

## Phylloxera and Grape Industry Board of South Australia

### Vineyard Wash Down Facility

### DESIGN SPECIFICATION

#### Introduction:

This specification covers the concept of and lists the construction details for a “*Vineyard Wash Down Facility*” It is a generic model suitable for individual modification relevant to each grower’s situation.

1. **Option 1 locations** relate to properties that have the ability to drain away from the wash down point to low lying areas – providing that those areas are at least 50 metres from the nearest vines.
2. **Option 2 locations** relate to properties that can’t meet this criteria and therefore require collection and disposal of waste wash down products.

#### Concept

- **Wash Water** for both options is supplied from a **Storage Tank** and pumped at high volume and pressure to a **Hose Point**. Storage capacity should allow for a worst-case scenario of 45 minutes usage (Harvester) with minimal tank make up. The operator manually cleans the vehicle or piece of equipment and is responsible for clean up and disposal of organic waste into the relevant container.
- The **Wash Down Area** for *Option 1 locations* is an uncovered, self-draining section of compacted *quarry rubble*.

For *Option 2 locations* the **Wash Down Area** is an uncovered, self-draining, *reinforced concrete slab*.

- **Wash Water** is supplied via a **Fire Fighting Pump** delivering 100 litres per minute at 600 kPa.
- Wash water from *Option 1 locations* drains directly to the **Designated Disposal Area** at the low end of the site. Wash water and sediment from *Option 2 location* slabs is collected through a **Central Drain** and channelled into an **Underground Settling Pit** for collection and disposal elsewhere.
- The storage tank makes up lost water through a direct **Mains Water Connection**.
- The pump, hose reel and valve set up can be stored in a small **Shed** with any detergents or chemicals for safety and security reasons.

#### Technical Specifications

**Duty:** Supply 6,000 litres per hour(100/Min) of cold(Ambient) water at 500kPa minimum. Collect the wastewater, sediment and plant matter and dispose of them.

#### Wash Down Area

##### **Option 1 locations:**

15metre x 4metre compacted quarry rubble section. This should be a minimum 200mm in depth, placed in two 100mm layers and compacted damp to achieve 98% compaction. The base should first be levelled and graded to the lower end of the site. The rubble may have a slight fall from both sides to the centre to facilitate drainage and must be of an appropriate grade. “Highways Standard PM21” is recommended. (20mm rubble). Soils should not be mixed in with the rubble. Compaction in accordance with Australian Standard 1289 is recommended.

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\* Suppliers listed are suggested by the consultant engineer and have no endorsement from the Phylloxera and Grape Industry Board of South Australia. Readers are strongly advised to seek multiple quotes before selecting a supplier of goods and services.

**Option 2 locations:**

15 m x 4 m concrete slab using N40 grade concrete to A.S. 3600 – 1994.

Refer to attached drawings and design notes by Structural Engineer concerning sandy or clay sites and for full detail. This consultant can arrange soil testing and make recommendations if required.

*David Combe & Associates\**  
*P.O. Box 402*  
*Unley S.A. 5061*

*08 8272 0244, 08 8373 1814(fax)*  
*e-mail: combe@camtech.net.au*

Local concrete contractors may be used for the slab installation but specifications must be adhered to.

**Drain Cover**

Galvanised mesh or wire construction. Mesh opening size should be such as to prevent plant matter passing through while ensuring a full water flow occurs.

**Shed**

Any basic construction or size relevant to the installation and requirements of the grower.

**Storage Tank**

4,500 or 5,000 litre - polyethylene construction, solid lid design, 50mm brass outlet. This *Tank* is a coloured, 'poly rib' vessel, has a 25 year guarantee and is available from:

*Bushman Tanks\**  
*15 C.B. Fisher Drive*  
*Cavan Estate*  
*Cavan S.A. 5094*

*08 8359 5455*  
*Greg Sharp*

Selection need not be limited to the above as most types and makes of tanks will be suitable for this purpose.

**Supply Pump**

3PKA-H5.5 Fire Fighting Pump close coupled to a Honda GX160 Petrol Recoil Start Motor.

*Harland Pump Sales & Service\**  
*8 Manthorpe Street*  
*Dry Creek S.A. 5094*

*08 82624911, 4355(fax)*  
*Chris Watters*

**Settling Pit (If Option 2 location)**

PCP No 5 Trade Waste Arrester, 5,280 litre.  
4800 x 1500 x 1650 Reinforced Concrete. (10.8 tonne)

*PCP Pty. Ltd\**  
*PO Box 320*  
*Kilkenny S.A. 5009*

*08 8268 1622, 1644 (fax)*  
*Tom Schultz*

Water, sediment and plant matter collected in this pit will require frequent disposal, possibly after each wash down.

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