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ALIEN INVASIVE VEGETATION SPECIES CONTROL PLAN

FOR

Portion 58, 59, 60, and 64 of Farm 216 (Uitzigt) (Featherbed Private Nature Reserve)

In terms of the National Environmental Management: Biodiversity Act (NEM:BA Act No 10 of 2004, as amended), Invasive Species Regulations (October 2020) and NEMA EIA Regulations (2014, as amended)

Prepare for:	Phambi Properties (Pty) Ltd (Kobus Smit)
Prepare by:	Eco Route Environmental Consultancy (Justin Brittion)
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Date:	October 2025

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Executive Summary

This Alien Invasive Vegetation Species Control Plan has been prepared for Phambi Properties (Pty) Ltd, covering Portions 58, 59, 60, and 64 of Farm 216 (Uitzigt). The plan has been developed in direct response to a formal instruction issued by the Department of Forestry, Fisheries and the Environment (DFFE) and is compiled in accordance with the National Environmental Management: Biodiversity Act (NEM:BA), Act No. 10 of 2004. It is informed by recent site-specific monitoring, updated mapping, and a detailed ecological assessment. The objective of this plan is to provide a clear, phased framework for the legally compliant and ecologically responsible removal of alien invasive species across the affected properties.

Current observations indicate that the properties are heavily infested, predominantly with Category 1b invasive species, including Acacia cyclops (Rooikrans), Acacia saligna (Port Jackson), and Pinus radiata (Monterey Pine), all of which pose a substantial threat to local biodiversity, ecosystem functioning, and fire risk. The DFFE has also identified the presence of Acacia melanoxylon (Australian Blackwood), a Category 2 species. To manage this, the site has been divided into seven distinct management units, each classified based on slope gradient, accessibility, and the intensity of infestation. A priority-based intervention strategy has been proposed, initiating with the most accessible and lowest-risk areas and progressing to more complex terrain. The proposed eradication timeline aims to achieve full compliance by 2030, with structured follow-up and monitoring after each major clearing cycle.

Control operations are further complicated by the presence of steep coastal cliffs, critically endangered ecosystems (notably Knysna Sand Fynbos), and the occurrence of protected tree species, including Sideroxylon inerme (Milkwood). These factors necessitate a measured and adaptive approach that emphasises ecological stability and full legislative compliance. The recommended control methods, including manual, mechanical, chemical, and drone-assisted techniques, have been selected according to both best practice and the specific physical and ecological conditions present in each management unit.

It is strongly recommended that the Property Owner formally appoint an Environmental Control Officer (ECO) to oversee all aspects of the clearing operation. The ECO must ensure that clearing activities remain within the bounds of this plan, that protected species are avoided, and that erosion control and rehabilitation measures are implemented immediately following removal. In addition, regular monitoring reports must be compiled and submitted to the competent authority to confirm progress and facilitate compliance tracking. Lastly, this plan must be treated as a living document, with timelines and methods subject to adjustment based on updated site conditions, feedback from the ECO, and the outcomes of each clearing phase. Should implementation delays or access limitations arise, a formal request for extension must be lodged with the DFFE to remain in compliance with regulatory timelines. By following the structured recommendations and phased interventions outlined in this document, Phambi Properties (Pty) Ltd can achieve full compliance with the directive, significantly reduce its environmental liability, and contribute meaningfully to the long-term restoration and conservation of the Featherbed Private Nature Reserve.

1. INTRODUCTION AND BACKGROUND

Portions 58, 59, and 60 of Farm 216 are located adjacent to one another on the western head of Knysna, with Portions 59 and 60 comprising the entirety of the Featherbed Private Nature Reserve. Portion 64 of Farm 216 is situated further west, toward Brenton-on-Sea, to the south of W.K. Grobler Avenue.

Western Cape SG information:

SG Region:	Knysna
Name:	Uitzigt
Farm Nr:	58/216
Area (Ha):	17.01
SG Code:	C03900000000021600058

SG Region:	Knysna
Name:	Uitzigt
Farm Nr:	59/216
Area (Ha):	13.58
SG Code:	C03900000000021600059

SG Region:	Knysna
Name:	Uitzigt
Farm Nr:	60/216
Area (Ha):	43.43
SG Code:	C03900000000021600060

SG Region:	Knysna
Name:	Uitzigt
Farm Nr:	64/216
Area (Ha):	21.95
SG Code:	C03900000000021600064

Figure 1: Locality map of Portion 58, 59, 60, and 64 of Farm 216

All the properties were affected by the wildfires that swept through Knysna during the 2017 fire event. Much of the indigenous vegetation previously established in the area was destroyed, and since then, limited intervention has taken place to control the spread of alien invasive species. This lack of management has contributed to the current dominance of alien invasive vegetation on the property.

Figure 2: Portion 58, 59, 60 and 64 of Farm 216 conditions after the 2017 Knysna fire event (Google Earth)

Recent environmental monitoring has enabled an updated understanding of the alien invasive vegetation present on the properties. Monitoring activities for the property have been completed. Although certain areas were subject to access restrictions due to challenging terrain and safety constraints, sufficient data were obtained to allow for a comprehensive assessment of the site conditions. The results indicate that the properties are primarily dominated by three alien invasive species, which will be discussed in detail in the subsequent chapters.

Figure 3: Updated conditions of vegetation present on site (Orthophoto: September / October 2025)

Table 1: Updated conditions of the vegetation present on site (Photographs: September / October 2025)






The majority of the property is currently dominated by alien invasive vegetation, with only sparse occurrences of indigenous species, such as *Osteospermum moniliferum* (Bitou Bush), observed throughout. Areas with deeper or more stable topsoil tend to exhibit higher densities of alien infestation, while rocky outcrops and steep cliff faces are comparatively less colonised. Evidence of moribund vegetation, likely remnants from the 2017 veld fires, remains present in various sections. Notably, protected tree species such as *Sideroxylon inerme* (Milkwood) have been identified on site and must be retained and safeguarded during clearing operations in accordance with applicable environmental legislation.

2. ADDITIONAL ENVIRONMENTAL CONSIDERATIONS

According to the SANBI red list of threatened ecosystem status, Portion 58 and 64 of Farm 216 proposed for alien invasive plant species management was mapped to include **Knysna Sand Fynbos** (CR), which had an original threat status of critically endangered. Portion 59 and 60 of Farm 216 was mapped to include **Goukamma Dune Thicket** (LC), which had an original threat status of least concerned.

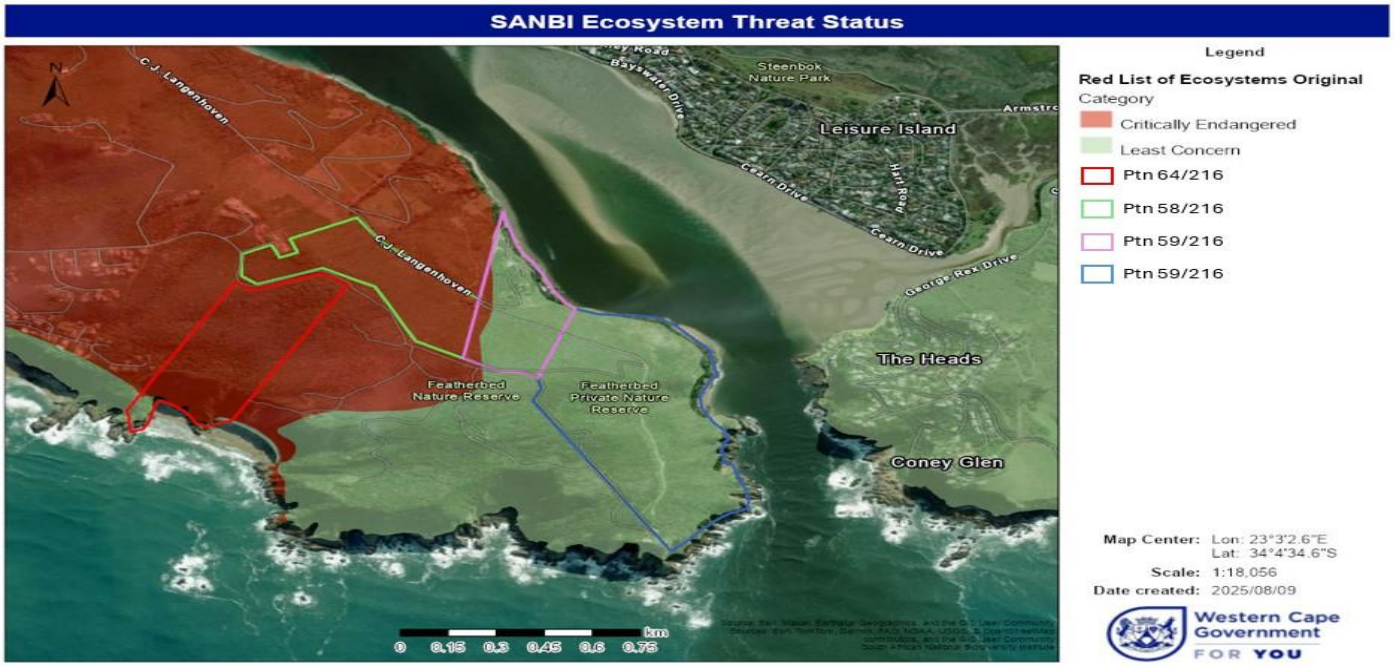

Figure 4: Portion 58, 59, 60, and 64 of Farm 216 - SANBI Ecosystem Threat Status

According to the current Western Cape Biodiversity Spatial Plan (WCBSP, 2023), all the relevant properties reflect Protected Areas (Knysna Protected Environment), while only the Featherbed Private Nature Reserve is a registered Protected Area.

Figure 5: Western Cape Biodiversity Spatial Plan (2023) Sensitive Areas

The topography of the highlighted properties varies considerably and will be a key factor in determining the layout of future alien invasive vegetation management units. Portion 64 of Farm 216 (outlined in red) is defined by steep, south-facing coastal slopes that descend sharply from approximately 180 m above sea level down to the shoreline. The tightly spaced contour lines reflect the severe gradient, and the surrounding cliffside further restricts accessibility. Portion 58, 59 and 60 of Farm 216 starts atop the ridgeline and descends downward towards the north-and-western facing coastal slopes sharply from 200 m above the sea level down to the shoreline.

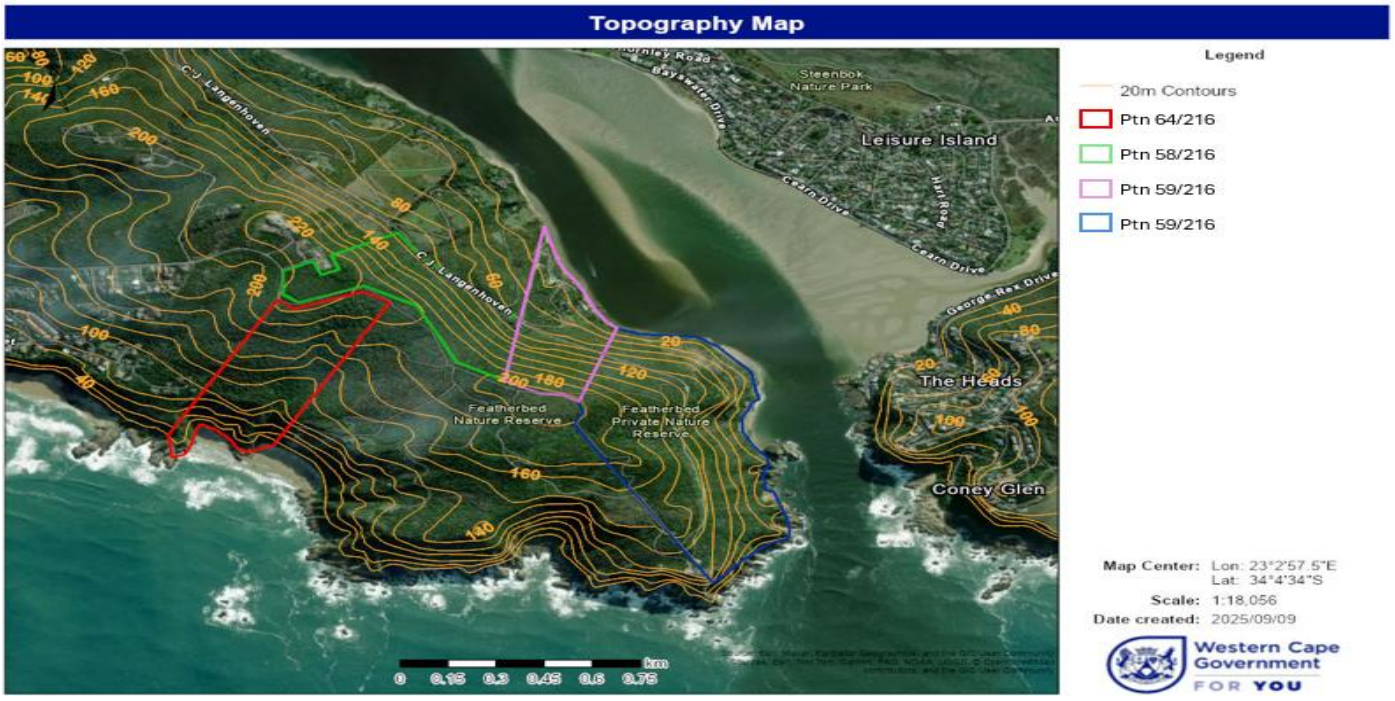

Figure 6: Topography Map of Portion 58, 59, 60, and 64 of Farm 216

3. LISTED ALIEN INVASIVE PLANT SPECIES PRESENT

In terms of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM:BA), invasive alien species are regulated through Chapter 5, which provides for the control and eradication of listed invasive species to prevent or minimise their harm to ecosystems, biodiversity and people. According to section 70 of NEM:BA, the Minister Published a national Government Gazetted list (2020) of Alien Invasive Plant Species separated into the following categories –

Table 2: Description of National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM:BA) categories 1 (a and b),2, and 3

NEM:BA Category	Description
Category 1 (a and b)	Invasive species falling under this category are prohibited plants, i.e. are illegal to grow or keep and must be controlled / eradiated. These plant species possess characteristics that can prove harmful to humans and/or have a detrimental impact on the environment, people or the economy. These plant species are only allowed in biological control reserves that are designed for the breeding of bio-control agents.

	Road reserves are not considered biological control reserves and as such these species need to be removed from such area unless specifically permitted to be there.
Category 2	Invasive species falling under this category are planted with a commercial or utility value. These species have certain useful qualities, which include the commercial use of for timber, animal fodder, food, soil stabilisation etc. The species falling under this category are only permitted in demarcated areas, under controlled conditions and in bio-control reserved. However, they are not permitted within 30 m of 1:50 year floodline or a watercourse or wetlands unless it is authorised by the National Department of Water Affairs. Road reserves are not considered demarcated areas or control conditions and as such these species need to be removed from such area unless specifically permitted to be there.
Category 3	These species are primarily 'exotic' or ornamental horticultural plants that escaped from residential gardens. These species may not be planted and propagative material may not be traded (except where the appropriate permits are in place). Eradication of these species is not required- except within 30 m of 1:50 year floodline or a watercourse or wetlands. The spread of these species must be prevented.

The areas earmarked for alien clearing is primarily dominated by Rooikrans (*Acacia Cyclops)* species; however, other alien invasive vegetation species, even if not specifically identified, should not be excluded from clearing efforts. The list below provides the identified alien invasive species as well as other species likely to co-occur on the property.

Table 3: NEM:BA listed (October 2014, as amended 2020) alien invasive species present (and likely to occur) on the property

Species	Common Name	NEMBA Category	Typical Habitat Preference	Control Priority
Pinus radiata	Monterey Pine	1b	Upland slopes, disturbed land, forest margins	High – fell & treat stumps, prevent reseeding
Acacia saligna	**Port Jackson Willow**	**1b**	**Sandy soils, dunes, disturbed fynbos**	**High – manual clearing & follow-up**
Acacia Cyclops	**Rooikrans**	**1b**	**Sandy soils, dunes, disturbed fynbos**	**High – manual clearing & follow-up**
Hakea sericea	Silky Hakea	1b	Fynbos slopes, open disturbed sites	High – remove mature trees, manage seedbank
Rubus cuneifolius	American Bramble	1b	Forest margins, clearings, disturbed patches	Medium – cut-back & herbicide, repeat
Solanum mauritianum	Bugweed	1b	Shaded areas, forest edges, drainage lines	Medium – uproot seedlings, cut-stump

Lantana camara	Common Lantana	1b	Forest margins, disturbed thicket edges	Medium – mechanical removal & monitor
Acacia mearnsii	**Black Wattle**	**2**	**Riparian zones, drainage lines, disturbed areas**	**High – cut-stump & chemical follow-up**
Eucalyptus spp. (self-seeded)	Blue Gum & others	2 (or 1b if uncontrolled)	Former plantation margins, wetter slopes, drainage lines	Medium – ring-bark or fell, treat stumps
Acacia melanoxylon	Australian Blackwood	2	Riparian zones, Indigenous Forest margins, Wetter fynbos and grassland areas, Disturbed areas with high soil moisture content	High – cut-stump & chemical follow-up

4. APPLICABLE ENVIRONMENTAL LEGISLATION

This report has been prepared to guide the clearance and long-term follow-up control of alien invasive vegetation species present on the property. The following section outlines the relevant environmental legislation applicable within the broader framework of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM:BA), under which this alien vegetation control plan has been developed.

4.1. National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)

In accordance with the National Environmental Management Act (Act 107 of 1998) (NEMA) and its amendments any proposal that triggers listed activities under Listing Notices 1 and 3 (R 327 & R 324) requires an Environmental Impact Assessment (EIA) process to secure Environmental Authorisation (EA) from the Department of Forestry, Fisheries, and the Environment (DFFE), prior to commencement.

Table 4: National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) applicability

Listing Notice 1: GN No. R.327 of 2014 (as amended 2017)		
No.	**Activity**	**Applicability**
27	The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan	Applicable While the removal of alien invasive vegetation is necessary, it is essential to carefully consider the eradication methods to ensure that no listed activities are inadvertently triggered under applicable environmental legislation. Clearing should be limited to removal of vegetation at the stump level. The removal

		of stumps and root systems can result in significant topsoil disturbance, which may constitute a listed activity requiring environmental authorisation. Accordingly, this Alien Invasive Vegetation Control Plan does not recommend the removal of stumps or roots, and as such, the activity does not trigger the need for an Environmental Impact Assessment (EIA).
Listing Notice 3: GN No. R.324 of 2014 (as amended 2017)		
No.	**Activity**	**Applicability**
3	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. **Western Cape** i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans; iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial	Applicable While the removal of alien invasive vegetation is necessary, it is essential to carefully consider the eradication methods to ensure that no listed activities are inadvertently triggered under applicable environmental legislation. Clearing should be limited to removal of vegetation at the stump level. The removal of stumps and root systems can result in significant topsoil disturbance, which may constitute a listed activity requiring environmental authorisation. Accordingly, this Alien Invasive Vegetation Control Plan does not recommend the removal of stumps or roots, and as such, the activity does not trigger the need for an Environmental Impact Assessment (EIA).

	Development Framework adopted by the MEC or Minister.	

4.2. National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM:BA)

There are scenarios where an alien invasive vegetation control plan is not required. However, in the case of this property, Section 75 of the National Environmental Management: Biodiversity Act (NEMBA) requires the implementation of an Invasive Species Management Programme, which must include the following information:

- Details about the property (including size, address, maps, land use, and name of the landowner).
- A list of the invasive species present on the property.
- The extent and distribution of these species on the property.
- Clear objectives and actions to:

- Control invasive plant infestations;
- Prevent further spread;
- Facilitate early detection and rapid response (EDRR) and eradication where feasible.
  - A monitoring plan.

Landowners are legally required to manage all listed alien invasive species that occur on their land. However, not all properties require a formal control plan. To guide this, the Department of Environmental Affairs (DEA) has developed criteria to determine when Invasive Alien Species (IAS) Control Plans are necessary.

Criteria for properties requiring alien invasive species control plans:

Property Size	Requirements	Timeframes for Clearing
< 0.05 ha (≤ 5,000 m^2)	Clear and remove plant material to an approved Green Garden Waste site.	30 days
0.051 – 1 ha (5,001 – 10,000 m^2)	Clear and remove plant material to an approved Green Garden Waste site; or apply for fuel reduction burn; or chip/utilize. Alternatively, submit a Control Plan with acceptable timeframes to the Department of Environmental Affairs.	90 days (at least by the end of November/start of fire season)
> 1 – 5 ha (10,001 – 50,000 m^2)	Clear or submit Control Plan with timeframes acceptable to the Department of Environmental Affairs.	120 days to clear **or** 30 days to submit a Control Plan

> 5.1 ha (> 50,001 m^2)	Submit Control Plan with acceptable timeframes to the Department. Prioritise urban edge boundaries that are high fire risk. Fire breaks must be in place. Permits are required to keep Category 2 plants except in riparian areas or where they pose a fire risk; in these cases, they must be treated as Category 1b and cleared.	30 days to submit Control Plan. On approval: start implementing within reasonable timeframe (5–10 years)

According to the property descriptions provided, the landowner is required to submit a Control Plan with timeframes acceptable to the Department which must be implemented within a reasonable timeframe (5 - 10 years).

4.3. National Forests Act, 1998 (Act No. 84 of 1998)

In terms of the National Forests Act, 1998 (Act No. 84 of 1998), certain indigenous tree species are classified as protected, including *Sideroxylon inerme* (Milkwood). The Act prohibits the cutting, disturbing, damaging, destroying, or removal of any protected tree without prior authorisation from the Department of Forestry, Fisheries, and the Environment (DFFE). On-site observations have confirmed the presence of Milkwood trees within the project area. As such, these trees must not be removed, pruned, or otherwise disturbed during alien clearing operations unless a valid Section 15 licence has been obtained. All clearing teams must be made aware of the presence of protected trees and take appropriate care to avoid direct or indirect harm. Any activity that could impact these trees must be reported to the Environmental Control Officer (ECO) and the relevant authority before proceeding.

5. ALIEN INVASIVE VEGETATION SPECIES: CONTROL PLAN

The purpose of this Alien Invasive Vegetation Species Control Plan is to assist the property owner in the removal and management of alien invasive species present on the property, in compliance with the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) and the Invasive Species Regulations (October 2014). The plan applies to the entire property. It includes invasive alien plant species only and does not include invasive animals as none were observed during the site assessment.

5.1. Strategic Objectives

<u>Objective 1 – Prevention:</u>
To implement measures that prevent the introduction of NEM:BA-listed alien invasive vegetation species onto the property, and to prevent the spread of such species to neighbouring properties.

Preventative actions:

- No listed alien invasive plant species will be planted.
- Areas bordering the neighbouring land will be prioritised for control to prevent existing invasive plants from spreading beyond the boundaries of the property.
- These prevention measures will be communicated to all users of the property (where applicable).

Objective 2 – Early Detection and Rapid Response:

To put measures in place whereby new and secondary invasive species are detected early and removed before establishing sustainable populations and start spreading (Early Detection and Rapid Response).

Early Detection and Rapid Response actions:

- Regularly survey the property to detect any new or emerging invader plant species.
- Report category 1a species immediately to the Department of Forestry, Fisheries and the Environmental (DFFE) and ask for assistance with the control of the species.
- Do not allow emerging or new species to produce seeds or off-spring, or start growing vegetatively, act immediately by removing them.
- Update species list by including these species and indicate where on the property they were located.
- Increase surveillance in the areas where the species occur to ensure the plants re-sprout or re-occur.

Objective 3 – Restricted Activities and Duty of Care:

To adhere to Restricted Activities and Duty of Care as determined by NEMBA & Regulations concerning invasive and alien species.

Actions NEM:BA Regulation 6(a-g) Restricted Activities:

- Prevent spreading or allowing the spread of any specimen of a listed invasive species.

Actions Section 69 & 71 Duty of Care relating to alien species:

- Take all required steps to prevent or minimise harm to biodiversity.
- Notify the competent authority, in writing, of the listed invasive species occurring on the property.
- Take steps to control and eradicate the listed invasive species and to prevent it from spreading.

Objective 4 - Appropriate means and method of control:

To ensure the means and methods of control are appropriate to the species and environment and are implemented in such a way that it minimizes the risk to biodiversity and the environment.

Actions to ensure appropriate means and control methods:

- Implement measures to prevent the starting of wildfires, including spreading to neighbouring land and to be ready and able to combat fires on the farm should they occur.
- Mechanical and hand tools must be best suited to the work and the size of plants being cleared and in a good working condition.
- Control methods must be appropriate for the species and the environment.
- Control methods are to be implemented in such a way that it prevents harm to biodiversity and the environment.

<u>Objective 5: Fire prevention and preparedness:</u>

Implement measures to prevent the starting of wildfires on the property, wildfires spreading to neighbouring land, and ensuring fire-preparedness and ability to combat fires on the property should they occur.

Fire prevention and preparedness actions:

- Manage fuel loads by controlling invasive plants.
- Join the Fire Southern Cape Fire Protection Association (SCFPA).
- Prepare and maintain a fire break around the property (if recommended by the SCFPA).

5.2. Management Units

To ensure the effective removal of alien invasive vegetation species on the property, clear management units need to be informed by baseline information, and updated monitoring of the site conditions. Key factors considered in defining these units included the level of infestation, the potential for spread, and access and feasibility constraints.

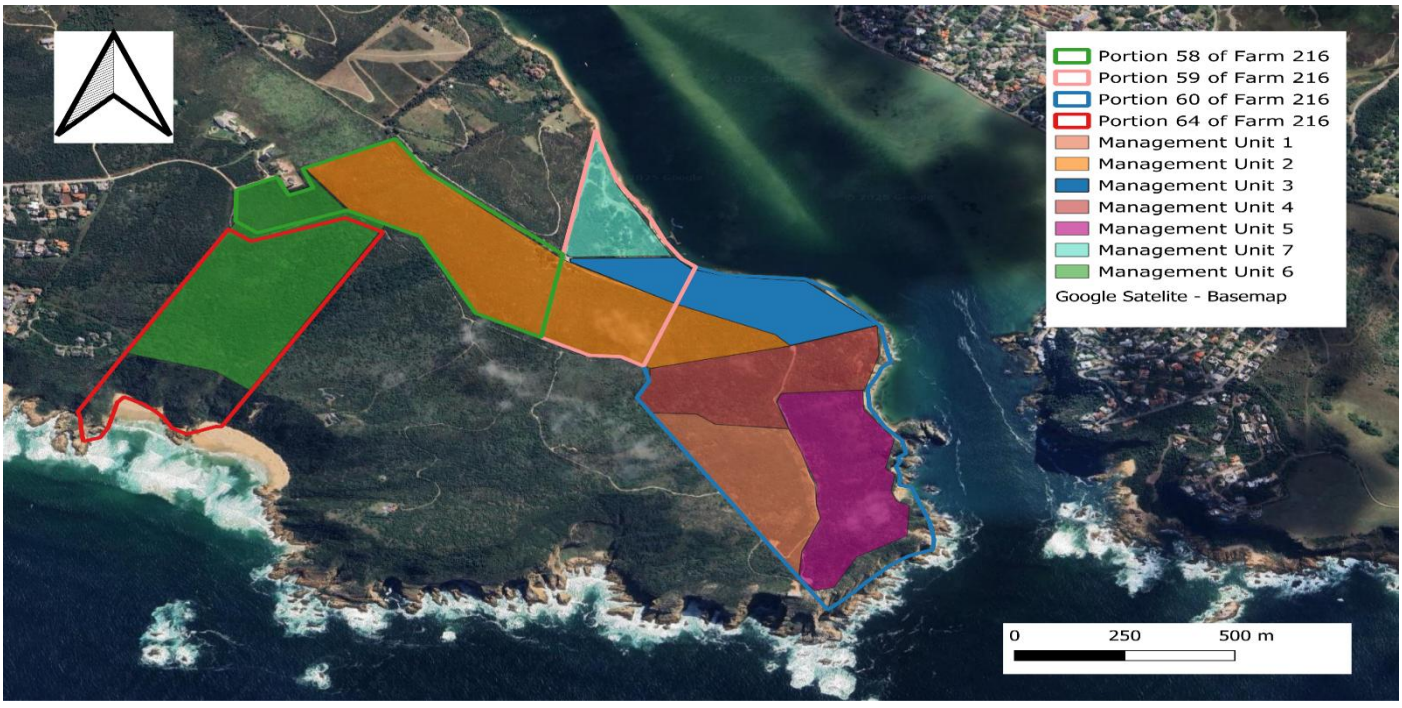

Figure 7: Management Unit Map

Table 5: Recommended priority order

Priority	Management Unit	Reasoning
1st	1, 6, and 7	These units offer the lowest logistical burden, allowing ground teams to start operations immediately, build momentum, and trial methods before moving into more complex zones.
2nd	2, 3, and 4	These units are more complex in terms of terrain but still manageable. Phased intervention is recommended.
3rd	5	Due to the steep terrain and associated safety/erosion risks, this unit should be scheduled only once resources for drone spraying or rope-access methods are confirmed, and lessons from other units have been applied.

🟤 **Management Unit 1** (± 8.7 Ha) (Top centre)

- Topography: This unit occupies the ridgeline area with a generally flat to gently undulating surface.
- Slopes: Minimal gradient; minor elevation changes.
- Accessibility: Excellent – Easily reachable via existing paths or access roads. Ideal for initial clearing efforts due to minimal constraints.

🟠 **Management Unit 2** (± 23.4 Ha) (Central spine)

- Topography: Lies on a gradual downslope from the ridgeline toward lower-lying areas.
- Slopes: Moderate incline, steady descent.
- Accessibility: Good – Accessible with some effort; suitable for both manual and mechanical clearing.

🔵 **Management Unit 3** (± 8.2 Ha) (North-eastern block – Portion 60)

- Topography: Concave terrain sloping toward the estuary.
- Slopes: Moderate, with some steeper patches near the water's edge.
- Accessibility: Low – Requires managed access routes; may require temporary track creation or bunded access.

🟥 **Management Unit 4** (± 9.9 Ha) (Central-east block – Portion 60)

- Topography: Undulating terrain with a noticeable downward gradient.
- Slopes: Moderate to steep in places.
- Accessibility: Moderate to low – May require manual clearing teams; vehicle access is likely limited or terrain-specific.

🟣 **Management Unit 5** (± 11.1 Ha) (South-east corner – Portion 60)

- Topography: Consists of steep, south-facing coastal slopes, dropping sharply toward the sea.
- Slopes: Severe gradients with rugged rockface features.
- Accessibility: Low – Manual access only; drone-based spraying or rope-access methods recommended.

🟢 Management Unit 6 (± 19.2 Ha) (Western spine – Portion 64)

- Topography: Situated on an elevated plateau tapering off into descending slopes.
- Slopes: Variable; gentle to moderate incline overall.
- Accessibility: Good – Can be accessed via upper ridge lines; ideal for staged clearing.

🟦 Management Unit 7 (± 4.4 Ha) (North-western boundary – Portion 58)

- Topography: Flat to gently rolling terrain near the upper boundaries of the property.
- Slopes: Minimal to gentle.
- Accessibility: High – Easily accessed from adjacent properties or tracks; well-suited to early intervention.

5.3. Eradication methods

Various eradication and control measures may be applied to each of the listed invasive alien vegetation species. It is important to note that this report provides recommendations only. The responsibility lies with the property owner to ensure that monitoring is carried out effectively, with no deviation from the suggested methods. It will be recommended that an Environmental Control Officer (ECO) be appointed to monitor the progress of the alien invasive vegetation clearance to ensure compliance with the proposed methodology and environmental legislation.

- Felling:
  - This applies to species of invasive plants that cannot regenerate by coppicing e.g. most pine species. Cut horizontally and close to the ground as possible.
  - Cut material (biomass) needs to be removed / stacked depending further use or burnt / chipped.

- Felling and Herbicide Treatment:
  - This method applies to alien invasive vegetation species that can regenerate by coppicing (regrow from the cut stump). When felling. Always cut the alien invasive vegetation species as horizontal and close to the ground as possible so as not to leave sharp points that could be a danger to others.
  - A registered herbicide with the Department of Agriculture is then applied to the cut stump.
  - A sticker agent may also be needed depending on the type of herbicide used plus the use of vegetable dye should be added to your herbicide mix to allow for tracking of what has and what has not been sprayed.
  - Herbicide when used in this method is applied via solid cone nozzle the herbicide must be applied to the cut stump as soon as possible to allow the herbicide to be absorbed by the plant via the *xylum phloem* canals (a plants version of veins and arteries).
  - These veins are found cambium layer which is the area between the bark and the wood, and this is where the herbicide must be applied. i.e. the outer rim of the cut stump.
  - Cut material (biomass) needs to be removed / stacked depending further use or burnt / chipped.

- Ringbarking:
  - Used on alien invasive vegetation species in areas where it is impossible to remove the biomass or where felling would damage the surrounding indigenous habitat.
  - This involves simply cutting a ring half a meter up the tree's trunk exposing cambium layer then painting the exposed cambium layer with approved herbicide from the Department of Agriculture.

- Folio Spraying with Herbicide:
  - This method is mainly restricted to follow up phases over areas where the seed bank has germinated on mass.
  - When doing this wait till the newly germinated alien invasive vegetation species have reached a height of 1 meter as at this point of growth this will result in killing the early and late germinating seedlings.
  - This process will have to be repeated depending on the depth of the seedbank which correlates to the frequency of germination

- Hoeing / Pulling by Hand:
  - This method should be a way of life i.e. if alien invasive vegetation species is observed, hand pulling is recommended where possible. It is best to pull by hand after rainfall.

- Aerial Spraying via Drone (UAS) with Herbicide:
  - This method is primarily suited for steep, inaccessible terrain where manual clearing is impractical or unsafe, such as coastal cliffs and densely vegetated slopes.
  - Targeted herbicide application is conducted using drones equipped with precision spraying systems, focusing on areas with high alien invasive vegetation density.
  - Herbicide is applied during optimal growth stages, typically when plants are actively photosynthesising, to maximise uptake and efficacy.

5.4. Targets and Timeline

The primary target is to have the property eradicated from alien invasive vegetation species by 2030 (5 years). This will be done by executing the recommended clearing methods in corelation with the supplied management units. The following timeline will assist with monitoring and control.

Table 6: Proposed timeline targets for alien invasive vegetation clearance

Priority	Management Unit	Proposed Timeframe
1st	1, 6, and 7	2026 – 2027 (follow-up clearing after 6 months)
2nd	2, 3, and 4	2027 – 2028 (follow-up clearing after 6 months)
3rd	5	2028 – 2029 (follow-up clearing after 6 months)

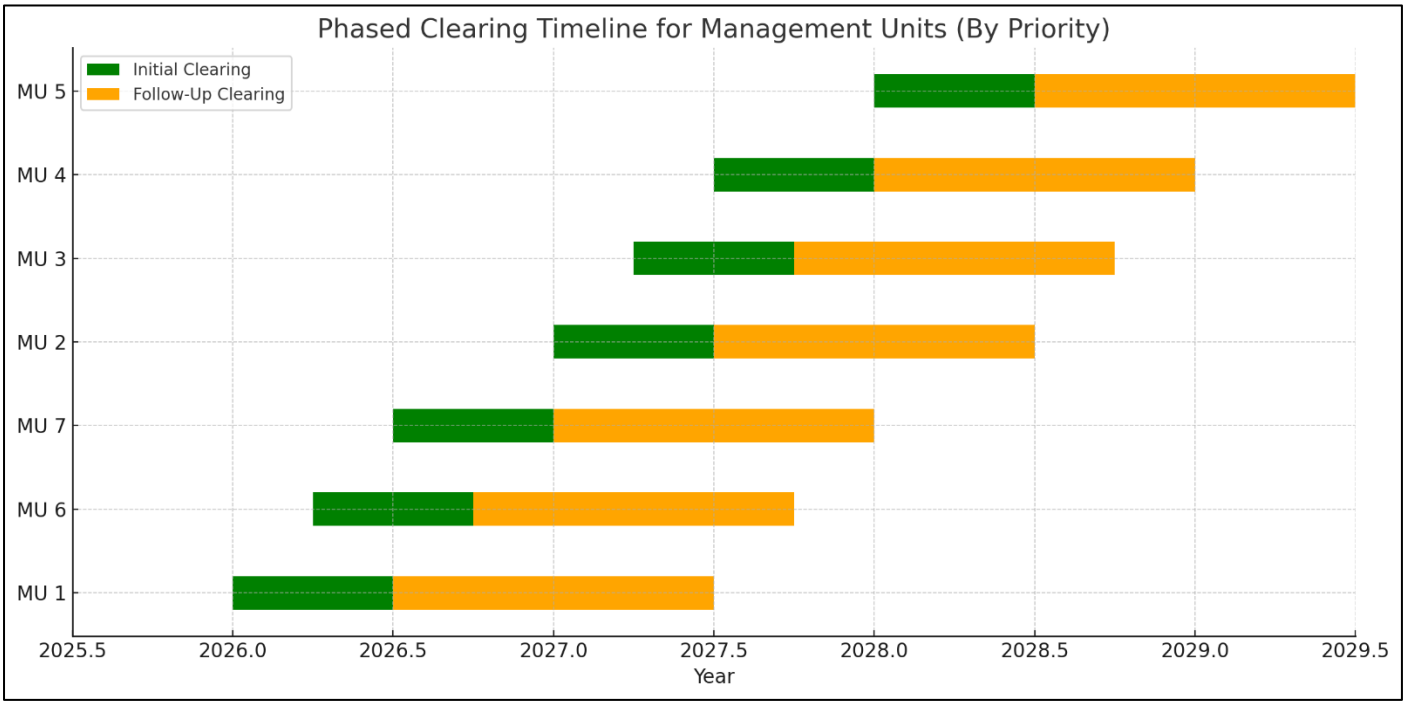

Figure 8: Timeframes associated with alien clearing efforts

It is recommended that the eradication timeline be reviewed and updated based on feedback from the appointed Environmental Control Officer (ECO). Should ongoing challenges or unforeseen constraints persist, a formal request for an extension of the implementation period will be submitted at the appropriate time.

5.5. Responsibilities and Requirements

Successful implementation of this Alien Invasive Species Control Plan depends on the clear allocation of roles and responsibilities among all parties involved. This section defines the duties of the Property Owner, the appointed contractor (George Timbers), the recommended Environmental Control Officer (ECO), and the relevant authorities, including the Department of Forestry, Fisheries and the Environment (DFFE) as the competent authority and the George Local Municipality.

- Property Owner:
  - Responsible for contracting a qualified clearing team to carry out all alien invasive vegetation clearing as outlined in this plan.
  - Must ensure that the clearing team follows the approved methodology.
  - Must provide access to all parts of the site, facilitate safe working conditions, and make available any necessary resources to support proper clearing, biomass disposal, and site rehabilitation.
  - Must ensure that only approved herbicides are used and that all herbicide use is recorded and stored safely in compliance with applicable legislation.
  - Responsible for ensuring that erosion control measures and any required restoration actions are implemented immediately after clearing to prevent soil loss and to encourage recovery of indigenous vegetation.
  - Must remedy any damage to the environment caused by their activities or by the actions of the appointed contractor.

- Appointed Contractor:
  - Responsible for carrying out alien vegetation clearing on site in line with the approved methodology.
  - Must ensure all staff are trained and competent in safe alien clearing practices, herbicide application, and environmental protection measures.
  - Must follow occupational health and safety requirements on site, including the use of PPE (personal protective equipment) and safe storage and handling of herbicides.
  - Must keep detailed records of the areas cleared, the density of infestations removed, quantities and types of herbicides used, and any follow-up treatments done.
  - Must report progress and any problems to the Property Owner and appointed ECO.

- Environmental Control Officer (ECO) (*Recommended):*
  - Should be formally appointed to oversee the clearing operation to ensure it is done in accordance with this plan, the National Environmental Management: Biodiversity Act (Act 10 of 2004), and relevant George Municipal and DFFE requirements.
  - Must conduct site inspections during clearing operations at the start and end of each management unit to verify compliance with approved methods and identify any non-compliance or risks of environmental damage.
  - Must monitor that erosion control and rehabilitation measures are effectively implemented after clearing.
  - Must provide guidance on adaptive management if unforeseen site conditions arise.

- Must maintain a record of site visits, findings, and recommendations and submit progress reports to the Property Owner and Competent Authority.

- Department of Forestry, Fisheries, and the Environment (DFFE) (Competent Authority):
  - Holds the authority to enforce compliance with the National Environmental Management: Biodiversity Act and the Alien and Invasive Species Regulations.
  - May inspect the property at any stage to verify that the clearing is being done in line with the approved plan.
  - Reviews any required reports or follow-up plans as part of the duty of care.

5.6. Monitoring and Evaluation

Monitoring involves repeated observations or recording of data to be able to track progress and determine the efficacy of control methods. A very basic monitoring programme applies to private land. A monitoring report must be produced following this basic monitoring programme, either by the property owner, or the recommended ECO.

WHAT	FREQUENCY	HOW	RESPONSE
How effective are the control methods	4-6 months after every operation	Survey cleared areas and look for regrowth	Continue with methods or adapt to be more effective
Do the infestation levels decrease	Annually	Visual, photos	Continue clearing – you are doing well
How much herbicides were used	After every operation	Herbicide records / register	Keep track of cost and ensure no wastage
Does the forest recover in the cleared areas?	Annually	Photos, survey	If it does – you are doing well, if not, look at clearing methods, clearing intervals or consult an expert
How many jobs were created	After every operation	Timesheets	Send to DFFE

6. CONCLUSION AND RECOMMENDATIONS

This Alien Invasive Vegetation Species Control Plan has been prepared for Phambi Properties (Pty) Ltd, covering Portions 58, 59, 60, and 64 of Farm 216 (Uitzigt). The plan has been developed in direct response to a formal instruction issued by the Department of Forestry, Fisheries and the Environment (DFFE) and is compiled in accordance with the National Environmental Management: Biodiversity Act (NEM:BA), Act No. 10 of 2004. It is informed by recent site-specific monitoring, updated mapping, and a detailed ecological assessment. The objective of this plan is to provide a clear, phased framework for the legally compliant and ecologically responsible removal of alien invasive species across the affected properties.

Current observations indicate that the properties are heavily infested, predominantly with Category 1b invasive species, including Acacia cyclops (Rooikrans), Acacia saligna (Port Jackson), and Pinus radiata (Monterey Pine), all of which pose a substantial threat to local biodiversity, ecosystem functioning, and fire risk. The DFFE has also identified the presence of Acacia melanoxylon (Australian Blackwood), a Category 2 species. To manage this, the site has been divided into seven distinct management units, each classified based on slope gradient, accessibility, and the intensity of infestation. A priority-based intervention strategy has been proposed, initiating with the most accessible and lowest-risk areas and progressing to more complex terrain. The proposed eradication timeline aims to achieve full compliance by 2030, with structured follow-up and monitoring after each major clearing cycle.

Control operations are further complicated by the presence of steep coastal cliffs, critically endangered ecosystems (notably Knysna Sand Fynbos), and the occurrence of protected tree species, including *Sideroxylon inerme* (Milkwood). These factors necessitate a measured and adaptive approach that emphasises ecological stability and full legislative compliance. The recommended control methods, including manual, mechanical, chemical, and drone-assisted techniques, have been selected according to both best practice and the specific physical and ecological conditions present in each management unit.

It is strongly recommended that the Property Owner formally appoint an Environmental Control Officer (ECO) to oversee all aspects of the clearing operation. The ECO must ensure that clearing activities remain within the bounds of this plan, that protected species are avoided, and that erosion control and rehabilitation measures are implemented immediately following removal. In addition, regular monitoring reports must be compiled and submitted to the competent authority to confirm progress and facilitate compliance tracking. Lastly, this plan must be treated as a living document, with timelines and methods subject to adjustment based on updated site conditions, feedback from the ECO, and the outcomes of each clearing phase. Should implementation delays or access limitations arise, a formal request for extension must be lodged with the DFFE to remain in compliance with regulatory timelines. By following the structured recommendations and phased interventions outlined in this document, Phambi Properties (Pty) Ltd can achieve full compliance with the directive, significantly reduce its environmental liability, and contribute meaningfully to the long-term restoration and conservation of the Featherbed Private Nature Reserve.

ANNEXURES

Annexure A: Fire Prevention and Contingency Planning

To minimise the risk of wildfires starting on any of the relevant properties, and to reduce the chance of fires spreading to neighbouring properties, it is strongly recommended that the property owner joins the Southern Cape Fire Protection Association (SCFPA). Membership will provide guidance on local fire risk management and best practices.

In line with the National Veld and Forest Fire Act, 1998 (Act 101 of 1998), all landowners have a legal duty to take reasonable steps to prevent, control, and extinguish wildfires. This includes preparing and maintaining fire breaks to the standards set out by the SCFPA. Failure to comply may result in liability for damage caused by uncontrolled fires spreading from the property.

Fire breaks must be planned and maintained to:

- Be wide and long enough to reasonably prevent a veldfire from spreading to or from neighbouring land.
- Be designed to avoid causing soil erosion.
- Be kept clear of flammable material that could carry a fire across it.

It is further recommended that the landowner:

- Maintains membership in the SCFPA and follows any specific fire management recommendations they provide.
- Keeps firefighting equipment in good working condition and has trained personnel available to respond to fires.
- Notifies the SCFPA and neighbouring landowners in advance of any planned burns, and takes reasonable steps to stop the spread of fires should they occur.
- Ensures that, in an emergency, appropriate access is available for officials and emergency responders to enter the property and suppress fires.

Bringing alien invasive plant infestations under control is also a critical step in fire management, as alien-infested areas can burn hotter and spread fires more rapidly than intact indigenous fynbos.

Annexure B: Fire Prevention and Contingency Planning

It is the landowner's responsibility to ensure a safe working environment and that the teams working on the property adhere to the minimum safety requirements. This can be achieved by sourcing appropriately trained and experienced teams. The principle of "leave no trace" applies.

The landowner should liaise with the contractor to ensure the following minimum SHE requirements are adhered to:

Toilet facilities

- The contractor is responsible for providing a mobile toilet on site for the duration of the work (it is not in all cases possible to provide a mobile toilet, where the field conditions are not suitable for a mobile toilet, human waste should be buried by digging a hole of at least 20 cm deep)
- Clean water must be made available in suitable containers for drinking and mixing herbicides

Team's skills requirements

- Chainsaw operators in possession of valid certificates
- Herbicide applicators certified

Work methods and equipment

- Equipment must be suitable for the work and in good working condition
- Adhere to work methods stipulated in the site specification

Vehicle and driver

- The driver must be in possession of a valid PrDP
- The vehicle must be roadworthy
- Tools must be transported in the trailer, separately from the workers

Safety precautions

- Certified SHE Rep on site
- Certified Safety Office on site
- The SHE Rep must conduct daily safety talks
- The first aid kit must be on site

COID

- The contractor must be in possession and present proof of a valid certificate of good standing with the Compensation Commissioner
- Any incidents must be reported to the landowner
- An indemnity form must be signed stating that the contractors excepts full liability for any COID related matters and that the landowner will not be held liable should the contractor not comply with minimum standards
- The contractor deals with COID cases and not the landowner
- Near misses, incidents and accident register must be kept

Insurance

- The contractor must be appropriately insured for the vehicle and equipment
- The contractor must provide proof of third party and liability insurance
- Sign an agreement whereby the contractor accepts liability for damages in case of negligence

Storage of fuel and herbicides

- Fuel and herbicides must be left in a shady area, away from the resting/eating area
- The area must be clearly marked with bunting
- The bunting must be removed on completion of the job
- Herbicide mixing and refuelling must be conducted on a spill blanket
- A spade must be on site to cover any accidental spillage
- A serviced and functional fire extinguisher must be kept at the fuel refilling area

Preventing fires

- No smoking while working, assign a designated smoking area
- Remove cigarette butts
- No smoking during windy conditions
- Keep 1 fire beater for every team member within reach of the workers
- No chainsaw work during Code Red days - Fire Danger Indices (FDIs) obtainable from FPA

Correct PPE that should be worn

Item	**Supervisor**	**Machine operator**	**General workers SHE Rep; 1st Aid Rep; Driver**	**Specialized herbicide applicator**
Sunhat (follow up operations)	✓	✓	✓	✓
Hard hat (when chainsaws are being used)	✓	✓	✓	✓
Hard hat with visor and certified earmuffs (SABS or EU),	x	✓	x	x
T-shirt	✓	✓	✓	✓
Conti suit	✓	✓	✓	✓
FESA approved chainsaw pants (eleven layers) with broad belt or braces	x	✓	x	x
Whistle	✓	✓	x	x
Safety boots	✓	✓	✓	✓
Gumboots (only when working in riverine/wetland areas)	✓	✓	✓	✓
Chainsaw safety boots	x	✓	x	x
Gloves	✓	✓	✓	✓
Chainsaw operators gloves	x	✓	x	x
Safety goggles	✓	✓	✓	✓
Cape (when using a knapsack)	x	x	x	✓
Mask (when applying herbicides)	x	x	x	✓
Rubber gloves (for mixing herbicides)	x	x	x	✓
Rubber apron (for mixing herbicides)	x	x	x	✓
Rain suit (during rainy conditions)	✓	✓	✓	✓

It is recommended that the requirements are stipulated in the work specifications and the contractor accept accountability in writing.