



WEED HYGIENE AND CONTROL MRL-EN-PRO-0007

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1. PURPOSE

The purpose of this procedure is to ensure that no new species of weed (including both declared weeds and environmental weeds) are introduced into the project area and that the cover of weeds in adjacent undisturbed areas does not exceed the weed cover present prior to commencement of the project.

2. SCOPE

This procedure applies to all Mineral Resources Limited (MRL) companies, its subsidiary company activities and all joint venture operations where MRL has substantial participation and/or management control.

This procedure is to be followed by all employees involved in the movement of ground-engaging plant, equipment and off road vehicles between sites, personnel who are likely to carry out weed control, and personnel with specific environmental management responsibilities who will give advice to others.

Some sites may have particular problematic weed species present or high value vegetation communities requiring protection. In these cases, tailored management plans additional to this procedure may be developed.

3. LEGISLATIVE CONTEXT

The following legislation contains or may contain provisions relating to weeds and weed control:

- Wildlife Conservation Act 1950 (WA) (WC Act)
- Environmental Protection Act 1986 (WA) (EP Act)
- Biosecurity and Agriculture Management Act 2007 (WA) (BAM Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act)

4. DEFINITIONS

Declared plants	Plants declared under the Biosecurity and Agriculture Management Act 2007. Declared pests are placed in one of three categories, namely: <ul style="list-style-type: none"> • C1 (exclusion - not established in Western Australia and must be kept out), • C2 (eradication - present in Western Australia but in sufficiently small quantities that eradication is feasible) or • C3 (management - established in Western Australia but feasible to control to limit potential spread).
Pest plants	Plants prescribed under the Biosecurity and Agriculture Management Act 2007 by local government authorities, to be a pest plant (cannot be a declared plant).
Environmental weeds	Exotic species that, if established, could result in changes to the structure, species composition, fire frequency and abundance of native plant communities.
Weed hygiene	Prevention of the introduction or spread of weeds through movement of earthmoving machinery, vehicles or soil containing weed seed.
WHC	Weed Hygiene Certificate.
Earthmoving and ground-engaging equipment	Equipment may include but is not limited to dump trucks, loaders, dozers, graders, pipe laying equipment and drill rigs.

5. RESPONSIBILITIES

5.1 Site/Project Manager

The Manager is responsible for:

- a) Ensuring full compliance with the requirements of this procedure
- b) Ensuring training in weed hygiene requirements is provided to personnel responsible for the transfer of earthmoving equipment and vehicles between sites.
- c) Ensuring the required resources are allocated to fulfil the requirements of this procedure

5.2 Supervisor

The Supervisor is responsible for:

- a) Ensuring any vehicles or earthmoving equipment leaving a mine is cleaned down so that it is free of vegetation or dirt, and, following an inspection, a Weed Hygiene Certificate (WHC) is issued.
- b) Ensuring that personnel involved in vehicle or equipment transfers are aware of this procedure and can competently meet their responsibilities.

5.3 Environmental Advisors or delegates (ED)

Environmental Advisors or their delegates are responsible for:

- a) Providing advice to others about weed hygiene procedures and about the identification of plants that may be weeds.
- b) Undertaking or commission weed control activities.
- c) Undertaking site inspections for weeds
- d) Keeping records of weed management - weed hygiene certificates, GIS data recording the location and extent of weed populations, control methods used etc.
- e) Presenting ongoing weed management and control awareness training

5.4 All MRL personnel and contractors

All MRL personnel and contractors must:

- a) Understand and meet the obligations of this procedure
- b) Report potential weed occurrences and poorly cleaned machinery

6. SOURCES OF WEEDS

Sources of weeds on equipment and vehicles include:

- In mud adhering to wheel arches and the underside of vehicles or equipment
- Attached to plant material caught around the exhaust system or elsewhere on the underside of vehicles
- Material attached to the radiator
- In open trays of utes or in other recesses.

Examples of seeds known to be transported in this manner are shown in Plate 1.



Plate 1: Ruby dock (left) and Maltese Cockspur (right), two weed species easily spread without hygiene procedures in place (photographs from Florabase).

7. PROCEDURE(S)

7.1 Induction and awareness training

- All employees and contractors are required to participate in the site induction, which will provide an awareness of weeds, including risk species, and an overview of the weed hygiene process.
- Employees and contractors who are involved in movement or operation of earthworks equipment, off road vehicles, and land clearing will be specifically trained in weed hygiene procedures and documentation. This includes but is not limited to, exploration personnel, surveyors, environmental survey consultants, workshop and logistics personnel;
- Training or technical assistance may be required for site personnel to be able to recognise locally-occurring weed species.
- Specialist training (chemical handling, personal protection etc.) may be required if site personnel are involved in chemical methods of weed control
- Tool box talks will be presented from time to time to refresh employees and contractors on weed hygiene procedures.

7.2 When a Weed Hygiene Certificate is required

The movement of earthmoving equipment and vehicles may require use of a Weed Hygiene Certificate (WHC). This procedure cannot cover every situation but a WHC would generally be required when there is a medium to high risk. Medium to high risk situations include:

- Movement of equipment that has been operating in borrow pits or in topsoil stockpiling or recovery operations.
- Light vehicles and drill rigs operating in an area with known weed occurrences.
- Any off road earthmoving or heavy equipment moving from one mine site to another.

WHCs are generally not required for low risk situations. Low risk situations include:

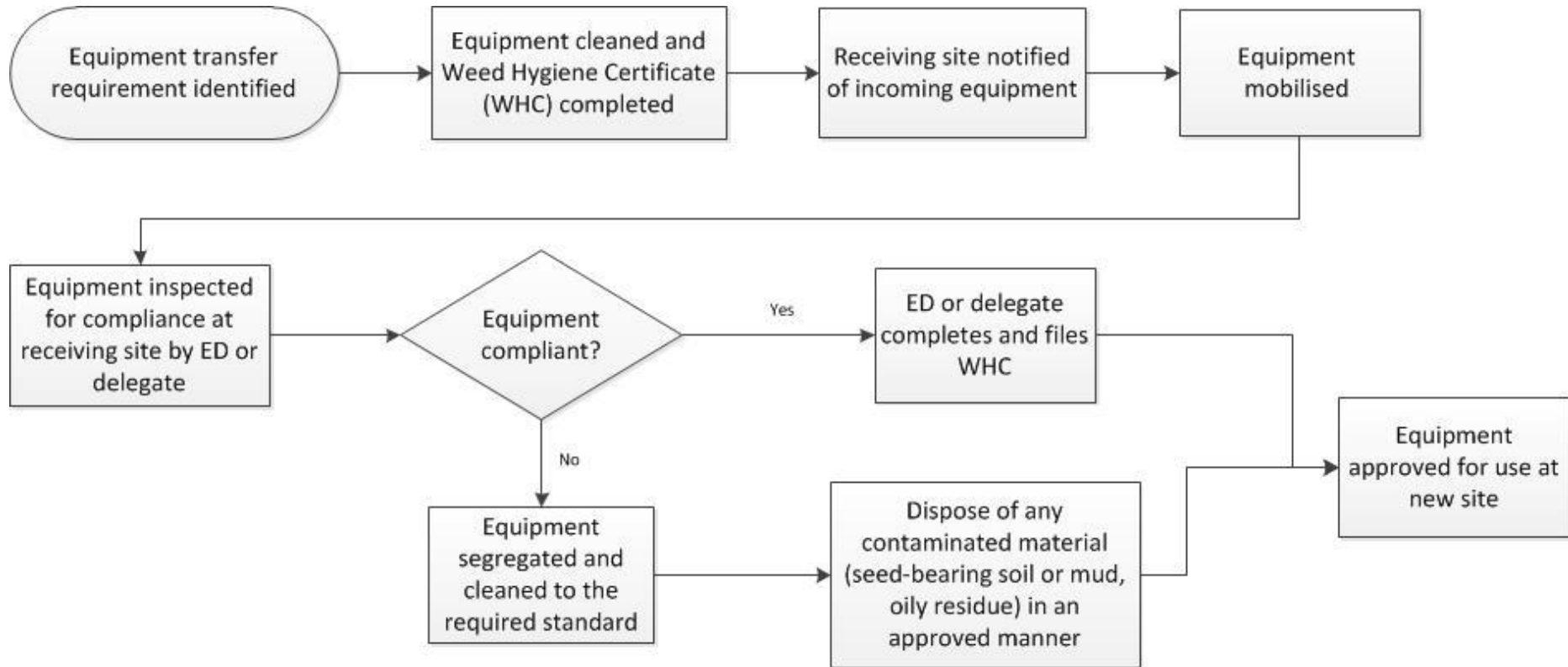
- Light vehicles and support vehicles remaining on established roads.
- Excavators and dump trucks operating within multiple pits at one mine site.
- Drill rigs operating on overburden or ore within multiple pits after topsoil has been removed.
- Graders operating at one mine site (although regular clean down is recommended).

7.3 Use of Weed Hygiene Certificates

If a WHC is required:

- The earthmoving equipment or vehicle must be cleaned to remove any seeds, plant material or mud that could contain seeds.
- Cleaning can be undertaken using wet or dry methods.
- Ensure any material cleaned from equipment and containing weed seed does not itself become a source of weeds. Disposal to landfill or other suitable alternative is required.
- Once the cleaning process has been completed and the Supervisor is satisfied the equipment or vehicle is clean, a WHC can be completed.
- The WHC remains with the equipment until its arrival at its destination.
- At this point, a further inspection is conducted by the ED or delegate to verify the Certificate is accurate, 'sign off' on the Certificate and free the equipment for use at the new location.
- Movement of vehicles or earthmoving equipment that does not comply with this procedure must be reported as an incident.

This procedure is outlined in the following process flow chart:



7.4 Weed control

- If populations of declared or pest plants occur on site, control should be undertaken in consultation with the Department of Agriculture and Food.
- If populations of environmental weeds occur on site, control should be undertaken where it is practical to do so. Some environmental weeds are so well established that control is not warranted.
- This procedure does not require control of other introduced species but control methods may be used in particular circumstances.
- Control methods may include spraying with herbicide or physical removal.
- Herbicide use will only be undertaken in accordance with the manufacturer's instructions. Users must consider their personal safety, the safety of others (e.g. people potentially exposed to herbicide through wind drift) and sensitive non-target plant species that occur nearby. If the target area is on a pastoral property, liaison with the pastoralist is required.
- Weeds that are physically removed should be disposed of to a landfill or waste rock landform and buried.
- Soil or material movement from areas that have or may have weeds should be done in consultation with ED. Areas of risk include topsoil recovery or re-use and recovery of material from borrow pits.

8. RECORDS

The following records should be maintained:

- A copy of all WHCs are to be given to the ED for hard copy and electronic records
- Details of weed control - location, methods used, date and time, target species, extent of population treated, treatment success (through subsequent inspection).

9. MONITORING

Monitoring to be conducted by the ED to record changes in target weeds populations (their location and extent, and the effect of any control methods).

10. REFERENCES

MRL-EN-FRM-0004	Weed Hygiene Certificate
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