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Environmental Impact Statement – Chapter 6: Consultation

Warragamba Dam Raising

Reference No. 30012078 Prepared for WaterNSW 10 September 2021

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6 Consultation

This chapter summarises the stakeholder and community consultation undertaken before and during preparation of this environmental impact statement (EIS). It includes details of stakeholders consulted, consultation methods and an overview of the key issues raised. The EIS addresses any concerns and outlines proposed future consultation initiatives.

Communication and engagement activities were undertaken to address the relevant Secretary's Environmental Assessment Requirements (SEARs) shown in Table 6-1.

Table 6-1.	Secretary's	environmental	assessment	requirements:	consultation
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Desired performance outcomes	Secretary's Environmental Assessment Requirements ¹	Where addressed
4. Consultation Desired performance outcomes: The Project is developed with meaningful and effective engagement during Project design and delivery.	 The Project must be informed by consultation, including with relevant government agencies, infrastructure and service providers, special interest groups, affected landowners, businesses, and the community. 	This chapter
	 The Proponent must document the consultation process and demonstrate how the Project has responded to the inputs received. 	Sections 6.4 and 6.6
	3. The Proponent must describe the timing and type of community consultation proposed during the design and delivery of the Project, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.	Section 6.8

1 Note: this chapter specifically addresses SEAR 4 in addition to those general requirements of the SEARs applicable to all chapters and as identified as such in Chapter 1 (Section 1.5, Table 1-1).

6.1 Consultation on the Hawkesbury-Nepean Valley Flood Risk Management Strategy

The Project is the key infrastructure action of the NSW Government's Hawkesbury-Nepean Valley Flood Risk Management Strategy (Flood Strategy) (Infrastructure NSW (INSW) 2017). Project details are provided in:

- Chapter 3: Strategic justification and need
- Chapter 4: Project development and alternatives
- Chapter 5: Project description.

Infrastructure NSW (INSW) is overseeing and coordinating delivery of the range of Flood Strategy measures, including the Warragamba Dam Raising. To support the Flood Strategy and the Project, the NSW Government's Hawkesbury-Nepean Valley Flood Management Taskforce began a community engagement program in February 2016, which is outlined in Table 6-2. The aim of the Flood Strategy is to reduce the risk of flooding impacts through an integrated suite of outcomes across the disaster risk management spectrum of: prevent/mitigate, prepare, respond, and recover. The program is informed by research that showed public awareness of flooding and its impacts were low, with the last major flood more than 25 years ago in 1990.

Under Outcome 5 of the Flood Strategy, a Community Resilience program was developed and is being delivered by INSW in partnership with multiple agencies and floodplain communities. The program aims to increase and sustain the Hawkesbury-Nepean Valley community's flood awareness and preparedness and their ability to respond to and recover from floods. It comprises 20 projects grouped within three streams:

broad awareness and preparedness

- outreach for communities of concern
- education and engagement for young people and their schools.

Table 6-2. Flood Strategy Community Resilience Program

Activity	Details
Three-day community event in Windsor to mark the 150th anniversary of the June 1867	 Engagement with the community to increase awareness of the potential for catastrophic flooding, and to educate the community about ways to access information during an emergency
Hawkesbury-Nepean Valley flood – the largest on record	 Promote awareness of real-time impacts and learn the best ways to evacuate in a flood event
	 Communicate the benefits of the Warragamba Dam Raising Project to manage flood flows from the Warragamba catchment as the major contributor to flooding in the valley.
Parliamentary, Council and interest group briefings	 Senior representatives of INSW have held briefings with local councils, government agencies and special interest groups about the Flood Strategy, as well as the proposed dam raising.
Community information days	 Community information days at: three Hawkesbury Shows Windsor Markets two Warragamba DamFest events Yandhai Nepean River crossing opening at Penrith.
Flood Strategy community newsletter	 INSW distributed 75,000 copies of a Flood Strategy community update newsletter providing context and the benefits of the Project in the Flood Strategy Content was displayed on the INSW website.
Stakeholder briefings	 INSW undertook more than 40 stakeholder briefings and engagements on matters related to both the Flood Strategy and the Project.

Consultation and engagement activities undertaken by INSW are summarised in Appendix A of Appendix D (Community Issues Report) and provide context for the approach taken to inform and engage with stakeholders and the community during preparation of this EIS.

6.2 EIS consultation process

Consultation undertaken for the EIS involved informing, educating, and capturing feedback from community and stakeholders. Key objectives were to:

- build on the consultation program activities undertaken for the Flood Strategy
- build awareness and improve the broader community's understanding of the Project and its primary purpose of reducing flood risk and impact to downstream communities
- identify key community members/groups of stakeholders and build long-term relationships for ongoing communication
- provide accessible and targeted opportunities for the community and stakeholders to provide feedback on the Project
- ensure community and stakeholder issues were identified and considered during preparation of the socioeconomic impact assessment (SEIA) and technical impact assessments
- capture community and stakeholder feedback to identify potential mitigation measures for environmental and social impacts
- provide accessible plain English communication materials to increase the knowledge and understanding of need, impacts and benefits of the Project upstream, downstream, and adjacent to Warragamba Dam

- raise awareness of the planning approval process for the Project and how the community and stakeholders could provide input
- inform and refine ongoing engagement and consultation
- provide timely responses to questions about the Project from the community and other stakeholders.

6.3 Key stakeholders

Key stakeholders identified for the Project include:

- residents and businesses near the Project construction footprint
- the broader community and interested community groups
- government including local government, relevant state and federal agencies and elected representatives
- Traditional Custodians and Registered Aboriginal Parties
- directly affected property owners
- interest groups including industry, businesses, farmers, fishermen and community groups
- special interest groups
- infrastructure and service providers including emergency service providers
- media.

6.4 Consultation and engagement activities during preparation of the EIS

6.4.1 Overview

A combination of communication tools and consultation activities were used to inform communities, interest groups and stakeholders. Consultation activities undertaken from January 2018 to August 2019 included:

- community update newsletters
- community information displays
- interviews
- surveys
- workshops
- letters
- other communication channels.

These are described in Appendix D (Community Issues Report, Appendix A) and summarised below.

6.4.2 Community update newsletters

Community update newsletters were provided at key times during EIS preparation.

The January 2018 Community update newsletter provided:

- information on the need for the dam raising
- explanation of the environmental impact assessment process and schedule of activities through the planning approval and business case phases.

The September 2018 Community update newsletter provided:

- the outcomes of the consultation activities during the initial phase
- information on some of the impacts and benefits of the Project
- a reminder to stakeholders of their ability to contribute to the EIS.

The Summer 2018/2019 Community update newsletter provided:

- information about the current operation of Warragamba Dam and its auxiliary spillway
- the consultation effort and next steps in engaging with the community
- the existing impacts major floods would have on downstream communities
- the science and engineering effort underway to test the impact of the Project.

Additional Community Update newsletters are planned for the public exhibition period during 2021. The first will announce the launch of the public exhibition and provide information on available tools and means of engaging with consultation activities. The second targeted update will focus on construct3ion-related impacts. Towards the end of the exhibition period there will be a Community Update newsletter that will outline next steps following public exhibition.

6.4.3 Community information displays

Eight community information displays were held at strategic regional locations throughout the Study Area. The Project team were present to answer questions and provide information about the Project. Displays were located in communities that would experience direct impacts or receive immediate benefits from the Project. Table 6-3 provides a list of the community information displays held during this period. Each was advertised in local newspapers, council buildings and associated websites.

Location/community event	Date	Time
Warragamba Dam Visitor Centre	3 February 2018	11am – 3pm
Westfield Penrith	8 February 2018	6pm – 9pm
Windsor Riverview Shopping Centre	15 February 2018	5pm – 8pm
North Richmond Marketplace	22 February 2018	6pm – 9pm
Wisemans Ferry Community Centre	28 February 2018	5pm – 8pm
Hawkesbury Annual Show	20 April 2018/21 April 2018	2pm – 8pm/12pm-6pm
DamFest Warragamba	21 October 2018	9am – 4pm
Yandhai Nepean Crossing Opening	28 October 2018	10am – 1pm

Table 6-3. Location, date, and tin	ne of community information displays
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These displays provided insight into community interests and common views. The feedback from these displays provided guidance on what needed to be addressed in the EIS.

6.4.4 Interviews

Interviews were held with representative organisations in early 2018 to collect information on the socio-economic indicators, identification of vulnerable groups, and the potential benefits and impacts of the Project for different community groups. Examples of these stakeholders included:

- local government authorities in the study area
- Hawkesbury State Emergency Services (SES)
- WaterNSW
- Turf Australia
- National Parks and Wildlife Service (NPWS)
- NSW Police
- Cumberland Rural Fire Service (RFS).

In all, 16 interviews with representative organisations contributed to building awareness and understanding of the Project and identifying key stakeholder issues and community concerns. Feedback was used in the development of mitigation measures for impacts on affected communities, particularly those most vulnerable in major flooding events. These are addressed in Chapter 21 (Socio-economic, land use and property).

6.4.5 Surveys

Phone, internet and face-to-face surveys were undertaken during November and December 2018. Prior to commencement of the survey engagement, relevant local and state government officials were notified and advised to direct enquiries to the Project team.

6.4.5.1 Phone

The key objectives of the phone surveys were to capture attitudes towards flood risk perception and the Project. Survey participants were identified through an analysis of social and location specific vulnerability. This included organisations representing the interests of identified vulnerable sectors of LGAs upstream and downstream of the dam. The Project was introduced as a key component of the Flood Strategy, and information was provided about aspects of construction and operation. Over 310 organisations were approached, and a total of 69 surveys were completed.

6.4.5.2 Internet

The key objective of the web-based survey was to allow participants to provide more detailed information regarding perceived Project-related effects in specific localities including:

- upstream of the dam
- downstream of the dam
- in Warragamba, Silverdale, and Wallacia.

Respondents were shown a visual representation and supporting information explaining the predicted effects of a 1 in 100 chance in a year flood event. They were then asked to consider this information and provide details as to how such effects might translate to benefits and impacts, who would be most affected and how impacts might be mitigated, and benefits realised. Respondents were able to select more than one of the three location options. An email invitation to participate in the survey was sent to 197 stakeholder organisations. A total of 61 surveys were completed.

6.4.5.3 Face to face

This survey aimed to engage businesses across the study area to understand the perception of potential impacts and benefits for employees and customers in relation to Project construction (specific to Warragamba, Silverdale, and Wallacia communities), and Project operation on upstream and downstream communities. A total of 170 businesses were doorknocked and invited to participate in the business survey, with a total of 50 business surveys completed.

6.4.6 Workshop

A workshop with the local community was held in Warragamba to discuss potential construction-related impacts and Project benefits.

The communities of Warragamba, Silverdale, and Wallacia joined the Project team in conversations on how to manage and explore opportunities for the local environment, traffic and transport and the economy during construction, should the proposal be approved.

Stakeholders were asked:

- 1. Have we identified and interpreted the impacts correctly —are there other local impacts?
- 2. How do you think the impacts on the local community could be avoided or reduced?
- 3. Do you have ideas about benefits that could be provided to the local community as part of the management plans and how these benefits could be realised?

The insights helped to inform the EIS.

6.4.7 Other communication channels

The catchment of affected stakeholders covers a broad geographic spread of communities upstream, downstream, and neighbouring the Dam. Relevant information, diagrams and maps were provided via the Project website, information phone line and email, and through the media. Any feedback from the phone line or email was also recorded and a response made. A summary of other communication channels is presented in Table 6-4 and covers the period of communication from October 2017 to August 2021.

Table 6-4. Other communication channels

Activity	Details
Community	1800 932 066
information phone line	There have been 284 calls to the Project phone line.
Community email	wdr@waternsw.com.au
address	There have been 1,157 emails to the Project email address.
Website	www.waternsw.com.au/projects/greater-sydney/warragamba-dam-raising
	The website includes information about the EIS process, community consultation, design, answers to commonly asked questions, and how to contact the Project team.
	There have been 39,082 page views on the website.
Letters	There have been 356 letters issued to property owners. Letters received by the Project have been recorded and have informed the EIS.
Media	INSW provided updates to media outlets to broadcast updates and information on the EIS process and dam raising proposal.

6.5 Aboriginal cultural heritage consultation

As part of the Aboriginal cultural heritage assessment (ACHA), 22 representatives from the Aboriginal community registered to be involved in the ACHA process for the Project. These representatives are Registered Aboriginal Parties (RAPs). Consultation was in accordance with the NSW Government's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW) 2010a).

A description of the consultation activities undertaken in relation to the ACHA is included in Chapter 18 (Aboriginal cultural heritage) and detailed in Appendix K (Aboriginal Cultural Heritage Assessment Report). These activities included:

- identifying and contacting Aboriginal parties with connection to land
- consultation with RAPs on the methodology for the ACHA
- participation of RAPs in field surveys and the recording of heritage and cultural sites
- review of the draft ACHA and provision of cultural information for the ACHA by the RAPs
- regular progress meetings with RAPs.

The RAPs involvement in the ACHA was the primary means of incorporating feedback on Aboriginal cultural heritage into the EIS.

Some RAPs are members of the Gundungurra Aboriginal Heritage Association Incorporated and the Gundungurra Tribal Council Aboriginal Corporation. Both the Gundungurra Aboriginal Heritage Association Incorporated and the Gundungurra Tribal Council Aboriginal Corporation hold significant cultural heritage connections to the Project study area and are party to an Indigenous Land Use Agreement (ILUA) negotiated under the Commonwealth *Native Title Act 1993*.

The Project team has met six times with the Gundungurra ILUA Consultative Committee, which includes representatives of the Gundungurra Aboriginal Heritage Association Incorporated and Gundungurra Tribal Council Aboriginal Corporation, to provide updates on the Project and progress of the ACHA. These meetings took place on the following dates:

- 17 August 2017
- 16 November 2017
- 27 March 2018
- 23 August 2018
- 27 June 2019
- 22 August 2019.

WaterNSW attended an additional meeting with the IULA on 11 December 2020.

Further engagement with the RAPs during 2021 comprised:

- a voluntary escorted trip to the Warragamba Special Areas on 6 February 2021
- a workshop on 1 June 2021 at the Warragamba Dam Visitors Centre related to the further revisions to the ACHA since the previous round of consultation with the RAPs.

Consultation related to the Cultural Values Assessment Report (CVAR, Annex 2 to Appendix K) comprised:

- initial contact with RAPs in mid October 2020 regarding the proposed cultural values assessment methodology for review and comment
- follow up to RAPS on 4 November 2020 to all RAPs providing a summary of the comments provided on the proposed cultural values assessment methodology, the finalised cultural values assessment methodology as an attachment, and a request for nomination of Aboriginal cultural knowledge holders
- email sent to all RAPs on 12 November 2020 acknowledging NAIDOC Week and extending the timeframe for the nomination of Aboriginal cultural knowledge holders to 20 November 2020
- email to all RAPs in mid-January 2021 inviting them to contribute to the assessment through sharing knowledge regarding the cultural values of the study area
- provision of the draft CVAR to the RAPs in early April 2021 for review and comment
- a face-to-face meeting at Warragamba Dam Visitors Centre on 1 June 2021 to workshop the comments on the draft CVAR.

On three occasions the Project team met with the Greater Blue Mountains World Heritage Area (GBMWHA) Advisory Committee, which includes Aboriginal representatives, providing progress and findings of the ACHA and EIS. Appendix K (Aboriginal cultural heritage assessment report) presents detailed information on feedback from RAPs and responses to issues raised by the RAPs.

6.6 Summary of inputs received during EIS preparation

6.6.1 Introduction

The following tables summarise feedback received from the community and stakeholders including government agencies, infrastructure and service providers, special interest groups, affected landowners, businesses and the community as required by the SEARs (4.1).

Feedback has been categorised by environmental aspect and specific issue. The relevant EIS chapter that provides a response to each specific issue has been referenced in the tables. Feedback was also used to develop mitigation measures in Chapter 21 (Socio-economic, land use and property) and other EIS chapters.

6.6.2 Inputs from government agencies

(NOTE: the names of agencies consulted may refer to the agency name prior to the March 2019 election. Several agencies were renamed, as outlined in Table 6-5).

Feedback received from government agencies and where responses are provided in the EIS are summarised in Table 6-6. Other government agencies provided feedback on the Project to the Department of Planning, Industry and Environment (DPIE) during preparation of the SEARs for the Project.

Table 6-5. NSW agency title changes after the March 2019 election.

Prior to the March 2019 election	Current
Department of Primary Industries – Crown Land	Department of Planning, Industry and Environment – Crown Lands
Department of Primary Industries – Fisheries	Department of Primary Industries Fisheries
Office of Environment and Heritage	Largely amalgamated into Department of Planning, Industry and Environment; heritage matters sit with Heritage NSW which sits within the Community Engagement Group within the Department of Premier and Cabinet.

At the Commonwealth level, the Environment portfolio within the former Department of Energy and the Environment (DoEE) was incorporated into the new Department of Agriculture, Water and the Environment (DAWE) which commenced operation on 1 February 2020.

Table 6-6. Inputs from government agencies

Category	Feedback	Summary response and EIS chapter location			
Commonwealth Depar	Commonwealth Department of the Environment and Energy / Agriculture, Water and the Environment				
Biodiversity	Matters relating to World heritage are presented in:				
		Chapter 17 – Non-Aboriginal heritage			
		Chapter 20 – Protected and sensitive lands			
		Appendix J – World Heritage assessment report			
	Assessment requirements for	Requirements for MNES assessment have been included in the revised SEARs and are presented in:			
	Matters of National	Chapter 12 – Matters of national environmental significance - biodiversity			
	Environmental Significance (MNES)	Appendix F5 – Matters of national environmental significance – biodiversity			
	Potential offset requirements for biodiversity	A biodiversity offset strategy (BOS) was prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts for MNES and World Heritage impacts, and is presented in:			
		Chapter 13 – Biodiversity offset strategy			
		Appendix F6 – Biodiversity offset strategy report			
Greater Sydney Commission					
Flooding	Map projections capturing the	Elooding projections are presented in:			
lioounig	extent of flood waters	Chanter 15 – Elogding and hydrology			
		Appendix H1 – Elooding and hydrology			
		Appendix HI – Flooding and hydrology assessment report			
NSW Department of P	NSW Department of Primary Industries – Crown Land				
Socio-Economic, land	Crown land temporarily	Impacts and benefits of the Project to property owners are presented in:			
use and property	inundated upstream	Chapter 21 – Socio-economic, land use and property			
		Appendix M – Socio-economic, land use and property assessment report			
NSW Department of P	rimary Industries – Fisheries				
Design	Provision for fish migration	Fish passage and migration is presented in:			
		Chapter 11 – Aquatic ecology			

Category	Feedback	Summary response and EIS chapter location		
NSW National Parks ar	NSW National Parks and Wildlife Service			
Aboriginal heritage	Impacts on Aboriginal sites from upstream temporary inundation	An ACHA was undertaken as part of the environmental assessment process and is presented in: Chapter 18 – Aboriginal cultural heritage Appendix K – Aboriginal cultural heritage assessment report		
Biodiversity	Increased temporary upstream inundation impacts on native flora, contributing to weed growth and population growth of feral pigs Funding of weed and pest control	Biodiversity studies were undertaken to assess the upstream impacts of a temporary increase in inundation, including impacts on threatened plants, animals and ecosystems and identify measures to mitigate impacts where possible, and are presented in: Chapter 8 – Biodiversity upstream Appendix F1 – Biodiversity assessment report – upstream A BOS was also prepared which contains offsets, mitigation measures and funding to mitigate biodiversity impacts, and is presented in: Chapter 13 – Biodiversity offset strategy Appendix F6 – Biodiversity offset strategy report A National Parks Environmental Management Plan (EMP) would be prepared which would contain mitigation measures which would include feral animal, weed control and funding. This is presented in: Chapter 2 – Statutory and planning framework		
Climate change risk	Climate change impacts on flood events	A climate change risk assessment for the Project was prepared and is presented in: Chapter 14 – Climate change risk Appendix G – Climate change assessment report		
Socio-economic, land use and property	Floodplain development	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.		
Visual amenity	Visual and associated tourism impacts from vegetation mortality	An assessment of the visual amenity and landscape impacts of the Project is presented in: Chapter 25 – Visual amenity Appendix P – Landscape character and visual impact assessment report Potential impacts to tourism and bushland amenity is presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report		
World Heritage	Prioritising development over protecting the area's World Heritage status	An assessment of the potential impact to World Heritage Areas is presented in: Chapter 20 – Protected and sensitive lands Appendix J – World Heritage assessment report		

Category	Feedback	Summary response and EIS chapter location	
		Managing future development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.	
		The overall justification for the Project including consideration of World Heritage impacts in relation to the flood mitigation is presented in:	
		Chapter 29 – EIS synthesis. Project justification and conclusion	
NSW Office of Environ	ment and Heritage		
Biodiversity	Biodiversity assessment and field survey approach	Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identify measures to mitigate impacts where possible, and are presented in:	
		Chapter 8 – Biodiversity upstream	
		Appendix F1 – Biodiversity assessment report – upstream	
		Chapter 9 – Downstream ecological assessment	
		Appendix F2 – Downstream ecological assessment	
		Chapter 10 – Biodiversity construction area	
		Appendix F3 – Biodiversity assessment report – construction area	
		A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in:	
		Chapter 13 – Biodiversity offset strategy	
		Appendix F6 – Biodiversity offset strategy report	
Blacktown City Council			
Aboriginal heritage	Impacts on Aboriginal sites	An ACHA was undertaken as part of the environmental assessment process, and is presented in:	
	from upstream temporary	Chapter 18 – Aboriginal cultural heritage	
	inundation	Appendix K – Aboriginal cultural heritage assessment report	
Biodiversity	Biodiversity impacts	Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identify measures to mitigate impacts where possible, and are presented in:	
		Chapter 8 – Biodiversity upstream	
		Appendix F1 – Biodiversity assessment report - upstream	
		Chapter 9 – Downstream ecological assessment	
		Appendix F2 – Downstream ecological assessment	
		Chapter 10 – Biodiversity construction area	
		Appendix F3 – Biodiversity assessment report – construction area	

Category	Feedback	Summary response and EIS chapter location
		A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in:
		Chapter 13 – Biodiversity offset strategy
		Appendix F6 – Biodiversity offset strategy report
Flooding	Downstream flood risk awareness	Improving the downstream flood risk awareness within communities is not part of the scope for this Project but is addressed in outcome four (accessible contemporary flood risk information) and outcome five (an aware, prepared and responsive community) of the Flood Strategy.
	Backwater flooding affecting Blacktown, Eastern Creek and	Backwater flooding impacts along South and Eastern Creeks have been modelled as part of the Flood Strategy and for the Project. Details of modelling outcomes are presented in:
	South Creek	Chapter 15 - Flooding and hydrology
		Appendix H1 – Flooding and hydrology assessment report
	Dam raising construction method and safety risks	The design, construction and operation of the Project will comply with state, national and international dam safety guidelines. These are being applied to the Project and are presented in:
		Chapter 5 – Project description
		Chapter 16 – Health and safety
Socio-economic, land use and property	Floodplain developments	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.
	Impact of Project on property insurance	Insurance premiums are determined independently by insurance companies. A reduction in flood risk may influence flood insurance premiums but is not part of the scope for this Project.
	Flooding of social infrastructure (for example, Riverstone Fire	The Project would reduce the extent and duration of flooding downstream which is likely to reduce the risk of flood damage to social infrastructure, as presented in:
	Station)	Chapter 16 – Health and safety
		Chapter 21 – Socio-economic, land use and property
		Appendix M – Socio-economic, land use and property assessment report
Traffic and transport	Potential flood damage to low- lying transport networks (including rail bridges)	The Project will result in most bridge river crossings being open for longer while some would no longer be closed in certain flood events. There will be some low-lying bridges on the main river channel that may experience longer periods of flooding due to the discharge of the flood mitigation zone, as presented in:
		Chapter 24 – Traffic and transport Appendix $Q = Traffic and transport assessment report$
		Appendix O = frame and transport assessment report

Category	Feedback	Summary response and EIS chapter location
Blue Mountains City Co	ouncil	
Aboriginal heritage	Impacts on Aboriginal sites from upstream temporary inundation	An ACHA was undertaken as part of the environmental assessment process, as presented in: Chapter 18 – Aboriginal cultural heritage Appendix K – Aboriginal cultural heritage assessment report
Alternatives	Lowering the Full Supply Level (FSL) and using the desalination plant as alternative to the Project	Lowering the FSL and using desalinated water is not the intent of the Project. This EIS provides an assessment of how raising the dam is intended to reduce the threat to life and property from flood water discharge, as presented in: Chapter 4 – Project development and alternatives
Biodiversity	Biodiversity impacts outweighed by flood mitigation	The justification for the Project is provided in: Chapter 3 – Strategic justification and Project need Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in: Chapter 8 – Biodiversity upstream Appendix F1 – Biodiversity assessment report – upstream Chapter 9 – Downstream ecological assessment Appendix F2 – Downstream ecological assessment Chapter 10 – Biodiversity construction area Appendix F3 – Biodiversity assessment report – construction area A BOS was also prepared which contains mitigation measures and funding to mitigate biodiversity impacts, as presented in: Chapter 13 – Biodiversity offset strategy Appendix F6 – Biodiversity offset strategy report The overall justification for the Project including consideration of biodiversity impacts in relation to the flood mitigation, as presented in: Chapter 29 – DES Symbolis Project justification and conclusion
Climate change risk	Climate change affecting the likelihood and severity of flood events	A climate change risk assessment for the Project has been prepared, as presented in: Chapter 14 – Climate change risk Appendix G – Climate change assessment report
Socio-economic, land use and property	Floodplain development	Managing future development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.

Category	Feedback	Summary response and EIS chapter location
	Upstream flooding leading to	The potential impacts on tourism is assessed and presented in:
	tourism and economic impacts	Chapter 21 – Socio-economic, land use and property
		Appendix M – Socio-economic, land use and property assessment report
Visual amenity	Impacts to views of the Blue Mountains National Park from	Potential visual impacts from loss or change in vegetation due to the Project would not be visible from Echo Point. An assessment of the visual amenity and landscape impacts of the Project is presented in:
	Echo Point	Chapter 25 – Visual amenity
		Appendix P – Landscape character and visual impact assessment report
Water hydrology	Increasing permanent water storage	The Project will be approved, designed, and operated for flood mitigation and not to increase the FSL. A full description of the Project is presented in:
		Chapter 5 – Project description
World Heritage	Prioritising development over	An assessment of the potential impacts on the GBWMHA is presented in:
	protecting World Heritage	Chapter 20 – Protected and sensitive lands
	Areas	Appendix J – World Heritage assessment report
		Managing future development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.
		The overall justification for the Project including consideration of World Heritage impacts in relation to the flood mitigation is presented in:
		Chapter 29 – EIS synthesis, Project justification and conclusion
Camden Council		
Protected and	Impacts on National Parks	The areas of National Parks potentially experiencing increased temporary inundation are presented in:
sensitive land		Chapter 20 – Protected and sensitive lands
Socio-economic, land	Urban development increasing	Floodplain development is not part of the scope for this Project but is addressed in outcome three (strategic and
use and property	flood impacts on the Hawkesbury-Nepean Valley	integrated land use and road planning) of the Flood Strategy.
		Flood modelling has considered future development scenarios, as presented in:
		Chapter 15 – Flooding and hydrology
		Appendix H1 – Flooding and hydrology assessment report

Category	Feedback	Summary response and EIS chapter location
Hawkesbury City Coun	cil	
Flooding	Impacts of the Project on flood- prone and vulnerable communities	The reduction in flooding in the Hawkesbury-Nepean Valley from the Project is presented in: Chapter 15 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report The potential benefits of the Project to flood-prone and vulnerable communities are presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report
	Downstream flood risk awareness	Improving the downstream flood risk awareness within communities is not part of the scope for this Project but is addressed in outcome four (accessible contemporary flood risk information) and outcome five (an aware, prepared and responsive community) of the Flood Strategy.
Socio-economic, land use and property	Impacts on turf farms and landscaping suppliers	The Project aims to reduce flood extents and durations, particularly around Richmond and Windsor where many turf farms are located, as presented in: Chapter 15 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report The economic impacts on agriculture and turf farms of reduced flooding is presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report
	Development pressures on the Hawkesbury area	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.
Soils	Geomorphology impacts	Potential geomorphology impacts of the Project are presented in: Chapter 22 - Soils Appendix N2 – Geomorphology assessment report
Traffic and transport	Upgrades to flood evacuation routes Flood evacuation exercises	Upgrades to flood evacuation routes is not part of the scope for this Project but is addressed in outcome eight (adequate local roads for evacuation) of the Flood Strategy. Undertaking flood evacuation planning and evacuation exercises is not part of the scope for this Project but is addressed in outcome seven (best practice emergency response and recovery) of the Flood Strategy.

Category	Feedback	Summary response and EIS chapter location
The Hills Shire Council		
Health and safety	Dam raising construction method and safety risks	All upgrades of Warragamba Dam including the design, construction and operation of the Project will comply with state, national and international dam safety guidelines, as presented in: Chapter 16 – Health and safety
Socio-economic, land use and property	Impacts to river-based tourism	The Project would reduce the extent and duration of large flood events. However, during the discharge of the flood mitigation zone there may be longer low-level flooding. The impacts on river-based tourism are presented in: Chapter 21– Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report
Water supply	Increasing permanent water storage	The Project will be approved, designed, and operated for flood mitigation and not to increase the FSL. A full description of the Project is presented in: Chapter 5 – Project description
Water hydrology	Impact of higher water velocities	The Project would result in reduced peak velocities in flood events with longer periods of higher velocities due to the discharge of the flood mitigation zone, as presented in: Chapter 15 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report
Hornsby Shire Council	1	
Biodiversity	Increases in turbidity and impacts on aquatic biodiversity	The Project would not result in increased turbidity in the estuarine areas of the Hawkesbury River, with no impact on aquatic biodiversity in this area as presented in: Chapter 11 – Aquatic ecology Appendix F4 – Aquatic ecology assessment report Chapter 27 – Water quality Appendix Q – Water quality assessment report
Climate change risk	Accuracy of flood modelling	With projected climate change the flood risk is predicted to increase, as presented in: Chapter 15 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report
Flooding	Flood impacts at Brooklyn and Dangar Island	The Flood Study did not incorporate this area because the Project would not have impacts or benefits this far downstream.
Health and safety	Impacts of flood debris on navigation	The Project would result in a reduction in peak flood extents and velocities which in turn should result in a reduction in the generation of flood debris. The reduction in peak flood characteristics is presented in: Chapter 15 – Flooding and hydrology

Category	Feedback	Summary response and EIS chapter location
		Appendix H1 – Flooding and hydrology assessment report
Socio-economic, land use and property	Impacts on tourism businesses at Wisemans Ferry	The Project would reduce the extent and duration of large flood events. However, during the discharge of the flood mitigation zone there may be longer low-level flooding. The impacts on river-based tourism are presented in: Chapter 21– Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report
	Impact of Project on property insurance	Insurance premiums are determined independently by insurance companies. A reduction in flood risk may influence flood insurance premiums but is not part of the scope for this Project.
	Effect on property prices	The impacts or benefits of the Project on property prices are unknown and has not been a factor for assessment within the EIS. Matters relating to property are presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report
Liverpool City Council		
Aboriginal heritage	Impacts on Aboriginal sites from upstream temporary inundation	An ACHA was undertaken as part of the environmental assessment process, as presented in: Chapter 18 – Aboriginal cultural heritage Appendix K – Aboriginal cultural heritage assessment report
Alternatives	Lowering the FSL and using the desalination plant as alternative to the Project	Lowering the FSL and using desalinated water is not the intent of the Project. This EIS provides an assessment of how raising the dam is intended to reduce the threat to life and property from flood water discharge, as presented in: Chapter 4 – Project development and alternatives
Biodiversity	Upstream biodiversity impacts	Biodiversity studies assessed impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in: Chapter 8 – Biodiversity upstream Appendix F1 – Biodiversity assessment report – upstream A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in: Chapter 13 – Biodiversity offset strategy Appendix F6 – Biodiversity offset strategy report
Construction traffic	Construction traffic impacts	The impacts of construction traffic on the surrounding road network are presented in: Chapter 24 – Traffic and transport Appendix O – Traffic and transport assessment report

Category	Feedback	Summary response and EIS chapter location
Design	Impacts of new dam operating protocols	The new operating protocols will need to balance upstream and downstream inundation criteria and meet safety requirements – and would be developed in consultation with relevant stakeholders. Dam operating protocols are presented in: Chapter 15 – Flooding and hydrology
		Appendix H1 – Flooding and hydrology assessment report
Flooding	Downstream flood risk awareness	Improving the downstream flood risk awareness within communities is not part of the scope for this Project but is addressed in outcome four (accessible contemporary flood risk information) and outcome five (an aware, prepared and responsive community) of the Flood Strategy.
Health and safety	Dam construction method and safety risks	All upgrades of Warragamba Dam including the design, construction and operation will comply with state, national and international dam safety guidelines, as presented in: Chapter 16 – Health and safety
Non-Aboriginal heritage	Impacts on heritage items	A non-Aboriginal heritage assessment was prepared which assesses the potential impacts and benefits to items of historical significance and identifies management measures. Heritage items downstream of the dam would generally experience benefits from the Project with a reduction in the extent and duration of flooding, as presented in: Chapter 17 – Non-Aboriginal heritage
		Appendix I – Non-Aboriginal heritage assessment report
Penrith City Council		
Flooding	Access to Emu Plains in a flood event	The frequency and duration of flooding of Emu Plains (and other low-lying areas) would be significantly reduced with the Project, as presented in:
		Chapter 15 – Flooding and hydrology
		Appendix H1 – Flooding and hydrology assessment report
	Downstream flood risk awareness	Improving the downstream flood risk awareness within communities is not part of the scope for this Project but is addressed in outcome four (accessible contemporary flood risk information) and outcome five (an aware, prepared and responsive community) of the Flood Strategy.
Socio-economic, land use and property	Population growth attributed to the Project and other local developments	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.
	Urban development increasing flood impacts	Flood modelling has considered future development scenarios, as presented in: Chapter 11 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report

Category	Feedback	Summary response and EIS chapter location
Traffic and transport	Lack of transport infrastructure for evacuation	Upgrades to flood evacuation routes is not part of the scope for this Project but is addressed in outcome eight (adequate local roads for evacuation) of the Flood Strategy.
		The Project will result in most bridge river crossings being open for longer while some would no longer be closed in certain flood events.
		There will be some low-lying bridges on the main river channel that may experience longer periods of flooding due to the discharge of the flood mitigation zone, as presented in:
		Chapter 24 – Traffic and transport
		Appendix O – Traffic and transport assessment report
	Congestion of major road	The Flood Strategy considered upgrades of local and regional roads to support flood evacuation, as presented in:
	corridors of M4 and Mulgoa Road for flood evacuations	Chapter 4 – Project development and alternatives
Wingecarribee Shire C	ouncil	
Aboriginal cultural	Impacts on Aboriginal cultural	An ACHA was undertaken as part of the environmental assessment process, as presented in:
heritage	sites from upstream temporary	Chapter 18 – Aboriginal cultural heritage
	inundation	Appendix K – Aboriginal cultural heritage assessment report
Alternatives	Dredging the Hawkesbury River as an alternative to the Project	The dredging of the Hawkesbury-Nepean River was assessed and was not the preferred option as it had significant environmental and economic costs and would not provide the same level of flood mitigation as the Project, as presented in:
		Chapter 4 – Project development and alternatives
Aquatic ecology	Provision for fish migration	A structure suitable for eels to migrate from the base of the dam to Lake Burragorang is being considered and is presented in:
		Chapter 5 – Project description
		Chapter 11 – Aquatic ecology
		Appendix F4 – Aquatic ecology assessment report
Design	Increased security risk	The Project would not result in any increased security threat. The Project would result in the thickening of the dam wall and would increase the strength of the dam wall.
Flooding	Flood impacts to the	There would be no impacts from the Project on publicly accessible bushwalking tracks of the Kowmung and Coxs
	bushwalking tracks in the	Rivers. This is presented in:
	Kowmung River and Coxs Rivers catchments	Chapter 20 – Protected and sensitive lands

Category	Feedback	Summary response and EIS chapter location
	Impacts on property owners on the Wollondilly River	Impacts of the Project on private property adjacent to the Wollondilly River were assessed and are presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report
Socio-economic, land use and property	Impacts to mines in the catchment	The current longwall coal mining activities are in the upper catchment and would not be affected by the Project. The potential impacts to mining operations are presented in: Appendix N1 – Soils and contamination assessment report
Wollondilly Shire Coun	cil	
Aboriginal cultural heritage	Impacts on Aboriginal cultural sites from upstream temporary inundation	An ACHA was undertaken as part of the environmental assessment process, as presented in: Chapter 18 – Aboriginal cultural heritage Appendix K – Aboriginal cultural heritage assessment report
Alternatives	Lowering the FSL and using the desalination plant as alternative to the Project	Lowering the FSL and using desalinated water is not the intent of raising of the Project. This EIS provides an assessment of how raising the dam is intended to reduce the threat to life and property from flood water discharge, as presented in: Chapter 4 – Project development and alternatives
Biodiversity	Impacts on threatened species such as the Camden White Gum	Biodiversity studies assessed impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible. The impact of the Project on Camden White Gums has been assessed including a study by CSIRO, as presented in: Chapter 8 – Biodiversity upstream Appendix F1 – Biodiversity assessment report – upstream Chapter 9 – Downstream ecological assessment Appendix F2 – Downstream ecological assessment Chapter 10 – Biodiversity construction area Appendix F3 – Biodiversity assessment report – construction area A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, and is presented in: Chapter 13 – Biodiversity offset strategy Appendix F6 – Biodiversity offset strategy report
Cumulative impacts	Cumulative construction impacts with local developments	Cumulative impacts during construction have been assessed and are presented in: Chapter 28 – Cumulative impacts and interactions

Category	Feedback	Summary response and EIS chapter location
Socio-economic, land use and property	Economic impacts from construction on Warragamba township	An assessment of the potential impacts and benefits on the local economy during Project construction is presented in: Chapter 21 – Socio-economic, land use and property
		Appendix M – Socio-economic, land use and property assessment report
	Floodplain development	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.
	Closure of the Warragamba	Potential impacts to business and visitors are considered in the EIS, as presented in:
	Dam Visitor Centre	Chapter 21 – Socio-economic, land use and property
		Appendix M – Socio-economic, land use and property assessment report
Traffic and transport	Construction traffic impacts	The road network in and around the Project area has considerable capacity. The impacts of construction traffic on the surrounding road network are presented in:
		Chapter 24 – Traffic and transport
		Appendix O – Traffic and transport assessment report
Visual amenity	Impacts to the view from the	An assessment of the visual amenity and landscape character impacts of the Project is presented in:
vi: W	visitor centre and lookouts in Warragamba	Chapter 25 – Visual amenity
		Appendix P – Landscape character and visual impacts assessment report

6.6.3 Inputs from infrastructure and service providers

Feedback received from service and infrastructure providers and where responses are provided in the EIS are summarised in Table 6-7. Emergency service providers provided feedback on socio-economic, traffic and local environment issues for the Warragamba, Silverdale and Wallacia communities at a workshop held in April 2019. Further details and analysis of this feedback is contained in Chapter 21 (Socio-economic, land use and property).

 Table 6-7. Inputs from infrastructure and service providers

Category	Feedback	Summary response and EIS chapter location
NSW Ambulance		
Construction traffic	Construction traffic impacts on local road safety	A Construction Traffic Management Plan would be developed to manage vehicle movements safely. Predicted traffic impacts and mitigation measures are presented in:
		Chapter 24 – Traffic and transport
		Appendix O – Traffic and transport assessment report
NSW Fire and Rescue		
Catchment access	Catchment access during construction and operation of the Project	Impacts on catchment access during construction and operation of the Project are presented in: Chapter 20 – Protected and sensitive lands
Health and safety	Use of Warragamba sports fields as emergency helicopter	An Emergency Management Plan would be developed by the Construction Contractor as part of the construction planning process. Access to and from the catchment is presented in:
	pad during construction	Chapter 21 – Socio-economic, land use and property
		Appendix M – Socio-economic, land use and property assessment report
		Chapter 24 – Traffic and transport
		Appendix O – Traffic and transport assessment report
Traffic and transport	Access to the Warragamba Fire Station	The Project would not impact upon the access to Warragamba Fire Station.
Waste	Hazardous material encountered during construction	Contamination risks during the construction of the Project are presented in: Chapter 22 – Soils Appendix N1 – Soils and contamination assessment report

Category	Feedback	Summary response and EIS chapter location
NSW Police		
Flooding	Emergency services response to flooding	The Project would result in increased opportunity for evacuation during major flood events. Chapter 24 – Traffic and transport
Health and safety	Downstream flood risk awareness	Improving the downstream flood risk awareness within communities is not part of the scope for this Project but is addressed in outcome four (accessible contemporary flood risk information) and outcome five (an aware, prepared and responsive community) of the Flood Strategy.
Traffic and transport	Flood impacts on bridge access at Yarramundi, Windsor, and North Richmond	The Project will result in most bridge river crossings being open for longer while some would no longer be closed in certain flood events. There will be some low-lying bridges on the main river channel which may experience longer periods of flooding due to the discharge of the flood mitigation zone, as presented in: Chapter 24 – Traffic and transport Appendix O – Traffic and transport assessment report
NSW Rural Fire Service		
Air quality	Construction air quality impacts	Predicted levels for construction dust emissions are low and well below their respective air quality assessment criteria. The impacts of the Project on air quality and mitigation measures are presented in: Chapter 7 – Air quality Appendix E – Air quality assessment report
Biodiversity	Upstream biodiversity impacts	Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in: Chapter 8 – Biodiversity upstream Appendix F1 – Biodiversity assessment report – upstream A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in: Chapter 13 – Biodiversity offset strategy Appendix F6 – Biodiversity offset strategy report
Catchment access	Catchment access during construction and operation of the Project	Impacts on catchment access during construction and operation of the Project are presented in: Chapter 20 – Protected and sensitive lands
Noise and vibration	Noise impacts during construction	Noise will be generated during construction works and some out of hours works are likely to be required. Predicted noise levels and mitigation measures are presented in: Chapter 19 – Noise and vibration Appendix L – Noise and vibration assessment report

Category	Feedback	Summary response and EIS chapter location				
Socio-economic, land	Local employment and	During construction the Project would generate opportunities for local employment and businesses, as presented in:				
use and property	economic benefits	Chapter 21 – Socio-economic, land use and property				
		Appendix M – Socio-economic, land use and property assessment report				
Traffic and transport	Increased risk of road accidents	Construction vehicles will use the local road network to access the Project construction site. A Construction Traffic Management Plan would be developed to manage vehicle movements safely, as presented in:				
		Chapter 21 – Socio-economic, land use and property				
		Appendix M – Socio-economic, land use and property assessment report				
		Chapter 24 – Traffic and transport				
		Appendix O – Traffic and transport assessment report				
Water supply	Increasing permanent water storage	The Project will be approved, designed, and operated for flood mitigation and not to increase the FSL. A full description of the Project is presented in:				
		Chapter 5 – Project description				
NSW State Emergency	Service					
Flooding	Contribution of flood waters from other sources apart from	Flood data reveals 80% of flood flows experienced at Penrith and 70% at Windsor are attributed to the Warragamba catchment. This is presented in:				
	Warragamba Dam	Chapter 3 – Strategic justification and Project need				
		Chapter 15 – Flooding and hydrology				
		Appendix H1 – Flooding and hydrology assessment report				
	Downstream flood risk awareness	Improving the downstream flood risk awareness within communities is not part of the scope for this Project but is addressed in outcome four (accessible contemporary flood risk information) and outcome five (an aware, prepared and responsive community) of the Flood Strategy.				
	Impacts of the flood mitigation zone discharges	The discharge of the flood mitigation zone after the peak of a flood event will result in a longer period of low-level flooding. The impacts on the community are presented in:				
		Chapter 15 – Flooding and hydrology				
		Appendix H1 – Flooding and hydrology assessment report				
		Chapter 21 – Socio-economic, land use and property				
		Appendix M – Socio-economic, land use and property assessment report				
		Chapter 24 – Traffic and transport				
		Appendix O – Traffic and transport assessment report				

Category	Feedback	Summary response and EIS chapter location				
	Evacuation benefits	The Project contributes to a reduction in flooding extents and an increase in time before evacuation routes are closed in downstream areas, as presented in:				
		Chapter 4 – Project development and alternatives Chapter 21 – Socio-economic, land use and property				
		Appendix M – Socio-economic, land use and property assessment report				
		Chapter 24 – Traffic and transport				
		Appendix O – Traffic and transport assessment report				
Socio-economic, land use and property	Impact of Project on property insurance	Insurance premiums are determined independently by insurance companies. A reduction in flood risk may influence flood insurance premiums but is not part of the scope for this Project.				
Soils	Impacts on agriculture from reduced floodplain soil replenishment	Many of the agricultural enterprises in Hawkesbury-Nepean Valley do not rely on floods to replenish soils and consider the reduction in flooding to be a benefit, as presented in:				
		Chapter 15 – Flooding and hydrology				
		Appendix H1 – Flooding and hydrology assessment report				
		Chapter 21 – Socio-economic, land use and property				
		Appendix M – Socio-economic, land use and property assessment report				
		Chapter 22 – Soils				
		Appendix N1 – Soils and contamination assessment report				
		Appendix N2 – Geomorphology assessment report				
Traffic and transport	Inadequate road and bridge infrastructure for evacuations during a major flood event	The Project will result in most bridge river crossings being open for longer while some would no longer be closed in certain flood events. There will be some low-lying bridges on the main river channel which may experience longer periods of flooding due to the discharge of the flood mitigation zone, as presented in:				
		Chapter 24 – Traffic and transport				
		Appendix O – Traffic and transport assessment report				
Water hydrology	Impacts of new dam operating protocols	The new operating protocols will need to balance upstream and downstream inundation criteria and meet safety requirements – and would be developed in consultation with relevant stakeholders. Dam operating protocols are presented in:				
		Chapter 15 – Flooding and hydrology				
		Appendix H1 – Flooding and hydrology assessment report				

6.6.4 Inputs from special interest groups

Feedback received from special interest groups and where responses are provided in the EIS are summarised in Table 6-8.

Table 6-8. Inputs from special interest groups

Category	Feedback	Summary response and EIS chapter location			
Colong Foundation for Wilderness					
Aboriginal cultural heritage	Impacts on Aboriginal cultural sites from upstream temporary inundation	An ACHA was undertaken as part of the environmental assessment process, as presented in: Chapter 18 – Aboriginal cultural heritage Appendix K – Aboriginal cultural heritage assessment report			
Biodiversity	Impacts on wild rivers	There would be no material impacts on Wild Rivers from the Project, as presented in Chapter 20 – Protected and sensitive lands Appendix J – World Heritage assessment report			
	Biodiversity impacts	Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in: Chapter 8 – Biodiversity upstream Appendix F1 – Biodiversity assessment report – upstream Chapter 9 – Downstream ecological assessment Appendix F2 – Downstream ecological assessment Chapter 10 – Biodiversity construction area Appendix F3 – Biodiversity assessment report – construction area Appendix F3 – Biodiversity assessment report – construction area A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in: Chapter 13 – Biodiversity offset strategy Appendix F6 – Biodiversity offset strategy report			
Protected and sensitive land	Impacts on the Blue Mountains National Park and the Greater Blue Mountains World Heritage Area (GBMWHA)	An assessment of the potential impacts on the areas of National Parks potentially experiencing increased temporary inundation and the GBWMHA are presented in: Chapter 20 – Protected and sensitive lands Appendix J – World Heritage assessment report			
Socio-economic, land use and property	Floodplain development	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.			

Category	Feedback	Summary response and EIS chapter location			
Greater Blue Mountains World Heritage Area Advisory Committee					
Biodiversity	Impacts on wild rivers	There would be negligible impacts on Wild Rivers from the Project, as presented in			
		Chapter 15 – Flooding and hydrology			
		Appendix H1 – Flooding and hydrology assessment report			
		Chapter 20 – Protected and sensitive lands			
	Biodiversity impacts	Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in:			
		Chapter 8 – Biodiversity upstream			
		Appendix F1 – Biodiversity assessment report – upstream			
		Chapter 9 – Downstream ecological assessment			
		Appendix F2 – Downstream ecological assessment			
		Chapter 10 – Biodiversity construction area			
		Appendix F3 – Biodiversity assessment report – construction area			
		A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in:			
		Chapter 13 – Biodiversity offset strategy			
		Appendix F6 – Biodiversity offset strategy report			
Cumulative impacts	Cumulative impacts on the GBMWHA	Cumulative impacts on the GBMWHA including consideration of the Western Sydney Airport are presented in:			
		Chapter 20 – Protected and sensitive lands			
		Appendix J – World Heritage assessment report			
		Chapter 28 – Cumulative impacts and interactions			
Socio-economic, land use and property	Floodplain development	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.			
	Impact on recreational access to the GBMWHA	There would no impacts from the Project on publicly accessible areas of the GBMWHA, as presented in:			
		Chapter 20 – Protected and sensitive lands			

Category	Feedback	Summary response and EIS chapter location		
World Heritage	Impacts on the GBMWHA	An assessment of the potential impacts on the GBWMHA is presented in:		
		Chapter 20 – Protected and sensitive lands		
		Appendix J – World Heritage assessment report		
Yerranderie Managem	ent Committee			
Design	Eel migration	A structure suitable for eels to migrate from the base of the dam to Lake Burragorang would be provided, as presented in:		
		Chapter 5 – Project description		
		Chapter 11 – Aquatic ecology		
		Appendix F4 – Aquatic ecology assessment report		
Flooding	Potential flooding impacts on Silverdale	The Project would not result in increased flooding of Silverdale as presented in:		
		Chapter 15 – Flooding and hydrology		
		Appendix H1 – Flooding and hydrology assessment report		
Heritage	Impacts to non-Aboriginal heritage from temporary upstream inundation	A non-Aboriginal heritage assessment was prepared which assesses the potential impacts and benefits to items of historical significance and identifies management measures. Heritage items downstream of the dam would generally experience benefits from the Project with a reduction in the extent and duration of flooding, as presented in:		
		Chapter 17 – Non-Aboriginal heritage		
		Appendix I – Non-Aboriginal heritage assessment report		
Protected and sensitive land	Flood impacts to the bushwalking tracks in the Kowmung River and Coxs River catchments	There would no impacts from the Project on publicly accessible bushwalking tracks of the Kowmung and Coxs Rivers. This is presented in:		
		Chapter 20 – Protected and sensitive lands		
Traffic and transport	Sedimentation and other impacts on roads and access (Nattai Bridge and the W4 Fire Trail)	There would be some impact on catchment roads and fire trails during flood events – however the catchment is currently closed during most flood events. Impacts on catchment roads and fire trails are presented in:		
		Chapter 20 – Protected and sensitive lands		
		Chapter 24 – Traffic and transport		
		Appendix O – Traffic and transport assessment report		

6.6.5 Inputs from affected landowners

Feedback received from affected landowners and where responses are provided in the EIS are summarised in Table 6-9.

Table 6-9. Inputs from affected landowners

Category	Feedback	Summary response and EIS chapter location			
Aboriginal cultural	Impacts on Aboriginal cultural sites from upstream temporary inundation	An ACHA was undertaken as part of the environmental assessment process, as presented in:			
heritage		Chapter 18 – Aboriginal cultural heritage			
		Appendix K – Aboriginal cultural heritage assessment report			
Biodiversity Biodiversity impacts		Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in:			
		Chapter 8 – Biodiversity upstream			
		Appendix F1 – Biodiversity assessment report – upstream			
		Chapter 9 – Downstream ecological assessment			
		Appendix F2 – Downstream ecological assessment			
		A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in:			
		Chapter 13 – Biodiversity offset strategy			
		Appendix F6 – Biodiversity offset strategy report			
Flooding	Impacts on private property	The impact of the Project on private property would be minimal and confined to extreme flood events, as presented in:			
		Chapter 21 – Socio-economic, land use and property			
		Appendix M – Socio-economic, land use and property assessment report			

6.6.6 Inputs from businesses and the community

Feedback received from businesses and the community, and where responses are provided in the EIS are summarised in Table 6-10. Business operators also provided feedback on construction related socio-economic, traffic and local environment issues for the Warragamba, Silverdale, and Wallacia communities at a workshop held in April 2019.

Table 6-10. Inputs from businesses and the community

Category	Feedback	Summary response and EIS chapter location			
Aboriginal cultural	Impacts on Aboriginal cultural sites from upstream temporary	An ACHA was undertaken as part of the environmental assessment process, as presented in:			
heritage		Chapter 18 – Aboriginal cultural heritage			
	inundation	Appendix K – Aboriginal cultural heritage assessment report			
Air quality	Construction air quality impacts	Predicted levels for construction dust emissions are low and well below their respective air quality assessment criteria. The impacts of the Project on air quality and mitigation measures are presented in:			
		Chapter 7 – Air quality			
		Appendix E – Air quality assessment report			
Biodiversity	Biodiversity impacts	Biodiversity studies were undertaken to assess impacts on threatened plants, animals and ecosystems and identified measures to mitigate impacts where possible, and are presented in:			
		Chapter 8 – Biodiversity upstream			
		Appendix F1 – Biodiversity assessment report – upstream			
		Chapter 9 – Downstream ecological assessment			
		Appendix F2 – Downstream ecological assessment			
		Chapter 10 – Biodiversity construction area			
		Appendix F3 – Biodiversity assessment report – construction area			
		A BOS was also prepared which contains offsets, mitigation measures and funding to offset biodiversity impacts, as presented in:			
		Chapter 13 – Biodiversity offset strategy			
		Appendix F6 – Biodiversity offset strategy assessment report			
Climate change risk	Climate change affecting the likelihood and severity of flood events	A climate change risk assessment for the Project has been prepared and is presented in:			
		Chapter 14 – Climate change risk			
		Appendix G – Climate change assessment report			

Category	Feedback	Summary response and EIS chapter location			
Design	Increasing permanent water storage	The Project is designed for flood mitigation and not to increase the FSL. A full description of the Project is presented in:			
		Chapter 5 – Project description			
	Impacts of new dam operating protocols	The new operating protocols will need to balance upstream and downstream inundation criteria and meet safety requirements – and would be developed in consultation with relevant stakeholders. Dam operating protocols are discussed in:			
		Chapter 15 – Flooding and hydrology			
		Appendix H1 – Flooding and hydrology assessment report			
	Increased security risk	The Project would not result in any increased security threat. The Project would result in the thickening of the dam wall and would increase the strength of the dam wall.			
Flooding	Benefits for downstream communities, property, and infrastructure	The Project would reduce the existing risk to people's lives and livelihoods and would reduce flood damage by an estimated 75% on average, as presented in:			
		Chapter 15 – Flooding and hydrology			
		Appendix H1 – Flooding and hydrology assessment report			
		Chapter 21 – Socio-economic, land use and property			
		Appendix M – Socio-economic, land use and property assessment report			
	Increase in the area of land upstream that would experience inundation	The duration and depth of temporary flooding would vary as it relates to the specific location, the size of the flood, the level of the dam storage at that time, the inflows from the dam's tributaries, and the rate of the managed release of the captured inflows. The area of land affected by temporary inundation is assessed in:			
		Chapter 15 – Flooding and hydrology			
		Appendix H1 – Flooding and hydrology assessment report			
		Chapter 20 – Protected and sensitive lands			
Noise and vibration	Noise impacts during construction	Noise will be generated during construction works and some out of hours works are likely to be required. Predicted noise levels and mitigation measures are presented in:			
		Chapter 19 – Noise and vibration			
		Appendix L – Noise and vibration assessment report			

Category	Feedback	Summary response and EIS chapter location				
Non-Aboriginal heritage	Impacts to non-Aboriginal heritage from temporary upstream inundation	A non-Aboriginal heritage assessment was prepared as part of the EIS. The report assesses the potential impacts to items of historical significance and identifies measures to manage these impacts, as presented in: Chapter 17 – Non-Aboriginal heritage Appendix I – Non-Aboriginal heritage assessment report				
Project development	Project approval requirements	Approval from both the NSW Minister for Planning and the Commonwealth Minister for the Environment would be required. This process is presented in: Chapter 2 – Statutory and planning framework				
	Cost benefit of the Project	⁻ he Project was found to have the highest net benefit in comparison to other alternatives, as presented in: Chapter 4 – Project development and alternatives				
	Project development stages	The Project development stages are presented in: Chapter 5 – Project description				
Protected and sensitive lands	Impacts on the GBMWHA	An assessment of the potential impacts on the GBWMHA is presented in: Chapter 20 – Protected and sensitive lands Appendix J – World Heritage assessment report				
Socio-economic, land use and property	Floodplain development	Managing development within the floodplain is not part of the scope for this Project but is addressed in outcome three (strategic and integrated land use and road planning) of the Flood Strategy.				
	Upstream flooding leading to tourism and economic impacts	The potential impacts on tourism is assessed and is presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report				
	Impact of Project on property insurance	Insurance premiums are determined independently by insurance companies. A reduction in flood risk may influence flood insurance premiums but is not part of the scope for this project.				
	Impacts to turf farming	The economic impacts of the Project on agriculture and turf farms is presented in: Chapter 15 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report				

Category	Feedback	Summary response and EIS chapter location			
	Impacts on aquaculture	The economic impacts of the Project on aquaculture is presented in: Chapter 21 – Socio-economic, land use and property Appendix M – Socio-economic, land use and property assessment report			
Soils	Geomorphology impacts	Potential geomorphology impacts of the Project are assessed in: Chapter 22 – Soils Appendix N2 – Geomorphology assessment report			
Traffic and transport	Construction traffic impacts	The road network in and around the Project area has substantial capacity. The impacts of construction traffic on the surrounding road network are presented in: Chapter 24 – Traffic and transport Appendix O – Traffic and transport assessment report			
	Improving evacuation routes	The Project will result in most bridge river crossings being open for longer while some would no longer be closed in certain flood events. There will be some low-lying bridges on the main river channel that may experience longer periods of flooding due to the discharge of the flood mitigation zone, as presented in: Chapter 24 – Traffic and transport Appendix O – Traffic and transport assessment report			
Visual amenity	Impacts views of Blue Mountains National Park from Echo Point	Potential visual impacts from loss or change in vegetation due to the Project would not be visible from Echo Point. An assessment of the visual amenity and landscape impacts of the Project is presented in: Chapter 25 – Visual amenity Appendix P – Landscape character and visual impact assessment report			
Water hydrology	Changes to the catchment tributaries and waterflow downstream of the dam	A detailed water hydrology assessment was undertaken to assess the potential impacts to the dam catchment an the rivers downstream, as presented in: Chapter 15 – Flooding and hydrology Appendix H1 – Flooding and hydrology assessment report			
Water quality	Construction impact on water quality	There would be negligible impact on downstream water quality attributed to construction activities. These impacts are presented in: Chapter 27 – Water quality Appendix Q – Water quality assessment report			

Category	Feedback	Summary response and EIS chapter location
	Operational water quality impacts	The Project operational impact on existing water quality would be minimal, as presented in:
		Chapter 27 – Water quality
		Appendix Q – Water quality assessment report

6.7 Consultation during exhibition of the EIS

The period of public exhibition of the EIS has been determined by the Minister for Planning and Public Spaces. During this period, government agencies, interest groups and organisations, stakeholders and the community can provide written submissions to the DPIE on the Project and EIS. A copy of all submissions received by DPIE will be provided to WaterNSW for their consideration and response in the Submissions Report.

Written submissions on the EIS can be made via the DPIE website at:

https://www.planningportal.nsw.gov.au/major-projects/project/10571

or can be posted to DPIE at:

Department of Planning, Industry and Environment Attention: Warragamba Dam Raising EIS Locked Bag 5022, Parramatta NSW 2124

The public exhibition is designed to raise awareness, provide information and answer questions raised by the community. During the exhibition period the type of engagement activities will be guided by the government rulings at the time and may include those outlined in Table 6-11.

Table 6-11.	Consultation	activities	during	EIS	exhibition
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Activity	Description
Community update	Information sessions for the community and other stakeholders that will provide an interactive format to understand the contents of the EIS.
Warragamba Dam Raising Project EIS Portal and Virtual Engagement Room www.waternsw.com.au/wdr	An easy-to-use web interface has been developed to provide information on the Project, the EIS and the design process. The website includes an interactive map, an animation illustrating the flood mitigation zone filling and emptying, and the full EIS. Stakeholders will be able to review and analyse the documents that make up the EIS and provide feedback through a direct link to make a written submission on DPIE's website www.majorprojects.planning.nsw.gov.au.
Webinars	A series of webinars (web-based seminars) will be held and tailored to address areas of interest respond to questions received.
Project information line (1800 932 066) and email (wdr@waternsw.com.au)	The Project email and phone line is available during the EIS exhibition.
Advertising	DPIE has advertised the EIS and the submissions process in local and State newspapers. The Project will advertise Community Information Sessions about the EIS in local newspapers.

6.8 Consultation after exhibition of the EIS

The process for responding to submissions and the final Project assessment phases is described in Chapter 2 (Section 2.1.1, Figure 2.1).

Following the exhibition of the EIS, DPIE will provide WaterNSW with copies of all written submissions it has received. WaterNSW will then assess each submission to identify all issues raised and prepare responses to each issue in a submissions report. A preferred infrastructure report (PIR) may also be required to outline and assess any proposed changes to the Project. If significant changes are proposed, DPIE may require the PIR to be publicly exhibited, providing the community and stakeholders with a further opportunity to formally comment on the modified project.

The submissions report and PIR (if required) would be publicly available on the DPIE website: www.majorprojects.planning.nsw.gov.au.

After receiving WaterNSW's response to submissions and the PIR (if required), DPIE will complete its detailed assessment of the Project and prepare an assessment report. This involves integrating the findings of community

engagement into the technical assessment of the Project impacts. The assessment report will be made available on the DPIE website: www.majorprojects.planning.nsw.gov.au.

The assessment report will be provided to the NSW Minister for Planning and Public Spaces who will then decide whether to approve the Project and, if approved, identify a set of conditions of approval for WaterNSW to adhere to during construction and operation of the Project. Following the determination, DPIE will publish the decision online and give public notice of the reasons for the decision and how community views were taken into consideration during decision-making.

If approval for the Project is given by the NSW Minister for Planning and Public Spaces, the Commonwealth Minister for the Environment would then assess the Project EIS and submissions report. They would assess whether the impacts on matters of national environmental significance were significant and determine whether the Project is approved with or without additional conditions of approval.

The community will be informed of the status of the Project during the assessment and approval process through the Project website and email.

6.8.1 Consultation during construction

If the Project is approved by the NSW Minister for Planning and Public Spaces and the Commonwealth Minister for the Environment and the business case for the Project is approved by the NSW Government, relevant contractors would be engaged to undertake the detailed design and construction of the Project.

The construction contractor and WaterNSW would be responsible for communication and engagement with stakeholders and the community during construction. The community would be consulted to select a legacy project that provides immediate community benefit to be delivered upon construction completion. The design and intent of this project would be informed by social, cultural and community needs.

A construction community and stakeholder engagement plan (Construction CSEP) would be developed before construction commences and implemented during construction to provide a framework of activities, procedures and policies for engagement. The feedback provided by the community and stakeholders to the EIS and Submissions Report would help to inform the Construction CSEP.

Engagement would focus on providing updates on construction activities and program, responding to enquiries and complaints in a timely manner, and minimising potential impacts where possible.

The Construction CSEP would include the following elements:

- identification of relevant communities and stakeholders potentially impacted by construction
- identification of specific potential construction impacts and their relevance to specific communities and stakeholders
- notification requirements and procedures for a range of key construction activities such as start of construction, noisy activities, out of hours works, delivery of oversize equipment, changes to traffic arrangements and other activities that may cause disruptions or impacts
- notification details for specific communities and stakeholders (that is, letters, emails, phone calls, etc)
- timing and content of any regular community updates
- a complaints management and resolution procedure, including timing of responses for complaints and enquiries.

Engagement tools during construction would likely include:

- notification emails, letters and phone calls to residents and businesses directly affected by construction works
- face-to-face meetings with landowners
- regular community updates, information brochures and factsheets distributed via email and letterbox drops
- regular updates of the WaterNSW website Project pages
- media releases and Project advertising in local media
- 24-hour, toll-free project information and complaints line, a dedicated email and postal address
- variable message signs
- an on-site community and stakeholder liaison manager (and office) as a point-of-contact for the community
- site signage around construction and ancillary facilities.

6.8.2 Consultation during operation

WaterNSW's current protocols for engaging with the local community around the dam would continue. This includes:

- the visitor and education centre experience at Warragamba Dam
- ongoing management of community complaints and enquiries during operations
- community notifications prior to major maintenance activities
- notifications to affected community and stakeholders of activities that require the closure of the dam and its surrounds
- notifications and communication with the community and emergency services during an emergency.

New communications protocols would be developed and implemented for the operation of the flood mitigation zone. These would be developed as part of the overall new flood plan for the Hawkesbury-Nepean Valley, which is a key element of the Flood Strategy.

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