

Statement of Environmental Effects

Tapalin Mail Road, Euston (Happy Valley Landing Road, Happy Valley)

May 2021



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Introduction

Development approval is sought for works associated with the development and operation of an irrigation pump station on the southern bank of the Murray River, to meet the irrigation requirements of the ageing vines of table grapes established by the proponent on land adjoining to the eastern side of Hocking Road, Happy Valley in Victoria. Its location means that the pump station and related infrastructure will straddle the New South Wales – Victoria border. This application for development approval relates to the portion of proposed works that will occur in NSW. Separate consent for the works situated in Victoria is being sought from the relevant authorities.

The proposed site is abutting an existing pump station on its western side. For the smooth operations of horticultural enterprise, it is of the utmost importance to have a reliable irrigation pump site to meet the irrigation requirements of permanent plantings as they mature.

The site of the proposed works is located on the Happy Valley Landing Road, Happy Valley approximately 15 kilometres southwest of the township of Robinvale. The works will involve preparation of site for construction of a pump station which will house eight pumps on four different pontoons. Rising main from three different pontoons will run into two delivery main to adjoining grower's property and another pontoon will be having a separate delivery main servicing proponents' property. Both the delivery mains will be servicing different properties on Hocking Road, Bannerton.

The proposed site is located on the Happy Valley Landing Road, Happy valley approximately 15 kilometres southwest of the township of Robinvale. The selected pump site is located on the Victorian bank of river and is opposite to Lot 5546 DP768456 Tapalin Mail Road, Euston. No terrestrial access to the pump from New South Wales is possible.

Following consideration of the Balranald LEP, relevant SEPP's, integrated approval requirements and other

documents, the proposal to install the new pump and associated works is worthy of support.

The land adjoining to the pump station and the land proponent is planning to develop is highly developed for horticultural production primarily being table grapes. The closest pump station to the proposed site is located 50 metres downstream of the river. The new works have been designed and located to minimise any significant negative impacts upon the environment.

The proponents themselves own and operate a pump station approximately 750 metres upstream of the river. This site is not capable to support the development because of the certain constraints which include multiple pump sites and pipelines running through the track. Therefore, after carefully considerations, the site has been chosen to set up a new pump station.



Figure 1 Location of the chosen pump site

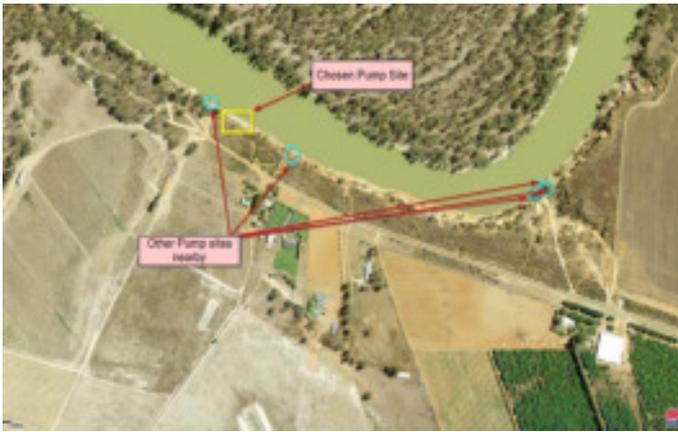


Figure 2 Other pump stations located nearby



Proposal

Project justification

The aim of the project is to construct and operate a pump station to supply irrigation water to maturing vineyards which proponents have planted on their property at southern side of Hocking Road – Knight Road intersection.

The pump station will consist of four pontoons, three of which will be belonging to the adjoining grower and one will be owned by the proponent, each of which will be housing two pumps and two suction. The pump station will also comprise of three rising mains. One of the rising mains will serve the proponents' property. The other two rising mains will serve the adjoining landowners' property further south. The control rooms will be installed 10 metres behind the platform of the pump station where the floating pontoon will be connected. The control room will be established on a raised platform and is designed in a manner to be operational during 1:100-year flood event.

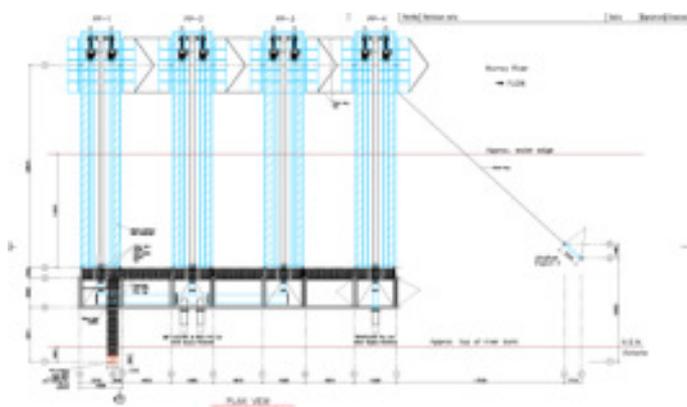


Figure 4 Plan view for Gantry Assembly

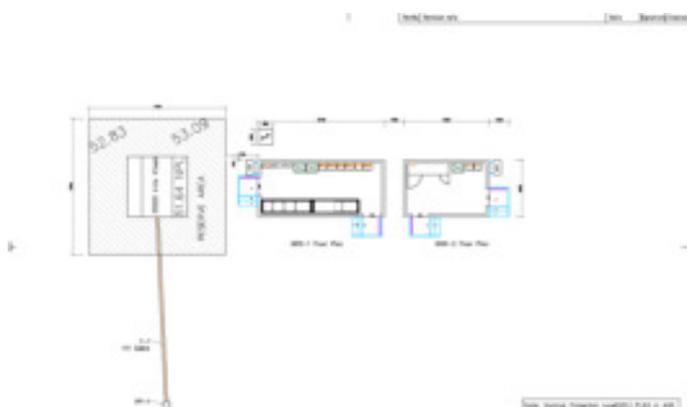


Figure 5 Floor Plan for control rooms



Figure 3 Side view plan looking upstream towards river

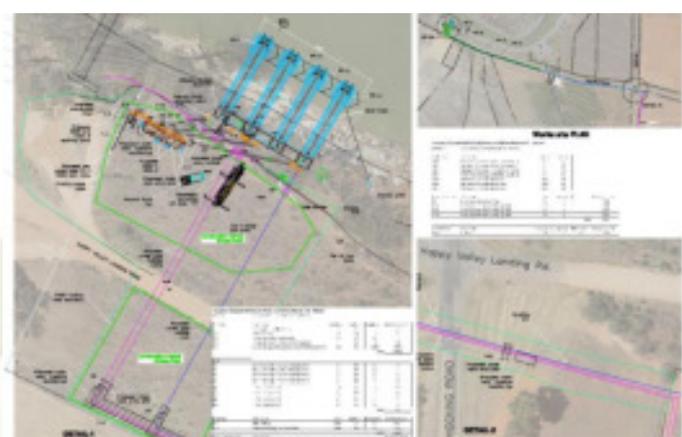


Figure 6 Site plan for proposed works

Construction plan

Works at the site will follow the outline below:

- ◆ The structural elements will be fabricated offsite. Other modular elements will be purchased and fitted as required.
- ◆ Bore holes will be underbored to the riverbank and poured with concrete to provide a support for the raised platform.
- ◆ The pontoon will be lifted into place and tethered.
- ◆ The prefabricated gantry will be lifted into position and affixed to the pontoon and to the pump shed.
- ◆ The pontoons will be connected to each other and a stabilising cable will be connected to the upstream side anchored in the sloping bank.
- ◆ The pumps, suctions and delivery mains will be installed.
- ◆ A new power pole, substation kiosk and control panel will be established on the top of riverbank.
- ◆ The works will be energised and commissioned.



Figure 8 Site of the proposed pump station

Access

The site can be accessed via an unnamed dirt track off the Happy Valley Landing Road. There is enough area available for parking vehicles on site. Therefore, no additional areas will be required or be created for parking contractors' vehicles.



Figure 7 Access to site via unnamed track off Happy Valley Landing Rd

Planning controls

Table 1 Planning controls for the land

Type	Planning Control
Local Environment Plan	Balranald LEP 2010
Land Zoning	W1 – Natural Waterways Zone
Minimum lot size	40 ha
Riparian Land and Watercourses	Riparian Land
Terrestrial Biodiversity	High conservation value Native Vegetation
Wetlands	Wetlands

Definition

The works are defined as a Water Supply System for which the LEP provides the definition as:

any of the following:

- (a) a water reticulation system,
- (b) a water storage facility,
- (c) a water treatment facility,
- (d) a building or place that is a combination of any of the things referred to in paragraphs (a)–(c).

Zoning

In accordance with the Balranald LEP zoning maps the land is contained within W1 Zone – Waterways.

The 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.

Development consent is required under zone W1 for the Water Supply System.

Additional Local Provisions

Other relevant clauses from the LEP are as follows:

- ♦ 6.1 Biodiversity
- ♦ 6.2 Riparian land, waterways and groundwater vulnerability
- ♦ 6.4 Flood planning
- ♦ 6.5 Development on riverfront areas
- ♦ 6.6 Development on riverbeds and banks
- ♦ 6.7 Earthworks

An assessment of the relevant clauses is outlined below.

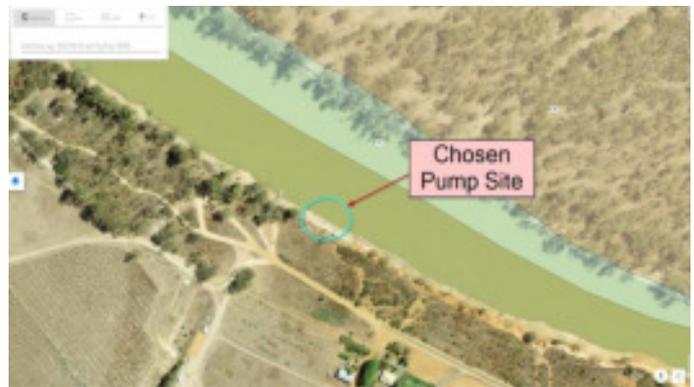


Figure 9 Zone map

Additional Planning Controls

The land is affected by the following mapping in addition to the zoning of the land:

- ♦ Riparian lands and watercourse
- ♦ Terrestrial biodiversity
- ♦ Wetlands

Murray Regional Environmental Plan No.2 – Riverine land

The Murray REP 2 plan applies to riparian land within the Balranald Shire Council local government area and is applicable in the assessment of this proposal. The objectives of this plan are:

- (a) to ensure that appropriate consideration is given to development with the potential to adversely affect the riverine environment of the River Murray, and
- (b) to establish a consistent and co-ordinated approach to environmental planning and assessment along the River Murray, and

- (c) *to conserve and promote the better management of the natural and cultural heritage values of the riverine environment of the River Murray.*

The plan outlines specific principles and planning controls that apply to this proposal and consultation which is required under the plan. Clause 12 does not specifically identify consultation for a water supply system. Clause 14 provides direction for the setback of development.

Aboriginal cultural heritage

All Aboriginal cultural heritage is protected by the NSW National Parks and Wildlife Act 1974. Responsibility rests with the proponent of a development to demonstrate that due care and diligence have been taken to identify and avoid impacts on archaeological sites through construction works.

AHIMS search for the site suggests that there are no aboriginal sites located in the area in NSW. Consequently, the risk of harm to aboriginal cultural heritage is extremely low.

Water Management Act

A controlled activity approval authorises its holder to carry out a specified controlled activity at a specified location in, on or under waterfront land. Under the Water Management Act 2000 (WM Act), a controlled activity means:

- ♦ the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or
- ♦ the removal of material (whether extractive material) or vegetation from land, whether by way of excavation or otherwise, or
- ♦ the deposition of material (whether extractive material) on land, whether by way of landfill operations or otherwise, or
- ♦ the carrying out of any other activity that affects the quantity or flow of water in a water source.

Site and surrounding area

Subject site

The site is a pump station located on the Victorian bank of the Murray River at Happy Valley which is accessed by an unnamed track connecting to Happy Valley Landing Road. This site is opposite to Lot 5546 / DP768456 which is located directly across the Murray River. No private property directly abuts the site of the proposed works.

The immediate area around the site has several access tracks and parking areas. The site is largely devoid of any large trees but includes few plantings of *Eucalyptus camaldulensis* species which is an understory cover and couple of dead trees.

Several other pump stations are located close to the site and these supply irrigation water to other horticultural enterprises located nearby.

The opposite (southern) side of Happy Valley Landing Road has been extensively developed to support various horticultural activities, principally table grape production at this location.



Figure 11 View looking down the bank from site



Figure 12 Looking at dead trees on riverbank



Figure 13 View looking south from the pump site



Figure 10 Aerial image of the site

Locality

The pump station will service a table grape production enterprise that proponents are establishing on the northern side of Hattah - Robinvale Road in Bannerton, Victoria. The nearest land holding in NSW is located on the opposite bank of the river. This landholding is zoned W1.

There is a paved boat ramp approximately 70 metres downstream of the chosen site.

Figure 14 NSW Planning map with the site location



Figure 15 Paved boat ramp 70 metres downstream



Figure 16 View to the pump site to NSW land



Figure 17 View looking up the bank toward the pump site



Figure 18 Looking downstream from the site



Figure 19 Looking upstream from the site



Figure 20 *Power pole southwest of the pump site*



Planning assessment

Policy context

The works subject to approval in this application constitute the smaller portion of a much larger overall project. The greater part of the works associated with this project are located on the land proper in terms of where the plantings are located to be irrigated. The necessary investigations into soils, hydrology, flora, and fauna have been completed to support the applications for development in Victoria.

The proponent has engaged several suitably qualified persons to undertake assessments of and provide expert opinion on several aspects concerning this application. These include the impacts on soils, irrigation, and cultural heritage.

The results of these assessments were used to justify the project scope and were incorporated early in the design and planning phase of the project.

Aboriginal Cultural Heritage

The works will require to dig in the sloping riverbank for newly piers to be installed. The works will be conducted under close observation and by digging using hand tools to prevent any harm to cultural heritage items.

In the event that cultural heritage item is uncovered works will immediately cease and the necessary organisations will be notified to determine what actions are required.

A search of the AHIMS database was undertaken. The search revealed that no aboriginal cultural heritage sites have been recorded in the vicinity of the works location.



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

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

Figure 21 AHIMS search for the site

Fauna

The design of the pump station is a pontoon and gantry system. The pump and rising main will be supported by the pontoon. As a result of this design, there are no contacts with the riverbed or the riverbank.

The pump intake will be fitted with mesh exclusion screens with sieve sized less than 6mm to prevent the ingress of macroinvertebrates and other aquatic species into the pumping system.

Consequently, there will be no impact on aquatic or terrestrial habitat and no impact on the faunal species is likely to occur at the site.

Murray REP No. 2

The Murray REP No. 2 sets out specific principles that need to be considered when undertaking any development on land that the plan applies to. A response to the principles is offered below.

Access

- ♦ The proposed works will not adversely impact the public's ability to access the river or foreshore areas. Access to the site and surrounding area will be unchanged as a result of the planned works. The public access to nearest boat ramp will not be affected by this development neither during construction phase nor during operation of pump site.

- ◆ The suction intake and pontoon will extend into the Murray River. However, navigation of the river will not be adversely impacted. Markers and navigation aids will be installed on the structure as required by Transport NSW.

Bank disturbance

- ◆ Disturbance of the riverbank will be confined to the construction phase of the project and will be minor in nature. It will be limited to the disturbance caused by the foot traffic of workers at the site.
- ◆ Once construction activity is complete, no further disturbance of the riverbank will occur.

Flooding

- ◆ The site is subject to inundation by floodwaters. However, the works will not be adversely impacted by floods of any magnitude. The pump station is designed to remain operational during floods of all foreseeable magnitudes, including 1:100-year flood events.
- ◆ The proposed development of the site will not deprive the surrounding ecosystems of the benefits of periodic flooding. The scale and design of the structure is such that it will not have any impact on the flow regimes of the river.
- ◆ There will be no increased hazards or risks from flooding because of this proposed development. The proposed development will not have any material impact on risk from flooding due to its design, scale or location.
- ◆ There will be no redistributive effects on flooding because of the proposed works. The proposed development will have no impact of any type on the flow of floodwaters.
- ◆ The proposed works will not impact any other land in the vicinity. All adjoining land consists of the riverbank and, by definition, faces the risk of inundation.
- ◆ There will be no impact on the ability of emergency services to have flood-free access due to the siting or design of the proposed works.
- ◆ There will be no increased risk of pollution during flooding as a result of this proposal. The site will not be used for the storage of chemicals or any other potential contaminants.

Land degradation

- ◆ The land subject to the proposed development consists entirely of the riverbank from the waterline to the high point at the top of the bank. The development will have limited impact on the riverbank. The only point of contact will be the gantry support structure located on the sloping riverbank. The other end of the gantry is located on the pontoon located in the river itself.
- ◆ Understorey species will be allowed to recolonise the riverbank underneath the support gantry.
- ◆ There will be no excavation at the site as part of the proposed works. There will be no increased risk of increasing the potential for sulphur and acids in soils.

Landscape

- ◆ The pump station site is largely devoid of understorey and groundcover species. The only vegetation required to be removed will be the few understorey *Eucalyptus camaldulensis* cover and couple of dead trees to establish the infrastructure for a pumping site. Once construction is complete, the understorey species will be left undisturbed and will be encouraged to re-establish underneath the support gantry.



Figure 22 View looking west from pump site

River related uses

- ◆ The development has an essential relationship with the Murray River. The river is the sole source of

irrigation water in the region and the development cannot occur elsewhere or be set back from the river.

Settlement

- ◆ The proposal is intrinsically linked to the Murray River. It cannot be located anywhere else. It cannot be located on flood-free land. The site is located among other similar irrigation facilities and this proposal will not have any impact on the availability of cropping, pastoral or food and fibre producing land.

Water quality

- ◆ There will be no effect on water quality as a result of the proposed works.
- ◆ The proponent will take all possible and responsible measures to prevent any negative impact on water quality during construction. This will include measures such as:
 - ◆ Construction activity will be confined to periods of suitable weather
 - ◆ If required, a suitable silt barrier will be erected to prevent any silt and soil entering the river.
 - ◆ No snags will be removed from the river.

Wetlands

- ◆ The works are not located on or near any mapped wetlands.

Balranald LEP

The site is in Zone W1 Natural Waterways. The proposed works are consistent with the relevant objectives of this zone, including:

- ◆ *To protect the ecological and scenic values of natural waterways*

There are existing operational pump stations both upstream and downstream to irrigate the respective benefiting land. The proposed development will have no additional impact on the ecological values of the immediate region. The design siting and layout of the facility has considered impacts as necessary. The works have been sited in area which is largely clear of vegetation.

The works site is a crown land but has no significant ecological value as a habitat. The aquatic habitat will not be interfered with as there is no contact with the bed of the river. No snags will be removed from the river through the installation of the pontoon.

- ◆ *To prevent development that would have an adverse effect on the natural values of waterways in this zone*

The proposed development has been designed carefully to extract the required amount of water for the growth of horticultural crops which proponent is planning to establish. There will be no significant impacts resulting from the proposal.

- ◆ *To provide for sustainable fishing industries and recreational fishing*

There will be no adverse impacts on fishing as a result of the proposed development.

Site Constraints

The principal site constraint is that the entire site is located on the sloping southern bank of the Murray River. This means that it is located on state border between New South Wales and Victoria. All terrestrial access to the site is from the Victorian road network.

The slope of the riverbank presents additional complexities that have been accounted for both in the project design and the proposed works plan.

There are number of large trees nearby the site along the riverbank. Thus, the site has been carefully chosen to have no effect on natural vegetation.

Potential Impacts

Below is a list of the potential impacts that have been identified during the planning phase for this project. The list also includes the steps that have been taken to minimize these impacts.

Tree removal or damage

The site is largely devoid of vegetation so impacts to vegetation will be minimal. Only the necessary understorey cover and couple of dead trees will be required to remove to place the infrastructure. There will be no need to remove, lop or cause any harm to any other vegetation at the site.

Visual and aesthetic impact

The site has been carefully nestled among the large Black Box trees and understorey Black Box cover. There will be only minimal changes to the site's visual impact. Other pump stations of similar design and appearance are located nearby.

An appropriate colour palette (including muted tones) will be used for all site infrastructure to ensure that it blends into the setting as much as possible.

Traffic impacts

There will be no additional traffic generated or any additional traffic impacts for any roads in New South Wales. There will be a minor increase in traffic volume during the short period of construction, but this will be confined to the Victorian road network.

Impact on flow paths

There will be no impacts on any flows as a result of this proposal.

Waste management

The production of waste will be limited to the construction phase of the project. During construction, the management of waste will be a priority. Workers at the site will be required to remove all waste materials from the site at the conclusion of each working day.

The operational pump station will produce no onsite waste.

Siting impacts

The pump station will not interrupt views of, or disrupt access to, the river and its environs. The infrastructure owner is in the process of obtaining a Crown Lands Licence for the site.

Visual appearance

The visual impact of the infrastructure at the site will reflect its function. The appearance will be attenuated as far as possible through the careful choice of materials and colours where scope to do so exists.

Design impacts

There will be minimal changes to the site's appearance. The site will be developed for a pump station and the infrastructure will reflect this use.

Noise, vibration, and dust

The pump station is in a relatively remote area of New South Wales. There are no residences that are close enough to detect noise from the operating pump station. There will be no detectable vibration or dust or any other type of emissions from the operating pump station.

Impact Identification

Potential impacts on the site as result of this proposal have been identified through a process involving consultation with expert consultants, visits to the site, and negotiation with various consent authorities and service providers on both sides of the state border.

Impact Minimisation

The proposal to install a new pump station has been chosen carefully to have a minimum impact on both river and its environs.

- ◆ No contact with the riverbank or riverbed. The gantry spans the riverbank and eliminates impacts with the bank and riverbed.
- ◆ Reduced maintenance and service callouts. The new pumps have increased service intervals and require less maintenance.
- ◆ Safe access to the pumps. The pumps are easily and safely accessed via the gangway on the gantry.
- ◆ The pumps will automatically respond to changes in river levels. The floating pontoon means that there is no need for workers to attend the site and manually reposition the pump to ensure that pumping can continue each time there are changes to river heights.
- ◆ The pumping design and siting offer reliability and efficiency ensuring that the vineyard has sufficient irrigation water during peak demand times and river flow regimes.

Construction Impact

The proponent will implement several control measures to ensure that the potential impacts to the site because of construction activity will be controlled and minimised. These include the following:

Silt fencing

If required, silt fencing will be erected at the site. The first fence will be placed along the riverbank, close to the water's edge. This will prevent any loose soil or any other debris from entering the river. Any material trapped by the fence will be picked up by and removed from the site.

Vegetation impact

The project will have minimal impact on vegetation. Only necessary understorey species will be required to remove. No other vegetation will be cleared, trimmed, or lopped at any time during construction.

Fauna impact

Impacts on faunal species because of the project will be minimal. There will be no impact with the bed of the river. No snags or logs will be removed from the water. The pumps' suction intakes will be fitted with exclusion screens with sieve sized less than 6mm to prevent organisms being drawn into the pumps.

Rubbish and waste

Contractors will be required to remove all wastes from the site each day. No waste of any type will be permitted to be stored at the site.

Noise

Noise generated during construction will be general construction noise. Construction hours will be confined to the EPA recommended times.

Dust, vibration, and other emissions

It is not expected that construction activity will result in emissions of dust, vibration, or any other type of emissions. The operational pump station will have none of these impacts.



Conclusion

In conclusion, it is considered for the reasons outlined above, the development responds well to the opportunities and constraints of the site and is consistent with the relevant provisions.

The proposal is appropriate for the site for the following reasons:

- ◆ The proposal is consistent with Balranald LEP.
- ◆ The proposal is consistent with the Murray Regional Environmental Plan No 2 – Riverine land.
- ◆ The proposal supports primary production industry in the region with the attendant benefits this brings to the wider region.
- ◆ There will be no net loss of vegetation and no other substantial impact on ecological or biodiversity values of the locality.
- ◆ The proposal responds well to the site's characteristics and opportunities and has considered the potential impacts upon the locality and particularly of this section of the Murray River.

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