolution appointing the committee: submission nos. 155, 168-170.

#### 5.2 Management of proforma submissions

Resolved on the motion of Mr Pearson: That the committee publish a copy Proforma No. 1 and Proforma No. 2 on the committee's webpage, noting how many of each were received.

#### 5.3 Public hearing

##### *Allocation of questioning*

The committee noted that they would allocate questions in the same way resolved at the first public hearing, being that the sequence of questions to be asked at hearings is to alternate between crossbench, government members and opposition in that order, with equal time allocated to each.

Witnesses were admitted.

The Chair made an opening statement regarding the broadcasting of proceedings and other matters.

The following witness was sworn and examined:

- Professor Richard Kingsford, Professor of Environmental Science Director of Centre for Ecosystem Science School of Biological, Earth and Environmental Sciences University of New South Wales

Mr Mallard departed at 9.29 am.

The evidence concluded and the witness withdrew.

The following witnesses were sworn and examined:

- Cr Bill West, Chair, Central NSW Joint Organisation of Councils, Regional Prosperity Portfolio, Mayor of Cowra
- Cr Craig Davies, Chairman, Orana Joint Organisation of Councils, Mayor of Narromine

Mr Mallard returned at 11.10 am.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Ms Claire Miller, Chief Executive Officer, NSW Irrigators' Council
- Ms Christine Freak, Policy Manager, NSW Irrigators' Council

The evidence concluded and the witnesses withdrew.

The following witness was sworn and examined:

- Mr Greg Mashiah, Manager, Water Cycle, Clarence Valley Council

Mr Pearson departed at 12.55 pm.

The evidence concluded and the witness withdrew.

The following witnesses were sworn and examined:

- Mr Ross McDonnell, Executive Member, National Parks Association of NSW
- Mr Gary Dunnett, Executive Officer, National Parks Association of NSW
- Mr Chris Gambian, Chief Executive Officer, Nature Conservation Council of NSW
- Ms Jacqui Mumford, Organising Director, Nature Conservation Council of NSW

Mr Franklin departed at 2.18 pm.

Mr Franklin returned at 3.30 pm.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Ms Kate Boyd, Convenor, Mole River Protection Alliance
- Mr Bruce Norris, Land Owner, Mole River Protection Alliance
- Ms Melissa Gray, Convenor, Healthy Rivers Dubbo

The evidence concluded and the witnesses withdrew.

The public hearing concluded at 3.48 pm.

## **6. Adjournment**

The committee adjourned at 3.49 pm until 9.15 am, Friday 4 December 2020, Public hearing, Macquarie Room.

Madeleine Dowd  
**Clerk to the Committee**

**Minutes no. 39**

Friday 4 December 2020

Portfolio Committee No. 7 – Planning and Environment

Macquarie Room and via videoconference, 9.17 am

**1. Members present**Ms Faehrmann, *Chair*Mr Pearson, *Deputy Chair*

Mr Buttigieg

Ms Cusack

Mr Khan (*substituting for Mr Franklin*)

Mr Mallard

Mr Primrose (*substituting for Mr Buttigieg from 1.30 pm*)

Ms Sharpe

**2. Previous minutes**

Resolved on the motion of Ms Sharpe: That draft minutes no. 38 be confirmed.

**3. Correspondence**

The committee noted the following items of correspondence:

- 24 November 2020 – Email from Cr Mark Rodda to the secretariat in response to an invitation to appear at a public hearing, noting his work for the Department of Industry and Environment, Housing and Property (Crown Lands).
- 1 December 2020 – Email from Mr Declan Page, CSIRO, to the secretariat providing a recently published CSIRO study for the consideration of the committee prior to his appearance at a public hearing on 4 December 2020.

**4. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW****4.1 Answers to questions on notice**

The committee noted that the following responses have been received and will be published on the committee's website as per the resolution establishing the committee:

- Mr Raymond Woods received on 27 November 2020
- NSW Farmers' Association – Upper Lachlan Branch received on 28 November 2020
- Department of Planning, Industry and Environment and WaterNSW received on 30 November 2020
- Lachlan Valley Water received on 1 December 2020

**4.2 Additional information from Ms Jane Paul, Daroo Landcare**

Resolved, on the motion of Mr Pearson: That the committee accept and publish the additional information provided by Ms Jane Paul, Daroo Landcare.

**4.3 Public hearing**

Witnesses were admitted.

The Chair made an opening statement regarding the broadcasting of proceedings and other matters.

The following witnesses were sworn and examined:

- Mr Michael Drum, Executive Officer, Macquarie River Food and Fibre
- Mr Tony Quigley, Chairman, Macquarie River Food and Fibre
- Mr Rowan Cleaver, Member, Macquarie Effluent Creeks Association

The evidence concluded and the witnesses withdrew.

The following witness was sworn and examined:

- Mr Phillip Spark, Individual

The evidence concluded and the witness withdrew.

The following witness was sworn and examined:

- Mr Mark Rodda, Individual

Resolved, on the motion of Mr Khan: That the committee hear Mr Rodda's evidence *in camera*.

The committee resumed a public hearing at 10.35 am.

The evidence concluded and the witness withdrew.

The following witnesses were sworn and examined:

- Dr Declan Page, Principal Research Scientist, CSIRO Land and Water
- Dr Graham Bonnett, Interim Leader Drought Resilience Mission, CSIRO Agriculture and Food

The evidence concluded and the witnesses withdrew.

Mr Mallard departed at 12.00 pm.

The following witnesses were sworn and examined:

- Mr John Webster, Owner, Webster Pastoral Co.
- Mrs Kerri Webster, Owner, Webster Pastoral Co.

The evidence concluded and the witnesses withdrew.

The Hon Melinda Pavey MP, Minister for Water, Property and Housing was admitted.

The Chair noted that members of Parliament swear an oath to their office, and therefore do not need to be sworn prior to giving evidence before a committee. The Chair also reminded the following witnesses that they did not need to be sworn, as they had been sworn at another hearing for this inquiry:

- Mr Andrew George, A/Chief Executive Officer, WaterNSW
- Mr Jim Bentley, Chief Executive Officer (Deputy Secretary), Department of Planning Industry and Environment

The evidence concluded and the witnesses withdrew.

Mr Primrose departed at 3.35 pm.

The following witnesses were sworn and examined:

- Mr Derek Rutherford, Director, Water for the Environment, Department of Planning, Industry and Environment
- Ms Michelle Dumazel, Executive Director, Biodiversity & Conservation Environment, Energy and Science Group, Department of Planning, Industry and Environment

Ms Sharpe departed at 4.12 pm.

The evidence concluded and the witnesses withdrew.

The public hearing concluded at 4.35 pm.

## 5. Adjournment

The committee adjourned at 4.40 pm *sine die*.

Madeleine Dowd  
Clerk to the Committee

## Minutes no. 40

Monday 1 February 2021  
Portfolio Committee No. 7 – Planning and Environment  
Room 1254, Parliament House, Sydney at 10.00 am

### 1. Members present

Ms Fachrmann, *Chair*  
Mr Pearson, *Deputy Chair* (from 10.02 am, via Webex)  
Mr Buttigieg  
Ms Cusack (from 10.05 am, via Webex)  
Mr Franklin  
Mr Martin (substituting for Mr Mallard via Webex)  
Ms Sharpe (via Webex)

### 2. \*\*\*

### 3. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW

#### 3.1 Public submissions

The committee noted that supplementary submission 147a was published by the committee clerk under the authorisation of the resolution appointing the committee.

#### 3.2 Answers to questions on notice

The committee noted the following answers to questions on notice were published by the committee clerk under the authorisation of the resolution establishing the committee:

- Cr Bill West, Chair, Central NSW Joint Organisation of Councils, Regional Prosperity Portfolio, Mayor of Cowra, received on 7 January 2021
- The Hon Melinda Pavey MP, Minister for Water, Housing and Property Department of Planning, Industry and Environment, and Water NSW, received on 15 January 2021
- NSW Irrigators' Council, received on 22 January 2021.

#### 3.3 Additional information

Resolved, on the motion of Mr Buttigieg: That the committee accept and publish the additional information provided by Mr John Webster and Mrs Kerri Webster, Webster Pastoral Co., and Ms Michelle Dumazel, Executive Director, Biodiversity & Conservation Environment, Energy and Science Group Department of Planning, Industry and Environment.

#### 3.4 Site visit itinerary and hearing schedule

Resolved, on the motion of Mr Pearson: That the committee undertake a site visit and conduct a regional hearing in line with the attached itinerary and hearing schedule on 9 and 10 February 2021.

### 4. Adjournment

The committee adjourned at 10.21 am, until Tuesday 9 February 2021 (water infrastructure site visit and hearing)

Emma Rogerson  
**Committee Clerk**

**Minutes no. 41**

Tuesday 9 February 2021

Portfolio Committee No. 7 – Planning and Environment

Sydney Airport – Execujet Flight Lounge, 394 Ross Smith Ave, Mascot, 6.45 am

**1. Members present**

Ms Faehrmann, *Chair*  
 Mr Pearson, *Deputy Chair*  
 Mr Buttigieg  
 Ms Cusack  
 Mr Franklin  
 Ms Sharpe

**2. Apologies**

Mr Mallard

**3. Previous minutes**

Resolved on the motion of Mr Pearson: That draft minutes nos. 39 and 40 be confirmed.

**4. Correspondence**

The committee noted the following items of correspondence:

- 1 February 2021 – Chair to Dr Baumgartner and Dr Mallen-Cooper inviting them to join the committee on its upcoming site visit to Menindee Lakes and Sunset Strip on 10 February 2021.
- 2 February 2021 – Chair To Mrs Helen Dalton MP, Member for Murray, advising her of the upcoming site visit on 9 and 10 February 2021.
- 2 February 2021 – Chair To Mr Roy Butler MP, Member for Barwon, advising him of the upcoming site visit on 9 and 10 February 2021.
- 2 February 2021 – Chair To Ms Steph Cooke, Member for Cootamundra, advising her of the upcoming site visit on 9 and 10 February 2021.

**5. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW**

**5.1 Site visit**

The committee visited Wyangala Dam, and received a briefing from the following Government representatives:

- Mr Steve Hamson, Regional Manager, Central Region, WaterNSW
- Mr Dave Morgan, Maintenance Team Leader, Central Region, Water NSW
- Ms Ingrid Emery, Director, Project Interfaces and Government Relations, Water Infrastructure NSW, Department of Planning, Industry and Environment

The Government representatives departed.

The committee travelled to Reids Flat, and met with the owners and operators of Webster Pastoral Co:

- Mr John Webster, Webster Pastoral Co.
- Mrs Kerri Webster, Webster Pastoral Co.

- Mr Dave Webster, Webster Pastoral Co.

The committee departed and travelled to Griffith Airport.

The committee met with Mr Gordon Turner, local landholder, and Mr Hugh McLean, Secretary, Lachlan Floodplain & Wetlands Group.

The committee conducted a fly-over of the lower Lachlan region accompanied with Mr Turner and Mr McLean.

Mr Turner and Mr Mclean departed.

The committee travelled to Broken Hill.

## 6. Adjournment

The committee adjourned at 7.00 pm until 6.15 am Thursday 10 February 2021 at the Ibis Styles Hotel, Broken Hill.

Madeleine Dowd  
**Clerk to the Committee**

## Minutes no. 42

Wednesday 10 February 2021

Portfolio Committee No. 7 – Planning and Environment

Ibis Styles Hotel, Broken Hill, 6.15 am

### 1. Members present

Ms Faehrmann, *Chair*  
Mr Pearson, *Deputy Chair*  
Mr Buttigieg  
Ms Cusack  
Mr Franklin  
Ms Sharpe

### 2. Apologies

Mr Mallard

### 3. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW

#### 3.1 Site visit

The committee visited Pamamaroo Lake Regulator, Menindee Lakes, and received a briefing from the following Government representatives:

- Mr Barry Philp, Maintenance Team Leader, Menindee, WaterNSW
- Ms Donna Kennedy, Department of Planning, Industry and Environment

The Government representatives departed at 9.50 am.

The committee was joined by the following stakeholders:

- Dr Martin Mallen-Cooper, Adjunct Research Professor, Institute for Land Water and Society, Charles Sturt University, Director, OzFish Unlimited
- Dr Lee Baumgartner, Professor of Fisheries and River Management, Institute for Land Water and Society, Charles Sturt University
- Mr Ross Leddra, President, Darling River Action Group

- Mr Graeme McCrabb, Menindee resident

The committee and stakeholders visited the Menindee Lakes lookout and Sunset Strip.

The above stakeholders departed at 11.40 am.

The committee met with Ngiyaampaa Elder, Aunty Beryl Carmichael, in Menindee from 12.00 pm to 12.30 pm.

The committee departed at 12.30 pm and travelled to Broken Hill City Council for a public hearing.

### 3.2 Public hearing

Witnesses, the media and the public were admitted.

The Chair made an opening statement regarding the broadcasting of proceedings and other matters.

The following witnesses were sworn and examined:

- Cr Marion Browne, Councillor, Broken Hill City Council
- Cr Tom Kennedy Councillor, Broken Hill City Council
- Mr Greg Hill, General Manager, Central Darling Shire Council
- Cr Tim Elstone, Councillor, Councillor, Wentworth Shire Council
- Mr Ken Ross, General Manager, Wentworth Shire Council

Cr Marion Browne tendered the following document:

- Submission to the inquiry on behalf of Broken Hill City Council, dated 9 February 2021.

Mr Greg Hill tendered the following document:

- Submission to the inquiry on behalf of Central Darling Shire Council, dated 9 February 2021.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Ms Jane MacAllister, Community Organiser (Water) Nature Conservation Council of NSW
- Mr Darryn Clifton, Vice-President, Darling River Action Group
- Mr Rob McBride, Owner, Tolarno Station

Ms Jane MacAllister tendered the following documents:

- Letter from Mr Terry Smith, Chair, Menindee Stakeholder Advisory Group to the Department of Planning, Industry and Environment regarding future meetings of the Stakeholder Advisory Group, dated 8 February 2021.
- *2019' Citizens' Inquiry into the Health of the Baraka/Darling River and Menindee Lakes: Report and Recommendations*, Australian Peoples' Tribunal for Community and Nature's Rights, dated October 2020.

The evidence concluded and the witnesses withdrew.

The following witness was sworn and examined:

- Mr Derek Hardman, CEO, Barkandji Native Title Group

The evidence concluded and the witness withdrew.

The public hearing concluded at 5.31 pm ACDT.

The public and media withdrew.

### 3.3 Tended documents

Resolved, on the motion of Mr Pearson: That the committee accept and publish the following documents tendered during the public hearing:

- Submission to the inquiry on behalf of Broken Hill City Council, dated 9 February 2021.
- Submission to the inquiry on behalf of Central Darling Shire Council, dated 9 February 2021.
- Letter from Mr Terry Smith, Chair, Menindee Stakeholder Advisory Group to the Department of Planning, Industry and Environment regarding future meetings of the Stakeholder Advisory Group, dated 8 February 2021.
- *2019' Citizens' Inquiry into the Health of the Barka/Darling River and Menindee Lakes: Report and Recommendations*, Australian Peoples' Tribunal for Community and Nature's Rights, dated October 2020.

### 3.4 Report timeline

Resolved, on the motion of Mr Pearson: That the committee report in two parts, with part one reporting by 22 March 2021, and addressing the Wyangala Dam project, and part 2 reporting by 15 June 2021 and addressing the Mole River and Dungowan Dam projects, the Macquarie River re-regulating storage project, the Menindee Lakes Water Savings Project and the Western Weirs Project.

## 4. Adjournment

The committee adjourned at 5.40 pm ACDT *sine die*.

Madeleine Dowd  
Clerk to the Committee

### Minutes no. 46

Monday 15 March 2021

Portfolio Committee No. 7 – Planning and Environment

Room 1043 and WebEx, 9.33 am

#### 1. Members present

Ms Faehrmann, *Chair*  
Mr Pearson, *Deputy Chair*  
Mr Buttigieg  
Ms Cusack  
Mr Franklin  
Mr Mallard  
Ms Sharpe

#### 2. Correspondence

The committee noted the following items of correspondence:

##### ***Received:***

- 8 February 2021 – Email from Mr Ross Leddra, President, Darling River Action Group containing letters from the Stakeholder Advisory Committee regarding the Menindee Lakes Water Savings Project
- 11 February 2021 – Email from Mr Gordon Turner containing additional information and pictures of the lower Lachlan following the committee's site visit and fly over
- 12 February 2021 – Email from Mr Ross Leddra, President, Darling River Action Group, containing a media article regarding the Menindee Lakes Water Savings Project
- 14 February 2021 - Email from Mr Ross Leddra, President, Darling River Action Group, regarding the Darling River

- 15 February 2021 – Email from Ms Jane MacAllister, Nature Conservation Council of NSW, containing information from Mr Wayne Smith, a resident of the Lower Darling
- 17 February 2021 – Email from the Hon Mark Pearson MLC, forwarding an email from Ms Kate Boyd, Mole River Protection Alliance, regarding the Mole River Dam business case
- 18 February 2021 – Email from Ms Jane MacAllister, Nature Conservation Council of NSW, containing information from Mr Paul Buttigieg
- 24 February 2021 - Email from Mr Ross Leddra, President, Darling River Action Group, containing a report from Slattery & Johnson regarding floodplain water harvesting in Northern NSW

**Sent:**

- 2 March 2021 – Chair to Mr Andrew George, A/CEO, WaterNSW, requesting additional information on the Menindee Lakes Water Savings Project
- 2 March 2021 – Chair to Mr Jim Bentley, Deputy Secretary, Water, NSW Department of Planning, Industry and Environment, requesting additional information on the Menindee Lakes Water Savings Project

4. \*\*\*

5. \*\*\*

**6. Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW****6.1 Additional public hearing**

The committee noted that an additional public hearing will be held on Monday 3 May 2021.

**6.2 Consideration of Chair's draft report**

The Chair submitted her draft report entitled Rationale for, and impacts of, new dams and other water infrastructure which, having been previously circulated, was taken as being read.

**Chapter 2**

Resolved, on the motion of Mr Franklin: That paragraph 2.18 be amended by inserting 'continue to' between the words 'to' and 'diversify'.

Resolved, on the motion of Mr Franklin: That paragraph 2.35 be amended by omitting: 'Despite the efforts of the government and irrigation industry to argue that dams are good for the environment because they hold environmental water, the overwhelming evidence to the inquiry was that dams and weirs are detrimental to river health'.

Resolved, on the motion of Ms Sharpe: That paragraph 2.35 be amended by inserting at the start: 'The majority of the evidence to the inquiry was that dams and weirs are detrimental to river health'.

Resolved, on the motion of Mr Franklin: That paragraph 2.36 be amended by omitting the word 'particularly' in the sentence 'Additionally, the impact of dams limiting water overflow onto floodplains is particularly concerning'.

Resolved, on the motion of Mr Franklin: That paragraph 2.37 be amended by omitting 'The committee is very concerned that building new dams and other water infrastructure will likely mean Australia will be in breach of obligations to protect migratory species and floodplains' and inserting instead 'The committee believes that it is important that Australia continue to observe these obligations to protect migratory species and floodplains'.

Resolved, on the motion of Mr Franklin: That Finding 2 be omitted: 'That bulk water supply infrastructure, like dams and weirs, has significant and negative impacts on rivers, including disrupting native fish breeding and migration, the quality of fish habitat, and on general river health and floodplain sustainability' and the following new finding be inserted instead:

"That without large dams, millions of people in NSW would have run out of water at least once over the past twenty years. However, bulk water supply infrastructure, like dams and weirs, has significant impacts on rivers, including disrupting native fish breeding and migration, the quality of fish habitat, and on general river health and floodplain sustainability. In order to manage climate change risks to our bulk water supply, existing infrastructure – much of which was built between the 1940s and 1970s – may need to be rebuilt, upgraded, modernised and improved'.

Mr Pearson moved: That Finding 2 as amended be further amended by inserting 'negative' before 'impacts on rivers, including disrupting native fish breeding and migration, the quality of fish habitat, and on general river health and floodplain sustainability'.

The committee divided.

Ayes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Noes: Ms Cusack, Mr Franklin, Mr Mallard.

Question resolved in the affirmative.

### Chapter 3

Resolved, on the motion of Ms Sharpe: That paragraph 3.22 be omitted: "The committee is concerned to hear that various options studies had been characterised as explicitly endorsing the Wyangala Dam wall raising project. The committee was not convinced by evidence from WaterNSW and the Department of Planning, Industry and Environment that these studies formed a sufficient evidence base to make a decision about the proposed project', and the following new paragraph be inserted instead:

"The committee notes that there have been various options studies that include examination of raising the Wyangala Dam wall. Without a full feasibility study, business case and Environmental Impact Statement, these studies should not be regarded as endorsements of the project'.

Resolved, on the motion of Ms Sharpe: That paragraph 3.24 be amended by omitting 'Significantly' at the start of the paragraph.

Resolved, on the motion of Ms Sharpe: That Finding 3 be amended by:

- a) Omitting at the end: 'and runs contrary to the evidence that has been made available'
- b) omitting 'have not been demonstrated and inserting instead 'are yet to be demonstrated'.

Mr Franklin moved: That the following new finding be inserted after Finding 3:

"That successive NSW Governments have recognised there are both positive and negative impacts of 'regulated' rivers and have adopted procedures known as 'complementary measures' on new and existing water infrastructure to help mitigate the impacts. Wyangala Dam is the major source of downstream cold water pollution. The raising of the dam wall will provide a once in a lifetime chance for key mitigation measures such as multi-level offtakes to be incorporated into the dam wall'.

The committee divided.

Ayes: Ms Cusack, Mr Franklin, Mr Mallard.

Noes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Question resolved in the negative.

Resolved, on the motion of Mr Franklin: That Recommendation 1 be amended by omitting: "That the NSW Department of Planning, Industry and Environment finalise the Lachlan Regional Water Strategy with a view to pursuing the most efficient, effective and sustainable options for addressing water security in the Lachlan Valley' and inserting instead:

'That the NSW Department of Planning, Industry and Environment finalise the Lachlan Regional Water Strategy and investigate how it can expedite funding and policy proposals for projects which improve water security and sustainability, and help mitigate the impacts of climate change'.

Resolved, on the motion of Ms Sharpe: That paragraph 3.52 be amended by omitting by:

- a) omitting 'and believes that the decision to pursue the project was premature' after 'The committee is concerned that the government has given commitments to raise the wall of Wyangala Dam before it has completed environmental assessments or developed a business case', and
- b) omitting 'no matter what is contained in the final business case and EIS' and inserting instead 'despite what is contained in the final business case and EIS.'

Mr Franklin moved: That paragraph 3.52 as amended be omitted:

'The committee is concerned that the government has given commitments to raise the wall of Wyangala Dam before it has completed environmental assessments or developed a business case. The committee is particularly troubled by suggestions, as evidenced by Minister Pavey's comments, that the project will go ahead, despite what is contained in the final business case and EIS'.

The committee divided.

Ayes: Ms Cusack, Mr Franklin, Mr Mallard.

Noes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Question resolved in the negative.

Resolved, on the motion of Mr Franklin: That paragraph 3.53 be omitted:

'It is not clear to the committee how the NSW Government would respond to any serious issues contained within the final business case and the EIS. This reflects the general view of the committee that the decision to proceed with this project had, in substance, been made. Progress on the development, approval and delivery of the proposed project'.

Resolved, on the motion of Mr Franklin: That paragraph 3.80 be amended by omitting: 'The committee is concerned that community consultation on this project has been inadequate, which is particularly concerning given the significant impacts the project will have' and inserting instead:

'The committee is concerned by evidence from some witnesses that they believe community consultation on the Wyangala Dam wall raising project has been inadequate. The committee believes that community consultation is important and should be ongoing, given the significant impacts the project will have'.

Resolved, on the motion of Mr Pearson: That a new paragraph be inserted after paragraph 3.80:

'However, the committee notes that despite the challenges caused by the COVID-19 pandemic, some consultation for raising the Wyangala Dam wall did occur'.

Resolved, on the motion of Mr Franklin: That paragraph 3.82 be amended by omitting 'The committee is particularly shocked to hear' and inserting instead 'The committee is concerned to hear'.

Resolved, on the motion of Mr Franklin: That Finding 4 be amended by omitting: 'with landholders and' after 'That WaterNSW has not sufficiently consulted'.

Resolved, on the motion of Mr Franklin: That the following new Recommendation be inserted after Finding 4:

**'Recommendation X**

The NSW Government should continue to improve the ways it provides information to individuals and communities regarding the Wyangala Dam wall raising project, especially as new reports become available'.

Ms Sharpe moved:

- a) That paragraph 3.119 be omitted: 'The committee is concerned about the extremely high cost of the project, and the limited benefits it will deliver. Media reports that note the project is now estimated to cost at least \$2.1 billion are particularly troubling'.
- b) That paragraph 3.120 be omitted: 'The committee strongly agrees with the argument that to spend over \$1 billion on a project to supply an average additional annual water yield of 21 gigalitres from an additional 650 gigalitres of storage is a complete waste of taxpayers money'.
- c) Instead insert after paragraph 3.118: 'The committee is concerned about the potentially high cost of the project for the additional annual water yield of 21 gigalitres from an additional 650 gigalitres of storage'.

The committee divided.

Ayes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Noes: Ms Cusack, Mr Franklin, Mr Mallard.

Question resolved in the affirmative.

Resolved, on the motion of Mr Franklin: That paragraph 3.121 be omitted:

'The committee is particularly alarmed by the evidence that Wyangala Dam does not fill regularly enough to justify the project, and that climate change is likely to make it even less likely that the dam will fill to capacity regularly. It is particularly galling that the project could proceed when the government's own regional water strategy concluded that the storage levels in Wyangala Dam could be consistently lower based on future climate projections. It is very likely that any raising of the Wyangala Dam wall will become a very expensive white elephant'.

Ms Sharpe moved: That Finding 5 be amended by omitting: 'That the Government has pursued the raising of the Wyangala Dam wall as a solution to water insecurity in the Lachlan Valley without sufficient evidence or due consideration of alternative solutions' and inserting instead:

'That the Government is pursuing the raising of the Wyangala Dam wall as a solution to water insecurity in the Lachlan Valley, however, is yet to demonstrate the cost effectiveness and water yield benefits of the project'.

The committee divided.

Ayes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Noes: Ms Cusack, Mr Franklin, Mr Mallard.

Question resolved in the affirmative.

Mr Franklin moved: That Finding 6 be omitted: 'That the annual yield available as a result of increasing Wyangala Dam's capacity by 50% by raising its wall provides only a marginal increase in water security', and the following new finding be inserted instead:

'That had the Wyangala Dam wall been raised in 2016, the additional water captured would have provided enough water to run the Lachlan River continuously for two years and provide enough water for towns, stock and domestic, environment flows and high security users without any additional inflows. The flood damage in Lachlan Valley communities could also have been mitigated'.

The committee divided.

Ayes: Ms Cusack, Mr Franklin, Mr Mallard.

Noes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Question resolved in the negative.

Ms Sharpe moved: 'That Finding 6 be amended by omitting 'a marginal increase in water security' and inserting instead 'a 21 gigalitre increase in water security'.

The committee divided.

Ayes: Mr Buttigieg, Ms Faehrmann, Mr Pearson, Ms Sharpe.

Noes: Ms Cusack, Mr Franklin, Mr Mallard.

Question resolved in the affirmative.

Mr Franklin moved: That Finding 7 be omitted:

'That the cost estimates for the Wyangala Dam wall project's business case, preliminary works and construction have been significantly underestimated and could cost more than three times the original figure of \$650 million'.

The committee divided.

Ayes: Mr Buttigieg, Ms Cusack, Mr Franklin, Mr Mallard, Mr Pearson, Ms Sharpe.

Noes: Ms Faehrmann.

Question resolved in the affirmative.

Resolved, on the motion of Mr Franklin:

- a) That paragraph 3.127 be amended by omitting 'The committee is not satisfied' and inserting instead 'The committee notes'
- b) That paragraph 3.128 be amended by omitting at the start: 'Specifically'

Resolved, on the motion of Mr Franklin: That paragraph 3.141 be omitted: 'The committee is deeply concerned to hear about the wide-ranging and ecologically devastating impacts of the proposed raising of Wyangala Dam wall', and the following new paragraph be inserted instead:

'The committee is concerned to hear about the potential ecologically damaging impacts of the proposed raising of the Wyangala Dam wall'.

Mr Franklin moved: That Finding 8 be amended by omitting 'will have a severe and permanent negative impact' and inserting instead 'may have an impact'.

The committee divided.

Ayes: Mr Buttigieg, Ms Cusack, Mr Franklin, Mr Mallard, Ms Sharpe.

Noes: Mr Pearson, Ms Faehrmann.

Question resolved in the affirmative.

Mr Pearson moved: That Finding 8 as amended be omitted: 'That the proposed raising of Wyangala Dam wall may have an impact on the ecology of the Lachlan River, including the floodplains and wetlands, and various fish species and migratory bird species which Australia is obligated to protect', and the following new Finding be inserted instead:

'That the proposed raising of Wyangala Dam wall is likely to have an impact on the ecology of the Lachlan River, including the floodplains and wetlands, and various fish species and migratory bird species which Australia is obligated to protect'.

The committee divided.

Ayes: Ms Faehrmann, Mr Pearson,

Noes: Mr Buttigieg, Ms Cusack, Mr Franklin, Mr Mallard, Ms Sharpe.

Question resolved in the negative.

Resolved, on the motion of Mr Franklin: That Finding 8 be amended by inserting at the end: 'which will be known once the Environmental Impact Statement is finalised'.

Resolved, on the motion of Ms Sharpe: That Finding 9 be amended by omitting 'will have' and inserting instead 'is likely to have'.

Resolved, on the motion of Mr Pearson: That paragraph 3.167 be amended by omitting: 'The committee is heartened to hear that there are reliable and proven methods of addressing water security issues that avoid the significant negative impacts of the proposed Wyangala Dam wall raising project', and inserting instead:

"The committee notes that there are reliable and proven methods of addressing water security issues available as alternatives to the Wyangala Dam wall raising project'.

Resolved, on the motion of Mr Franklin: That paragraph 3.168 be amended by omitting: 'Coincidentally, the raising of the Wyangala Dam wall is expected to yield an extra 21 GL per year. The committee is convinced that water efficiency projects are a far superior solution to addressing water security in the Lachlan region than compared to raising the height of Wyangala Dam wall, and recommends that the government investigate the funding and implementation of such works as a matter of urgency', and instead inserting:

"The committee is convinced that water efficiency projects are an important part of the solution to addressing water security in the Lachlan region. The Government should investigate the funding and implementation of water efficiency measures such as the upgrading of Jemalong Irrigation infrastructure, upgrading piping, stock and domestic channels and removing banks across floodplains along the Lachlan Valley'.

Resolved, on the motion of Mr Franklin: That Recommendation 2 be omitted:

"That the NSW Government investigate alternatives to addressing water security in the Lachlan Valley, such as the funding and implementation of upgrading Jemalong Irrigation infrastructure, as a matter of urgency',

and the following new recommendation be inserted instead:

"That the NSW Government investigate the funding and implementation of water efficiency measures such as the upgrading of Jemalong Irrigation infrastructure, upgrading piping stock and domestic channels and removing banks across floodplains along the Lachlan Valley'.

Mr Franklin moved: That paragraph 3.170 be omitted: "The committee recommends that based on the evidence outlined in this chapter, the NSW Government not proceed with the raising of the Wyangala Dam wall. There are significant and persuasive arguments against the project, including the high cost, limited additional water yielded, and the impact of climate change on reducing inflows, meaning less frequent filling of the dam. Additionally, the project would negatively impact First Nations people, cultural sites and artefacts, as well as having irreversible ecological impacts on floodplains, fish and bird species, and river health'.

The committee divided.

Ayes: Mr Buttigieg, Ms Cusack, Mr Franklin, Mr Mallard, Ms Sharpe.

Noes: Mr Pearson, Ms Faehrmann.

Question resolved in the affirmative.

Mr Franklin moved: That Recommendation 3 be omitted:

"That the NSW Government not proceed with the raising of the Wyangala Dam wall due to the significant and persuasive arguments against the project, including the:

- extremely high cost

- limited additional water yielded
- impact of climate change reducing inflows into Wyangala Dam, meaning less frequent filling of the dam
- impacts on First Nations people, cultural sites and artefacts
- irreversible ecological impacts on floodplains, fish and bird species and general river health'.

The committee divided.

Ayes: Mr Buttigieg, Ms Cusack, Mr Franklin, Mr Mallard, Ms Sharpe.

Noes: Mr Pearson, Ms Faehrmann.

Question resolved in the affirmative.

Resolved, on the motion of Ms Sharpe: That a new recommendation be inserted after paragraph 3.170:

**'Recommendation X**

That the NSW Government address significant concerns raised during this inquiry in the business case and environmental impact studies. The Government must take into consideration both the arguments for and against the project, with particular emphasis given to:

- its high cost
- limited water yielded
- impact of climate change reducing inflows into Wyangala Dam, meaning less frequent filling of the dam
- impacts on First Nations people, cultural sites and artefacts
- ecological impacts on floodplains, fish and bird species and general river health'.

Resolved, on the motion of Mr Pearson: That:

- the draft report as amended be the report of the committee and that the committee present the report to the House;
- the committee secretariat correct any typographical, grammatical and formatting errors prior to tabling;
- the committee secretariat be authorised to update any committee comments where necessary to reflect changes to recommendations or new recommendations resolved by the committee;
- dissenting statements be provided to the secretariat within 24 hours after receipt of the draft minutes of the meeting;
- the report be tabled on Thursday 18 March 2021;
- the Chair to advise the secretariat and members if they intend to hold a press conference, and if so, the date and time.

**7. Adjournment**

The committee adjourned at 11.48 am until Monday 3 May 2021, Public Hearing in the Jubilee Room.

Madeleine Dowd

**Clerk to the Committee**

## Appendix 5 Dissenting statements

**The Hon Ben Franklin MLC, the Nationals,  
The Hon Shayne Mallard MLC, Liberal Party  
The Hon Catherine Cusack MLC, Liberal Party**

The NSW Government has learnt from the droughts that have been a near constant feature of the past 20 years and is committed to building the infrastructure needed to secure Lachlan Valley water supplies.

The Lachlan Valley has always been a valley of extremes, experiencing record breaking droughts and, as in 2016, a major flood that damaged local infrastructure, destroyed crops and saw the region's major arterial roads, including the Newell Highway, cut for up to seven weeks.

Had the dam wall been higher in 2016, capturing an additional 650 gigalitres of water that entered the storage during this flood could have been captured and it would have provided more than two extra years of water to run the Lachlan River and supply every town, stock and domestic and high security water user.

Communities during the last drought made it clear that that having enough water to support local employment opportunities is a critical human need and is a core responsibility of government. The Government through the Regional Water Strategies is working with the communities to identify how we are going to provide water security in the face of increasing climate extremes. The Dam wall raising is an important component of improving water security in the Lachlan Valley, however there are other projects and policy solutions that will need to be undertaken in the Lachlan Valley to improve maximise water security outcomes.

To talk in certainties about potential construction impacts and costs is premature and highly speculative and serves only to create uncertainty among the communities potentially impacted by this project.

The NSW Government has committed to adopting best practises when consulting with all stakeholders and with restrictions on face to face meetings associated with the COVID-19 Pandemic being relaxed consultation will improve.

## Appendix 5 Dissenting Statements

### Ms Cate Faehrmann MLC, The Greens

1. **Recommended Finding:** That the cost estimates for the Wyangala Dam wall project's business case, preliminary works and construction have been significantly underestimated and could cost more than three times the original figure of \$650 million'.

Throughout this inquiry, the Minister and her department have been unable to provide the rationale behind the original cost estimate of \$650 million for the Wyangala dam wall raising project. The committee attempted several times to get an updated cost estimate from the Water Minister and her department throughout the Inquiry to no avail. However, in early 2021, a number of media articles were published, which mentioned government documents uncovered by a Return to Orders in the NSW Legislative Council which revealed that the project could potentially triple to as much as \$2.1 billion. It was therefore unsatisfactory that, considering the potentially significant investment of this project, the committee did not receive any updated projected costs for this Inquiry to be able to examine against the projected marginal increase in water security delivered by the project.

2. **Recommended Finding:** That the proposed raising of the Wyangala Dam Wall will have a severe and permanent negative impact on the ecology of the Lachlan River, including the floodplains and wetlands, and various fish species and migratory bird species which Australia is obligated to protect.

The evidence regarding the severe and permanent negative impacts of dams, received by esteemed scientists with decades of experience working in the field of dams, was overwhelming. This evidence is documented throughout the report to justify the finding that raising the Wyangala Dam wall will have a severe and permanent negative impact on the Lachlan River, including the floodplains and wetlands, and various fish species and migratory bird species which Australia is obligated to protect.

1. **Recommendation:** That the NSW Government not proceed with the raising of the Wyangala Dam wall due to the significant and persuasive arguments against the project, including the:

- extremely high cost
- limited additional water yielded as a result
- impact of climate change reducing inflows into Wyangala Dam, meaning less frequent filling of the dam
- impacts on First Nations people, cultural sites and artefacts
- irreversible ecological impacts on floodplains, fish and bird species and general river health.

I believe that the evidence detailed in this report, along with the majority of submissions and evidence provided by witnesses, supports a recommendation to the NSW Government that it not proceed with the project, given the impacts it will have on downstream users and the environment in particular.

There are significant and persuasive arguments against the project, including the high cost, limited additional water yielded, and the impact of climate change on reducing inflows, meaning less frequent filling of the dam. Additionally, raising the Wyangala Dam wall will negatively impact First Nations people, cultural sites and artefacts, as well as having irreversible ecological impacts on floodplains, fish and bird species, and river health.

The NSW Government has not considered alternatives that could deliver water security in the Lachlan Valley, and has instead made public statements about its determination to raise the Wyangala Dam wall without a business case or adequate environmental studies. I believe a Recommendation to the Government to not proceed with the dam was warranted.





