STATEMENT OF ENVIRONMENTAL EFFECTS:

Upgrade of pump station

Palms Vineyards

Yelta, Victoria

February 2025

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Project number
31PALMV-CONS

Document status
Final

Date	Status/issue	Reason for revision	Reviewed by	Authorised by
20 February 2025	Version 2	Technical edit	K Luitjes	K Luitjes

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1 Introduction

This report has been prepared by Pinion Advisory for Palms Vineyards, to assess the environmental impacts of construction works of a pump upgrade at an existing pump station on the Murray River at Yelta, Victoria. The location is shown on the appended map (Appendix 1).

To comply with the regulatory framework in NSW, this Statement of Environmental Effects (SEE) describes the proposed works, the environmental values at the site, the potential impacts of the works, and the mitigation measures to minimise impacts.

1.1 BACKGOUND

The pump station is located on the Victorian bank of the Murray River (Figure 1), approximately 3km upstream from the Abbotsford Bridge, within Crown Allotment 16 of the Parish of Merbein. The allotment is part of the Murray River Reserve (Murray River Park), managed by Parks Victoria.

The existing pump station supplies irrigation water to a fully developed horticultural property located to the south on Crown Allotment 9, SPI 9H\PP3089, Lot 2, SPI2\PS522732 and Lot 2 SPI2\PS303156, all Parish of Merbein. The property address is 683 Wentworth Road, Yelta Vic 3505.

The property is used for production of table grapes. An ongoing, reliable water supply is essential for this high value perennial crop and the current pumping infrastructure is ageing, inadequate, and becoming unreliable.

Figure 1: The existing pump structures on Murray River at Yelta, showing switch room, private power pole and top end of rail structure

1.2 OBJECTIVES

The objective of this Statement of Environmental Effects (SEE) is to support a development application and an application for a NSW Crown Licence.

1.3 LEGISLATIVE FRAMEWORK

This report supports a development application to Wentworth Shire Council for construction works relating to new water supply infrastructure in NSW.

Relevant Federal and NSW Acts and Regulations that address environmental matters are discussed below.

Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth) requires an assessment of actions that are likely to impact on Matters of National Environmental Significance to determine if an EPBC referral is required.

Comment: This assessment will conclude that the impact of this development on Matters of National Environmental Significance is negligible and an EPBC referral is therefore not required.

Crown Lands Act 1989 requires landowner's consent for lodgement of a development application for works on Crown Land; and a Crown land licence under Section 45 for the use and occupation of Crown land.

Comment: This SEE will be attached to the relevant applications

Biodiversity Conservation Act 2016 - Section 7.3, Impact on threatened species, ecological communities, or their habitats.

Comment: This assessment will conclude that the impact of this development on NSW Threatened flora and fauna species and communities is not significant. Impacts on native vegetation and any offsets required will be addressed in Victoria.

Biodiversity Conservation Act 2016 – Part 6 Biodiversity Offset Scheme

The NSW Biodiversity Offset Scheme (BOS) applies to local development (assessed under Part 4 of the *Environmental Planning and Assessment Act 1979)* that triggers the BOS Threshold or is likely to significantly affect threatened species based on the test of significance in Section 7.3 of the *Biodiversity Conservation Act 2016*.

Comment: Although a small area of native vegetation will be removed on the high bank, this will be addressed in the Victorian approvals process. The NSW component of the construction works lies below the riverbank in the water. The assessment will conclude that the development will not significantly affect threatened species.

Fisheries Management Act 1994 – Part 7A Threatened species conservation, Impact on threatened aquatic species, threatened populations, or endangered ecological communities, or their habitat will need to be assessed.

Comment: The impact assessment for threatened aquatic species and the Lower Murray endangered aquatic ecological community are analysed via a Seven Part Test. The test concludes that the impact of this development on aquatic species and ecological communities will be negligible.

National Parks and Wildlife Act 1974 -Section 86 sets out several offences covering harm or desecration to an Aboriginal place or object and specifies penalties. Part 6 Division 2, Aboriginal Heritage Impact Permits, addresses assessment and consultation for specifying mitigation and contingency measures.

Comment: Cultural heritage impacts are briefly discussed in this report. A letter from the First People Millewa Mallee is appended (Appendix 7).

2 Land use and planning assessment

2.1 SURROUNDING LAND USE

The immediate surrounding land-use at the pump site in Victoria is characterised by passive recreational and conservation activities within the Murray River Reserve. There are at least two dozen houseboat mooring sites near the pump station, both upstream and downstream. There are also existing irrigation and domestic pumps located both upstream and downstream, that service neighbouring properties and dwellings. The closest houseboat is a few metres upstream of the existing pump (Figure 2). Downstream the nearest houseboat is 25m away.

Figure 2: Existing pump rail on sloping bank with the nearest upstream houseboat at rear, along with a corrugated iron fence near waterline, and a water supply tank higher up the bank.

A track is located south of the pump site that provides public access along the Murray River Reserve and to the moored houseboats.

There is a mix of residential and horticultural properties located along the southern boundary of the Murray River Reserve (Appendix 1). The closest dwelling in Victoria is 100m from the site.

On the NSW side of the river is an 87ha parcel of Crown land (Lot 50 DP807833) covered by riverine native vegetation.

2.2 WENTWORTH LEP

In the Wentworth Local Environmental Plan 2011, the land is zone RU1 while the river is zoned W1.

The Murray River is shown on the Natural Resource - Watercourse Map as a watercourse. On the Natural Resource Terrestrial Biodiversity Map, it is shown as having high biodiversity value (Wentworth LEP 2011).

The Natural Resource – Wetlands Map indicates the absence of wetlands in the near vicinity on the NSW side of the river

1 Objectives of zone W1 are:

- *To protect the ecological and scenic values of natural waterways.*
- *To prevent development that would have an adverse effect on the natural values of waterways in this zone.*
- *To provide for sustainable fishing industries and recreational fishing.*

2 Permitted without consent

Nil

3 Permitted with consent

…; Environmental protection works…. Water supply systems

4 Prohibited

…; Any other development not specified in item 2 or 3

Comment: As the proposed development is a water supply system, development consent is required for the portion of the structure in NSW.

Part 7 Additional local provisions

7.6 Development of river front areas

(1) The objectives of this clause are as follows—

(a) to support natural riverine processes, including the migration of the Murray River's channels,

(b) to protect and improve the bed and bank stability of the Murray River,

(c) to maintain and improve the water quality of the Murray River,

(d) to protect the amenity, scenic landscape values and cultural heritage of the Murray River and to protect public access to its riverine corridors,

(e) to conserve and protect the riverine corridors of the Murray River, including wildlife habitat.

(2) Despite any other provision of this Plan, development consent may only be granted to development on land in a river front area for the following purposes—

(b) the extension or alteration of an existing building that is wholly or partly in the river front area, but only if the extension or alteration is to be located no closer to the riverbank than the existing building,

(c) environmental protection works,

(d) extensive agriculture and intensive plant agriculture,

(3) Development consent must not be granted under subclause (2) unless the consent authority is satisfied of the following—

(a) that the appearance of the development, from both the Murray River and the river front area will be compatible with the surrounding area,

(b) that the development is not likely to cause environmental harm, including (but not limited to) any of the following—

(i) pollution or siltation of the Murray River,

(ii) any adverse effect on surrounding uses, riverine habitat, wetland areas or flora or fauna habitats,

(iii) any adverse effect on drainage patterns,

(c) that the development is likely to cause only minimal visual disturbance to the existing landscape,

(d) that continuous public access, and opportunities to provide continuous public access, along the river front and to the Murray River are not likely to be compromised,

(e) that any historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance of the land on which the development is to be carried out and of surrounding land is to be maintained.

7.7 Riparian land and Murray River and other waterways

(1) The objective of this clause is to protect and maintain the following—

(a) water quality within the Murray River and other watercourses,

(b) the stability of the bed and banks of the Murray River and other watercourses,

(c) aquatic riparian habitats,

(d) ecological processes within the Murray River and other watercourses and riparian areas.

(2) This clause applies to land—

(a) identified as "Watercourse" on the Natural Resource—Watercourse Map, and

(3) Before determining a development application to carry out development on land to which this clause applies, the consent authority must consider whether or not the development—

(a) is likely to cause any adverse impact on the following—

(i) the water quality and flows within a watercourse,

(ii) aquatic and riparian species, habitats and ecosystems,

(iii) the stability of the bed, shore and banks of a watercourse,

(iv) the free passage of fish and other aquatic organisms within or along a watercourse,

(v) any future rehabilitation of a watercourse and riparian areas, and

(b) will increase water extraction from a watercourse.

(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—

(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or

(b) if that impact cannot be avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

7.8 Additional Provisions – development in riverbed and banks of the Murray River

(1) The objectives of this clause are as follows—

(a) to manage and maintain the quality of water in the Murray River,

(b) to protect the environmental values, scenic amenity and cultural heritage of the Murray River,

(c) to protect the stability of the bed and banks of the Murray River,

(d) to limit the impact of structures in or near the Murray River on natural riverine processes and navigability of the River.

(2) This clause applies to land comprising the bed of the Murray River and up to the top of the bank of that River.

(3) Development consent must not be granted to any development on land to which this clause applies unless the consent authority is satisfied of the following—

(a) that the development is likely to contribute to achieving the objectives of the zone in which the land is located,

(b) that the development will not increase erosion,

(c) that the development is not likely to cause an adverse effect on riverine habitat or flora or fauna habitats,

(d) that the development will not cause an adverse effect on drainage or flow patterns.

(4) Development consent must not be granted for the erection of a structure on land to which this clause applies unless the consent authority is satisfied of the following—

(a) that the proposed structure will not be located on an outside bend of the Murray River,

(b) that the appearance of the proposed structure, from both the Murray River and any adjacent land, will be compatible with the surrounding area,

(5) This clause is in addition to clause 7.7 and prevails to the extent of any inconsistency with that clause.

Note:

Clause 7.7 sets out matters that must be considered when determining development applications relating to land on or near the Murray River and other watercourses.

Comment: To ensure the consent authority is satisfied that the requirements stated in this clause are met, an environmental impact assessment is required, i.e. this SEE. It is stressed that the proposed works and replacement is essential and urgent to maintaining vineyard health and production.

2.3 MILDURA PLANNING SCHEME

Under the Mildura Planning Scheme, the Murray River Reserve at this location is zoned as PCRZ (Public Conservation and Resource Zone).

The Murray River Reserve is covered by the Environmental Significance Overlay (ESO1).

The immediate area is covered by the Floodway Overlay (FO), as well as a Bushfire Management Overlay (BMO) and Bushfire Prone Area (BPA).

A 200m buffer extending from all waterways and wetlands are the designated 'Aboriginal cultural heritage sensitivity' areas.

The private land to the south is zoned as FZ (Farming Zone). Properties are medium sized, and the land use is irrigated horticulture. The distance from residential dwellings to the pump site is provided in Section 2.1, and further discussed in Section 5, sensitive receptors (Figure 3).

Figure 3: View from the river track looking south along new rising main route, nearest house is just visible, grape vines at rear.

Comment: The need for planning consent in Victoria under the Mildura Planning Scheme is triggered by the PCRZ, ESO and the FO, and by Section 52.17, which relates to removal of native vegetation.

3 Methodology

3.1 SITE ASSESSMENT

The initial site inspection was conducted on 12 March 2024 by Pinion Advisory (Stephen Erlandsen and Kym Luitjes), with Nadia Argiro and John Argiro (junior) representing Palms Vineyards. Another meeting was held on site on 8 January 2025 to mark out the work zone, discuss the history of the site, and determine the machinery to be used during construction. Attending the meeting were John Argiro (senior), Nadia Argiro, John Perry and assistant (the contractor), and an electrician (who will alter the power supply). Stephen Erlandsen and Mina Ivanov represented Pinion Advisory.

A site assessment was undertaken on 8 January 2025 by Stephen Erlandsen and Mina Ivanov. The primary objective of the site assessment was to evaluate the existing conditions present at the site for the purpose of preparing a *Siting and Design Guidelines Report* (for Vic) and a *Statement of Environmental Effects (*SEE) for NSW. Four polygons of native shrubs to be removed were marked out and assessed under the relevant Victorian guidelines.

The consultants have a combined total of 27 years' experience in environmental assessment for a wide range of developments, including water diversion infrastructure.

Senior consultant Stephen Erlandsen, the principal author of this report, has worked in the Mallee for a total of 41 years, based in Mildura initially with Victorian Government environmental agencies and later with Pinion Advisory. Mina Ivanov is an accredited native vegetation assessor in Victoria with six years' experience.

The SEE was prepared in accordance with Clause 5 of the *Environmental Planning and Assessment Act 1979* (EPA Act) and the requirements of the relevant local government and state government policies.

The site assessment methodology included a detailed review of the landscape features, land-use, infrastructure and services, vegetation, hydrology, soils, and wildlife. GIS mapping was used to identify any significant features of the site, such as impacted vegetation, existing infrastructure, services, or land uses.

An assessment was conducted to identify the flora species (including threatened species) and their quality. It also identified unavoidable losses of native vegetation and any other impacts.

3.2 CONSULTATION

Palms Vineyards representatives met with Parks Victoria (PV) on site prior to the first inspection with Pinion Advisory, to determine the process required by PV.

Palms Vineyards representatives also met with First Peoples of the Millewa Mallee on site to discuss the risk of potential impacts of the proposed works on Aboriginal cultural heritage.

3.3 DATABASE SEARCHES

Several references were sourced for information on the local area. Searches were conducted of relevant databases:

- Environmental Protection and Biodiversity Conservation Act Protected Matters.
- NSW BioNet Atlas.

4 Outline of proposed development

4.1 DESCRIPTION

The project will involve decommissioning and removal of the existing rail, pump and switch room, and the installation of a new pump station. The new pump station will consist of three pumps/electric motors mounted on a pontoon. The pivot point allowing the pumps to rise and fall with changes in water level, will be installed immediately downstream of the existing rail. The frame for the pivot point will be attached to vertical steel supports set in concrete in vertical bore holes in the upper section of the sloping bank.

The switch room will be mounted behind the pivot frame and in front of the existing concrete-lined pit (Figure 4). A platform will be mounted over the existing pit. A sub-surface conduit will replace the current overhead powerline which runs from an existing Powercor pole on the river track.

Design drawings (finalised November 2024) for the proposed pump station are appended (Appendix 6).

The existing access route from the river track will be used to access the site during construction and for ongoing monitoring and maintenance post-construction. The set-down area will be the cleared areas along the river track and the headland on the proponent's property south of the river track. It is noted that the pipeline to the property will be replaced by a 450mm diameter rising main as far as the Crown land/property boundary.

The changeover from the existing pumps to the new pumps must be seamless to ensure the water supply to the property is not disrupted.

Figure 4: Existing control sitting on concrete well (no longer used), view towards river and existing rail structure. Note poor quality River Cooba.

4.2 CONSTRUCTION METHOD

All demolition and construction will be done from the Victorian side. A barge will not be used.

Figure 5: Existing pump structure at centre viewed from river track, showing overhead power supply and pole and thin strips of shrub later to be removed each side.

The following steps will be taken to prepare the site (Figure 5) and build the pump station:

- Disconnect power supply and remove overhead line.
- Place steel posts and bunting to mark the edge of the work zone.
- Carefully remove native vegetation (small and medium shrubs) inside the bunting to enable safe access by heavy equipment.
- Remove all existing above ground structures for disposal off site, noting the concrete surround to the old well structure and decommissioned mainline to the property will remain in place.
- Six holes will be augured in upper sloping bank, with measures taken to ensure spoil does not move down the riverbank. The auger will be suspended from an excavator located on the cleared area on the high bank downstream of the well.

- A steel pole will be inserted in each auger hole which will be then filled with concrete. Spoil from the auguring will be used to level the parts of the cleared area on the high bank which are uneven.
- Install pivot point frame with manifold on the six vertical steel members.
- Install the pontoon arm and control room using a crane stationed on the existing access track
- Powercor to reposition their power pole 5m from its current position.
- Install new rising main to the property boundary in a trench dug by an excavator, ensuring good compaction.
- Switch room to mains power in a new sub-surface conduit from the new Powercor pole, ensuring a minimum of 1m cover, trench to be excavated with a backhoe.
- Clean up waste including leftover spoil, level disturbed soil to a smooth profile, Add a layer of gravel to ensure all-weather access to pump site.
- Test the system for operational effectiveness and leaks, address any issues.

Construction will involve the following equipment:

- excavator, fitted with bucket, or soil auger
- truck mounted telescopic crane
- backhoe
- concrete truck
- tray truck
- portable toilet
- rubbish skip
- portable generator
- motor vehicles.

5 Results of site assessment

5.1 LOCATION

The pump site is on the Victorian bank of the Murray River 3km upstream of the Abottsford Bridge (Appendix 1).

The position (GDA20/MGA Zone 54) of the pump site is:

Coordinates: 142.01886, -34.12555.

5.2 SENSITIVE RECEPTORS

The distance of the nearest residential dwelling in Victoria was covered in Section 2.1. There are no dwellings in the vicinity on the NSW side of the Murray River. Houseboats moorings are nearby, but houseboats and pumps have co-existed along that strecth of river bank for an extended time.

5.3 LAND TENURE

The NSW part of the pump station is on the sloping bank and water of the Murray River. Below the top of the high bank the authors have assumed the land is NSW Crown land, as the State border has not been accurately surveyed. The adjoining parcel of land in NSW is Lot 50 DP807833.

Figure 6: The river track looking west, pipeline crossing in foreground, another residential dwelling is quite close to the Murray River Park, Paschendale Avenue is just past power pole in far distance

The status of the land above the high bank in Victoria is the Murray River Reserve i.e. Crown Land. At this location, the Murray River Park is approximately 60m wide which includes the access track (Figure 6). The western side of the allotment abuts the end of road reserve of Paschendale Avenue. The Victorian Crown description is Crown Allotment 16 Sec G, Parish of Merbein, SPI 16~G\3089 (Council property number: not applicable).

5.4 GENERAL SITE DESCRIPTION

The pump site is in the Murray Basin Geological Province and Riverina Bioregion, Murray Scroll Belt Sub-region. The area is characterised by Quaternary fine-textured alluvial deposits with some modifications to the riverbank due to past construction and maintenance activities. The elevation (from LiDAR data) of the land at the pump site is approximately 36.7m AHD (Australian Height Datum). Wentworth Shire Council advised the surveyor who undertook the feature survey that the 1 in 100 year flood level is between 36.5m and 37m AHD.

Vegetation at this area consists of an overstorey of River Black Box woodland with River Cooba, and an understorey of common Salbush and Blubush species (Figure 6). Flora composition is documented in Section 5.9, as well as any weed species observed at this location.

Ambient noise levels are generally low apart from the hum from existing nearby pumps as well as occasional passing boats. The adjacent river track is used by local residents, and for recreation as well as those servicing and monitoring pumps.

Air quality at this location is good (apart from regional dust storms which occur periodically in some years).

Water quality analysis indicates river salinity is less than 200 EC with turbidity being observed occasionally. There is potential for blue-green algae outbreaks in summer months during low river flow periods. The surrounding riverbank appears stable.

5.5 WETLANDS OF INTERNATIONAL IMPORTANCE

A search of the EPBC Protected Matters (*Environmental Protection and Biodiversity Conservation Act 1999*) database (Appendix 2) revealed three Wetlands of International Importance (Ramsar) in the region, but more than 100km from the site:

- Banrock station wetland complex
- Riverland
- The Coorong and lakes Alexandrina and Albert wetland

The EPBC Protected Matters database search indicated there was no Nationally important wetland in the local area.

5.6 RESERVES

A search of the EPBC Protected Matters (*Environmental Protection and Biodiversity Conservation Act 1999*) database (Appendix 2) for State and Territory Reserve indicated one reserve:

- River Murray Reserve (Vic)

5.7 LISTED THREATENED ECOLOGICAL COMMUNITIES

A search of the EPBC Protected Matters (*Environmental Protection and Biodiversity Conservation Act 1999*) database (Appendix 2) indicated that one listed threatened community may be present in or near the study area, whose threatened catergory is endangered:

- Buloke Woodland of the Riverina and Murray-Darling Depression Bioregions (endangered).

5.8 ENDANGERED ECOLOGICAL COMMUNITIES

The Murray River is listed as an Endangered Ecological Community in New South Wales – Lower Murray River Aquatic Ecological Community under the *Fisheries Management Act 1994*. The implication of this is that there are offences for damaging the environment and controls to ensure that damage is avoided during development or use that impact on the ecology of river.

5.9 FAUNA

Terrestrial and avian fauna were not recorded during the site assessment.

5.10 THREATENED FAUNA

A search of the EPBC threatened species database using the Protected Matters Search Tool indicated the potential for 29 EPBC Act listed threatened species of fauna (Table 2). The search results are appended (Appendix 2).

A search of the Bionet Atlas of NSW Wildlife database indicated that 25 threatened species of terrestrial fauna (listed under the *Biodiversity Conservation Act 2016*) have been recorded in a 10km map tile incorporating the proposed development (Table 1). The search results are appended (Appendix 3). The search results include EPBC threatened aquatic species.

However, aquatic species listed in NSW under the *Fisheries Management Act 1994* were searched using the Fisheries Spatial Data Portal (NSW DPI, 2024a) and Threatened species lists (NSW DPI, 2024b). Combined results of searches for aquatic species are shown in Table 1. The habitat requirements for each threatened species have been compared with the characteristics of the site as "unsuitable", "may be suitable" or "suitable". For some threatened species the habitat may be suitable but that species no longer occurs along the lower Murray River.

Table 1: Results of database searches for threatened fauna

Scientific name	Common name	EPBC	NSW	Habitat
Birds				
Amytornis striatus howei	Murray Mallee Striated Grasswren	E	NL	Unsuitable, confined to areas dominated by *Triodia irritans*
Anseranas semipalmata	Magpie Goose	NL	V	Unlikely, now confined to tropical aquatic habitats
Aphelocephala leucopsis	Southern Whiteface	V	V NISR	Suitable but unlikely as has never been recorded in the area
Artamus cyanopterus cyanopterus	Dusky Woodswallow	NL	V	Suitable but unlikely as mostly on western slopes
Botaurus poiciloptilus	Australasian Bittern	E	E	Unsuitable, favours permanent freshwater wetlands with rushes
Burhinus grallarius	Bush Stone-curlew	NL	E	Unlikely, almost extinct in southeastern Australia

Calidris acuminata	Sharp-tailed Sandpiper	V	NL	Unsuitable
Cerionid variegatus	Pied Honeyeater	NL	V	Suitable
Calidris ferruginea	Curlew Sandpiper	CE	CE	Unsuitable
Circus assimilis	Spotted Harrier	NL	V	Suitable
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	NL	V	Unsuitable, eastern subspecies not found west of Wagga Wagga/Corowa
Epthianura albifrons	White-fronted Chat	NL	V	Suitable
Falco hypoleucos	Grey Falcon	V	NL	Suitable
Falco subniger	Black Falcon	NL	V	Suitable
Gallinago hardwickii	Latham's Snipe	V	V	Unsuitable (migratory species)
Grantiella picta	Painted Honeyeater	V	NL	May be suitable (nomadic species)
Hieraaetus morphnoides	Little Eagle	NL	V	Suitable
Lathamus discolor	Swift Parrot	CE	NL	Unsuitable
Leipoa ocellata	Malleefowl	V	NL	Unsuitable
Lophochroa leadbeateri leadbeateri	Major Mitchell's Cockatoo (eastern)	E	V	Unsuitable
Lophoictinia isura	Square-tailed Kite	NL	V	Suitable
Manorina melanotis	Black-eared Miner	E	NL	Unsuitable
Melanodryas cucullata cucullata	South-eastern Hooded Robin	E	E	Suitable
Neophema chrysostoma	Blue-winged Parrot	V	V	Suitable
Pachycephala inornata	Gilbert's Whistler	NL	V	Suitable
Pedionomus torquatus	Plains-wanderer	CE	NL	Unsuitable

Polytelis anthopeplus monarchoides	Regent Parrot (eastern)	V	E	Suitable (but outside of known breeding area)
Rostratula australis	Australian Painted Snipe	E	E	Unsuitable
Stagonopleura guttata	Diamond Firetail	V	V	Suitable
Tringa nebularia	Common Greenshank	E	NL	Unsuitable
Fish				
Bidyanus bidyanus	Silver Perch	E	V	Suitable
Craterocephalus fluviatilis	Murray Hardyhead	E	CE	Unsuitable, prefers brackish backwaters and wetlands
Euastacus armatus	Murray Crayfish	NL	V	Suitable
Galaxias rostratus	Flathead Galaxias	CE	CE	May be suitable, but now extinct below Colignan
Maccullochella macquariensis	Trout Cod	E	E	May be suitable, but not now occurring in lowland rivers
Maccullochella peelii	Murray Cod	V	NL	Suitable
Macquaria australasica	Macquarie Perch	E	E	May be suitable, but not now occurring in lowland rivers
Anphibeans				
Litoria raniformis	Growling Grass Frog	V	E	Suitable
Mammals				
Nyctophilus corbeni	Corben's Long-eared Bat	V	V	Unsuitable
Phascolarctos cinereus	Koala	E	E	May be suitable, but not occurring in far west NSW or NW Victoria
Reptiles				
Hemiaspis damelii	Grey Snake	E	E	May be suitable, but not occurring along the Murray River

EPBC = Species listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*: CE = critically endangered; E = endangered; V = vulnerable; NISR = not in search results
NSW = Species listed as threatened under the NSW *Biodiversity Conservation Act 2016* or *Fisheries Management Act 1994*: V = vulnerable; E = endangered; CE = Critically Endangered; X = Presumed Extinct
NISR = Not in Search Results, NSW conservation status listed in brackets
FSPD = Fisheries Spatial Data Portal (NSW DP1, 2024a)
TSL = Threatened Species Lists (NSW DP1, 2024b)

5.11 FLORA

Native flora identified in the area surrounding the pump site are shown in Table 2. None of the species present are listed as threatened under the relevant NSW or national legislation. The dominant species (Black Box, River Coobah, and Old Man Saltbush) occur in many riverine or non-riverine vegetation communities in the region (Figure 7). The Murray River Park in this location has aproximately two dozen licenced houseboat moorings. This landuse has lead to extensive modifcation of the riverbank and vegetatation over many years. Examples include clearing for car parking and pathways, landscaping, gardens, levelling, installation of retaining walls, permanent picnic tables, fences, and terracing.

Figure 7: The native vegetation in the surrounding area is dominated by Black Box m River Cooba and Old Man Saltbush. A thin strip of shrubs to removed is identified by one of several metal stakes

In addition for the Black Box, there are occasional River Red Gum low on the sloping bank, with the nearest two being 15m upstream and downstream of the existing pump.

Table 2: Native flora observed in and near the pump site

Scientific name	Common name	Frequency	EPBC	NSW
Acacia stenophylla	River Cooba	Common on sloping bank, often dead or with poor canopy health.	NL	NL
Alternanthera nodiflora	Common Joyweed	A few on sloping bank.	NL	NL
Atriplex nummularia	Old Man Saltbush	Commonest shrub on river side of access track.	NL	NL

Einadia nutans subsp. *nutans*	Nodding Saltbush	A few amongst the Old Man Saltbush.	NL	NL
Enchylaena tomentosa var. *tomentosa*	Ruby Saltbush	A few amongst the Old Man Saltbush.	NL	NL
Eucalyptus camaldulensis	River Red Gum	Both sides of pump site but approx. 15m from it.	NL	NL
Eucalyptus largiflorens	Black Box	Common in the area, but reduction around houseboat sites, construction impacts on Tree Protection Zones of 4 trees.	NL	NL
Exocarpus aphyllus	Leafless Ballart	One plant near the existing well	NL	NL
Maireana brevifolia	Black Bluebush	A few amongst the Old Man Saltbush	NL	NL
Rhagodia spinescens	Hedge Saltbush	A few amongst the Old Man Saltbush	NL	NL
Stemodia florulenta	Bluerod	A few on sloping bank	NL	NL

EPBC = Species listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*: CE = critically endangered; E = endangered; V = vulnerable; NISR = not in search results
NSW = Species listed as threatened under the NSW *Biodiversity Conservation Act 2016*
NISR = Not in Search Results, NSW conservation status listed in brackets.

5.12 THREATENED FLORA

A search of the EPBC threatened species database using the Protected Matters Search Tool revealed the potential for five EPBC listed threatened species of flora (Table 3). The full search results are appended (Appendix 2). A search of the NSW Bionet Atlas indicated no threatened flora species (listed under the *Biodiversity Conservation Act 2016*) have been recorded in a 10km map tile. The search results are appended (Appendix 3). Combined results of both searches are shown in Table 3. The habitat requirement for each threatened species has been compared with the characteristics of the site as "unsuitable", "may be suitable", or "suitable". In the above assessment no flora species was identified as potentially having suitable habitat at the pump site. This is further discussed in Section 6.6.

Table 3: Results of database searches for threatened flora

Scientific name	Common name	EPBC	NSW	Habitat
Lepidium monoplocoides	Winged Pepper-cress	E	E, NISR	Unsuitable
Pterostylis xerophila	Desert Greenhood	V	NL	Unsuitable
Solanum karsense	Menindee Nightshade	V	V, NISR	Unsuitable
Swainsona murrayana	Slender Darling-pea	V	V, NISR	Unsuitable
Swainsona pyrophila	Yellow Swainson-pea	V	V, NISR	Unsuitable

EPBC = Species listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*: CE = critically endangered; E = endangered; V = vulnerable; NISR = not in search results
NSW = Species listed as threatened under the NSW *Biodiversity Conservation Act 2016*
NISR = Not in Search Results

5.13 WEEDS

The weeds present included Wiry Noon-flower (*Mesembryanthemum granulicaule*) at low density and a few Common Heliotrope (*Heliotropium europeum*) and Wards Weed (*Carrichtera annua*). None are *Weeds of National Significance*, nor listed in Victoria or the Mallee as threats.

5.14 HABITAT

There was no visible logs or woody debris in the river near the pump site. There was also no aquatic vegetation visible in the vicinity of the pump site. The overstorey trees were too young to have developed tree hollows and no nests were observed.

6 Environmental impacts

6.1 WETLANDS OF INTERNATIONAL IMPORTANCE

The proposed development is hundreds of river kilometres upstream of Banrock Station, Coorong and Lakes Alexandrina and Albert, and the Riverland wetlands.

Due to the minimal and short-term impact of construction on the water quality, flows and aquatic species in Murray River, the development will have no impact on Wetlands of International Importance (RAMSAR). Therefore, this development will not require an EPBC Referral for causing significant impacts on these assets.

6.2 RESERVES

The Murray River Park at the location of the pump site is approximately 60m wide including an access track which is approximately 10m wide. The small footprint of the proposed development is in a heavily disturbed area due to the presence of more than two dozen houseboat mooring sites. Overall, compared to the widespread clearing and landscaping by houseboat owners (Figure 8) in this section of the Murray River Park, this development will have no significant impact on the reserve.

Figure 8: The nearest houseboat moored on the downstream site of the pump site showing an old levee bank, presumed to diver stormwater away from their landscaping.

The Crown land on the opposite side of the Murray River (NSW) will not be impacted by this development. Therefore, this development will not require an EPBC Referral for causing significant impacts on these assets.

6.3 THREATENED ECOLOGICAL COMMUNITIES

Buloke Woodland of the Riverina and Murray-Darling Depression Bioregions is not present in or near the study area. There will be no impact on threatened ecological communities. An EPBC Referral for impacts on these assets is not required.

6.4 ENDANGERED ECOLOGICAL COMMUNITIES

The proposed development of the Murray River requires a review of potential impacts on the ecology of the river, pursuant to the Seven Part Test under the *Fisheries Management Act 1994*, which is in Appendix 5. This test is applied to assess the impact of a development on the Lower Murray River Aquatic Ecological Community, which is listed as an Endangered Ecological Community (EEC) in New South Wales.

The Seven Part Test reveals that the development will have no adverse impacts on this EEC. Water quality will remain unchanged in the long-term, and no changes or diversions of natural river flows, topography, woody debris, logs, or trees will occur during construction. The only impact will be limited to removal of a thin band of shrubs on the high bank and the potential trimming of one overhanging tree limb to enable machinery access and operation. Given the findings of the Seven Part Test, no threatened species impact statement is necessary.

6.5 FAUNA

There will be little to no impact on terrestrial fauna at the pump site. Impacts on terrestrial fauna habitat will be restricted to the minor trimming of tree limbs in Victoria to a minimum extent and removal of narrow bands of shrubs to allow machinery access and operation during construction. The shrubs to be removed provide very little habitat value. Surrounding habitat beyond the work zone will not be impacted.

The operation of a crane and excavator along with vehicles and workers will be a minor disruption to birds and reptiles as the works will be done in winter. However, the direct impact will be negligible. No overstorey trees will be removed; no tree limbs containing hollows will be removed; and no dead trees or logs will be moved or destroyed. No bird's nests will be destroyed. As the nearest habitat trees are outside the work zone, the activity is unlikely to impact on avian fauna particularly given the short duration of construction and minimal disturbance of habitat.

There will be no piles driven into the riverbed and no logs will be moved or destroyed. Therefore, the impact on aquatic habitat will be negligible and of short duration. The entrance to pump suctions will be protected by mesh to prevent entry of vegetative matter and aquatic fauna.

The works will have no impact on surrounding habitat outside of the work zone.

6.6 THREATENED FAUNA

An *Assessment of Significance* (Five Part Test) was conducted for 14 threatened terrestrial fauna species for which the habitat was suitable or may be suitable at the pump site. Those species no longer occurring along the lower Murray River where habitat may be suitable have been excluded from the Five Part Test. The assessment is appended (Appendix 4). The assessment covers both EPBC listed threatened species, and NSW threatened species. The test was done on 13 bird species and one frog. The assessment concluded that the proposed development will not have a significant impact on threatened terrestrial fauna.

Therefore, an EPBC Referral is not required for any threatened terrestrial fauna. A Threatened Species Impact Statement is not required for any NSW threatened terrestrial fauna.

Of the threatened species revealed in the searches, six were aquatic species, which were listed either under EPBC Protected Matters Search Tool search or under the *Fisheries Management Act 1994*. The latter were identified using Fisheries Spatial Data Portal (NSW DPI, 2024a) and Threatened species lists (NSW DPI, 2024b). Therefore, an Assessment of Significance (Seven Part Test) has been conducted for three of these aquatic species, with the assessment appended (Appendix 5). The assessment covers both EPBC listed threatened species, and NSW threatened species. The assessment concluded that the proposed development will not have a significant impact on threatened aquatic fauna.

Therefore, an EPBC Referral is not required for any threatened aquatic fauna. A Threatened Species Impact Statement is not required for any NSW threatened aquatic fauna.

6.7 FLORA

The impacts on native flora at the pump site are expected to be minimal, limited to small areas of understorey shrubs.

Four Black Box near the site will be assumed losses due to activities in more than 10% of their Tree Protection Zone. There are no understorey plants in New South Wales (below the top of the high bank) to be removed.

The construction of the pump site will have no negative impact on the surrounding vegetation. Vehicles, equipment, and materials will remain within the areas defined by bunting during construction.

6.8 THREATENED FLORA

As suitable habitat was not identified for any threatened flora from the database searches, an Assessment of Significance (Five Part Test) was not conducted, hence a NSW Threatened Species Impact Statement or an EPBC Referral is not required.

6.9 AIR QUALITY

It is anticipated that the level of dust and gaseous emissions generated during construction of the pump site will be low. Exhaust fumes will be emitted during construction, but this will not impact on ambient or local air quality, provided controls are observed by the contractor.

At the pump site, dust from vehicles and plant moving along the access track will be negligible due to the low speed of vehicles. The compacted soil surface will not easily generate dust emissions. If required, a water cart will apply water to heavily trafficked areas as an additional dust suppression measure to ensure that impacts to the closest residential dwelling are minimised.

Construction will run from no earlier than 7am and no later than 6pm for several months but will not be continuous over that period. Controls implemented during construction will ensure local sensitive receptors will not be impacted upon by any short-term reduction in air quality during construction.

6.10 NOISE

Construction of the pump site will include drilling, installation of the steel framework and pumps, as well as underboring for rising mains and trenching for conduits. Noise

emissions will be generated by an excavator, hydraulic pile driver, concrete and equipment delivery, telescopic crane and power generator. However, the installation of the rest of the infrastructure will be a relatively low-noise operation. The operation of the pumps will generate negligible noise and will not exceed the current noise levels of the existing pump. Residential dwellings near the site will not be exposed to intrusive noise levels. Construction will take place between 7am and 6pm for a period of several months.

6.11 VISUAL AMENITY

The proposed development is projected to have no negative impact on the aesthetic of the area. The pump and its associated infrastructure are close to the access track and can be easily observed by passing traffic. However, it is no different from the existing structure and many other pumps along the river that are used to support horticultural production. Therefore, the pump and its components are in line with the purpose of the area and are an appropriate addition to the local and surrounding land use. However, the structure will be visible from the river.

6.12 WATER QUALITY AND HYDROLOGY

As stated in Section 5.4, the impact on water quality will be negligible during works and nil in the long term. The development will not change or divert natural river flows or change the frequency or extent of flooding. The topography of the river and the riparian land adjoining the river will not be altered. As the works will occur on land along the river, controls and mitigation measures will be in place to protect water quality from unforeseen events such as storm water runoff and oil spills.

6.13 FLOODING

All water-sensitive equipment will be installed at the required level above the estimated 1 in 100-year flood level for this location The floor level of the new switch room will be at 36.5m AHD, while the highest elevation of the natural surface is 35.6m AHD. Pool level is at 30.7m AHD. As the main part of the pump infrastructure is floating on the surface there will be little impact on flood flows in the river. The pump station will not divert flood flows, reduce flood storage, increase flooding or cause a high river to impact on other infrastructure. As the rising main is below the ground, it will not affect flood flows.

6.14 RIVERBANK STABILITY

By removing infrastructure from the sloping bank, the upgrade will restore stability of the riverbank and not cause erosion. The profile and integrity of the area will be improved as a result.

6.15 TRAFFIC

The development will generate a small increase in traffic along the access track to the pump site for a short period during construction, with no significant impact. In the longer term there will be no increase in traffic. As barge will not be used in construction there will be no traffic increase on the Murray River.

6.16 NAVIGATION

The finished pontoon structure will have a similar footprint on land but will reach further into the river than the current structure, creating a slight increase in navigation hazard. Reflectors, navigation marks and signage will be mounted on the upstream and downstream sides of the structure as per the relevant Maritime NSW regulations.

7 Social and economic impacts

The upgrade of an existing pump station will enable a highly productive horticultural property to operate with an assured water supply. The proposed works will provide income to suppliers of materials and services and local contractors.

This development will ensure ongoing employment and income to the local community thus stimulate economic activity.

The construction work will not change the appearance or aesthetics at the local landscape level. The upgrade and stabilisation work will not change the aesthetics of the area. It is not out of character due the several other existing pump stations nearby and serious modification to the landscape near each houseboat mooring site.

The access track will not be closed routinely during construction. However, during replacement of the sub-surface rising main and powerline, it will be closed on two separate occasions for part of the day each time (Figure 9).

Figure 9: The access track (looking east) will only be closed for up to two days during installation of pipe and power supply, overhead powerline (Powercor) visible.

8 Site Environmental Management Plan

8.1 PRE-CONSTRUCTION

Pre-construction activities for this project include the following:

- The pump site has been surveyed, engineering design drawings completed with RLs shown.
- Perimeter of work zone has been marked with metal stakes.
- Site Environment Management Plan (this section).
- Work method statements for specific parts of construction (done by contractor).
- Erection of bunting to align with steel stakes which are already in place, followed by removal of the shrubs in the work zone and lopping of one overhanging tree limb.

Permits and approvals will be received prior to commencement and stakeholder notifications undertaken, including NSW Waterways.

A portable toilet will be located in the work zone at all times during construction and serviced as required.

All site personnel will undergo site inductions for job safety and environmental management, the latter to be supplied by Parks Victoria.

8.2 CONSTRUCTION

8.2.1 Weeds

Weed hygiene of equipment will be observed; machinery will be cleaned prior to arrival on site. Only approved fill material will be imported to the site.

8.2.2 Work zone

The work zone is shown on the appended map (Appendix 1).

Warning signs will be erected on both approaches of the river track during construction.

8.2.3 Fire protection

It is intended that construction works relating to this development will occur in the off season for fire risk, while noting that the overall fire risk is low. However, some basic rules will be in place. All vehicles and plant will be fitted with suitable fire extinguishers. The contractor's team will have training in fire suppression.

Fire regulations will be adhered to, and controls will be put in place during the fire season and for Total Fire Ban days. Fire prevention and suppression will be discussed at induction at the commencement of work. The site supervisor will liaise with the Victorian Country Fire Authority as to the level of activity on high fire-risk days. A portable pump and fire hose will be on hand at the pump site to draw water from the river in case of fire.

Exhaust systems of vehicle, plant and small motors will be maintained to design specifications to minimise the risk of starting a fire.

The site supervisor will be provided with contact details of the nearest station for the Victorian Country Fire Authority.

8.2.4 Waste management

There will be negligible waste generated during this project. However, to mitigate waste at the construction site, such as off-cuts, wrapping and food/drink containers, a small rubbish skip will be placed onsite. The site supervisor will ensure that the skip is emptied as required. All waste will be taken off site for disposal to a Council landfill. Any surplus materials (including concrete overspill) will be disposed of appropriately off-site on completion of construction works.

8.2.5 Erosion and sediment control

After the permitted removal of shrubs, the initial phase of construction will involve auguring of six holes on the sloping bank. This will be followed by levelling of work zone to enable safe operations. Care will be taken to ensure that loose material or lumps of concrete on the sloping bank do not fall into the river. Silt fences and or hay bales will be installed across the slope to avoid impacts on the river (Figure 10).

Figure 10: The existing structure to be removed includes old concrete footings. Measures to ensure no debris rolls downslope to the river.

Excess spoil after levelling the work zone will be removed from the site promptly and not allowed to move down the sloping bank. If the site becomes boggy due to prolonged rainfall, Parks Victoria must grant approval before works can resume.

8.2.6 Noise

Measures to mitigate the effects of noise include:

- Limiting work on site to between the hours of 7am and 6pm.

- Only modern plant, vehicles and equipment will be used on the project, serviced and maintained to manufacturers' specifications.

8.2.7 Air quality

Measures to mitigate the effects on air quality include:

- Only modern plant, vehicles and equipment will be used.
- Plant will be serviced and maintained to manufacturers' specifications.
- Trucks both inwards and outward carting loose material will have loads covered.
- Water carts will apply water on heavily trafficked areas and other high-risk areas to reduce dust emissions when required.

8.2.8 Water quality

Care will be taken to ensure no hazardous material, including fuels and lubricants or other liquids or solids impact on the ecology or water quality of the Murray River during construction. It is expected that refuelling of heavy machinery will not occur on site. If a spill occurs (e.g. a burst hydraulic hose), an emergency response plan will be followed, and the Environment Protection Authority in both States notified as required in the respective regulations. A spill kit will be kept on hand during works.

8.2.9 Vegetation management

At the pump site care will be taken to avoid damage to branches and trunks of trees that are off site during operation of heavy equipment. For the branch to be lopped, a chainsaw must be used, following the three-cut method. The woody debris from any lopping will be placed amongst native vegetation nearby to provide habitat.

8.2.10 Compliance with waterway management

On completion of construction the pontoon structure in the river will be suitably fitted with the appropriate reflective markers on both upstream and downstream sides.

8.2.11 Wildlife management

A wide range of wildlife occurs in the local area and may visit, pass through, or reside in the construction zone. Ideally work will not be done in spring when the greatest risk of disturbing wildlife while breeding occurs, and reptiles are most active. During occupation of the site for construction, vigilance will be maintained for any displaced or injured wildlife. Any such wildlife will be removed by a qualified wildlife carer who will be engaged to be on standby during this project. Any excavations that remain open overnight will be checked for trapped wildlife before work commences next morning. Openings of any installed pipes or conduits will be sealed until they are fully connected. Pipes and conduits taken from a stockpile will be checked for wildlife prior to installation.

8.3 SITE RESTORATION AND REHABILITATION

With the exception of the shrubs that will be removed, the site will be returned to its original condition on completion of the works and all rubbish, spoil and surplus materials removed. On completion of construction works, trenches and pits will be well compacted ensuring the finished level is similar to the previous natural surface profile at the site.

The access track will be returned to original condition, noting that gravel will be applied to the access track between the river track and pumps to enable all-weather ongoing access. No revegetation is required.

9 Summary

The construction of an upgraded pump station at Yelta on the Murray River by Palms Vineyards will provide substantial economic and social benefits to the community. The existing structure, a fixed rail mounted pump and switch room will be removed. A new pontoon structure and switch room and elevated platform will be installed 2m downstream of the current footprint. A new rising main will be installed to the nearby property and the current overhead power supply will be replaced with a subsurface line.

Six steel support will be installed on the upper sloping bank in augured holes, which will be filled with concrete. They will support a frame with the swivel point for attachment of a pontoon structure, and the switch room.

An environmental assessment indicated that provided the environmental management plan is followed, the proposed development will not have a significant impact on the environment. Some shrubs will be removed each side of the existing access.

There will be no native vegetation impacts in NSW. The development will not affect threatened species or ecological communities of Aboriginal cultural heritage. Therefore, *Threatened Species Impact Statements* or an EPBC Referral are not required.

The pump station is readily accessed from the adjacent track and adjoins existing mains power supply.

The construction works will have no significant impact on the aquatic and terrestrial environments and other sensitive receptors.

Construction is aimed to occur in winter 2025 to ensure that supply of water to an established table grape property is assured by the following irrigation season which starts in spring.

10 References

Department of Primary Industries (DPI) 2024a, Fisheries Spatial Data Portal, viewed 14 November 2024

https://www.dpi.nsw.gov.au/about-us/research-development/spatial-data-portal

Department of Primary Industries (DPI) 2024b, Listed threatened species, populations, ecological communities and key threatening processes, viewed 14 November 2024

https://www.dpi.nsw.gov.au/fishing/species-protection/what-current

NSW Department of Planning and Environment 2020, Threatened species biodiversity profile search, viewed July 2023 (2020c)

https://www.environment.nsw.gov.au/threatenedspeciesapp/

Appendix 1 Map of proposed development

Murray River

New South Wales

Victoria

RIVER TRACK

PASCHENDALE AVENUE

SAWMILL ROAD

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pinion

https://www.pinionadvisory.com

Palm Vineyards

Crown Allotment 16,
Parish of Merbein
Yelta, Victoria 3505

Date: 28/01/2025 Job reference: 31PALMV-CONS Drafter: NF

Spatial grid datum and projection: GDA2020 MGA Zone 54

Main Map Imagery: Nearmap (16 November 2024)
Inset Map Imagery: Vicmap, Esri, HERE, Garmin, NGA, USGS

While every effort has been made to ensure map accuracy, Pinion Advisory takes no responsibility for the spatial accuracy of information displayed on this map.

Legend

- Construction Zone
- Cadastre

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1:2,000 @ A3

Appendix 2 EPBC Protected Matters search results

Australian Government
Department of Climate Change, Energy, the Environment and Water

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. Please see the caveat for interpretation of information provided here.

Report created: 14-Nov-2024

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment 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 (Ramsar	3
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	34
Listed Migratory Species:	8

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 https://www.dcceew.gov.au/parks-heritage/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 Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	4
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)	[Resource Information]
Ramsar Site Name	Proximity
Banrock station wetland complex	150 - 200km upstream from Ramsar site
Riverland	50 - 100km upstream from Ramsar site
The coorong, and lakes alexandrina and albert wetland	200 - 300km upstream from Ramsar site

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.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	Endangered	Community may occur within area

Listed Threatened Species		[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Amytornis striatus howei		
Murray Mallee Striated Grasswren, Striated Grasswren (sandplain) [91648]	Endangered	Species or species habitat may occur within area
Aphelocephala leucopsis		
Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area
Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Lophochroa leadbeateri leadbeateri Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo, Pink Cockatoo (eastern) [82926]	Endangered	Species or species habitat known to occur within area
Manorina melanotis Black-eared Miner [449]	Endangered	Species or species habitat may occur within area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area
Polytelis anthopeplus monarchoides Regent Parrot (eastern) [59612]	Vulnerable	Breeding likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
FISH		
Bidyanus bidyanus Silver Perch, Bidyan [76155]	Endangered	Species or species habitat likely to occur within area
Craterocephalus fluviatilis Murray Hardyhead [56791]	Endangered	Species or species habitat likely to occur within area
Galaxias rostratus Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat likely to 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
FROG		

Scientific Name	Threatened Category	Presence Text
Litoria raniformis		
Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Nyctophilus corbeni		
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to 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]	Endangered	Species or species habitat may occur within area
PLANT		
Lepidium monoplocoides		
Winged Pepper-cress [9190]	Endangered	Species or species habitat may occur within area
Pterostylis xerophila		
Desert Greenhood [7997]	Vulnerable	Species or species habitat may occur within area
Solanum karsense		
Menindee Nightshade [7776]	Vulnerable	Species or species habitat may occur within area
Swainsona murrayana		
Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat may occur within area
Swainsona pyrophila		
Yellow Swainson-pea [56344]	Vulnerable	Species or species habitat may occur within area
REPTILE		
Hemiaspis damelii		
Grey Snake [1179]	Endangered	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Migratory Terrestrial Species		
Motacilla flava Yellow Wagtail [644]		Species or species habitat may 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]	Vulnerable	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]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
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 overfly marine area

Scientific Name	Threatened Category	Presence Text
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
River Murray Reserve	Natural Features Reserve	VIC

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Great Darling Anabranch - pipeline construction and environmental water flow ma	2004/1319	Controlled Action	Post-Approval
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Not controlled action (particular manner)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and 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

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

Where little information is available for a 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 detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

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.

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Appendix 3 NSW BioNet Atlas search results

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. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) Entities in selected area [North: -34.08 West: 141.97 East: 142.07 South: -34.18] returned a total of 104 records of 19 species.

Report generated on 20/02/2025 8:54 AM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Aves	Anseranatidae	0199	*Anseranas semipalmata*		Magpie Goose	V,P		1	
Animalia	Aves	Ardeidae	0197	*Botaurus poiciloptilus*		Australasian Bittern	E1,P	E	13	
Animalia	Aves	Accipitridae	0218	*Circus assimilis*		Spotted Harrier	V,P		5	
Animalia	Aves	Accipitridae	0225	*Hieraaetus morphnoides*		Little Eagle	V,P		4	
Animalia	Aves	Accipitridae	0230	^^*Lophoictinia isura*		Square-tailed Kite	V,P,3		1	
Animalia	Aves	Falconidae	0238	*Falco subniger*		Black Falcon	V,P		1	
Animalia	Aves	Burhinidae	0174	*Burhinus grallarius*		Bush Stone-curlew	E1,P		2	
Animalia	Aves	Scolopacidae	0168	*Gallinago hardwickii*		Latham's Snipe	V,P	V,J,K	1	
Animalia	Aves	Cacatuidae	0270	^*Lophochroa leadbeateri*		Pink Cockatoo	V,P,2	E	7	
Animalia	Aves	Psittacidae	0259	^^*Glossopsitta porphyrocephala*		Purple-crowned Lorikeet	V,P,3		1	
Animalia	Aves	Psittacidae	0306	*Neophema chrysostoma*		Blue-winged Parrot	V,P	V	1	
Animalia	Aves	Climacteridae	8127	*Climacteris picumnus victoriae*		Brown Treecreeper (eastern subspecies)	V,P	V	2	
Animalia	Aves	Acanthizidae	0466	*Aphelocephala leucopsis*		Southern Whiteface	V,P	V	12	
Animalia	Aves	Meliphagidae	0602	*Certhionyx variegatus*		Pied Honeyeater	V,P		4	
Animalia	Aves	Meliphagidae	0448	*Epthianura albifrons*		White-fronted Chat	V,P		7	
Animalia	Aves	Meliphagidae	0598	*Grantiella picta*		Painted Honeyeater	V,P	V	3	
Animalia	Aves	Pachycephalidae	0403	*Pachycephala inornata*		Gilbert's Whistler	V,P		4	
Animalia	Aves	Artamidae	8519	*Artamus cyanopterus cyanopterus*		Dusky Woodswallow	V,P		16	
Animalia	Aves	Petroicidae	8367	*Melanodryas cucullata cucullata*		South-eastern Hooded Robin	E1,P	E	19	

Appendix 4 Assessment of significance (Five part test)

Five Part Test Pertaining to Threatened species listed under the Biodiversity Conservation Act 2016.

Conservation status is shown after the species name as: EPBC listing/NSW listing.
Relevant key threatening processes:

- Removal of dead wood and dead trees (habitat loss/change)
- Clearing of native vegetation (habitat loss/change)

Pied Honeyeater (*Certhionyx variegatus*) Not listed/Vulnerable

Inhabits wattle shrub, primarily Mulga (*Acacia aneura*), mallee, spinifex and eucalypt woodlands, usually when shrubs are flowering; feeds on nectar, predominantly from various species of emu-bushes (*Eremophila* spp.); also, from mistletoes and various other shrubs (e.g. *Grevillea* spp.); also eats saltbush fruit, berries, seed, flowers and insects.

Highly nomadic, following the erratic flowering of shrubs; can be locally common at times.

Constructs a relatively large cup-shaped nest, usually robust, although occasionally loose, constructed of grasses and fine twigs, bound with spider webs, in the fork of a shrub or tree up to 5m above the ground.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=10156>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for Pied Honeyeater, however, as only a small band of native vegetation will be removed it is highly unlikely that the proposed works will place any existing local population at risk of extinction. No large habitat trees will be impacted by the proposed works.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in*

the locality.

Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for Pied Honeyeater, however, as only a small band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Pied Honeyeater. No large habitat trees will be impacted by the proposed works.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to Pied Honeyeater, including *Clearing of Native Vegetation* and *Removal of dead wood and dead trees*. it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Pied Honeyeater and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for Pied Honeyeater, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

Spotted Harrier (*Circus assimilis*) Not listed/Vulnerable

Occurs in grassy open woodland including Acacia and mallee remnants, inland riparian woodland, grassland and shrub steppe. It is found commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands.

Builds a stick nest in a tree and lays eggs in spring (or sometimes autumn), with young remaining in the nest for several months.

Preys on terrestrial mammals (eg bandicoots, bettongs, and rodents), birds and reptile, occasionally insects and rarely carrion.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=20134>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for Spotted Harrier, however, as no large trees will be removed it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*

i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for Spotted Harrier, however, as no large trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Spotted Harrier.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to Spotted Harrier, including *Clearing of Native Vegetation* and *Removal of dead wood and dead trees*. it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Spotted Harrier and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for Spotted Harrier, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

White-fronted Chat (*Epthianura albifrons*) NL/Vulnerable

The White-fronted Chat is found across the southern half of Australia, from southernmost Queensland to southern Tasmania, and across to Western Australia as far north as Carnarvon. Found mostly in temperate to arid climates, it occupies foothills and lowlands up to 1,000m above sea level. In NSW, it occurs mostly in the southern half of the state, in damp open habitats along the coast, and near waterways in the western part of the state. The White-fronted Chat is usually found foraging on bare or grassy ground in wetland areas, singly or in pairs. They are insectivorous, feeding mainly on

flies and beetles caught from or close to the ground. They have been observed breeding from late July through to early March, with 'open-cup' nests built in low vegetation.

<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20143>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for White-fronted Chat. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for White-fronted Chat. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for White-fronted Chat.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to White-fronted Chat, including *Clearing of Native Vegetation* and *Removal of dead wood and dead trees*. As only a narrow band of native vegetation will be removed, it is highly unlikely that the

proposed works will have a significant impact on suitable habitat for White-fronted Chat and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for White-fronted Chat, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

Grey Falcon (*Falco hypoleucos*) Vulnerable/NL

Grey Falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. The breeding range has contracted since the 1950s with most breeding now confined to arid parts of the range. There are possibly less than 5,000 individuals left. Population trends are unclear, though it is believed to be extinct in areas with more than 500mm rainfall in NSW.

Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey. Preys primarily on birds, especially parrots and pigeons, using high-speed chases and stoops; reptiles and mammals are also taken. Like other falcons it utilises old nests of other birds of prey and ravens, usually high in a living eucalypt near water or a watercourse; peak laying season is in late winter and early spring; two or three eggs are laid.
https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10330

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for Grey Falcon. However, as no large trees will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in*

the locality.

Comment: The pump station site and surrounding floodplain is potential suitable habitat for Grey Falcon. However, as no large trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat Grey Falcon.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to Grey Falcon, including *Clearing of Native Vegetation*. As no large trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Grey Falcon and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for Grey Falcon, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC) species.

Black Falcon (*Falco subniger*) NL/Vulnerable

The Black Falcon inhabits woodland, shrubland and grassland in the arid and semi-arid zones, especially wooded watercourses and agricultural land with scattered remnant trees. The Black Falcon is usually associated with streams or wetlands, visiting them in search of prey and often using standing dead trees as lookout posts. Habitat selection is generally influenced more by prey densities than by specific aspects of habitat floristics or condition, although in agricultural landscapes the Black Falcon tends to nest in healthy, riparian woodland remnants with a diverse avifauna. Much of the best habitat of the Black Falcon in New South Wales is likely to occur on private land (i.e. agricultural or pastoral land), rather than in reserves.

https://threatenedspecies.bionet.nsw.gov.au/profile?id=20269.

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

Comment: The pump station site and surrounding floodplain is on potentially suitable habitat for Black Falcon. However, as no large trees will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*

i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*

ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

Comment: The pump station site and surrounding floodplain is potential suitable habitat for Black Falcon. However, as no large trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat Black Falcon.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to Black Falcon, including *Clearing of Native Vegetation*. As no large trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Black Falcon and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for Black Falcon, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

Painted Honeyeater (*Grantiella picta*) Vulnerable / NL

The Painted Honeyeater is nomadic and occurs at low densities throughout its range. The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria, and southern Queensland. The Painted Honeyeater inhabits Boree/Weeping Myall (*Acacia pendula*), Brigalow (*A. harpophylla*) and Box-Gum Woodlands and Box-Ironbark Forests. It is a specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias, but sometimes also eats insects and nectar from mistletoe or eucalypts.
<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10357>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

Comment: The pump station site and surrounding floodplain and the mallee vegetation adjacent to the pipeline route may be suitable habitat for Painted Honeyeater. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction. No trees with mistletoe will be impacted by the proposed works.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

Comment: The pump station site and the mallee vegetation adjacent to the pipeline route may be suitable habitat for Painted Honeyeater. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat. No trees with mistletoe will be impacted by the proposed works.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to Painted Honeyeater, including *Clearing of Native Vegetation* and *Removal of dead wood and dead trees*. As only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for Painted Honeyeater and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for Painted Honeyeater, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC) species.

Little Eagle (*Hieraaetus morphnoides*) NL / Vulnerable

The Little Eagle occupies habitats rich in prey within open eucalypt forest, woodland or open woodland. Sheoak or Acacia woodlands and riparian woodlands of interior NSW are also used. For nest sites it requires a tall living tree within a remnant patch, where pairs build a large stick nest in winter and lay in early spring.
<http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20131>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain may be suitable habitat for the Little Eagle. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction. No large trees suitable for nesting will be impacted by the proposed works.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the Little Eagle. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat. No large trees suitable for nesting will be impacted by the proposed works.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Little Eagle, including *Clearing of Native Vegetation*. As only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for the Little Eagle and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the Little Eagle, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

Square-tailed Kite (*Lophoictinia isura)* NL/Vulnerable

Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses. In arid north-western NSW, has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland.

Is a specialist hunter of passerines, especially honeyeaters, and most particularly nestlings, and insects in the tree canopy, picking most prey items from the outer foliage. Appears to occupy large hunting ranges of more than 100km^2.

Breeding is from July to February, with nest sites generally located along or near watercourses, in a fork or on large horizontal limbs.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=10495>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

Comment: The pump station site and surrounding floodplain may be suitable habitat for the Square-tailed Kite. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction. No large trees suitable for nesting will be impacted by the proposed works.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*

i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the Square-tailed Kite. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat. No large trees suitable for nesting will be impacted by the proposed works.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Square-tailed Kite, including *Clearing of Native Vegetation*. As only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for the Square-tailed Kite and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the Square-tailed Kite, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
Endangered/Endangered

Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses. The south-eastern form (subspecies *cucullata*) is found from Brisbane to Adelaide and throughout much of inland NSW, except for the extreme north-west.

Often perches on low dead stumps and fallen timber or on low-hanging branches, using a perch-and-pounce method of hunting insect prey. Territories range from around 10ha during the breeding season, to 30ha in the non-breeding season.

May breed any time between July and November, often rearing several broods. The nest is a small, neat cup of bark and grasses bound with webs, in a tree fork or crevice, from

less than 1 m to 5 m above the ground. The nest is defended by both sexes with displays of injury-feigning, tumbling across the ground. A clutch of two to three is laid and incubated for fourteen days by the female. Two females often cooperate in brooding.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=10519>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain may be suitable habitat for the South-eastern Hooded Robin. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction. No large trees suitable for nesting will be impacted by the proposed works.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the South-eastern Hooded Robin. However, as only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat. No large trees suitable for nesting will be impacted by the proposed works.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to the South-eastern Hooded Robin,

including *Clearing of Native Vegetation*. As only a narrow band of native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for the South-eastern Hooded Robin and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the South-eastern Hooded Robin, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC and NSW) species.

Blue-winged Parrot (*Neophema chrysostoma)* Vulnerable/Vulnerable

Blue-winged parrots inhabit a range of habitats from coastal, sub-coastal and inland areas, through to semi-arid zones. They tend to favour grasslands and grassy woodlands and are often found near wetlands both near the coast and in semi-arid zones. The species can also be seen in altered environments such as airfields, golf-courses and paddocks. Pairs or small parties of blue-winged parrots forage mainly near or on the ground for seeds of a wide range of native and introduced grasses, herbs and shrubs. Blue-winged parrots breed in Tasmania, coastal south-eastern South Australia and southern Victoria.

During the breeding season (spring and summer), birds occupy eucalypt forests and woodlands. Blue-winged parrots form monogamous pairs. Nests are made in hollows, preferably with a vertical opening, in live or dead trees or stumps. Usually 4−6 eggs are laid on a bed of decaying wood. The female alone incubates the eggs, leaving the nest at intervals to be fed by the male. Both parents feed the nestlings. In Victoria, birds are known to breed mainly in heathy forests and woodlands and in wetter forests soon after fire or logging. During the non-breeding period, from autumn to early spring, birds are recorded from northern Victoria, eastern South Australia, south-western Queensland and western New South Wales.

<https://www.environment.gov.au/biodiversity/threatened/species/pubs/726-conservation-advice-31032023.pdf>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain may be suitable feeding habitat for the Blue-winged Parrot. As only a narrow band of shrubs will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the Blue-winged Parrot. However, as only a narrow band of shrubs will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Blue-winged Parrot, including *Clearing of Native Vegetation*. As only a narrow band of shrubs will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable feeding habitat for the Blue-winged Parrot and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the Blue-winged Parrot, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC and NSW) species.

Gilbert's Whistler (*Pachycephala inornata*) NL/Vulnerable

The Gilbert's Whistler occurs in a range of habitats within NSW, though the shared feature appears to be a dense shrub layer. It is widely recorded in mallee shrublands, but also occurs in box-ironbark woodlands, Cypress Pine and Belah woodlands and River Red Gum forests, though at this stage it is only known to use this habitat along the Murray, Edwards and Wakool Rivers. Within the mallee the species is often found in association with an understorey of spinifex and low shrubs including wattles, hakea, senna and hopbush. In woodland habitats, the understorey comprises dense patches of shrubs, particularly thickets of regrowth Callitris pine. Parasitic 'cherries' (*Exocarpus* species) appear to be an important habitat component in Belah and Red Gum communities, though in the latter case other dense shrubs, such as Lignum and wattles, are also utilised.

The Gilbert's Whistler forages on or near the ground in shrub thickets and in tops of small trees. Its food consists mainly of spiders and insects such as caterpillars, beetles and ants, and occasionally, seeds and fruits are eaten.

Breeding takes place between August and November. Nests are usually built below about two and a half metres (but up to six metres) above the ground in the fork of dense foliage of plants such as wattles or cypress pines.

The species is also recorded in River Red Gum forests along the Murray River valley between Mathoura and Wentworth.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=10582>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain may be suitable feeding and breeding habitat for Gilbert's Whistler. As only a narrow band of shrubs and not habitat trees will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the Gilbert's Whistler. However, as only a narrow band of shrubs and no habitat trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Gilbert's Whistler, including *Clearing of Native Vegetation*. As only a narrow band of shrubs and no habitat trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable feeding habitat for the Gilbert's Whistler and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the **Gilbert's** Whistler, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (NSW) species.

Regent Parrot (*Polytelis anthopeplus monarchoides*) Vulnerable/Endangered

The eastern subspecies is restricted to areas around the Murray River in South Australia, Victoria and NSW. In NSW it occurs along the Murray River downstream of Tooleybuc, the Wakool River downstream of Kyalite, and the Murrumbidgee River immediately upstream from the junction with the Murray River and adjoining areas of mallee. There are scattered records along the Darling River as far north as Menindee, but at this stage the species has not been confirmed to breed along this river. The species nests within River Red Gum forests along the Murray, Wakool and lower Murrumbidgee Rivers, and possibly the Darling River downstream of Pooncarie. Typical nest trees are large, mature healthy trees with many spouts (though dead trees are used) and are usually located close to a watercourse. Principal foraging habitat is mallee woodlands, though foraging also occurs in riverine forests and woodlands. Mallee woodland within 20km of nesting sites is critical foraging habitat for breeding birds. Birds move between the riverine nesting habitat and foraging sites along corridors of natural vegetation. Outside the breeding season birds may move away from the riverine plain, with birds observed in mallee over 60km from the river, and it has been speculated that most birds may join non-breeding flocks in Victoria.
<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10644>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

Comment: The pump station site and surrounding floodplain and the mallee vegetation adjacent to the pipeline route may be suitable habitat for the Regent Parrot. However, as no native vegetation will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction. No large trees with hollows at the pump site will be impacted by the proposed works.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at*

risk of extinction.

Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site and surrounding floodplain and the mallee vegetation adjacent to the pipeline route may be suitable habitat for Regent Parrot. However, as no native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat. No large trees with hollows at the pump site will be impacted by the proposed works.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Regent Parrot, including *Clearing of Native Vegetation*. There were no large trees with hollows in the proposed clearing. As no native vegetation will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat for the Regent Parrot and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for Regent Parrot, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC) species and endangered (NSW) species.

Diamond Firetail (*Rostratula australis)* NL / Vulnerable

Found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum *Eucalyptus pauciflora* Woodlands. Also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities. Often found in riparian areas (rivers and creeks), and sometimes in lightly wooded farmland. The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. It is widely distributed in NSW, with a concentration of records from the Northern, Central and Southern Tablelands, the Northern, Central and Southwestern Slopes and the Northwest Plains and Riverina.

Feeds exclusively on the ground, on ripe and partly ripe grass and herb seeds and green leaves, and on insects (especially in the breeding season).

Usually encountered in flocks of between 5 to 40 birds, occasionally more. Groups separate into small colonies to breed, between August and January.

Nests are globular structures built either in the shrubby understorey, or higher up, especially under hawk's or raven's nests. Birds roost in dense shrubs or in smaller nests built especially for roosting.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=10768>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The pump station site and surrounding floodplain may be suitable feeding and breeding habitat for Diamond Firetail. As only a narrow band of shrubs and no habitat trees will be removed, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the Diamond Firetail. However, as only a narrow band of shrubs and no habitat trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable habitat.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Diamond Firetail, including *Clearing of Native Vegetation*. As only a narrow band of shrubs and no habitat trees will be removed, it is highly unlikely that the proposed works will have a significant impact on suitable feeding habitat for the Diamond Firetail and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the Diamond Firetail, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC and NSW) species.

Growling Grass Frog (*Litoria raniformis)* Vulnerable/Endangered

Usually found in or around permanent or ephemeral Black Box/Lignum/Nitre Goosefoot swamps, Lignum/Typha swamps and River Red Gum swamps or billabongs along floodplains and river valleys. They are also found in irrigated rice crops, particularly where there is no available natural habitat.

Breeding occurs during the warmer months and is triggered by flooding or a significant rise in water levels. The species has been known to breed anytime from early spring through to late summer/early autumn (Sept to April) following a rise in water levels. During the breeding season animals are found floating amongst aquatic vegetation (especially Cumbungi or Common Reeds) within or at the edge of slow-moving streams, marshes, lagoons, lakes, farm dams and rice crops.

Tadpoles require standing water for at least 4 months for development and metamorphosis to occur but can take up to 12 months to develop.

Outside the breeding season animals disperse away from the water and take shelter beneath ground debris such as fallen timber and bark, rocks, grass clumps and in deep soil cracks.

<https://threatenedspecies.bionet.nsw.gov.au/profile?id=10491>

a) *In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

Comment: The pump station site and surrounding floodplain may be suitable feeding and breeding habitat for Growling Grass Frog. As only a narrow band of shrubs will be removed and no there is no impact on the river or shoreline, it is highly unlikely that the proposed works will place any existing local population at risk of extinction.

b) *In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at*

risk of extinction.

Comment: Not Applicable

c) *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.*

   Comment: The pump station site may be suitable habitat for the Growling Grass Frog. However, as only a narrow band of shrubs will be removed and there is no impact on the river or shoreline, it is highly unlikely that the proposed works will have a significant impact on suitable habitat.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).*

   Comment: The proposed works are not located in or near any declared areas of outstanding biodiversity value.

e) *Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.*

   Comment: The proposed works do not include actions listed as a key threatening process of relevance to the Growling Grass Frog, include *removal of groundcover, alteration of natural flooding regimes or loss of aquatic habitat*. As only a narrow band of shrubs will be removed and there will be no impact on the river or shoreline, it is highly unlikely that the proposed works will have a significant impact on habitat for the Growling Grass Frog and increase the impact of key threatening processes.

Conclusion

In view of the information outlined in the five part test for the Growling Grass Frog, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable (EPBC) species and endangered (NSW) species.

Appendix 5 Assessment of significance (Seven part test)

Seven Part Test Pertaining to Threatened Species, Populations and Ecological Communities listed under the Fisheries Management Act 1994

Conservation status is indicated after the species name as: EPBC listing/NSW listing.
Relevant key threatening processes:

- Degradation of native riparian vegetation along New South Wales water courses

Silver Perch (*Bidyanus bidyanus*) Critically Endangered/Vulnerable
Silver Perch prefers fast-flowing, open waters, especially where there are rapids and races. A significant natural population of Silver Perch is found in the Darling River and lower reaches of the Murray River. Silver Perch is now successfully bred for aquaculture, conservation and to enhance recreational fishing, and large numbers have been stocked into impoundments and smaller numbers into rivers in the Murray-Darling Basin. <https://www.dpi.nsw.gov.au/fishing/species-protection/what-current/vulnerable-species2/silver-perch>

1. *In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The proposed works are unlikely to have an adverse effect on the life cycle of Silver Perch due to the small area of aquatic habitat impacted which is a negligible proportion of the habitat in the local area. The use of a pontoon design anchored on the high bank of the river will avoid impacts on the riverbed. Adoption of an Environmental Management Plan will ensure that sedimentation or pollution of the river will not occur. It is therefore highly unlikely that the proposed works will place any existing local population at risk of extinction.

2. *In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: Not Applicable

3. *In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

4. *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the action proposed*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action*
   iii. *the importance of the habitat to be removed, modified, fragmented or*

isolated to the long-term survival of the species, population or ecological community in the locality.

Comment: As the proposed works affect only a small area of the river, they are unlikely to have an adverse effect on the long-term survival of the local population of Silver Perch.

5. *Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).*

   Comment: Critical habitat has not yet been identified or declared for this species.

6. *Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

   Comment: The proposed works will not impact on objectives and actions in a range of recovery plans and threat abatement plans.

7. *Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.*

   Comment: A key threatening process of relevance is *Degradation of native riparian vegetation along NSW water courses*. However, the proposed works are unlikely to significantly increase the impact of this key threatening process on Silver Perch as the area impacted by the proposed development is a small proportion of the terrestrial habitat in the local area.

Conclusion

In view of the information outlined in the seven part test for the Silver Perch, the proposed activities are not expected to have a significant detrimental long-term effect on this endangered species (EPBC) and vulnerable species (NSW).

Murray Crayfish (*Euastacus armatus*) NISR/Vulnerable

Murray Crayfish can be found in the Murray River upstream of Mildura, in the Murrumbidgee River and in some dams, and is the only species in the *Euastacus* genus that lives in both cold and warm water habitats. A range of environmental factors such as black water flooding events, land use practices and broad scale river regulation have contributed to the reduction of the species.
<https://www.dpi.nsw.gov.au/fishing/threatened-species/what-current/vulnerable-species/murray-crayfish>

1. *In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The proposed works are unlikely to have an adverse effect on the life cycle of Murray Crayfish due to the small area of aquatic vegetation impacted which is an insignificant proportion of the habitat in the local area. The use of a pontoon design anchored on the high bank of the river will avoid impacts on the riverbed. Adoption of an Environmental Management will ensure that sedimentation or pollution of the river will not occur. It is therefore highly unlikely that the proposed works will place any existing local population at risk of extinction.

2. *In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: Not Applicable

3. *In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

4. *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the action proposed*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.*

   Comment: As the proposed works affect only a small area of the river bank, they are unlikely to have an adverse effect on the long-term survival of the local population of Murray Crayfish.

5. *Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).*

   Comment: Critical habitat has not yet been identified or declared for this species.

6. *Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

   Comment: The proposed works will not impact on objectives and actions in a range of recovery plans and threat abatement plans.

7. *Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.*

   Comment: A key threatening process of relevance is *Degradation of native riparian vegetation along NSW water courses*. However, the proposed works are unlikely to significantly increase the impact of this key threatening process on Murray Crayfish as the area impacted by the proposed development is a small proportion of the terrestrial habitat in the local area.

Conclusion

In view of the information outlined in the seven part test for the Murray Crayfish, the proposed activities are not expected to have a significant detrimental long-term effect on this vulnerable species.

Murray Cod (*Maccullochella peelii*) EPBC – Vulnerable/NISR

Murray Cod were once abundant throughout the Murray-Darling river system, but overfishing and environmental changes have drastically reduced numbers. Murray Cod generally prefer slow flowing, turbid water in streams and rivers, favouring deeper water around boulders, undercut banks, overhanging vegetation and logs. <https://www.dpi.nsw.gov.au/fishing/fish-species/species-list/murray-cod>

1. *In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: The proposed works are unlikely to have an adverse effect on the life cycle of Murray Cod due to the small area of aquatic vegetation impacted which is an insignificant proportion of the habitat in the local area. The use of a pontoon design anchored on the high bank of the river will avoid impacts on the riverbed. Adoption of an Environmental Management will ensure that sedimentation or pollution of the river will not occur. It is therefore highly unlikely that the proposed works will place any existing local population at risk of extinction.

2. *In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: Not Applicable

3. *In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*

   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction*

   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: Not Applicable

4. *In relation to the habitat of a threatened species, population or ecological community:*

   i. *the extent to which habitat is likely to be removed or modified as a result of the action proposed*

   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action*

   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.*

Comment: As the proposed works affect only a small area of the river, they are unlikely to have an adverse effect on the long-term survival of the local population of Murray Cod.

5. *Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).*

   Comment: Critical habitat has not yet been identified or declared for this species.

6. *Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

   Comment: The proposed works will not impact on objectives and actions in a range of recovery plans and threat abatement plans.

7. *Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.*

   Comment: A key threatening process of relevance is *Degradation of native riparian vegetation along NSW water courses*. However, the proposed works are unlikely to significantly increase the impact of this key threatening process on Murray Cod as the area impacted by the proposed development is a small proportion of the terrestrial habitat in the local area.

Conclusion

In view of the information outlined in the seven part test for the Murray Cod, the proposed activities are not expected to have a significant detrimental long-term effect on this species.

<u>Aquatic Ecological Community in the natural drainage system of the lower Murray River catchment, Endangered Ecological Community</u>

The lower Murray aquatic ecological community includes all native fish (23 species) and aquatic invertebrates (over 400 species) within all natural creeks, rivers and associated lagoons, billabongs and lakes of the regulated portions of the:

- Murray River below Hume Weir
- Murrumbidgee River below Burrinjuck Dam
- Tumut River below Blowering Dam
- Billabong Creek, Yanco Creek, Colombo Creek and their tributaries
- Edward River, the Wakool River and their tributaries
- Frenchmans Creek, Rufus River and Lake Victoria

The lower Murray aquatic ecological community has been significantly modified since European settlement. Many natural habitats have declined in quality and many native species have declined in number and distribution due to activities such as river regulation, agricultural practices and the introduction of non-native plant and animal species. <https://www.dpi.nsw.gov.au/fishing/threatened-species/what-current/endangered/murray-river-eec>

1. *In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: Not Applicable

2. *In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.*

   Comment: Not Applicable

3. *In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*
   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction*
   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

   Comment: The proposed works are unlikely to have an adverse effect on the lower Murray River aquatic ecological community due to the small area of aquatic habitat impacted which is an insignificant proportion of the habitat in the local area. The use of steel piles to mount the pump station structure on will minimise impacts on the bed and bank of the river. It is therefore highly unlikely that the proposed works will place the local occurrence of this endangered ecological community at risk of extinction.

4. *In relation to the habitat of a threatened species, population or ecological community:*
   i. *the extent to which habitat is likely to be removed or modified as a result of the action proposed*
   ii. *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action*
   iii. *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.*

   Comment: As the proposed works affect only a small area of the river, they are unlikely to have an adverse effect on the long-term survival of the lower Murray River aquatic ecological community in the local area.

5. *Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).*

   Comment: Critical habitat has not yet been identified or declared for this community.

6. *Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

   Comment: The proposed works will not impact on objectives and actions in a range of recovery plans and threat abatement plans.

7. *Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.*

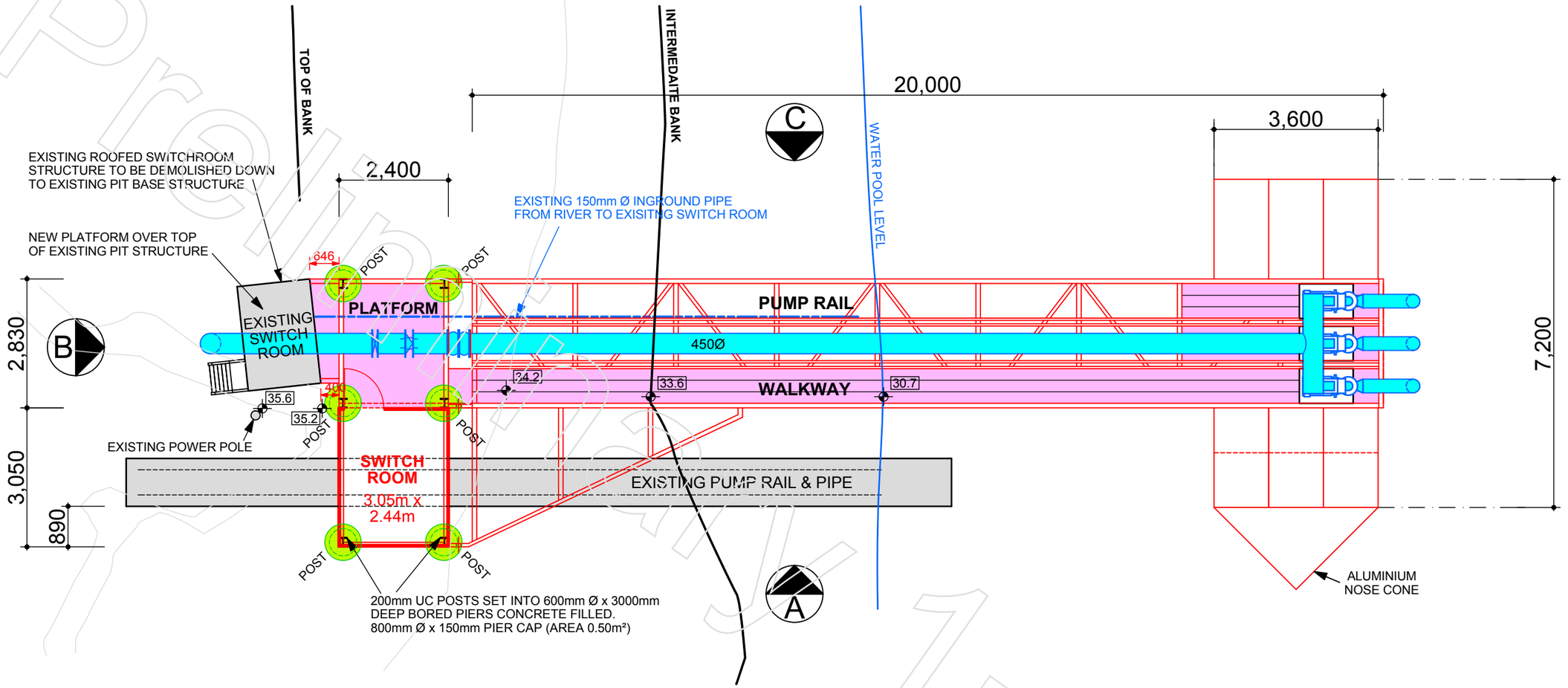
   Comment: A key threatening process of relevance is *Degradation of native riparian vegetation along NSW water courses*. However, the proposed works are unlikely to significantly increase the impact of this key threatening process

on the lower Murray aquatic ecological community as only a small band f terrestrial native vegetation will be removed by the proposed development.

Conclusion

In view of the information outlined in the seven part test for the lower Murray River aquatic ecological community, the proposed activities are not expected to have a significant detrimental long-term effect on this endangered ecological community.

Appendix 6 Design drawings of pump station



SWITCH ROOM, PLATFORMS, PUMP RAIL AND PONTOON PLAN

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SCALE LEGEND

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Rigby Designs
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AREA'S

PROJECT : PALMS VINEYARD
PROPOSED IRRIGATION PUMP
ADDRESS : LOT 16, SECTION G, PAR MERBEIN
PASCHENDALE AVE, YELTA
CLIENT : PERRY ENGNIEERING

1 OF 4
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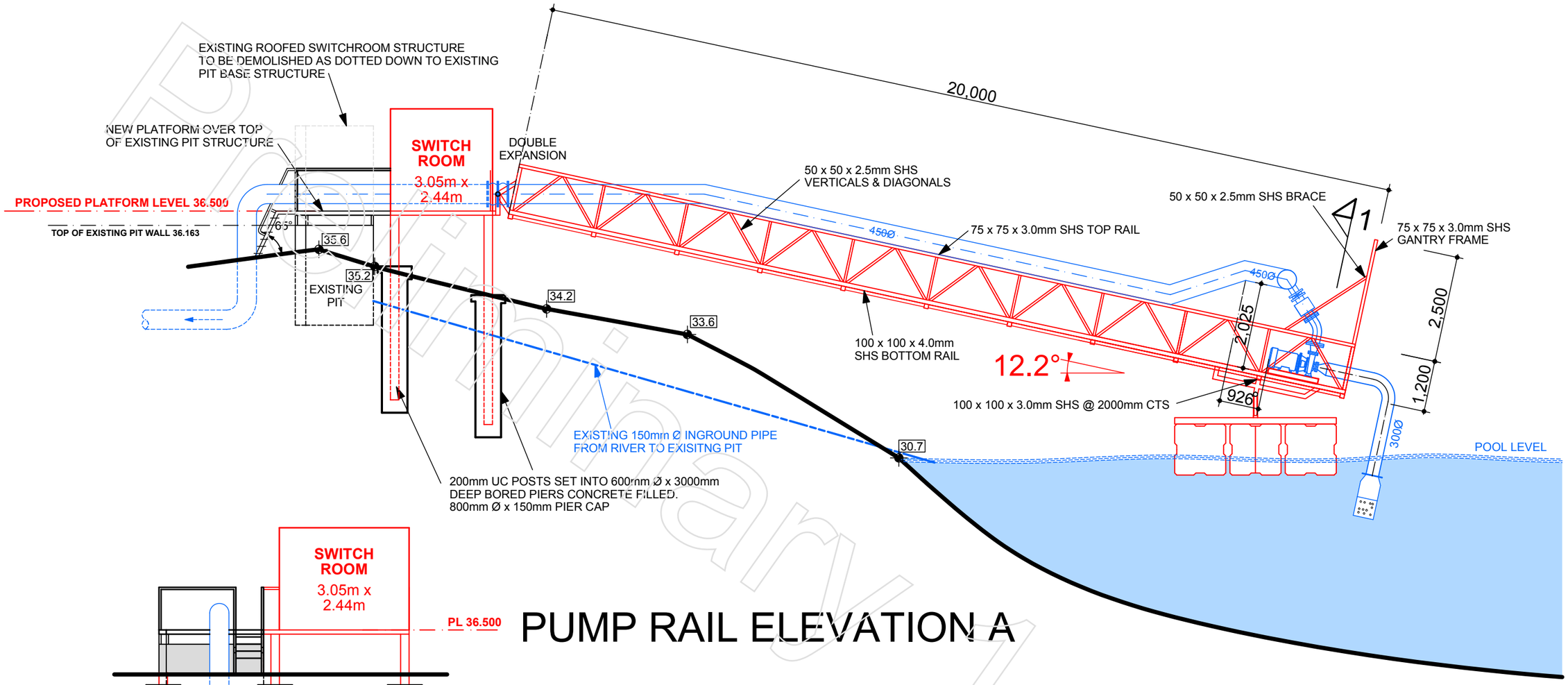

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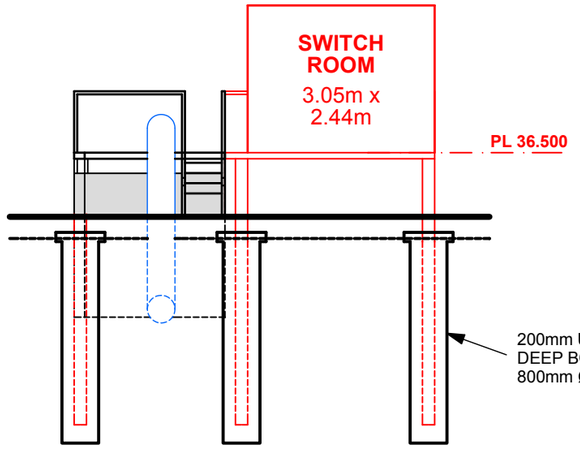

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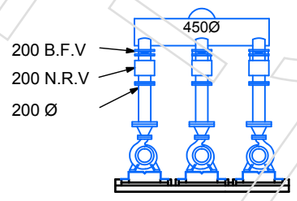

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SCALE LEGEND

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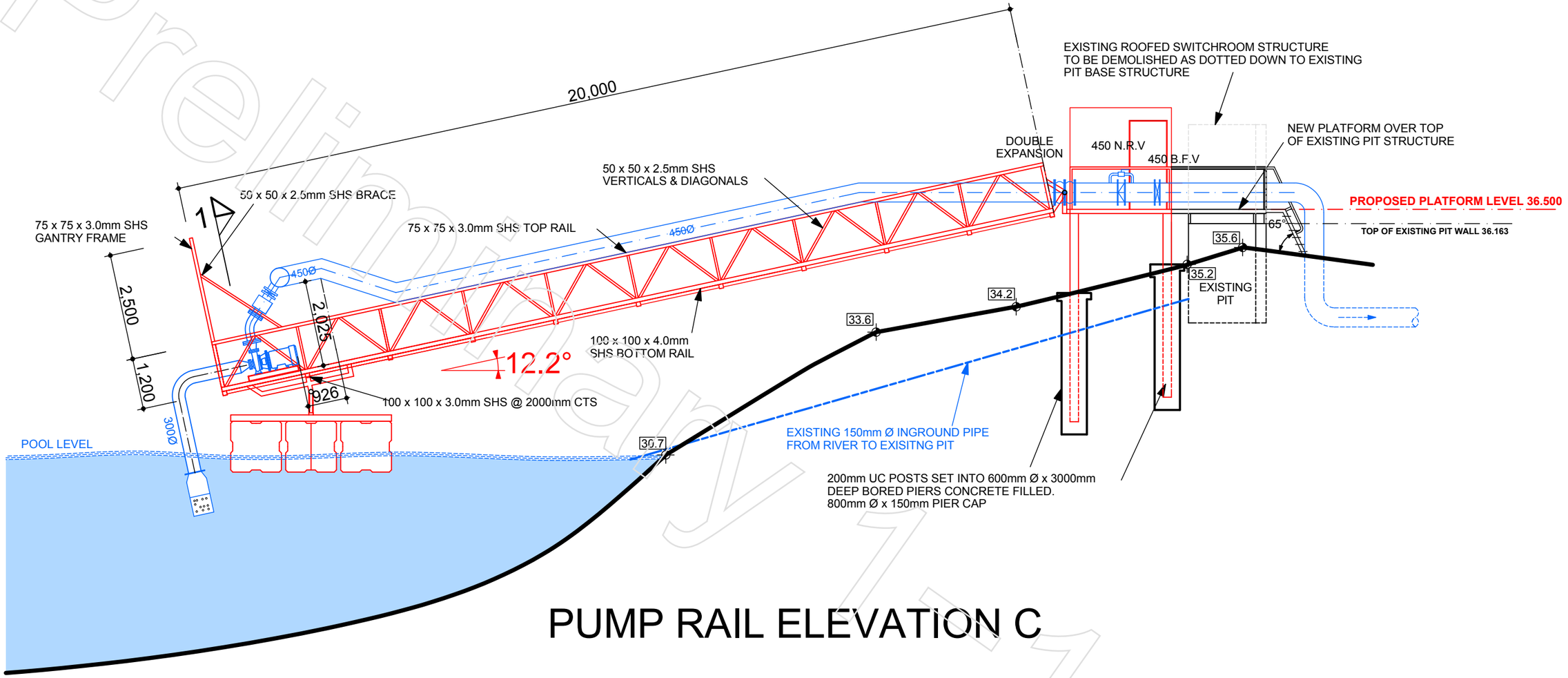

PUMP RAIL ELEVATION C

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SCALE LEGEND

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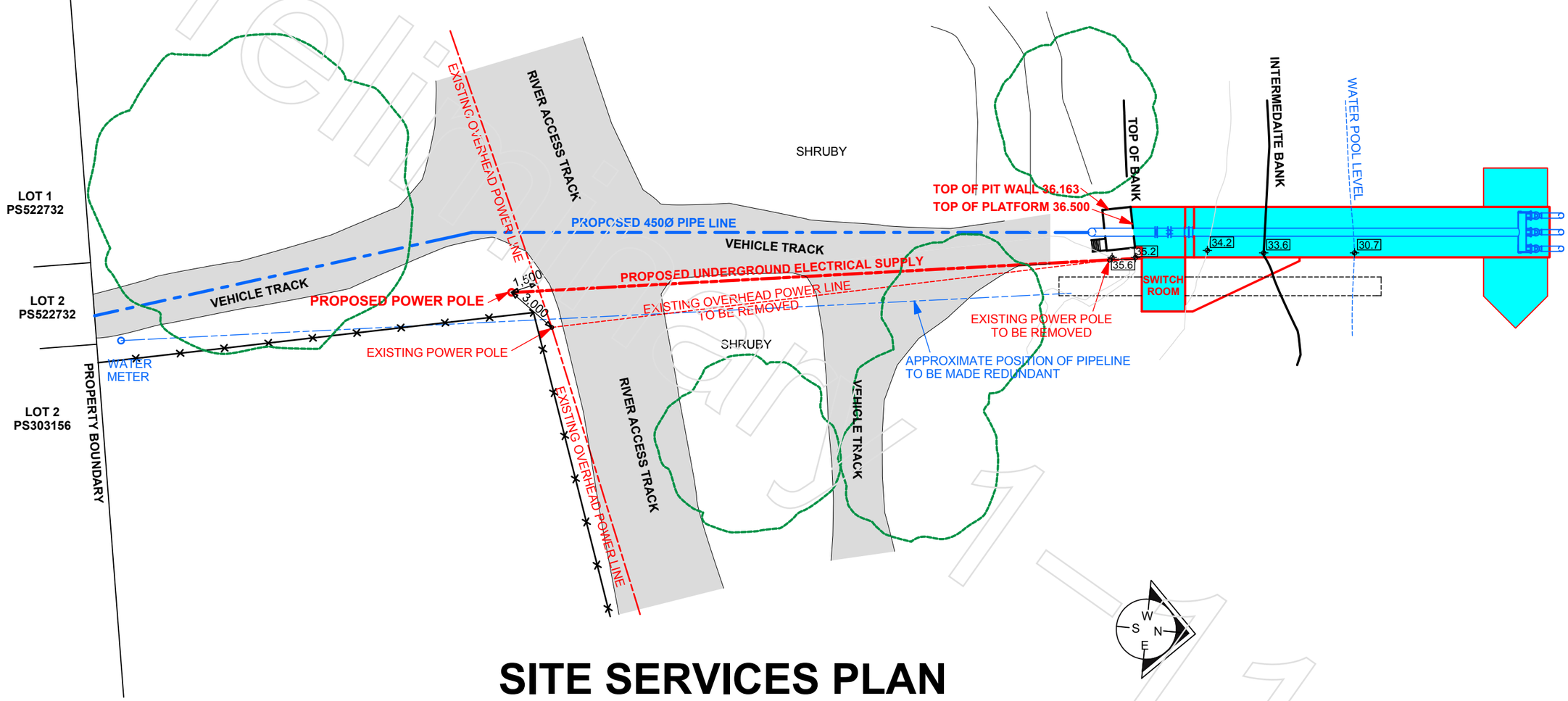

SITE SERVICES PLAN

 A3

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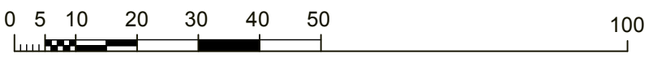
LOCATION PLAN



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Appendix 7 Aboriginal cultural heritage assessment

FIRST PEOPLE OF THE MILLEWA-MALLEE ABORIGINAL CORPORATION
ABN:26322021678 ICN: 8264
142 Langtree Avenue, Mildura, Vic 3500
Ph:03 40149780 www.fpmmac.com

Nadia Argiro
Palms Vineyards
768 Wentworth Road, Yelta, Vic.

10 January 2024

Re: Replace Old Pump with new Flouting Pontoon + New Pump Station - 768 Wentworth Road, Yelta, Vic

The following information within **Replace Old Pump with new Flouting Pontoon + New Pump Station** was reviewed by FPMMAC on 8 January 2024.

A field visit and site inspection was taking by FPMMAC on 10 January 2024

Replace Old Pump with new Flouting Pontoon + New Pump Station – 768 Wentworth Road, Yelta, Vic
does not require a mandatory Aboriginal cultural heritage management plan under section 16 of the Act."

1. I have also checked the Aboriginal Cultural Heritage Register and Information System (ACHRIS) to assess the likelihood of cultural heritage being disturbed during works.

2. Based on this assessment, there are no known Aboriginal Cultural Heritage places in the activity area.

3. There are no dunes as defined in Aboringinal Hertiage Regulations 2018 on these site.

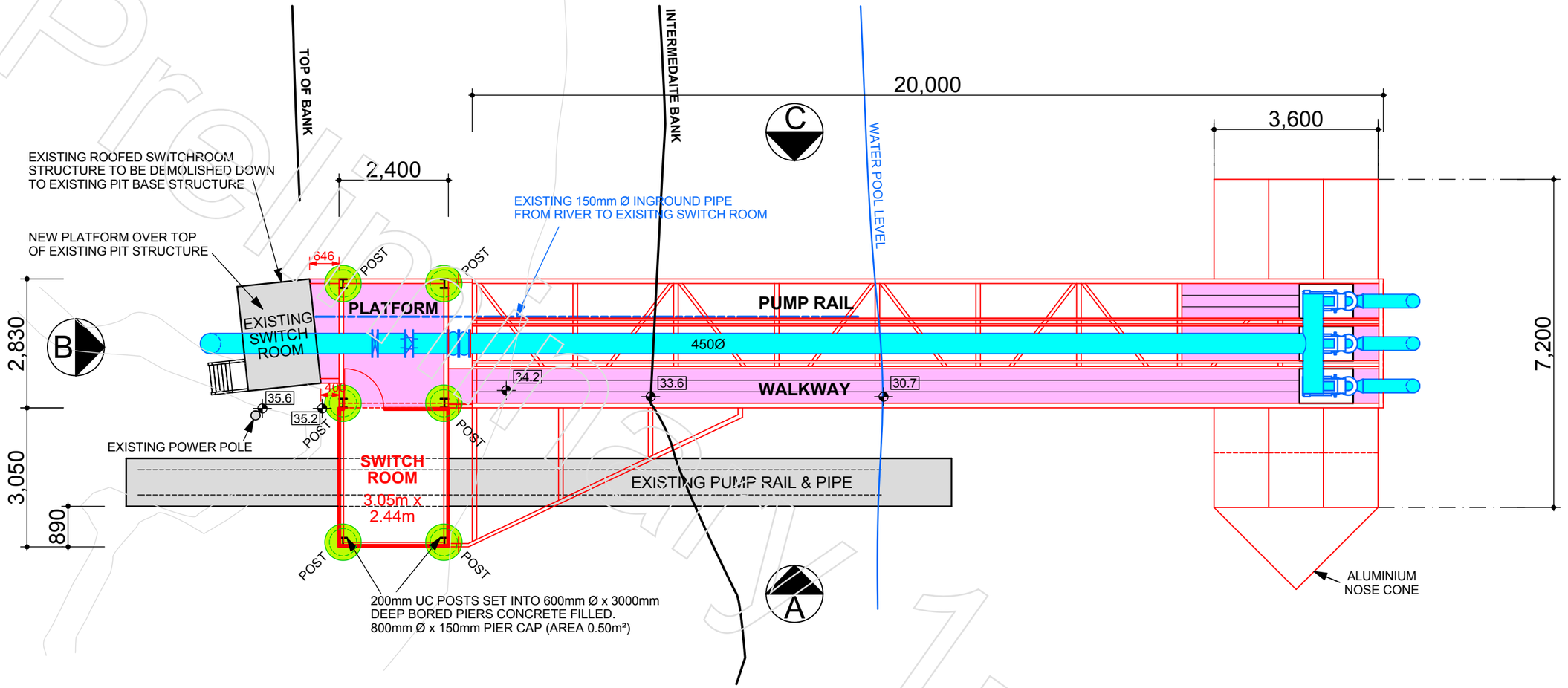
4. However, it is still possible unrecorded cultural heritage may be uncovered during works.

5. There is still a legislative requirement to protect any Aboriginal cultural heritage that may be discovered during works.

A voluntary Aboriginal cultural heritage management plan could also be prepared for the activities under section 45 of the Aboriginal Heritage Act 2006.
Please do not hesitate to contact FPMMAC or Arthur Smith (03 40149780) if I can provide any further information.

Yours sincerely

Arthur Smith
Cultural Heritage Officer
First People of the Millewa-Mallee Aboriginal Corporation



SWITCH ROOM, PLATFORMS, PUMP RAIL AND PONTOON PLAN

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SCALE LEGEND

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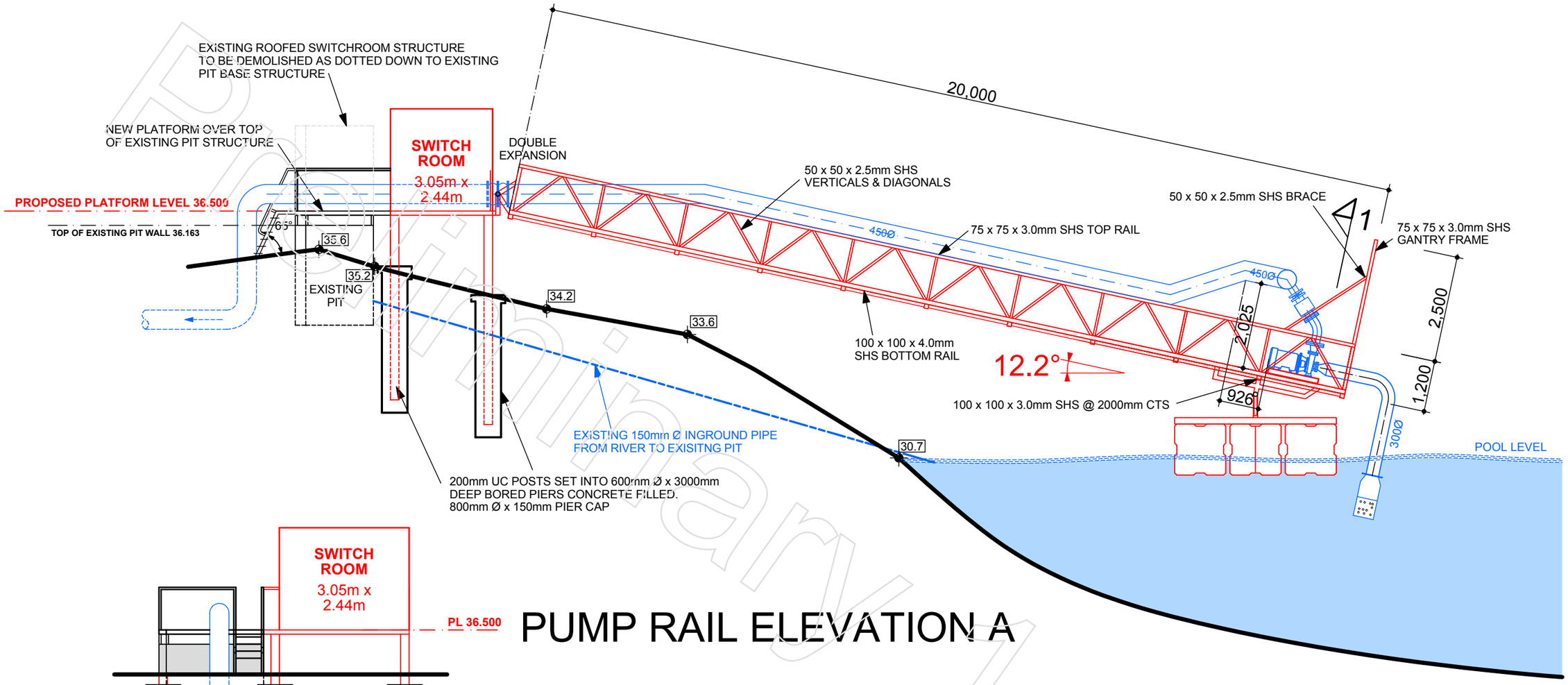

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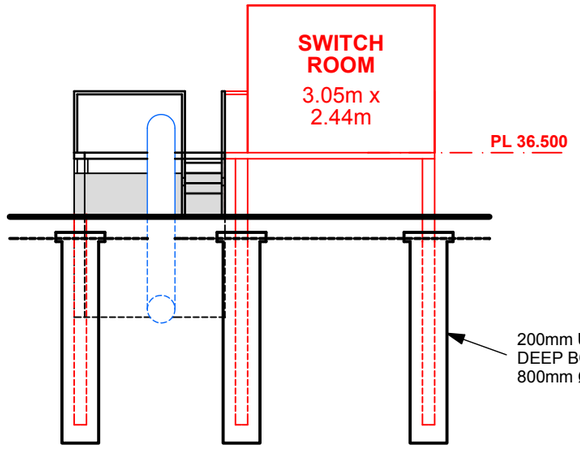

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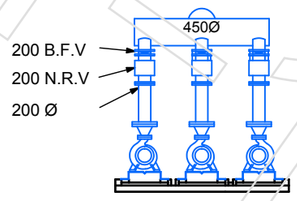

PUMP ELEVATION 1

SCALE LEGEND

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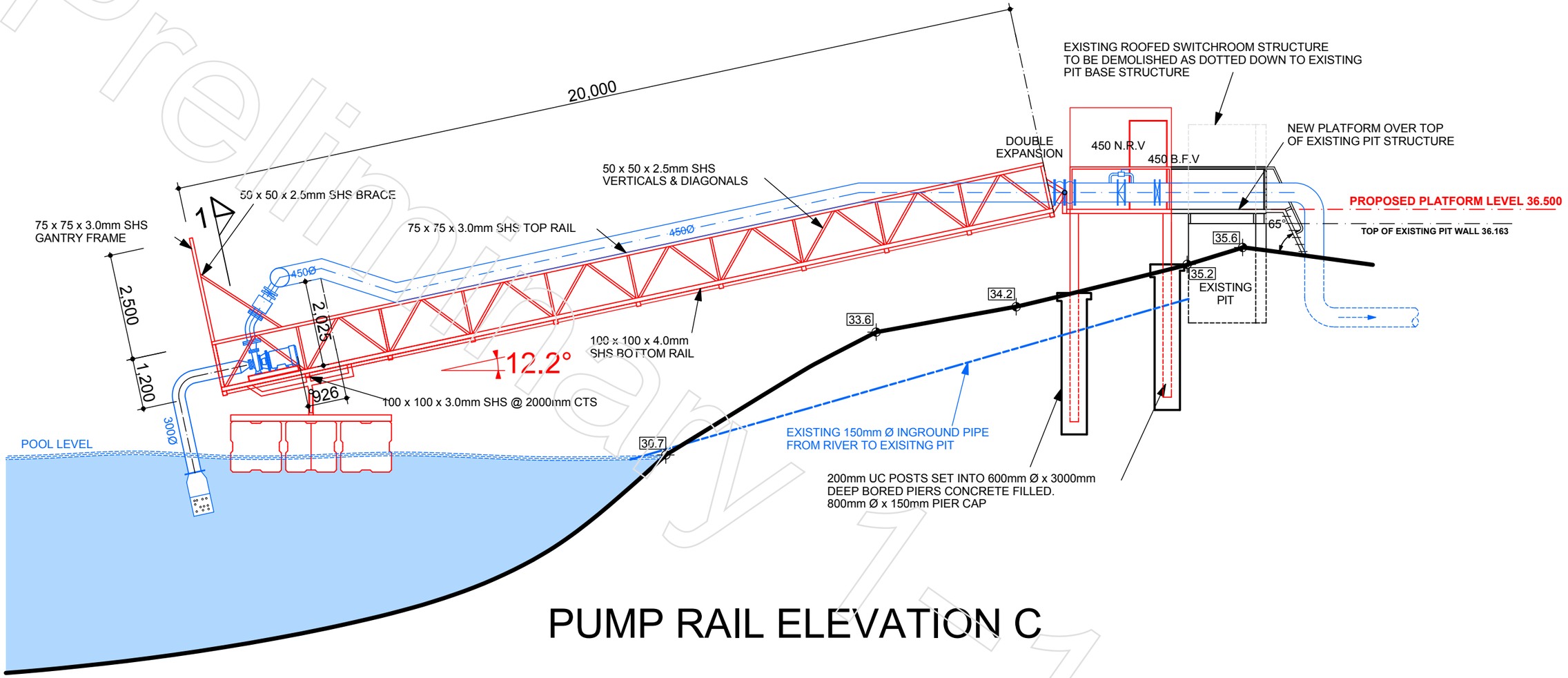

PUMP RAIL ELEVATION C

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SCALE LEGEND

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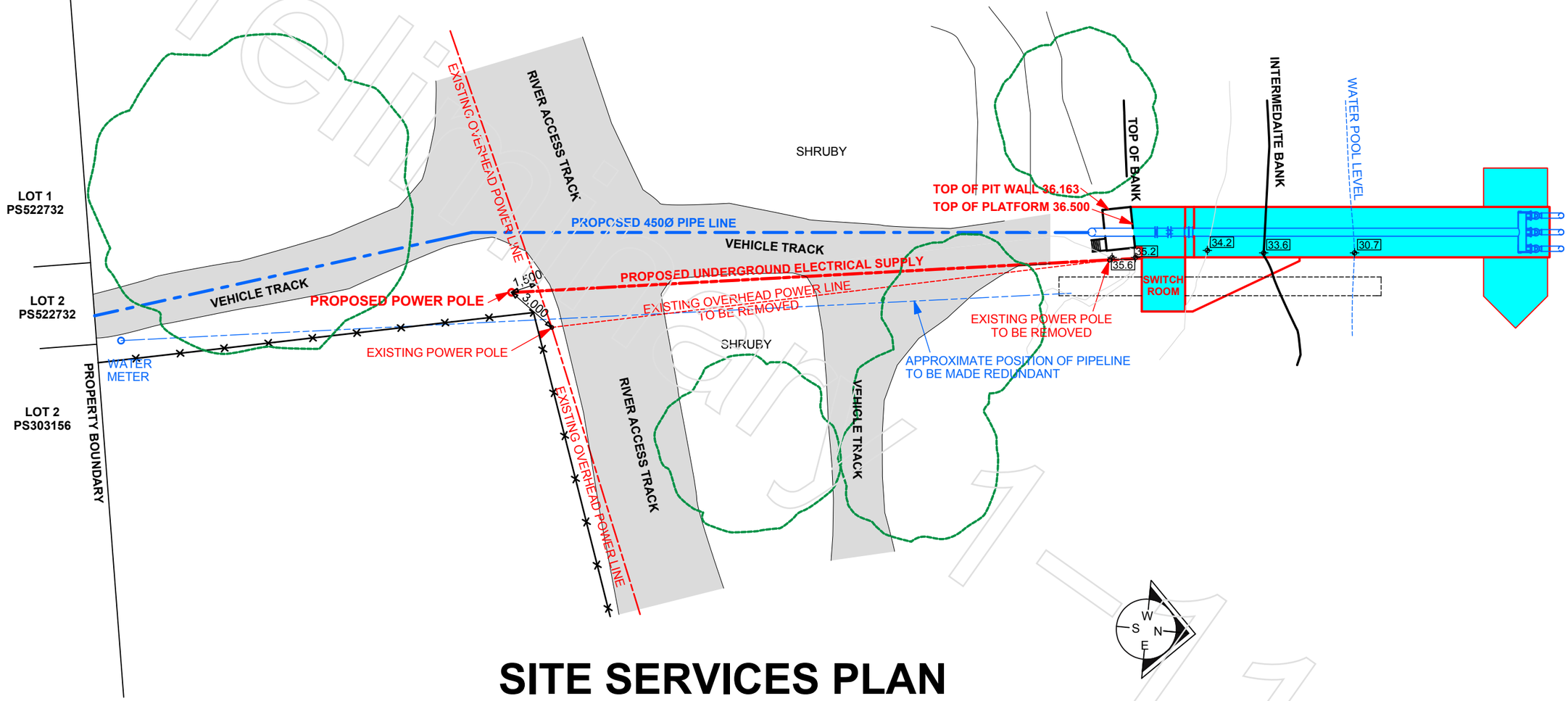

SITE SERVICES PLAN

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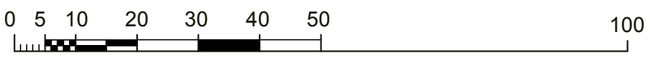
LOCATION PLAN



SCALE LEGEND 1:1000

 A3

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AREA'S

PROJECT : PALMS VINEYARD
PROPOSED IRRIGATION PUMP
ADDRESS : LOT 16, SECTION G, PAR MERBEIN
PASCHENDALE AVE, YELTA
CLIENT : PERRY ENGNIEERING

OCT 24
1:1000
23-005-TP4