

Department of Climate Change, Energy, the Environment and Water

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Wilcannia Additional Groundwater Bore

Minor Works Review of Environmental Factors

April 2026





Acknowledgement of Country

The Department of Climate Change, Energy, the Environment and Water acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

Published by NSW Department of Climate Change, Energy, the Environment and Water dcceew.nsw.gov.au

Wilcannia Additional Groundwater Bore

First published: April 2026

Department reference number: DOC26/68125

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TMP-MC-R-DC-V1.2

Document Status – Wilcannia Additional Groundwater Bore Minor Works Review of Environmental Factors

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0.2	10/4/2026	Jane Dugdale-Bradley	Laura Atencio

Declaration

This Minor Works Review of Environmental Factors (minor works REF) has been prepared by Jane Dugdale-Bradley, on behalf of the Department of Climate Change, Energy, the Environment and Water, Water Group, Infrastructure Division (DCCEEW, Water – Infrastructure). The minor works REF has been prepared to assess the environmental impacts to satisfy the requirements of Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and considers the factors listed in section 171 of the Environmental Planning & Assessment Regulation 2021 (EP&A Regulation).

The minor works REF provides a true and fair assessment of the proposed activity in relation to its likely effects on the environment. It examines and takes into account to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposed activity.

Based on the information provided in the minor works REF, it is concluded that:

- (1) the proposed activity is not likely to have a significant impact on the environment, and an Environmental Impact Statement is not required.
- (2) the proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values. A Species Impact Statement (SIS) is not required.
- (3) The proposed activity is not likely to significantly affect any Matters of National Environmental Significance, nor is the activity being carried out on or is it likely to impact Commonwealth land.

Based on the information presented in this minor works REF, it is concluded that by adopting the safeguards identified in this assessment, it is unlikely that there would be significant adverse environmental impacts associated with the project. Subject to the adoption of the measures to avoid, minimise or manage environmental impacts listed in this minor works REF, the proposed activity is recommended for approval.

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1 Introduction

1.1 Project overview

DCCEEW, Water – Infrastructure proposes to establish an additional emergency groundwater bore in Wilcannia as part of an integrated approach to addressing water security for the township of Wilcannia.

Two preferred bore sites have been confirmed in conjunction with the community and groundwater experts, and test bore drilling will be undertaken as part of the proposal. The intent is for the production bore to be developed in the same hole as the successful test bore.

Project location

The two test bore drill sites are located on the Wilcannia Golf Course, just north of the town of Wilcannia (see Figure 1). Up to two test bores will be drilled, with the test bore which provides the best yield being converted to a production bore.

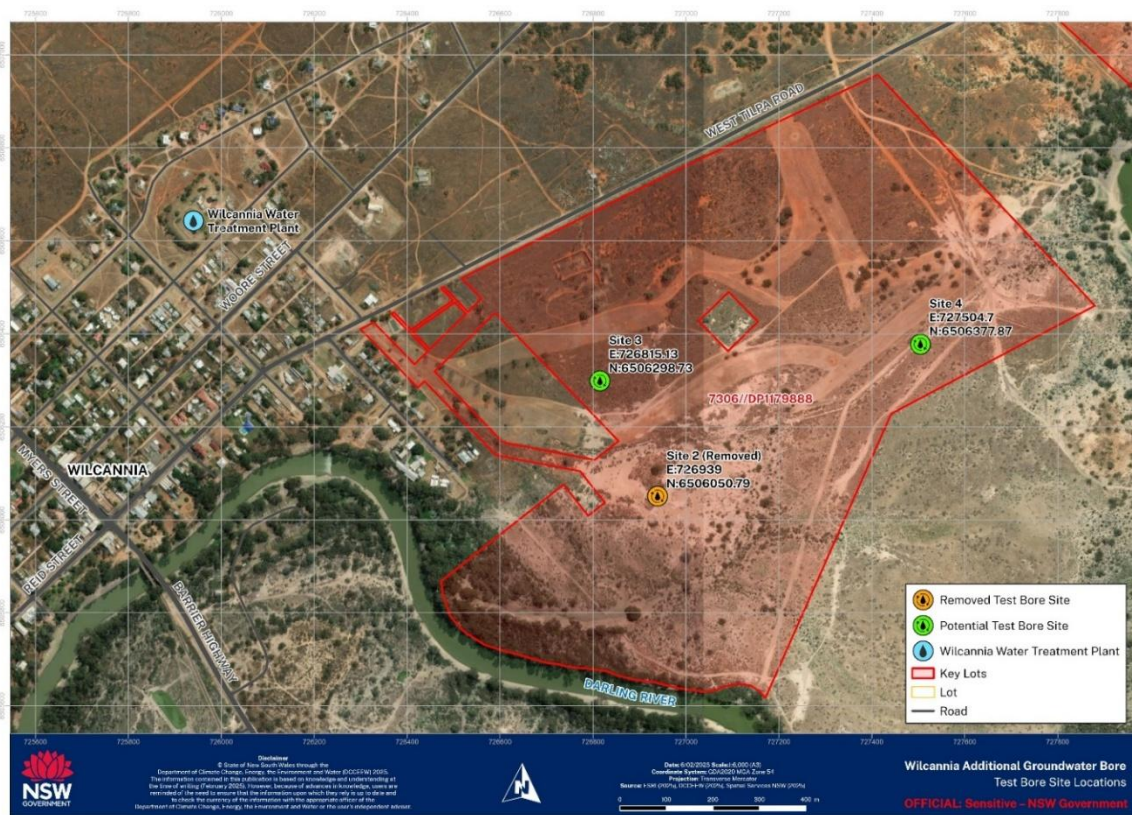


Figure 1: Locality

1.2 Project needs and objectives

The Wilcannia Additional Groundwater Bore project is part of an integrated, system-wide approach to improving water security and quality for the Wilcannia community. The additional groundwater bore will supplement Wilcannia's existing water infrastructure.

The objectives of the Wilcannia additional groundwater bore project are:

- Identify bore locations, undertake land matters and planning pathways to enable project progression
- Undertake stakeholder engagement and agreement for land use and access
- Obtain relevant environmental planning approval pathways
- Establish clear communication channels and foster positive relationships between all parties and relevant stakeholders involved.
- Establish an additional emergency groundwater bore in Wilcannia with a target yield of 8L/second

There is no existing infrastructure at the proposed test bore drilling sites. There is a bore field on Union Bend Road, approximately 3 km south-west of the Wilcannia Golf Course, which is part of the Wilcannia water supply.

1.3 Options considered

Table 1: Options considered

Option considered	Description
Do nothing	The 'do nothing' option would mean no test bores are drilled, no production bore is developed, and an additional emergency groundwater bore does not come online to support the security of Wilcannia's water supply.
Option 1	Up to two test bores will be drilled, with the test bore producing at the required 8L/s being converted to a production bore. A pump pipeline will link the new production bore with the Wilcannia water treatment plant. The pump and pipeline will be the subject of a separate REF. This option would enable an additional emergency groundwater bore to be added to Wilcannia's water supply, supporting increased water security for the town.

The preferred option is Option 1 as it meets the objectives outlined in section 1.2 and supports increased water security for the town of Wilcannia.

The Wilcannia Additional Groundwater Bore project provides additional options for water supply to the township of Wilcannia during times of drought and when other components of the water supply system are off-line.

2 Project description

2.1 Project features

A map of the proposed activity and key features is shown at Figure 1. Location details are provided in Table 2 below.

Table 2: Proposed activity location details

Location details	
Address	Wilcannia Golf Course, 33 Bourke Street, Wilcannia, NSW 2836
Lot / DP	Lot 7306 DP 1179888
Land ownership	The State of NSW, Crown Land
Local government area	Central Darling Shire Council

There is no existing infrastructure at the site of the proposed production bore. Once construction is complete, Central Darling Shire Council will take ownership of the bore and be responsible for operation and maintenance.

2.2 Description of the proposed activity

The key features of the proposed activity are:

- Establishment of work area for test bore drilling (production bore area will be the same)
- Drilling of test bores – Site 4 will be drilled first. If Site 4 produces the required flow rate, Site 3 will not be drilled. If Site 4 does not produce the required flow rate, Site 3 will be drilled.
- Development of production bore

The proposed activity is expected to comprise the following work methodology:

Site access and preparation

The site will be accessed using existing public roads and unsealed access tracks within the Wilcannia Golf Course. No track upgrades are required. Site access tracks have been assessed in the Aboriginal Cultural Heritage Assessment (ACHA).

No levelling or drilling pad formation is proposed.

No trees will be removed or trimmed. A small area (2m x 2m x 0.1 mm depth) will be completely cleared at each test bore site.

The maximum estimated work (impact) area at each bore site is 40 m wide x 40 m.

This methodology may change in response to site conditions.

Test bore drilling

The test bores will be drilled by rotary or cable tool method.

Water for drilling (between 500 L and 5,000 L) will be provided on site via a mobile water cart. Water will not be directly extracted from the river. Water will be obtained from an appropriately licenced source.

Drilling fluids will be potable water, possibly combined with an environmentally friendly, biodegradable drilling polymers such as Guar Gum, if needed.

Mud tanks will be used to capture and reverse circulate drilling fluids to prevent water from escaping. Upon completion of the drilling, the drilling muds will be removed from site and disposed of at a licenced facility in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014).

Drill cutting samples will be bagged and retained on site until the completion of the drilling. All cuttings will be removed from the site before or at demobilisation.

Test bore water will be collected on site and disposed of in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014).

Sediment control will be implemented at each bore location, as required.

Test bore drilling is estimated to take 7-14 days on each site.

This methodology may change in response to site conditions.

Production bore

The production bore will be drilled by rotary or cable tool method.

Water for drilling (between 500 L and 5,000 L) will be provided on site via a mobile water cart. Water will not be directly extracted from the river. Water will be obtained from an appropriately licenced source.

Drilling fluids will be potable water, possibly combined with an environmentally friendly, biodegradable drilling polymers such as Guar Gum, if needed.

Mud tanks will be used to capture and reverse circulate drilling fluids to prevent water from escaping. Upon completion of the drilling, the drilling muds will be removed from site and disposed of at a licenced facility in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014).

Drill cutting samples will be bagged and retained on site until the completion of the drilling. All cuttings will be removed from the site before or at demobilisation

Bore development water will be managed on site during development of the bore, then disposed of offsite in accordance with licence conditions.

This methodology may change in response to site conditions.

Plant and equipment

The following plant/tools are anticipated for use during construction:

- Manitou or forklift
- Drill rig (4WD or truck mounted)
- Light vehicles
- Excavator or bobcat
- Mud tanks
- Water truck

The following ancillary facilities are proposed:

- Bore casing stockpiles

Work is expected to occur during standard daytime construction hours and take approximately four weeks from May 2026 to June 2026

The capital investment value of the project is anticipated to be \$2.0 million.

Operation of the production bore

The production bore will be operated by the Central Darling Shire Council. The bore will be operational during times of drought, or when other components of the Wilcannia water supply system are off-line.

3 Statutory context

3.1 NSW Environmental Planning Instruments

3.1.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

The proposal is permissible without development consent under Chapter 2 Part 2.2 Division 24 s2.159 of the T&I SEPP – *Development permitted without consent – general*

(1) Development for the purpose of water reticulation systems may be carried out by or on behalf of a public authority without consent on any land

(6) In this Division, a reference to development for the purpose of a water supply system of any kind includes a reference to development for any of the following purposes if the development is in connection with the water supply system—

(c) groundwater investigation works, groundwater bore stations, borefields, mine water and the like

Chapter 2 Part 2.2 Division 1 of the T&I SEPP contains provisions for public authorities to consult with local councils and other public authorities.

Consultation is discussed in Section 4 of this REF.

3.2 NSW Legislation

Table 3: Relevant NSW legislation

Legislation	Relevance to the proposed activity
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	NSW DCCEEW Water Group – Infrastructure is a public authority and determining authority as defined in Part 5 of the EP&A Act. The proposal satisfies the definition of an activity under the Act. As such, NSW DCCEEW Water Group – Infrastructure must assess and consider to the fullest extent possible all environmental impacts of the proposal before determining whether to proceed.

Legislation	Relevance to the proposed activity
	This REF has been prepared with consideration of Section 171 of the EP&A Regulations and Section 5.5 and 5.7 of the EP&A Act, and documents consideration of the environmental impact of the proposal and the necessary mitigation actions
<i>Biodiversity Conservation Act 2016</i>	The Biodiversity Conservation Act 2016 (BC Act) is directed at maintaining a healthy, productive and resilient environment consistent with the principles of ecologically sustainable development (ESD). The BC Act sets out the assessment framework for threatened species and ecological communities. Certain species of animals or plants are identified as endangered species, populations or communities or vulnerable species under the BC Act. Areas of land comprising the habitats of listed endangered species may also be declared Areas of Outstanding Biodiversity Value under the Act. An assessment of the potential biodiversity impacts of the proposal is covered in Section 5.3 of this MWREF. No trees will be removed or trimmed with the sites located on previously disturbed land on the Wilcannia golf course. There were 10 bird species, one reptile species and one plant species under the BC Act listed as threatened that are predicted to occur in the locality, based on Bionet searches. The land is not declared an area of outstanding biodiversity value under the <i>Biodiversity Conservation Act 2016</i>. The proposal is unlikely to have a significant impact on any listed threatened species, ecological communities or critical habitat. Therefore, a species impact statement (SIS) is not required.
<i>Fisheries Management Act 1994</i>	The <i>Fisheries Management Act 1994</i> (FM Act) aims to conserve fish stocks and key fish habitats, conserve threatened species, populations and ecological communities of fish and marine vegetation, and promote ecologically sustainable development, including the conservation of biological diversity. There are no defined watercourses or Key Fish Habitat within the proposal area. The FM Act does not apply to the proposal.

Legislation	Relevance to the proposed activity
<i>National Parks and Wildlife Act</i>	The harming or desecrating of Aboriginal objects or places is an offence under Section 86 of the <i>National Parks and Wildlife Act 1974</i> (NPW Act). Under Section 90, an Aboriginal heritage impact permit may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons. Further provisions include the protection of Aboriginal objects and places and offences relating to harm or desecration of an Aboriginal object or declared Aboriginal place. Harm includes destroying, defacing damage or moving items or places without consultation. An Aboriginal Heritage Due Diligence (DD) Assessment Report has been prepared including a desktop assessment and field survey undertaken in April 2025 by Austral Archaeology (see Appendix D). Based on the results of the DD assessment (Appendix D), an Aboriginal Cultural Heritage Assessment was undertaken in November 2025 and report prepared (see Appendix E), and an Aboriginal Impact Heritage Permit application is in progress. Further details on impacts to Aboriginal heritage are summarised in Section 5.4 of this MWREF.
<i>Native Title (New South Wales) Act 1994</i>	The <i>Native Title (New South Wales) Act 1994</i> serves to implement the <i>Commonwealth Native Title Act 1993</i> in NSW and to ensure consistency with the standards set in the Commonwealth Act. The proposed Wilcannia additional groundwater bore works sit within the Barkandji Traditional Owners #8 Part A Native Title Determination Area (NCD2015/001) (see Appendix F). Consultation with the Barkandji Native Title Group Aboriginal Corporation is discussed in Section 4 and Appendix A of the MWREF.

Legislation	Relevance to the proposed activity
<i>Heritage Act 1977</i>	The <i>Heritage Act 1977</i> (Heritage Act) is designed to protect both known heritage items (such as standing structures) and items that may not be immediately obvious (such as potential archaeological remains or ‘relics’). Section 57(1) of the Heritage Act lists the types of activities/ works that require approval from Heritage NSW under Section 60 of the Heritage Act, when working on/in an item/place listed on the State Heritage Register (SHR). An application for an exemption can also be made under some circumstances. There is no Historic heritage identified within the proposed impact areas (see Appendix I). The proposal will not create any negative impacts on Historic heritage. Historic heritage is discussed in Section 5.5 of the MWREF.
<i>Protection of the Environment Operations Act 1997 (POEO Act)</i>	An environment protection licence (EPL) is required for scheduled activities or development work listed by the POEO Act. The proposal is not of a kind listed in Schedule 1 of the POEO Act and would not require an EPL under this Act. Construction activities must comply with the requirements of the POEO Act, including but not limited to the following: • Sections 115 and 116 (regarding disposal of waste, leaks, spillages and other escapes). • Section 120 (regarding pollution of waters). • Section 124 and 126 (regarding operations that result in air pollution) · Section 139 (regarding noise pollution). • Section 167 (regarding the appropriate maintenance and operation of plant and equipment). Waste is discussed in Section 5.11 of the MWREF.

Legislation	Relevance to the proposed activity
<i>Biosecurity Act 2015</i>	Under the s22 of the <i>Biosecurity Act 2015</i>, all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. The contractor is required to develop a site-specific construction environmental work method statement (EWMS) which addresses biosecurity risk minimisation and mitigation.
<i>Water Management Act 2000</i>	<i>Water supply work approval - bore drilling</i> Under the <i>Water Management Act 2000</i> (WM Act) Chapter 3, Part 1, Division 1, clause 52(2)(b) does not allow a water bore to be constructed without a water supply work approval. Therefore, a water supply work approval must be sought before construction commences <i>Use of water</i> The WM Act requires approval to be obtained for the taking and use of water. The water access for the production bore will be included under water access licence held by the Central Darling Shire Council, for which an amendment will be applied for. <i>Controlled activity approval</i> Under the WM Act regulations, a public authority is exempt from section 91E (1) of the Act in relation to all controlled activities that it carries out in, on or under waterfront land. The proposed works are not occurring on waterfront land.

Legislation	Relevance to the proposed activity
<i>Crown Land Management Act 2016</i>	The purpose of the <i>Crown Lands Management Act 2016</i> (CLM Act) is to consolidate statutory provisions dealing with the ownership, use and management of Crown land into one Act. Although the works are occurring on Crown Land, Water Administration Ministerial Corporation (WAMC) powers for access and construction will be utilised. No Crown Land licence is required. An easement for the pipeline and bore benefitting the Central Darling Shire Council is being proposed post completion of the works.
<i>Public Works and Procurement Act 1912</i>	DCCEEW Water Group will issue statutory notification to the Department of Planning, Housing and Infrastructure – Crown Lands advising of entry to Crown Land for construction activities associated with the Wilcannia Additional Groundwater Bore project.

3.3 Commonwealth legislation

Table 4: Relevant Commonwealth legislation

Legislation	Relevance to the proposed activity
Environment Protection & Biodiversity Conservation Act 1999	The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides a legal framework to protect and manage flora, fauna, ecological communities and heritage places – defined in the EPBC Act as Matters of National Environmental Significance (MNES). Under the EPBC Act, actions that have or are likely to have a significant impact on a MNES must be referred to the Australian Minister for the Environment for assessment. If the Minister determines that a referred proposal is a 'controlled action' under the EPBC Act, the approval of the Minister for the Environment would be required. There were one listed threatened ecological community, 21 listed threatened species (13 bird species, three fish species and five

Legislation	Relevance to the proposed activity
	plant species,) as well as seven listed migratory species under the EPBC Act identified to occur within or adjacent to the proposed works location, based on an MNES search (see Appendix C). The works have been assessed as unlikely to have a significant impact on a MNES listed under the EPBC Act. Biodiversity is discussed in Section 5.3 of the MWREF.
Native Title Act 1993	The <i>Native Title Act 1993</i> (Cth) recognises, under Australian common law, pre-existing Indigenous rights and in land and waters according to traditional laws and customs. It sets up processes to determine where native title exists, how a future act impacting upon native title may be undertaken, and to provide compensation where native title is impaired or extinguished. The Act gives Indigenous Australians who hold native title rights and interests, or who have made a native title claim, the right to be consulted and, in some cases, to participate in decisions about activities proposed to be undertaken on the land. Indigenous Australians have been able to negotiate benefits for their communities, including heritage protection. The proposed Wilcannia additional groundwater bore works sit within the Barkandji Traditional Owners #8 Part A Native Title Determination Area (NCD2015/001) (see Appendix F). Consultation with the Barkandji Native Title Group Aboriginal Corporation is discussed in Section 4 and Appendix A of the MWREF. Regardless of whether or not native title rights apply to various parts of a project, the NSW Government recognises the significance of the land and water of NSW to Aboriginal people and are committed to ensuring the Aboriginal community is consulted and included in the design and assessment of a project.

Matters of national environmental significance checklist

Under Chapter 2, Part 3 of the EPBC Act, the following matters of national environmental significance are required to be considered to assist in determining whether the proposed activity should be referred to the C'wth DCCEEW.

Table 5: Matter of national environmental significance

Will the proposed activity impact on any of the following matter of national environmental significance?	Impact
World Heritage property?	No
National Heritage place?	No
Wetland of international importance (often called 'Ramsar' wetlands)?	No
Nationally threatened species and ecological communities species?	No
Nationally listed migratory species?	No
Commonwealth marine area?	No
The Great Barrier Reef Marine Park?	No
A nuclear action (including uranium mining)?	No
A water resource, in relation to an unconventional gas development and large coal mining development?	No
Any impact (direct or indirect) on the environment of Commonwealth land?	No

3.4 Summary of licences and approvals

Table 6: Summary of licences and approvals

Legislation	Approval / permit / notification	Responsibility	Timing
<i>Environmental Planning and Assessment Act 1979</i>	Determination of proposal	DCCEEW – Water Group	Prior to construction

Legislation	Approval / permit / notification	Responsibility	Timing
<i>Water Management Act 2000</i>	Water Supply Work Approval – bore drilling	DCCEEW – Water Group	Prior to construction
	Amendment to Water Access Licence – groundwater bore	DCCEEW – Water Group	Prior to construction
<i>National Parks & Wildlife Act 1974</i>	Aboriginal Heritage Impact Permit	DCCEEW – Water Group	Prior to construction
<i>Public Works and Procurement Act 1912</i>	Issue of letter to Crown Lands advising of WAMC statutory powers for access and construction	DCCEEW – Water Group	Prior to construction
<i>Crown Land Management Act 2016</i>	Easement in favour of Central Darling Shire Council	DCCEEW-Water Group	Post construction

REF publishing

The REF must be published on the determining authority's website or the NSW Planning Portal if:

- The activity has a capital investment value of more than \$5 million, or
- The activity requires an approval or permit as referred to in any of the following provisions before it may be carried out:
 - Fisheries Management Act 1994* (s44, 201, 205 or 219)
 - Heritage Act 1977* (s57)
 - National Parks and Wildlife Act 1974* (s90)
 - Sections 47-49 of the *Protection of the Environment Operations Act 1997* (POEO Act).
- The determining authority considers the proposal to be in the public interest.

The Wilcannia Additional Groundwater Bore Project REF meets the requirements for publication under the *Environmental Planning and Assessment Regulation 2021* as an Aboriginal Heritage Impact Permit under the *National Parks and Wildlife Act 1974* is required.

As such, the REF must be published on the NSW DCCEEW website.

4 Consultation

4.1 Transport and infrastructure SEPP consultation

Part 2.2, Division 1 of the Transport and Infrastructure SEPP contains provisions for consultation with public authorities prior to the commencement of certain types of development. Table 4.1 lists the consultation requirements under the Transport and Infrastructure SEPP.

For each row, if the response is 'yes', consultation with the relevant agency will be required.

NOTE: All consultation periods listed below require a 21-day notification period.

Table 7: Transport and infrastructure SEPP consultation

Is consultation required the Transport and Infrastructure SEPP?	Yes	No
Will the proposed activity have a substantial impact on stormwater management services provided by a council? If 'yes', notification to Council is required.	☐	☒
Is the proposed activity likely to generate traffic to an extent that will strain the capacity of the road system in a local government area? If 'yes', notification to Council is required.	☐	☒
Will the proposed activity involve connection to, and a substantial impact on the capacity of, any part of a sewerage system owned by a council? If 'yes', notification to Council is required.	☐	☒
Will the proposed activity involve connection to, and use of a substantial volume of water from, any part of a water supply system owned by a council? If 'yes', notification to Council is required.	☐	☒
Will the proposed activity involve the installation of a temporary structure on, or the enclosing of, a public place that is under a council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential? If 'yes', notification to Council is required.	☐	☒

Is consultation required the Transport and Infrastructure SEPP?	Yes	No
Will the proposed activity involve excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which a council is the roads authority under the <i>Roads Act 1993</i> (if the public authority that is carrying out the development, or on whose behalf it is being carried out, is not responsible for the maintenance of the road or footpath)? If 'yes', notification to Council is required.	☐	☒
Is the proposed activity likely to affect the heritage significance of a local heritage item, or of a heritage conservation area, that is not also a State heritage item, in a way that is more than minor or inconsequential? If 'yes', notification to Council is required.	☐	☒
Is the proposed activity located on flood liable land? If so, will the works change flooding patterns to more than a minor extent? If 'yes', notification to Council is required.	☐	☒
Is the proposed activity land that is within a coastal vulnerability area and is inconsistent with a certified coastal management program that applies to that land? If 'yes', notification to Council is required.	☐	☒
Is the proposed activity located on flood liable land and permissible without development consent under the following provision of Part 2.3 of the Transport and Infrastructure SEPP: (a) Division 1 (Air transport facilities), (b) Division 2 (Correctional centres and correctional complexes), (c) Division 6 (Emergency services facilities and bush fire hazard reduction), (d) Division 10 (Health services facilities), (e) Division 14 (Public administration buildings and buildings of the Crown), (f) Division 15 (Railways), (g) Division 16 (Research and monitoring stations), (h) Division 17 (Roads and traffic), (i) Division 20 (Stormwater management systems). * This section does not apply in relation to the carrying out of minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance. If 'yes', consultation with the State Emergency Service is required.	☐	☒
Is the proposed activity located adjacent to a national park, nature reserve or other area reserved under the <i>National Parks and Wildlife Act 1974</i> , or on land acquired under that Act? If 'yes', consultation with the National Parks is required.	☐	☒

Is consultation required the Transport and Infrastructure SEPP?	Yes	No
Is the proposed activity located on land in Zone E1 National Parks and Nature Reserves? If 'yes', consultation with the National Parks is required.	☐	☒
Does the proposed activity include a fixed or floating structure in or over navigable waters? If 'yes', notification to Roads and Maritime Services is required.	☐	☒
Will the proposed activity increase the amount of artificial light in the night sky within the dark sky region as identified on the dark sky region map? If 'yes', notification to the Director of the Observatory is required.	☐	☒
Is the proposed activity located on defence communications facility buffer land within the meaning of clause 5.15 of the Standard Instrument? If 'yes', notification to the Secretary of the Commonwealth Department of Defence is required.	☐	☒
Is the proposed activity within a mine subsidence district within the meaning of the Mine Subsidence Compensation Act 1961? If 'yes', notification to Subsidence Advisory is required.	☐	☒

4.2 Other consultation

The department has undertaken consultation and engagement with a local council, First Nations, key stakeholders and the community on the additional emergency groundwater bore project.

Engagement methods have included phone calls, SMS, Electronic Direct Email (eDM), email, site visits, face to face and online meetings, discussions, workshops, and posting updates on the department's website (see Appendix A).

Table 8: Other consultation undertaken

Agency	Feedback received
First Nations	• Collaboration with First Nations who are supportive of the additional emergency groundwater bore progressing, with First Nations representatives to be engaged to salvage artefacts on site as part of the Aboriginal Heritage Impact Permit process. • First Nations representatives observed that communities within the local council area, including Ivanhoe and White

Agency	Feedback received
	Cliffs, are already supplied by groundwater and objected to the bore being characterised as a 'drought' measure. • First Nations representatives confirmed their view that improved upstream surface water management would reduce the frequency and severity of water quality issues experienced in Wilcannia. • Ongoing discussions on the Indigenous Land Use Agreement.
Local council	• Collaboration with local council on matters to assess and support the bore development and impact on council's own operations including reticulation lines to the water treatment plant and the Aboriginal Cultural Heritage Assessment.
NSW Crown Lands	• Requested information about the funding source for the proposed groundwater bore and whether it is independent of the Wilcannia Weir Replacement Project. The department advised that the bore is funded separately to the weir project.
Local business – directly affected	• Ongoing discussions with local business to support the project's operations, including access to the proposed bore sites, planned test excavation works and early works investigations. • Local business expressed support for the project and has engaged constructively throughout consultation.

5 Environmental assessment

5.1 Topography, geology and soil

Description of existing environment and potential impact	Yes	No
Does the proposed activity require excavation or ground disturbance?	☒	☐
Does the proposed activity site have constraints for erosion and sedimentation controls (e.g. steep gradients or narrow corridors)?	☐	☒
Is the proposed activity located in an area of high erosion or landslip risk?	☐	☒
Are there any known occurrences of salinity or acid sulphate soils in the proposed activity site?	☐	☒
Is there any evidence within or in proximity to the proposed activity site of potential contamination?	☐	☒
Are there any sensitive receiving environments that are located within or in proximity to the proposed activity site that would likely receive stormwater discharge from the proposed activity?	☐	☒
Is the proposed activity located within a mine subsidence district?	☐	☒
<u>Description of potential impacts:</u> The proposed works have the potential for erosion, sediment and dust to occur outside of the approved works area.		

5.2 Water and drainage

Description of existing environment and potential impact	Yes	No
Is the proposed activity site located within, adjacent to or near a waterway?	☐	☒

Description of existing environment and potential impact	Yes	No
Is the location of the proposed activity site known to flood or be prone to water logging?	☐	☒
Is the proposed activity likely to require the extraction or diversion of water from a local water course?	☐	☒
Is the proposed activity within a drinking water catchment?	☐	☒
Does the proposed activity impact groundwater?	☒	☐
Does the proposed activity require discharge of wastewater to the environment (e.g. wastewater, chlorinated water, groundwater, sediment-laden water, drilling fluid)? If so, is this an EPL licenced discharge? No	☐	☒
Does the proposed activity temporarily divert watercourses?	☐	☒
Does the proposed activity permanently change drainage?	☐	☒
Does the proposed activity require the use or storage of fuels or other chemicals?	☒	☐

Description of potential impacts:

The proposed works will involve the drilling of a production bore. Groundwater discharged during the development of the production bore will need to be stored, removed from site and disposed of at an appropriately licenced facility.

There is the potential for spills and leaks of drilling mud additives and fuel supplies stored on site.

Operation of the production bore will impact the groundwater aquifer. The intent is that the bore will be used with other available water resources to manage aquifer impact across the bore field. The bore will have the capacity to be used in an emergency capacity when all other water sources are off-line.

Extraction from the production bore will not exceed licence volumes previously granted for town water requirements, the demand for which is being met from a number of sources from the same aquifer.

5.3 Biodiversity

Description of existing environment and potential impact	Yes	No
Does the proposed activity impact native vegetation, native fauna or habitat?	☒	☐
Does the proposed activity impact any threatened species/populations, ecological communities, Areas of Outstanding Biodiversity Value, critical habitat, migratory species or Key Fish Habitat?	☐	☒
Does the proposed activity impact any other legally protected terrestrial, marine or aquatic habitats (e.g. urban bushland, riparian zones, marine parks)?	☐	☒
Did the site inspection confirm the presence of fauna habitat?	☒	☐
Are any listed priority weeds located within the proposed activity site?	☐	☒
Will the proposed activity provide any additional barriers to the movement of wildlife?	☐	☒
Will the proposed activity disturb any natural waterways or aquatic habitat?	☐	☒

Description of potential impacts:

Field investigation

A field investigation was completed the week of 2 December 2024.

No major constraints were identified in proximity to the proposed works sites. Vegetation disturbance is to be kept to a minimum.

As the sites are located within previously disturbed land on the Wilcannia golf course, changes to site conditions between December 2024 and May/June 2026 were not expected to be significant.

Searches

A basic desktop assessment was undertaken on 9 February 2026 to assess the known biodiversity values around the area of the proposed works.

Searches included

- BioNet – Atlas of NSW Wildlife and Threatened Biodiversity Data Collection (10km x 10km search area)
- NSW Department of Planning and Environment NSW Plant Community Type Classification.
- EPBC Act Protected Matters Search Tool (PMST) (defined area around the Wilcannia Golf Course)

Site 3 & 4

The proposed impact area for site 3 is located within an area classed as plant community type (PCT) 0 – Not native, although, based on photos of the area, it is more likely PCT 158 Old Man Saltbush – mixed chenopod shrubland of the semi-arid hot (persistently dry) and arid climates zones of north-western NSW.

The proposed impact area for site 4 is located within an area classed as PCT 158 – Old Man Saltbush – mixed chenopod shrubland of the semi-arid hot (persistently dry) and arid climates zones of north-western NSW.

The proposed works will have a very minor impact on understorey and ground cover species.

There were 10 bird species, one reptile species and one plant species under the BC Act listed as threatened that are predicted to occur in the locality, based on BioNet searches (see Appendix B).

There was one listed threatened ecological community, 21 listed threatened species (13 bird species, three fish species and five plant species,) as well as seven listed migratory species under the EPBC Act identified to occur within or adjacent to the proposed works location, based on an MNES search (see Appendix C).

Summary

The test bores will be located within the Wilcannia golf course.

A small area (2m x 2m x 0.1m depth) will be completely cleared at each test bore site.

Description of existing environment and potential impact	Yes	No
The maximum estimated work (impact) area at each bore site is 40 m wide x 40 m. No trees will be removed or trimmed. Disturbance to fauna during the activity from noise will be minor and temporary due to the short duration of the work. The land is not declared an area of outstanding biodiversity value under the Biodiversity Conservation Act 2016 or declared critical habitat under Part 7a of the Fisheries Management 1994. The disturbance of the ground or vegetation will be contained to the minimum required to undertake the investigations		

5.4 Aboriginal heritage

Description of existing environment and potential impact	Yes	No
Has the AHIMS basic search (using a 200 m search area) been completed?	☒	☐
Are there any registered Aboriginal heritage objects or declared Aboriginal places within 200 m of the project area?	☒	☐
Does the landscape contain features that indicate high risk of encountering Aboriginal objects? Features which indicate High archaeological potential include: • within 200 m of waters • in a sand dune system • on a ridge top, ridge line or headland (turn on contours) • within 200 m below or above a cliff face • within 20 m of or in a cave, rock shelter or cave mouth.	☒	☐
Are there any Aboriginal culturally modified trees (scarred trees) within 200 m of the project area?	☐	☒
Would the proposed activity involve the removal of mature native trees?	☐	☒

Description of existing environment and potential impact	Yes	No
<u>Description of potential impacts:</u> Impacts to two Aboriginal sites – Wilcannia Artefact Scatter 1 – AHIMS 24-5-0245 and Wilcannia Artefact Scatter 2 24-5-0250 have been identified in the Aboriginal Cultural Heritage Assessment (ACHA) report. Before any works can occur, NSW DCCEEW will apply to Heritage NSW for an Aboriginal Heritage Impact Permit (AHIP) to partially destroy Wilcannia Artefact Scatter 1 (AHIMS 24-5 0245), Wilcannia Artefact Scatter 2 (AHIMS 24-5-0250) through community collection. These sites are protected under Section 90 of the <i>NSW National Parks and Wildlife Act 1974</i>.		

5.5 Historic heritage

Description of existing environment and potential impact	Yes	No
Will the activity be undertaken in proximity to a local or State listed heritage item?	☐	☒
Does the proposed activity involve excavation in an area of high non-Aboriginal archaeological potential? These are areas that are more likely to contain the Colony's earliest archaeological remains.	☐	☒
Could the proposed activity, including excavation, impact listed items (within the heritage curtilage) of State or Local Heritage significance?	☐	☒
<u>Description of potential impacts:</u> A search of the NSW State Heritage Inventory was undertaken on 9 February 2026 (see Appendix I). No historic heritage items were located within the proposal area. No impacts to items of State or Local Heritage significance are expected.		

5.6 Noise and vibration

Description of existing environment and potential impact	Yes	No
Will the proposed activity be undertaken outside of standard working hours? Standard working hours being: - Monday-Friday: 7:00am to 6.00pm - Saturday: 8.00am to 1.00pm - Sunday and Public Holidays: no work	☐	☒
Are there any noise sensitive receivers in vicinity of the proposed activity?	☒	☐
Will the proposed activity result in vibration being experienced by any surrounding properties or infrastructure (during either construction or operation)?	☐	☒
Will the proposed activity result in permanent changes to background noise?	☐	☒

Description of potential impacts:

Noise impacts may be experienced by sensitive receivers (residences) close to Site 3 (see Appendix G). Works will only be undertaken during standard working hours. Given the short-term nature of the drilling, impacts are expected to be minor and temporary.

5.7 Socio-economic

Description of existing environment and potential impact	Yes	No
Are any residents, businesses, public facilities (e.g. hospitals, schools) located in vicinity to the proposed activity likely to be impacted?	☒	☐

Description of potential impacts:

People using the Wilcannia Golf Club course may experience minor impacts during the drilling of the test bores and production bore. These impacts will be short-term and temporary.

There is no proposal to change the land use type as a result of the works.

The establishment of a new production bore will increase the resilience of the Wilcannia water supply. The bore will be used during times of drought as an emergency water supply for the town, in addition to being operational when other components of the Wilcannia water supply system are off-line.

5.8 Visual amenity

Description of existing environment and potential impact	Yes	No
Is the proposed activity near an important physical or cultural element or landscape? (e.g. heritage items and areas, National Parks, conservation areas, etc.)?	☐	☒
Do trees (if present and proposed to be removed) form part of a streetscape, an avenue or roadside planting and/or have the trees been planted by a community group, Land Care group or by council or is the tree a memorial or part of a memorial group?	☐	☒
Would the proposed activity obstruct or intrude upon the character or views of a valued landscape or urban area?	☐	☒
Will the proposed activity result in unwanted light spillage on residential properties or into bushland (during construction or operation)?	☐	☒
Does the proposed activity include any new structures or features being constructed that may result in over shadowing to adjoining properties or areas?	☐	☒
<u>Description of potential impacts:</u> Minor visual amenity impacts may be experienced by nearby residences during the proposed works; however, these will be short-term and temporary.		

5.9 Traffic

Description of existing environment and potential impact	Yes	No
Will the proposed activity result in detours or disruptions to traffic flow (vehicular, cycle and pedestrian) or access during construction or operation?	☐	☒
Will the proposed activity result in impacts to any other transport nodes or transport infrastructure (e.g. bus stops, bus routes)?	☐	☒
Is a Road Occupancy Licence Required?	☐	☒
<u>Description of potential impacts:</u> There are unlikely to be impacts to traffic and access as a result of the proposed works.		

5.10 Air quality

Description of existing environment and potential impact	Yes	No
Is the proposed activity likely to result in any emission to air during construction or operation?	☒	☐
Description of potential impacts: Vehicle and drilling rig emissions are likely during drilling of the test bores and production bore. These emissions will be minor, short term and temporary.		

5.11 Waste

Description of existing environment and potential impact	Yes	No
Is the proposed activity likely to generate waste material?	☒	☐
Description of potential impacts: Drilling muds, drill cuttings, development water and general construction waste will be generated as part of the proposed works. These will be removed from site and disposed of at an appropriately licenced facility.		

5.12 Preliminary salinity risk assessment

Description of existing environment and potential impact	Yes	No
Is the proposed activity likely to change salinity in the River Murray, and for which the impact may be deemed to have a significant effect under Schedule B of the Murray Darling Basin Agreement? (EMS-WINSW_PRO-04/005 – preliminary salinity risk assessment procedure)?	☐	☒
Description of potential impacts: The proposed works are unlikely to change salinity in the River Murray. A preliminary salinity risk assessment screening has been prepared (see Appendix H)		

5.13 Cumulative

Description of existing environment and potential impact	Yes	No
Will the proposed activity result in cumulative environmental impacts due to nearby works?	☐	☒
<u>Description of potential impacts:</u> The proposed activity will not result in cumulative environmental impacts due to nearby works.		

5.14 Other impacts

Description of existing environment and potential impact
<u>Description of potential impacts:</u> The proposed activity has the potential to be impacted by bushfire and severe weather such as heavy rain, high winds and lightning storms.

6 Environmental management

6.1 Construction

A site-specific Environmental Work Method Statement (EWMS) will be prepared for the proposed works.

The mitigation measures identified in this MWREF will form the basis for the EWMS.

6.2 Operation

Operation of the production bore will be regulated by the Water Supply Work Approval and Water Access Licence.

Table 9: Summary of mitigation measures

Environmental aspect	Mitigation measures	Responsibility	Timing
w			
General			
G-1	Land access approval must be obtained prior to commencement of works Statutory notification to Crown Lands must be undertaken prior to commencement of works.	DCCEEW Water	Pre-construction
G-2	The works are to be carried out in accordance with landholder requirements agreed to by DCCEEW – Water Group.	Contractor	At all times
G-3	The following approvals must be obtained prior to works commencing: • AHIP under s90 of the NPW Act to impact AHIMS site #24-5-0245 and AHIMS site #24-5-0250. • Water supply works approval under the WM Act.	DCCEEW Water	Pre-construction
G-4	Environmental inductions are to be conducted for all workers on site prior to commencing work, to review the Environmental Work Method Statement, and requirements of the AHIP.	DCCEEW Water	Pre-construction
G-5	The works areas must be clearly delineated and areas outside of the works area marked as no go zones prior to construction. DCCEEW – Water Group must inspect delineation of the no go zones prior to works commencing. No go zones are to be maintained during construction and only removed once works have been completed and access to the site is no longer required.	Contractor	Construction

Environmental aspect	Mitigation measures	Responsibility	Timing
G-6	Environmental incidents such as spills and unexpected contaminated soil must be reported immediately to the DCCEEW Project Manager, and the DCCEEW – Water Group Environmental incident management process followed.	Contractor	Construction
G-7	The REF must be published on the DCCEEW Water website	DCCEEW Water	Within 4 weeks of construction commencing
Topography, geology and soils			
TGS-1	Where there is potential for erosion and sedimentation, erosion and sediment controls are to be installed prior to the commencement of works in accordance with the technical document, Landcom (2006) Edition 4 Managing Urban Stormwater, Soils & Construction (the Blue Book).	Contractor	Construction
TGS-2	All works are to be undertaken in a manner that will minimise ground disturbance, and in accordance with the DCCEEW Soil and Water Management Guideline.	Contractor	At all times
TGS-3	Weather forecasts are to be checked each day so that expected storm events can be considered in project planning and erosion and sediment management.	Contractor	Construction
TGS-4	Where implemented, erosion and sediment controls are to be inspected and maintained regularly, and before and after rain events to ensure they are in good order and working properly.	Contractor	Construction

Environmental aspect	Mitigation measures	Responsibility	Timing
TGS-5	Rehabilitation works are to be undertaken as soon as practicable following works at each location. The sites are to be returned to as close as possible to the existing condition.	Contractor	Construction
Surface water and drainage			
SW-1	Chemicals, fuels and lubricants are to be securely stored in approved containers in bunded areas at least 40 m away from any waterbody. Bunded capacity is to be at least 110% of the largest container and 25% of the total stored volume for chemicals, fuels and lubricants.	Contractor	Construction
SW-2	Plant and equipment are to be refuelled or serviced off site wherever possible, or at least 40 m away from any waterbody.	Contractor	Construction
SW-3	Appropriate, well maintained spill kits are to be kept on site, ready for immediate use, including during refuelling activities.	Contractor	Construction
SW-4	Workers are to be trained in the use of spill kits.	Contractor	Pre-construction
Groundwater			
GW-1	If groundwater flows come to the surface, groundwater will be disposed to prevent adverse impacts (such as localised erosion and water pollution) and in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014).	Contractor	Construction

Environmental aspect	Mitigation measures	Responsibility	Timing
GW-2	Groundwater is not to be discharged to a natural waterway during the works.	Contractor	At all times
Flora and fauna			
FF-1	The proposed works are to be located so as to minimise impacts to native vegetation wherever possible.	Contractor	At all times
FF-2	No trees will be removed or trimmed.	Contractor	Construction
FF-3	Ground cover, free of weeds, that is removed is to be retained and used as surface mulching to assist site rehabilitation.	Contractor	Construction
FF-4	Fallen timber on site is to be placed gently outside the work area and replaced on site after construction is complete.	Contractor	Construction
FF-5	The work site is to be inspected at the start of each day of the works to confirm the presence of any wildlife. Wildlife is to be relocated from the site where safe to do so, or WIRES is to be contacted to assist with the removal (particularly where wildlife may be injured).	Contractor	Construction
FF-6	Where boreholes / areas of excavation are to be left open overnight, the opening is to be covered to avoid the potential for wildlife to become trapped in the hole.	Contractor	Construction
Pests and weeds			

Environmental aspect	Mitigation measures	Responsibility	Timing
PW-1	All vehicles and equipment are to be inspected and documented as free from weeds or other contaminants before mobilising to site, in accordance with DCCEE's Biosecurity Management Guideline.	Contractor	Construction
PW-2	Wherever possible, vehicles are not be driven over priority weed species, if present.	Contractor	At all times
PW-3	All vehicles and equipment are to be inspected and documented as free from weeds or other contaminants before leaving site.	Contractor	Construction
PW-4	Management of weeds (where identified) within the work area is to be in accordance with all relevant government and industry accepted control methods.	Contractor	Pre-construction
Air quality			
AQ-1	Vehicles speeds on unsealed roads are to be kept to a minimum. Vehicles transporting spoil to and from the site are to be covered.	Contractor	At all times
AQ-2	Excavated soils are to be suitably contained and covered as required to avoid becoming airborne.	Contractor	Construction
AQ-3	All equipment must be recently serviced and in accordance with the manufacturer's recommendations and be in good working order before being mobilised to site.	Contractor	Construction
AQ-4	Wherever possible, vehicles, plant and equipment is to be switched off when not in use.	Contractor	Construction

Environmental aspect	Mitigation measures	Responsibility	Timing
AQ-5	All vehicles, plant and equipment are to comply with relevant EPA requirements	Contractor	Construction
Waste, hazardous materials and contamination			
W-1	All waste is to be contained on site and removed and disposed of at licensed facilities.	Contractor	Construction
W-2	If contaminated material is encountered during ground disturbance, work must cease, the site secured, and a safe work method statement(s) prepared. The fund must be reported to DCCEEW as Environmental Incident, and the DCCEEW – Water Group Environmental incident management procedure implemented.	Contractor	Construction
W-3	Contaminated material is to be classified first and then stored, transported and disposed of in accordance with EPA waste classification guidelines (NSW EPA, 2014).	Contractor	Construction
W-4	Stripped vegetation and topsoil is to be stockpiled separately and used in site rehabilitation at the conclusion of the drilling.	Contractor	Construction
W-5	Waste material is not to be burnt on site.	Contractor	At all times

Environmental aspect	Mitigation measures	Responsibility	Timing
W-6	Drill cuttings are to be retained on site until the completion of the works. At the completion of work, drill cuttings are to be removed from site and disposed of in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014).	Contractor	Construction
W-7	Biodegradable muds are to be used. Drilling muds are to be recirculated within a tank. Upon completion of the drilling, the drilling muds are to be removed from site and disposed of in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014).	Contractor	Construction
Hazards			
HZ-1	An emergency response plan is to be developed and available on site. The plan is to include procedure and actions to be taken in the event of bushfire, accidental fire, flooding or extreme weather during construction. Contact details for local Fire and Rescue services are to be available on site.	Contractor	Construction
HZ-2	All personnel and subcontractors are to be made aware of and trained in the project emergency response plan.	Contractor	Pre-construction
HZ-3	The Contractor is to monitor the weather, Fire Danger Ratings and Total Fire Ban Declarations on a regular basis, and daily if required during the Bush Fire Danger Season.	Contractor	Construction
HZ-4	No work is to occur on site during catastrophic Fire Danger Rating Days.	Contractor	Construction

Environmental aspect	Mitigation measures	Responsibility	Timing
HZ-5	Only works permitted by the NSW Rural Fire Service Total Fire Ban Rules are to be undertaken on site on Total Fire Ban days.	Contractor	Construction
HZ-6	Fire-fighting equipment must be available for use at all construction work areas. All vehicles and plant must have a suitably sized, appropriate category fire extinguisher that has a correct label and service tag. All extinguishers must have been serviced within the last 6 months.	Contractor	Construction
HZ-7	All personnel on site must be trained in the use of fire suppression equipment.	Contractor	Pre-construction
HZ-8	A cigarette smoking policy must be developed which clearly states exclusion areas. Ash and cigarette butts must be stored separately, away from other domestic waste, and disposed off-site as general solid waste.	Contractor	Construction
HZ-9	Avoid undertaking works during periods of extreme weather.	Contractor	Construction
Aboriginal cultural heritage			
ACH-1	All works must be undertaken in accordance with the project Aboriginal Cultural Heritage Assessment and in line with the conditions in the Aboriginal Heritage Impact Permit.	Contractor	Construction

Environmental aspect	Mitigation measures	Responsibility	Timing
ACH-2	If an unexpected Aboriginal cultural material find occurs within the work area, work must cease immediately and an exclusion zone must be established. The DCCEEW -Water Group Unexpected heritage finds procedure and flowchart must be followed (see Appendix J)	Contractor	Construction
ACH-3	If suspected human remains are found within the work area, works must cease immediately, and exclusion zone must be established. The DCCEEW -Water Group Suspected human remains procedure flowchart must be followed.	Contractor	Construction
Historic heritage			
HH-1	If any non-Aboriginal cultural material is encountered within or immediately adjacent to the work area, work must stop until the significance of the item can be determined, and appropriate measures implemented to allow work to recommence if deemed appropriate. The DCCEEW -Water Group Unexpected heritage find procedure and flowchart must be followed.	Contractor	Construction
Noise and vibration			
NV-1	Consultation with the landowners and neighbours is required prior to the proposed works commencing to address potential concerns relating to noise and vibration.	Contractor	Pre-construction
NV-2	A complaints procedure must be put in place to promptly deal with any noise complaints received by the landowners / other members of the community.	Contractor	Pre-construction

Environmental aspect	Mitigation measures	Responsibility	Timing
Traffic and access			
TA-1	Vehicles will use existing access tracks and areas assessed under the ACHA to reach the investigation sites.	Contractor	At all times
TA-2	In the event of wet weather, site access is to be made only when unsealed roads are identified as “open” by the relevant Council.	Contractor	At all times
TA-3	Where works are conducted on or adjacent to public roads or public roads need to be closed temporarily for safety reasons, approval of the relevant council is to be obtained, and traffic control procedures implemented in accordance with council requirements.	Contractor	Construction
TA-4	Public access to the investigation sites must be prevented for safety reasons for the duration of the works, such as by implementing appropriately located barricades or bunting.	Contractor	Construction
Utilities and infrastructure			
UI-1	Utilities and services which may be impacted by the proposed works are to be accurately located prior to commencement of works (e.g. Dial Before You Dig).	Contractor	Pre-construction
UI-2	Adjacent landholders are to be consulted prior to commencement of works if impacts on private services are likely.	Contractor	Pre-construction

7 Conclusion

The proposed activity will meet the project objectives of improving water security for the township of Wilcannia by establishing an additional emergency groundwater bore in Wilcannia with a target yield of 8L/second.

The proposed activity will result in minimal adverse impact upon the environment as described in this Minor Works REF. Environmental safeguards provided in this Minor Works REF would ameliorate or minimise these expected impacts.

This Minor Works REF has examined and considered all relevant location, state and commonwealth legislation and policies, and all matters affecting and likely to affect the environment as a result of the proposed activity.

This Minor Works REF has been prepared in accordance with section 5.5 of the EP&A Act. It has concluded that the proposed activity is unlikely to have a significant impact on the environment, therefore an environmental impact statement under section 5.7 of the EP&A Act is not required.

This Minor Works REF has considered whether there is likely to be a significant impact on State listed threatened species, ecological communities and their habitats and concluded that a significant impact is not likely.

In addition, the proposed activity is unlikely to have a significant impact on MNES or Commonwealth land within the meaning of the EPBC Act, therefore a referral to the Commonwealth DCCEW is not required.

7.1 Section 171(2) Environmental Factors Checklist

The following factors listed in section 171(2) of the EP&A Regulation, have been considered in assessing the likely impacts of the Proposed Activity on the environment. These are provided in the table below.

Table 10: Section 171(2) factors

Environmental Factor	Impact	Details
(a) the environmental impact on the community	no	The proposal will not result in an environmental impact on the community. The proposal will result in a long term positive impact on the community via the increased resilience of the Wilcannia water supply for the township of Wilcannia.
(b) the transformation of the locality	no	The proposal will not transform the locality.
(c) the environmental impact on the ecosystems of the locality	no	The proposal will have a minor environmental impact on the ecosystems of the locality. Potential impacts to biodiversity are discussed in Section 5.3. These impacts will be short-term and temporary and mitigated by the implementation of the mitigation measures included in Section 6.
(d) reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality	no	The proposal will not reduce the aesthetic, recreational, scientific or other environmental quality or value of the location. Potential socio economic and visual amenity impacts are discussed in Section 5.7 and 5.8. These impacts will be short-term and temporary and mitigated by the implementation of the mitigation measures included in Section 6

Environmental Factor	Impact	Details
(e) the effects on any locality, place or building that has — (i) aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or (ii) other special value for present or future generations	no	The proposal will not have any effects on any locality, place or building of significance or special value for present or future generations. Impacts will occur to Aboriginal heritage as a result of the works. These impacts will be managed under an AHIP. Impacts to Aboriginal heritage is discussed further in Section 5.4 and Appendices D&E.
(f) the impact on the habitat of protected animals, within the meaning of the <i>Biodiversity Conservation Act 2016</i>	no	The proposal will have minor impacts on the habitat of protected animals. Potential impacts to biodiversity are discussed in Section 5.3. These impacts will be short-term and temporary, and mitigated by the implementation of the mitigation measures included in Section 6.
(g) the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air	no	The proposed works will not endanger a species of animal, plant or other life form living on land, in water or in the air. Potential impacts to biodiversity are discussed in Section 5.3. Any impacts will be short-term and temporary and mitigated by the implementation of management measures included in Section 6.

Environmental Factor	Impact	Details
(h) long-term effects on the environment	no	The proposal will not have long term effects on the environment. While operation of the production bore will see draw down impacts on the aquifer, these will be short term given the emergency use nature of the bore, within existing extraction limits for the aquifer. Any impacts will be short-term and temporary and mitigated by the implementation of management measures included in Section 6. The operation of the production bore during times of drought and when other components of the Wilcannia water supply system are off-line will have positive long term effects for the Wilcannia community.
(i) degradation of the quality of the environment	no	The proposal will not result in the degradation of the quality of the environment. Potential impacts to the environment are discussed in Section 5. Any impacts to the environment are minor, and short-term and temporary in nature and mitigated by the mitigation measures included in Section 6.
(j) risk to the safety of the environment	no	The proposal does not pose a risk to the safety of the environment.
(k) reduction in the range of beneficial uses of the environment	no	The proposal will not result in a reduction in the range of beneficial uses of the environment. Any impacts to the environment are minor, and short-term and temporary in nature and mitigated by the mitigation measures included in Section 6.

Environmental Factor	Impact	Details
(l) pollution of the environment	no	Any pollution risks as a result of the proposal will be mitigated by the implementation of the mitigation measures in Section 6.
(m) environmental problems associated with the disposal of waste	no	The proposal will not result in environmental problems associated with the disposal of waste. Potential impacts from waste are discussed in Section 5.11. Waste management risks are mitigated by the mitigation measures included in Section 6.
(n) increased demands on natural or other resources that are, or are likely to become, in short supply	yes	The proposal will result in increased demand on the groundwater resource in the vicinity of the production bore. The use of this bore will occur under a Water Access Licence which takes into consideration the sustainable yield of the groundwater resource. The production bore will be used for emergencies such as drought, and when other components of the Wilcannia water supply system are off-line.
(o) the cumulative environmental effect with other existing or likely future activities	no	The proposal will not result in a cumulative negative environmental effect with other existing or likely future activities. Cumulative impacts are discussed in Section 5.13. Any impacts to the environment are minor, and short-term and temporary in nature and mitigated by the mitigation measures included in Section 6.

Environmental Factor	Impact	Details
(p) the impact on coastal processes and coastal hazards, including those under projected climate change conditions	no	The proposal is not located within a coastal zone.
(q) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	yes	The proposal is consistent with the Central Darling Shire Local Strategic Planning Statement – Section 9.3 Protect Our Natural Environment, 9.3.1 Increase resilience to climate change and natural hazard risks. The proposal is consistent with the Far West Regional Plan – Direction 26 – deliver long term water security.
(r) other relevant environmental factors.	no	n/a

8 References

9 Terms and abbreviations

Term	Description
AHIP	Aboriginal Heritage Impact Permit
AHIMS	Aboriginal Heritage Information Management System
BC Act	<i>Biodiversity Conservation Act 2016</i>
CEMP	Construction environmental management plan
Commonwealth DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
REF	Review of environmental factors
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water

Appendix A - Consultation

Appendix B - Bionet search results

Appendix C - PMST search results

Appendix D Aboriginal Heritage Due Diligence Assessment

Appendix E Aboriginal Cultural Heritage Assessment

Appendix F Native Title areas

Appendix G Sensitive receivers

Appendix H Preliminary salinity assessment

Appendix I NSW State Heritage Inventory search results