# Weed Management Plan Guidelines

## Melton City Council

FINAL REPORT

Prepared for Melton City Council

27 August 2021

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|---|---|
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| **Biosis project no.:** | 34917 |
| **File name:** | MCC.WMP.Guidelines.FIN01.20211022 |

**Citation:** Biosis 2021. Weed Management Plan Guidelines Report prepared for Melton City Council. S. Bidwell, Biosis Pty Ltd, Melbourne, Victoria. Project no. 34917

## Document control

| Version | Internal reviewer | Date issued |
|---|---|---|
| Draft version 01 | Steve Mueck | 27/08/2021 |
| Final version 01 | Sjaan Bidwell | 22/10/2021 |

## Acknowledgements


Biosis acknowledges the contribution of the following people and organisations in undertaking this study:

- Client: Lawrie Conole, Jason Edwards and Kate Martin

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## Abbreviations

| Abbreviation | Description |
|---|---|
| ***CaLP Act 1994*** | *Catchment and Land Protection Act 1994* |
| **DELWP** | Department of Land, Water and Planning |
| **DJPR** | Department of Jobs, Precincts and Regions |
| **DNW** | Declared noxious weed listed under the *Catchment and Land Protection Act 1994* |
| **MCC** | Melton City Council |
| **PWP CMA** | Port Philip and Westernport Catchment Management Authority |
| **WoNS** | Weed of National Significance |

## Glossary

| Term | Description |
|---|---|
| **Declared Noxious Weeds** | ***Regionally Controlled Weeds (C)***<br>These invasive plants are usually widespread and are considered important in a particular Region. To prevent their spread, continuing control measures are required. Land owners have the responsibility to take all reasonable steps to prevent the growth and spread of Regionally Controlled weeds on their land.<br>***Regionally Prohibited Weeds (P)***<br>Regionally prohibited weeds are not widely distributed in a Region but are capable of spreading further. It is reasonable to expect that they can be eradicated from a Region and they must be managed with that goal. Land owners, including public authorities responsible for Crown land management, must take all reasonable steps to eradicate regionally prohibited weeds on their land.<br>***Restricted Weeds (R)***<br>This category includes plants that pose an unacceptable risk of spreading in this State or to other parts of Australia if they were to be sold or traded in Victoria, and are a serious threat to another State or Territory of Australia. Trade in these weeds and their propagules, either as plants, seeds or contaminants in other materials is prohibited. |
| **Environmental weeds** | An environmental weed is a non-indigenous plant species that has invaded (or has the potential to invade) natural ecosystems and threaten (or has the potential to threaten) environmental and/or conservation assets. It may include some Australian native plants not indigenous to a given area. Environmental weeds can be declared as noxious weeds (under schedules in the *Catchment and Land Protection* (CaLP) *Act* 1994) but many are not declared. Refer to DELWP Advisory List of Environmental Weeds (DELWP 2017). |
| **Weeds of National Significance** | Weeds of National Significance (WONS) are weeds considered a threat within Australia within an agricultural, forestry and environmental and national context. Twenty WONS were identified by the federal government as a priority for control within Australia. The list is intended to provide a framework to prioritise weed management at the state, regional and local levels. Individual landowners and managers are ultimately responsible for managing WONS. Each WONS has a strategic plan that outlines strategies and actions that are required to control the weed and identifies responsibilities for each action. |

# 1 Introduction

## 1.1 Background

Melton City Council (MCC) has prepared these Guidelines to assist developers and their contractors in the preparation of Weed Management Plans (WMPs) for construction sites throughout the municipality. These Guidelines outline MCC's expectations for WMPs when a planning permit condition specifies that a WMP must be prepared by a permit holder and implemented by the permit holder to the satisfaction of MCC.

In framing these guidelines, we have drawn extensively on the construction industry's own documentation (Civil Contractors Federation 2011), as well as other best practice and regulatory compliance documentation from Agriculture Victoria in its role as the regulator of the *Catchment & Land Protection Act 1994*.

MCC's planning permit condition typically requires:

A Weed Management Plan, which outlines measures to manage weeds to the satisfaction of the Responsible Authority, must be prepared as part of the Construction Environmental Management Plan (CEMP) and must include (but is not limited to):

- Protocols for management of weeds before, during and post construction works.
- All vehicles, earth-moving equipment and other machinery must be cleaned of soil and plant material before entering and leaving the site to prevent the spread of weeds and pathogens.
- Identify the location of a designated wash-down area to achieve the above.
- All declared noxious weeds must be controlled.
- All weed infestations resulting from soil disturbance and/or the importation of sand, gravel and other material must be controlled.

## 1.2 Regulatory framework

### *1.2.1 Catchment and Land Protection Act 1994*

Landholders and managers are required under the *Catchment and Land Protection Act 1994* to control declared noxious weeds on their land and to take all reasonable steps to prevent the spread of declared noxious weeds within Victoria. The specific sections of the Act of relevance to construction sites within Melton include:

Under section 70A Removing particular vehicles or other things on to a road: A person must not remove machinery, implements or other equipment from land on to a road without first taking reasonable precautions to ensure that the equipment is free from— (a) the seeds of any noxious weed; and (b) any other part of a noxious weed that is capable of growing.

Under section 20 of the CaLP Act, all land owners, including the Crown, public authorities and licensees of Crown lands, must, in relation to their land, take all reasonable steps to:

- Avoid causing or contributing to land degradation which causes or may cause damage to land of another land owner.
- Eradicate regionally prohibited weeds.
- Prevent the growth and spread of regionally controlled weeds on their land.
- Prevent the spread of, and as far as possible, eradicate established pest animals.

In the case of non-compliance with section 20 of the CaLP Act, the government may serve a Directions Notice and/or Land Management Notice on a land owner outlining measures that must be taken for the control or eradication of noxious species on their land. Not complying with the conditions of a Directions Notice or Land Management Notice is an offence and penalties may apply.

The CaLP Act also contains provisions to prevent the spread of declared noxious weeds, through regulating the purchase, sale, possession for the purposes of sale, display, propagation or transport of these species into or within Victoria.

In summary, it is an offence to:

- Remove or sell soil, sand, stone, gravel, fodder or grain likely to contain any part of a noxious weed without a permit. A person who contravenes any of these prohibitions may be directed to remove the noxious weed from any infested goods (animal, plants, vehicle, soil, sand, gravel and stone) or destroy them or restrict the movement if it is likely to spread weeds.
- Buy, sell, possess for sale, bring into the State or transport within the State without a permit, noxious weeds, seeds of noxious weeds or any part of a noxious weed capable of growing.
- Sell or offer for hire, without a permit from DJPR, any machinery that is for primary production that contains seeds of noxious weeds or other parts of noxious weeds that are capable of growing.
- Sell an animal that is carrying the seeds of a noxious weed without a permit from DJPR, unless it is a farm animal being sold directly to a meat processing facility within the meaning of the *Meat Industry Act 1993*.
- Deposit on land, without a permit from DJPR, a noxious weed or a part of a noxious weed that is capable of germinating.
- Fail to comply with a Directions Notice.
- Fail to comply with a Land Management Notice.

**Penalties for offences under the CaLP Act**

Land owners should be aware that the maximum penalty for a single offence involving responsibilities for the management of noxious weeds is approximately $38,000 in 2017/18.

### 1.2.2 Catchment and Land Protection Regulations 2012

There are also regulations under the CaLP Act which further guide the management of invasive pests. The CaLP Regulations 2012 specify the four control measures that can be included in a Directions Notice for each species of declared noxious weed. The four measures are: application of herbicide; cultivation of the soil; physical removal; and mulching.

### *1.2.3 Planning and Environment Act 1987*

Preparation of a WMP is a condition of land development planning permits in the City of Melton, and compliance with the WMP is therefore enforceable under the *Planning and Environment Act 1987*.

**Melton City Council – General Local Law 2015**

**PART 5**

**64. UNSIGHTLY, DILAPIDATED AND DANGEROUS PREMISES**

1. The Owner, and/or Occupier of a Property must not allow:

c) A Noxious Weed to grow on the Property

Noxious weeds in this context has the same meaning as in the CaLP Act definition.

## 1.3 Structure of the Guidelines

The Guidelines are set out as follows:

- Section 2: Guiding principles for weed management
- Section 3: Template for a Weed Management Plan
- Section 4: Links to useful information
- Section 5: Logbook templates

# 2 Guiding principles for weed management

These guiding principles are intended to assist permit holders in developing a weed management program for a given site. These principles are in line with National, State and local legislation and policies related to weed management.

Principle 1: Understanding risks and current site conditions

Principle 2: Prevention and early intervention: prevention is better than cure

Principle 3: Implementation of best practice vehicle and machinery hygiene protocols

Principle 4: Education and awareness of personnel

Principle 5: Undertaking best practice weed control

Principle 6: Monitoring and reporting of compliance

## 2.1 Understanding risks and current site conditions

It is important to first understand which weed species are present within your site, the current extent of infestation at the site, and understand the potential sources of introduction of weeds into the site and spread of weeds within the site or to between sites.

The civil construction industry has the potential to spread weed seeds and plant parts capable of growing, via the movement of contaminated vehicles, equipment, goods and soil/fill. Civil construction activities often involve working in direct contact with soil, and are therefore pose a higher risk of weed contamination than many other industries (CCF 2011). Risks include:

- Introduction of new weeds into sites;
- Spread of existing established weeds within and between sites;
- Impacts on areas of environmental significance e.g. native vegetation and/or habitat for threatened species and/or waterways/wetlands.

Potential sources of weed propagules within the construction industry include:

- Importation of materials into the site such as gravel, soil and mulch.
- Vehicles, machinery and equipment brought onto site or leaving site.
- Adjoining land, which may be infested with weeds, particularly if plants are in seed.
- Exportation of materials from a site, including the disposal of harvested weed material.

## 2.2 Prevention and early intervention

Prevention and early intervention are the most cost effective means of weed management.

**Disposal** – lawfully dispose of surplus material that may contain weed propagules.

**Minimise site disturbance -** minimising site disturbance (particularly soil disturbance) will reduce (but not remove) the opportunities for weeds to establish and ultimately save money.

**Undertake weed control before stripping topsoil** – Undertaking weed control before stripping topsoil will assist in reducing the weed load of a site. To be effective, a WMP should be developed and implemented at the earliest stage of development and be part of a planning application. So that effective weed control can commence well ahead of commencement of construction and be undertaken over a number of seasons, so that seasonal weed species can be targeted and the weed seed bank reduced.

## 2.3 Best practice: Vehicle and machinery hygiene protocols

Implementing strict vehicle and machinery hygiene protocols is of utmost importance in successfully preventing the introduction and further spread of weeds within and between sites. This requires ensuring that staff are trained in appropriate hygiene protocols, have the facilities, time and resources to implement these hygiene protocols and the means for reporting or logging such activities.

Implementing strict hygiene protocols will ultimately reduce costs of weed control (i.e. by preventing the introduction or further spread of weeds), resulting in reduced weed control efforts which in turn reduces costs in the long-term.

Cleaning must occur (CCF 2011):

- After working in an area affected by weeds or plant pathogens.
- Before moving machinery between worksites or properties.
- Before moving machines from a local area of operation.
- Before moving machinery that is infested or likely to be infested with weed seeds or plant pathogens.
- Before and after using machinery along roadsides, riverbanks, controlled access tracks or in remote areas.

Wash-down bays must be:

- Located close to the site entry and exit points or infested areas.
- At least 30 metres from waterways, drainage lines or wetlands.
- At an appropriate buffer distance from native vegetation, and outside Tree Protection Zones.
- Be bunded to prevent sediment run-off.

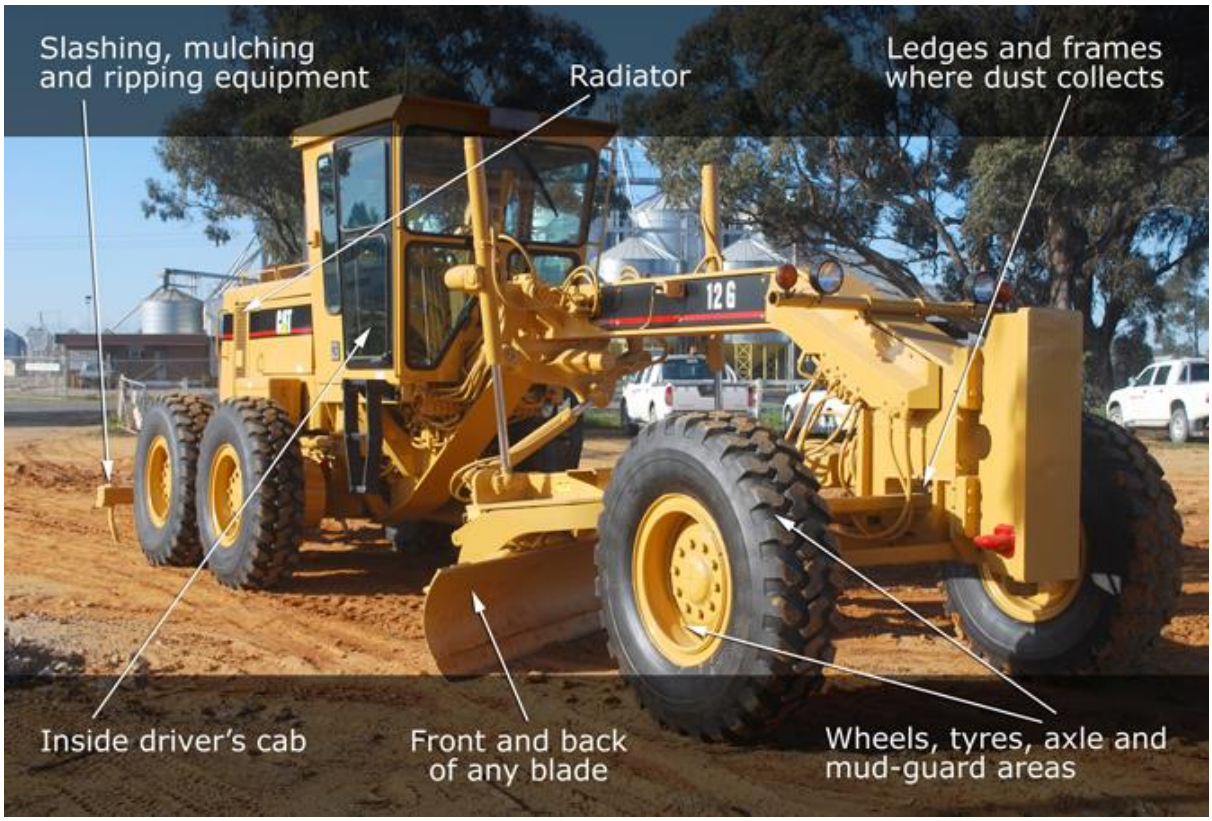
Waste collected from wash-down bays must be managed on site or seek a permit from DPI (136 186) to transport weed infested soil or material off site. Where material is to remain on site, burying may be an appropriate treatment. Care must be taken to prevent discharge off site to waterways and drainage as large penalties may apply.

Effective cleaning methods include:

- Physical removal – done prior to and at the completion of cleaning.
- Washing – high-pressure water or a garden hose.
- Air blasting – suitable for dry dusty machines but not caked on mud.
- Steam cleaning – in some cases this method may kill seeds or plant diseases/pathogens.
- Vacuuming – useful in removing matter from the interior of a vehicle.
- Disinfection with a pressure pump spray – used after cleaning to kill plant diseases and fungus.

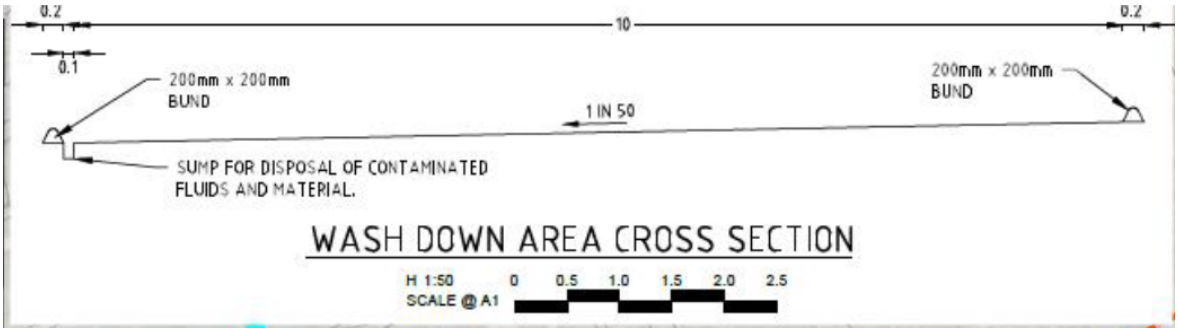
The type of cleaning method used may be dependent on type of machinery, amount of build-up of soil and debris and site constraints. Ensure the selected cleaning method is fit for purpose.

**Figure 1 Critical contammination areas in earthmoving vehicles**




Source: CCF 2011: A Guide for Machinery Hygiene for Civil Construction, Civil Contractors Federation.

**Figure 2 Washdown bay dimensions**




Source: supplied by Melton City Council

## 2.4 Education and awareness of personnel

Without awareness and education of people working on site, the WMP is unlikely to be satisfactorily implemented. As a minimum, all site personnel must be inducted in the WMP, including the location of and how to use the wash-down bay and monitoring and reporting procedures.

MCC encourages contractors working on site to attend the WeedStop training, which provides a Certificate of Attainment in the nationally accredited units 'RTD2312A: Inspect Machinery for Plant, Animal and Soil Material' and 'RTD2313A: Clean Machinery of Plant, Animal and Soil Material'.

## 2.5 Implementation of control methods

The majority (if not all) of the development sites within the municipality of Melton are infested with weeds, including many declared noxious weeds and WoNS. Undertaking weed control before undertaking works is considered best practice, as it reduces the risk of further spread of weeds within and between sites. Stripping the topsoil is not considered weed control in itself. Weed control must be undertaken before stripping the topsoil to minimise the spread of weed propagules within and between sites. Preferably, weed control should be undertaken over several seasons before commencing works.

Best practice includes:

- Undertaking control before plants set seed to minimise the spread of weed seed.
- Undertaking follow-up control over a number of seasons to exhaust soil-stored weed seed and propagules.
- Prioritising weed management efforts, focusing on managing areas of ecological value first e.g. native vegetation and fauna habitat (asset based approach); and focusing on weed species, which are considered to pose a higher threat (species-led approach).

There are numerous types of effective control methods for managing weeds. The appropriate method must be determined based on: 1) species; and 2) extent of infestation and 3) site constraints e.g. if working in native vegetation, a targeted approach is required to prevent off-target damage. MCC strongly encourages permit holders to seek advice from qualified weed contractors who:

1) are experienced in undertaking weed management; and

2) are licensed to use agricultural chemicals (Commercial Operators License certified by Agriculture Victoria).

### 2.5.1 Licences for chemical use

In Victoria, a person must hold a valid an Agricultural Chemical User Permit (ACUP), or be working under the direct and immediate supervision (i.e. within sight and sound) of an ACUP holder to use an agricultural chemical product that is a 'restricted use' chemical (Agriculture Victoria).

'Restricted use' chemicals are as follows (source: Agriculture Victoria):

- Schedule 7 Poisons (Dangerous Poisons).
- Contain atrazine.
- Contain metham sodium.
- Contain ester formulations of 2,4-D, 2,4-DB, MCPA or triclopyr.

## 2.6 Monitoring and reporting compliance

Monitoring and reporting implementation of the Weed Management Plan is important because it will assist you to:

- Demonstrate compliance with planning permit conditions to MCC.
- Meet your obligations under other legislation such as the CaLP Act.
- Learn from management practices and improve these practices over-time e.g. adaptive management.

# 3 Weed management plan template

## 3.1 Identification of risks

### 3.1.1 Current weed problems

Undertake a survey of weeds on the site during the project planning phase. Provide a list of weeds present on site, noting which species are declared noxious under the CaLP Act and/or listed as a WoNS and/or listed as environmental weeds on the DELWP Advisory List of Environmental Weeds (DELWP 2018). These categories of weeds are priority weeds for control and management. An example list of priority weeds is provided in Table 1.

**Table 1 Example of weed species and baseline percentage cover**

| Weed species | Declared Noxious Weed | Weed of National Significance | Environmental Weed | Current % cover |
|---|---|---|---|---|
| Serrated Tussock *(Nassella trichotoma)* | Regionally controlled | yes | Very high risk | 20-30% |
| African Boxthorn (*Lycium ferocissimum*) | Regionally controlled | yes | High risk | 5-10% |
| Artichoke Thistle (*Cynara cardunculus*) | Regionally controlled | no | Medium risk | 5-10% |
| Toowoomba Canary-grass (*Phalaris aquatica*) | no | no | High risk | 20-30% |



Provide a map of weed occurrences across your site. There are many approaches to weed mapping and monitoring that are used. Choose an approach that suits your site and the purpose of the weed mapping. Simple examples include:

- Map of percentage cover of total weeds across the site (e.g. using categories: <5% cover, 5-25%, 25-50% and >50%). This information is then usually used to define management zones. Then in each management zone, a table is be provided with estimates of percentage cover of priority weeds.

- Map of major infestations of priority weeds is useful when there are large isolated infestations of priority weeds e.g. thickets of Box-thorn. This information is useful to weed contractors that are engaged to target priority weeds. Mapping the outline of the infestation also assists in monitoring reduction in extent of the infestation over time (e.g. if managing a reserve).

## 3.2 Potential sources of introduction or spread of weeds

List the potential sources of introduction and spread of weeds into the site and between sites. List the control methods to be employed to prevent the introduction and spread of weeds. Examples of sources of introduction and spread of weeds are provided in Table 2.

**Table 2 Potential sources of introduction and/or spread of weeds and proposed mitigation measures**

| Source | Mitigation measures |
|---|---|
| **Importation of materials into or exportation from the site such as gravel, soil, mulch...** | Inspect all material before entry to site and before leaving site<br>Reject all material that contains noxious weed propagules (seed or vegetative material)<br>Dispose of material containing declared noxious weeds in accordance with the *CaLP Act* e.g. if necessary obtain relevant permit to transport and dispose of at a legal place of disposal<br>Keep records of disposal of above materials<br>Keep records of inspections |
| **Vehicles, machinery and equipment brought onto site and leaving site** | Inspect all vehicles, machinery and plant equipment before entering the site and before leaving the site<br>Maintain a logbook of inspections of vehicles, machinery and plant equipment<br>Clean all vehicles, machinery and plant equipment before entering and before leaving the site at the designated wash-down bay<br>Maintain a logbook of cleaning of vehicles, machinery and plant equipment |
| **Existing established weeds** | Undertake weed control before, during and post construction in accordance with this WMP.<br>Undertake weed control before stripping topsoil.<br>Clearly define targets for weed control and measure progress towards achieving targets.<br>Keep records of weed control completed. |
| **Adjoining land, which may be infested with weeds, particularly if plants are in seed** | For staged subdivisions, undertake weed control ahead of development to minimise potential re-infestation from adjoining sites<br>Clearly define targets for weed control and measure progress towards achieving targets.<br>Keep records of weed control completed. |

| Source | Mitigation measures |
|---|---|
| **Disposal of harvested weed material** | Dispose of material containing declared noxious weeds in accordance with the *CaLP Act* e.g. if necessary obtain relevant permit to transport and dispose of at a legal place of disposal<br>Keep records of disposal of materials and permits obtained. |

## 3.3 Weed management procedures

### 3.3.1 Induction

All personnel working on site must be inducted in the Weed Management Plan. A record of inductions must be kept by the Site Supervisor and must be available on site for inspection by MCC Officers upon request.

### 3.3.2 Vehicle and machinery hygiene protocols

All vehicles, machinery and plant equipment must be inspected upon arrival and before leaving the site. If deemed unclean, they must be cleaned before entering or leaving the site at the designated wash-down bay.

### 3.3.3 Wash-down bay

A wash-down bay is essential to implementing the Weed Management Plan. The location of the wash-down bay must be:

- Located near the entrance and exit points to the sit.
- At an appropriate distance from waterways, drainage lines and/or wetlands (at least 30 m).
- At an appropriate distance from native vegetation and other areas of ecological value e.g. habitat for threatened species (nominally at least 10 metres).

The wash-down bay must:

- Be bunded with impervious material to prevent run-off of water and to contain sediment that could transport weed propagules.
- Stabilised with gravel/ballast or similar material.

### 3.3.4 Importation of materials

A declaration form or equivalent is to be provided by the supplier of organic materials imported to and exported from the site, to confirm that the materials are free of weed seeds and pathogens:

- Materials must be inspected on arrival.
- Records must be kept of all materials transported to site including the supplier, composition and source.
- The transport provider must follow the wash-down procedures for all vehicles, machinery and equipment.
- Noxious weeds must be removed from any areas to be used to stockpile materials.
- Material or soil that may be contaminated must not to be removed without appropriate treatment and permits.

### 3.3.5 Weed control methods, timing and targets

Include a table outlining proposed weed control for each priority weed species, including: weed species, method of control, timing and target (percentage cover).

#### Priority weed species

Priority weeds for control include WoNS, declared noxious weeds (listed under the CaLP Act), and environmental weeds listed on the DELWP Advisory List of Environmental Weeds (DELWP 2018).

#### Methods of control

Select the appropriate method of control based on:

1. species; and
2. extent of infestation; and
3. site constraints

Section 4 provides some useful resources for determining appropriate control methods for common weed species.

### 3.3.6 Targets

Targets must be measurable and realistic e.g. percentage vegetation cover. As a general rule, woody weeds should be eliminated from the site and the total cover of declared noxious weeds should be reduced to < 10% cover prior to stripping topsoil. Thereafter, targets must be maintained throughout construction and post construction.

Such targets will assist in reducing weed control efforts in the long-term, as low weed cover will assist in reducing weed seed load across a site over time i.e. reduce risk of re-infestation. An example weed control plan is provided in Table 3.

**Table 3 Example weed control plan**

| Weed species | Control method | Timing | Target % cover |
|---|---|---|---|
| Serrated Tussock *(Nassella trichotoma)* | Spot-spraying | Before stripping topsoil<br>May-October<br>Before seed set | < 1 % |
| Boxthorn<br>(*Lycium ferocissimum*) | Cut and paint | Before stripping topsoil<br>All year round<br>Before seed set | 0%<br>eliminate |
| Artichoke Thistle<br>(*Cynara cardunculus*) | Spot-spraying | Before stripping topsoil<br>Optimal time September to November<br>Before seed set | < 1 % |

## 3.4 Monitoring and reporting

The following logbooks must be maintained on site and made available to MCC Officers upon request:

1. Weed survey results and weed control logbook.
2. Wash-down logbook.
3. Importation/exportation of materials logbook.
4. Audits.

### 3.4.1 Logbook for weed survey and weed control

Undertake weekly monitoring of the site for new weed management risks, including inspection of:

- Site entrance.
- Wash-down bay and discharge areas.
- Materials transported to site.
- Stockpiles.
- Areas of soil disturbance.
- All sediment collected at the wash-down bay that may contain weed seeds must be appropriately treated or buried with adequate soil cover to prevent seed germination.

The results of all monitoring must be documented in a logbook. Weed control undertaken should also be logged in the logbook. An example logbook for recording weed survey results and weed control is provided in Appendix 2.

### 3.4.2 Logbook for recording wash-down

Record the following information at the wash-down bay for every machine and piece of equipment entering and exiting the site, and all trucks and light vehicles that has been inspected and requires cleaning before it enters and exits the site:

- Date.
- Time.
- The name of the person undertaking wash-down.
- Description (whether machinery, a vehicle or equipment).
- Identification (rego, serial number).
- Origin (where the machinery, vehicle, piece of equipment or personnel has come from).
- Destination (where the machinery, vehicle, or equipment is going to).
- Sign off that a check (for attached soil, dust or weed propagules) has been undertaken.
- Physical removal of soil and debris methods undertaken.

An example wash-down log is provided in Appendix 2.

### 3.4.3 Logbook for recording importation of materials

Record the following for all organic materials imported into or exported from the site that may contain weed seeds, plant parts and/or pathogens:

- Date.
- Time.
- The name of the person responsible for the receiving of materials.
- Supplier.

  Composition.
- Source.
- Destination.
- Sign off that a declaration form or equivalent has been provided by the supplier to confirm they are free of weed seeds and pathogens.
- For materials to be exported off-site, include record of inspection of materials for declared noxious weeds.
- For declared noxious weed material to be exported off-site, obtain a permit from the Department of Economic Development, Jobs, Transport and Resources (DJPR) and record the permit number.

An example logbook for importation or exportation of materials is provided in Appendix 2.

### 3.4.4 Audits

Site supervisor must undertake a weekly audit of weed management procedures, including:

- Check induction logs.
- Check that only designated site entrances and exits are being used.
- Check that all site entrances and exits have appropriate signage directing to the wash-down bay.
- Check that the wash-down bay is in place and in good working order.
- Check wash-down logs.
- Check material importation and exportation logs.
- Check monitoring logs.

Audit documents are to be filed to demonstrate compliance with the relevant legislation and policies and provide traceability. Audit documents must be available for MCC inspection upon request. An example audit log is provided in Appendix 2.

## 3.5 Implementation plan

Summarise the weed management actions in an implementation plan. An example table is provided in Table 4 for guidance.

**Table 4 Example implementation plan**

| Project phase | Management action | Who | Reporting protocol |
|---|---|---|---|
| **Pre-construction** | Pre-construction weed survey | Ecologist/suitably qualified weed management contractor | Weed Management Plan and Weed survey & weed control logbook |
| | Preparation of Weed Management Plan to the satisfaction of MCC | Ecologist/suitably qualified weed management contractor | Weed Management Plan endorsed by MCC |
| | Induction of all personnel working on site | Site Supervisor | Induction forms |
| | Establishment of wash-down bay | Site Supervisor | Logbook of wash-down bay |
| | Undertake weed control | Suitably qualified weed management contractor | Weed survey and weed control logbook |
| **During construction** | Inspect all vehicles, machinery and equipment entering or leaving the site | All personnel bringing vehicles, machinery and plant equipment into or out of the site | Logbook of inspections |
| | Use wash-down bay | All personnel bringing vehicles, machinery and plant equipment into or out of the site | Logbook of wash-down bay |
| | Maintain wash-down logbook | All personnel bringing vehicles, machinery and plant equipment into or out of the site | Logbook of wash-down bay |
| | Maintain importation and exportation logbook | Site supervisor (or personnel supervising delivery of materials to site or export of materials from site) | Logbook of importation/exportation of materials |
| | Monitor for new outbreaks of weeds | Ecologist/suitably qualified weed management contractor<br>Site Supervisor | Weed survey and weed control logbook |
| | Undertake weed control | Suitably qualified weed management contractor | Weed survey and weed control logbook |
| **Post construction** | Monitor for weed outbreaks | Ecologist/suitably qualified weed management contractor<br>Site Supervisor | Weed survey and weed control logbook |
| | Follow-up weed control | Suitably qualified weed management contractor | Weed survey and weed control logbook |
| | Remove wash-down bay, disposing of sediment containing weed propagules in accordance with the CaLP Act | Site Supervisor | Logbook of importation/exportation of materials |

# 4 Links to useful information

### Lists of weeds

The list of declared noxious weeds is maintained by DEJTR:

https://agriculture.vic.gov.au/biosecurity/protecting-victoria/legislation-policy-and-permits/consolidated-lists-of-declared-noxious-weeds-and-pest-animals

The list of Weeds of National Significance is maintained by the Commonwealth Government:

http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html

The Department of Environment, Land, Water and Planning's (DELWP's) Advisory List of Environmental Weeds in Victoria:

https://www.environment.vic.gov.au/invasive-plants-and-animals/weed-risk-ratings

### Vehicle and machinery hygiene protocols

Victorian Serrated Tussock Working Party (2020). *Best Practice Serrated Tussock Weed Hygiene Guide.* Victorian Serrated Tussock Working Party: https://agriculture.vic.gov.au/biosecurity/weeds/prescribed-measures-for-the-control-of-noxious-weeds

Civil Contractors Federation (2010). *CCF Environmental Guidelines for Civil Construction, Civil Contractors Federation.*

Civil Contractors Federation (2011). *A Guide for Machinery Hygiene for Civil Construction, Civil Contractors Federation.*

DEDJTR 2021: Invasive Plant and Animal Management Policy Framework, Victoria State Government: https://agriculture.vic.gov.au/biosecurity/protecting-victoria/legislation-policy-and-permits/invasive-plants-and-animals-policy-framework

WeedStop training (Agriculture Victoria): https://weedsandrabbits.com/weed-hygiene-training-program/

### Weed control methods

Agriculture Victoria website: https://agriculture.vic.gov.au/biosecurity/weeds

https://agriculture.vic.gov.au/biosecurity/weeds/prescribed-measures-for-the-control-of-noxious-weeds

Muyt, A. (2001). *Bush invaders of South-East Australia: a guide to the identification and control of environmental weeds found in South-East Australia.* R G & F J Richardson, Meredith.

### Chemical use

A guide to using agricultural chemicals in Victoria (Agriculture Victoria): https://agriculture.vic.gov.au/farm-management/chemicals/responsible-chemical-use/working-with-chemicals

### Field guides for weed identification

Richardson, R G and Richardson F J (2016). *Weeds of the South-east: An identification Guide for Australia,* second edition. CSIRO Publishing, Collingwood.

## For plant identification also consult

Blood, K. (2009): *Environmental Weeds: A field guide to South-east Australia.* Bloomings Books, Toorak.

Vicflora online: https://vicflora.rbg.vic.gov.au/

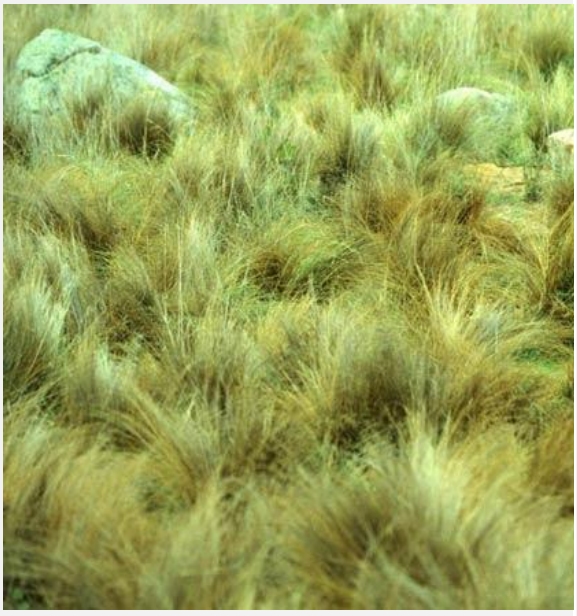
Walsh N and Entwisle T (1989, 1996, 1999). *Flora of Victoria, volumes 2, 3 and 4.* Inkata Press, Melbourne.

# Appendices

# Appendix 1 Common weeds found within the Melton Municipality

Artichoke Thistle (*Cynara cardunculus*)

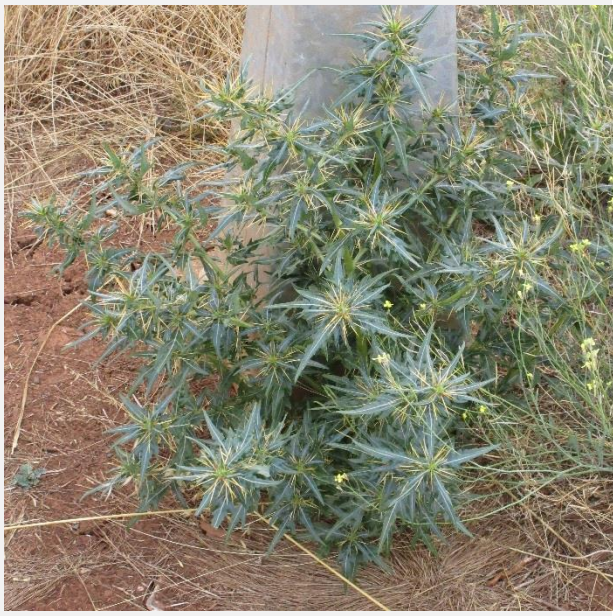
Artichoke Thistle (*Cynara cardunculus)*



Serrated Tussock (*Nassella trichotoma*)

Serrated Tussock (*Nassella trichotoma*)

Prairie Ground-cherry (*Physalis hederifolia*)



Bathurst Burr (*Xanthium spinosum*)

Chilean Needle-grass (*Nassella neesiana*)
(Credit: Environment Canterbury, NZ)

African Boxthorn (*Lycium ferocissimum*)

# Appendix 2 Logbook examples

## Weed survey and weed control logbook

**Date**

**Assessor**

**Site**

| Weed species: flowering/seeding<br>Current % cover<br>Extent of infestation (Hectares)<br>Map zone | Recommended control: method and timing<br>Target | Control completed: method and timing | Recommended follow-up treatment |
|---|---|---|---|
| **Species:** Serrated Tussock, not seeding<br>**Current cover:** 30-40% cover<br>**Extent of infestation:** covers 20 Ha (=70% of the site)<br>**Map zone:** A | **Method:** Spot spray with Flurpropanate herbicide e.g. Kenock<br>**Timing:** March-October before seed set<br>**Target % cover**= <5% before stripping topsoil, thereafter maintain cover at < 5% | Spot spray conducted on 20/6/2018; 20 hectares treated; cover reduced from 30-40% to < 5% | Follow-up treatment in March 2019 to maintain cover at < 5% |
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## Before and after photos

Insert photos before weed control and after weed control

| Site | Before weed control | After weed control |
|---|---|---|
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| | | |

## Wash-down bay logbook

| Date | Time | Name | Machine type | Identification | Origin | Destination | Checked (✓/NA) | | | | | | | | | Cleaning method (✓) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Cabin | Underside | Track area | Wheels & steering | Blades & buckets | Lights & accessories | Arms/booms | Engine | Attachments | Slasher | Manual removal | High Pressure Water | Airblast | Disinfection |
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## Importation and exportation logbook for materials

| Date | Time | Name | Import/export of materials | Supplier | Composition | Source | Destination | Declaration form provided by supplier | Inspection of export/import material conducted | Permit required? (✓/NA) |
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## Audit logbook

| Date | Time | Name | Induction logs | Use of designated entrance/exit points | Signage to wash-down bay | Wash-down bay in place & good working order | Wash-down logs | Import/export logs | Weed control logs | Actions required | Actions completed |
|---|---|---|---|---|---|---|---|---|---|---|---|
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