



Biosecurity

The general biosecurity obligation — weeds, pests and pathogens.

How to use this handbook

This volume is the practitioner (site and technical) reference for the Biosecurity factor. It sets out what Biosecurity governs, every assessment element with its own process and controls, the Queensland and Commonwealth instruments that apply, and the primary metric for each element. It is decision support, not legal advice or a substitute for a site-specific assessment — confirm every regulatory point against the current instrument and, where a threshold is close or a critical exception applies, obtain specialist and legal review.

FIELD	DETAIL
Volume	06 of 17 — Environmental Knowledge Handbooks
Factor	Biosecurity
Jurisdiction	Queensland, Australia
Edition	2026 · current at issue
Prepared by	QTEN — Queensland Technical Excellence Network
Review	SME, spatial and legal review before reliance

Executive overview

Biosecurity is a duty every person and project carries, not a permit to obtain. In Queensland the Biosecurity Act 2014 imposes a general biosecurity obligation to take reasonable and practical steps to prevent or minimise biosecurity risk, backed by prohibited and restricted matter, movement controls and zones. For projects the exposures are weed and pest spread through soil, vehicles and materials, and emergency incursions such as fire ants or electric ants. The site-manager task is to assess biosecurity risk, apply hygiene and movement controls, and report and respond to prohibited or restricted matter.

Scope

Biosecurity resolves into four secondary factors — Biosecurity Governance and Risk; Invasive Species and Pests; Disease and Pathogen Management; Operational Biosecurity Controls — and twenty assessment elements. Every element is set out below with its own process and controls and its primary decision metric; identifiers are shared with the companion Knowledge System workbook and the platform calculators.

Assessment elements & process

Each assessment element below carries what it governs and its key pressures, the appropriate site process and controls, and the primary metric that measures it. Work every element that your project engages.

ASSESSMENT ELEMENT	WHAT IT GOVERNS & KEY PRESSURES	PROCESS & CONTROLS
General Biosecurity Obligation <i>GBO control effectiveness</i>	The standing general biosecurity obligation for the activity. Pressures: soil and material movement, vehicles, works spreading pests.	Assess biosecurity risks; apply reasonable and practical controls; induct personnel; record steps taken under the GBO.
Biosecurity Risk Assessment <i>Biosecurity risk rating</i>	Biosecurity risk assessment for the site and activity. Pressures: unassessed pathways, adjoining infestations.	Assess pathways, receptors and consequence; rate risk; set proportionate controls; review as the activity changes.

ASSESSMENT ELEMENT	WHAT IT GOVERNS & KEY PRESSURES	PROCESS & CONTROLS
Prohibited and Restricted Matter <i>Regulated matter compliance</i>	Prohibited and restricted matter compliance. Pressures: presence or spread of regulated matter.	Identify regulated matter; meet the category duties; treat or contain; report as required.
Biosecurity Zones and Movement Controls <i>Movement-control compliance</i>	Biosecurity zones and movement controls. Pressures: moving carrier materials from restricted areas.	Check zone status; source and move materials to the movement requirements; keep movement records; verify compliance.
Biosecurity Plans and Emergency Preparedness <i>Biosecurity preparedness maturity</i>	Biosecurity plans and emergency preparedness. Pressures: no plan, poor readiness for incursions.	Prepare a biosecurity plan; define surveillance and response; train and drill; maintain preparedness.
Invasive Plants and Weeds <i>Weed infestation and control outcome</i>	Invasive plants and weeds — infestation and control. Pressures: disturbance, contaminated fill, spread.	Map infestations; apply hygiene and certified fill; treat restricted matter; monitor control outcome.
Invasive Animals and Pest Fauna <i>Pest animal pressure index</i>	Invasive animals and pest fauna pressure. Pressures: harbourage, food, movement corridors.	Assess pest-animal pressure; remove harbourage; control access; coordinate with local programs; monitor.
Invasive Ants and Terrestrial Invertebrates <i>Invasive invertebrate pathway risk</i>	Invasive ants and terrestrial invertebrates pathway risk. Pressures: movement of soil, mulch, turf and quarry materials.	Check fire-ant/electric-ant zones; source approved materials; treat and inspect; record movements; report detections.
Aquatic and Marine Pests <i>Aquatic pest introduction risk</i>	Aquatic and marine pest introduction risk. Pressures: vessels, equipment, water transfer.	Assess aquatic-pest pathways; apply vessel and equipment hygiene; manage water transfer; monitor and report.
Invasive Species Surveillance and Eradication <i>Surveillance confidence and eradication progress</i>	Invasive species surveillance and eradication. Pressures: undetected incursions, incomplete eradication.	Run surveillance to detect early; respond and eradicate; verify absence; track surveillance confidence and progress.
Plant Pests and Diseases <i>Plant health biosecurity risk</i>	Plant pests and diseases risk. Pressures: infected material, contaminated equipment, soil movement.	Assess plant-health risk; apply hygiene; source certified material; monitor and report detections.
Animal Pests and Diseases <i>Animal disease pathway risk</i>	Animal pests and disease pathway risk. Pressures: stock and wildlife movement, contaminated carriers.	Assess animal-disease pathways; apply hygiene and movement controls; coordinate with authorities; report.
Aquatic Animal Diseases <i>Aquatic disease spread risk</i>	Aquatic animal disease spread risk. Pressures: water transfer, equipment, stock movement.	Assess aquatic-disease pathways; disinfect equipment; manage water and stock movement; monitor and report.
Soil-borne Pathogens and Contaminated Carriers <i>Carrier contamination risk</i>	Soil-borne pathogens and contaminated carriers. Pressures: soil, fill, mulch and equipment movement.	Identify pathogen risk; wash-down and hygiene; source clean carriers; verify and monitor.
Zoonotic and One Health Biosecurity <i>One Health biosecurity risk</i>	Zoonotic and One-Health biosecurity risk. Pressures: human-animal-environment disease interfaces.	Assess zoonotic risk; apply hygiene and PPE; coordinate One-Health response; monitor and report.
Vehicle, Plant and Equipment Hygiene <i>Hygiene compliance rate</i>	Vehicle, plant and equipment hygiene. Pressures: mud, seeds and pests carried on machinery.	Provide wash-down and hygiene stations; inspect before and after; certify clean; record hygiene compliance.

ASSESSMENT ELEMENT	WHAT IT GOVERNS & KEY PRESSURES	PROCESS & CONTROLS
Soil, Fill, Mulch and Material Movement <i>Controlled material movement rate</i>	Soil, fill, mulch and material movement. Pressures: contaminated or uncertified materials.	Source certified clean materials; control and record movements; verify provenance; treat suspect materials.
Site Access, Induction and Contractor Biosecurity <i>Access biosecurity compliance</i>	Site access, induction and contractor biosecurity. Pressures: uninducted access, contractor-borne spread.	Induct all access on the GBO; control entry points; require contractor hygiene; record access compliance.
Detection, Notification and Incident Response <i>Notification and containment timeliness</i>	Detection, notification and incident response. Pressures: late detection, failure to report.	Detect and report prohibited/restricted matter promptly; contain; follow response protocol; record timeliness.
Treatment, Verification and Adaptive Management <i>Treatment efficacy and verification</i>	Treatment, verification and adaptive management. Pressures: ineffective treatment, no verification.	Apply treatment; verify efficacy; monitor for re-infestation; adapt the program to results.

Regulatory mapping

The instruments most often engaged for Biosecurity. Confirm currency and application to the specific site and activity before relying on any entry.

INSTRUMENT	JURIS.	WHAT IT DOES	TYPICAL TRIGGER
Biosecurity Act 2014	Qld	General biosecurity obligation; prohibited and restricted matter; zones and movement controls.	Any activity with a biosecurity risk; carrier-material movement.
Biosecurity Regulation 2016	Qld	Restricted-matter categories, zones and movement requirements.	Dealing with restricted matter or moving carriers.
Local Government biosecurity plans	Qld	Local pest and weed priorities and control obligations.	Operating in a local-government area with a plan.
Biosecurity Act 2015	Cth	National biosecurity for imported and nationally significant pests and diseases.	Dealing with nationally regulated biosecurity matter.

Assurance & evidence

- **Source currency.** Confirm the instruments, criteria and trigger values cited are current and correctly applied to the site and activity.
- **Records.** For each element engaged, retain the assessment, the controls applied, monitoring against the metric, and any statutory notifications — the evidence that the process was followed.
- **Independent review.** Interpretations, threshold decisions and critical exceptions are reviewed by a suitably qualified person before reliance.

TALK TO QTEN

Managing biosecurity on a live project? QTEN helps Queensland clients turn this handbook into a defensible, evidence-backed position — scoping, assessment, controls, approvals and review. Bring us your site and we will help you get it right, and prove it.

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