



Washdown Procedures and Guidelines Policy

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Introduction

Lake Baroon Catchment Care Group and staff are committed to minimising the spread of weeds. As a consequence of this, Lake Baroon Catchment Care Group encourages all of its staff members, volunteers and contractors to be aware of the potential spread of weeds by vehicle, machinery, equipment and personal apparel.

Purpose

The purpose of this policy procedure is to outline acceptable practices to minimise the potential for the spread of viable biosecurity material via vehicle, machinery, equipment and personal apparel (footwear and clothing)

LBCCG and its contractors shall ensure that they comply with the relevant legislation and regulations outlined by the group and the State of Queensland

Biosecurity Act 2014 and Biosecurity Regulation 2016

The procedure is to give 'how to' approach for all activities which involve traversing through a property or path to inspect land and/or undertake works, by LBCCG staff and contractors

General Information

An invasive plant is a plant species that has or is likely to have an adverse impact on a biosecurity consideration because of the introduction, spread or increase in population size of the species in an area.

Invasive plants cost Queensland more than \$600 million annually in lost production, land degradation and control costs. The spread of invasive plants threatens our agricultural industries, environment and social amenity.

Invasive plant infestations in Queensland have resulted from poor vehicle and machinery cleanliness and maintenance.

Vehicles or machinery operating or moving through weed infestations can become contaminated with invasive plant seeds or other reproductive material. These seeds or reproductive material can then travel long distances on the vehicle or machinery to new locations.

Reproductive material can include any part of a plant that is capable of growing to become a new plant (e.g. a bulb, rhizome, a stolon, a tuber, a stem, leaf cuttings or stem or root fragments).

There is a real risk that these seeds or soil and mud containing the seeds will fall from contaminated or dirty machinery or vehicles in agricultural production or environmentally sensitive locations where an invasive plant infestation may become a long-term and costly problem for the land manager to remediate.

Clean down of vehicles and machinery reduces the risk of spreading invasive plants and soil borne pests and diseases.

These clean-down procedures have been developed to allow a consistent approach across Queensland to the cleaning of vehicles and machinery. These methods will help reduce the chance of spreading invasive plant seeds or other reproductive material when moving vehicles or machinery.

This document will also help those undertaking the cleaning and inspection of vehicles and machinery to understand their role in helping drivers and operators to discharge their obligations

General Biosecurity Obligation

Under Queensland's Biosecurity Act 2014, all persons have an obligation to take reasonable and practical measures to prevent or minimise the biosecurity risks associated with their activities or dealings with the carriers of invasive plants.

A carrier is anything capable of moving biosecurity matter, such as invasive plant seeds, attached to, or contained in the thing from one place to another.

All types of vehicles and machinery are capable of being carriers of invasive plants.

A person (for example, the owners or operators of vehicles and machinery) may show that they have discharged their general biosecurity obligation by following these procedures to ensure that their vehicles and machinery are as clean as practical of the seeds or other reproductive material of invasive plants.

Invasive Plants

The Lake Baroon Catchment lies within the Sunshine Coast Council Local Government Area, and as a result refers to the Sunshine Coast Council Local Government Area Biosecurity Plan 2017 as a guide for the Groups legislative responsibilities for invasive plant and animal management.

Of particular concern are several species either not established in the catchment or are in discreet locations:

- Giant rats tail grass (*Sporobolous pyramidalis* & *S. nataensis*)
- Parramatta grass (*Sporobolous fertilis*)
- All other weedy *Sporobolous* grasses
- Cats claw vine (*Dolichandra unguis-cati*)
- Groundsel (*Baccharis halimifolia*)
- Fireweed (*Senecio madagascariensis*)

Table 1. Priority invasive plants and animals (Sunshine Coast Council Local Government Area Biosecurity Plan 2017)

'Restricted' Invasive Plants	'Locally Significant' Invasive Plants
Annual ragweed (<i>Ambrosia artemisiifolia</i>)	African lovegrass (<i>Eragrostis curvula</i>)
Balloon vine (<i>Cardiospermum grandiflorum</i>)	Air potato (<i>Dioscorea bulbifera</i>)
Basket asparagus (<i>Asparagus aethiopicus</i>)	Barleria (<i>Barleria prionitis</i> & <i>B. lupulina</i>)
Bitou bush (<i>Chrysanthemoides monilifera</i> ssp. <i>rotundifolia</i>)	Blue lotus (<i>Nymphaea caerulea</i> subsp. <i>zanzibarensis</i>)
Broad leaf pepper tree (<i>Schinus terebinthifolius</i>)	Blue morning glory (<i>Ipomoea indica</i>)
Cabomba (<i>Cabomba caroliniana</i>)	Buffel grass (<i>Cenchrus ciliaris</i>)
Camphor laurel (<i>Cinnamomum camphora</i>)	Castor oil (<i>Ricinus communis</i>)
Cats claw creeper (<i>Dolichandra unguis-cati</i>)	Coastal morning glory (<i>Ipomoea cairica</i>)
Chinese celtis (<i>Celtis sinensis</i>)	Colombian wax weed (<i>Cuphea carthagenensis</i>)
Climbing asparagus (<i>Asparagus africanus</i> & <i>A. plumosus</i>)	Coral berry (<i>Ardisia crenata</i> & <i>A. crispa</i>)
Common giant rat's tail grass (<i>Sporobolus pyramidalis</i> & <i>S. nataensis</i>)	Coral berry (<i>Rivina humilis</i>)
creeping lantana (<i>Lantana montevidensis</i>)	Coral berry or shoe button ardisia (<i>Ardisia elliptica</i>)
Dutchman's pipe (<i>Aristolochia</i> spp. other than native species)	Cow pea (<i>Macrotyloma axillare</i> var. <i>axillare</i>)
Fireweed (<i>Senecio madagascariensis</i>)	Crofton weed (<i>Ageratina adenophora</i>) Dyschoriste (<i>Dyschoriste depressa</i>)
Giant Parramatta grass (<i>Sporobolus fertilis</i>)	Fragrant thunbergia (<i>Thunbergia fragrans</i>)
Groundsel bush (<i>Baccharis halimifolia</i>)	Giant devil's fig (<i>Solanum chrysotrichum</i> syn. <i>S. hispidum</i>)
Honey locust (<i>Gleditsia triacanthos</i> including cultivars & varieties)	Giant tropical salvia (<i>Brillantaisia lamium</i>)
Hygrophila (<i>Hygrophila costata</i>)	Gidee-gidee (<i>Abrus precatorius</i> subsp. <i>africanus</i>)
Hymenachne (<i>Hymenachne amplexicaulis</i> and hybrids)	Glory lily (<i>Gloriosa superba</i>)
Kudzu (<i>Pueraria montana</i> var. <i>lobata</i> syn. <i>P. lobata</i> , <i>P. triloba</i> other than in the Torres Strait Islands)	Glycine (<i>Neonotonia wightii</i>)
Madeira vine (<i>Anredera cordifolia</i>)	Golden trumpet tree (<i>Handroanthus chrysotrichus</i> syn. <i>Tabebuia chrysotricha</i>)
Mexican bean tree (<i>Cecropia pachystachya</i> , <i>C. palmata</i> & <i>C. peltata</i>)	Grader grass (<i>Themeda quadrivalvis</i>)

Ornamental gingers (<i>Hedychium gardnerianum</i>, <i>H. coronarium</i>, <i>H. flavescens</i>)	hiptage (<i>Hiptage benghalensis</i>)
Parthenium (<i>Parthenium hysterophorus</i>)	Kidney-leaf mud plantain (<i>Heteranthera reniformis</i>)
Pond apple (<i>Annona glabra</i>)	Mistflower (<i>Ageratina riparia</i>)
Prickly pear (<i>Opuntia stricta</i> syn <i>O.inermis</i>)	Moth vine (<i>Araujia sericifera</i>)
Sagittaria (<i>Sagittaria platyphylla</i>)	Ochna (<i>Ochna serrulata</i>)
Salvinia (<i>Salvinia molesta</i>)	Parrots feather (<i>Myriophyllum aquaticum</i>)
Senegal tea (<i>Gymnocoronis spilanthoides</i>)	Praxelis (<i>Praxelis clematidea</i>)
Singapore daisy (<i>Sphagneticola trilobata</i> syn. <i>Wedelia trilobata</i>)	Purple-leaved plectranthus (<i>Plectranthus ciliatus</i>)
Thunbergia (<i>Thunbergia grandiflora</i> syn. <i>T. laurifolia</i>)	Resurrection plant (<i>Bryophyllum pinnatum</i>)
Water hyacinth (<i>Eichhornia crassipes</i>)	Ruellia (<i>Ruellia squarrosa</i> & <i>R.simplex</i> syn. <i>R.tweediana</i>)
Water lettuce (<i>Pistia stratiotes</i>)	Satinleaf (<i>Chrysophyllum oliviforme</i>)
	Sickle thorn (<i>Asparagus falcatus</i>)
	Sword pear (<i>Acanthocereus tetragonus</i>)
	Thatch grass (<i>Hyparrhenia rufa</i> subsp. <i>rufa</i>)
	Tree of heaven (<i>Ailanthus altissima</i>)
	Water poppy (<i>Hydrocleys nymphoides</i>)

Current lists of Queensland's invasive plants, are available at daf.qld.gov.au.

Training

All people responsible for cleaning down vehicles or machinery should have previously undertaken competency-based training and received a satisfactory assessment.

Competency-based training is provided by registered training organisations (RTO) through units such as:

AHC BIO201A—Inspect and clean machinery of plant, animal and soil material

After completing this training, a person will be able to perform the following tasks:

- check machinery and support vehicles;
- clean machinery and equipment;
- complete Weed Hygiene Declarations.

Minimising weed spread

How to minimise the risk of transporting weed seeds on vehicles and machinery

The following are some suggested ways to minimise risk:

- Avoid driving off the road in areas known to contain declared pest plants such as giant rat's tail grass or other weeds that present a risk of vehicle or machinery contamination. Do not drive through infested paddocks.
- Limit entry points to access the property (ideally just one) and when traversing property stick to defined tracks and follow the same path where possible.
- Ensure clothing and footwear are free of mud and seeds before stepping back into vehicles.
- Avoid driving or working in contaminated areas in wet or dewy conditions.
- As soon as practical clean vehicles, machinery and equipment suspected of carrying weed seed.
- Work clean areas or start in areas with the least amount of infestation and work towards infested or high-density areas.
- Keep roads, laneways and buffer zones free of weeds.
- Where possible work infested areas separately and clean down prior to moving between areas.
- Avoid slashing and other works through infestation during peak seed production times.
- Clean down machinery and implements before proceeding into clean areas.
- Encourage landholders to be vigilant about vehicle access and hygiene.
- Ensure contractors are following policy guidelines.
- Weed Hygiene Declaration will be provided if required, refer to Appendix.
- Keep a record of the vehicles weed and seed wash history, as well as a vehicle log of property inspections.
- LBCCG vehicles shall be cleaned down once every four weeks regardless of the vehicle's movements.

Monitoring vehicle movements

LBCCG employees will maintain an accurate diary of movements in work vehicles (including private vehicles if being used for LBCCG business). This will provide the ability to trace the spread of weeds if it occurs or if required by landholders.

Washdown Facilities

There are limited facilities available to staff to undertake washdowns in the Maleny area. Throughout Queensland, clean-down facilities are available for public or industry use. They are provided for cleaning vehicles and machinery to prevent spread of invasive plants and should be used whenever possible, as they are equipped with grease and silt traps for environmental protection.

LBCCG has a washdown site, located at the LBCCG office at 455 North Maleny Road. This site has been constructed according to available guidelines and best practice so far as possible.

LBCCG also has the ability to construct temporary (portable) wash down bays on site where required. Site location selection should take a number of factors into consideration:

- Consider the site's run-off. Ensure the site is away from watercourses and drains—this will help prevent the spread of invasive plants and will avoid grease and detergents polluting the water.
- Choose a relatively flat site to help prevent run-off and to ensure safety. However, a slight slope or the use of railway sleepers may prevent waterlogging.
- Ensure the site can be easily identified, as it will need to be monitored for outbreaks in the following seasons, and notify the landholder/trustee of the land of this location.

To facilitate the establishment of a temporary site LBCCG has the following equipment.

- Light trailer.
- 1,000 litre shuttle pod.
- Firefighter pump.
- Sufficient length of hose.
- As an alternative to the firefighter pump, a generator and pressure washer is also available.

General Clean Down Procedures (DAF, 2019)

Cleaning frequency

The frequency of cleaning will vary according to vehicle use, vehicle type and requirements of landowners.

All LBCCG vehicles will be washed and decontaminated monthly regardless of use or exposure to potential weed threats.

LBCCG vehicles (including trailers, mowers etc) that have been 'off road' (off road refers to any sites not including sealed and gravel roads in good condition. Note: pulling off the formed road onto the verge is considered going off road) outside the Lake Baroon catchment will be cleaned as soon as possible after returning to the catchment if it cannot be cleaned before leaving destination site.

LBCCG vehicles that have knowingly been driven in a weed infested paddock must be inspected and cleaned before leaving the site.

Any LBCCG vehicle entering the Seqwater 'Bunya Block' must be cleaned beforehand and a Weed Hygiene Declaration completed.

Safety

Ensure all safety precautions are taken. Refer to the relevant sections of the operating manual of the vehicle or machinery for specific safety instructions before cleaning.

- Place the vehicle or machinery in a safe position. It should be stable and immobile.

- Stop the engine, apply the park brake, chock the wheels and lower all implements or secure/chock them if they need to be up for cleaning (e.g. the slasher).
- Ensure the area is free of obstructions and objects that may cause injury (e.g. logs, power lines).
- Have a qualified operator present if parts of the vehicle or machinery need to be moved during cleaning.
- Move the vehicle or machinery with caution.

General clean-down guidelines

The following points are general guidelines only. Please refer to the specific procedures later in this document for different types of vehicles and machinery.

- Examine the item to determine how much mud, soil and plant material has built up.
- Identify any areas that require special attention as outlined in the specific vehicle or machinery procedures (e.g. radiators, spare tyres, behind guards and protective plates). Some of these may be difficult to locate and access. Remove the necessary guards or belly plates to access these areas for cleaning.
- Identify any areas that must be cleaned with compressed air rather than water. Clean these first.
- Where possible clean from the top down.
- Clean upper body and cabin then under the guards and underneath the machinery/vehicle and then do the attachments or implements.
- Clean all toolboxes and storage compartments.
- Check that all areas have been cleaned.
- Replace the guards (remember that belly plates and other guards on heavy machinery may need to be replaced before moving the machinery).
- Move the clean vehicle or machinery carefully, avoiding recontamination. If necessary, wash any remaining mud, soil or plant material from the tyres or tracks.
- Record the details of the cleaning on the appropriate forms or in the vehicle or machinery logbook.
- Present the vehicle or machinery to an inspector if required.
- Dispose of any plant material according to the relevant guidelines.

Remember that no clean-down guidelines can detail all the parts to check. This is because there are:

- Numerous different models and new models.
- Different attachments.
- Different modifications, either in the factory or by previous owners.
- Varying conditions of the machinery (e.g. rusted parts allowing entry of contaminants into sections that are usually sealed).

Examine the item you are cleaning very carefully for any areas that could be contaminated, even if these areas are not listed in the guidelines, and clean them thoroughly.

Suggested equipment

- A mobile water tanker or spray unit (ideally) or water pumped from a dam, cattle trough or tank.
- A high-pressure water cleaner or pump.
- A garden hose (for small clean-downs).
- An air compressor (for removing dry material, e.g. from radiators).
- Brooms, brushes and a dustpan (for cleaning cabins).
- A vacuum cleaner.

CAUTION

DO NOT use high-pressure water jets in compartments that house electronic components.

Basic cleaning for all vehicle types

It is best to start cleaning at the top of the vehicle and work down to the ground. Carry out the basic cleaning in conjunction with the specific requirements for the type of vehicle, ensuring that you remove all soil and plant material.

Cars, trucks and four-wheel drives**Interior**

- Check and clean the foot wells.
- Check the carpets and mats.
- Check and clean the seatbelts.

Boot

- Check and clean the carpet (checking for deposits of hay, weed seeds, burrs and/or soil).
- Check and clean the spare tyre area.
- Check and clean other recesses in the boot or rear of the vehicle.

Engine bay

- Check and clean the radiator.
- Check and clean the grill.
- Check and clean the top of the transmission gearbox.
- Check and clean the recess under the windscreen wipers.
- Check and clean the air filters.

Underside

- Check and clean the wheel arches, wheel trims, flares, step treads and bumpers.
- Check and clean the mudflaps.
- Check and clean the tyre rims (particularly the near side).
- Check and clean the axles and differentials.

- Check and clean the spare tyres on four-wheel drives and station wagons. These are often suspended underneath. **Note:** These are high-risk areas, as contaminants collect inside the horizontally positioned rim.

Other areas

- Check and clean all toolboxes, ladders and storage compartments.
- Check and clean the back or tray of trucks and four-wheel drives.

Remember: The key to successful cleaning is more than just ticking off a checklist You should be thorough, systematic and consistent. CHECK, CLEAN, RECHECK

Excavators

Cabin

- Remove any rubber floor mats and clean the floor surface.
- Remove and clean all door rubbers and internal door panelling. Clean all windowsills.
- Remove the cabin wall lining and clean behind it.
- Remove and clean under the seat, including the rubber seat shroud.
- Remove any non-affixed floor panels and clean underneath them.
- Remove and clean the rubber pedal covers.
- Remove and clean inside the joystick control housing.
- Check all air-conditioning vents, including the air-conditioning filter. You may have to remove some panelling for cleaning.
- Check the cleanliness of the cabin roof, both inside and out.
- Clean the ladder to the cabin (if applicable). It may have a hollow frame, so check for possible entry points. Clean under each footstep.
- Remove all light covers and check the cavities behind them.
- If the cabin housing can be flushed via drainage holes, flush it with water.

Body and engine bay

- Remove and clean the air-filter pre-cleaner.
- Remove the air-filter and clean it with compressed air.
- Check all surfaces of the engine block, including between tappet covers.
- Clean inside the fan belt flywheels (harmonic balancer).
- Remove all non-affixed engine covers and clean all surfaces.
- Check the engine covers for hollow support frameworks and flush them to ensure that they are clean. Remove and clean the engine cover rubbers.
- Check either side of the radiator for vertical hollow support structures and, if they are present, flush them to ensure that they are clean.
- Loosen the radiator shroud to let loose debris fall through.

- Check inside all wiring harnesses. If necessary, remove the counterweights to allow cleaning and inspection.
- Remove and check the engine cover rubbers.
- Remove zip-ties and electrical tape that hold hydraulic hoses together—this will facilitate cleaning.
- Loosen the batteries and clean under them.
- Flush the radiator and oil cooler from both sides to ensure that the fin/core is clean.
- If the bottom rails along the sides are open ended, flush them with water.
- Check the sump and engine block.
- Remove all contaminated grease from the hydraulic rams.
- Check all lights and cavities behind them.
- Check all rubber engine mounts.
- Flush under all non-slip checker-plate footings to ensure they are clean.

Tracks, rollers and frame

- Remove the track rock guards to allow access to inside the track frames.
- Once the rock guards have been removed, check where the bolts attach to the frame. If this is hollow, flush it.
- Remove any individual rubber track pads (usually on small excavators).
- Remove the motor cover plates and clean inside the drive motor.
- Individually clean each countersunk bolt hole on the rollers. • Flush the hollow track frame ends to remove all contamination.
- Remove all non-affixed covers and plates.
- Turn the roll tracks one revolution to check each track pad and the countersunk bolts on the rollers and idler wheels.
- Clean behind the sprockets.
- Thoroughly clean the spring adjuster inside the track frame.
- If the carrier roller above the tracks has a hollow support structure, check it.
- If the excavator has telescopic tracks (generally only small excavators), extend them and clean inside them.
- Clean all internal ledges and hollow sections inside the track frames, as these can harbour contamination.

Dipper arm (boom) and bucket

- Check the front and back of the bucket for any cracks, splits or evidence of repair. If any are detected, the inside will need to be verified as clean.
- Remove all non-affixed wear plates.
- Flush spot-welded wear plates on the back of the bucket.
- Remove all cutting teeth (boots) from the bucket.

- If the boom arm is hollow, remove all external non-affixed plates.
- Clean all knuckles, removing all contaminated grease.
- Remove the cutting teeth from the blade.

Remember: The key to successful cleaning is more than just ticking off a checklist. You should be thorough, systematic and consistent. CHECK, CLEAN, RECHECK

Wheeled tractors

Tyres and rims

- Check and clean all parts of the tyres and rims, including the inner sides of the rims.
- Check between dual wheels (if fitted).
- Check any wheel-mounted counterweights.
- Check for any gashes or cuts in the tyres.

Engine

- Check the radiator core and grill for residues.
- Check the void between the oil cooler and radiator (the oil cooler may be hinged or on a slide).
- Remove and check all air filters/cleaners, pre-cleaners and cyclone-style dust separators. If you cannot clean them satisfactorily, you may need to destroy them and install new ones.
- Check and clean sound-deadening foams and heat shields (foams can become impregnated with dust).

Cabin

- Check externally under and around the cabin.
- Check under the mats in the cabin and in any void or on any skirt under suspended seats.
- Check air-conditioner filters (if fitted). Most large tractors will have a false cabin roof housing the air-conditioning unit, so remove or open the false roof for access.
- Check the integrity of rubber door and window seals. If they are torn, soil and plant material will be sucked into them and trapped.
- Check the void behind consoles and the dashboard.

Chassis and vehicle body

- Check the inside of the chassis rail ledges and the back axle-beam and the undercarriage of this area.
- Check any hollow sections in the front axle tubes.
- Check and clean all toolboxes and battery boxes. These are often under the cabin steps or in the engine bay.
- Check any voids in the rear brake assemblies.
- Check any hollow sections in the drawbars and in the retractable/extendable three-point linkages.
- Check and clean single counterweights. You may need to remove multiple counterweights to clean the voids.

- Check and clean mudguards and wheel flares, and look for hollows and crevices.
- Check and clean roll cages and roll bars. Look for holes and gaps where these are attached to the vehicle.
- For four-wheel drives, check the torque tube (front drive shaft guard) for holes or poor attachment.
- Check and clean the power take-off (PTO) area, PTO shaft, universal joints and shaft covers/PTO tubes.
- Check and clean the wiring looms in split protective conduit.

Note: Some agricultural tractors will have a rear carryall mounted on the three-point linkages or a forward-mounted forklift or bucket/scoop attachment—check these carefully.

Buckets, blades and scoops

- Check and clean all areas of the blade. Look for holes or double skins.
- Remove, check and clean the cutting teeth, adaptors and wear plates on the blades.
- Check and clean the hydraulic arms and supports. Look for hollows that may contain soil and plant material.

All areas

- Check for any hollow sections or channels and determine if there is a possible entry point for contamination. Check whether any plates are covering a compartment or space that may have collected soil and plant material.

Remember: The key to successful cleaning is more than just ticking off a checklist You should be thorough, systematic and consistent. CHECK, CLEAN, RECHECK

References

Vehicle and machinery, INSPECTION PROCEDURE, Biosecurity Queensland Checklists 2013, Biosecurity Queensland, Department of Agriculture and Fisheries, State of Queensland, 2013.

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Sunshine Coast Council Local Government Area Biosecurity Plan, 2017.

Appendixes

Appendix A - Weed Hygiene Declaration - Weed Hygiene Declaration form

Appendix B - Vehicle machinery hygiene inspection report - Adapt from Seqwater Vehicle-Machinery Hygiene Inspection Report.