## Sydney WATER

# Appendix A SEARs compliance table



# **Compliance with Secretary's Environmental**

# **Assessment Requirements**

Table 1 lists the project's Secretary's Environmental Assessment Requirements (SEARs) and where in the Environmental Impact Statement (EIS) they are addressed.

Table 1: SEARs provided by DPIE and reference to where they are addressed in this EIS

SEARs	EIS section where requirement addressed
General Requirements:	
The Environmental Impact Statement (EIS) must be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the EP&A Regulation). The onus is on the Proponent to ensure legislative requirements relevant to the project are met.	Appendix E summarises how the EIS has addressed Schedule 2 of the EP&A Regulation.
The project requires approval under the EPBC Act and is being assessed under the Bilateral Agreement. The EIS should address the requirements of Attachment 1. It is the Proponent's responsibility to determine whether the project needs to be referred to the Commonwealth Department of the Agriculture, Water and Environment (DAWE) for an approval under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). If DAWE has determined that an approval is required under the EPBC Act, supplementary environmental assessment requirements may need to be issued to ensure a streamlined assessment under an Accredited Assessment can be achieved. Where the project requires approval under the EPBC Act and is being assessed under the Bilateral Agreement the EIS should address:	Sydney Water referred the project to DAWE who determined the project is a Controlled Action and requires approval under the EPBC Act. Attachment 1 of these SEARs specify supplementary environmental assessment requirements given the project is being assessed under the Bilateral Agreement. The supplementary SEARs provided by DAWE are listed below the DPIE SEARs.

SEARs	EIS section where requirement addressed
<ul> <li>(a) consideration of any Protected Matters that may be impacted by the development where the Commonwealth Minister has determined that the project is a Controlled Action;</li> <li>(b) identification and assessment of those Protected Matters that are likely to be significantly impacted;</li> <li>(c) details of how significant impacts to Protected Matters have been avoided, mitigated and, if necessary, offset; and consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans.</li> </ul>	Refer to later sections of this table for where Attachment 1 requirements and points a, b and c are addressed.
In particular, the EIS must include, but not necessarily be limited to, the following:	
(a) an executive summary;	Volume 1
(b) a full description of the Upper South Creek Advanced Water Recycling Centre (the project), including:	Chapter 4
i. the design for the project that is proposed to be constructed and operated.	Section 4.4 outlines the design of the project
ii. all components, disturbance areas, materials, activities, site preparation and construction infrastructure (e.g. storage compounds, dirty water areas, roads, concrete batch plants) required to construct the project (including any ancillary development that may require separate approvals).	Sections 4.8, 4.9, and 4.10 outline the construction of all project components.
iii. the operation of the project, and associated water infrastructure that is proposed to be constructed.	Sections 4.5 and 4.6 outline all operational components of the project.
iv. likely staging or sequencing of the project, including construction, operation, maintenance, decommissioning and rehabilitation.	Sections 4.3 and 4.12 outline the likely staging and timing of different stages of the project.

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SEARs



#### **EIS section where requirement** addressed

	Construction stages are also outlined in section 4.8.1. Maintenance activities are discussed in section 4.5.4 and 4.6.3. Rehabilitation and landscaping is outlined in section 4.9.5 with respect to the pipelines and 4.4.1 with respect to the AWRC site. Decommissioning is discussed in section 4.11.
v. site plans, maps, drawings and diagrams at an adequate scale with dimensions in an electronic format that enables integration with mapping and other technical software, showing:	Maps in electronic (GIS) format have been provided separately to DPIE.
i. the location and dimensions of all project components.	Sections 4.2-4.10 and associated figures
ii. existing infrastructure, land use, and environmental features.	describe all project components. Figures 4- 16 and 4-17 show the development corridor that was assessed
iii. the development corridor that has been assessed and consideration of design options.	Land use is addressed as part of the social impact assessment in section 11.6 and shown on the zoning maps in Chapter 5.
	Environmental features and key existing infrastructure are addressed in impact assessment sections in Chapters 8-13.
	Chapter 3 includes maps of design options.
iv. the likely interactions between the project and any other existing, approved, proposed, reasonably foreseeable	Section 2.13 outlines interactions with other

iv. the development in the vicinity of the site, including an assessment of the cumulative impacts on the environment.

major projects.

SEARs	EIS section where requirement addressed
	Cumulative impacts are covered in Chapters 8-13.
c) a summary of the strategic need with regard to its State significance and relevant State Government policy including:	Chapter 2
i. NSW State Infrastructure Strategy: South Creek Corridor Strategy	Section 2.5, 2.6, 2.10 and Appendix B noting the following:
ii. Western Sydney Aerotropolis Plan (WSAP)	Western Sydney Aerotropolis SEPP
iii. Western Sydney Aerotropolis Discussion Paper on proposed State Environmental Planning Policy (SEPP);	Discussion Paper not addressed because SEPP has been enacted.
iv. Western Sydney Aerotropolis DCP	Section 5.2.2 addresses the SEPP, which
v. Wianamatta-South Creek Precinct Plan	There is no separate precinct plan
vi. Kemps Creek Precinct Plan	for Wianamatta-South Creek. The draft
vii. Draft Cumberland Plain Conservation Plan	incorporates this precinct.
	Kemps Creek Precinct Plan is not addressed because it has not yet been developed.
(d) a statement of the strategic objective(s).	Section 2.4





iv. a description of how any residual impacts will be managed or offset, and the approach and effectiveness of these measures.

(h) a chapter that synthesises the environmental impact assessment and provides:

i. a succinct but complete description of the project for which approval is sought.

ii. a description of any uncertainties that still exist around design, construction methodologies and/or operational Section 15.3 methodologies and how these will be resolved in the next stages of the project.

iii. a compilation of the impacts of the project that have not been avoided.

iv. a compilation of the proposed measures associated with each impact to avoid or minimise (through design Section 15.4 refinements or ongoing management during construction and operation) or offset these impacts.

v. a compilation of the outcome(s) the proponent will achieve.

C

Provided within each impact assessment section in Chapters 8-13. Section 7.5

describes approach to managing impacts

and effectiveness of measures.

Chapter 15

Section 15.2

Section 15.4

Section 15.5



within the context of the proposed location and surrounding environment. The assessment must have regard to applicable NSW and Commonwealth Government policies and guidelines. In particular, the EIS must address the following:

Section 7.5 describes project's impact assessment approach.

Chapter 2 outlines consistency with a range of government policies and guidelines. Each impact assessment section in Chapters 8-13 references government guidelines and policies relevant to that assessment.



### EIS section where requirement addressed

### Water – including:

SEARs

(a)	existing surface and groundwater.	Sections 8.5, 9.2.3 and 9.4.3
(b)	hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.	Section 8.5 discusses the existing waterway hydrology, including at release locations. The project does not have an intake location. Sections 9.2.3 and 9.2.6 provide the volume and frequency and quality of stormwater runoff from the AWRC site. Section 4.5 provides volume, frequency and quality of releases of treated water.
(c)	Water Quality Objectives (as endorsed by the NSW Government (www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.	Sections 8.2.1 and 8.4. Section 9.4.4 with reference to groundwater
(d)	indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.	Sections 8.2.1 and 8.4 (incorporated into the waterway objectives) and section 9.2.2 with respect to surface water
(e)	Consideration of the Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land- use Planning Decisions.	Sections 8.2.1, 8.4 and 9.2.2

1. Describe background conditions for any water resource likely to be affected by the development, including:



### EIS section where requirement addressed

2. Assess the impacts of the development on water quality, including:

**SEARs** 

(a) the nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.

Section 8.5 provides a comparison of existing surface water quality to waterway objectives.

Sections 8.2.3 and 8.7 discuss operational impacts on waterway objectives (surface water), incorporating mitigating effects of proposed wastewater management during operation.

Section 9.2.5 assesses surface water construction impacts and section 9.2.6 demonstrates how stormwater discharges from the AWRC will contribute to achieving water quality objectives in South Creek.

Sections 9.4.5 and 9.4.6 assess groundwater impacts to waterway objectives.

Sections 8.11, 9.2.9 and 9.4.9

Section 8.7.1

- (b) identification of proposed monitoring of water quality.
- (c) if the proposal will achieve a neutral or beneficial effect (NorBE) on water quality within the declared Sydney Drinking Water Catchment (SDWC).
- 3. Assess the impacts of the development on hydrology, including:



55	AKS	addressed
(a	) water balance including quantity, quality and source.	Sections 9.2.3, 9.2.6 and Appendix K provide the pre- and post-development water balance including volumes and pollutant loads.
(b	) effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.	Section 8.7 discusses hydrological impacts to rivers from treated water releases during operation. Hawkesbury Nepean estuary not predicted to be impacted. Hydrological impacts to wetlands not anticipated. Section 8.7.1 assesses potential impacts to marine waters from brine releases to Malabar wastewater network and compliance with Malabar EPL. Sections 9.2.5 and 9.2.6 discuss impacts to stormwater runoff and effects to downstream flow conditions, rivers and floodplain areas.
(c)	) effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.	Sections 8.6.2, 8.7.3, 9.1.5 and 9.1.6
(d	) impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning	Section 8.7.1 discusses nutrients loads.

and refuge (e.g. river benches). , ayu ιy ıy

Section 8.7.2 assesses hydrological and hydraulic changes.





### **SEARs EIS section where requirement** addressed 4. Map: (a) rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method). Figure 8-6 – South Creek catchment Figure 8-11 – Hawkesbury Nepean River catchment Figures 9-14, 9-15 and 9-16 (b) wetlands as described in s4.2 of the Biodiversity Assessment Method. Figure 8-8 – wetlands at AWRC site, section 9.1.3 and Appendix J (c) groundwater. The figures in section 9.4 show the hydrogeological landscapes and groundwater dependant ecosystems (d) groundwater dependent ecosystems. Figure 8-9 – South Creek sub- catchment Figure 8-16 – Hawkesbury Nepean catchment Figure 8-18 Georges River catchment (e) proposed intake and discharge locations. No intake locations during operation. Figure 8-5 and 8-7 show South Creek Figure 8-12 and 8-13 show the Nepean River release area Figure 8-14 shows the Warragamba River release area

SEARs	EIS section where requirement addressed
	Figure 9-5 shows the AWRC stormwater release locations
<ol> <li>Demonstrate that the project is consistent with the Environment Protection Authority's (EPA) framework for regulating nutrient discharges in effluent from STPs discharging to the lower Hawkesbury Nepean River (EPA 2019) including:</li> </ol>	Section 8.7.1
(a) obtain prior agreement from the EPA on the approach and study design where site specific studies are proposed to tailor the guideline values to reflect local conditions.	Section 8.4 discusses the project waterway objectives and selection of indicators and guideline values. Site specific studies were not undertaken to develop guideline values for the project.
(b) specify the location of discharge points, including but not limited to the Nepean River, Warragamba River and South Creek release location(s) for dry and wet weather justifying why the location was selected over other potential discharge points, including discussion of waterway characteristics at each point (eg depth, salinity, hydrodynamics) and consideration of the relative water quality risks.	Section 8.5 discusses the location of discharge points and waterway characteristics. Section 8.7 provides consideration of the relative water quality risks. Section 3.4 provides further detail about the options selection process for the release locations.
(c) provide consideration of management measures including, but not necessarily limited to, options for storage capacity at Upper South Creek STP or elsewhere, improvement to sewers to increase capacity or reduce wet weather infiltration.	Section 3.6









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SE	ARs	EIS section where requirement addressed
(a	) assessment of the impacts according to the 'Seven-Part Test"	Sections 8.6.2, 8.7.3 and Appendix H
(b	) consideration of NSW DPI threatened species indicative distribution maps for species, populations and ecological communities likely to be present.	Section 8.5
16	5. Development of an Aquatic Biodiversity Offsets Strategy that is consistent with the Policy and Guidelines for Fish Habitat Conservation and Management (2013) and the NSW Biodiversity Offsets Policy for Major Projects that addresses direct, indirect, and prescribed impacts of the project during construction and operation, focusing on protecting and improving the biodiversity and conservation of aquatic environments and associated riparian zones in the medium to long-term. The strategy must be prepared in consultation with, and have regard to, the requirements of DPI Fisheries.	Sections 8.6.2 and 8.7.3 provide consideration of whether this is needed. An aquatic biodiversity offsets strategy is not proposed, given that impacts to aquatic ecology are predicted to be minor and can be adequately managed by management measures included in section 8.10.
17	7. Description of the type and extent of any dredging or reclamation activities within 'water land' as defined under the FM Act. This assessment must be prepared in consultation with, and have regard to the requirements of DPI Fisheries.	Section 4.9.3 describes the activities of the project within 'water land'. Section 8.6.2 assesses construction impacts.
18	B. Development of suitable fish passage mitigation strategies (including potential offsets) to the satisfaction of NSW DPI Fisheries that align with the NSW DPI Fisheries Fishway Design Guidelines (2015) and the Policy and Guidelines for Fish Habitat Conservation and Management (2013).	Section 8.10

SEAI	Rs	EIS section where requirement addressed
19.	A description and assessment of how the project will be managed over the full range of operating conditions, and how this relates to aquatic biodiversity mitigation and offsetting strategies.	Sections 4.5 and 4.6 describe how the project will be operated. Section 8.7.3 describes aquatic biodiversity impacts and the conclusion that an aquatic biodiversity offset strategy is not required. Section 8.10 describes mitigation measures.
Abo	riginal Cultural Heritage – including:	
20.	Identifying and describing the Aboriginal cultural heritage values that exist across the whole area that will be affected by the project and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010), and be guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and consultation with Heritage NSW.	Section 10.1.3 and Appendix O Chapter 6 addresses consultation with Heritage NSW.
21.	Consulting with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.	Sections 10.1.2 and 10.1.3 and Appendix C
22.	Assessing and documenting impacts to Aboriginal cultural heritage values in an ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.	Sections 10.1.5, 10.1.6, 10.1.9 and Appendix O

SEA	ARs	EIS section where requirement addressed
23.	The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the [development/project] to formulate appropriate measures to manage unforeseen impacts.	Section 10.1.9 and Appendix O
Nor	n-Aboriginal heritage – including:	
24.	A Statement of Heritage Impact (SOHI) should be prepared for the project by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The SOHI is to address the impacts of the project on the heritage significance of the site and adjacent areas and is to identify the following:	Section 10.2 and Appendix P Section 10.3 and Appendix Q address the Greater Blue Mountains World Heritage Area
(a)	all heritage items (state and local) within and near the site, including built heritage, landscapes and archaeology, and includes detailed mapping of these items, and assessment of why the items and site(s) are of heritage significance	Section 10.2.3 and Appendix P
(b)	assesses the project's impact on the heritage significance of heritage items or potential heritage items on, and near the development site. Documentary evidence should also be provided by an appropriately qualified Structural Engineer, with experience in heritage buildings, confirming that any affected heritage item is capable of withstanding the proposed works	Sections 10.2.5, 10.2.6 and 10.2.8 Structural engineering is only considered relevant to the Upper Canal and is addressed in Table 10-15
(c)	addresses the project's compliance with policies of relevant Conservation Management Plans for the affected sites;	Sections 10.2.5 and 10.2.6
(d)	the impacts of the proposal on heritage item(s) including visual impacts, along with photomontages; and	Sections 10.2.5, 10.2.6, 10.2.7 and 10.2.8. Photomontages included in section 11.3.
(e)	any attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the site and the surrounding heritage items;	Sections 10.2.2 and 10.2.9 and Table 10-15





Agricultural land – including:			
27.	Identify potential impacts of the proposed development on the operations of impacted agricultural industries and detail the mitigation measures to enable the agricultural industries to continue to operate. This could be detailed in a Land Use Conflict Risk Assessment (LUCRA) in consultation with DPI Agriculture.	Sections 11.6.5, 11.6.6, 11.6.7, 11.6.8 and Appendix X	
20	Consult with the owners (monogene of offected and edicining neighbours and equipultural energiance in a	Chanter C and Annandiv V	

28. Consult with the owners / managers of affected and adjoining neighbours and agricultural operations in a timely and appropriate manner about the project, the likely impacts and suitable mitigation measures or compensation. Chapter 6 and Appendix X

SEA	ARs	EIS section where requirement addressed
Flo	oding – including:	
29.	Mapping the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: a) flood prone land. b) flood planning area, the area below the flood planning level. c) hydraulic categorisation (floodways and flood storage areas) d) flood hazard.	Section 9.3.3 and Appendix L
30.	The Proponent must assess and (model where required) the impacts on flood behaviour during construction and operation for a full range of flood events up to the probable maximum flood (taking into account sea level rise and storm intensity due to climate change).	Sections 9.3.5 and 9.3.6
31.	Modelling must consider and document:	
(e)	existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.	Section 9.3.2
(f)	the impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood.	Section 9.3.6
(g)	impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories	Section 9.3.6
(h)	relevant provisions of the NSW Floodplain Development Manual 2005.	Section 9.3.4

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SE	ARs	EIS section where requirement addressed
(i)	consideration of scenarios where the pipelines are shut down or used infrequently.	Table 9-36 discusses potential impacts to South Creek in the event of a total power failure, which is the only relevant scenario. Power supply is discussed in section 4.5.3. Chapter 4 describes infrequent maintenance activities that may occur on the pipelines and these are not expected to have flooding impacts.
(j)	impacts to South Creek under all scenarios, specifically where South Creek and the Warragamba Pipelines intersect.	Section 9.3.6. Section 9.2.6 for impacts to peak flows from the AWRC site. Sections 8.7.2, 13.2 and Appendix G for impacts to Warragamba pipeline from treated water releases.
(k)	consideration of backflow impacts during flood events.	Table 9-36
(I)	assessment of the hydrological flows into South Creek from both wet and potential dry weather flows, including consideration of the effects on downstream receiving environments, specifically the Warragamba Pipelines infrastructure (footings etc).	Section 8.7.2 Warragamba Pipelines also considered in Table 9-36, section 13.2 and Appendix G.
32.	The EIS must assess the impacts on the proposed development on flood behaviour, including:	
(a)	whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.	Section 9.3.6



SEA	Rs	EIS section where requirement addressed
(b)	consistency with Council floodplain risk management plans.	Section 9.3.2
(c)	consistency with any Rural Floodplain Management Plans.	No Rural Floodplain Risk Management Plans relevant to the project.
(d)	compatibility with the flood hazard of the land.	Section 9.3.6
(e)	compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.	Section 9.3.6
(f)	whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.	Section 9.3.6
(g)	whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.	Section 8.7.2 assesses erosion, siltation and stability of riverbanks and watercourses. Sections 8.6.2 and 8.7.3 assess impacts to riparian vegetation during construction and operation
(h)	any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council.	Sections 9.3.5 and 9.3.6. Consultation with SES is also outlined in Chapter 6.
(i)	whether the project incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.	Sections 9.3.5 and 9.3.6. Consultation with SES is also outlined in Chapter 6.

SE	ARs	EIS section where requirement addressed
(j)	emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES.	Sections 9.3.5 and 9.3.6
(k)	any impacts the development may have on the social and economic costs to the community as consequence of flooding.	Section 9.3.6
Tra	ansport – including:	
33	Assessment of the construction transport and traffic (vehicle, pedestrian and cyclists) impacts, including, but not necessarily limited to:	
(a)	construction schedule (stages and timing)	Sections 11.4.5, 11.4.7 and Chapter 4
(b)	route identification and scheduling of transport movements	Section 11.4.7
(c)	the number (daily and peak), frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements), including consideration of heavy vehicles participating in the Safety, Productivity and Environment Construction Transport Scheme	Section 11.4.5 Appendix U details consideration of the Safety, Productivity and Environment Construction Transport Scheme
(d)	details of construction site access arrangements and swept path details for relevant turning movements	Sections 11.4.5 and 11.4.7. Swept path analysis will be completed during detailed design.
(e)	construction worker parking	Sections 11.4.5 and 11.4.7



SE	ARs	EIS section where requirement addressed
(f)	the nature of existing traffic (types and number of movements) on construction access routes (including consideration of strategic freight routes, peak traffic times, sensitive road users and parking arrangements)	Sections 11.4.3 and 11.4.5
(g)	access constraints and impacts on public transport, pedestrians and cyclists	Section 11.4.5
(h)	the need to close, divert or otherwise reconfigure elements of the road and cycle network associated with construction of the project	Sections 11.4.5 and 11.4.7
(i)	mitigation of construction vehicle and excavation work on the classified road and rail network.	Section 11.4.5
34.	Assessment (including traffic modelling) of the operational transport impacts of the project, including:	
(a)	forecast travel demand and traffic volumes for the project and the surrounding road, cycle and public transport network;	Section 11.4.6
(b)	travel time analysis;	Section 11.4.6
(c)	performance of key interchanges and intersections by undertaking a level of service analysis at key locations;	Section 11.4.6 Table 11-42
(d)	wider transport interactions (local and regional roads, cycling, public and freight transport);	Section 11.4.6
(e)	induced traffic and operational implications for public transport (particularly with respect to strategic bus corridors and bus routes) and consideration of opportunities to improve public transport;	Section 11.4.6
(f)	impacts on cyclists and pedestrian access and safety;	Section 11.4.6

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SEARs	EIS section where requirement addressed	
Noise and Vibration – including:		
38. An assessment of construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. The assessment must include consideration of impacts to sensitive receivers, infrastructure, heritage and include, as relevant, the characteristics of noise and vibration (for example, low frequency noise).	Sections 11.2.5, 11.2.6, and Appendix S	
39. Details and justification of proposed noise mitigation and monitoring measures.	Section 11.2.9	
Air – including:		
40. An air quality impact assessment (AQIA) for construction and operation of the project in accordance with the current guidelines.	Appendix R	
41. The Proponent must ensure the AQIA also includes the following:		
<ul> <li>(a) demonstrated ability to comply with the relevant regulatory framework, specifically the <i>Protection of the</i> <i>Environment Operations Act 1997</i> and the Protection of the Environment Operations (Clean Air) Regulation (2010);</li> </ul>	Sections 11.1.2, 11.1.6 and Appendix R	
(b) a cumulative local and regional air quality impact assessment, including consideration of the impacts associated with cogeneration of energy.	Sections 11.1.5 to 11.1.8	
Social – including:		
42. Identifies and assesses the potential social impacts of the project, from the points of view of the affected community/ies and other relevant stakeholders, i.e. how they expect to experience the project.	Section 11.6 and Appendix X	



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SEA	NRs	EIS section where requirement addressed
(a)	addressing the relevant objectives, strategic directions, land use opportunities and key management priorities of State Environmental Planning Policy (Western Sydney Parklands) 2009, the Western Sydney Parklands Plan of Management 2030, the Western Sydney Parklands Southern Parklands Framework and the Western Sydney Parklands Design Manual	The State Environmental Planning Policy is addressed in section 5.2.2. Section 2.6.6 and Appendix B address other content.
(b)	consulting with the Western Sydney Parklands Trust on the appropriate route, maintenance and access requirements for the project within the Parklands.	Consultation is outlined in Chapter 6
Puk	olic Safety – including:	
50.	A Health Impact Assessment of the project in accordance with the current guidelines.	Sections 11.5 and Appendix V
51.	An assessment of the likely risks of the project to public safety including flood risk, subsidence risks, bushfire risks and the handling and use of dangerous goods.	Sections 11.5.5 and 11.5.6
52.	Provide detailed modelling that considers the impacts of potential leaks of the brine pipeline in Western Sydney Parklands including an assessment of minor leaks to catastrophic failure and outlines emergency protocols and incident management strategies to mitigate damage.	Unless an overflow point has been included in the design of a wastewater pipeline, modelling leaks and failures is not feasible. The only way the brine pipeline can fail is if it gets damaged by ground disturbance. This cannot be predicted, so it cannot be modelled.Our response to this SEAR has been discussed with DPIE and Greater Sydney Parklands. Section 4.6.2 provides detail about how the brine pipeline will be designed and managed to avoid leaks and failures.

SEA	ARs	EIS section where requirement addressed
53.	Outline how the proposal has considered WaterNSW's 'Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines' and include all practical measures to prevent damage to WaterNSW water supply infrastructure from construction or operation of the project.	Section 13.2.3 Section 8.7.2 provides an assessment of geomorphology impacts from treated water releases into waterways where WaterNSW infrastructure is located.
Was	ste – including:	
54.	Details of the predicted waste generated from the project during construction and operation, including:	
(a)	classification of the waste in accordance with the current guidelines.	Sections 12.2.2, 12.2.5 and 12.2.7
(b)	estimates / details of the quantity of each classification of waste to be generated during the construction of the project, including bulk earthworks and spoil balance.	Sections 12.2.5 and 12.2.7
(c)	handling of waste including measures to facilitate segregation and prevent cross contamination.	Section 12.2.13
(d)	management of waste including estimated location and volume of stockpiles.	Sections 12.2.5 and 12.2.13
(e)	waste minimisation and reuse.	Section 12.2.13
(f)	lawful disposal or recycling locations for each type of waste and contingencies for the above, including managing unexpected waste volumes, excessive stockpiling of material, or dirty water volumes exceeding the storage capacity available on site	Appendix Z, sections 12.2.4 and 12.2.13. Section 9.4.9 for saline groundwater management measures and section 9.2.9 for surface water management measures



SE	ARs	EIS section where requirement addressed
60.	Identify how the project can provide water that could supply future recycled water schemes.	Section 3.5.1
Cli	nate Change – including:	
61.	Assessment of the risk and vulnerability of the project to climate change in accordance with the current guidelines, including any Regional Water Strategy and associated climate change modelling as relevant to the project	Sections 12.1.2 and 12.1.7
62.	Quantified specific climate change risks with reference to the NSW Government's climate projections and incorporate specific adaptation actions in the design.	Section 12.1.7
63.	An assessment of potential future climate variability impacts on the operation and management of the project and associated delivery works (such as water deliver by way of river operations, or pipe infrastructure), having regard to research on groundwater recharge and surface run-off and the NSW Climate Impact Profile.	Section 12.1.7
64.	Assessment of the greenhouse gas emissions from the construction and operation of the project for the life of infrastructure, including:	
(a)	documentation and justification of an appropriate methodology for estimating greenhouse gas emissions for the project	Section 12.1.2
(b)	assessment of carbon dioxide, nitrous oxide and methane gas emissions,	Section 12.1.9
(c)	quantitative assessment of Scope 1, 2 and 3 greenhouse gas emissions.	Section 12.1.9
(d)	an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency.	Sections 12.1.9 and 12.1.11



66. Preparing an Infrastructure Management Plan in consultation with relevant agencies / authorities to:



SEARs	EIS section where requirement addressed
(h) address the existing capacity of the site to service the proposed development and any extension or augmentation, property tenure or staging requirements for the provision of utilities, including arrangements for electrical network requirements, drinking water, wastewater and recycled water.	Section 13.2.2
<ul> <li>(i) identify the existing infrastructure on the site or within the network which may be impacted by the construction and operation of the project and the measures to be implemented to address any impacts on this infrastructure.</li> </ul>	Section 13.2.3
(j) demonstrates advice on the electricity infrastructure required to facilitate the proposed development (including asset relocations) has been obtained through consultation with Endeavour Energy's Network Connections Branch.	Section 13.2.2
Consultation	
During the preparation of the draft EIS, the proponent should consult with the relevant local, State or Sections 6.3 and 6.4 Commonwealth Government authorities, service providers, Aboriginal community, community groups and affected landowners, including but not limited to:	
a) Registered Aboriginal Parties	
b) Penrith City Council	
c) Liverpool City Council	
d) Fairfield City Council	
e) wonoriality Shire Council	
a) City of Canterbury Bankstown Council	
h) NSW DPI Fisheries	



### EIS section where requirement addressed

i) D j) N k) [ l) T m) f n) f o) f q) f r) V s) V	epartment of Planning Industry and Environment – Biodiversity and Conservation SW Environment Protection Authority (EPA) Department of Planning Industry and Environment (Water Division) ransport for NSW (TfNSW) Department of Premier and Cabinet, NSW Heritage Endeavour Energy NSW DPI Agriculture NSW Crown Lands Vestern City and Aerotropolis Authority Vestern Sydney Planning Partnership VaterNSW.	
In p (a)	particular, the proponent must: Document a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of the consultation, including a justification for this approach.	Sections 6.2, 6.3 and 6.4
(b)	<ul><li>Provide a report containing details of how the community and stakeholder participation strategy has been carried out (to date) including a description of consultation that was carried out, including details of:</li><li>a. documentation of all consultation methods</li><li>b. timeframes of consultation</li></ul>	Sections 6.3 and 6.4
(c)	Report upon any digital engagement strategies and demonstrate the relevance of digital engagement methods to potentially affected stakeholders.	Section 6.2

SEARs



any specific requirements.

#### **Project Description**

5. The title of the action, background to the action and current status.

The EIS certification provides the formal title of the project. The action has not commenced. Sydney Water is seeking approval for the action as outlined in this EIS.

Sections 2.3 - 2.10 provide the need and the background to the action.

SE	ARs	EIS section where requirement addressed
6.	The precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on MNES.	Section 4.4 describes the design and location of all project components. Sections 4.8, 4.9, 4.10 outline the construction of all project components. Table 9-14 and sections, 8.6.2, 8.7.3 and Table 10-30 describe impacts to MNES.
7.	How the action relates to any other actions that have been, or are being taken in the region affected by the action.	Section 2.13 describes the project alignment with other major projects and Chapters 8-13 describe cumulative impacts with these projects. Section 4.14 outlines elements that are outside the project scope.
8.	How the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts on MNES.	Sections 4.8 to 4.14 outline the construction methodology and phases of how the works will be undertaken. Section 4.4 outlines the design parameters of all structures.
<i>Im</i> , 9. i.	<ul> <li>pacts</li> <li>The EIS must include an assessment of the relevant impacts of the action on the matters protected by the controlling provisions, including:</li> <li>a description and detailed assessment of the nature and extent of the likely direct, indirect and consequential impacts, including short term and long term relevant impacts;</li> <li>a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;</li> </ul>	Waterways related impacts (including on Macquarie Perch) are discussed in sections 8.6 and 8.7. Biodiversity impacts to MNES are addressed in section 9.1 and Appendix J.



### SEARs

- iii. analysis of the significance of relevant impacts; and
- iv. any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

#### Avoidance, mitigation and offsetting

- 10. For each of the relevant matters protected that are likely to be significantly impacted by the action, the EIS must provide information on proposed avoidance and mitigation measures to manage the relevant impacts of the action including:
- i. a description, and an assessment of the expected or predicted effectiveness of the mitigation measures;
- ii. any statutory policy basis for the mitigation measures;
- iii. the cost of the mitigation measures;
- iv. an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
- v. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.

### EIS section where requirement addressed

World Heritage related impacts are discussed in section 10.3.5

Waterways related impacts (including on Macquarie Perch) are discussed in sections 8.6 and 8.7.

Avoidance to biodiversity MNES addressed in section 9.1.2, mitigation in section 9.1.9, and offsetting in section 9.1.10.

No matters in relation to World or National heritage have been identified as likely to be significantly impacted by the project. No additional management measures are proposed to manage impacts on World or National heritage, as outlined in section 10.3.8.

The cost of mitigation measures is not known at this stage and is therefore not included.

Chapter 14 describes the overall environmental management approach for the project.



SEARs		EIS section where requirement addressed	
Key Bioe	v Issues diversity (threatened species and communities and migratory species)		
14.	<ul> <li>The EIS must identify each EPBC Act listed threatened species and community and migratory species likely to be impacted by the action. For any species and communities that are likely to be impacted, the proponent must provide a description of the nature, quantum and consequences of the impacts. For species and communities potentially located in the project area or in the vicinity that are not likely to be impacted, provide evidence why they are not likely to be impacted.</li> <li>Based on consideration of available information, the proposed action is likely to have a significant impact on the following matters of national environmental significance:</li> <li>Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest – critically endangered.</li> <li>Regent Honeyeater (<i>Anthochaera phrygia</i>) – critically endangered.</li> <li>Swift Parrot (<i>Lathamus discolor</i>) – critically endangered.</li> <li>Macquarie perch (<i>Macquaria australasica</i>) – endangered.</li> </ul>	Sections 8.5, 8.6 and 8.7 for the Macquarie perch and section 9.1.5 and 9.1.6 and Appendix J for the remaining species and communities.	
15.	For each of the EPBC Act listed threatened species and communities and migratory species likely to be impacted by the action the EIS must provide a separate:		
(a)	description of the habitat (including identification and mapping of suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advice, conservation advice and recovery plans;	Section 8.5 and Appendix J	
(b)	details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Australian Government guidelines and policy statements;	Sections 8.2.3, 9.1.2 and Appendix J.	



SEARs		EIS section where requirement addressed	
(c)	description of the relevant impacts of the action having regard to the full national extent of the species or community's range; and	Sections 8.6, 8.7, 9.1.5 and Appendix J.	
(d)	description of the specific proposed avoidance and mitigation measures to deal with relevant impacts of the action;	Section 8.10 and 9.1.9	
(e)	identification of significant residual adverse impacts likely to occur after the proposed activities to avoid and mitigate all impacts are taken into account;	For waterways, sections 8.6 and 8.7. For terrestrial biodiversity, no significant residual impacts are likely to occur as a result of the project as outlined in Table 9- 14.	
(f)	a description of any offsets proposed to address residual adverse significant impacts and how these offsets will be established.	Significant residual impacts in waterways are not expected as outlined in sections 8.6 and 8.7, therefore no offsets are proposed. Terrestrial biodiversity offsets are outlined in section 9.1.10.	
(g)	details of how the current published NSW Biodiversity Assessment Method (BAM) has been applied in accordance with the objects of the EPBC Act to offset significant residual adverse impacts; and	Sections 9.1.2, 9.1.10 and Appendix J	
(h)	details of the offset package to compensate for significant residual impacts including details of the credit profiles required to offset the action in accordance with the FBA and/or mapping and descriptions of the extent and condition of the relevant habitat and/or threatened communities occurring on proposed offset sites;	Significant residual impacts are not expected as outlined in sections 8.6 and 8.7, therefore no offsets are proposed. Terrestrial biodiversity offsets are discussed in section 9.1.10	

SE	ARs	EIS section where requirement addressed
16	Any significant residual impacts not addressed by the BAM may need to be addressed in accordance with the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offset Policy.	Significant residual impacts are not expected as outlined in sections 8.6 and 8.7, therefore no offsets are proposed. Terrestrial biodiversity offsets are discussed in section 9.1.10
17. The i.	The EIS must identify and describe the characteristics and values, including Outstanding Universal values, of the Greater Blue Mountains Area – World Heritage property and National Heritage place that is likely to be impacted by all stages of the proposed action with appropriate reference to relevant management plans. e assessment of impacts should include information on: the modification, destruction, fragmentation, isolation, disturbance of an important or substantial area of habitat;	Section 10.3.5
ii.	impacts on other users of the area;	Section 10.3.5
iii.	the potential impacts on important amenities, navigation, culturally or historically significant sites, threatened or migratory species or sensitive habitat;	Section 10.3.5
iv.	the potential visual impacts;	Section 10.3.5
V.	a description of any specific mitigation and management measures proposed to protect or enhance the affected values of the World Heritage property or National Heritage place.	Section 10.3.8
18	Where a significant residual adverse impact to a World Heritage property and/or a National Heritage place is considered likely the EIS must provide information on the proposed offset strategy. The offset strategy must:	No significant residual impacts are expected, and no offsets are needed under the EPBC Act.

SEARs		EIS section where requirement addressed
i.	include a discussion and supporting evidence of the conservation benefit associated with the proposed offset strategy. The conservation benefit must demonstrate, at a minimum, how the proposed offset will improve the integrity and resilience of the heritage values of the impacted heritage place or property; and	
ii.	be consistent with the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offset Policy (2012): <u>www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy</u> or an endorsed state policy.	