MATAKANUI

GOLD LIMITED

Bendigo-Ophir Gold Project

Biosecurity and Plant Pest Management Plan

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GLOSSARY

Specific terms	
ACO	Artificial Cover Object
AMP	Avifauna Management Plan
AOP	Annual Operational Plan
ARP	Applied Research Plan for Cushionfields and Spring Annuals
ARAMP	Ardgour Restoration Area Management Plan
BHR	Bendigo Historic Reserve Zone
BPPMP	Biosecurity and Plant Pest Management Plan
BOGP	Bendigo-Ophir Gold Project ('the Project')
BOMP	Biodiversity Outcome Monitoring Plan
C	Cushionfield Zone
CCI	Chew Card Index
CIT	Come in Time gold deposit
CTCI	Camera Trap Catch Index
CODC	Central Otago District Council
DDF	Direct disturbance footprint
DOC	Department of Conservation
ELF	Engineered landform
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
FR	Forest Regeneration Zone
HIMP	Habitat Impact Management Plan
HSWAA	Health and Safety at Work Act 2015
HSNOA	Hazardous Substance and New Organism Act 1996
ICZ	Intensive control Zone
LEMP	Landscape and Ecology Management Plan
LERMP	Landscape and Ecological Rehabilitation Management Plan
LMP	Lizard Management Plan
MGL	Matakanui Gold Limited
MPMP	Mammalian Pest Control Management Plan
MSMP	Matakanui Sanctuary Management Plan
NZTCS	New Zealand Threat Classification System
ORC	Otago Regional Council

POI	Points of Interest
RAS	Rise and Shine gold deposit
RMA	Resource Management Act
RPMP	Otago Regional Pest Management Plan
SRE	Srex East gold deposit
SRX	Srex gold deposit
TIMP	Terrestrial Invertebrate Management Plan
TLF	Tailings Storage Facility
W	Wetland Control Zone

1. INTRODUCTION

1.1. Bendigo-Ophir Gold Project

Matakanui Gold Limited (MGL) proposes the Bendigo-Ophir Gold Project (BOGP), a new gold mine on Bendigo and Ardgour Stations in Central Otago's Dunstan Mountains, approximately 20 km north of Cromwell. The project will mine four deposits (Rise and Shine (RAS), Come in Time (CIT), Srex (SRX), and Srex East (SRE)) using open pit and underground methods, with most operations in Shepherds Valley and administration facilities on Ardgour.

1.2. Purpose and Scope

This Biosecurity and Plant Pest Management Plan (BPPMP) establishes the operational framework for managing biosecurity risks and controlling plant pests at the BOGP site. The plan fulfils two key functions:

- it implements the plant pest control and biosecurity requirements outlined in the site's management framework, and
- it equips field crews and contractors with flexible methods, scheduling guidance, and detailed procedures necessary for effective pest management across the project's 35-year operational period.

Biosecurity risks and pest plants occur across the entire BOGP site, crossing boundaries between different management areas and extending into neighbouring properties. An integrated approach has been adopted as plant pests function as connected systems requiring coordinated management.

This approach delivers:

- Operational efficiency through standardised control methods deployable site-wide
- Cost effectiveness via centralised planning and resource allocation
- Regulatory consistency ensuring all areas meet legal requirements through unified protocols.

1.3. Relationship with the BOGP Management Plan Suite

The BPPMP is the operational plan for biosecurity and plant pest control at the BOGP. It sets out the methods, phasing, verification, and reporting through which biosecurity and plant pest management is delivered on the ground. It is a standalone document - field

crews, contractors, and compliance monitors do not need to refer to other plans to implement or verify works under the BPPMP.

The ecological outcomes that pest plant and biosecurity management must achieve are defined in the ARAMP and LERMP, which establish restoration targets for each area of the site. The control zones in this plan are drawn directly from those documents. The BPPMP is the mechanism through which those outcomes are pursued, not the document that sets them.

The relationship between this plan and others in the suite is summarised below:

- ARAMP and LERMP set the restoration targets and ecological outcomes for each management area. The BPPMP delivers the pest plant and biosecurity control programme required to achieve them.
- BOMP monitors whether ecological outcomes are being achieved at the site level. The BPPMP verifies that the operational programme is being implemented correctly. These are distinct functions - failure of BOMP outcomes triggers adaptive management under both plans.
- MPMP manages mammalian pests under a separate but complementary programme. Each plan has its own Annual Operational Plan, keeping contractor responsibilities clear. Coordination between the two AOPs occurs at the planning stage through the Environmental Manager.
- MSMP governs land within the Matakanui Sanctuary and establishes the ecological objectives that sanctuary pest management must achieve. The BPPMP operates outside the sanctuary boundary, although the plant pest control methods it establishes are equally applicable to sanctuary operations.
- ARP generates research findings that inform adaptive management of pest plant control in cushionfield areas. Findings are incorporated into subsequent AOPs as they become available.
- TIMP and LMP set management requirements for invertebrates and lizards respectively. Where pest plant control operations conflict with those plans, resolution occurs through the AOP planning process in consultation with the Technical Lead (Biosecurity) and the relevant species plan lead.

1.4. Implementation Framework

The BPPMP establishes operational standards across five integrated components. Species-specific control is delivered through detailed protocols for 27 target plant pest species based on their biology, distribution, and threat level. Biosecurity management

prevents plant pest spread via equipment, materials, and human activities by using systematic procedures. The framework incorporates:

- Adaptive management through monitoring systems and decision frameworks
- Quality assurance via verification processes ensuring work meets specified standards
- Regulatory compliance encompassing all legal requirements including the Biosecurity Act 1993, Regional Pest Management Plan, Hazardous Substances and New Organisms Act 1996 (HSNOA) and the Health and Safety at Work Act 2015 (HSWA).

1.5. Long-Term Vision

The plan supports the creation of self-sustaining native ecosystems in both mined and non-mined areas. Success will be demonstrated through establishment of resilient native plant communities as a result of progressive reduction in plant pest populations, maintenance of effective biosecurity standards, and successful integration of pest management with broader restoration objectives. This framework provides the foundation for effective biosecurity and plant pest management while maintaining flexibility to respond to site-specific requirements and emerging challenges over the project's duration.

1.6. Compliance with legislation

This management plan complies with all legal requirements for biosecurity and pest management at the BOGP site. The plan addresses biosecurity management requirements associated with Fast Track Approvals Act permissions, including all specific approval conditions, whilst site management activities comply with all relevant legislation and regional requirements.

The term 'plant pest' in this plan refers to all species within the BOGP site that are detrimental to the objectives of any relevant management plan. These species may or may not be classified as regulated 'plant pests' under the RPMP or other frameworks, but all require management to achieve BOGP site restoration goals.

1.6.1. Biosecurity Act 1993

The Biosecurity Act 1993 establishes New Zealand's primary legislation for plant pest management. Under this Act, the project must comply with provisions that prohibit activities contributing to pest spread. Sections 52 and 53 specifically prohibit the communication, release, spread, sale, and propagation of RPMP-listed pest species.

Compliance obligations under the Act include detection, reporting, control, and prevention of spread of designated plant pest species. This management plan incorporates these requirements into operational procedures, ensuring all activities meet legislative standards while supporting broader restoration objectives.

1.6.2. Regional Pest Management Plan (RPMP)

The BOGP must comply with the current Otago RPMP, which establishes specific management requirements for plant pest species across different regulatory categories. For RPMP-listed 'plant pest' species, responsible parties must undertake the following mandatory actions:

- **Active control** of designated pest plants to specified standards and timeframes
- **Management planning** including preparation and submission where mandated by the RPMP
- **Reporting requirements** covering pest species presence and control activities including type, quantity, frequency, location, and completion status
- **Prevention measures** to stop plant pest propagation, sale, or distribution
- **Pathway management** implementing controls for machinery, gravel, livestock, and other potential spread vectors.

The RPMP-listed species represent only a portion of plant pests identified for the BOGP site. All applicable RPMP Plan Rules are provided in Appendix B, and are incorporated into this BPPMP's implementation process. The plan maintains flexibility to update compliance obligations as new plant pest species establish within the project area, ensuring ongoing regulatory compliance throughout the project lifecycle.

1.6.3. Agrichemical Management

All herbicides used under this BPPMP must comply with New Zealand's laws for agrichemical management, primarily governed by the HSNOA 1996 and HSWA 2015, supported by industry standard NZS 8409:2021 Management of Agrichemicals (or latest version).

Where agrichemical use occurs under this programme, specific legal obligations may apply. These project-specific requirements are incorporated into this BPPMP and detailed in Annual Operational Plans (AOP) to ensure the safe and appropriate use of herbicides and full regulatory compliance.

1.7. Roles and Responsibilities

Matakanui Gold Ltd will establish a governance structure (Figure 1) to ensure oversight and long-term management of biosecurity and plant pest control across the BOGP. A dedicated Environmental Manager provides day-to-day operational leadership and implementation of this BPPMP.

Technical expertise is provided by both inhouse and consultant technical experts, as necessary, to meet the objectives of the ecological program.

Matakanui Gold Ltd will maintain ultimate responsibility for the project while delegating operational authority to the Environmental Manager. This governance approach balances professional management with expert guidance, ensuring both practical implementation and technical excellence in achieving the project's biosecurity and plant pest control and broader ecological restoration objectives.

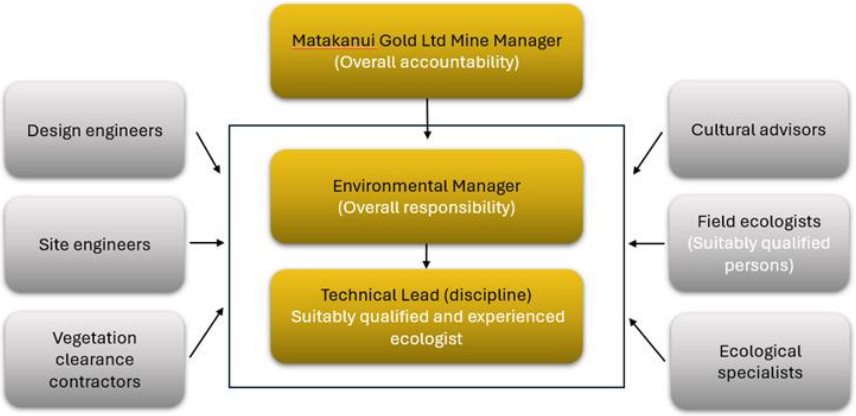


Figure 1: Proposed Governance structure for ecological work at the Bendigo-Ophir Gold Project.

1.8. Resource Consent Conditions for BPPMP

The project resource consent conditions set out the requirements for the content of this BPPMP. The table below identifies the key resource consent conditions relevant to BPPMP and identify where they are addressed in this document.

[Placeholder]

Table 1 Draft resource consent conditions relevant to the BPPMP.

Condition number	Condition text	Relevant BPPMP Section
C69	The consent holder must implement the Biosecurity and Plant Pest Management Plan ("BPPMP") certified as part of the approval of the BOGP pursuant to Section 81 of the Fast-track Approvals Act 2024 (or as amended in accordance with relevant conditions), and which forms part of the consents. The objective of the Biosecurity and Plant Pest Management Plan is to establish the framework for managing biosecurity risks and controlling plant pests within the Project Site, over the project's 35-year operational and closure period.	All
C70	To achieve the objective set out in Condition C69 above, the BPPMP must, as a minimum: a. Identify and address relevant legislative requirements; b. Identify plant pest target species and a plant pest control framework covering phasing, control zones, control methods and timing; c. Provide a framework for points of interest management; and d. Inspection and verification compliance monitoring and reporting requirements, and a continuous improvement / adaptive management process.	Section 1.6, Section 3, Section 4, Section 7, Section 8, Section 9, Appendices B, D, E, F
C71	A Plant Pest Annual Operational Plan must be prepared annually to cover the following season's planned control operations. The plan must include: a. A work plan summary; b. Site-specific plans including performance criteria, methods, timing and locations; c. Compliance and safety protocols including agrichemical compliance procedures, biosecurity protocols, safety procedures; and	Section 6, Appendix

Condition number	Condition text	Relevant BPPMP Section
	d. Monitoring and reporting requirements. The Plant Pest Annual Operational Plan must be made available to Central Otago District Council on request.	
C72	The Consent Holder must prepare annual performance reporting of the BPPMP, which will form part of the BOGP Annual Ecological Monitoring Report required under Condition C12). The reporting must include: a. A summary of biosecurity and plant pest control activities undertaken during the preceding 12-month period, including timing, methods employed, chemical types and quantities where applicable, mapped treatment locations, and target species within treated areas; b. Outcomes reporting and performance evaluation of control activities undertaken; and c. Recommendations for future work and for managing emerging risks (if applicable).	Section 8, Section 9
C73	Ground engaging machinery including trucks or off-road vehicles entering the Project Site, must be inspected to confirm they are clean and free from soil, plant matter and fauna (including invertebrates). If not, they will be refused entry until rectified. Materials used for road sheeting (e.g. gravels), erosion control (e.g. hydromulching, mulches, straw) and revegetation (e.g. seeds, nursery plants, hydroseeding equipment) must be inspected and assessed as 'clean' before use. A minimum 500 m^2 hardening off area must be established on Ardgour Terrace to facilitate nursery plant biosecurity management.	Section 2.2

2. BIOSECURITY MANAGEMENT

2.1. Overview

Effective biosecurity management prevents the introduction and spread of biosecurity risks, plant pests, pathogens, and unwanted organisms at the BOGP site. Biosecurity risks can enter the site through two primary pathways: project-related activities and natural dispersal processes. Project activities include mining equipment movements, earthworks,

soil movement, material importation, nursery operations, and revegetation material transport. Natural processes include wind dispersal of seeds and other propagules from surrounding areas. Both pathways require systematic management protocols to maintain site integrity.

This management plan specifically targets plant pests, pathogens, and invertebrate biosecurity threats at the BOGP site. Mammalian pests are managed in the Mammalian Pest Management Plan (MPMP). By separating these management responsibilities, each pest category receives specialised attention while preventing overlapping efforts and maintaining distinct operational boundaries.

Biosecurity management operates at the strategic level under the oversight of the General Manager and Environment Manager, spanning all site activities rather than being confined to Annual Operational Plans. This management framework integrates biosecurity protocols into standard site operating procedures as fundamental everyday activities. This means biosecurity becomes an embedded operational requirement rather than an additional compliance burden.

2.2. Key Biosecurity Risks and Management

2.2.1. Importation of Materials to Site

Risk identification: Material and equipment importation presents significant biosecurity risks through potential introduction of new pest plants, pathogens, and invertebrate species to the site.

Materials requiring management include mining equipment, road gravels, machinery, nursery supplies, revegetation plants, erosion control products, pasture seed mixes, mulches and building products from external sources. These materials may harbour pest seeds, plant fragments, or contaminating organisms that could establish within the BOGP site environment.

Management framework: Biosecurity measures are chosen based on each location's specific risks and environmental conditions, with different procedures for different types of materials and where they come from. The approach emphasises prevention through supplier requirements, verification through inspection and testing, and documentation for ongoing risk management.

Implementation measures include:

- **Supplier certification** requires all biological material suppliers to provide current biosecurity certifications or comprehensive plant pest declarations detailing source locations and treatment history.
- **Material inspection** involving thorough assessment of all imported materials for plant pest seeds, fragments, and contamination before site acceptance, with qualified specialists engaged for species identification where necessary.
- **Source verification** to ensure road gravels, aggregates, and fill materials come from clean sources determined by site inspection and verification of supplier's site or appropriate documentation and chain of custody records.
- **Nursery standards** require suppliers to comply with established biosecurity guidance and accredited schemes such as Plant Pass or equivalent programmes.
- **Material restrictions** prohibit sourcing from properties known to contain high-risk pest plants, with site inspections of source locations conducted where necessary.
- **Quality assurance** through germination trials and lab testing on suspect materials, with quarantine protocols for materials pending test results.
- **Documentation standards** maintaining detailed records of all material sources, certifications, and testing results for audit and traceability purposes.

2.2.2. Nursery and Plant Production

Risk identification: Growing, preparing, and moving plants can accidentally spread pest plants and diseases to restoration sites through dirty soil, infected plants, contaminated equipment, or people carrying pests from place to place. Nursery operations present concentrated biosecurity risks due to the intensive handling of plant materials and the potential for widespread distribution of contaminated plants across multiple restoration sites.

Management framework: Comprehensive biosecurity protocols address all aspects of plant production from propagation through field distribution, emphasising prevention, early detection, and containment of potential contamination sources.

Implementation measures include:

- **Buffer zone management** Maintain a minimum 50-metre exclusion zone around the on-site native plant nursery that is kept clear of weeds, pest plants, and any restoration or rehabilitation plantings that could harbour biosecurity risks, with monthly inspection protocols and immediate response to any detected incursion.

- **Clean propagation standards** require all propagation materials and nursery inputs to be clean, tested, and sourced from reputable suppliers with appropriate biosecurity certifications.
- **Pre-planting inspection** thorough examination of all plants within the nursery before transport, with de-potting protocols for suitable species and specialised handling for sensitive species such as toi toi (*Austroderia*).
- **Movement** control with comprehensive visitor management protocols to address risks from people moving between different sites, with particular attention to contaminated vehicles, equipment, footwear, and clothing.
- **Equipment hygiene** to maintain high cleaning standards for all vehicles and equipment, with sterilisation protocols between different material sources and segregation of pest control equipment from standard nursery equipment.

2.2.3. Equipment and Vehicle Contamination

Risk identification: Earthmoving equipment, vehicles, and hand tools can carry pest materials from contaminated to clean sites. Inadequate cleaning protocols can result in widespread pest distribution across the project area.

Management framework: Systematic vehicle and machinery management protocols prevent cross-contamination while maintaining operational efficiency. The approach emphasises comprehensive cleaning procedures, designated facilities, and formal verification processes.

Implementation measures include:

- **Ground Engaging Machinery inspection** protocols require comprehensive examination of all ground engaging machinery, including trucks or off-road vehicles that have the potential to transfer propagules. Procedures include entering the site with formal sign-off and confirming equipment cleanliness before authorisation to proceed onto site.

2.2.4. Human-Mediated Spread

Risk identification: People moving onto and around the site can transport biosecurity risks including plant pest seeds on clothing, footwear, and personal equipment. Workers, contractors, and visitors present ongoing biosecurity risks requiring ongoing management.

Management framework: Comprehensive workforce management protocols minimise human pest transfer while ensuring everyone understands and complies with biosecurity

responsibilities. The approach emphasises education, infrastructure provision, and clear procedures.

Implementation measures include:

- **Site induction integration** incorporates biosecurity requirements into standard induction procedures, covering protocol compliance, key pest species identification, and site-specific biosecurity risks.
- **Clothing management** requires clean clothing free of plant material and soil when moving into designated areas, with particular attention to pockets and equipment pouches.
- **Visitor controls** by establishing designated parking areas and controlled pathways to minimise contact with sensitive rehabilitation areas and prevent unauthorised access to designated areas.
- **Communication protocols** install clear, visible signage at site entrances, work areas, and transition points outlining specific biosecurity requirements and compliance procedures.

2.2.5. Redback Spider Management

Risk identification: Redback spiders (*Latrodectus hasselti*) present both ecological and human safety risks to BOGP site operations. One individual was documented in the project area (February 2026 in gear cache of wooden discs during BOMP baseline) and they have been reported to occur in the surrounding landscape. Redback spiders pose documented threats to native species including the Cromwell Chafer Beetle (Bryan 2014, Spencer *et al.* 2017) and McCann's skinks. The species' preference for rabbit burrows as habitat (Spencer *et al.* 2017) creates direct links between mammalian pest management and spider control requirements in high-risk areas.

Management framework: Proactive habitat management and monitoring addresses prevention, detection, and control strategies while minimising risks to both ecological restoration and human safety. The approach emphasises habitat modification, systematic monitoring, and rapid response protocols.

Implementation measures include:

- **Habitat modification -** designing onsite nursery infrastructure to minimise suitable spider habitat.

- **Rabbit management -** implement comprehensive rabbit control in high-risk areas where redbacks are likely to be found, include infilling of burrows and ongoing population control to prevent new burrow establishment.
- **Monitoring protocols -** conduct systematic surveys using artificial cover objects (ACOs) deployed during optimal detection periods (October to November), with minimum two-week deployment periods to ensure detection reliability (Bryan 2014).
- **Direct control measures** ensure site reporting procedures include immediate reporting to supervisors and implement immediate manual clearance of spiders and webs upon detection.
- **Adaptive management** maintain flexibility to incorporate new control technologies, including potential adoption of pheromone-based control systems currently under development (Plant and Food Research, 2024).

A detailed description of redback spider management processes for the BOGP is provided in Appendix C.

2.3. Biosecurity Implementation and Monitoring

2.3.1. Implementation Framework

Biosecurity protocols start when the project begins and continue for the entire 35-year consent duration. Implementation intensity is adjusted according to risk profiles and operational phases. The initial soil stripping and stockpiling phases during years 1-3 are the peak contamination risk periods requiring increased vigilance and more frequent monitoring. Biosecurity effectiveness is achieved through long-term monitoring and maintenance protocols, while formal handover procedures keep management responsibilities clear when operations change hands.

The implementation builds biosecurity requirements into standard operations rather than treating them as separate compliance tasks. This approach ensures biosecurity considerations become fundamental components of project planning and site operations while maintaining operational efficiency and cost-effectiveness.

2.3.2. Compliance and Training Integration

Biosecurity measures are incorporated into all contractor agreements. All machinery and vehicles entering site will be inspected to confirm they are free from soil and plant matter. If soil or plant matter is found, the machinery and / or vehicle will be refused entry.

Site induction training includes biosecurity components covering protocol requirements, risk identification, and response procedures to ensure everyone understands their responsibilities and the consequences of non-compliance.

Compliance monitoring involves regular verification and inspection with established corrective action procedures for breaches, to ensure immediate response to identified deficiencies. Annual reviews assess overall biosecurity efficacy and performance, providing the foundation for adaptive management decisions based on monitoring and emerging risk assessments. This review process ensures the biosecurity programme remains responsive to changing conditions and incorporates lessons learned from operational experience.

2.3.3. Weather Contingency Management

Winter weather conditions, including snow and extreme weather, may restrict access for monitoring and rapid response interventions. When regular monitoring schedules or rapid response actions can’t be safely executed due to severe weather, activities must resume immediately once conditions permit safe access and effective intervention outcomes.

Alternative protocols may be implemented during extended periods of adverse weather to maintain biosecurity surveillance and prevent gaps in risk management. These contingencies acknowledge practical limitations imposed by Central Otago's challenging weather. Documentation of weather-related delays and alternative measures provides accountability and supports adaptive management of seasonal constraints.

3. PLANT PEST TARGET SPECIES

This BPPMP addresses 27 plant pest species identified for active management at the BOGP site (Table 2). These species have been selected based on their current presence across the site and/or their potential to impact restoration objectives. Some species are already established within the BOGP area, while others have been identified as high-risk invaders based on their presence in nearby areas, including the potential Rocky Point Subdivision.

3.1. Management Scope and Priorities

The 27 target plant pest species are the priority threats requiring immediate and ongoing management to achieve restoration objectives. Other non-native plant and pathogen species, that may be present, fall outside the scope of active management under this plan. The adaptive management framework (section 9) incorporates emerging threats as they are identified, so the plan remains responsive to changing ecology and conditions.

3.2. Functional Species Control Groups

Target plant pest species managed at the BOGP site under this plan are categorised as woody or herbaceous species and are shown in Table 2. To simplify operational implementation, species have been organised into eight functional groups based on having similar functional control method requirements (see Appendix E):

- Group 1: Large Woody
- Group 2: Small Woody
- Group 3: Thorny/ Spiny Woody
- Group 4: Climbing/ Vines
- Group 5: Mat-Forming Herbaceous
- Group 6: Tall Herbaceous
- Group 7: Rosette/ Low
- Group 8: Specialist Species

These groupings streamline field operations by providing standardised control methods for species with similar treatment requirements.

Table 2: Target plant pest species, categorisation and group

Common name	Species name	Type	Species control group
Australian bidibid	*Acaenea* spp. (*A. agnipila*)	Herbaceous	Group 7: Rosette/Low Herbaceous
Biting Stonecrop	*Sedum acre*	Herbaceous	Group 5: Mat-Forming Herbaceous
Black Poplar	*Populus nigra*	Woody	Group 1: Large Woody
Boxthorn	*Lycium ferocissimum*	Woody	Group 2: Small Woody
Broom	*Cytisus scoparius*	Woody	Group 3: Thorny/Spiny Woody
Buddleia	*Buddleja davidii*	Woody	Group 1: Large Woody
California poppy	*Eschscholzia californica*	Herbaceous	Group 7: Rosette/Low Herbaceous
Cherries, plums, peaches, nectarines, apricots and almonds	*Prunus* spp.	Woody	Group 1: Large Woody
Cotoneaster	Cotoneaster spp. (E.g. *C. franchetti*)	Woody	Group 2: Small Woody
Elderberry	*Sambucus nigra*	Woody	Group 1: Large Woody
Flowering currant	*Ribes sanguineum*	Woody	Group 2: Small Woody
Foxglove	*Digitalis purpurea*	Herbaceous	Group 6: Tall Herbaceous
Gooseberry	*Ribes uva-crispa*	Woody	Group 2: Small Woody
Gorse	*Ulex europaeus*	Woody	Group 3: Thorny/Spiny Woody
Hawthorn	*Crataegus monogyna*	Woody	Group 3: Thorny/Spiny Woody
Hemlock	*Conium maculatum*	Herbaceous	Group 6: Tall Herbaceous
Male fern	*Dryopteris filix-mas*	Herbaceous	Group 8: Specialist Species
Mullein	*Verbascum thapsus*	Herbaceous	Group 6: Tall Herbaceous
Non-native climbing vines	Non-native Clematis spp. (E.g. *C. tangutica, C. vitalba*)	Woody	Group 4: Climbing/Vine Species
Rowan	*Sorbus aucuparia*	Woody	Group 1: Large Woody
Stinking iris	*Iris foetidissima*	Herbaceous	Group 5: Mat-Forming Herbaceous
Sweet brier	*Rosa rubiginosa*	Woody	Group 3: Thorny/Spiny Woody

Common name	Species name	Type	Species control group
Thistles	Any thistles (E.g. *Carduus tenuiflorus, Cirsium vulgare, Onopordum acanthium, Carduus nutans)*	Herbaceous	Group 6: Tall Herbaceous
Thyme	*Thymus vulgaris*	Herbaceous	Group 3: Thorny/Spiny Woody
Vipers bugloss	*Echium vulgare*	Herbaceous	Group 7: Rosette/Low Herbaceous
Wilding conifers (larches, firs, pines)	All species, including *Larix decidua, Pinus contorta*, and *Pinus radiata*	Woody	Group 1: Large Woody
Willow	Salix x fragilis	Woody	Group 1: Large Woody

4. PLANT PEST CONTROL FRAMEWORK

4.1. Overview

The BOGP plant pest control framework integrates four key components to ensure effective, site-wide plant pest management:

- **Control Phasing** provides temporal sequence for management efforts through three phases.
- **Control Zones** defines spatial priorities based on ecological values and zone-specific restoration objectives, management approach and target species.
- **Control Methods** delivers implementation treatments tailored to species characteristics and required intensity of response for functional control groups.
- **Control Timing** considers seasonality and weather implications for success of control methods.

This integrated approach ensures each location receives appropriate management based on its ecological context and restoration objectives.

The framework balances comprehensive site coverage with ecological sensitivity. Sensitive cushionfield areas receive minimal disturbance to protect rare species, while intensive forest restoration areas receive intensive control to support rapid native establishment. All zones progress through the same three-phase sequence, with control methods and timing adapted to site-specific conditions and operational constraints.

Implementation occurs through Annual Operational Plans (AOPs) that integrate all four controls, supported by species-specific control guidance and Points of Interest (POI) spatial tracking. This systematic approach ensures appropriate control methods for each zone while maintaining programme sustainability across the 35-year project duration.

4.2. Control Phasing Framework

Plant pest control follows a structured progression through three outcome-based phases: Knockdown, Suppression, and Surveillance. This approach ensures systematic reduction of plant pest populations while preventing re-establishment across control zones. It maximises treatment effectiveness and reduces long-term programme costs by responding to actual control success rather than predetermined timelines.

Areas progress through phases based on measurable outcomes rather than time elapsed. This biological realism ensures resources are allocated where needed while maintaining

systematic progression toward control objectives. Once areas enter the control program, phase transitions are triggered by specific performance thresholds rather than calendar dates.

Where it's impractical to control an entire management unit in a single operation, it will be divided into discrete blocks and done in stages. Each block progresses through the phase system independently based on its specific control outcomes.

4.2.1. Phase 1: Knockdown

Knockdown Objectives and Triggers

Knockdown is entered when a previously untreated area is brought into the control programme or a new infestation is identified. Two goals are identified for the Knockdown phase:

- **Primary Goal**: Reduce existing pest populations by 80%+ and prevent seed production
- **Secondary Goal**: Establish immediate control momentum and prevent pest spread.

Knockdown Performance Criteria

The following criteria are used to determine when control is successful in the Knockdown phase:

- **Population Reduction**: Achieve 80% reduction in pest density within treatment area
- **Reproductive Control**: Prevent seed/ fruit production in 95% of target species
- **Containment**: No new satellite populations established from treated area

Knockdown Phase Completion Triggers

The following completion triggers are used to determine when a control zone progresses from Knockdown to the Suppression phase:

- Population reduction targets achieved AND maintained for one full growing season
- No seed production observed for species-specific minimum period (typically 12 months)
- Treatment area shows stable trend toward further population decline

Knockdown Key Activities

Key activities of this phase are:

- Comprehensive species identification and population mapping
- Implementation of high-intensity control measures timed for maximum effectiveness
- Establishment of treatment boundaries and monitoring protocols
- Application of optimised control methods considering available practical methods and acceptable solutions

Knockdown Implementation Approach

This requires the following aspects:

- **Duration**: Variable - from single season to multiple years depending on species and infestation severity
- **Intensity**: High - optimised resource allocation to achieve rapid population reduction
- **Methods**: Practical methods that deliver acceptable solutions, prioritising most effective approaches
- **Monitoring**: Monthly during active growing season, quarterly during dormant periods

4.2.2. Phase 2: Suppression

Suppression Objectives and Triggers

Suppression directly follows the knockdown phase and starts once a previously treated control zone has met the knockdown completion triggers. The suppression phase has two primary objectives:

- **Primary Goal**: Maintain plant pest population recovery at <5% of pre-treatment levels
- **Secondary Goal**: Prevent re-establishment of reproductive plant pest populations

Suppression Performance Criteria

The following criteria are used to determine when control is successful in the Suppression phase:

- **Population Stability**: Maintains <5% population recovery from Phase 1 levels
- **Reproductive Suppression**: Zero mature seed/ fruit production
- **Trend Analysis**: Demonstrates continued population decline or stable suppression

Suppression Phase Completion Triggers

The following completion triggers determine when a control zone progresses from the Suppression phase to the Surveillance phase:

- Population remains <5% of original infestation level for two consecutive growing seasons
- No reproductive individuals detected for species-specific minimum period
- Natural recruitment (germination/ establishment) reduced to background levels

Suppression Key Activities

Key activities of this phase are:

- Regular monitoring and rapid response to population recovery
- Targeted treatment of surviving individuals and new germination
- Integration with habitat restoration to enhance competitive exclusion
- Refinement of treatment methods based on species response patterns.

Suppression Implementation Approach

This requires the following aspects:

- **Duration**: Variable - typically 2-5 years depending on species longevity and seed bank persistence
- **Intensity**: Medium - targeted interventions based on monitoring results
- **Methods:** Selective application of proven techniques, emphasis on efficiency
- **Monitoring:** Quarterly during growing season, annually during dormant periods

4.2.3. Phase 3: Surveillance

Surveillance Objectives and Triggers

Surveillance activities start once a previously treated control zone has met the suppression completion triggers. The Surveillance phase has two primary objectives:

- **Primary Goal**: Early detection and rapid response to new incursions
- **Secondary Goal**: Maintain achieved control outcomes at minimum cost

Surveillance Performance Criteria

The following criteria are used to determine when control is successful in the Surveillance phase:

- **Detection Efficiency**: Identify new incursions within one growing season
- **Response Effectiveness**: Treat new detections before reproductive maturity

4.3. Control Zone Framework

The BOGP site is divided into six control zones (Figure 2) each representing an amalgamation of management units from the ARAMP and LERMP. These zones group areas with similar restoration objectives, ecological sensitivity, and operational requirements, enabling a unified approach to managing woody and herbaceous plant pests.

This approach makes implementation easier by reducing the complexity of managing many small areas with different needs. Instead, it provides six distinct operational zones - each with tailored plant pest restoration objectives and clearly defined control strategies. These strategies balance treatment intensity with the protection of sensitive ecology and threatened species.

Control Zone boundaries and management requirements are set by overarching plans (ARAMP and LERMP) to make sure they integrate with overall site restoration goals. While individual management units may still be referenced for specific purposes, the Control Zone structure enables standardised approaches, efficient equipment deployment, and consistent resource allocation across ecologically similar areas.

By considering space, ecology, and operations together, this framework ensures plant pest control actively supports, rather than compromises the restoration goals for each area.

Control Zones are shown in Figure 2 and include:

- ICZ – Intensive Control Zone
- FR - Forest Regeneration Plant Pest Control Zone
- C - Cushionfield Plant Pest Control Zone
- BHR - Bendigo Historic Reserve Plant Pest Control Zone
- W – Wetland Plant Pest Control Zone

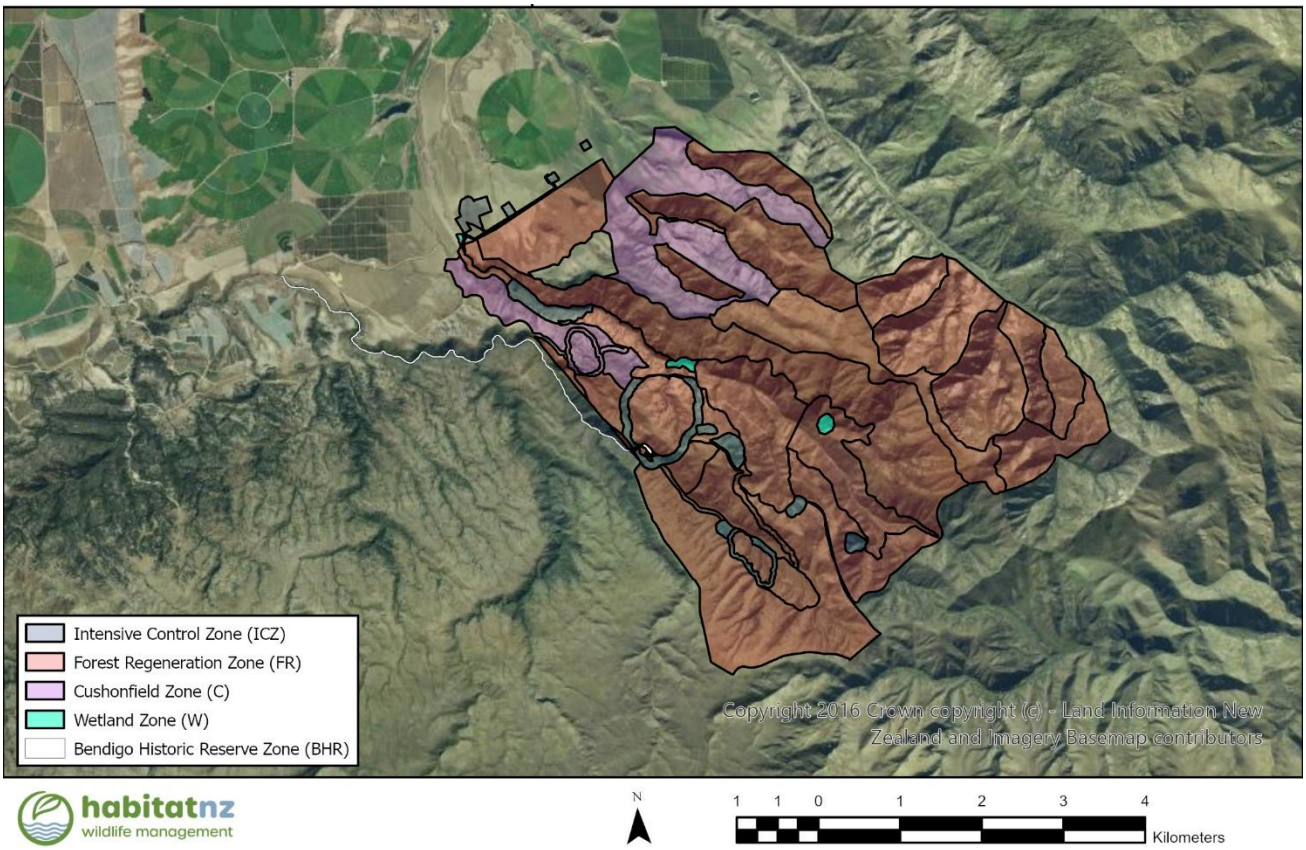


Figure 2: Plant Pest Control Zones of BOGP site. An A3 version of this map is presented in Appendix A.

4.4. Zone Management Restoration Objective, Approach and Target Species

Appendix D provides a matrix of plant pest species and the management objectives for each Control Zone and Appendix E lists the control methods for each plant pest species.

4.4.1. ICZ - Intensive Control Zone

Restoration Objective

The Intensive Control Zone targets the minimisation of all identified plant pest species to support intensive restoration objectives. The minimisation goal reflects the high ecological value and restoration potential of these areas, while recognising that complete elimination of pest plants is a very difficult task to achieve. The outcome is comprehensive pest plant management to ensure successful native species establishment.

Management Approach

Any control methods identified in Appendix E may be used for target species within this zone, providing maximum flexibility to achieve the minimisation objectives. Additional

control methods may be used through adaptive management processes so the programme can respond to emerging challenges or improved techniques over time.

Target species

All 27 woody and herbaceous plant pests identified for the BOGP are targeted for minimisation within this zone, reflecting its priority status for restoration outcomes and the need for comprehensive pest-free conditions to support threatened species recovery and ecosystem restoration.

4.4.2. FR - Forest Regeneration Zone

Restoration Objective

Forest Regeneration Plant Pest Control Zone aims to ensure minimal presence of identified plant pests to support restoration while accommodating different levels of management intensity based on species characteristics and site conditions. This flexibility recognises that complete suppression may not be immediately achievable for all species and so allows for adaptive management to minimise plant pest presence over time.

Management approach

All control methods identified in Appendix E can be used against target species within this zone, providing flexibility to select the most appropriate techniques based on infestation characteristics, seasonal conditions, and site constraints. Additional control methods may be used through adaptive management processes, so the program can adapt to changing conditions and improved control technologies over time.

Target species

The zone addresses 19 woody and herbaceous plant pests with different approaches based on species biology, invasion characteristics, and threat level to restoration objectives. Species that pose the biggest threat to restoration are prioritised, with control intensity adjusted based on each species' management needs and site sensitivity

4.4.3. C - Cushionfield Zone

Restoration Objective

Cushionfield Plant Pest Control Zone aims to eliminate or control all 27 identified plant pest species while prioritising protection of sensitive ecology and ongoing research activities. This flexibility recognises the need to balance pest control objectives with

protection of threatened species and research integrity within these ecologically sensitive areas.

Management approach

Only light touch methods listed in Appendix E can be used in this zone, due to the sensitive nature of these areas and the need to minimise disturbance to threatened plants present here. Management intensity is deliberately constrained pending outcomes from the Applied Research Plan (ARP), which will inform future management decisions based on research findings. Additional control methods can be used through adaptive management processes, but only after appropriate assessment of their compatibility with conservation and research objectives.

Target species

Management targets vary between minimisation and control of the 27 species, depending on species characteristics and their potential impact on sensitive ecological communities. The differentiated approach ensures pest management supports, rather than compromises, the protection of threatened species and research within these priority conservation areas.

4.4.4. BHR - Bendigo Historic Reserve Zone

Restoration Objective

The Bendigo Historic Reserve Control Zone aims to manage willows to achieve restoration objectives and maintain ecosystem integrity. The goal of willow management reflects the importance of establishing conditions within these areas free of live willows to support successful restoration and prevent willow establishment in surrounding management areas. This zone lies mostly on land administered by the Department of Conservation (DOC), with a small portion on Bendigo Station.

Management approach

Willow control in the BHR requires a carefully sequenced approach that responds to the proximity of willows to historic heritage features. Three site-specific constraints apply in areas where willows occur in close association with heritage sites, structures, stonework, or archaeologically sensitive ground. These constraints do not apply uniformly across the zone - willows in the BHR that are located away from heritage features may be treated using standard methods as described in Appendix E. These provide operational flexibility to

manage willows from this zone. These methods align with approved measures for controlling plant pests on land administered by DOC.

Prior to works commencing each season, the AOP will identify and spatially delineate areas where the following constraints apply, based on the location of known heritage features and a pre-operational assessment of fall risk and ground sensitivity. Works in heritage-proximate areas will be clearly distinguished from standard willow management operations in the AOP and on field maps.

The full range of control techniques allows selection of the most effective approaches based on species biology, infestation characteristics, and site conditions. Additional control methods may be incorporated through adaptive management processes, thereby letting the program adapt to new challenges and use better control technologies as they become available.

Soil disturbance minimisation (heritage-proximate areas)

Where willows occur on or immediately adjacent to historically significant ground, soil disturbance risks damaging subsurface heritage fabric. In these locations, hand-grubbing and mechanical extraction methods are to be avoided. Seedlings and small juveniles (up to approximately 2 m) may be hand-pulled with minimal root disturbance where this can be achieved without significant soil disruption. For established willows in heritage-proximate areas, cut-stump treatment is preferred over extraction, accepting gradual in-situ root decomposition rather than physical removal. Standard management methods remain available for willows in parts of the BHR away from heritage-sensitive ground.

Tree felling and heritage protection (heritage-proximate areas)

Where willows near heritage features are large enough to pose a fall risk to stonework, structures, or sensitive ground, they will be sectioned down from above using rigging and lowering systems rather than felled or left standing following herbicide treatment. A pre-operational assessment will identify these trees before each season's works commence, and the findings, including the proposed sectioning approach, will be recorded in the AOP and discussed with DOC beforehand. Willows away from heritage features may be treated and/or felled using standard methods.

All willow control in heritage-proximate areas within the BHR will be carried out by or under the supervision of experienced arborists. Works will be timed to avoid active bird nesting periods where practicable.

Target species

Practical minimisation of willows (*Salix* x *fragilis* and any other *Salix* spp. present) is required within the BHR. No other plant pest species are targeted in this zone, reflecting the operational constraints described above and the need to focus available disturbance capacity on the primary restoration goal of willow management (i.e. no live willows). Any other plant pest species detected during BHR operations will be recorded and reported, and their management considered through the adaptive management framework if warranted.

4.4.5. W – Wetland Plant Pest Control Zone

Restoration Objective

The Wetland Plant Pest Control Zone aims to control the 20 identified plant pest species present within this zone to balance restoration objectives with operational flexibility. This allows for adaptive approaches that can progress from control to local elimination if as conditions permit, ensuring effective pest management while accommodating varying site conditions and resource constraints.

Management approach:

All control methods identified in Appendix E can be used for the control of target species within this zone, providing operational flexibility to address plant pest populations effectively. Field crews can select appropriate techniques based on infestation characteristics, seasonal timing, and site-specific requirements to achieve optimal outcomes. Additional control methods can be used through adaptive management processes, so the programme can respond to changing conditions and use better control technologies as they become available.

Target species

The zone addresses 20 designated plant pest species with management intensity adjusted according to species characteristics, invasion pressure, and restoration priorities. This flexible approach allows progress from basic control to more advanced levels of suppression as the program efficacy increases and site conditions improve.

4.5. Control Methods Framework

This section provides a brief overview of the operational methods for controlling plant pest species at the BOGP site. Full detail of control methods and relationships to zones and restoration objectives can be found in the appendices.

4.5.1. Ecological Balance in Control Methods

Control methods are designed to minimise impacts on native species while effectively managing target plant pests. For example, invasive weed control in cushionfield communities requires specialised techniques that protect threatened spring annual species inhabiting the same areas.

The species-specific control strategies detailed in this plan reflect this balance, with different management intensities and methods applied according to the ecological sensitivity of each Control Zone. Appendix D provides a matrix of plant pest species for each Control Zone and details the relevant restoration objectives.

4.5.2. Control Method Guides

Control methods for each species control group (from Table 2) are provided in Appendix E. Field Cards for each of the eight control groups provide standardised, field-ready control guidance for all 27 target plant pest species at the BOGP site. Field Cards outline:

- Control Group details and applicable plant pest species
- Preferred and alternative control methods
- Timing, equipment, chemical and follow-up timeframes
- Critical notes
- Timing specifics
- Success criteria
- Strategies if unsuccessful

Appendix E also provides a ‘Quick reference field matrix to accompany control guides’ which outlines preferred method, equipment and chemicals, success targets and timeframes.

4.6. Control Timing Considerations

Plant pest control timing at the BOGP site must align with target plant species biology, weather windows, and site operational constraints. While detailed species-specific timing

windows, monthly activity calendars, and comprehensive weather protocols are provided in Appendix E, this section provides essential timing guidance for AOP development and field implementation, focusing on practical requirements for effective control operations.

4.6.1. Optimal Control Seasons

Seasonal timing drives operational planning to ensure maximum treatment effectiveness and efficient resource deployment through three key activity periods:

- Primary Season (September-February): Peak activity period with optimal plant growth, weather conditions, and herbicide effectiveness
- Secondary Season (March-May): Final spray applications, cut & stump treatments, winter preparation
- Limited Operations (June-August): Hand pulling and mechanical methods only, equipment maintenance period

Seasonally, the work programme for the BPPMP is presented in Figure 3.

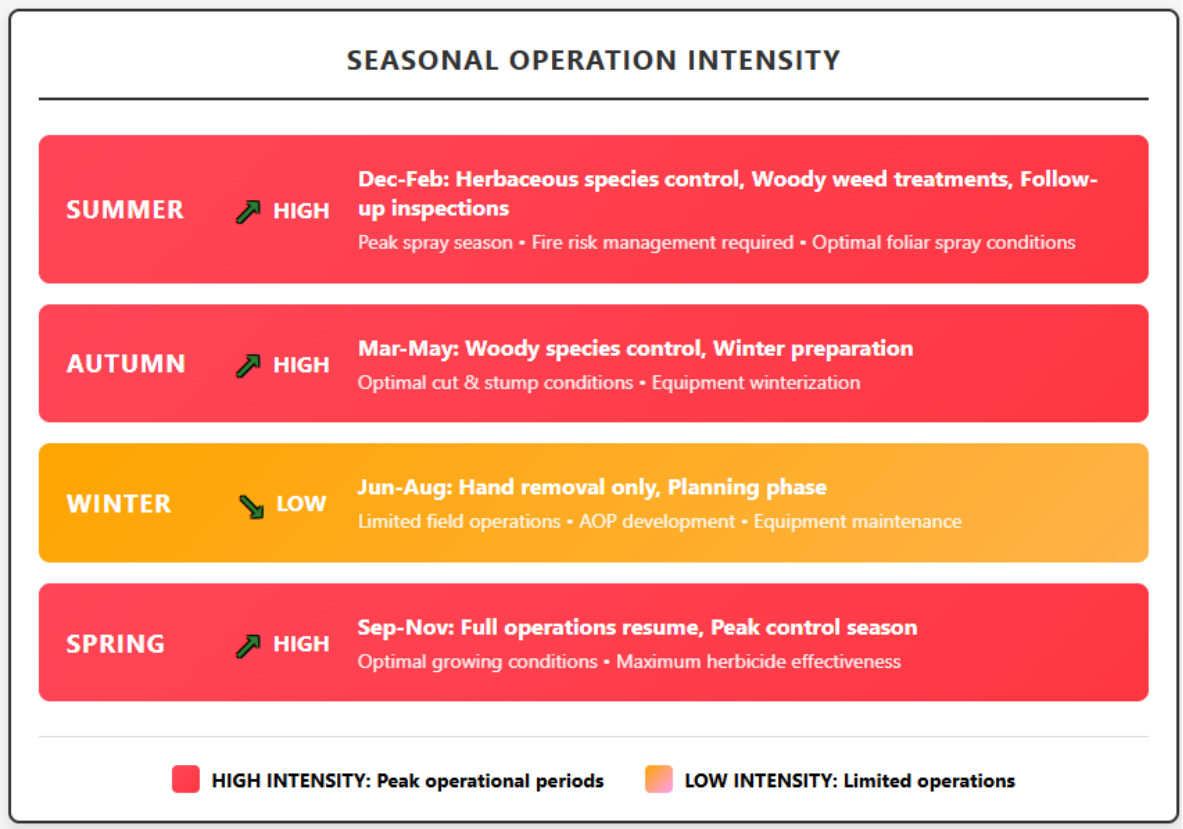


Figure 3: Seasonal operational Intensity for BPPMP works at BOGP.

4.6.2. Critical Species Timing

Several target species have time-sensitive control requirements that determine treatment success. Figure 44 identifies the most critical timing constraints:

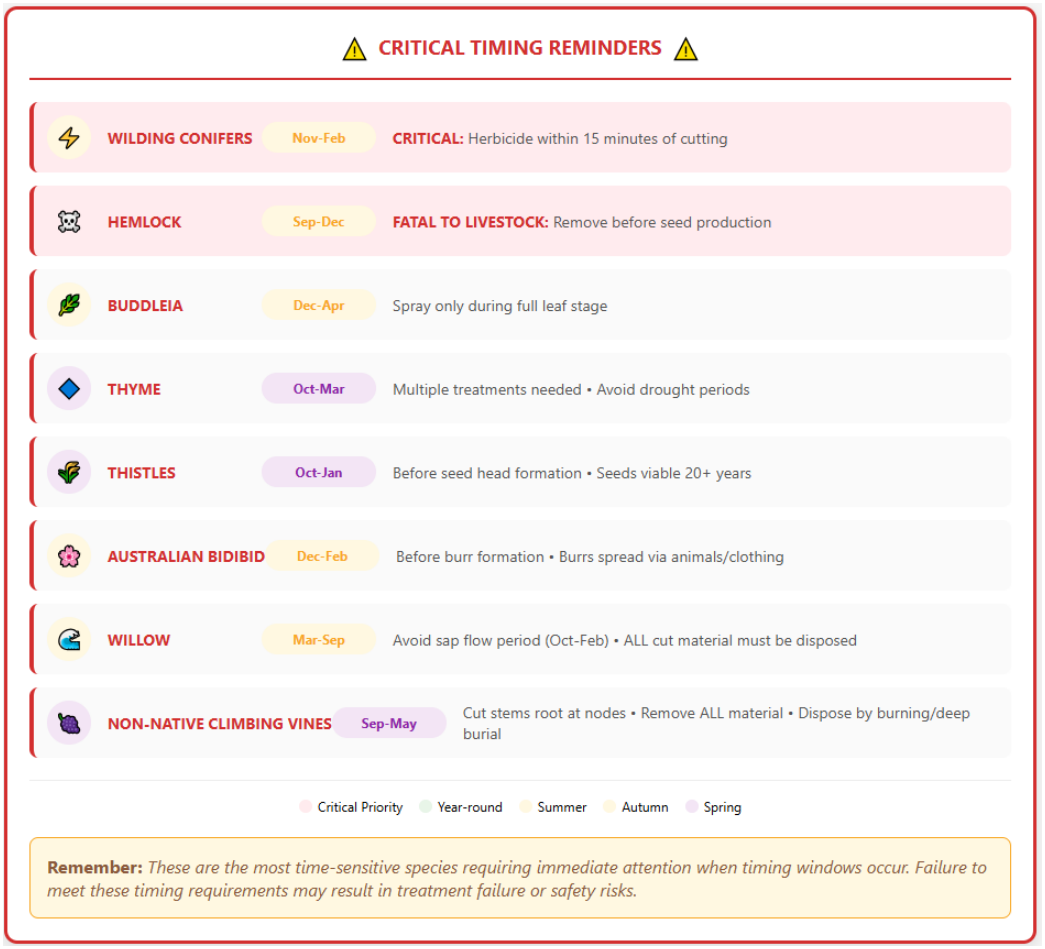


Figure 4: Critical timing requirements for key programme aspects at the BOGP.

4.6.3. Essential Weather Requirements

Environmental conditions and seasonal factors impose specific operational constraints on plant pest control activities. Environmental factors to consider for plant pest control at the BOGP site are:

- **Wind Limitations:** No spray applications when wind >15km/h
- **Rain Restrictions:** No herbicide applications with rain forecast within 6 hours

- **Temperature:** Avoid chemical applications in extreme cold or heat (<10 degrees or >25 degrees
- **Seasonal Access:** Winter restrictions may limit operations between June-September.

4.6.4. Standard Follow-up Schedule

Follow-up monitoring and retreatment schedules are established based on treatment type and target species characteristics:

- 30 days: All herbicide treatments require effectiveness evaluation
- 6 months: Hand pulling, cut & stump treatments, and general follow-up
- 12 months: Long-lived seed bank species (wilding conifers, gorse, broom)
- Multiple per season: Species requiring repeated treatment (thyme, thistles)

4.6.5. Integration Requirements

All control timing must coordinate with:

- Mining schedules and active work areas
- Restoration planting
- Ecological monitoring activities (BOMP)
- Research activities (ARP) in sensitive areas
- Seasonal access limitations and lambing restrictions.

4.6.6. Adaptive Timing Protocols

Where evidence-based research demonstrates improved efficacy with alternative timing, modifications may be implemented with Technical Lead (Biosecurity) approval, provided all safety and regulatory requirements are maintained.

Appendix F expands these timing frameworks into practical, field-ready guidance and decision tools for contractors.

5. POINTS OF INTEREST MANAGEMENT

Points of Interest (POIs) are specific locations where plant pest control work has been undertaken, or plant pests are found. POIs provide a systematic way to track important risk areas or treated sites, and schedule follow-up checks to make sure plant pests are not missed and/or do not reestablish after treatment.

Every location where control work is completed becomes a POI requiring future monitoring to ensure success and prevent re-establishment of plant pests.

5.1. POI Establishment Criteria

The criterion for establishing POIs includes but is not limited to the following key aspects:

- **Prior treated areas:** all areas receiving plant pest control automatically become POIs upon completion of initial treatment, requiring progression through the control three-phase system.
- **High-risk locations** with elevated reinvasion potential include:
  - Roadsides and access tracks
  - Soil stockpiles and disturbed areas
  - Water channels and drainage lines
  - Equipment staging areas
  - Onsite nursery buffer zones
- **Surveillance detections:** new infestations identified during routine site activities or dedicated surveys.

5.2. Follow-up Monitoring Schedule

Follow-up monitoring is on a structured timeline to ensure treatment effectiveness and prevent plant pest re-establishment:

- **30 days**: Initial effectiveness check - has the treatment worked?
- **6 months**: Standard follow-up inspection - are plant pests returning?
- **12 months**: Annual inspection for species with persistent seed banks (gorse, broom, wilding conifers)
- **Ongoing**: POIs remain active until two consecutive inspections show no plant pest regrowth.

5.3. POI Monitoring Process

The process for inspecting and monitoring the progress of control at POIs is as follows:

- Inspections are required to check each POI for regrowth, new infestations, or treatment failure.
- The following actions are triggered if weeds are found during POI inspections:
  - Treat immediately if small numbers
  - Schedule formal control work if significant regrowth
  - Update POI records with new treatment details
- Records are kept to document inspection results, any treatments undertaken, and schedule next inspection date.
- POIs can be closed after two consecutive inspections (minimum 12 months apart) with no weed regrowth detected.

5.4. POI Implementation

POI management is integrated into Annual Operational Plans with contractors required to:

- Establish POIs for all control work undertaken
- Schedule and complete follow-up inspections according to the monitoring schedule
- Maintain accurate POI databases with GPS locations and treatment history
- Report POI inspection results and any additional treatments required.

This systematic approach ensures no treated areas are forgotten and prevents plant pest re-establishment through consistent follow-up monitoring.

Detailed POI procedures, data management requirements, and reporting standards are provided in Appendix H.

5.5. Species-Specific Management Considerations

Many target plant pest species have distinct flowering periods or specific visibility windows requiring temporally adjusted management approaches. Some species are only readily identifiable during periods when control methods are most effective, necessitating coordinated detection and treatment scheduling.

The POI system accommodates these temporal and biological variations by scheduling management activities according to species-specific requirements. Resource allocation

and timing reflect these considerations within AOP planning. For example, wilding pine POIs may not require active treatment for several years following initial control, allowing resource reallocation to high-priority areas. Conversely, prolific seeding species such as buddleia require frequent revisiting due to rapid seed production and dispersal potential.

This variable timing approach ensures efficient resource allocation while maintaining effective control across the diverse range of target plant pest species. The system provides flexibility to address biological constraints and optimal management windows while ensuring no opportunities are missed due to seasonal or biological limitations.

6. ANNUAL OPERATIONAL PLAN

6.1. AOP Preparation

The lead plant pest control contractor must prepare a Plant Pest Annual Operational Plan (AOP) by 1 August each year, covering the following season's control operations. The document will provide the operational blueprint for implementing the BPPMP framework while providing contractors flexibility to adapt field work to site-specific conditions and seasonal constraints.

6.2. AOP Requirements

Each AOP must address four essential components:

- **Work Plan Summary**: Treatment overview by control zone, quarterly activity schedule, resource requirements, and expected outcomes by control phase (Knockdown/ Suppression/ Surveillance).
- **Site-Specific Plans**: Priority site locations with treatment methods and timing, Points of Interest (POI) management approach, and access considerations.
- **Compliance & Safety**: Agrichemical compliance procedures, biosecurity protocols, safety procedures, and certification confirmations.
- **Monitoring & Reporting**: Success criteria and measurement methods, adaptive management triggers, and reporting schedules.

6.3. AOP Timeline

The AOP follows a structured approval process, with the key dates of:

- **1 August**: AOP creation deadline
- **15 August**: Technical review completed
- **1 September**: Final AOP approval
- **20 September**: Field operations commence

6.4. Performance Standards

Each AOP must define measurable success criteria for control efficacy, operational performance, and programme progression through the three-phase system.

Detailed AOP requirements, templates, and procedures are provided in Appendix G.

6.5. Information Management Systems

AOPs must detail information collection and management procedures for Points of Interest (POI) and operational activities. Data collection may use spray diaries, field GIS systems such as Fulcrum or Field Maps applications, or retrospective entry into database systems, provided necessary information remains accessible for future planning.

Matakanui Gold Ltd. will establish appropriate GIS or similar technology for storing operational information and POI data.

6.6. Risk management protocols

Risk management protocols will address potential undesirable outcomes from control methods, with particular focus on preventing accidental treatment of non-target species, especially desired native plants – a significant operational risk.

The plan will outline procedures for making operational changes when qualified staff identify concerns, requiring proper justification in exceptional cases, contractors will be required to detail species identification protocols and biosecurity risk minimisation measures for all control operations.

6.7. Information Integration and Forward Planning

AOP development shall incorporate information from previous BOGP Annual Ecological Monitoring Reports with geo-referenced POI data collected during preceding years. This integration ensures operational planning builds on previous experience while addressing identified gaps or emerging priorities.

AOPs must outline monitoring and maintenance needs after planned operations, including potential management needs outside expected timeframes. This forward-looking approach ensures smooth transitions between work cycles and helps plan resources for future years. The system addresses areas where previous work didn't meet goals, identifying and fixing potential problems before starting field work.

7. VERIFICATION AND PROGRAMME MANAGEMENT

7.1. Verification Framework

The term 'verification' describes monitoring activities required by this BPPMP, which is separate from the outcome monitoring done at the BOGP site under the BOMP monitoring program. Verification processes ensure the BPPMP works effectively, meets regulatory requirements, and provides reliable information for making adaptive management decisions throughout all BPPMP phases. The verification framework operates at four levels:

- Pre-implementation verification ensures AOPs meet planning standards
- Implementation verification confirms work completion according to approved plans and evaluation of control efficacy
- Record keeping verification ensures data quality and accessibility for future planning cycle
- Agrichemical compliance verification for pre and post work and ongoing verification.

This systematic approach provides accountability while supporting continuous improvement.

7.2. Pre-Implementation Verification

AOPs need verification from the technical lead (biosecurity) before implementation approval, to ensure they include all required annual actions, have enough resources for planned activities, control work is scheduled at the right times for target species and site conditions, and have a realistic chance of achieving successful outcomes that meet BPPMP objectives.

The verification process ensures AOPs provide practical, achievable programs that deliver required BPPMP outcomes while staying operationally viable. This process identifies potential issues before field work starts, reducing the risk of programme failure and ensuring efficient use of resources throughout the operational season.

7.3. Implementation Verification and Success Evaluation

Implementation verification confirms work has been completed according to approved AOPs. This is distinct from effectiveness evaluations of control methods themselves. Contractors may correctly follow all specified procedures using appropriate methods,

including timing, yet still fail to achieve expected results due to factors beyond their control such as herbicide resistance, unexpected biological responses, or environmental conditions.

The implementation verification involves management site inspections before, during, and after control works to confirm appropriate activity planning, specification compliance, operational challenge identification, and appropriate treatment delivery to designated areas. Inspection methods vary based on work size, nature, and control zone characteristics, ensuring verification approaches match how complex the work is and how sensitive the site is.

Post-treatment success evaluation systematically checks treated areas after enough time has passed for control results to be evident. Drone surveys provide the foundation for this assessment by finding locations potentially missed by control field crews, with targeted ground truthing to verify findings and assess control success. This technology-supported approach ensures complete coverage while making the best use of field verification effort

7.4. Record Keeping Verification

Comprehensive records are maintained for all plant pest control activities including:

- Required control effort per control zone,
- GPS records of target species locations and treatments,
- Quantities of herbicides used with application details, and
- Documentation of control success or failure with specific techniques.

This information provides the foundation for adaptive management and future planning decisions.

Record verification includes assessing the accuracy of POI data and confirming that all recorded information meets BPPMP specifications. The verification process confirms appropriate data collection and storage methods while ensuring information is accessible for future planning. This systematic approach maintains data quality standards essential for effective adaptive management and programme improvement.

7.5. Agrichemical Compliance Verification

All chemical applications require compliance with NZS 8409:2021 Management of Agrichemicals, with verification processes confirming regulatory adherence and operational safety standards. Pre-work verification confirms all chemical applicators hold current, appropriate certifications and maintain up-to-date training in application

techniques and safety procedures. Post-work verifications ensure all tracking requirements were adhered to, and all spray diaries were completed and filed appropriately.

Ongoing compliance verification verifies contractors maintain detailed chemical usage records with complete spray record sheets documenting all required information for each application. Weather condition compliance verification ensures applications occur within acceptable parameters for safety and effectiveness, while personal protective equipment usage and maintenance verification confirms appropriate safety protocol implementation. This complete approach ensures chemical operations meet all regulatory requirements while maintaining operational safety and environmental protection standards.

8. REPORTING

8.1. Integrated Reporting Framework

BPPMP reporting is a dedicated section within the BOGP Annual Ecological Monitoring Report, which consolidates monitoring and outcomes from all BOGP ecological components. This approach ensures biosecurity and plant pest management reporting supports the broader adaptive management framework while providing the foundation for subsequent operational planning and control works at the site.

The reporting framework serves multiple purposes:

- documenting annual achievements and challenges,
- providing accountability for management activities,
- supporting adaptive management decision-making, and
- informing future resource allocation and planning priorities.

This systematic approach ensures continuous programme improvement while maintaining transparency and regulatory compliance.

8.2. Annual Monitoring Report Requirements

The biosecurity and plant pest section of the BOGP Annual Ecological Monitoring Report will be completed to summarise biosecurity and plant pest control activities undertaken during the preceding 12-month period. The report will be reviewed by the Technical Lead (Biosecurity) and documents key operational aspects of control work including timing, methods employed, chemical types and quantities where applicable, mapped treatment locations, and target species within treated areas.

8.2.1. Operational documentation

Operational documentation includes:

- outcome assessments for monitoring and maintenance works,
- POI mapping with location descriptions, and
- identification of future priorities for the following year, particularly areas outside established POIs.

The report addresses exceptions or deviations from established biosecurity protocols, instances where unexpected risks required control response, and recommendations for managing emerging biosecurity risks.

8.2.2. Performance evaluation

Performance evaluation documents significant concerns or issues identified during verification processes. Specifically, it addresses instances where plant pest works failed to meet BPPMP requirements or deviated from approved AOPs. This includes evaluation of control operations that failed to achieve expected outcomes, with descriptions of significant problems such as herbicide ineffectiveness or unintended damage to native vegetation requiring corrective action.

8.3. Adaptive Management Integration

Annual report findings form the basis for future AOPs (see Appendix G for details), informing control work priorities and resource management needs. This integration represents a crucial component of the adaptive management framework (section 9) ensuring plant pest management remains effective across the landscape while responding to changing conditions and lessons learned from operational experience, and evolving control methods.

Information flow between annual reports and subsequent AOPs ensures field experience, performance data, and new priorities are systematically built into operational planning. This communication maintains programme effectiveness while supporting continuous improvement and adaptation to evolving site conditions. The linkage between documentation, evaluation, and planning ensures management activities prevent plant pest re-establishment while effectively managing new incursions across the project landscape.

9. ADAPTIVE MANAGEMENT FRAMEWORK

Biosecurity threats and plant pest management operate in dynamic environments where new species, changing environmental conditions, and new control technologies require ongoing management adjustments. Static protocols risk becoming ineffective over the 35-year project duration without systematic evaluation and refinement to maintain programme efficacy.

The adaptive management framework ensures biosecurity management remains responsive to changing conditions, emerging threats, and technological advances through structured processes for continuous improvement and protocol refinement. This approach balances operational stability with necessary flexibility to address evolving challenges while maintaining programme effectiveness and regulatory compliance.

9.1. Core Adaptive Management Processes

9.1.1. Performance Evaluation

Performance evaluation occurs through comprehensive annual assessments analysing monitoring data, incident reports, and compliance records to identify performance gaps and improvement opportunities. These reviews provide the foundation for evidence-based management adjustments while documenting programme effectiveness and areas requiring modification.

9.1.2. Trigger Mechanisms

Trigger mechanisms set clear thresholds for adjusting management interventions, including pest detection frequency rates, control method effectiveness standards, and compliance failures that automatically start protocol reviews and potential changes. These predetermined triggers ensure timely responses to performance issues while maintaining operational predictability.

9.1.3. Threat Assessment

Threat assessment involves systematic screening for new pest species, climate change impacts, and evolving site conditions that may require additional or modified biosecurity measures. This proactive approach enables early identification of emerging risks while providing time for appropriate response development.

9.2. Technology and Knowledge Integration

Technology evaluation regularly assesses new control technologies, monitoring methods, and management tools for potential incorporation into existing protocols. New technologies undergo pilot testing or verification with contractors before full implementation, ensuring proven effectiveness while minimising operational disruption.

Stakeholder integration creates ways to include feedback from contractors, site staff, regulators, and technical specialists into improving management protocols. This collaborative approach ensures practical experience informs protocol development while maintaining technical rigor and regulatory compliance.

9.3. Implementation and Communication

9.3.1. Protocol Updates

Protocol updates follow systematic procedures including:

- Stakeholder consultation
- Risk assessment
- Approval processes
- Communication of changes to all relevant personnel.

These procedures ensure appropriate review while maintaining operational continuity and regulatory compliance throughout modification implementation.

9.3.2. Programme Evolution

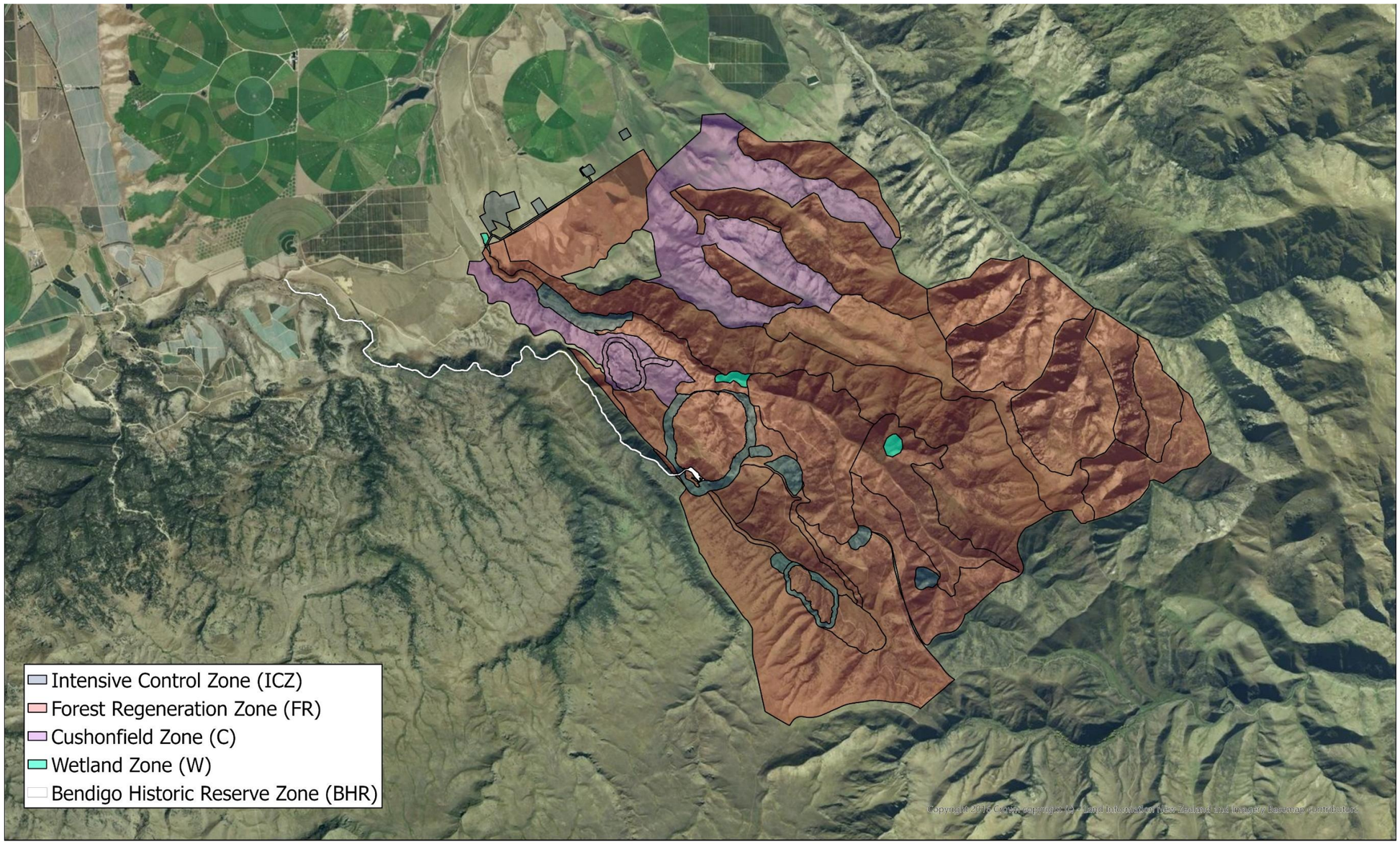
Programme evolution is part of the annual review and adjusts monitoring frequency, methods, and programme parameters based on detection success, emerging threats, and management effectiveness to optimise resource allocation and detection capability. This continuous refinement ensures monitoring programs remain relevant and cost-effective while maintaining adequate surveillance coverage for effective pest management.

9.3.3. Documentation Standards

Documentation standards maintain complete records of management decisions, protocol modifications, and implementation outcomes to inform future adaptive management cycles while providing institutional knowledge retention. This documentation supports evidence-based decision-making and ensures continuity across personnel changes.

APPENDIX A. FIGURES AS A3

This section provides an enlarged version of each map provided in the MPMP in order of appearance.



habitatnz wildlife management

Figure 5. Plant pest control zones across the BOGP landscape

APPENDIX B. RPMP REQUIREMENTS

Table 3. RPMP Plan Rules relating to plant pest species across the BOGP.

Rule	Description from RPMP	Explanation of rule from RPMP
Nodding thistle		
Plan Rule 6.4.4.1	Note: This is designated a good neighbour rule. All occupiers in the Otago region on rural zoned land shall eliminate nodding thistle infestations on their land within 100m of the property boundary where the occupier of the adjoining property is eliminating nodding thistle infestations within 100m of that boundary. For the purpose of this rule, eliminate means the permanent preclusion of the plant's ability to set viable seed. A breach of this rule creates an offence under section 154N(19) of the Act.	The reason for this rule is to manage the spread of nodding thistle causing unreasonable costs to an adjacent occupier who is undertaking active nodding thistle management within 100m of their property boundary. Any action pertaining to non-compliance will only be initiated upon a complaint.
Broom		
Plan Rule 6.4.3.1	All occupiers within the Gorse and Broom Free Areas as shown on Map 2 in Appendix 3 shall, eliminate all broom infestations on the land that they occupy. This rule shall not have legal effect within the New Gorse and Broom Free Areas as illustrated on Map 2 in Appendix 3 until 31 October 2024. For the purpose of this rule, eliminate means the permanent preclusion of the plant's ability to set viable seed. A breach of this rule creates an offence under section 154N(19) of the Act.	The reason for this rule is to maintain the past investment by occupiers in establishing areas clear of broom within properties. Otago Regional Council will proactively support all land occupiers within the New Gorse and Broom Free Areas to clear these areas prior to Rule 6.4.3.1 having legal effect from 31 October 2024.
Gorse		
Plan Rule 6.4.3.3	All occupiers within the New Gorse and Broom Free Areas as shown on Map 2 in Appendix 3 shall eliminate all gorse infestations on the land that they occupy. This rule shall not have legal effect for the New Gorse and Broom Free Areas as shown on Map 2 in Appendix 3 until 31 October 2024. For the purpose of this rule, eliminate means the permanent preclusion of the plant's ability to set viable seed. A breach of this rule creates an offence under section 154N(19) of the Act.	The reason for this rule is to maintain the past investment by occupiers in establishing areas clear of gorse within properties. Otago Regional Council will proactively support all land occupiers within the New Gorse and Broom Free Areas to clear these areas prior to Rule 6.4.3.3 having legal effect from 31 October 2024.
Ragwort		

Rule	Description from RPMP	Explanation of rule from RPMP
Plan Rule 6.4.4.2	Note: This is designated a good neighbour rule. All occupiers in the Otago Region on rural zoned land shall eliminate ragwort infestations on their land within 50m of the property boundary where the occupier of the adjoining property is eliminating ragwort infestations within 50m of that boundary. For the purpose of this rule, eliminate means the permanent preclusion of the plant's ability to set viable seed. A breach of this rule creates an offence under section 154N(19) of the Act.	The reason for this rule is to manage the spread of ragwort causing unreasonable costs to an adjacent occupier who is undertaking active ragwort management within 50m of their property boundary. Any action pertaining to non-compliance will only be initiated upon a complaint from the adjoining affected occupier.
Wilding conifers		
Plan Rule 6.3.4.2	Within the Otago Region occupiers shall eliminate all wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch present on land they occupy within 200m of an adjoining property boundary prior to cone bearing, if; a) wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch have previously been eliminated through control operations on the adjoining property; and b) the control operations on the adjoining property were within 200m of the boundary and were undertaken since January 2016. A breach of this rule or any part thereof creates an offence under section154N(19) of the Act.	Over the duration of the Plan, to ensure that the spread of wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch does not cause unreasonable costs to the occupiers of adjoining properties, where wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch have previously been eliminated through control operations on the adjoining property.
Plan Rule 6.3.4.3	Note: This is designated a good neighbour rule. Within the Otago Region occupiers shall eliminate all wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch present on land they occupy within 200m of an adjoining property boundary prior to cone bearing where: a) the adjoining land has previously been cleared through control operations since January 2016; and b) the occupier of that adjoining land is taking reasonable steps to manage wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch on their land, within 200m of the boundary.	Over the duration of the Plan, to ensure that the spread of wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch does not cause unreasonable costs to the occupiers of adjoining properties, where wilding conifers have previously been eliminated through control operations on the adjoining property and the adjoining occupier is undertaking active wilding conifer management. The rule is required in addition to Plan Rule 6.3.4.2 as the National Policy Direction requires that before a rule can be identified as a good neighbour rule, the Otago Regional Council must be

Rule	Description from RPMP	Explanation of rule from RPMP
	A breach of this rule creates an offence undersection 154N(19) of the Act.	satisfied that the adjacent occupier is taking reasonable measures to manage the pest or its impacts.
Plan Rule 6.3.4.4	Note: This is a pest agent rule. Within the Otago Region occupiers shall, on receipt of written direction from an Authorised Person, eliminate any Pest Agent Conifer that is present on land they occupy within 200m of an adjoining property boundary prior to cone bearing where: a) wilding conifers; contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch have previously been eliminated through control operations on the adjoining property; and b) the control operations on the adjoining property were within 200m of the boundary and were undertaken since January 2016. For the purpose of this rule Pest Agent Conifer means any introduced conifer species that is capable of contributing toward the establishment and spread of wilding conifers and is not located within a plantation forest. This may include but is not limited to the conifer species listed in Table 3. Plantation forest means a forest deliberately established for commercial purposes, being at least 1 hectare of continuous forest cover of forest species that has been planted and has or will be harvested or replanted. Forest species means a tree species capable of reaching at least 5 metres in height at maturity where it is located. A breach of this rule creates an offence under section 154N(19) of the Act.	Introduced conifer species are capable of contributing toward the establishment and spread of wilding conifers and present a risk for wilding conifer management. This rule ensures that over the duration of the Plan new infestations or reinfestation of wilding conifers and contorta, Corsican, Scots, mountain or dwarf mountain pines, larch and/or other planted conifer species are prevented at sites where wilding conifers, contorta, Corsican, Scots, mountain or dwarf mountain pines, larch and/or other planted conifer species have previously been eliminated through publicly funded control operations.
Old man's beard		
Plan Rule 6.3.2.6	All occupiers within the Otago Region shall eliminate old man's beard infestations on the land that they occupy. For the purpose of this rule, eliminate means the permanent preclusion of the plant's ability to set viable seed. A breach of this rule creates an offence under section 154N(19) of the Act.	The reason for this rule is to ensure infestation levels are reduced and threats to environment values are minimised.

Rule	Description from RPMP	Explanation of rule from RPMP
Plan Rule 6.3.2.7	Note: This is designated a Good Neighbour Rule All occupiers within the Otago Region shall, on receipt of a written direction from an Authorised Person, eliminate old man's beard infestations on their land within 20m of the property boundary where the occupier of the adjoining property is eliminating old man's beard infestations within 20m of that boundary with the intention of protecting environmental values. For the purpose of this rule, eliminate means the permanent preclusion of the plant's ability to set viable seed. A breach of this rule creates an offence undersection 154N(19) of the Act.	The reason for this rule is to manage the spread of old man's beard having unreasonable costs to an adjacent occupier where active old man's beard management is being undertaken by that land occupier. Any written direction pertaining to non-compliance will only be initiated upon a complaint in writing from the adjoining affected occupier.

APPENDIX C. REDBACK SPIDER MANAGEMENT PROTOCOL

C.1. Risk assessment and distribution

Current Status: Redback spiders (*Latrodectus hasselti*) have been confirmed in the project area and are documented in the surrounding landscape. Their presence poses documented threats to native species including the Cromwell Chafer Beetle and McCann's skinks, as well as significant human safety risks during field operations.

High-Risk Areas: Priority monitoring locations include:

- Nursery facilities and storage areas
- Equipment staging and maintenance areas near Ardgour Flats
- Rock pile and scree slope interfaces near Ardgour Flats
- Shelter belt and windbreak plantings near Ardgour Flats
- Foundations of buildings and infrastructure on Ardgour Terraces.

C.2. Detection Protocols

C.2.1. Systematic Monitoring Programme

Artificial Cover Object (ACO) Deployment:

- Deploy ACOs (corrugated iron sheets 50cm x 50cm) at 50-meter intervals in high-risk areas
- Deployment period: October to November annually (optimal detection window)
- Minimum deployment duration: 14 days before first inspection
- ACO inspection frequency: Weekly during deployment period
- GPS coordinates recorded for each ACO location.

Visual Inspection Protocols:

- **Infrastructure Inspections**: Monthly inspection of buildings, storage areas, and equipment in high-risk areas
- **Equipment Inspections**: Pre use inspection of stored equipment and materials
- **Habitat Assessment**: Annual surveys of potential habitat in high-risk areas

Detection Methodology (ACO Inspection Procedure):

- Approach ACO slowly and lift carefully from one corner
- Visually inspect underside for webs, egg sacs, or spiders

- Check surrounding ground area within 2-meter radius
- Photograph any suspicious findings before disturbance
- Replace ACO in exact original position
- Record inspection results on standardised data sheet.

C.3. Response Protocols

C.3.1. Immediate Response (Upon Detection)

Step 1: Site Isolation

- Establish 2-meter exclusion zone around detection site
- Install temporary barrier tape and warning signage
- Notify Site Manager and Technical Lead (Biosecurity) immediately.

Step 2: Confirmation and Documentation

- Photograph specimen and habitat from safe distance (minimum 20cm)
- GPS coordinate recording (accuracy ±1 meter)
- Conduct comprehensive habitat assessment within 50-meter radius.

C.3.2. Control Implementation

Direct Control Methods:

- **Manual Removal**: By trained personnel using appropriate PPE.
- **Targeted Pesticide Application**: Residual insecticides applied by adequately trained applicator following label requirements.
- **Web Destruction**: Systematic removal of webs and egg sacs.
- **Habitat Modification**: Remove shelter opportunities where practical.

Habitat Management:

- **Rabbit Burrow Management**: Priority infilling of burrows within detection area.
- **Structural Modifications**: Reduce hiding places around infrastructure.
- **Vegetation Management**: Maintain clear zones around high-risk areas.
- **Material Storage**: Implement elevated storage protocols.

C.3.3. Post-Control Monitoring

Intensive Monitoring Phase:

- Weekly ACO inspections for 4 weeks post-treatment in the area of comprehensive habitat assessment.
- Document all findings with photographic evidence.

C.3.4. Safety Protocols

Personal Protective Equipment

- **Minimum PPE**: Long pants, closed shoes, gloves when handling materials
- **Enhanced PPE**: Leather gloves, long-sleeved shirts in high-risk areas
- **Detection Work**: Add eye protection and headlamp for low-light inspections.

First Aid Procedures

- **Bite Symptoms**: Immediate, intense pain, muscle weakness, nausea, sweating
- **Immediate Response**: Apply cold compress, keep patient calm and still
- **Medical Response**: Evacuate to hospital immediately, antivenom available
- **Emergency Contacts**: Site First Aid Officer, local emergency services (111).

C.3.5. Training Requirements

All Site Personnel:

- Redback spider identification training (annual refresher)
- Basic safety protocols and first aid awareness
- Reporting procedures and emergency contacts.

Biosecurity Specialists:

- Redback Identification
- ACO deployment and inspection certification
- Risk assessment and habitat evaluation skills.

Equipment Operators:

- Pre-work inspection protocols
- Equipment hygiene procedures
- Incident reporting requirements.

APPENDIX D. PLANT PEST SPECIES AND MANAGEMENT OBJECTIVES IN EACH CONTROL ZONE

Table 4. Table of current and likely future plant pest species and associated control objectives for each plant pest control zone of the BOGP. Purple cells indicate a species subject to the outcomes of the Applied Research Plan (ARP) within that zone.

Common Name	Scientific Name	Type	Intensive Control Zone (ICZ)	Forest Regeneration (FR)	Cushionfield Zone (C)	Bendigo Historic Reserve Zone (BSR)	Wetland Zone (W)
Black Poplar	Populus nigra	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Rowan	Sorbus aucuparia	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Stone Fruit	Prunus spp.	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Wilding Conifers	Larix/Pinus spp.	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Willow	Salix x fragilis	Woody	Elimination	Elimination	Elimination	Elimination	Elimination
Buddleia	Buddleja davidii	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Elderberry	Sambucus nigra	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Boxthorn	Lycium ferocissimum	Woody	Elimination	Elimination	ARP Outcome	Not Targeted	Elimination
Cotoneaster	Cotoneaster spp.	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Flowering Currant	Ribes sanguineum	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Gooseberry	Ribes uva-crispa	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Broom	Cytisus scoparius	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Gorse	Ulex europaeus	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Hawthorn	Crataegus monogyna	Woody	Elimination	Elimination	Elimination	Not Targeted	Elimination
Sweet Brier	Rosa rubiginosa	Woody	Elimination	Not Targeted	Elimination	Not Targeted	Not Targeted
Thyme	Thymus vulgaris	Herbaceous	Elimination	Elimination	Elimination	Not Targeted	Elimination
Non-native Climbing Vines	Clematis spp.	Woody	Elimination	Elimination	ARP Outcome	Not Targeted	Elimination
Biting Stonecrop	Sedum acre	Herbaceous	Elimination	Elimination	ARP Outcome	Not Targeted	Elimination
Stinking Iris	Iris foetidissima	Herbaceous	Elimination	Elimination	Elimination	Not Targeted	Elimination
Foxglove	Digitalis purpurea	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Not Targeted
Hemlock	Conium maculatum	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Not Targeted
Mullein	Verbascum thapsus	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Not Targeted
Thistles	Various species	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Control
Australian Bidibid	Acaenea spp.	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Not Targeted
California Poppy	Eschscholzia californica	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Not Targeted
Viper's Bugloss	Echium vulgare	Herbaceous	Elimination	Not Targeted	ARP Outcome	Not Targeted	Not Targeted
Male Fern	Dryopteris filix-mas	Herbaceous	Elimination	Elimination	ARP Outcome	Not Targeted	Elimination

APPENDIX E. PLANT PEST SPECIES CONTROL METHODS AND FIELD CARDS

The following Species Control Cards provide standardised, field-ready guidance for the control methods for all 27 target plant pest species at the BOGP, by functional control groups. Each card follows a consistent format designed to support efficient contractor implementation while ensuring regulatory compliance and treatment effectiveness.

The cards present control methods in priority order using a color-coded system:

- Preferred 'light touch' method for sensitive sites'
- Alternative method or less sensitive sites
- Least sensitive method for non-sensitive sites or difficult conditions.

Specific timing, equipment, and chemical application requirements are included. All herbicide rates and application methods comply with NZS 8409:2021 standards and relevant product labels.

Contractors must confirm positive species identification before treatment and apply the success criteria detailed on each card to evaluate treatment effectiveness. These cards are designed for field use and should be referenced alongside the detailed species descriptions in the main document.

All control activities must be conducted by appropriately certified personnel and documented according to the requirements outlined in Section 8.

E.1. Field Card Usage Instructions

How to use these cards:

1. Identify species and choose correct card.
2. Choose control method based on plant size, site sensitivity, and available equipment.
3. Follow timing recommendations for optimal effectiveness.
4. Apply success criteria to evaluate treatment effectiveness.
5. Schedule follow-up according to card recommendations.

Card Coding:

- 🟢 **Green:** Preferred method for sensitive sites
- 🟡 **Yellow:** Alternative method or less sensitive sites
- 🔴 **Red:** Non sensitive sites or difficult conditions

Safety Notes:

- Always wear appropriate PPE for chemical applications
- Follow all herbicide label requirements
- Confirm species identification before treatment
- Consider site sensitivity and non-target species protection

Group 1: Large Woody - Cut & Treat

Species in this Group (7 species):

Black Poplar • Buddleia • Elderberry • Rowan • Stone Fruit (Prunus) • Wilding Conifers • Willow

🟢 PREFERRED: Cut & Stump Treat

When: Spring/autumn for deciduous, year-round for evergreen
Equipment: Chainsaw + brush + herbicide
Chemical: Glyphosate 250ml/L OR Picloram 43gm/L gel
Follow-up: 6 months

🟡 ALTERNATIVE: Bore & Fill

When: Any time (large specimens)
Equipment: Drill + syringe
Chemical: Undiluted herbicide
Follow-up: 3 months

⚠️ Critical Notes:

- Wilding Conifers: **MUST** apply herbicide within 15 minutes of cutting
- Willow: All cut material **must** be disposed of - will regrow from fragments
- Near Waterways: **Use gel** formulations instead of liquid herbicides
- Cut stumps **WILL regrow** if not treated with herbicide
- Care must be taken during willow management in the BHR to prevent damage to heritage features from felling, sectioning, or the uncontrolled fall of trees left standing following herbicide treatment.

✅ Success Criteria (check in 30 days):

Target: >90% dead trees/shrubs
Signs: Brown/wilted leaves, no regrowth from base
If unsuccessful: Increase herbicide concentration by 50%

Group 2: Small Woody - Hand Remove

Species in this Group (4 species):

Boxthorn (small) • Cotoneaster • Flowering Currant • Gooseberry

🟢 PREFERRED: Dig Out/Hand Pull

When: All year (winter preferred for deciduous)
Equipment: Spade, mattock, thick gloves
Method: Remove entire root system
Follow-up: 6 months

🟡 LARGER PLANTS: Cut & Stump Treat

When: Summer-autumn preferred
Equipment: Loppers + brush + herbicide
Chemical: Metsulfuron 5g/L
Follow-up: 3 months (often regrows)

🔴 DENSE STANDS: Spray

When: Active growth periods (Summer)
Equipment: Spray equipment
Chemical: Tordon/ Grazon (follow labels)
Follow-up: 2 Months

⚠️ Critical Notes:

- Flowering Currant: Remove **ALL** root crowns - dispose at refuse station
- Cotoneaster: Plan whole-area control to prevent bird reseeding
- Boxthorn: Cut branches regrow if touching soil
- Essential to remove complete root system or will resprout

✅ Success Criteria (check in 30 days):

Target: >90% successful removal (100% for Flowering Currant)
Signs: No regrowth from root system
If unsuccessful: Re-dig missed root fragments

Group 3: Thorny/Spiny Woody

Species in this Group (4 species):

Gorse • Broom • Hawthorn • Sweet Brier

🟢 SMALL PLANTS: Hand Pull

When: All year
Equipment: THICK GLOVES, full protective clothing
Method: Pull including roots
Follow-up: 6 months for seedlings

🟡 LARGER PLANTS: Cut & Stump

When: Summer-autumn
Equipment: Chainsaw + protective gear + herbicide
Chemical: Metsulfuron gel OR triclopyr gel
Follow-up: 3 months

🔴 DENSE STANDS: Spray

When: Active growth periods
Equipment: Spray equipment
Chemical: Tordon/ Grazon (follow labels)
Follow-up: 30 days

⚠️ Critical Notes:

- SAFETY FIRST: Full protective clothing mandatory - sharp spines/thorns
- Gorse: Seeds viable for decades - long-term management needed
- Sweet Brier: Underground suckers produce new shoots
- Disposal: Burn or bury deeply - never leave on site

✅ Success Criteria (check in 30 days):

Target: >85% dead plants (Sweet Brier), >90% others
Signs: Brown/dead spines and foliage, no sucker regrowth
If unsuccessful: Check for missed root fragments

Group 4: Climbing/Vine Species

Species in this Group (3 species):

Non-native Clematis (Old Man's Beard, Chinese clematis and Oriental clematis)

🟢 PREFERRED: Cut & Paste Gel

When: All year
Equipment: Saw + gel applicator
Chemical: Metsulfuron gel 10g/L OR picloram gel
Follow-up: 3 months

🟡 ALTERNATIVE: Basal Spray

When: Stems <20cm diameter
Equipment: X-Tree Basal applicator
Chemical: X-Tree Basal
Follow-up: 6 months

⚠️ Critical Notes:

- DISPOSAL CRITICAL: Cut stems root at nodes - remove **ALL** material
- Never mulch: Dispose by burning or deep burial only
- High Priority: Non-native clematis may reinvade treated areas
- Check surrounding vegetation for native clematis - don't treat by mistake

✅ Success Criteria (check in 30 days):

Target: >95% dead vines
Signs: Brown/dead leaves, no regrowth
If unsuccessful: Retreat with cut & paste method

Group 5: Mat-Forming Herbaceous

Species in this Group (3 species):

Biting Stonecrop • Stinking Iris • Thyme

🟢 PREFERRED: Dig Out/Grub

When: All year (avoid drought for Thyme)
Equipment: Hand tools, collection bags
Method: Remove all plant material including fragments
Follow-up: 3-6 months

🟡 ALTERNATIVE: Cut & Stump (Iris)

When: All year
Equipment: Loppers + brush + herbicide
Chemical: Glyphosate 333ml/L + penetrant
Follow-up: 6 months

⚠️ Critical Notes:

- Biting Stonecrop: Fragments regrow - dispose at refuse station
- Stinking Iris: Poisonous seeds may impact birds
- Thyme: Often needs multiple treatments per season
- Start from top: Begin control at top of slopes/cliffs

🕒 Timing Specifics:

Biting Stonecrop: Don't replant for 2 months after spraying
Stinking Iris: Best results spring-autumn
Thyme: Spring when growing, avoid drought periods

✅ Success Criteria (check in 30 days):

Target: >80% (Thyme), >85% (Iris), >95% (Stonecrop)
Signs: Brown/dead mats, no regrowth
If unsuccessful: Increase follow-up frequency

Group 6: Tall Herbaceous – Spray

Species in this Group (4 species):

Foxglove • Hemlock • Mullein • Thistles (x 5 species)

🟢 **PREFERRED: Spot Spray**

When: Active growth, before flowering
Equipment: Knapsack sprayer
Chemical: Glyphosate (follow label rates)
Follow-up: 30 days

🟡 **SENSITIVE AREAS: Weed Wipe**

When: Active growth
Equipment: Weed wiper
Chemical: Glyphosate (wiper concentration)
Follow-up: 30 days

🟢 **ALTERNATIVE: Hand Pull**

When: Before seed set
Equipment: Thick gloves, hand tools
Method: Pull including basal rosette
Follow-up: 6 months

⚠️ **Critical Notes - POISONOUS SPECIES:**

- HEMLOCK - **FATAL**: Remove all stock from area, dispose safely
- FOXGLOVE - **TOXIC**: Wear gloves, wash hands thoroughly
- More palatable to livestock after spraying: Maintain stock exclusion
- Thistles: Seeds remain viable 20+ years

🕒 **Timing Specifics:**

Critical: Remove seed heads to prevent spread
Hemlock: Check for seedlings 30 days after spraying
Mullein: Seeds are long-lived - expect ongoing management

✅ **Success Criteria (check in 30 days):**

Target: >90% plant death, NO seed production
Signs: Complete plant death, brown/dead rosettes
If unsuccessful: Hand remove survivors, check species ID

Group 7: Rosette/Low Herbaceous

Species in this Group (3 species):

Australian Bidibid • California Poppy • Viper's Bugloss

🟢 PREFERRED: Hand Pull/Remove

When: Before seed set (critical timing)
Equipment: Hand tools, collection bags
Method: Remove including roots/seedheads
Follow-up: 6 months

🟡 ALTERNATIVE: Scrub Bar (Bugloss)

When: Before seed set
Equipment: Scrub bar, hand tools
Method: Cut to prevent seed production
Follow-up: 6 months

⚠️ Critical Notes:

- TIMING CRITICAL: Must treat before seed set
- Australian Bidibid: Burrs attach to animals/clothing - clean equipment
- California Poppy: Thrives in poor soils, outcompetes natives
- Viper's Bugloss: Deep taproot makes pulling difficult

🕒 Timing Specifics:

Australian Bidibid: Summer before globular seed heads mature
California Poppy: Spring-summer before 2-segment seed capsules form
Viper's Bugloss: Before flowers change from pink to blue

✅ Success Criteria (check in 30 days):

Target: >85% control, NO viable seed production
Signs: No seed capsule/head formation
If unsuccessful: Hand pull any missed plants immediately

Group 8: Specialist Species

Species in this Group (1 species):

Male Fern

🟢 PREFERRED: Hand Pull

When: All year round
Equipment: Spade, hand tools
Method: Pull whole fern including rhizome
Follow-up: 6 months

🟡 ALTERNATIVE: Chemical Control

When: Active growth
Equipment: Knapsack sprayer
Chemical: Metsulfuron (follow label)
Follow-up: 30 days

⚠️ Critical Notes:

- IDENTIFICATION: Don't confuse with native ferns
- COMPLETE REMOVAL: Rhizome must be completely removed or will regrow
- Large fronds: 125x30cm with kidney-shaped spore covers
- Habitat: Damp forests, stream-sides, rare in dry areas

✅ Success Criteria (check in 30 days):

Target: >90% successful removal
Signs: No regrowth from rhizome
If unsuccessful: Re-dig missed rhizome fragments

E.2. Quick reference field matrix to accompany control guides

Control Group	Primary Method	Equipment Needed	Chemical	Success Target	Follow-up timeframe
Group 1: Large Woody	Cut & Stump Treat	Chainsaw + brush + specialist lowering equipment near heritage areas in BHR	Glyphosate 250ml/L	>90%	6 months
(7 species) Black Poplar • Buddleia • Elderberry • Rowan • Stone Fruit (Prunus) • Wilding Conifers • Willow					
Group 2: Small Woody	Dig Out/Hand Pull	Spade + thick gloves	None (physical removal)	>90%	6 months
(4 species) Boxthorn (small) • Cotoneaster • Flowering Currant • Gooseberry (young)					
Group 3: Thorny/ Spiny	Hand Pull (small)	THICK GLOVES + protective clothing	None/Gel for larger	>85%	6 months
(3 species) Gorse • Broom • Hawthorn • Sweet Brier					
Group 4: Climbing/ Vines	Cut & Paste Gel	Saw + gel applicator	Metsulfuron gel 10g/L	>95%	3 months
(2 species) Non-native Clematis • Old Man's Beard (if present)					
Group 5: Mat-Forming	Dig Out/Grub	Hand tools + bags	Glyphosate 333ml/L + penetrant	>80-95%	3-6 months
(3 species) Biting Stonecrop • Stinking Iris • Thyme					
Group 6: Tall Herbaceous	Spot Spray	Knapsack sprayer	Glyphosate (label rates)	>90%	30 days
(4 species)					

Control Group	Primary Method	Equipment Needed	Chemical	Success Target	Follow-up timeframe
Foxglove • Hemlock • Mullein • Thistles (x 5 species)					
Group 7: Rosette/ Low	Hand Pull	Hand tools + bags	None (physical removal)	>85%	6 months
(3 species) Australian Bidibid • California Poppy • Viper's Bugloss					
Group 8: Specialist	Hand Pull	Spade + hand tools	None (physical removal)	>90%	6 months
(1 species) Male Fern					

APPENDIX F. KEY PROGRAMME TIMING CONSIDERATIONS

The detailed schedules and protocols in this appendix operationalize the timing framework described in Section 5.5, providing field crews with specific guidance for effective plant pest control implementation

F.1. Plant control group specific guidance

Effective plant pest control depends on precise timing that considers species biology, growth stages, and reproductive cycles, with the detailed schedules below providing optimal treatment windows and critical timing notes for all 27 target species, grouped by function control groups.

GROUP 1: LARGE WOODY SPECIES (7 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Black Poplar	Mar-May, Sep-Nov	Cut & treat during dormant season	6 months
Buddleia	Dec-Apr	Must spray during active growth (full leaf)	6 months
Elderberry	All year	Best results autumn/winter	6 months
Rowan	Mar-May, Sep-Nov	Dormant season preferred	6 months
Stone Fruit (Prunus)	May-Aug	Winter pruning period	6 months
Wilding Conifers	All year	CRITICAL: Herbicide within 15 minutes of cutting	12 months
Willow	Mar-Sep	Avoid sap flow period (Oct-Feb)	6 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 2: SMALL WOODY SPECIES (4 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Boxthorn	All year	Hand removal easier in winter	6 months
Cotoneaster	All year	Before berry production (Dec-Feb)	6 months
Flowering Currant	Jun-Aug	Winter removal preferred	6 months
Gooseberry	Jun-Aug	Dormant season for hand removal	6 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 3: THORNY/SPINY WOODY SPECIES (4 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Gorse	Oct-Mar	Active growth period	6 months
Broom	Oct-Mar	Before pod formation	6 months
Hawthorn	Mar-May, Sep-Nov	Dormant season cutting	6 months
Sweet Brier	Sep-Apr	Avoid winter dormancy	6 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 4: CLIMBING/VINE SPECIES (2 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Non-native Clematis	Sep-May	Cut stems root at nodes • Remove ALL material	3 months
Old Man's Beard	Sep-May	HIGH PRIORITY • Immediate disposal required	3 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 5: MAT-FORMING HERBACEOUS (3 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Biting Stonecrop	Oct-Apr	Avoid drought stress	3-6 months
Stinking Iris	All year	Before seed production	6 months
Thyme	Oct-Mar	Multiple treatments needed • Avoid drought	3 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 6: TALL HERBACEOUS (4 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Foxglove	Oct-Jan	TOXIC • Before flowering	30 days
Hemlock	Sep-Dec	FATAL • Before seed set	30 days
Mullein	Oct-Feb	Before flowering spike	30 days
Thistles	Oct-Jan	Before seed head formation	30 days

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 7: ROSETTE/LOW HERBACEOUS (3 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Australian Bidibid	Dec-Feb	Before burr formation	6 months
California Poppy	Oct-Jan	Before capsule formation	6 months
Viper's Bugloss	Oct-Jan	Before flowers turn blue	6 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

GROUP 8: SPECIALIST SPECIES (1 species)

Species	Optimal Treatment	Critical Timing Notes	Follow-up
Male Fern	All year	Easier identification when fronds developed	6 months

Spring/Growing Summer Autumn/Dormant Winter Year-round

F.2. Weather Protocol

Environmental conditions impose specific constraints on plant pest control effectiveness and safety, with the decision matrix below providing go/no-go criteria for spray operations, mechanical work, and hand removal activities.

WEATHER PROTOCOL DECISION MATRIX

WIND SPEED PROTOCOLS

Wind Speed (km/h)	Spray Operations	Mechanical Operations	Hand Operations
0-10	✅ Optimal conditions	✅ All operations	✅ All operations
11-15	⚠ Caution - check drift	✅ All operations	✅ All operations
16-20	❌ NO spray operations	✅ All operations	✅ All operations
21-30	❌ NO spray operations	⚠ Caution - chainsaw work	✅ All operations
>30	❌ NO operations	❌ NO operations	❌ NO operations

TEMPERATURE PROTOCOLS

Temperature (°C)	Spray Operations	Mechanical Operations	Hand Operations
<0	❌ NO spray (frost risk)	⚠ Equipment warming	⚠ Safety considerations
0-5	⚠ Limited effectiveness	✅ All operations	✅ All operations
5-25	✅ Optimal conditions	✅ All operations	✅ All operations
25-30	⚠ Stress conditions	✅ All operations	✅ All operations
>30	❌ NO spray operations	⚠ Heat stress protocols	⚠ Heat stress protocols

PRECIPITATION PROTOCOLS

Condition	Spray Operations	Mechanical Operations	Hand Operations
No rain forecast 6+ hours	✅ Optimal conditions	✅ All operations	✅ All operations
Rain forecast 3-6 hours	⚠ Fast-acting only	✅ All operations	✅ All operations
Rain forecast <3 hours	❌ NO spray operations	✅ All operations	✅ All operations
Light rain (<2mm/h)	❌ NO spray operations	✅ All operations	✅ All operations
Heavy rain (>5mm/h)	❌ NO operations	❌ NO operations	❌ NO operations

✅ GO - Safe to proceed ⚠ CAUTION - Proceed with restrictions ❌ STOP - Do not proceed

F.3. Emergency Response Timing

Emergency response timing overrides standard scheduling when immediate threats to human safety, livestock welfare, or programme integrity are identified, with priorities classified as follows:

- High Priority (24-72 hours)
  - Hemlock: Fatal to livestock - immediate removal
  - New high-risk species detection: Rapid response required
  - Biosecurity breach: Immediate containment
  - Foxglove: Toxic species before flowering
  - Seed head formation: Any species with viable seeds
  - Equipment contamination: Cross-zone movement.
- Standard Priority (1-7 days)
  - Routine follow-up: Scheduled inspections
  - Weather window: Optimal treatment conditions
  - Seasonal timing: Species-specific windows.
- Maintenance Priority (1-4 weeks)
  - Equipment servicing: Scheduled maintenance
  - POI inspections: Regular monitoring
  - Planning activities: AOP development.

This comprehensive timing framework ensures control activities are conducted at optimal times for maximum effectiveness while maintaining operational flexibility and safety standards.

APPENDIX G. ANNUAL OPERATIONAL PLAN TEMPLATE AND REQUIREMENTS

G.1. Required AOP sections

The Annual Operational Plan must include the following four essential sections:

G.1.1. Section A: Work Plan Summary

- A treatment overview including:
  - Total area to be treated by control zone (hectares)
  - Priority species and locations for the coming year
  - Expected outcomes by control phase (Knockdown/ Suppression/ Surveillance).
- Resource requirements including:
  - Crew size and key skills needed
  - Equipment and chemical requirements
  - Certified applicator confirmation
  - Major operational constraints (weather, access, mining schedule).
- A quarterly work plan schedule matrix, such as the example provided in Table 5.

Table 5. Example quarterly schedule for the work plan summary within the Annual Operational Plan.

Quarter	Control Zone	Group	Species	Method	Hectare	Crew days	Expected outcome
Q1 (Jul-Sep)	PPE	3	Gorse, Broom	Cut & paste	15.2	8	95% initial control
Q1 (Jul-Sep)	PPE	3	Gorse, Broom	Cut & paste	15.2	8	95% initial control
Q1 (Jul-Sep)	F1	1	Buddleia	Foliar spray	3.1	2	90% knockdown
Q2 (Oct-Dec)	C	3	Sweet brier	Hand removal	0.8	3	Minimisation (practical removal)

G.1.2. Section B: Site-Specific Plans

Site specific plan section must contain the following:

- Priority site list with the following information:
  - Site Name/Code and GPS Coordinates (NZTM)

  - Control Zone and Area (hectares)
  - Target Species
  - Treatment Phase (Knockdown/Suppression/Surveillance)
  - Planned Method and Optimal Timing
  - Access Requirements and Key Constraints
  - Success Criteria (measurable outcomes)
- Points of Interest (POI) management and information including:
  - POI priority ranking approach (High/ Medium/ Low)
  - Planned treatment frequency by POI category
  - Criteria for establishing new POIs
  - Approach for retiring achieved POIs.

G.1.3. Section C: Compliance & Safety

Details of compliance and safety requirements including:

- Agrichemical Compliance
  - Confirmation all applicators hold current certifications
  - Herbicide procurement and storage procedures
  - Application procedures meeting NZS 8409:2021 standards
  - Spray diary and record keeping approach
- Biosecurity Protocols
  - Equipment cleaning procedures between zones
  - High-risk activity management (equipment transfers, material movement)
  - Personnel hygiene protocols
  - Visitor and contractor management
- Safety Procedures
  - Personal protective equipment requirements
  - Emergency contact details and procedures
  - First aid provisions and training
  - Incident reporting procedures.

G.1.4. Section D: Monitoring & Reporting

- Success Measurement
  - Success criteria for each treatment phase
  - Monitoring methods and timing
  - Documentation standards (photos, GPS, treatment records)
  - Quality assurance inspection schedule.
- Adaptive management and decision triggers requiring plan modification:
  - Treatment effectiveness <80% after 6 months
  - New pest species detected
  - Access restrictions >30 days
  - Herbicide resistance suspected
  - Modification approval process
  - Communication protocols for changes
- Reporting schedule outlining:
  - Monthly progress updates (brief status against targets)
  - Quarterly performance reviews
  - Annual completion report requirements
  - Integration with BOGP Annual Ecological Monitoring Report.

G.2. AOP Submission Requirements

Mandatory Deliverables include:

- Completed AOP Document (following 4-section structure above)
- Site Location Map (showing priority sites and POIs)
- Resource Calculation Summary (crew days, equipment, chemicals)
- Certification Confirmation (applicator licenses, insurance)
- Supporting Information
- Previous year performance summary (if applicable)
- Risk assessment for high-risk activities
- Equipment calibration status
- Supplier certifications for chemicals and materials.

G.3. AOP Review and Approval Process

The Technical Lead (Biosecurity) will verify:

- All control zones addressed with appropriate species targeting
- Treatment methods suitable for site conditions and control phases
- Timing windows appropriate for target species biology
- Resource allocations realistic for planned activities
- Biosecurity and safety protocols adequate
- Success criteria measurable and achievable
- Compliance with NZS 8409:2021 requirements.

G.4. AOP Implementation, Monitoring and Success

Progress Tracking

- Monthly: Brief progress reports against quarterly targets
- Quarterly: Performance review and any necessary plan adjustments
- Annually: Completion report documenting outcomes and lessons learned.

Performance Indicators

- Area treated vs. planned (% completion)
- Control phase advancement (sites progressing from Knockdown to Suppression)
- Species control effectiveness (% population reduction)
- Safety performance (zero incidents target)
- Compliance record (zero non-compliance events).

G.4.1. Modification Procedures

Minor Modifications (no approval required):

- Schedule adjustments ≤14 days
- Equipment substitutions of equivalent capability
- Method refinements within approved parameters.

Major Modifications (approval required):

- New target species additions
- Significant method changes
- Schedule changes >30 days

- Budget variations >20%

Emergency Modifications:

- Immediate safety or environmental threats
- 24-hour notification required
- Formal documentation within 7 days
- Retrospective approval process.

G.4.2. AOP Success Criteria

Each AOP must define specific, measurable success criteria:

Control Effectiveness

- Population reduction targets by species and control phase
- Reproductive control (zero seed production for minimisation targets)
- Area coverage (% of planned area treated).

Operational Performance

- Timing compliance (activities completed within optimal windows)
- Safety record (zero lost-time incidents)
- Regulatory compliance (zero non-compliance events).

Programme Progression

- Sites advancing through control phases as planned
- POI management effectiveness
- Integration with broader site management objectives.

These criteria form the foundation for annual performance evaluation and inform subsequent AOP development, ensuring continuous improvement and adaptive management throughout the programme duration.

APPENDIX H. POINTS OF INTEREST PROCEDURES AND DATA MANAGEMENT

H.1. POI Establishment During any Control Work

- Record GPS coordinates (NZTM, ±3m accuracy) at treatment centre
- Assign POI ID: BOGP-[Zone]-[Year]-[Number] (e.g., BOGP-PPE-2025-001)
- Take before/ after photos
- Complete basic POI form with required information per POI

Required Information Per POI

- POI ID and GPS location
- Treatment date and species
- Control method and herbicide (if used)
- Photos and access notes
- Operator name

H.2. POI Monitoring

Inspection Schedule

- **30 days**: Check treatment worked
- **6 months**: Look for regrowth
- **12 months**: Annual check (ongoing until 2 clean inspections)

Inspection Process

- Navigate to POI using GPS
- Check entire treatment area for weeds
- If plant pest found: count/ estimate coverage, treat if small numbers, record details
- Take photos of any findings
- Complete inspection form
- Schedule next inspection

Action Triggers

- Small regrowth (few plants): Treat immediately
- Significant regrowth (>10% coverage): Schedule formal control work
- Two clean inspections: POI eligible for closure.

H.3. Data Management

Database Requirements include:

Essential Fields:

- POI_ID, GPS_Coordinates, Date_Established
- Treatment_Date, Species, Control_Method, Operator
- Inspection_Date, Species_Found, Action_Taken, Next_Due

Data Standards:

- Enter data within 48 hours of field work
- Use standardised species names
- Include minimum 2 photos per inspection
- Monthly data backup required.

H.4. Reporting

Monthly Summary

Simple overview of monthly POI activity, in table format.

Annual Report

- Total POIs by zone
- Inspection completion rate
- Treatment success by species
- POIs closed during year.

H.5. Quality Control

Standards

- 100% of control work becomes POIs
- 95% inspections completed on time
- New detections treated within 30 days.

Monthly Audit

- Check 10% of POI records
- Verify GPS coordinates and photos match
- Confirm inspection schedules followed.

This system ensures all treated areas are monitored and prevents plant pest re-establishment through systematic follow-up.

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