# Construction Environmental Management Plan

## Duxton Vineyards Pump Site – Euston NSW

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# Introduction

This Construction Environment Management Plan (CEMP) is for a diesel-powered river pump located on the northern bank of the Murray River on Lot 2 DP 1252366, approximately 30km east of Euston NSW. The site is accessed via Tillara Road and then via on-farm access tracks and will draw water from the Murray River for use on the Duxton dried fruit and wine grape vines

The CEMP is required to accompany a Statement of Environmental Effects to obtain Landowners Consent for the site.

# Purpose and Objectives of the Construction Environmental Management Plan

The purpose of this CEMP is to detail actions and procedures to be conducted during the planning, design, mobilizing, construction, and recommissioning phase of the erosion mitigation works

The objectives of this CEMP are to.

- Identify environmental aspects/impacts prior to works commencing
- Identify environmental mitigation measures to reduce risk

An environmental risk assessment is documented and detailed in **Appendix A.**

The following environmental objectives and targets apply to the project

***Table 1*** *Environmental Objectives and Targets*

| Objective | Target |
|---|---|
| To minimise any impacts of flora and fauna | • No significant impact or suitable offsets if impact unavoidable |
| To minimise any impact on riverine environment | • Effective sediment and erosion control<br>• No fuel or hazardous substance spills |
| To minimise the spread of weeds declared noxious weeds | • Effective and practical vehicle hygiene controls |
| To minimise the impact on cultural heritage artifacts and places | • No disturbance to known cultural heritage artifacts or places<br>• Protection of encountered cultural artefacts |
| To minimise the impact on air quality | • Machinery maintained to manufacturers specifications<br>• Dust suppression on stockpiles and roads |
| To minimise the disturbance to amenity | • Work to be conducted within defined work times<br>• No reduction to the amenity of neighbours |

# Implementation

## Training, Awareness and Competency

The proponent will ensure that workers are trained and competent to undertake the project works in accordance with the environmental requirements outlined within this plan. Worker training, awareness, and competency regarding environmental awareness as a minimum will include.

- Completion of Construction Induction (CI Card)
- Completion of project induction
- Awareness of this CEMP

This document applies to all on-site employees, contractors, sub-contractors and visitors and forms part of the safe systems of work for this project. Environmental awareness is the responsibility of everyone working onsite.

### Induction

The proponent will ensure that workers (including contractors, subcontractors, and visitors) are inducted into the project at which time they will be provided training and instruction in all the matters that are contained in this document. All workers attending the site will receive particular instruction in, and thoroughly understand the proponents' requirements relating to the following:

- Protection of vegetation
- Preservation and respect for cultural heritage
- Maintaining public safety
- Waste management and litter prevention
- Safe handling of chemicals and fuels

### Toolbox Talks

Toolbox talks will be facilitated as required by the proponent. The purpose of these talks is to update staff on any safety or environmental concerns and to identify, implement and assess mitigation actions.

## Onsite Responsibilities and Reporting

***Table 2*** *Onsite Responsibilities and Reporting*

| Position | Roles | Reports To |
|---|---|---|
| **Proponent** | Responsible for identifying environmental aspects and impacts associated with the project | **Stakeholders** |
| | Responsible for the assessment and implementation and control measures to minimize environmental impact | |
| | Responsible for training staff on CEMP | |
| | Responsible monitoring effectiveness of CEMP | |
| | Responsible for implementation of CEMP | |
| | Responsible for daily inspection of works to ensure compliance with CEMP | |

| | | |
|---|---|---|
| | Responsible for the implementation of mitigation works in the case of non-compliance with the CEMP | |
| **Employees and Subcontractors** | Comply with the CEMP<br>Comply with instructions given by project manager and site supervisor | **Site Supervisor** |

The proponent will undertake regular monitoring on the environmental performance of the project including.

- Site inspection observations
- Non-conformance and incidents
- The effectiveness of risk mitigation measures

# Pre-Construction – Approvals

The proponent will ensure that all permissions, approvals, licences and permits required for construction activities will be received and on hand prior to commencing any works. Preliminary work will include identifying suitable sites for laydown and stockpiling. The site footprint will be identified by bunting/flagging and areas of significant vegetation will be cordoned off.

# Construction

## Work Zones

Before any construction equipment enters the site, relevant designated work zones must be clearly marked to ensure that no off site environmental damage occurs.

**Work zone** – total area impacted including construction zone, access tracks, materials storage, stockpile sites, vehicle and equipment parking, amenities, maintenance, and refueling.

**Traffic zone** – access tracks or roads through or near the work zone.

**Construction zone** – area(s) directly impacted by works; includes pump footprint, control room, power supply and pipeline corridor. No works to be performed outside this zone.

**Work exclusion zone** – area within a work zone that may be excluded due to vegetation or other reasons.

**Conservation zone** – area outside the work zone, construction zone and traffic zone – not to be disturbed.

**Rehabilitation zone** – an area involved in the restoration of the site

Before works commence the site will be clearly defined. Access to the site will be through existing access tracks and roads. The areas for parking of vehicles and machinery will be separated from the work area and areas assigned for laying down of materials.

## Weeds

**Management Objective**: To negate the transport of weed seeds and foreign matter into the construction site footprint.

All machinery will be pressure washed prior to attending the site and be clean and free of weeds, exotic vegetation, and road debris before arriving on site and will be inspected by the proponent. This will ensure hygiene of the site is maintained during and following construction.

## Vegetation Management Measures

**Management Objective**: To minimize disturbance to vegetation during the planning, mobilizing, installation, commissioning and operation of irrigation pumps and associated infrastructure.

There is to be no stockpiling of material or storage of machinery/equipment on vegetated sections of Crown Land. There is a clear and level area behind the site, that has ample area for lay-down of materials.

Within native vegetation areas to be retained the following is prohibited

- Vehicular access
- Soil excavation
- Storage or dumping of soil, materials, equipment, vehicles, machinery, or waste products
- Any other activities that may result in diverse impacts to retained vegetation

## Vehicle access

**Management Objective**: To minimize environment impacts associated with increased vehicular traffic.

The proposed works will require access to the site by heavy machinery, plant, and equipment at various stages of the project. All access will be via existing tracks.

The site is not to be accessed by vehicles or plant during or after periods of heavy rainfall or flooding to avoid damage to tracks. No refueling or maintenance of vehicles or plant is to be undertaken on Crown Land.

No additional roads or tracks will be constructed. Parking will be limited to the area behind the construction site adjacent to the access road.

## Lay down areas/Stockpiling

**Management Objective**: To ensure erosion from stockpile areas does not reach the Murray River.

There is ample area behind the control room and adjacent to the formed access track that can be used for the lay-down of materials

## Fire Prevention

**Management Objective**: To prevent the outbreak of any fires during the mobilization, installation, recommissioning and operation of pumps and infrastructure.

Workers will receive instruction on fire safety requirements and emergency contact numbers as part of the site induction. Workers and contractor vehicles and machinery will be well maintained and fit for purpose and have fire extinguishers fitted.

No vehicles will be permitted to work in areas where combustible material could accumulate around hot exhausts and construction activities with potential ignition sources will require a hot work permit to be completed prior to commencing works.

Works will not occur on days of Total Fire Ban or Code Red to avoid bushfire risk.

## Erosion and Sediment Control

**Management Objective**: To ensure erosion from stockpile areas does not reach the Murray River.

Silt fencing (star picket supports and hessian material in-fill) 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 and removed from the site.

No work will be conducted on days of heavy rainfall to prevent damage to tracks.

## Water Quality Protection

**Management Objective**: To minimize the impact of fuel and chemical contamination arising from the mobilization, installation, commissioning and operations of pumps and irrigation infrastructure.

There will be no bulk storage of chemicals or fuel on the site. The proponent will ensure that workers and contractors bring the minimum amount of hazardous chemicals required to complete the works. All hazardous chemicals will be used as per label directions and have a current SDS available on site.

Machinery will not be permitted to be refueled on site and no hazardous chemicals will be permitted to be stored on site overnight.

A spill kit will be kept on site for the duration of the works.

## Air Quality

**Management Objective**: To minimize airborne pollutants during installation, commissioning, and operation of pumps.

It is not expected the works will have a significant impact on air quality. The proponent will ensure that all vehicles and machinery accessing the site is in good working order, suitable for purpose and is serviced and maintained to manufacturers specifications.

All materials imported or leaving the site will be covered prior to transport.

Should construction activities produce raised dust then watering of the areas generating dust will occur.

## Cultural Heritage

**Management Objective**: Preservation of items and places of cultural and natural heritage.

The proposed works are in an area where there has been previous high-level disturbance of the soil profile at the site.

The proposed plan of works means that no high impact activities will occur within the area of Aboriginal cultural heritage sensitivity. Excavation will be limited to the auguring of two footings for the concrete slab above the high bank.

It is recognized that there remains the potential to encounter unknown sites of cultural heritage and to address this the following actions are required.

- Work within 10m of the discovery must cease
- The discovery must be protected from harm
- The relevant authority must be notified of the discovery within 24 hours

## Wildlife Management

**Management Objective:** To minimize disturbance to fauna during mobilizing, constructing, commissioning and operation of the new pump.

There will be ~30m of trenching to join the delivery to the existing mainline will be no open trenches in which local fauna can become trapped. This trench will be tapered at either end to permit trapped wildlife to escape.

Speed restrictions will be enforced on site to reduce the potential of colliding with native and domestic wildlife on the construction site and access tracks.

## Waste Management

**Management Objective:** To reduce, reuse or recycle waste products generated from the mobilizing, constructing, commissioning and operation of pump.

Given the nature of the project there may be significant amounts of waste generated during this project and the proponent will instruct and enforce the removal of waste by contractors daily. It will be a requirement that all waste removed will be disposed of at appropriately licensed landfill or recycling sites.

## Amenity

The pump station is in a relatively remote area and there are no residences that are close enough to be impacted by excessive noise (nearest residence is on the Duxton vineyard ~700m away). Construction activities and the delivery of materials to and from the site, shall only be carried out between the following hours

- Monday to Fridays, between 07:00 AM and 06:00 PM
- Saturdays, between 08:00 AM and 01:00 PM

No works will be carried out on Sundays and public holidays and adequate notification shall be given to residents within 1km of the work site should any out of hour's work be required.

## Public Safety

This location is generally not accessible to the public as access is via on-farm roads. As such threats to public safety are minimal.

## Site Rehabilitation

The pump station infrastructure is largely modular in design. The various components are often simply bolted together. This means the demolition is often simply a matter of unbolting and removing them from the site.

Appropriate plant and machinery will used as need. This will likely include cranes and excavators.

Works to remove the infrastructure at the site will include all of the following:

- Site de-energising - the mains electricity will be disconnected.
- Removal of all above ground infrastructure. The site components are valuable and will be removed and reused elsewhere. This includes all of the pumping infrastructure and pump control devices. The suctions and valves will be removed for appropriate disposal. All of the support gantry and frame will be unbolted and removed for disposal.
- Support pylons will be cut off and/or unbolted below ground. Any excavated material will be returned to its place.
- The concrete slab will be broken up and removed from the site. The material will be taken to an appropriate facility for reprocessing.
- The site will be revegetated with locally sourced river red gums and understory.

All works will be conducted only at times of suitable weather. There will be no activity at the site during periods of wet weather.

## Surveillance and Improvement of EMP

Periodic inspection of the works by the proponent will be conducted to ensure that environmental outcomes are being achieved and that workers are compliant with the CEMP.

Inspections will focus on areas such as impacts to vegetation, noise and dust management, hazardous substance management and waste management.

Monitoring of the effectiveness of the CEMP will be achieved by discussion of environmental issues at Toolbox and pre-start meetings. Items discussed will include any new risk assessments on activities that can have a significant effect on the environment, non-conformances, and corrective actions. Toolbox meetings will be used to evaluate meeting the objectives of this document.

If monitoring activities detect an environmental non-conformance the proponent will.

- Investigate the incident
- Cease activities or implement suitable controls until the environmental deficiency is addressed
- Report the incident to relevant authorities
- Implement corrective actions
- Amend the EMP where necessary

## Monitoring and Maintenance of the Site

### Weed Control

Weeds will be controlled so that normal pumping activities are not impeded. Weeds that pose a fire hazard or offer a refuge for pest and vermin will be removed from around the new pump site at an early growth stage.

### Vermin Control

Should numbers of vermin such as rabbits increase to an extent that they become a risk to the structural integrity of the site due to burrowing, then the proponent will seek advice from LLS to determine the best means of control.

The control room should be kept free of insect and spider infestation.

## Infrastructure Monitoring

Continued operation of the pumping infrastructure must not pose a threat to the surrounding environment and the proponent will monitor the condition of the installation on a regular basis.

- Leaking flanges and gland-packing must be repaired in a timely manner so that they do not cause erosion to the riverbank and sedimentation of the river
- Leaking oil from gear boxes must be cleaned and contaminated soil removed and replaced with clean fill.
- Grease cartridges and other waste must be removed on a regular basis
- Noisy components must be repaired/replaced in a timely manner before they pose a nuisance to neighbors.
- Overland flows following heavy rain events should be monitored to ensure that the site is not being undermined or adding to riparian erosion and sedimentation of the river.

# Appendix 1

# Environmental Risk Assessment

| Risk | Likelihood | Consequence | Inherent Risk | Control | Residual Risk |
|---|---|---|---|---|---|
| **Disturbance of items of cultural or natural heritage** | Unlikely | Major | High | • Site is an existing structure that has previously been highly disturbed<br>• Procedure for encountering unknown items of cultural heritage to be included in the induction | Low |
| **Community amenity** | Unlikely | Minor | Low | • Site is an existing pump site<br>• Beaching will be of a muted tone – light grey in colour | Low |
| **Fire/Bushfire** | Unlikely | Major | High | • No refueling on site<br>• Suitable firefighting equipment on site<br>• Work to cease during severe fire danger days | Low |
| **Disturbance of fauna** | Possible | Moderate | High | • Restrict traffic to defined roadways<br>• Restrict clearing<br>• Do not move fallen timber if possible | Low |
| **Disturbance to vegetation** | Possible | Minor | Medium | • Washdown machinery and vehicles to reduce import of weeds<br>• Barricade trees and areas of native vegetation<br>• Third party offsets for vegetation removal (if required) | Low |
| **Soil contamination** | Possible | Moderate | Medium | • No bulk fuels stored on site<br>• No hazardous substances to be stored on site | Low |
| **Erosion** | Possible | Moderate | Medium | • Lay down areas to be located away from river | Low |

| | | | | | |
|---|---|---|---|---|---|
| | | | | • Silt barrier to be erected along riverbank | |
| **Airborne emissions** | Likely | Minor | High | • All equipment to be maintained as per manufacturers specification<br>• Dust suppression to be utilized on roads and stockpiles as necessary | Low |
| **Excessive noise and/or vibration** | Possible | Minor | Medium | • All equipment to be maintained as per manufacturers specification<br>• No out of hours work unless authorized and notification provided to residents | |

| **LIKELIHOOD** | **CONSEQUENCES** | | | | |
|---|---|---|---|---|---|
| **How likely it is to happen** | **Insignificant** (no injuries) | **Minor** (First aid; spillage contained on site) | **Moderate** (Medical treatment; spillage contained with outside help) | **Major** (Significant injury; loss of production) | **Catastrophic** (Death: toxic release of contaminants) |
| **Almost certain** Expected in most circumstances >95% | **3 H** | **4 E** | **4 E** | **4 E** | **4 E** |
| **Likely** Will probably occur >50% | **2 M** | **3 H** | **4 E** | **4 E** | **4 E** |
| **Possible** Might occur at some time >10% | **1 L** | **2 M** | **3 H** | **4 E** | **4 E** |
| **Unlikely** Could occur at some time >1% | **1 L** | **1 L** | **2 M** | **3 H** | **4 E** |
| **Rare** May occur in exceptional circumstances <1% | **1 L** | **1 L** | **2 M** | **3 H** | **3 H** |

| **Score and Statement** | **Action** |
|---|---|
| **4 E: Extreme** | **ACT NOW – URGENT** |

| | |
|---|---|
| **3<br>H: High** | **Highest management decision is required urgently** |
| **2<br>M: Moderate** | **Follow management instructions** |
| **1<br>L: Low** | **Record and review** |

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