



Public Works
Advisory



Planning Proposal

Rezoning for Nanima Village Sewage Treatment Plant

Report Number: ISR20129

January 2021

Prepared for Department of Planning, Industry & Environment - Water



Planning,
Industry &
Environment

Report Number: ISR20129

Document control

Version	Author(s)	Reviewer	Approved for issue	
			Name	Date
Draft v1	Kristen Parmeter	Lara Hess	Liz Mathieson	26.06.2020
Final	Kristen Parmeter	Lara Hess	Liz Mathieson	24.09.2020
Final v2	Kristen Parmeter	-	Liz Mathieson	30.09.2020
Final v3	Kristen Parmeter	-	Liz Mathieson	13.01.2021

Kristen Parmeter Environmental Scientist

Public Works Advisory, 4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150
Locked Bag 5022, Parramatta NSW 2124
p 02 9240 8803

e kristen.parmeter@finance.nsw.gov.au | w www.publicworksadvisory.nsw.gov.au

© Crown in right of the State of NSW through the Department of Regional NSW 2021

This publication is copyright and may incorporate material to which an individual maintains moral rights. Other than for the purposes of and subject to the conditions prescribed under the Copyright Act 1968, no part of it may, in any form or by any means, be reproduced, altered, manipulated, stored in a retrieval system or transmitted without prior written consent of the copyright owner or owner of moral rights. Any enquiries relating to consents and use of this publication, including by NSW Government agencies, must be addressed to Public Works Advisory.

While this document has been formulated with all due care, the State of New South Wales does not warrant or represent that the document is free from errors or omissions, or that it is exhaustive. The State of NSW disclaims, to the extent permitted by law, all warranties, representations or endorsements, express or implied, with regard to this document including but not limited to, all implied warranties of merchantability, fitness for a particular purpose, or non-infringement. The State of NSW further does not warrant or accept any liability in relation to the quality or accuracy of this document and no responsibility is accepted by the State of NSW for the accuracy, currency, reliability and correctness of any information in this document provided by the client or third parties.

All references to Public Works Advisory are taken to be references to the Department of Regional NSW for and on behalf of the State of New South Wales.

Contents

Abbreviations.....	1
1. Background.....	2
2. Part 1 – Objectives or Intended Outcomes	3
3. Part 2 – Explanation of Provisions	6
4. Part 3 – Justification.....	7
5. Part 4 – Maps.....	28
6. Part 5 – Community Consultation.....	30
7. Part 6 – Project Timeline	31
8. References	A-1
Appendix A Aboriginal Heritage Due Diligence Assessment– OzArk Environment and Heritage Pty Ltd	A-1
Appendix B Database Searches	B-1
Appendix C Nanima Village STP Augmentation Layout Design	C-1

Tables

Table 3-1: Proposed Rezoning	6
Table 4-1: Consistency with SEPP's	11
Table 4-2: Consistency with s.9.1 Directions	14
Table 4-3 Site Summary Table	27

Abbreviations

DRC	Dubbo Regional Council
DPIE - Water	Department of Planning, Industry & Environment - Water
LEP	Local Environmental Plan
PP	Planning Proposal
SEPP	State Environmental Planning Policy
STP	Sewage Treatment Plan

1. Background

This Planning Proposal has been prepared by Public Works Advisory on behalf of the Department of Planning, Industry & Environment - Water (DPIE - Water) in accordance with the requirements of Section 3.33 of the Environmental Planning & Assessment Act 1979 (EP&A Act) and the NSW Department of Planning, Industry and Environment's (DPIE) guidelines; *A Guide to Preparing Planning Proposals* (DPE, 2018) and *Guide to Preparing Local Environmental Plans* (DPE, 2018).

DPIE - Water is seeking to rezone a small portion of one land parcel (Lot 244 DP 756920) via an amendment to the *Wellington Local Environmental Plan 2012* (Wellington LEP) to facilitate the management and augmentation of the existing Sewage Treatment Plant (STP) which services Nanima Village, located in Central West NSW. The amendment would allow the STP works to proceed under the provisions of the *State Environmental Planning Policy (Infrastructure) 2007*.

The existing Nanima Village STP site is zoned RU5 Village, as shown in Figure 2-4. The site is owned by the Wellington Local Aboriginal Land Council (LALC) managed by DPIE - Water and operated under contract by Dubbo Regional Council (DRC). DPIE - Water and DRC have identified the need to upgrade the existing STP plant to overcome a number of deficiencies, namely to refurbish the existing treatment ponds which show evidence of leaking. In addition to the construction of a new oxidation pond at the site is needed to ensure adequate treatment of existing sewage loads.

The RU5 land use zone is not a prescribed zone under *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) and sewage treatment plants are prohibited within the RU5 land zone under the Wellington LEP. An amendment to the Wellington LEP is therefore required to facilitate any future upgrade and maintenance works for the Nanima Village STP.

This Planning Proposal seeks to address the above anomaly by rezoning a portion of the land parcel to SP2 Infrastructure, to provide for increased planning certainty and to more accurately reflect the STP site's current and future land use purpose.

The section of land parcel Lot 244 DP 756920 which is proposed to be rezoned SP2 Infrastructure, which comprises an approximately 1.78 ha total size, will be of a suitable size to entirely accommodate all of the proposed future STP augmentation infrastructure including adequate space to allow for the construction of a new oxidation pond and associated ancillary infrastructure. The area of Lot 244 DP 756920 to be rezoned SP2 Infrastructure is shown in Figure 2-3 and the layout design of the proposed STP augmentation is provided in Appendix C.

2. Part 1 – Objectives or Intended Outcomes

The objective of this Planning Proposal is to amend the *Wellington Local Environmental Plan 2012* by rezoning an approximately 1.78 ha portion of one parcel (Lot 244 DP 756920), to accurately reflect the existing or intended use of the land for sewerage scheme infrastructure, and to enable a streamlined approval pathway for future essential STP infrastructure operation and management.

A location map, aerial view land zoning map of the site proposed for rezoning is provided in Figure 2-1 to Figure 2-4.

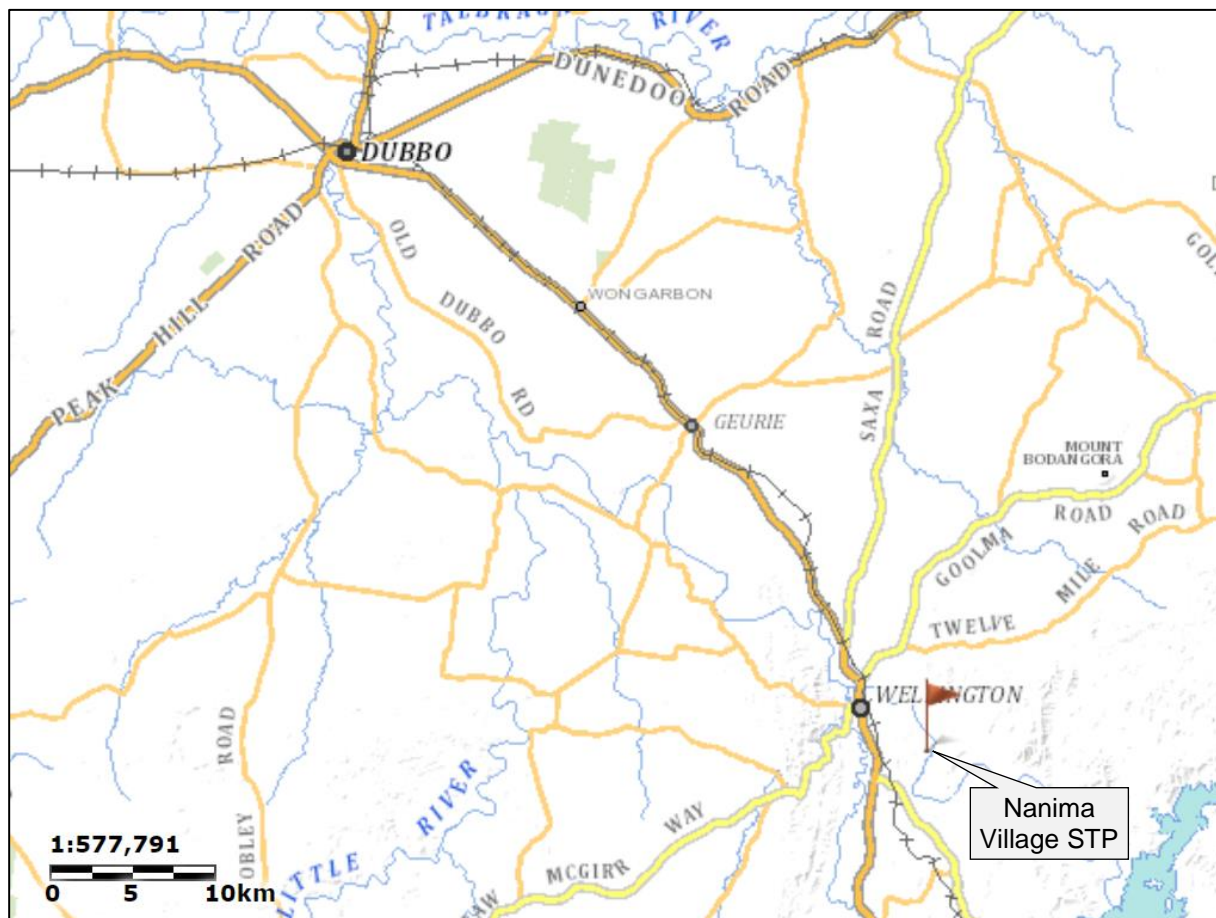


Figure 2-1: Location map of proposed rezoning site in relation to Wellington and Dubbo

Source: SIX Maps, June 2020



Figure 2-2 Location of existing Nanima Village STP site in relation to Nanima Village

Source: SIX Maps, accessed June 2020

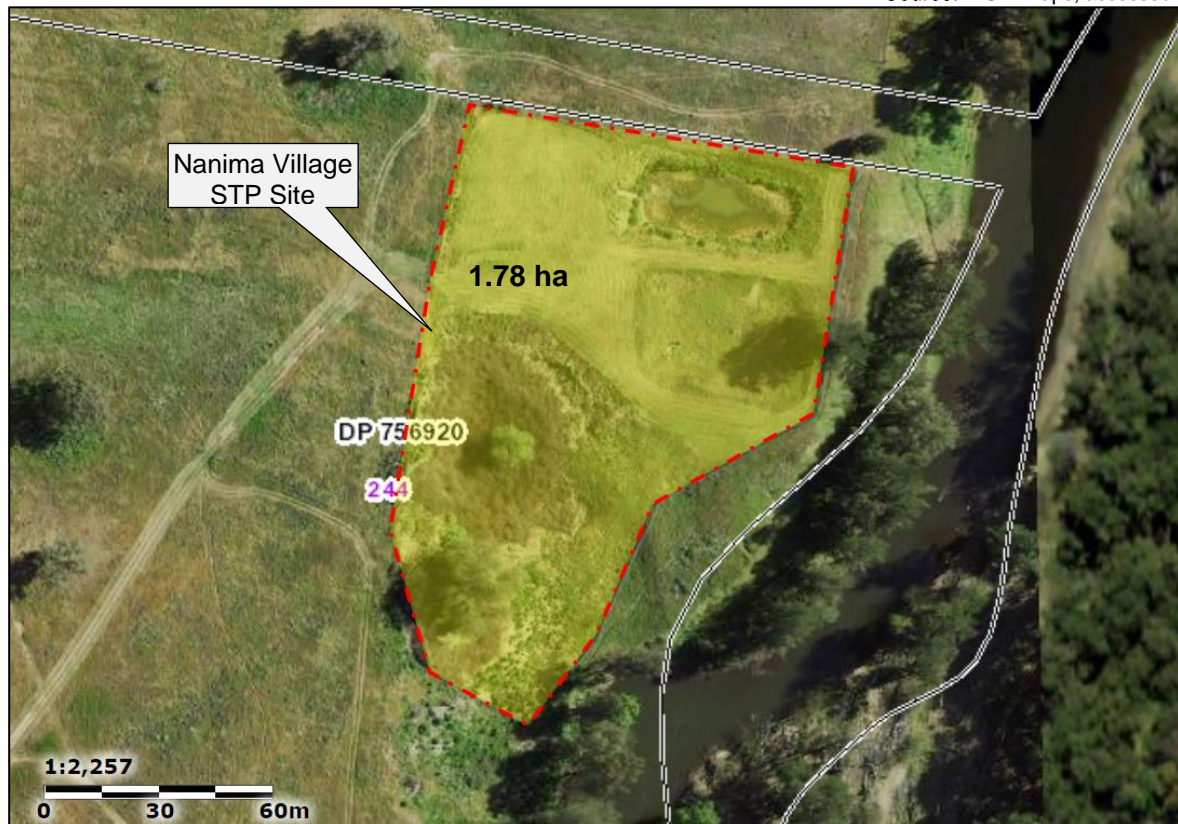


Figure 2-3 Aerial view of existing Nanima Village STP site showing the 1.78 ha area of land to be rezoned.

Source: SIX Maps, accessed Dec 2020

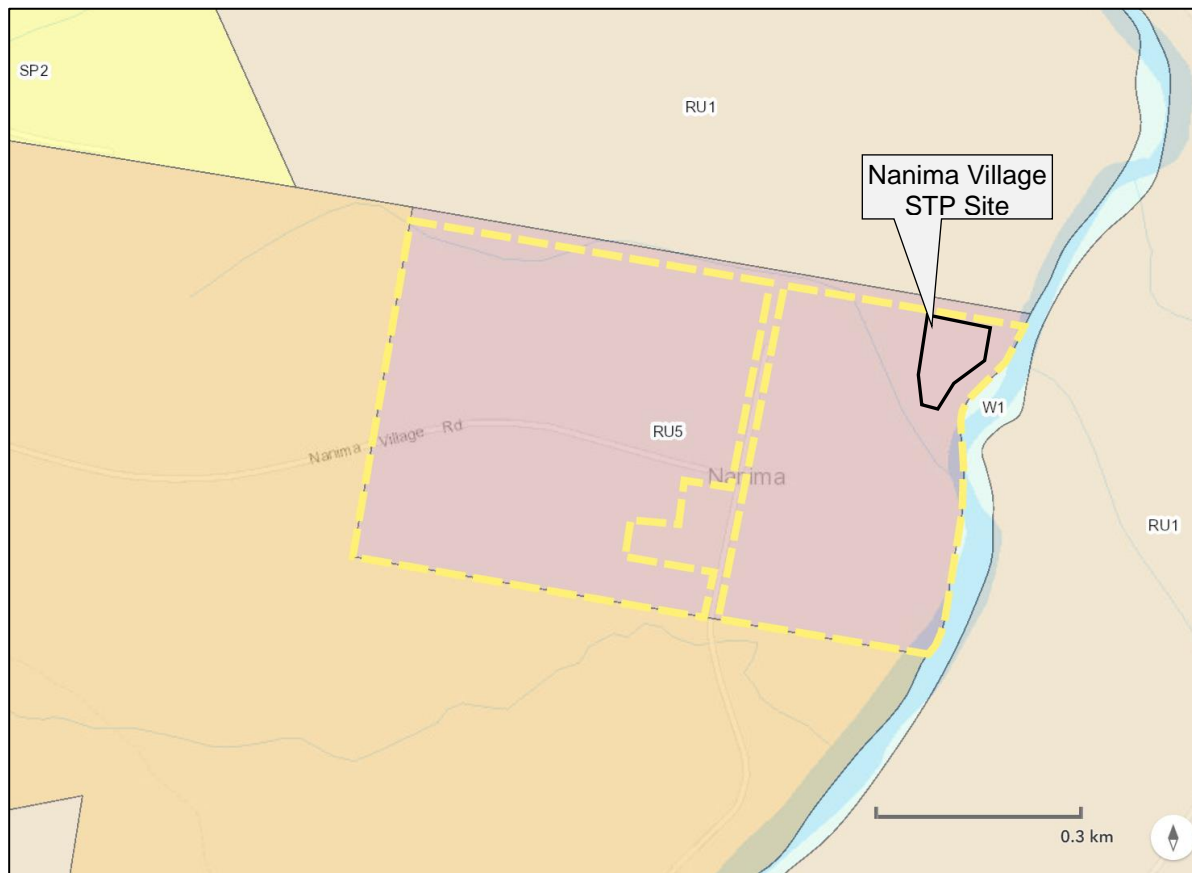


Figure 2-4 Nanima Village STP Site - Land Zoning Map

Source: NSW Planning Portal Spatial –
Land Zoning Map Layer

3. Part 2 – Explanation of Provisions

This planning proposal seeks to amend the Wellington LEP 2012 to rezone the parcel of land as presented in Table 3-1 below.

Table 3-1: Proposed Rezoning

Asset	Lot & DP	Current Zoning	Proposed Zoning	Land Classification	How it would be achieved
Nanima Village STP	244//DP756920	RU5 Village	SP2 Infrastructure (part Lot 244//DP756920)	Operational	Amend Map Sheet LZN_004 by applying SP2 Infrastructure (Sewerage System)

4. Part 3 – Justification

Section A – Need for the planning proposal

Q1. Is the planning proposal a result of any strategic study or report?

The need for the Planning Proposal is not the direct result of any strategic study or report; however, the proposal can be linked to the directions contained within the “Nanima Village Sewage Treatment Plant (STP) Options Study”, prepared by Public Works Advisory (2017) for the DPIE – Water, Aboriginal Communities Water and Sewerage Program and DRC. The study presented options for the augmentation of the Nanima Village STP. The Options Study identified the current deficiencies of the STP and detailed options for the required augmentation of STP.

The existing wastewater system which was constructed in the early 1990’s, consists of a gravity reticulation system and an STP consisting of two oxidation ponds and one evaporation pond. The Options Study identified that it is suspected that the clay liner of the oxidation ponds has failed and the ponds are leaking, likely to the adjacent Macquarie River via a sub-surface route.

After site inspection of the STP, it was recommended that lining of the existing oxidation ponds be undertaken to prevent further leakage from the ponds. The alternative option is the transfer of sewage back to the Wellington Sewage Treatment Plant (STP) but this is considered an uneconomical option, due to the local topography which would require high head pumping and a long transfer main. Therefore, the Options Study recommends that upgrade of the existing STP and the ponds liner replacement option should be implemented as the most economical option and due to additional environmental considerations such as reduced energy usage.

Specifically, the Options Study identifies the need for major capital works to augment the existing STP to meet the needs of the Nanima Village community and improve the wastewater treatment infrastructure.

This Planning Proposal is in keeping with the Options Study as it seeks to amend the existing Wellington LEP which will;

- (i) improve outcomes by facilitating the planning process to enable a more streamlined approval process for critical sewerage system infrastructure for Nanima Village , particularly where changes to current legislation may restrict or inhibit such development; and
- (ii) reduce potential impacts on the local community by reducing potential land use conflicts through the clear identification of existing and future land use of the existing STP site.

The Planning Proposal is consistent with and will facilitate the key aim of the Options Study

Q2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes. It is considered that this Planning Proposal is the most appropriate and available means of achieving the objective.

The Planning Proposal will provide for suitable zoning for existing and future sewerage infrastructure operation at the STP for Nanima Village; thereby providing the community with certainty of the land use and reducing the potential for land use conflict in the future for ongoing management and operation of the STP. It will allow for Council’s development assessment planners to use the visual cue on the land zoning map to ensure that consideration is given to

Rezoning for Nanima Village Sewage Treatment Plant

potential impacts such as odour, noise, security and safety issues etc rising from the existing STP within the SP2 zoned land on adjacent future development, and will also provide accurate land use information for prospective purchasers of adjacent land.

Providing an appropriate land use zoning for the existing sewerage infrastructure at the Nanima Village STP site will also facilitate approval for the much needed upgrade and any future maintenance of this essential community infrastructure facility, by removing the anomaly associated with the current land use zone. The Nanima STP and associated wastewater infrastructure is currently prohibited within the existing RU5 Village land use zone under both the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) and Wellington LEP. Rezoning of the Nanima Village STP site to a fit for purpose prescribed land use zone would also reduce the risk to the approval process in the event that provisions of the Infrastructure SEPP or other environmental planning instrument changes in the future.

This Planning Proposal is considered consistent with the strategies undertaken by a number of Councils, including Bega Valley, Wagga Wagga and Albury Councils, who have mapped their infrastructure facilities as SP2 Infrastructure in their Standard Instrument LEP's for similar reasons.

Section B – Relationship to strategic planning framework.

Q3. Is the planning proposal consistent with the objectives and actions of the applicable regional, subregional or district plan or strategy (including any exhibited draft plans or strategies)?

Central West and Orana Regional Plan 2036

The Central West and Orana Regional Plan 2036 (DoP, 2017) reflects the region's future vision to create a leading diverse regional economy in NSW, with a vibrant network of centres leveraging the opportunities of being at the heart of NSW. The Plan aims to meet the needs of changing communities, particularly for the ageing population, by promoting greater housing choices, improved housing affordability, access to health and education services and public and community transport. The Plan provides a guide to the NSW Government's land use planning priorities and decisions over 20 years to 2036, to achieve the following main goals:

- The most diverse regional economy in NSW;
- A stronger, healthier environment and diverse heritage;
- Quality freight, transport and infrastructure networks; and
- Dynamic, vibrant and healthy communities.

The Plan is considered an overarching framework that guides more detailed land use plans, development proposals and infrastructure funding decisions. The implementation plans that accompany the Central West and Orana Regional Plan provides a series of priority actions and identifies medium and longer term actions to coincide with population and economic growth.

The Central West and Orana Regional Plan acknowledges the importance of providing services and infrastructure required to support projected population growth and the ultimate economic growth in the region.

The Plan sets out a total of 29 directions to achieve the four main goals of the Plan. Each Direction is underpinned by number of actions to assist in achieving each goal.

The following directions are considered relevant to this planning proposal:

- Direction no. 12: Plan for greater land use compatibility
- Direction no. 14: Manage and conserve water resources for the environment
- Direction no. 21: Coordinate utility infrastructure investment
- Direction no. 22: Manage growth and change in regional cities and strategic and local centres
- Direction no. 24: Collaborate and partner with Aboriginal communities

These directions and associated actions aim to achieve all four main goals of the Plan.

The actions addressed under the above directions include the planning for, and prioritise services and infrastructure investment to for positive public health, environmental and water security outcomes; and to maximise cost efficiencies and coordinate the delivery of the different assets as well as develop a coordinated strategic approach to public infrastructure, including sewerage scheme infrastructure such as the Nanima Village STP.

The Planning Proposal is consistent with Direction 12 and 24 of the Central West and Orana Regional Plan as it will seek to reduce existing and future land use conflicts at Nanima Village by clearly identifying the planned and intended use of land for wastewater treatment infrastructure within the village. It will facilitate the upgrade of the existing deficient, leaking STP which will thereby provide safer, fit for purpose sewage treatment infrastructure, which will improve public health outcomes for the Nanima Village community and also reduce environmental pollution risks associated with groundwater resources and the adjacent waterway, for healthier environmental outcomes in accordance with the Direction no. 14 and 22 and 24 of the Plan.

Additionally, in rezoning the identified site, future Nanima Village STP infrastructure upgrades and maintenance can be more efficiently delivered through a more streamlined planning process utilising the provisions of Part 5 of the *Environmental Planning and Assessment Act 1979*. This would be more cost effective overall, avoiding development application fees and associated administrative and resources costs. The Planning Proposal would facilitate the augmentation of the existing infrastructure at the site, thereby reducing the need to establish large critical infrastructure in a new location. This would provide certainty and enabling lower risk construction timetables, which is also considered consistent with the Direction no. 12 and 21 of the Plan.

Q4. Is the planning proposal consistent with a council's local strategy or other local strategic plan?

Dubbo Regional Council Local Strategic Planning Statement 2020 (draft)

The draft Local Strategic Planning Statement (LSPS) was prepared by Dubbo Regional Council in 2020 to develop a plans for the economic, social and environmental land use needs of the community over the next 20 years. It sets land use planning priorities to ensure that the Local Government Area (LGA) can thrive both now and in the future, and that future development is appropriate in a local context.

Theme 1 (Infrastructure) of the Strategic identifies the priority to *plan for the delivery of infrastructure to support growth* and acknowledges that key infrastructure and services, including the provision of sewer infrastructure, needs to be provided to further enhance the quality of life for the community, maintain and attract economic growth.

This Planning Proposal seeks to achieve a correct and consistent zoning for sewerage infrastructure located within the Nanima Village community. This will provide for a more streamlined approval pathway and will reduce the impact future changes in the provisions of the Infrastructure SEPP may have on a public authority's ability to determine or enable infrastructure facilities on the land. This will ensure that DPIE – Water and DRC can continue to provide the efficient delivery of sewerage system infrastructure to the Nanima community and ensures consistency with the LSPS.

It will enable DPIE – Water and DRC to readily upgrade existing STP facilities to cater for the predicted growth in the village, in line with the Local Strategic Planning Statement.

Dubbo Region Community Strategic Plan

The Community Strategic Plan is a long-term visionary plan that aims to guide and influence the actions and initiatives of Dubbo Regional Council, the community, all tiers of government and community stakeholders over a 22 year period through to 2040.

After an extensive community engagement, the Community Strategic Plan sets out five visions which reflect the priorities of the community of Dubbo regional Council, these themes include:

- Housing;
- Infrastructure;
- Economy;
- Community Leadership; and
- Liveability.

A number of goals are sitting under each outcome, and a number of strategies have been developed to assist in achieving these outcomes.

This Planning Proposal is considered to be consistent with the visions of the Dubbo Region Community Strategic Plan, and in particular the 'Infrastructure' theme; Strategy no. 2.3: which states that *'Infrastructure meets the current and future needs of our community'* specifically, Strategy 2.3.1 which states that *'Council's water and sewer infrastructure and services comply with appropriate regulations to meet the current and future needs of the community...'*, as this Planning Proposal seeks to achieve correct zoning for existing sewerage infrastructure within Nanima Village, in order to facilitate the provision of fit for purpose sewerage infrastructure that would meet the needs of the residents of Nanima.

Q5. Is the planning proposal consistent with applicable State Environmental Planning Policies?

The Planning Proposal is consistent with the applicable State Environmental Planning Policies (SEPPs) as detailed in Table 4-1.

Table 4-1: Consistency with SEPP's

State Environmental Planning Policy (SEPP)	Statement of Consistency
SEPP 1 – Development Standards	Not Applicable – replaced by clause 4.6 of the Wellington LEP as the mechanism for any variation to development standards
SEPP 19 – Bushland in Urban Areas	Not Applicable – does not apply to Dubbo Regional Council
SEPP 21 – Caravan Parks	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP 33 – Hazardous and Offensive Development	Consistent – the Planning Proposal may result in development requiring assessment under this SEPP. This would be addressed during the environmental assessment phase.
SEPP 36 – Manufactured home estates	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP 47 – Moore Park Showground	Not Applicable – does not apply to Dubbo Regional Council
SEPP 50 – Canal Estate Development	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP 55 – Remediation of Land	Consistent – future developments would need to consider and comply with this SEPP however the SEPP does not inhibit the proposed development occurring on the site
SEPP 64 – Advertising and Signage	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP 65 – Design Quality of Residential Apartment Development	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP 70 – Affordable Housing (Revised Schemes)	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Aboriginal Land	Not Applicable – does not apply to Dubbo Regional Council
SEPP Activation Precincts	Not Applicable – does not apply to Dubbo Regional Council
SEPP Affordable Rental Housing	Consistent – the Planning Proposal will not result in any development applicable under this SEPP

Rezoning for Nanima Village Sewage Treatment Plant

State Environmental Planning Policy (SEPP)	Statement of Consistency
SEPP Building Sustainability Index: BASIX	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Coastal Management	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Concurrences	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Education Establishments and Child Care Facilities	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Exempt and Complying Development	Consistent – future developments would need to consider and comply with this SEPP however the SEPP does not inhibit the proposed developments occurring on site.
SEPP Gosford City Centre	Not Applicable – does not apply to Dubbo Regional Council
SEPP Housing for Seniors or People with a Disability	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Infrastructure	Consistent – The Planning Proposal will ensure the stated aim of the SEPP - <i>improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services</i> – will be achieved by providing for consistent land use zoning for the existing Nanima Village STP infrastructure.
SEPP Koala Habitat Protection	Not Applicable – does not apply to Dubbo Regional Council
SEPP Kosciuszko National Park – Alpine Resorts	Not Applicable – does not apply to Dubbo Regional Council
SEPP Kurnell Peninsula	Not Applicable – does not apply to Dubbo Regional Council
SEPP Mining, petroleum Production and Extractive Industries	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Miscellaneous Consent Provisions	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Penrith Lakes Scheme	Not Applicable – does not apply to Dubbo Regional Council

Rezoning for Nanima Village Sewage Treatment Plant

State Environmental Planning Policy (SEPP)	Statement of Consistency
SEPP Primary Production and Rural Development	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP State and Regional Development	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP State Significant Precincts	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Sydney Drinking Water Catchment	Not Applicable – does not apply to Dubbo Regional Council
SEPP Sydney Region Growth Centres	Not Applicable – does not apply to Dubbo Regional Council
SEPP Three Ports	Not Applicable – does not apply to Dubbo Regional Council
SEPP Urban Renewal	Consistent – the Planning Proposal will not result in any development applicable under this SEPP
SEPP Vegetation in Non-Rural Areas	Consistent – future developments would need to consider and comply with this SEPP however the SEPP does not inhibit the proposed developments occurring on site.
SEPP Western Sydney Employment Area	Not Applicable – does not apply to Dubbo Regional Council
SEPP Western Sydney Parklands	Not Applicable – does not apply to Dubbo Regional Council

Rezoning for Nanima Village Sewage Treatment Plant

Q6. Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

This section addresses consistency with applicable Section 9.1 Ministerial Directions. A summary of the consistency is provided in Table 4-2.

Table 4-2: Consistency with s.9.1 Directions

S9.1 Direction	Objective	Assessment	Consistency
1.1 Business and Industrial Zones	<p>To encourage employment growth in suitable locations;</p> <p>To protect employment land;</p> <p>To support viability of identified centres.</p>	This direction is not applicable to the planning proposal	N/A
1.2 Rural Zones	To protect the agricultural production value of rural land	<p>This direction applies when a planning proposal affects land within an existing or proposed rural zones.</p> <p>The planning proposal is consistent with this direction as it does not seek to rezone land from rural to any of the stated zones (i.e. residential, business, industrial, village or tourist zones), rather it seeks to rezone the land from rural to SP2 Infrastructure.</p> <p>The site located in rural land subject to this planning proposal contains existing sewerage infrastructure and is not currently used for rural purposes.</p>	Yes
1.3 Mining, Petroleum Production and Extractive Industries	To ensure future extraction of State or regionally significant coal etc are not compromised	This direction is not applicable to the planning proposal	N/A

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
1.4 Oyster Aquaculture	To protect oyster aquaculture areas ensure they are adequately considered in planning proposals	This direction is not applicable to the planning proposal	N/A
1.5 Rural Lands	To protect the agricultural production value of rural land and facilitate the development of rural land for rural purposes	<p>This direction applies when a planning proposal affects land within an existing or proposed rural or environmental protection zone.</p> <p>However, this direction is not applicable to the planning proposal as the site is not located in one of the applicable rural land zones.</p>	N/A
2.1 Environment Protection Zones	To protect and conserve environmentally sensitive areas	This direction is not applicable to the planning proposal	N/A
2.2 Coastal Management	To protect and manage coastal areas of NSW	<p>This direction applies when a planning proposal affects lands that is within the coastal zone comprising the coastal wetlands and littoral rainforests area, coastal vulnerability area, coastal environment area and coastal use area.</p> <p>This direction is not applicable to the planning proposal as the site is not located in the coastal zone.</p>	N/A
2.3 Heritage Conservation	To conserve items, area, objects and	This direction applies to all planning proposals and requires provision to be made that facilitate the conservation of heritage items.	Yes

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
	places of environmental significance and indigenous heritage significance.	The proposal is consistent with these principles as any future development on the site will be subject to Aboriginal cultural heritage assessment as part of the environmental approval process. A summary of the Aboriginal Cultural heritage assessment is provided in Table 4-3. Further details are provided in Appendix A.	
2.4 Recreation Vehicle Areas	To protect sensitive land from adverse impacts from recreational vehicles.	This direction is not applicable to the planning proposal	N/A
2.5 Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEP's	To ensure a balanced and consistent approach is taken when applying environmental protection zones on land in the Far North Coast	This direction is not applicable to the planning proposal	N/A
2.6 Remediation of Contaminated Land	To reduce the risk of harm to human health and the environment associated with land contamination and remediation	<p>This direction applies to land on which development for a purpose referred to in Table 1 of the contaminated land planning guidelines is being, or is known to have been, carried out.</p> <p>The planning proposal is inconsistent with the sub-clause 2(b) direction as it will affect a site where a waste treatment activity is being carried out.</p> <p>The planning proposal is however considered to satisfy sub-clause 4(b) as the planning proposal does not involve a change of the existing use of the land and</p>	Yes

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
		the land is suitable in its existing state for the purpose for which land in the SP2 Infrastructure zone is permitted to be used. However, any future development proposals would need to ensure contamination and remediation of the land is adequately addressed in the environmental assessment.	
3.1 Residential Zones	<p>To encourage a variety and choice of housing types</p> <p>To make efficient use of existing infrastructure</p> <p>To minimise impacts of residential development on the environment</p>	This direction is not applicable to the planning proposal as the planning proposal will not affect land within a residential zone.	N/A
3.2 Caravan Parks and Manufactured Home Estates	<p>To provide for a variety of housing types</p> <p>To provide opportunities for caravan parks and manufactured home estates</p>	This direction is not applicable to the planning proposal	N/A
3.3 Home Occupations	To encourage the carrying out of low impact small	This direction is not applicable to the planning proposal	N/A

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
	business in homes		
3.4 Integrating Land Use and Transport	To ensure that urban structures and land uses provide improved access choices.	This direction is not applicable to the planning proposal	N/A
3.5 Development near Regulated Airports and Defence Airfields	To ensure the effective and safe operation of regulated airports and defence airfields and that their operation is not compromised by development in the vicinity	This direction is not applicable to the planning proposal	N/A
3.6 Shooting Ranges	To maintain public safety and amenity, reduce land use conflict and identify issues when rezoning land for shooting ranges	This direction is not applicable to the planning proposal	N/A
3.7 Reduction in non-hosted short	To mitigate impacts of short-	This direction is not applicable to the planning proposal	N/A

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
term rental accommodation period	term rental accommodation where non-hosted short term rental accommodation period are reduced, and ensure views of the community are considered.		
4.1 Acid Sulfate Soils	To avoid significant adverse environmental impacts from acid sulfate soils	<p>This direction applies to land identified as containing acid sulfate soils.</p> <p>This direction is not applicable to the planning proposal, as the site is not identified as containing acid sulfate soils on Acid Sulfate Soils Planning Maps</p>	N/A
4.2 Mine Subsidence and Unstable Land	To prevent damage to life, property and the environment on land identified as unstable or subject to mine subsidence	This direction is not applicable to the planning proposal	N/A
4.3 Flood Prone Land	To ensure development of flood prone land is consistent with NSW policy	<p>This direction applies when a planning proposal creates, removes or alters a zone or a provision that affects flood prone land.</p> <p>The site is partially affected by flooding based on Council's internal flood mapping. The planning proposal is inconsistent with this direction as it plans to</p>	Yes

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
	To ensure the provisions of an LEP on flood prone land include consideration of the potential flood impacts	<p>rezone land from Rural to Special Purpose (SP2). It would also permit development without consent for any future works on the site.</p> <p>The planning proposal is however considered to satisfy sub-clause 9(b) as, due to the small size of the land parcel and type of development / activity on the site, any inconsistencies would be of minor significance. It is further noted that any future development would require detailed assessment of flooding as part of the environmental impact assessment process and design considerations.</p>	
4.4 Planning for Bushfire Protection	<p>To protect life, property and the environment from bushfire hazards</p> <p>To encourage sound management of bush fire prone areas</p>	<p>This direction applies to a planning proposal that will affect, or is in proximity to land mapped as bushfire prone land. A section of the site is mapped as buffer</p> <p>This Planning Proposal is considered consistent within this direction as it meets the following requirements:</p> <ul style="list-style-type: none"> • Consultation with the Commissioner of the NSW Rural Fire Service following receipt of a gateway determination • Any future development on the site will consider asset management zones and fire management measures. • Any future development on the site will consider bushfire planning, hazards and controls in accordance with <i>Planning for Bushfire Protection 2006</i> • The proposed development at the site is not anticipated to increase the level of bush fire risk to the existing community. 	Yes
5.1 Implementation of Regional Strategies	To give legal effect to the vision, land use strategy, policies, outcomes and actions contained	This direction is not applicable to the planning proposal	N/A

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
	in regional strategies.		
5.2 Sydney Drinking Water Catchment	To protect water quality in the Sydney drinking water catchment	This direction is not applicable to the planning proposal	N/A
5.3 Farmland of State and Regional Significance on the NSW Far North Coast	To ensure that the best agricultural land will be available for current and future generations	This direction is not applicable to the planning proposal	N/A
5.4 Commercial and Retail Development along the Pacific Hwy, North Coast	To manage commercial and retail development along the Pacific Hwy	This direction is not applicable to the planning proposal	N/A
5.5 – 5.8	Revoked	-	-
5.9 North West Rail Link Corridor Strategy	To promote transit-oriented development around the NWRL	This direction is not applicable to the planning proposal	N/A
5.10 Implementation of Regional Plans	To give legal effect to the vision, land use	This direction applies to land to which a Regional Plan has been released by the Minister for Planning.	Yes

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
	strategy, goals, directions and actions contained in Regional Plans	This planning proposal is consistent with this direction as it meets the provisions of the Central West and Orana Regional Plan 2036.	
5.11 Development of Aboriginal Land Council land	To provide for the consideration of development delivery plans prepared under <i>State Environmental Planning Policy (Aboriginal Land) 2019</i>	This direction is not applicable to the planning proposal	N/A
6.1 Approval and Referral Requirements	To ensure that LEP provisions encourage the efficient and appropriate assessment of development	This direction applies when preparing a planning proposal and this planning proposal is meets the requirements of this direction.	Yes
6.2 Reserving Land for Public Purposes	To facilitate the provision of public services and facilities	This direction applies when preparing a planning proposal and this planning proposal is consistent with the provisions of this direction, as the section of the lot is proposed to be rezoned for a public purpose.	Yes
6.3 Site Specific Provisions	To discourage unnecessarily restrictive site-	This direction applies when a planning proposal allows a particular development to be carried out.	Yes

Rezoning for Nanima Village Sewage Treatment Plant

S9.1 Direction	Objective	Assessment	Consistency
	specific planning controls	This planning proposal is consistent with this direction as it will rezone the section of the subject lot to an existing zone (SP2) which is already included in the environmental planning instrument and will not impose any additional development standards or requirements	
7 Metropolitan Planning	Relate to Sydney Metropolitan Area	These directions are not applicable to the planning proposal.	N/A

Section C – Environmental, social and economic impact

Q7. Is there any likelihood that critical habitat or threatened species populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

A desktop assessment comprising State and Commonwealth database searches (NSW Bionet Atlas, NSW SEED Map and Commonwealth Protected Matter Search Tool) was undertaken to inform the Planning Proposal and specifically to identify whether the land parcel is likely to contain critical habitat or threatened species populations or ecological communities, or their habitats. A copy of the database searches is provided in Appendix A.

A summary of the outcomes from the desktop assessment is provided in Table 4-3.

The land parcel subject to this Planning Proposal has not been identified for future development, but rather has been identified as a zoning anomaly, in that it contains existing sewerage infrastructure which is not reflected by the current land zone (refer Table 4-3 below). Rezoning this site would facilitate ongoing maintenance and upgrade of the STP through a streamlined planning process.

The STP site is disturbed, entirely cleared of native vegetation and has low biodiversity constraints. It is considered that utilising the existing disturbed site to upgrade the STP would result in a better environmental outcome than development of new sewage treatment facilities for Nanima Village on an entirely new site.

Any future development on the site would be subject to an environmental assessment under the provisions of Part 5 of the EP&A Act in which consideration of impacts on critical habitat, threatened species and ecological communities would be undertaken.

It is not considered that the Planning Proposal would result in any adverse impact to critical habitat or threatened species populations or ecological communities, or their habitats

Q8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

The proposed rezoning of the site will allow development that may generate a range of environmental impacts including impacts to water quality, soils etc. It is noted however that the site contains existing sewerage infrastructure which has been in operation for over 25 years and that the proposed upgrade is considered to result in improved environmental outcomes through rectifying known deficiencies. Furthermore, any future use of the site for infrastructure purposes would require a detailed environmental assessment to support the development.

An Aboriginal heritage due diligence assessment undertaken by OzArk Environment and Heritage Management included an assessment of the Aboriginal heritage sensitivity of the STP site. A summary of the outcomes from the report is provided in Table 4-3. The assessment based on database searches, reviews of previous studies, a site inspection and consideration of surrounding landforms and the extent of disturbance at the site. The assessment determined that there were no Aboriginal cultural heritage constraints at the site. Furthermore, a search of the State and Commonwealth Heritage Registers identified that the subject sites does not contain any listed heritage items.

Whilst the Planning Proposal may facilitate ongoing operation and an upgrade of the STP which has the potential to result in environmental effects, it is considered that impacts could be adequately managed through appropriate design in accordance with best practice guidelines and an

environmental assessment in accordance with the provisions of the EP&A Act and other relevant environmental legislation including the *National Parks and Wildlife Act 1979*, which verify potential site constraints and offer measures to manage any identified impacts.

Q9. Has the planning proposal adequately addressed any social and economic effects?

The proposed rezoning will allow an upgrade of the STP that may generate a range of environmental impacts which may in turn, impact on the Nanima Village community such as through the generation of noise, odour, and traffic during construction and operation. It is noted that the site includes existing sewage treatment infrastructure where no change of use is planned; and augmentation would result in a reduction to potential odour and water pollution impacts during operation of the STP.

The Planning Proposal would allow for the augmentation of the Nanima Village STP which currently has the potential to impact on the community due to its aging treatment process components which require upgrading. The reduction in the area of RU5 land use zone in the LGA would comprise a very small reduction overall (approximately 1.3 ha). This is not considered to result in a significant or noticeable reduction in rural village land use in the area, or significantly impact on future economic potential of the village.

The upgrade of STP infrastructure into the adjacent (western) area of the existing Nanima Village STP site would result in a minor reduction in the buffer to existing residential lots. There is a low potential for elevated odour impacts to the community and the southern area of site is mapped as flood prone land. These considerations would need to be addressed through the environmental assessment and design considerations including supporting technical studies, in order to avoid any potential land use conflicts. It is noted that the Nanima STP site is constrained to the north, south and east due to a property boundary, existing treatment infrastructure and a waterway, respectively.

The augmentation of the Nanima Village STP will safeguard against potential negative public health impacts and will ensure compliance with regulatory wastewater requirements (i.e. NSW EPA). Additionally; it is considered that facilitating the augmentation of the Nanima Village STP will enhance the residential development of the village by servicing the existing and forecasted population growth in Nanima.

The proposed rezoning will have a positive social and economic effect for Nanima by correctly identifying land for the purpose of sewerage infrastructure. This will enable the land owners (Wellington LALC) and community to identify the existing and future use of the land; and allow DPIE – Water and DRC to follow a streamlined assessment pathway, reflective of the nature of this critical infrastructure, which is enabled through the *State Environmental Planning Policy (Infrastructure) 2007*.

In rezoning the Nanima Village STP site, wastewater infrastructure can be more efficiently managed and operated through a streamlined planning process utilising the provisions of Part 5 of the *Environmental Planning and Assessment Act 1979*. This would be more cost effective overall, avoiding development application fees and associated administrative and resources costs. The Planning Proposal would facilitate the augmentation of existing infrastructure, thereby reducing the need to establish large critical infrastructure in a new location. This would provide certainty and enable lower risk construction timetables and costing.

It is considered that the social and economic effects arising from the Planning Proposal would be limited and predominantly positive, as discussed above.

Section D – State and Commonwealth interests

Q10. Is there adequate public infrastructure for the planning proposal?

Not applicable. The Planning Proposal will provide for essential upgrade and operation of existing public sewage treatment infrastructure to meet the current and future residential development requirements of Nanima Village


Q11. What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination?

Consultation required with relevant agencies and government departments would be confirmed in the Gateway Determination.

The government agencies identified for consultation with regard to the Planning Proposal include:

- NSW Health
- NSW EPA
- NSW Environment, Energy and Science
- NSW Rural Fire Service

Table 4-3 Site Summary Table

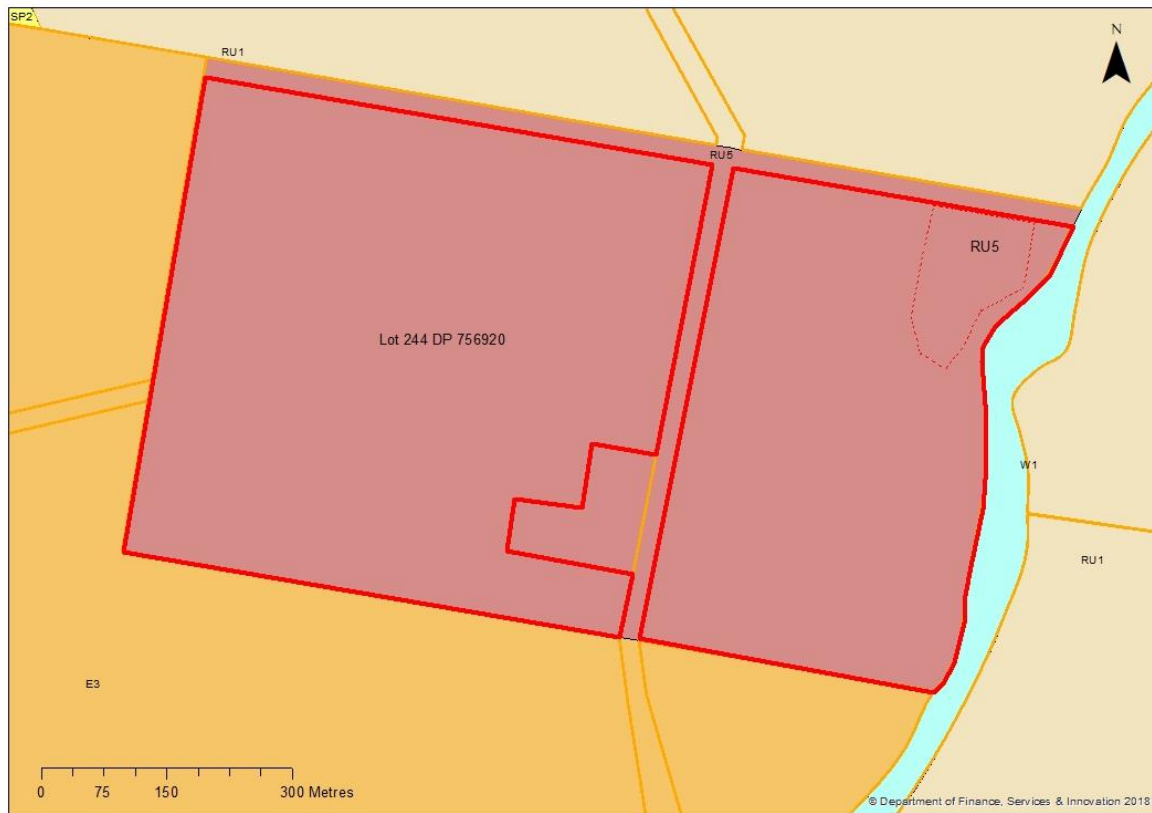
Site: Nanima Village STP site (Part Lot 244 DP 756920)	
Zone	RU5 - Village
General Site Notes	Existing STP - Cleared and highly disturbed from previous land development activities
Subject Site Aerial	 <p>Approx. 1.78 ha area of Lot 244 DP 756920</p>
Land Disturbance	Yes - STP development
Veg EEC / TEC	EEC/TEC - No. Plant Community Type (PTC) Mapped as Not native (PTCID: 0)
Recorded Threatened Species Sighting	No - No recorded threatened species sighting at the site
Biodiversity Constraint Level	Low Terrestrial Biodiversity - No Wetlands - No Groundwater Vulnerability - Yes
Bushfire Prone	Yes - Vegetation Buffer (part site)
Mapped Hazards	Acid Sulfate Soils - No Landslide Risk - No Salinity - No Environmentally Sensitive Land - No Mine Subsidence – No Flood Prone – Yes. The site is partially flood affected (1 in 100 year ARI + 0.5m freeboard level) based on Council's flood mapping (refer to Appendix B). Any future development at the site would require flood analysis as part of the environmental impact assessment process and design considerations.
AHIMS sites within 1 km	Yes - 5
Aboriginal Heritage Constraint Level	Low - An Aboriginal Heritage Due Diligence Assessment identified no Aboriginal objects during a recent survey of the site and that the site is considered to have low archaeological sensitivity with regards to Aboriginal cultural heritage. The assessment concluded that an Aboriginal Heritage Impact Permit (AHIP) is not required for proposed future upgrade works at the site.
Archaeological Sensitivity	Moderate - Elevated flat area leading down to the banks of Macquarie River, <100m to water.
Historic Heritage Constraint Level	Low - No listed local or state heritage items at the site

5. Part 4 – Maps

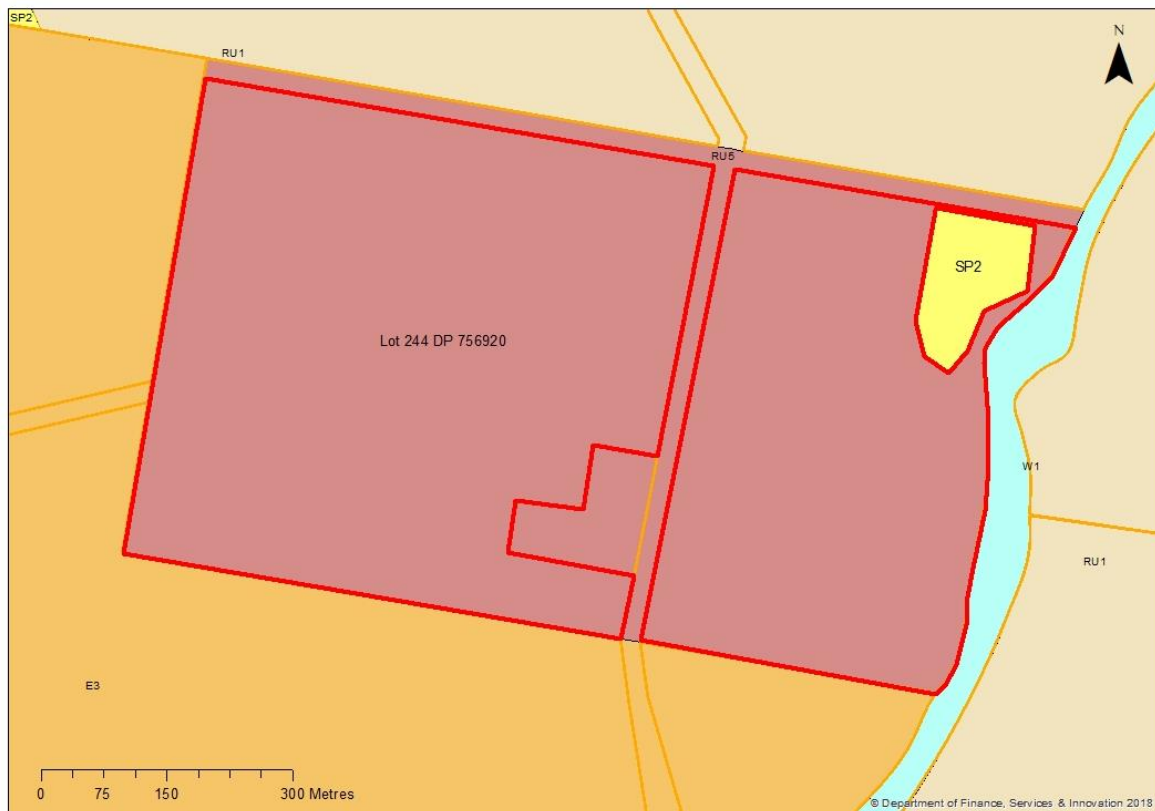
Changes to the proposed map sheet will be undertaken in a suitable format for public exhibition once the Gateway Determination is issued.

This Planning Proposal will result in a change to the Wellington LEP 2012 map as described in Table 3-1.

Nanima Village STP Site - Current Land Zoning



Nanima Village STP site - Proposed Laning Zoning



6. Part 5 – Community Consultation

The Gateway Determination will confirm community consultation requirements. It is likely that the Proposal will be exhibited as a 'low' impact proposal for a period of not less than 14 days in accordance with Section 5.5.2 of *A Guide to Preparing LEP's*.

Public exhibition of the Planning Proposal will include notification on the DRC website, notification in the newspapers that circulate widely in the area (Wellington Times, Daily Liberal) and in writing to affected and adjoining landowners.

Information relating to the Planning Proposal will also be on display at the following DRC customer service centres, located at

Place	Address
Wellington	Cnr Nanima Crescent and Warne Street, NSW, 2820
Dubbo	Cnr Church and Darling Streets, NSW, 2830

Informal consultation with representatives from the Wellington Local Aboriginal Land Council, the landowners of the Nanima Village land, has been carried out by DPIE - Water.

7. Part 6 – Project Timeline

The Project timeline will assist with tracking the progress of the Planning Proposal through the various stages of consultation and approval. It is estimated that this amendment to *Wellington Environmental Plan 2012* will be completed by July 2021.

Council delegation is requested to carry out plan-making functions in relation to this proposal. Delegation would be exercised by Council's General Manager or Strategic Planning Manager.

Key Stages of Consultation and Approval	Estimated Timeframe
STAGE 1 – Submit Planning Proposal to the Department	September 2020
STAGE 2 – Receive Gateway Determination	October 2020
STAGE 3 – Preparation of documentation for Public Exhibition	November 2020
STAGE 4 – Public Exhibition of the Planning Proposal (28 days)	January 2021
STAGE 5 – Review / consideration of submissions received	February 2021
STAGE 6 – Council Report	March 2021
STAGE 7 – Date of submission to the Department to finalise the LEP	May 2021
STAGE 8 – Date Council will make the Plan (if delegated), including any required consultation with the Parliamentary Counsel	June 2021
STAGE 9 – Anticipated date Council will forward Plan to the Department for notification.	July 2021

8. References

- Dubbo Regional Council (2012) "Wellington Local Environmental Plan 2012"
- Dubbo Regional Council (2018) "Community Strategic Plan"
- Dubbo Regional Council (2020) "Draft Local Strategic Planning Statement"
- Department of Planning (2010) "LEP Practice Note – Zoning for Infrastructure in LEPs"
- Department of Planning and Environment (2018) "A Guide to Preparing Local Environmental Plans"
- Department of Planning and Environment (2018) "A Guide to Preparing Planning Proposals"
- Department of Planning and Environment (2017) "Central West And Orana Regional Plan 2036"
- OzArk Environment and Heritage Management (July 2020). "Aboriginal Heritage Due Diligence Assessment Report- Nanima Village Sewerage Augmentation"
- Public Works Advisory (2017) "Nanima Village Sewage Treatment Plant (STP) Options Study"

Appendix A Aboriginal Heritage Due Diligence Assessment– OzArk Environment and Heritage Pty Ltd



A view across the study area towards Nanima Village.

ABORIGINAL HERITAGE DUE DILIGENCE ASSESSMENT REPORT

NANIMA VILLAGE SEWERAGE AUGMENTATION

NANIMA VILLAGE

SEPTEMBER 2020

Report prepared by
OzArk Environment & Heritage
for Public Works Advisory

OzArk

**OzArk
Environment & Heritage**

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

This page has intentionally been left blank.

DOCUMENT CONTROLS

Proponent	Department of Planning, Industry and Environment (DPIE) - Water	
Client	Public Works Advisory	
Document Description	Aboriginal Heritage Due Diligence-Nanima Village Sewerage Augmentation	
File Location	OzArk Job No.	
S:\OzArk EHM Data\Clients\NSW Public Works Advisory\Nanima Village STP April 2020\Report	2653	
Document Status: V3.0 FINAL		Date 09 Sept 2020
Draft V1.0 Author to editor OzArk 1 st internal (Series V1 = OzArk internal edits)		V1.0 KW author 15/6/20
Draft V2.0 Report Draft for release to client (Series V2 = OzArk and client edits)		V2.0 BC edit 6/7/20
FINAL V3.0 = Final report		V3.0 BC incorporates client comments 9 September 2020
Prepared For		Prepared By
Kristen Parmeter Environmental Scientist Infrastructure Services Public Works Advisory Department of Regional NSW		Kirwan Williams Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 F: 02 6882 6030 kirwan@ozarkehm.com.au
<p style="text-align: center;">COPYRIGHT</p> <p style="text-align: center;">© OzArk Environment & Heritage 2020 and © Public Works Advisory 2020</p> <p style="text-align: center;">All intellectual property and copyright reserved.</p> <p>Apart from any fair dealing for private study, research, criticism or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system or adapted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without written permission.</p> <p style="text-align: center;">Enquiries should be addressed to OzArk Environment & Heritage.</p>		

Acknowledgement

OzArk acknowledge Traditional Owners of the area on which this assessment took place and pay respect to their beliefs, cultural heritage and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

The Department of Planning, Industry and Environment (DPIE) - Water is proposing to upgrade the existing Sewage Treatment Plant (STP) that services the Nanima Village Aboriginal community. Nanima Village is located approximately four kilometres (km) southeast of Wellington and is managed by the Wellington Local Aboriginal Land Council. The STP is operated by Dubbo Regional Council (DRC). The existing STP is located to the north of the village, adjacent to the Macquarie River within Lot 244 DP756920.

The proposed works includes the construction of new STP infrastructure and upgrades to existing infrastructure at Nanima Village STP. The scope of works includes:

- Construction of a new lined first oxidation pond
- Modification of the current second pond to become a lined second oxidation pond
- Modification of the existing first oxidation pond to become an exfiltration pond (no work to be undertaken except a new inlet)
- Installation of new inlet and pipeline connections between the ponds.

The proposal will be assessed under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

A search of the Aboriginal Heritage Information Management System (AHIMS) register on 26 May 2020 identified 19 previously recorded Aboriginal sites in a 10 km by 10 km area centred on the study area (GDA Zone 55, Easting: 681650–691650; Northing: 6388750–6398750; **Appendix 1**). None of these sites are at risk of impact by the proposal, and no previously recorded Aboriginal sites are recorded within the study area.

The visual inspection of the study area was undertaken by OzArk Archaeologist Kirwan Williams on Friday 29 May 2020. The study area consists of a heavily modified portion of land on the western bank of the Macquarie River.

No Aboriginal objects or sites were recorded within the study area as a result of the visual inspection.

Recommendations

The undertaking of the Due Diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

Aboriginal Heritage Impact Permit (AHIP) application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work and notify Heritage NSW (131 555 or info@environment.nsw.gov.au). If human remains are found, stop work, secure the site and notify NSW Police and Heritage NSW.

The following recommendations are made with regards to the proposal within the study area:

- 1) The proposed work may proceed without further archaeological investigation under the following conditions:
 - a. All land and ground disturbance activities must be confined to within the study area assessed boundaries. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required
 - b. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- 2) This assessment has concluded that there is a low likelihood that the proposal will adversely harm Aboriginal cultural heritage items or sites. However, during works, if Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.
- 3) Work crews should undergo cultural heritage induction to ensure they recognise Aboriginal cultural heritage artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* and the contents of the *Unanticipated Finds Protocol*.
- 4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

CONTENTS

EXECUTIVE SUMMARY	III
1 INTRODUCTION	1
1.1 Brief description of the proposal	1
1.2 Background.....	1
1.3 Study area	2
1.4 Assessment approach	2
2 ABORIGINAL DUE DILIGENCE ASSESSMENT	4
2.1 Introduction	4
2.2 Defences under the NPW Regulation 2009.....	4
2.2.1 Low impact activities.....	4
2.2.2 Disturbed lands.....	4
2.3 Application of the Due Diligence Code of Practice to the proposal	5
2.3.1 Step 1	5
2.3.2 Step 2a	5
2.3.3 Step 2b	7
2.3.4 Step 2c.....	13
2.3.5 Step 3	14
2.3.6 Step 4	14
2.4 Discussion	16
2.5 Conclusion	16
3 MANAGEMENT RECOMMENDATIONS	18
REFERENCES	19
PLATES	21
APPENDIX 1: AHIMS SEARCH RESULTS	25
APPENDIX 2: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL.....	26
APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION	27

FIGURES

Figure 1-1. Map showing the location of the proposal in relation to Wellington.	1
Figure 1-2: Aerial showing the study area.	3
Figure 2-2: Previously recorded sites in relation to the study area.....	6
Figure 2-2: Landscape features in relation to the study area (Mitchell 2002).....	10
Figure 2-3: Survey coverage within the study area.	16

TABLES

Table 2-1: Determination of whether Due Diligence Code applies.	5
Table 2-1: Site types and frequencies of AHIMS sites near the study area.	6
Table 2-3: Association of all recorded sites to landscape units (OzArk 2016).	8
Table 2-4: Frequency of site types in association with landscape types (OzArk 2016).....	9
Table 2-3: Due Diligence Process application.	17

PLATES

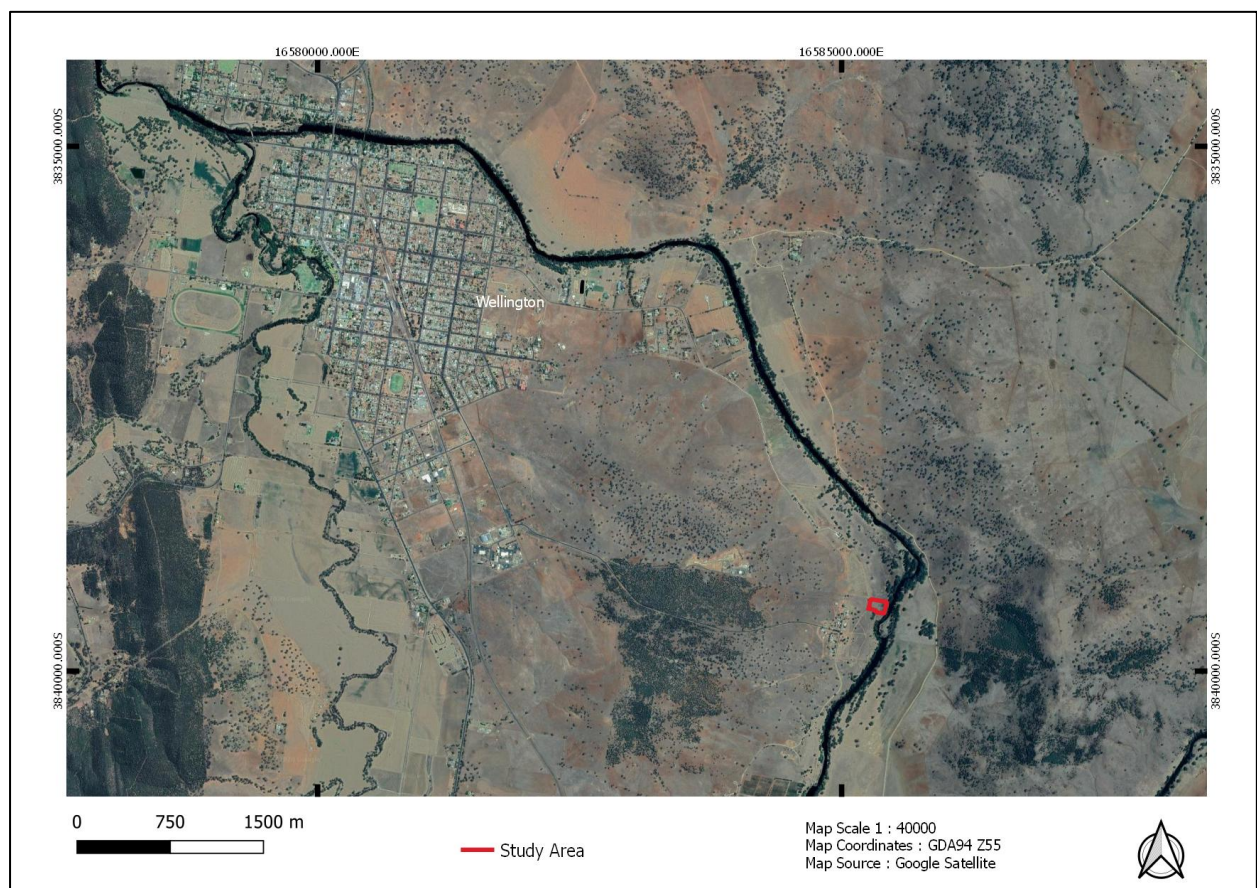
Plate 1: View southwest to the existing infrastructure within the study area.	21
Plate 2: View east towards the Macquarie River. Note the vegetation of dense, compact weeds and grasses.	21
Plate 3: View east through dense, compact weeds and grasses.	22
Plate 4: View east from the western point of the study area.....	22
Plate 5: View of imported cobbles outside the sewerage treatment compound.	23
Plate 6: View of the ground surface in a rare patch of exposure.	24

1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by Public Works Advisory (the client), on behalf of Department of Planning, Industry and Environment (DPIE) (the proponent) to complete an Aboriginal Due Diligence heritage assessment for the Nanima Village Sewerage Augmentation works (the proposal). The proposal is in the Dubbo Regional Council Local Government Area (LGA) (**Figure 1-1**).

Figure 1-1. Map showing the location of the proposal in relation to Wellington.



1.2 BACKGROUND

DPIE - Water is proposing to upgrade the existing Sewage Treatment Plant (STP) which services the Nanima Village Aboriginal community. Nanima Village is located approximately four kilometres (km) southeast of Wellington and is managed by the Wellington Local Aboriginal Land Council. The STP is operated by Dubbo Regional Council (DRC). The existing STP is located to the north of the village, adjacent to the Macquarie River within Lot 244 DP756920.

The proposed works includes the construction of new STP infrastructure and upgrades to existing infrastructure at Nanima Village STP (**Figure 1-1**). The scope of works includes:

- Construction of a new lined first oxidation pond

- Modification of the current second pond to become a lined second oxidation pond
- Modification of the existing first oxidation pond to become an exfiltration pond (no work to be undertaken except a new inlet)
- Installation of new inlet and pipeline connections between the ponds.

Public Works Advisory (PWA) are assisting DPIE – Water and have requested that OzArk undertake an Aboriginal heritage due diligence assessment to determine any potential impact to Aboriginal objects.

The site of the new STP infrastructure first needs to be rezoned and then the proposal will be assessed under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.3 STUDY AREA

The study area is located on a flat terrace above the Macquarie River approximately 3.5 km southeast of Wellington. (**Figure 1-2**). The study area has been completely cleared of vegetation, and at the time of the survey, was covered almost in its entirety by a lush growth of grass and weeds.

Immediately to the east of the study area lies the deeply incised channel of the Macquarie River. The study area is shown on **Figure 1-2**.

1.4 ASSESSMENT APPROACH

Aboriginal cultural heritage

The desktop and visual inspection component for the study area follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Due Diligence; DECCW 2010). The field inspection followed the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

Figure 1-2: Aerial showing the study area.



2 ABORIGINAL DUE DILIGENCE ASSESSMENT

2.1 INTRODUCTION

The National Parks and Wildlife Regulation 2009 (NPW Regulation) made under the *National Parks and Wildlife Act 1974* (NPW Act) advocates a Due Diligence process to determining likely impacts on Aboriginal objects. Carrying out Due Diligence provides a defence to the offence of harming Aboriginal objects and is an important step in satisfying Aboriginal heritage obligations in NSW.

2.2 DEFENCES UNDER THE NPW REGULATION 2009

2.2.1 Low impact activities

The first step before application of the Due Diligence process itself is to determine whether the proposed activity is a “low impact activity” for which there is a defence in the NPW Regulation. The exemptions are listed in Section 80B (1) of the NPW Regulation (DECCW 2010: 6).

The activities of DPIE are not considered a ‘low impact activity’ as the works are not ‘maintenance works’ but involve new construction.

2.2.2 Disturbed lands

Relevant to this process is the assessed levels of previous land-use disturbance.

The NPW Regulation Section 80B (4) (DECCW 2010: 18) define disturbed land as follows:

Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and observable.

Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.

All sections of the proposed work are in previously cleared landforms which contain established sewerage infrastructure and property fences and it could be considered that the proposed work is occurring in ‘disturbed land’ (**Figure 2-1**). However, apart from these areas, sections of the proposed work are not in an area where the land’s surface has been changed in a clear and observable manner and the Due Diligence process must be applied.

In summary, it is determined that the proposal must be assessed under the Due Diligence Code. The reasoning for this determination is set out in **Table 2-1**.

Table 2-1: Determination of whether Due Diligence Code applies.

Item	Reasoning	Answer
Is the activity a Part 3A project declared under section 75B of the EP&A Act?	The proposal is assessed under Part 5 of the EP&A Act.	No
Is the activity exempt from the NPW Act or NPW Regulation?	The proposal is not exempt under this Act or Regulation.	No
Do either or both of these apply: Is the activity in an Aboriginal place? Have previous investigations that meet the requirements of this Code identified Aboriginal objects?	The activity will not occur in an Aboriginal place. No previous investigations have been conducted.	No
Is the activity a low impact one for which there is a defence in the NPW Regulation?	The proposal is not a low impact activity for which there is a defence in the NPW Regulation.	No
Is the activity occurring entirely within areas that are assessed as 'disturbed lands'?	The proposal is not entirely within areas of high modification.	No
Due Diligence Code of Practice assessment is required		

2.3 APPLICATION OF THE DUE DILIGENCE CODE OF PRACTICE TO THE PROPOSAL

To follow the generic Due Diligence process, a series of steps in a question/answer flowchart format (DECCW 2010: 10) are applied to the proposed impacts and the study area, and the responses documented.

2.3.1 Step 1

Will the activity disturb the ground surface or any culturally modified trees?

Yes, the proposal will impact the ground surface and but will not impact culturally modified trees.

The nature of the proposed works will impact the ground surface during the construction of new infrastructure. All mature vegetation has been cleared and as such there will be no impact to any culturally modified trees.

2.3.2 Step 2a

Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

No, there are no previously recorded sites within the study area.

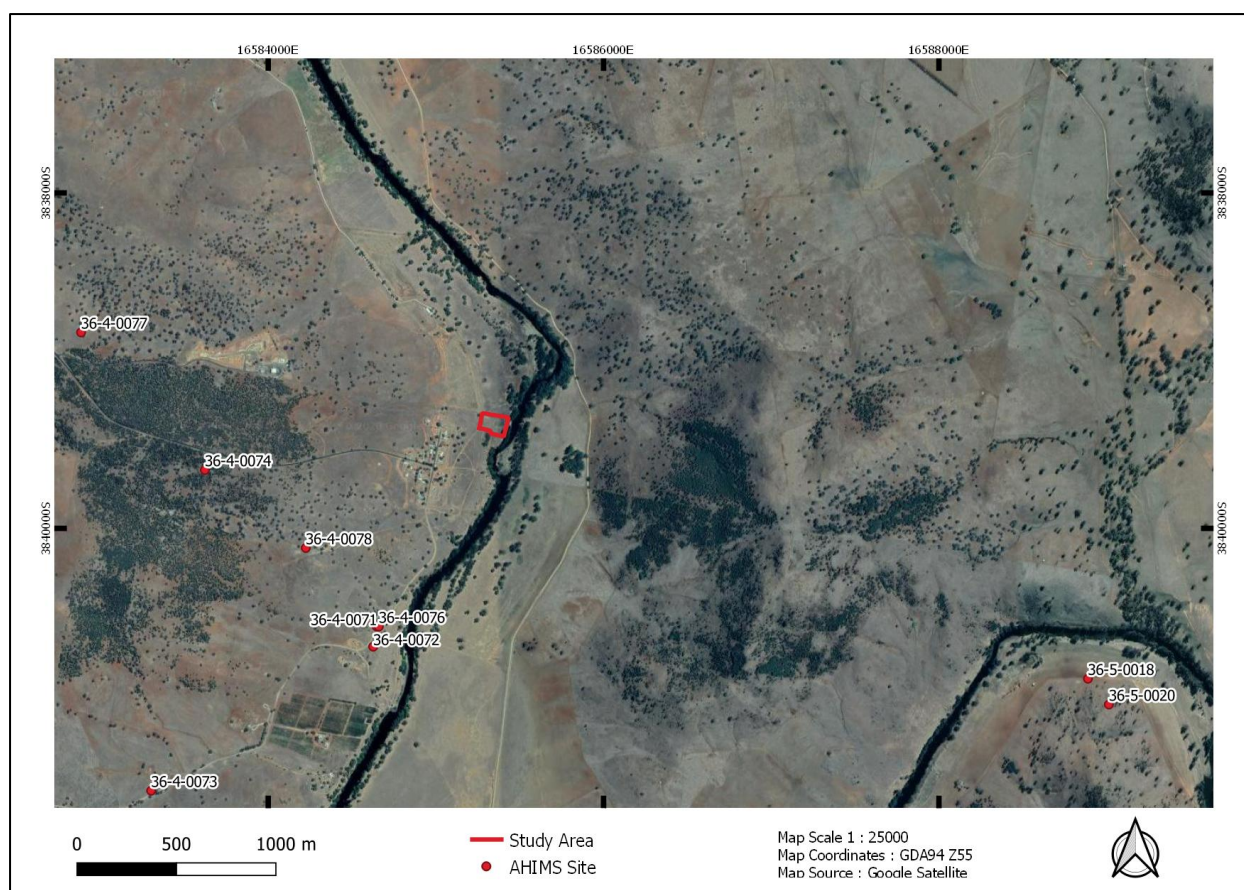
A search of the Aboriginal Heritage Information Management System (AHIMS) register on 26 May 2020 identified 19 previously recorded Aboriginal sites in a 10 km by 10 km area centred on the study area (GDA Zone 55, Easting: 681650–691650; Northing: 6388750–6398750; **Appendix 1**). None of these sites are at risk of impact by the proposal, and no previously recorded Aboriginal sites are recorded within the study area.

Figure 2-2 shows all previously recorded sites in relation to the study area and **Table 2-1** shows the types of sites that are close to the study area.

Table 2-2: Site types and frequencies of AHIMS sites near the study area.

Site Type	Number	% Frequency
Open Camp	5	26.3
Modified Tree (MT)	4	20.9
Restriction	3	15.8
Burial	2	10.5
Artefact Scatter	1	5.3
Midden	1	5.3
Habitation Structure	1	5.3
Ceremonial Ring	1	5.3
Aboriginal Ceremony and dreaming (MT)	1	5.3
	19	100

Figure 2-1: Previously recorded sites in relation to the study area.



The closest sites to the study area are AHIMS #36-4-0071, a habitation structure, and #36-4-0076, a modified tree, located 1.1 km distant to the south-southwest of the study area. The lack of previous site recordings in the area may reflect the low number of surveys undertaken in the vicinity of the study area and may not indicate an absence of Aboriginal sites.

2.3.3 Step 2b

Are there any other sources of information of which a person is already aware?

No, there are no other sources of information that would indicate the presence of Aboriginal objects in the study area.

No Aboriginal cultural heritage assessments appear to have been undertaken over the study area. As such, there are no known cultural values or Aboriginal sites pertaining directly to the location of the proposed work. Mike Nolan of the Wellington Local Aboriginal Land Council accompanied the inspection.

2.3.3.1 Ethnohistoric sources pertaining to the region

According to Tindale's (1974) and Horton's (1994) maps of tribal or ethno-linguistic boundaries, the Wiradjuri occupied the northern parts of the South Eastern Highlands bioregion in the vicinity of Orange and Bathurst. Within the Wiradjuri region, the presence of Aboriginal people in the Darling Basin has been dated to 40,000 BP (years before present; Hope 1981 as cited in Haglund 1985). A spread east into the mountains is thought to have occurred between 14,000 to 12,000 BP with occupation of areas surrounding Mudgee currently dated to between 7,800 and 5,000 BP (Kuskie and Clarke 2007: 12). Within the region, dates obtained from the Blue Mountains sites of Walls Cave, Lyre Bird Dell and Noola shelter (Johnson 1979), and probably Kariwara site 22 (McIntyre 1990) indicate that the area was occupied approximately 10,000 BP. Several other sites were occupied from at least 7,000 years BP including Horseshoe Falls, Capertee 3 (Johnson 1979) and Bobadeen 1 (Moore 1970).

2.3.3.2 Regional archaeological context

In 2016, OzArk was engaged by the Central West Local Land Services (CWLLS) to formulate and test a predictive model for Aboriginal site location within Travelling Stock Reserves (TSRs) across the CWLLS area. In formulating a predictive model for site location, Mitchell (2002) landscapes were used to understand the underlying landform type. The resolution of the Mitchell landscape units was too fine to be of use and OzArk (2016) used a higher-level classification within the Mitchell landscape units to describe the landscapes within the CWLLS area. Landscapes were divided into the following types:

- a) Channels and floodplains
- b) Alluvial plains
- c) Slopes
- d) Uplands
- e) Downs.

Previously recorded AHIMS sites were plotted against these landscape types and the following observations made:

- a) A high number of sites (n=876) were located within slopes landscapes, however, this result could be due to the fact that Dubbo is located within a slopes landscape and the highest number of sites in the CWLLS area is recorded in and around Dubbo
- b) The highest density of sites is within channels and floodplains landscapes (n=927)
- c) Alluvial plains landscapes have the third highest density of sites (n=770)
- d) Relatively small numbers of sites are recorded in uplands (n=5) and plateau (n=34) landscapes
- e) A moderate number of sites are recorded in downs landscapes (n=255). Three or four clusters of sites exist in downs landscapes, which may have skewed the data. If the veracity of all site recordings in this category could be verified, it is suspected that the actual number of sites in downs landscapes would be lower.

OzArk (2016) divided the CWLLS area into two stream orders—major watercourses (normally named rivers) and minor watercourses (normally named creeks and their larger tributaries)—and buffers were established for each watercourse type as follows:

- a) Drainage 1 buffer: 200 m either side of a major watercourse
- b) Drainage 2 buffer: 100 m either side of a minor watercourse.

As such, the OzArk (2016) CWLLS predictive model made predictions based on the landscape type and distance to watercourses. The predictive model was tested by assessing 32 TSRs within the CWLLS area located in a variety of landscape types with variable distances to water. As a result of the assessment, 59 sites were recorded. 26 (44%) of the recorded sites were modified trees, 22 (37%) were artefact scatters and 11 (19%) were isolated finds. Most recorded sites were located in channels and floodplains landscapes (35 sites or 59% of all sites), followed by 10 in slopes landscapes, four in alluvial plains landscapes and one in a downs landscape. No sites were recorded in uplands or plateau landscapes.

Table 2-3 demonstrates that the most archaeologically sensitive landscape in the CWLLS area is channels and floodplains, followed by slopes landscapes. Other landscape types have a low representation but demonstrate that low densities of sites exist in other landscape types.

Table 2-3: Association of all recorded sites to landscape units (OzArk 2016).

Landscape unit	Number of sites	Percentage of total (n=59)
Channels and floodplains	36	61
Alluvial plains	6	10
Slopes	14	23
Downs	1	2
Uplands	2	4
Plateau	0	0

Site types associated with the landscapes most-frequently recording sites (channels and floodplains and slopes) show that channels and floodplains landscapes are more likely to contain modified trees and that slopes landscapes are more likely to contain artefact scatters and isolated finds (**Table 2-4**).

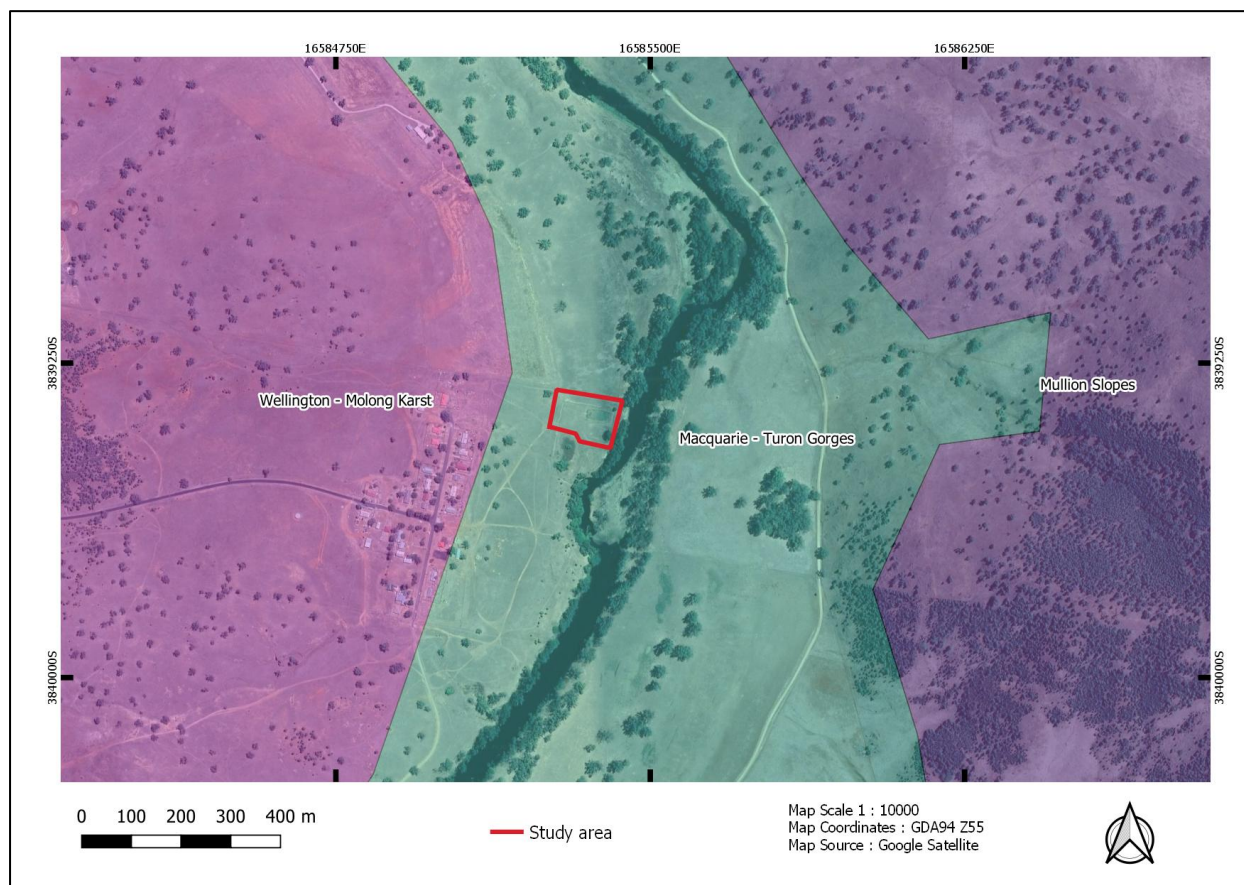
Table 2-4: Frequency of site types in association with landscape types (OzArk 2016).

Site type	Channels and floodplains	Slopes	Alluvial Plains
Artefact scatter	11 (30.5%)	7 (50%)	3 (50%)
Isolated finds	4 (11%)	3 (21%)	3 (50%)
Modified trees	21 (58.5%)	4 (29%)	0 (0%)

In terms of drainage buffers, OzArk (2016) found that 27 sites (or 46% of all sites) were recorded with the Drainage 1 buffer and 10 sites (or 17% of all sites) were recorded within the Drainage 2 buffer. Therefore, more than 63% of all sites were recorded within the two drainage buffers, with a clear bias toward Drainage 1 buffers.

Implications for the current study area

The study area is located in the South West Slopes bioregion Mitchell (2002: 59) and although it maps within a gorge landscape (Mitchell 2002: 87; **Figure 2-2**), the surrounding landscape is more similar to the Macquarie alluvial plains landscape (Mitchell 2002: 34) which is mapped 1.5 km to the north of the study area. Therefore, it can be said that the study area is better described as lying within an alluvial plains landscape type. The study area is located immediately west of the Macquarie River and is therefore well within a Drainage 1 buffer (refer to **Figure 2-2**). The CWLLS predictive model asserts that alluvial plains landscapes are likely to contain sites, particularly within Drainage 1 buffers (i.e. within 200 m of higher order waterways) (**Table 2-4**). Artefact sites (including isolated finds and artefact scatters) are the most likely site types to be encountered within alluvial plains landscapes. The likelihood of recording modified trees is much lower, however, in the case of the study area there are no trees of the right maturity and this site type will not be recorded.

Figure 2-2: Landscape features in relation to the study area (Mitchell 2002).

2.3.3.3 Local archaeological context

Several previous studies have assessed a variety of landforms and landscape types in the surrounding region.

Pearson (1979) wrote a preliminary study of recorded sites in the Bathurst Orange Development Area approximately 80 km to the south of the study area. Much of this work, based upon Gresser's earlier site recordings, has been invaluable in forming the basis for all archaeological predictive models developed in the area since. Gresser (1960s) was an amateur archaeologist, ethno-historian and collector of aboriginal artefacts who documented the first major recording of sites and oral accounts in the Bathurst–Orange area. Pearson's main conclusions were that open camp sites are most commonly located on well drained areas accessible to fresh water and adequate fuel. A sunny aspect, elevation above cold air drainage channels in winter and adequate breeze in summer also appeared to be important factors in site location. Gentle hillslopes, level areas on ridges, river flats and creek banks were the most common places in which open camp sites were located.

Oakley (2002) undertook an assessment of the Suma Park and Spring Creek Reservoirs near Orange and approximately 80 km to the south of the study area. Seven sites were located on low gradient spurs, and many were either just visible above the water line of both reservoirs. The

primary raw material was quartz with artefacts of basalt also recorded, and to a lesser degree, chert. Most artefacts were flakes and broken flakes, with several cores also recorded (bipolar and multi-platform), although one interesting find from site SPR-1 was labelled as a 'phallic rock' made from basalt. The final site was located on a naturally occurring quartz outcrop on a low gradient slope. Artefacts included flakes, broken flakes, possible bi-polar cores and flakes. All were quartz except for one basalt flake. This site was speculated to be a quartz procurement site as good quality stone was present.

Ozark (2006) undertook survey of 212 hectares (ha) between Leeds Parade and the Ophir Road Orange, NSW for the Orange City Council Local Environmental Study approximately 80 km to the south of the study area. The Aboriginal heritage study occurred on hilly country interspersed with ephemeral and permanent creeks (Summer Hill Creek and a tributary of Blackmans Swamp Creek). The assessment recorded nine Aboriginal sites and one potential archaeological deposit (PAD). Recorded sites types included isolated finds and scarred trees. Artefacts were manufactured from quartz sources with a volcanic scraper also recorded. All recorded scarred trees were yellow box trees and were identified in a cluster.

Ozark (2012) completed an Aboriginal archaeological assessment for the proposed Mitchell Highway upgrade at Goanna Hill near Molong approximately 60 km to the south of the study area. Four Aboriginal sites (culturally modified trees [scarred]), were identified during the survey in close proximity to Molong Creek and its tributaries. Scars were recorded on two white box and two yellow box species, however one of the yellow box trees was observed as dead.

Ozark (2014) completed the salvage on SPR-5 (44-2-0128) in accordance with Aboriginal Heritage Impact Permit (AHIP) C0000423. SPR-5 was one of eight sites recorded during part of a broader assessment area at Suma Park Reservoir (Oakley 2002). A total of 298 artefacts were salvaged from SPR-5. All but two of these artefacts were retrieved from within 10 metres (m) of the waterline of the Suma Park Reservoir. Two main trends were identified from the salvaged artefacts: many artefacts are flakes and the vast majority are made from the same grey volcanic material. Among the artefact types there was also a significant amount of debitage and shatter. Five scrapers were recorded in the salvage and five other artefacts (blades and flakes) were also backed. Many more artefacts were salvaged from SPR-5 than was expected based on previous recordings of the site. Only three artefacts were recorded within SPR-5 during the 2013 inspection, although it is important to note that water levels were significantly higher than in 2002 and 2014.

Ozark (2017a) completed a Due Diligence Aboriginal archaeological assessment for the proposed subdivision of Lot 9 DP243046 on Lower Lewis Ponds Road, Clifton Grove, and located approximately 80 km south-southeast of the current study area. One Aboriginal site was recorded during the survey (White Hill Lane-IF1). White Hill Lane-IF1 was recorded as an isolated stone artefact: a complete mudstone end/side scraper at a tertiary stage of reduction exhibiting steep

unifacial retouch and edge wear along the lateral and distal margins. It was concluded that the artefact may have washed downslope to its current position or may have been moved onto the road with fill sourced elsewhere for road maintenance. As such, no area of PAD was delineated at the site.

Ozark (2017b) completed a Due Diligence Aboriginal archaeological assessment for the rehabilitation works of a 650 m long section of Muronbung Road, located 42 km northeast of the current study area. One Aboriginal site was recorded during the survey (Spicers Creek OS1). Spicers Creek OS1 was recorded as consisting of five stone artefacts manufactured from mudstone, quartz and fine-grained siliceous material.

Ozark (2017c) completed a Due Diligence Aboriginal archaeological assessment for upgrade works associated with a 1.1 km long section of Benolong Road east of the Obley Road intersection. This area is located 45 km northwest of the current study area. No Aboriginal sites were recorded during the survey.

Ozark (2017d) completed a Due Diligence Aboriginal archaeological assessment for upgrade works associated with a 1.1 km long section of Ponto Falls Road. This area is located 12.5 km to the north of the current study area. No Aboriginal sites were recorded during the survey.

Ozark (2019) completed a Due Diligence Aboriginal archaeological assessment for a proposed water supply pipeline in Stuart Town, NSW. The project was located 26 km southeast of the current study area. One previously unrecorded Aboriginal site, Commissioners Lane-OS1, was identified during the visual inspection. The site is a low-density artefact scatter comprising three artefacts located in a disturbed context. Raw materials recorded include quartz (n=1) and volcanic (n=2). Artefacts types included two flakes and an end scraper.

2.3.3.4 Conclusion

Overall, these past archaeological assessments indicate that artefact sites are the most common site type found in the Wellington–Orange region and that they are more likely to occur near reliable water sources and on slopes associated with them.

The distribution of recorded sites in the region suggests:

- Culturally modified trees are possible wherever mature vegetation remains. Generally modified trees are found more frequently in close association with larger camps and permanent water resources. There are no mature trees in the vicinity of the study area therefore there no likelihood that this type of site to occur within the study area
- Artefact sites may occur anywhere in the landscape and are usually determined by the existence of a permanent water source. The study area is in proximity to the Macquarie River and as such larger artefact sites are possible. This prediction is also borne out by the work completed for the CWLLS study (OzArk 2016)

- Isolated finds are sites comprising single Aboriginal objects and usually represent either accidental loss or discard. These sites may occur anywhere and are possible within the study area
- Less commonly encountered site types such as Aboriginal Ceremony and Dreaming and Aboriginal Resource and Gathering are varieties of landscape features and natural sacred sites that are regarded as highly sacred to Aboriginal people. Such features may include mountains, waterholes, caves, and rock formations. Additionally, the flora and fauna that inhabit these landscapes also carry Aboriginal cultural significance particularly where these items were used both economically and medicinally. These sites have been recorded in the surrounding area and can occur wherever plants of economic or medicinal value are found or natural features of significance are seen. These site types are intangible in nature and would remain largely unknown without consultation with Aboriginal people. However, due to the degree of modification within the study area it is predicted that this site type will not be recorded.

2.3.4 Step 2c

Are there any landscape features that are likely to indicate presence of Aboriginal objects?

Yes. The study area contains landforms with identified archaeological sensitivity.

The study area is located in the South West Slopes bioregion. The study area is mapped within the Macquarie-Turon Gorge landscape, close to its interface with the Wellington-Molong Karst and the Macquarie Alluvial Plains landscapes.

The Macquarie-Turon Gorge landscape type consists of steep sided, deep gorge tract with incised meanders of the Macquarie and Turon Rivers below extensive tablelands of the Ophir-Hargraves Plateau ecosystem. This landscape is incised across the structural grain of north-south trending tightly folded Devonian dacite, crystal tuff, quartzite and slates. The area has a general elevation of 500 to 700m with a local relief to 150m. The landscape consists of shallow stony soils on semi-stable scree slopes and yellow texture-contrast soils on lower angle slopes. The vegetation consists of open woodland of yellow box (*Eucalyptus melliodora*), red box (*Eucalyptus polyanthemos*) and Blakely's red gum (*Eucalyptus blakelyi*) on lower areas, red stringybark (*Eucalyptus macrorhyncha*), broad-leaved peppermint (*Eucalyptus dives*) and white gum (*Eucalyptus viminalis*) on higher slopes. River oak (*Casuarina cunninghamiana*) dominates the channel.

With the Due Diligence guidelines, sensitive archaeological landscapes include (DECCW 2010):

- within 200 m of waters, or
- located within a sand dune system, or
- located on a ridge top, ridge line or headland, or
- located within 200 m below or above a cliff face, or
- within 20 m of or in a cave, rock shelter, or a cave mouth.

The only landscape type within this list that could apply to the study area relates to the banks of the Macquarie River which lies adjacent to the study area (i.e. the study area is within 200 m of 'waters'). It would be unusual for Aboriginal people not to have utilised this area and the abundant resources that the river would have supplied.

2.3.5 Step 3

Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?

No. landforms with identified archaeological sensitivity may be impacted by the proposal.

The Aboriginal sites identified through the AHIMS search do not occur within the study area and therefore there is no known risk of harming previously identified sites. However, landscape features associated with the Macquarie River will be impacted by the proposal. The proposal, however, seeks to upgrade infrastructure that is already in place and will therefore not be extensively impacting ground that has not been impacted previously.

In addition, many of the landforms within the study area have been modified through earthworks associated with construction vehicle tracks and drainage infrastructure.

Step 3 has concluded that an archaeologically sensitive landform, the western bank of the Macquarie River, will be disturbed by the proposal, therefore visual inspection of the study area was undertaken (**Section 2.3.6**) to confirm the desktop assessment of low to moderate archaeological potential.

2.3.6 Step 4

Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

No. Aboriginal objects were not recorded within the study area.

The visual inspection of the study area was undertaken by OzArk Archaeologist Kirwan Williams on Friday 29 May 2020. Mike Nolan of the Wellington Local Aboriginal Land Council accompanied the inspection.

Standard archaeological field survey and recording methods were employed (Burke and Smith 2004). As the STP was surrounded by a high fence and padlocked gates showing signs with no entry written on them only portions of land outside the fence was fully inspected on foot. Due to the limited nature of the STP and lack of visibility inside the fence it was possible to make judgements on it from a distance and extrapolated from areas that were fully covered. One transect involved a complete lap of the fenced STP covering all sides of the existing fenced area. **Figure 2-3** illustrates the pedestrian transects recorded by OzArk during the field inspection.

The majority of the impact area lies within the existing compound and is within an area subject to clear and observable levels of prior disturbance including the removal of soil for the formation of trenches and ponds. **Plate 1** shows the disturbances within the existing sewerage treatment compound.

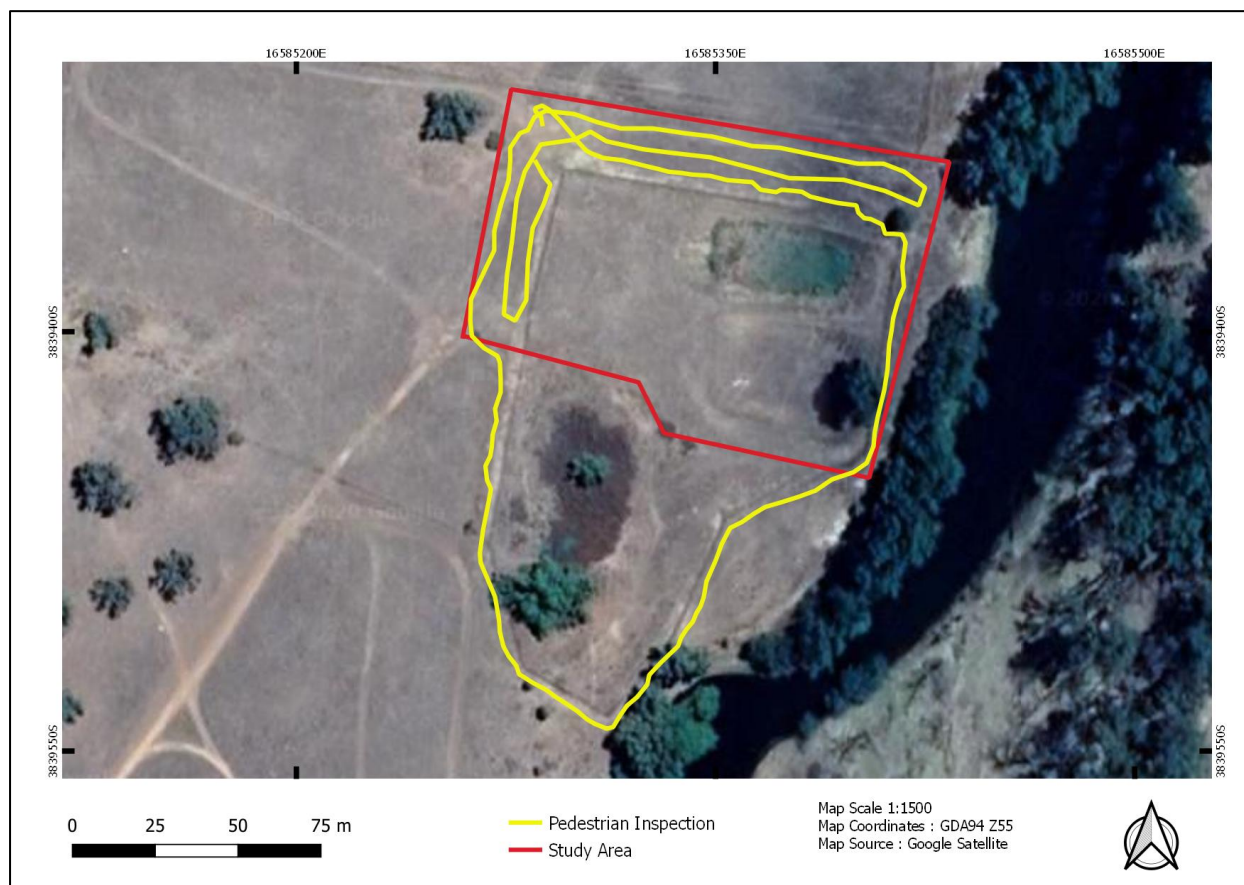
A wider area was surveyed on all sides of the existing sewerage treatment works compound (**Plate 2**).

No mature vegetation remained within the study area with an extremely dense growth of grass and weeds obscuring the ground surface both within and without the compound (**Plate 3**).

Disturbances in the study area included full landform clearing and modification associated with the construction of the existing sewerage infrastructure and those associated with drainage. Erosion accounts for the remainder of visible disturbance factors within the inspected area (**Plate 4**).

Overall, the ground surface exposure (GSE) was approximately 10% across the study area and the ground surface visibility (GSV) within available exposures was approximately 5–10%. Soils across the study area were all visibly disturbed with evidence of earthmoving activity obvious across the inspected area. Generally, soils comprised a medium to coarse-grained grey silty loam with large amounts of imported river cobble placed as an attempt to slow the rate of erosion in surrounding areas

Plate 5 shows some imported material utilised in this fashion. However, no raw material suitable for the manufacture of stone artefacts was identified (**Plate 6**).

Figure 2-3: Survey coverage within the study area.

2.4 DISCUSSION

As discussed previously, the prominence of the Macquarie River as a landform associated with the study area is almost certainly to have been visited by Aboriginal people in the past. However, the highly disturbed nature of the ground within and immediately surrounding the study area suggests that any archaeological signature is likely to have been disturbed or even removed by past works. As no previously recorded Aboriginal sites occur within the study area it is considered to have low archaeological sensitivity with regards to Aboriginal cultural heritage.

Mike Nolan who accompanied the visual inspection agreed with this assessment of low archaeological sensitivity.

2.5 CONCLUSION

The desktop section of this report has found that the level of historic disturbance caused by earthworks associated with the construction of the existing STP has caused clear and visible disturbance throughout the study area. It is also noted that the proposal will be mostly confined to areas that have been previously disturbed by the existing sewerage works.

The Due Diligence process has resulted in the outcome that an Aboriginal Heritage Impact Permit (AHIP) is not required. The reasoning behind this determination is set out in **Table 2-3**.

Table 2-5: Due Diligence Process application.

Item	Reasoning	Answer
<p>Will the activity disturb either of the following:</p> <ol style="list-style-type: none"> the ground surface where archaeological deposits are likely mature, native trees that may be culturally modified. 	<p>The proposed works would disturb the ground surface through earthmoving works in relation to the augmentation of the existing sewerage treatment works, but these works will not impact archaeological deposits due the extensive levels of existing disturbance.</p> <p>The proposal will not involve the disturbance of mature trees.</p>	Yes
Are there any relevant records of Aboriginal heritage on site (AHIMS or from other sources), or landscape features that are likely to indicate presence of Aboriginal objects?	AHIMS indicated that there are no known Aboriginal sites within the study area.	No
Will the activity impact Aboriginal objects or landforms with archaeological potential?	Whilst the study area lies on the western bank of a major watercourse (the Macquarie River) the study area has been extensively disturbed by the installation of existing infrastructure. The study area is therefore assessed to be of low archaeological potential.	No
Does a desktop assessment and visual assessment confirm that there are Aboriginal objects or that they are likely?	Desktop searches and the visual inspection recorded no Aboriginal objects in the study area.	No
AHIP not required. Proceed with caution		

3 MANAGEMENT RECOMMENDATIONS

The undertaking of the Due Diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

AHIP application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work and notify Heritage NSW (131 555 or info@environment.nsw.gov.au). If human remains are found, stop work, secure the site and notify NSW Police and Heritage NSW.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

- 1) The proposed work may proceed within the study area without further archaeological investigation under the following conditions:
 - a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
 - b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- 2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. However, during works, if Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed;
- 3) Work crews should undergo cultural heritage induction to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol*.
- 4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

REFERENCES

- Burke & Smith 2004 Burke, H. and Smith, C. 2004. *The Archaeologist's Field Handbook*, Blackwell, Oxford.
- Burra Charter 2013 International Council on Monuments and Sites 2013. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*.
- DECCW 2010 DECCW. 2010. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. Department of Environment, Climate Change and Water, Sydney.
- Gresser 1965 Gresser, P. 1965. *Unpublished Notes on Aboriginal Sites in the Bathurst District (1962-1965)*. Unpublished manuscript: NSW Office of Environment & Heritage.
- Johnson 1979 Johnson, I. 1979. *The getting of data: a case study from the recent industries of Australia*. Ph.D. thesis, Department of Prehistory, Research School of Pacific Studies, Australian National University, Canberra.
- Haglund 1985 Haglund, L. 1985 *Assessment of Aboriginal Heritage in the Mudgee Shire*. Report for Mudgee Shire Council.
- Horton 2007 Horton, D. 2007 (Revised Edn), *Aboriginal Australia Wall Map*, Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra
- Kuskie and Clarke 2007 Kuskie, P. and E. Clarke. 2007. *Aboriginal Heritage Assessment: SMP Application Area (Longwall Panels W2-W3) of Mining Lease 1468, Ulan Coal Mine, Central Tablelands, New South Wales*. Report to Ulan Coal Mines Limited.
- McIntyre 1990 McIntyre, S. 1990. *Archaeological survey of the proposed Kariwara Longwall Coal Mine*. Prepared for the Electricity Commission of NSW.
- Mitchell 2002 Mitchell, Dr. Peter. 2002. *Description for NSW (Mitchell) Landscapes Version 2*. Department of Environment and Climate Change NSW.
- Moore 1970 Moore, D. 1970 Results of an archaeological survey of the Hunter River, New South Wales, Australia. Part I: the Bondaian industry of the upper Hunter and Goulburn River valleys. *Records of the Australian Museum* 28(2): 25–64.
- Oakley 2002 Oakley, B. 2002. *Orange Dams Water Supply Augmentation: Suma Park and Spring Creek Reservoirs*. Orange.

OEH 2011	Office of Environment and Heritage. 2011. <i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales</i> . Department of Environment, Climate Change and Water, Sydney.
OzArk 2006	OzArk Environment and Heritage. 2006. <i>Flora, Fauna & Heritage Assessment: Orange Local Environmental Study, Ophir Road & Leeds Parade, NSW</i> . Report to Newplan
OzArk 2012	OzArk Environment & Heritage. 2012. <i>Aboriginal Heritage Assessment: HW7 Goanna Hill Realignment – Cabonne Local Government Area</i> . Report to NSW Transport Roads and Maritime Services.
OzArk 2014	OzArk Environment & Heritage. 2014. <i>Aboriginal Archaeological Salvage Report: Suma Park Reservoir Upgrade</i> . Report to Orange City Council.
OzArk 2016	OzArk Environment and Heritage. 2016. <i>Central West Local Land Services Travelling Stock Reserves Study</i> . Report to Central West Local Land Services.
OzArk 2017a	OzArk Environment & Heritage. 2017. <i>Aboriginal Due Diligence Archaeological Assessment: Subdivision of Lot 9 DP243046, Clifton Grove NSW, Cabonne LGA</i> . Report to: Landorange Partnership.
OzArk 2017b	OzArk Environment & Heritage. 2017. <i>Aboriginal Heritage Due Diligence-Muronbung Road Rehabilitation</i> . Report to Dubbo Regional Council.
OzArk 2017c	OzArk Environment & Heritage. 2017. <i>Aboriginal Heritage Due Diligence Assessment-Benolong Road Upgrade</i> . Report to Dubbo Regional Council.
OzArk 2017d	OzArk Environment & Heritage. 2017. <i>Aboriginal Heritage Due Diligence Assessment-Ponto Falls Road</i> . Report to Dubbo Regional Council.
OzArk 2019	OzArk Environment & Heritage. 2017. <i>Aboriginal Heritage Due Diligence Assessment-Stuart Town Water Supply Pipeline</i> . Report to Dubbo Regional Council.
Pearson 1979	Pearson, M. 1979. <i>Aboriginal sites in the Bathurst-Orange development area: A pilot survey</i> . Report to National Parks and Wildlife Services.
Tindale 1974	Tindale, A. 1974. <i>Aboriginal Tribes of Australia</i> . University of California Press.

PLATES



Plate 1: View southwest to the existing infrastructure within the study area.



Plate 2: View east towards the Macquarie River. Note the vegetation of dense, compact weeds and grasses.



Plate 3: View east through dense, compact weeds and grasses.



Plate 4: View east from the western point of the study area.




Plate 5: View of imported cobbles outside the sewerage treatment compound.




Plate 6: View of the ground surface in a rare patch of exposure.

APPENDIX 1: AHIMS SEARCH RESULTS

<div>  <div> AHIMS Web Services (AWS) Extensive search - Site list report </div> <div> Your Ref/PO Number : Nanima 1 Client Service ID : 508224 </div> </div>										
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
36-4-0080	Restriction applied. Please contact ahims@environment.nsw.gov.au. Contact					Open site	Valid			102779.102800
	Recorders	Unknown Author:Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corpora				Open site	Valid	Permits		102779
36-4-0084	Restriction applied. Please contact ahims@environment.nsw.gov.au. Contact					Open site	Valid			102779
	Recorders	Unknown Author:Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corpora				Open site	Valid	Permits		102779
36-5-0018	Eaglehawk:Eaglehawk 1; Contact	AGD	55	689522	6392272	Open site	Valid	Artefact : -	Open Camp Site	83.232.102779.102800
	Recorders	L Cubis						Permits		
36-5-0020	Eaglehawk:Eaglehawk 2; Contact	AGD	55	689625	6392141	Open site	Valid	Artefact : -	Open Camp Site	232.102779.102800
	Recorders	L Cubis						Permits		
36-5-0031	Burill Creek,Gigmalarie Creek 2; Contact	AGD	55	690510	6391088	Open site	Valid	Shell : -, Artefact : -	Midden	102779
	Recorders	L Cubis						Permits		
36-4-0071	Nanima Huts Contact	AGD	55	685950	6392600	Open site	Valid	Habitation Structure : -		102779
	Recorders	Ms.Jillian Comber,Carole Gartside						Permits		
36-4-0012	Apsley. Contact	AGD	55	685235	6390570	Open site	Valid	Artefact : -	Open Camp Site	102779
	Recorders	Michael Pearson						Permits		
36-4-0006	Macquarie River 2 Contact	AGD	55	682701	6396153	Open site	Valid	Ceremonial Ring (Stone or Earth) : -, Modified Tree (Carved or Scarred) : 28	Bora/Ceremonial Carved Tree	65.102779
	Recorders	David Bell,R Etheridge						Permits		
36-4-0072	Nanima Church; Contact	AGD	55	685930	6392500	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Modified Tree (Carved or Scarred) : -		102779
	Recorders	Ms.Jillian Comber,Carole Gartside						Permits		
36-4-0073	TC 2 Contact	AGD	55	684800	6391800	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102779
	Recorders	Ms.Jillian Comber,D Ingray						Permits		
36-4-0074	TC 3 Contact	AGD	55	685100	6393400	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102779
	Recorders	Ms.Jillian Comber,D Ingray						Permits		

Report generated by AHIMS Web Service on 26/05/2020 for Kirwan Williams for the following area at Datum :GDA, Zone : 55, Eastings : 681650 - 691650, Northings : 6388750 - 6398750 with a Buffer of 0 meters. Additional Info : To inform archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 19
This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 1 of 2

<div>  <div> AHIMS Web Services (AWS) Extensive search - Site list report </div> <div> Your Ref/PO Number : Nanima 1 Client Service ID : 508224 </div> </div>										
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
36-4-0076	-36-6-607Nanima Scarred Tree; Contact	AGD	55	685960	6392600	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102779
	Recorders	Ms.Jillian Comber,Carole Gartside						Permits		
36-4-0077	Nanima Rd 1; Contact	AGD	55	684490	6394100	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Scarred Tree	3701.102779
	Recorders	Mr.Matthew Barber						Permits		
36-4-0160	Restriction applied. Please contact ahims@environment.nsw.gov.au. Contact Mr.Bradley Bliss					Open site	Valid			
	Recorders	Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation						Permits		
36-4-0078	Nanima 1 Contact	AGD	55	685600	6393000	Open site	Valid	Artefact : -	Open Camp Site	102779
	Recorders	Ms.Jillian Comber,Carole Gartside						Permits		
36-4-0079	Wellington Contact	AGD	55	682000	6397000	Open site	Valid	Burial : -	Burial/s	2641.102779
	Recorders	Ms.Adrienne Howe,Planting						Permits		
36-4-0001	Bell River:Triplet Cave; Contact	AGD	55	681966	6388772	Open site	Valid	Burial : -	Burial/s	102779
	Recorders	Osbourne						Permits		
36-4-0121	Watson Creek 1 Contact	GDA	55	685999	6389436	Open site	Valid	Artefact : 19		
	Recorders	Doctor.Colin Pardoe						Permits		
36-4-0128	Blacks Camp Wellington Contact	GDA	55	685616	6395743	Open site	Valid	Artefact : -		103476
	Recorders	Phil Purcell						Permits		

Report generated by AHIMS Web Service on 26/05/2020 for Kirwan Williams for the following area at Datum :GDA, Zone : 55, Eastings : 681650 - 691650, Northings : 6388750 - 6398750 with a Buffer of 0 meters. Additional Info : To inform archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 19
This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 2 of 2

APPENDIX 2: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL


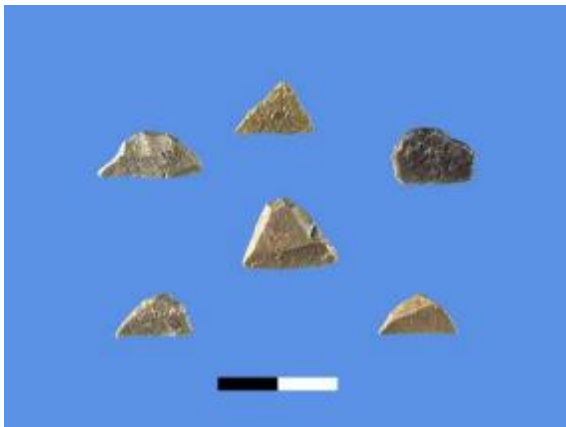

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also take into account scientific and educational value.

Protocol to be followed in the event that previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
 - a. Not further harm the object;
 - b. Immediately cease all work at the particular location;
 - c. Secure the area so as to avoid further harm to the Aboriginal object;
 - d. Notify Heritage NSW as soon as practical on 131 555, providing any details of the Aboriginal object and its location; and
 - e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. In the event that Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s);
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions; and
 - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (normally an Aboriginal Heritage Impact Permit).

APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

	
Retouched blades (scale = 1cm)	Flakes
	
Microliths (scale = 1cm)	Scraper (scale = 1cm)
	
Flake characteristics (scale = 1cm)	Core from which flakes have been removed (scale = 1cm)

Appendix B Database Searches

Public Works Advisory

66 Harrington Street
Sydney New South Wales 2000

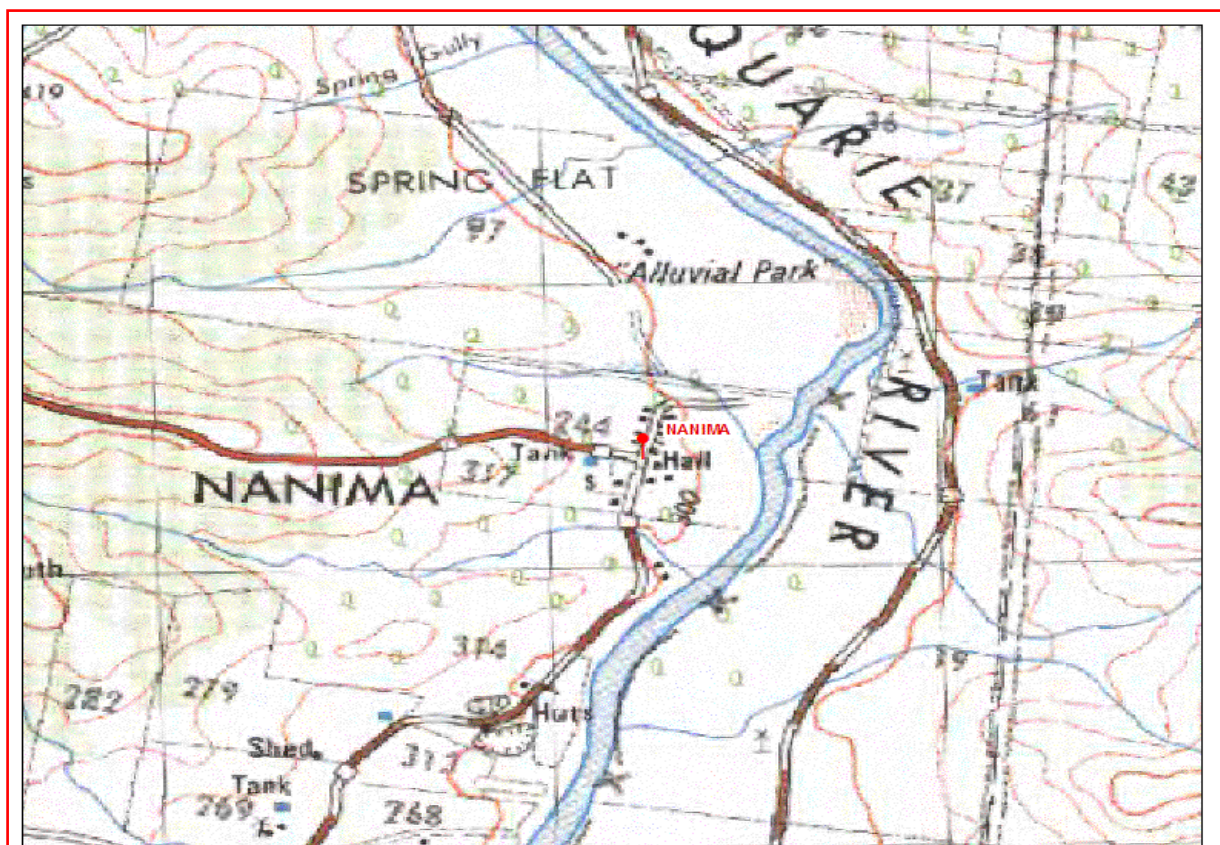
Attention: Kristen Parmeter

Email: kristen.parmeter@finance.nsw.gov.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 244, DP:DP756920 with a Buffer of 1000 meters, conducted by Kristen Parmeter on 23 June 2020.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

5	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

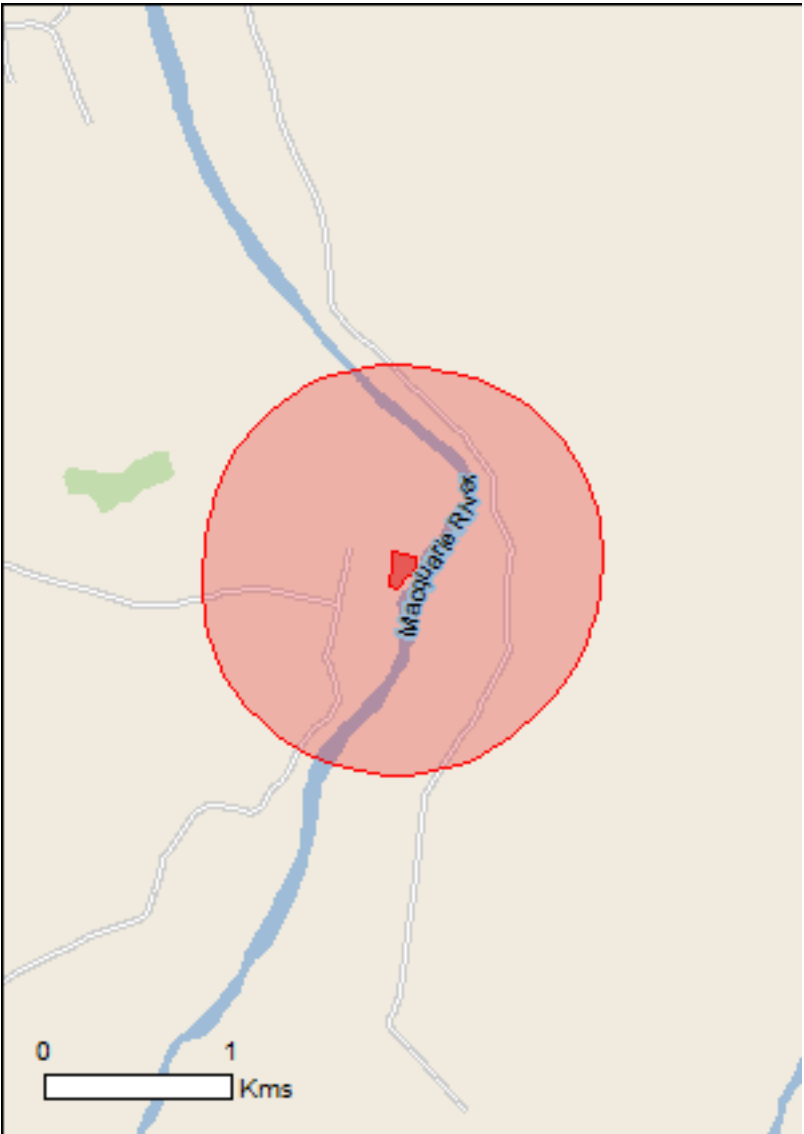
Report created: 22/06/20 17:03:39

- [Summary](#)
- [Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

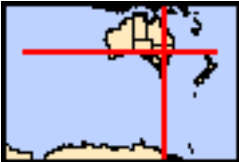
[Extra Information](#)
- [Caveat](#)
- [Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 1.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	27
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	17
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	28
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Banrock station wetland complex	800 - 900km upstream
Riverland	700 - 800km upstream
The coorong, and lakes alexandrina and albert wetland	900 - 1000km upstream
The macquarie marshes	200 - 300km upstream

Listed Threatened Ecological Communities	[Resource Information]
--	--------------------------

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area

Listed Threatened Species	[Resource Information]
---------------------------	--------------------------

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Polytelis swainsonii Superb Parrot [738]	Vulnerable	Species or species

Name	Status	Type of Presence
Rostratula australis Australian Painted Snipe [77037]	Endangered	habitat likely to occur within area Species or species habitat likely to occur within area
Fish		
Galaxias rostratus Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat may occur within area
Maccullochella macquariensis Trout Cod [26171]	Endangered	Species or species habitat may occur within area
Maccullochella peelii Murray Cod [66633]	Vulnerable	Species or species habitat known to occur within area
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Plants		
Austrostipa wakoolica [66623]	Endangered	Species or species habitat may occur within area
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat may occur within area
Prasophyllum petilum Tarengo Leek Orchid [55144]	Endangered	Species or species habitat may occur within area
Prasophyllum sp. Wybong (C.Phelps ORG 5269) a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
Swainsona recta Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]	Endangered	Species or species habitat likely to occur within area
Tylophora linearis [55231]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Reptiles		
Aprasia parapulchella Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Extra Information

Invasive Species

[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018] Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-32.577776 148.988108,-32.577369 148.988204,-32.577532 148.989288,-32.578183 148.989181,-32.578382 148.988837,-32.578626 148.988666,-32.578834 148.988419,-32.578716 148.988022,-32.577767 148.988108,-32.577767 148.988108,-32.577767 148.988108,-32.577767 148.988108,-32.577776 148.988108

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:



















- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals



















The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

Data from the BIONET Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) or Commonwealth listed Entities in selected area [North: -32.53 West: 148.94 East: 149.04 South: -32.63] returned a total of 48 records of 36 species.

Report generated on 22/06/2020 4:54 PM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Common status	Records	Info
Animalia	Aves	Anatidae	0214	<i>Stictonetta naevosa</i>		Freckled Duck	V,P		1	
Animalia	Aves	Apodidae	0334	<i>Hirundapus caudacutus</i>		White-throated Needletail	P	V,C,J,K	1	
Animalia	Aves	Ardeidae	0197	<i>Botaurus poiciloptilus</i>		Australasian Bittern	E1,P	E	1	
Animalia	Aves	Accipitridae	0218	<i>Circus assimilis</i>		Spotted Harrier	V,P		2	
Animalia	Aves	Accipitridae	0231	^^ <i>Hamirostra melanosternon</i>		Black-breasted Buzzard	V,P,3		1	
Animalia	Aves	Accipitridae	0225	<i>Hieraaetus morphnoides</i>		Little Eagle	V,P		1	
Animalia	Aves	Accipitridae	0230	^^ <i>Lophoictinia isura</i>		Square-tailed Kite	V,P,3		1	
Animalia	Aves	Falconidae	0238	<i>Falco subniger</i>		Black Falcon	V,P		2	
Animalia	Aves	Burhinidae	0174	<i>Burhinus grallarius</i>		Bush Stone-curlew	E1,P		1	
Animalia	Aves	Cacatuidae	0265	^ <i>Calyptorhynchus lathami</i>		Glossy Black-Cockatoo	V,P,2		1	
Animalia	Aves	Psittacidae	0260	<i>Glossopsitta pusilla</i>		Little Lorikeet	V,P		1	
Animalia	Aves	Psittacidae	0309	^^ <i>Lathamus discolor</i>		Swift Parrot	E1,P,3	CE	1	
Animalia	Aves	Psittacidae	0302	^^ <i>Neophema pulchella</i>		Turquoise Parrot	V,P,3		1	
Animalia	Aves	Psittacidae	0277	^^ <i>Polytelis swainsonii</i>		Superb Parrot	V,P,3	V	1	
Animalia	Aves	Strigidae	0246	^^ <i>Ninox connivens</i>		Barking Owl	V,P,3		1	
Animalia	Aves	Climacteridae	8127	<i>Climacteris picumnus victoriae</i>		Brown Treecreeper (eastern subspecies)	V,P		2	
Animalia	Aves	Acanthizidae	0504	<i>Chthonicola sagittata</i>		Speckled Warbler	V,P		1	
Animalia	Aves	Meliphagidae	0603	<i>Anthochaera phrygia</i>		Regent Honeyeater	E4A,P	CE	1	

Anima lia	Aves	Melipha gidae	0448	<i>Epthianura albifrons</i>	White-fronted Chat	V,P		1	
Anima lia	Aves	Melipha gidae	8303	<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)	V,P		1	
Anima lia	Aves	Pomatos tomidae	8388	<i>Pomatostomu s temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)	V,P		2	
Anima lia	Aves	Neositti dae	0549	<i>Daphoenositt a chrysoptera</i>	Varied Sittella	V,P		1	
Anima lia	Aves	Pachyce phalidae	0403	<i>Pachycephala inornata</i>	Gilbert's Whistler	V,P		1	
Anima lia	Aves	Artamid ae	8519	<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V,P		2	
Anima lia	Aves	Petroicid ae	8367	<i>Melanodryas cucullata cucullata</i>	Hooded Robin (south-eastern form)	V,P		1	
Anima lia	Aves	Petroicid ae	0380	<i>Petroica boodang</i>	Scarlet Robin	V,P		1	
Anima lia	Aves	Petroicid ae	0382	<i>Petroica phoenicea</i>	Flame Robin	V,P		1	
Anima lia	Aves	Estrildid ae	0652	<i>Stagonopleur a guttata</i>	Diamond Firetail	V,P		2	
Anima lia	Mamm alia	Dasyurid ae	1008	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E	2	
Anima lia	Mamm alia	Phascola rctidae	1162	<i>Phascolarctos cinereus</i>	Koala	V,P	V	1	
Anima lia	Mamm alia	Petaurid ae	1137	<i>Petaurus norfolcensis</i>	Squirrel Glider	V,P		1	
Anima lia	Mamm alia	Pseudoc heiridae	1133	<i>Petauroides volans</i>	Greater Glider	P	V	1	
Anima lia	Mamm alia	Pteropo didae	1280	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V,P	V	5	
Planta e	Flora	Fabacea e (Faboide ae)	3056	<i>Swainsona recta</i>	Small Purple- pea	E1	E	2	
Planta e	Flora	Fabacea e (Faboide ae)	8538	<i>Swainsona sericea</i>	Silky Swainson- pea	V		1	
Anima lia	Mamm alia	Miniopt eridae	3330	<i>Miniopterus orianae oceanensis</i>	Large Bent- winged Bat	V,P		1	



SEED

Sharing and Enabling Environmental Data

SEED Map - Bionet Threatened Species Sighting

Map may contain errors and omissions. Neither the NSW Government nor any other data custodian will accept liability for any loss, damage, cost or expenses incurred as a result of the use of, or reliance upon, the information in the map. Map copyright the State of NSW through the Office of Environment and Heritage.



0.9 0 0.47 0.9 Kilometers

Scale 1: 18,967.20

WGS_1984_Web_Mercator_Auxiliary_Sphere

Generated from SEED web map. Created 11:47 AM 23/6/2020
© Land and Property Information 2015 | Division of Resources & Energy | Department of Primary Industries NSW | Department of Primary Industries (Water) NSW | Office of Environment and Heritage NSW | Environment Protection Authority NSW | Department of Planning and Environment NSW | Geological Survey of NSW, 2016

Legend

- BionetSpeciesSightings

Critically Endangered

Endangered

Endangered Population



Endangered Population, Vulnerable

Vulnerable

Presumed Extinct

Not Listed as Threatened

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) or Commonwealth listed Communities in selected area [North: -32.53 West: 148.94 East: 149.04 South: -32.63] returned 0 records for 4
Report generated on 23/06/2020 12:17 PM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Community				<i>Coolac-Tumut Serpentine Shrubby Woodland in the NSW South Western Slopes and South Eastern Highlands Bioregions</i>		Coolac-Tumut Serpentine Shrubby Woodland in the NSW South Western Slopes and South Eastern Highlands Bioregions	E3		K	
Community				<i>Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions</i>		Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions	E3		K	

Community

*Inland Grey Box
Woodland in the
Riverina, NSW
South Western
Slopes, Cobar
Peneplain,
Nandewar and
Brigalow Belt
South Bioregions*

Inland Grey Box
Woodland in the
Riverina, NSW South
Western Slopes, Cobar
Peneplain, Nandewar
and Brigalow Belt
South Bioregions

E3

E

K



Community

*White Box Yellow
Box Blakely's Red
Gum Woodland*

White Box Yellow Box
Blakely's Red Gum
Woodland

E3

CE

K



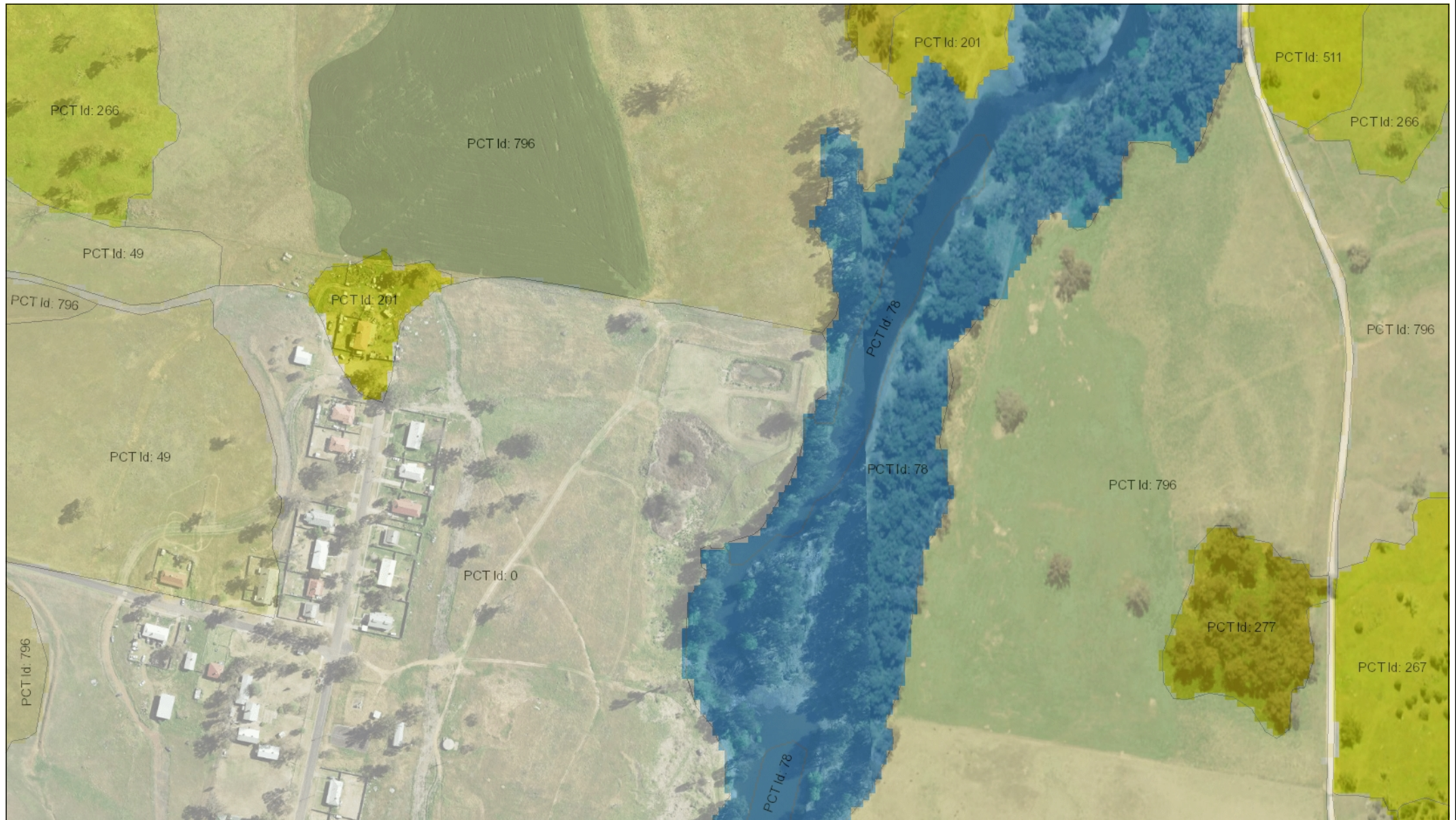


SEED

Sharing and Enabling Environmental Data

SEED map vegetation PCT - Nanima village STP Site

Map may contain errors and omissions. Neither the NSW Government nor any other data custodian will accept liability for any loss, damage, cost or expenses incurred as a result of the use of, or reliance upon, the information in the map. Map copyright the State of NSW through the Office of Environment and Heritage.



0.2 0 0.12 0.2 Kilometers

Scale 1: 4,741.80

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Land and Property Information 2015 | Division of Resources & Energy | Department of Primary Industries NSW | Department of Primary Industries (Water) NSW | Office of Environment and Heritage NSW | Environment Protection Authority NSW | Department of Planning and Environment NSW | Geological Survey of NSW, 2016

Generated from SEED web map. Created 5:18 PM 22/6/2020

Legend

Labels

Plant Community Type

0	46	87	139
2	47	88	140
5	48	98	141
7	49	100	142
8	50	101	143
9	52	102	144
10	53	103	145
11	54	104	146
12	55	105	147
13	56	106	148
15	57	108	149
16	58	109	150
17	59	110	151
18	60	112	152
19	61	113	153
20	62	114	154
21	63	115	155
22	64	116	156
23	65	117	157
24	66	118	158
25	67	119	159
26	68	120	160
27	69	121	161
28	70	122	162
29	71	123	163
31	72	124	164
35	74	125	165
36	75	127	166
37	76	128	167
38	77	129	168
39	78	130	169
40	79	131	170
41	80	132	171
42	81	133	172
43	82	134	173
44	83	135	174
45	84	136	175
	85	137	176
	86	138	177

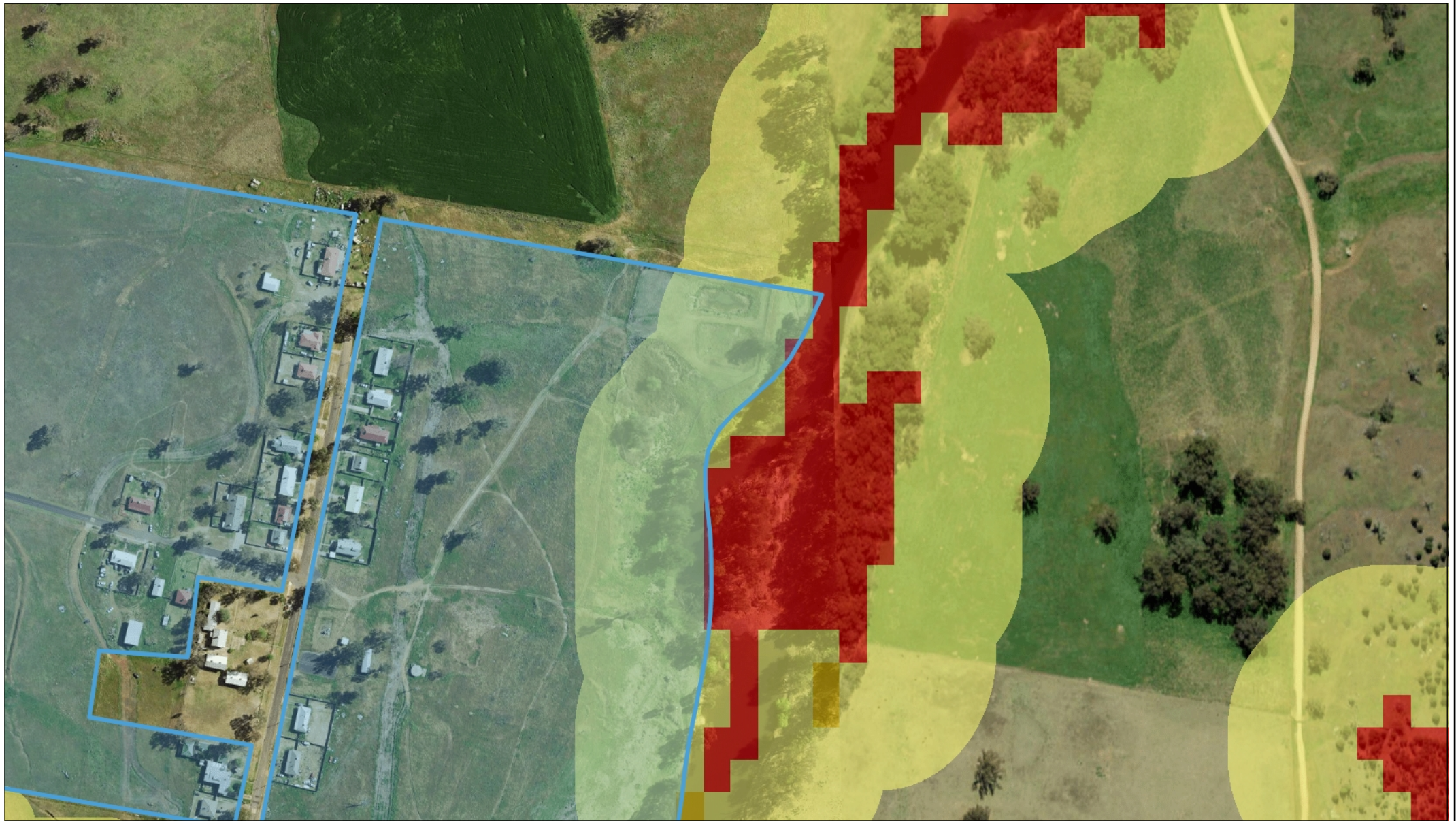


SEED

Sharing and Enabling Environmental Data

SEED Map bushfire

Map may contain errors and omissions. Neither the NSW Government nor any other data custodian will accept liability for any loss, damage, cost or expenses incurred as a result of the use of, or reliance upon, the information in the map. Map copyright the State of NSW through the Office of Environment and Heritage.



0.2 0 0.12 0.2 Kilometers






Scale 1: 4,741.80

WGS_1984_Web_Mercator_Auxiliary_Sphere

Generated from SEED web map. Created 1:01 PM 24/9/2020

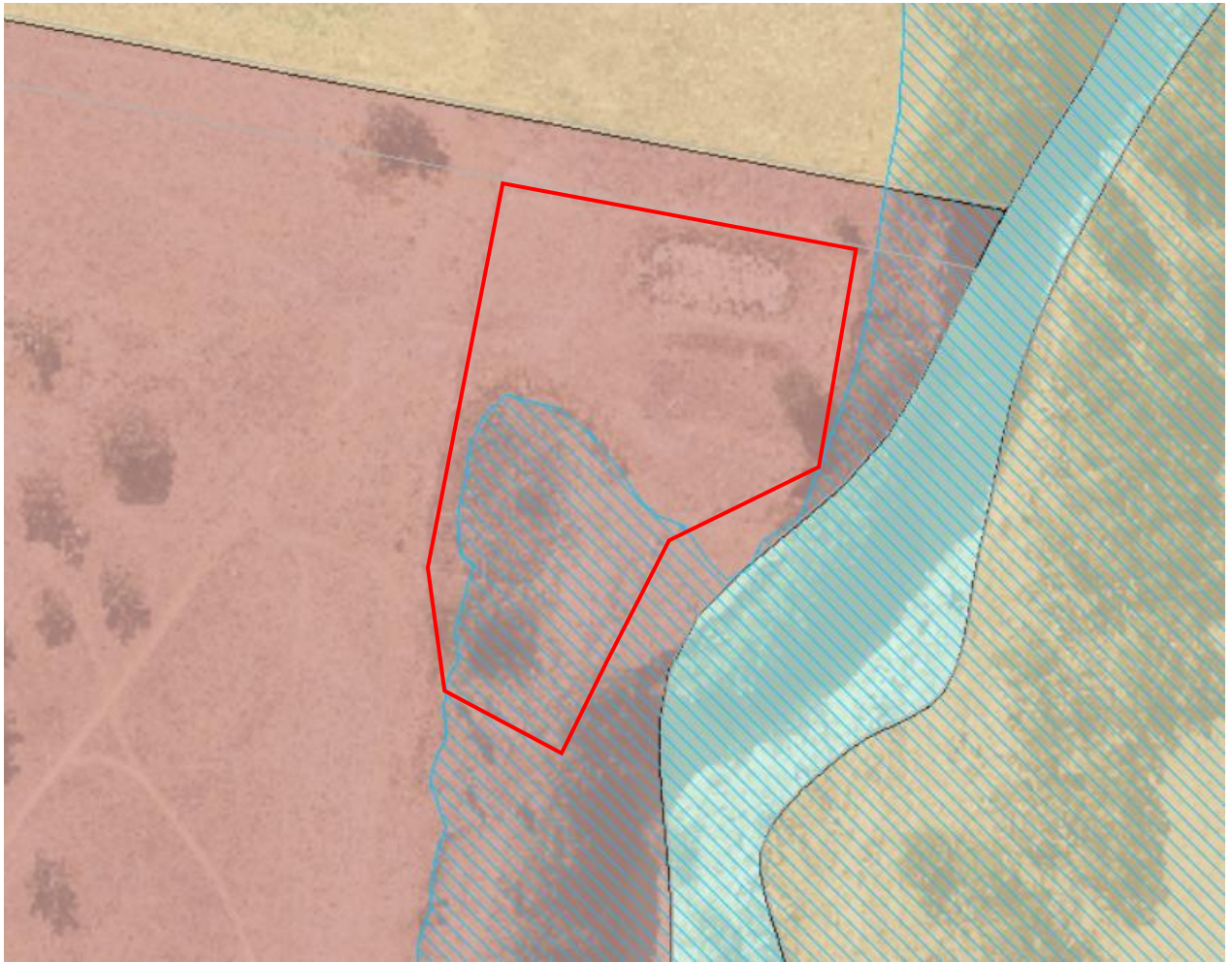
© Land and Property Information 2015 | Division of Resources & Energy | Department of Primary Industries NSW | Department of Primary Industries (Water) NSW | Office of Environment and Heritage NSW | Environment Protection Authority NSW | Department of Planning and Environment NSW | Geological Survey of NSW, 2016

Legend

-  NSW Bush Fire Prone Land
-  Buffer
-  Category 1
-  Category 2
-  Category 3

Dubbo Regional Council Flood Mapping- Extract

1 in 100 year ARI + 0.5 m freeboard level



Source: Dubbo Regional Council, 2020

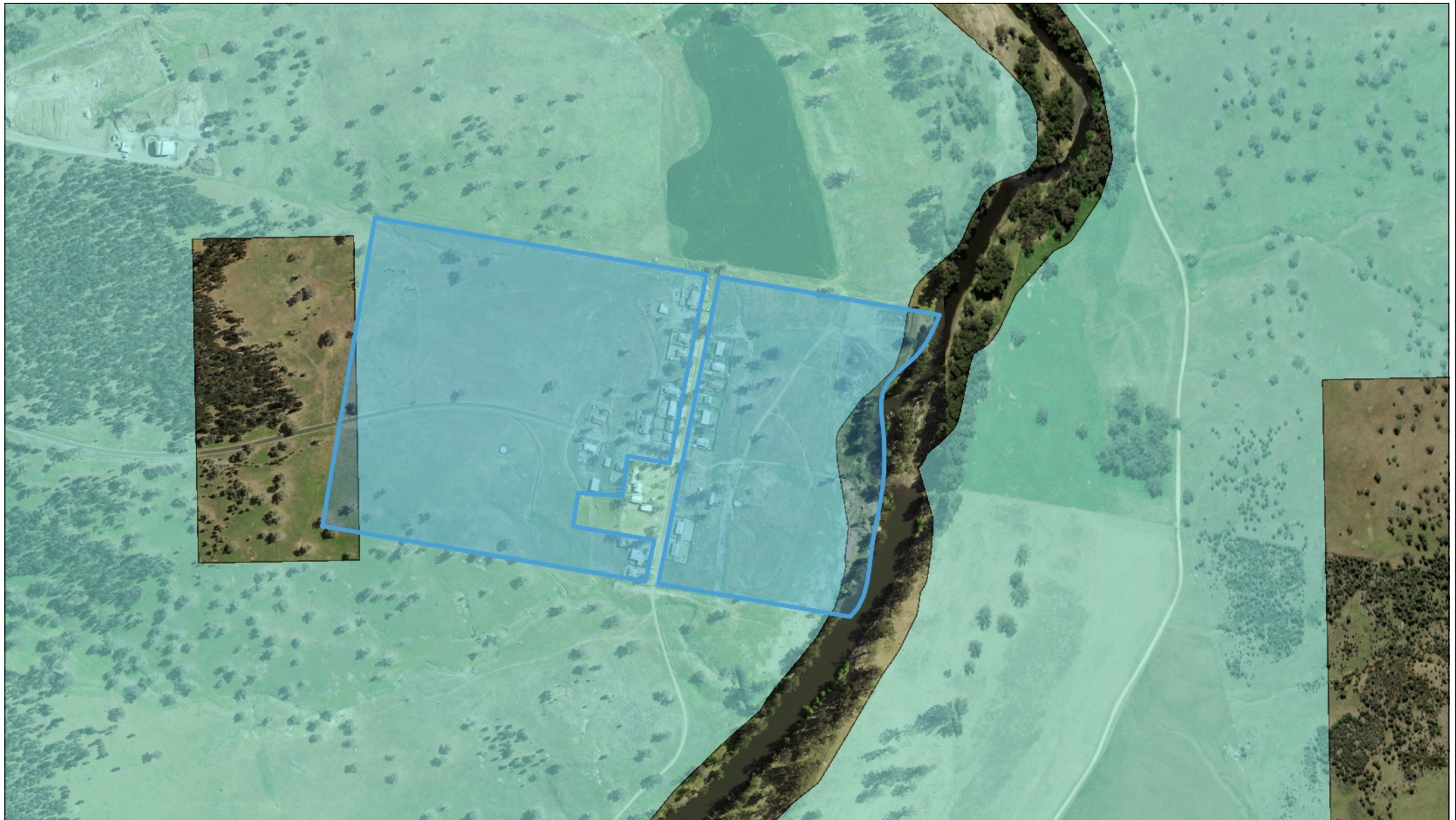


SEED

Sharing and Enabling Environmental Data

SEED Map groundwater vulnerability

Map may contain errors and omissions. Neither the NSW Government nor any other data custodian will accept liability for any loss, damage, cost or expenses incurred as a result of the use of, or reliance upon, the information in the map. Map copyright the State of NSW through the Office of Environment and Heritage.




0.5 0 0.24 0.5 Kilometers

Scale 1: 9,483.60

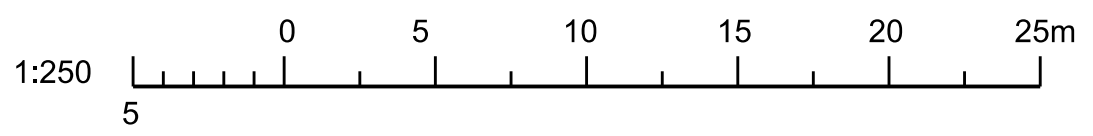
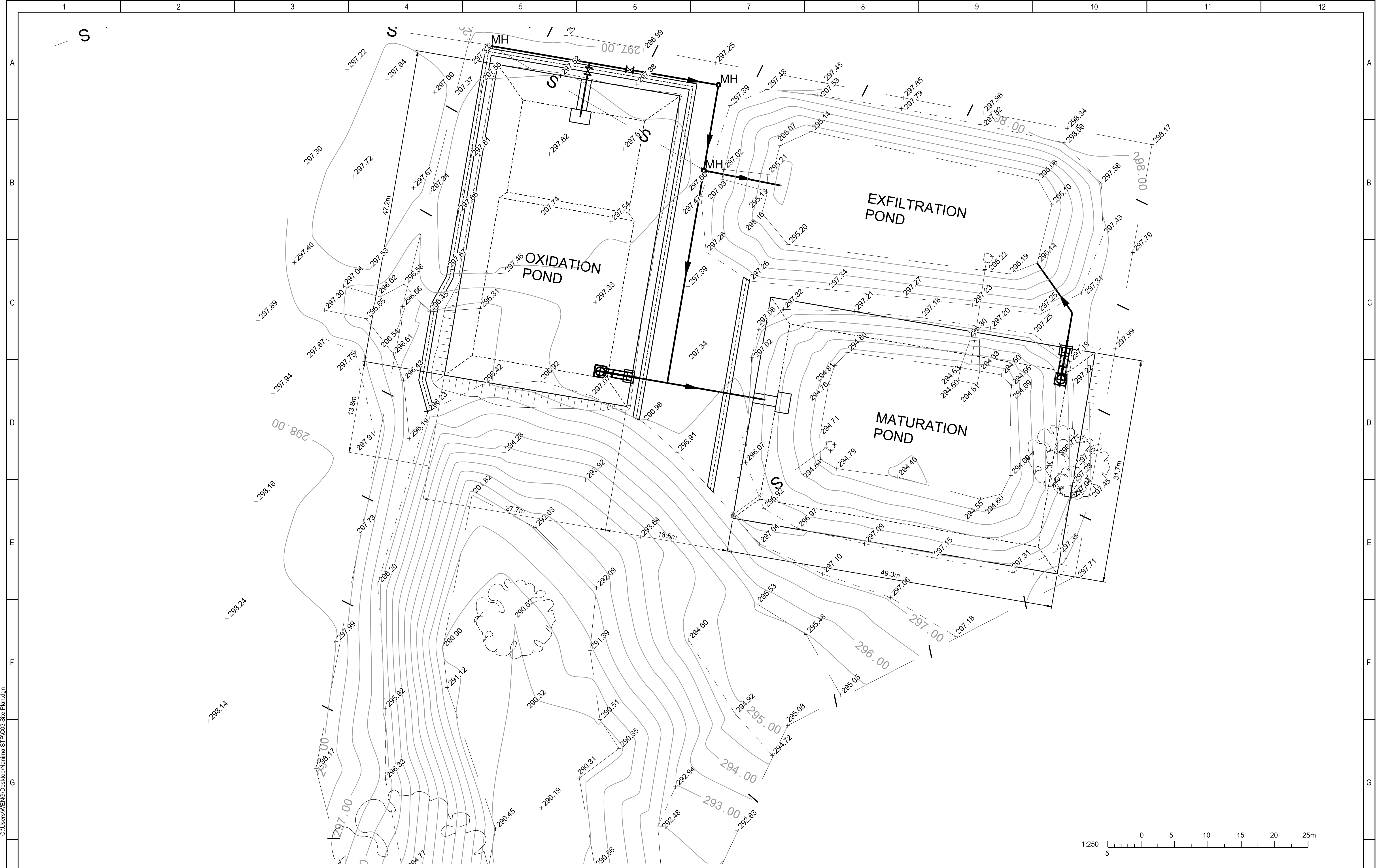
WGS_1984_Web_Mercator_Auxiliary_Sphere

Generated from SEED web map. Created 1:17 PM 24/9/2020
© Land and Property Information 2015 | Division of Resources & Energy | Department of Primary Industries NSW | Department of Primary Industries (Water) NSW | Office of Environment and Heritage NSW | Environment Protection Authority NSW | Department of Planning and Environment NSW | Geological Survey of NSW, 2016

Legend

 Groundwater Vulnerability

Appendix C Nanima Village STP Augmentation Layout Design



C:\Users\WENG\Desktop\Nanima STP\CD3 Site Plan.dgn 15/04/2020 3:57:55 PM

REV	DESCRIPTION	DATE
0	DRAFT	B.D.
AMENDMENT DETAILS		
1		XX.XX.20
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

Public Works Advisory, a division of the Department of Planning, Industry and Environment, shall not be liable or responsible for any loss or damage arising out of the conversion of any electronic document, data or program. The recipient or user of any electronic document, data or program is solely responsible for ascertaining its accuracy and its suitability for their purposes.

DRAFT



DESIGNED	
CHECKED	
DRAFTED	
CHECKED	
DIRECTOR	WS & WW

NANIMA ABORIGINAL RESERVE	
SITE PLAN	

PROJECT/CONTRACT No.	XXXXXX
SCALE @ A1	1:250
DRAWING No.	XXXXXX- C03
REV	



Public Works Advisory

4 Parramatta Square, 12 Darcy St, Parramatta NSW 2150
Locked Bag 5022, Parramatta NSW 2124
www.publicworksadvisory.nsw.gov.au

Document No. PWF-3006b Dec. 2018