



Havant Thicket Reservoir – Main Pipeline

Biosecurity Management Plan

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Rev 010 – Main Pipeline Works

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Biosecurity Management Plan

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Contents

Issue and Revision Record	2
Contents.....	3
1 Abbreviations and Definitions	4
2 Introduction	5
2.1 Known INNS across the Scheme.....	5
2.2 Objective of Biosecurity Management Plan.....	8
2.3 Existing and potential species requiring biosecurity controls.	8
2.4 Invasive and non-invasive species.....	8
2.5 Management Strategy.....	9
2.5.1 Working in Water/Adjacent to Water	10
2.6 Management Options	10
2.6.1 Himalayan Balsam.....	10
2.6.2 Japanese Knotweed	11
2.6.3 Other INNS	11
2.6.4 Designated Washdown Area.....	12
2.6.5 Site Materials, Machinery and Equipment	12
2.6.6 Reporting and Recording	12
3 Biosecurity Measures.....	13

1 Abbreviations and Definitions

Client	=	Portsmouth Water Limited
Contractor	=	Ward and Burke Construction Limited
CMP	=	Communications Management Plan
CSFs	=	Critical Success Factors
EA	=	Environment Agency
HTR MPW	=	Havant Thicket Reservoir Main Pipeline Works
HTR MRW	=	Havant Thicket Reservoir Main Reservoir Works
NR	=	Network Rail
OCI	=	Optimised Contractor Involvement
PW	=	Portsmouth Water Limited
RAMS	=	Risk Assessment / Method Statement
REAC	=	Register of Environmental Actions and Commitments
SPZ1	=	Source Protection Zone 1
SWS	=	Southern Water Services
INNS	=	Invasive Non-Native Species
WBCL	=	Ward and Burke Construction Limited
JK	=	Japanese Knotweed
HB	=	Himalayan Balsam

2 Introduction

This Biosecurity Management Plan (BMP) has been prepared for the Havant Thicket Reservoir – Main Pipeline Route. Ward and Burke Construction Limited (WBCL) have been appointed by Portsmouth Water Limited (PW) to design, construct, commission and draw down a new pipeline connecting Bedhampton Pumping Station to Havant Thicket Reservoir, including an emergency discharge structure at the Hermitage Stream, culvert upgrades and an Under Track Crossing. Due to the Invasive Non-Native Species (INNS) within the pipeline route, this document has been prepared to avoid contact with the Japanese Knotweed (JK) and Himalayan Balsam (HB) within the redline boundary at each site compound and open cut sections to effectively manage and mitigate any potential risks associated with working near these species. Other INNS have also been recorded within 1km of the scheme and there is a possibility that these species may develop and spread prior and during the progression of pipeline works so measures will be outlined for the monitoring of any potential development of other INNS and this plan will be updated to reflect any new species development. The focus of this document is to implement biosecurity measures around areas of JK and HB as these may have direct implications to works at this time. This document outlines a management strategy for both JK and HB and table 1 lists the biosecurity measures to be taken when working within areas of INNS. The management strategy also outlines the measures to be taken regarding other INNS which currently do not pose a threat to works but may develop and spread to working areas.

Non-Native Species (NNS) are any animal or plant introduced (deliberately or accidentally) by human activity to an area in which they do not naturally occur. Some animals and plants may have been transported here a long time ago and are considered “naturalised”, but these are still considered non-native species. Others are native to some parts of the UK but not to other parts (for example native to the mainland but not all islands). INNS, sometimes referred to as ‘invasive alien species’, are those non-native species that have the ability to spread rapidly and become dominant in an area or ecosystem, causing adverse ecological, environmental and economic impacts. INNS can also affect our health.

Examples of the negative effects caused by INNS include economic cost, structural damage, environmental degradation, aesthetic degradation, biodiversity loss, loss of land function, access restrictions and increased risk to human and animal health and safety. Costs incurred because of INNS can include repairs to damaged structures and environment, delays to works, loss in value of a landholding or other asset, potential for prosecution because of damage caused by invasive species or infringement of legislation. There is also a risk of loss of reputation through mismanagement of invasive species, especially where the interest of sensitive local groups (such as a fisheries trust) could be affected.

2.1 Known INNS across the Scheme

JK and HB at the site has been recorded at the Welfare Site/ Shaft 1 site as noted in The Pipeline Ecological Update (HTR-ATK-XX-XX-RP-Z-0035). Figure 1 shows identified JK and HB which affect the pipeline scheme, and these are located along the Hermitage Stream. During habitat surveys in 2023, HB seeds were identified approximately 10m east of the Emergency Discharge (ED) Chamber. HB has also been discovered in the Hermitage Stream along the shaft 4 work area. Pre-construction surveys will be carried out prior to works commencing at the ED chamber and shaft 4 to monitor for any new presence of HB plants/seeds. HB has also been noted to the southwestern end of the Bedhampton compound site which may implicate works regarding the creation of a new Public Right of Way, which is still being discussed at the time of writing this document. This document will be updated to reflect any additional construction works that may take place within this known area of HB.

The presence of other INNS species was recorded within 1km of the Pipeline Scheme and have been noted in the Pipeline Ecological Update (HTR-ATK-XX-XX-RP-Z-0035) which includes Butterfly bush, New Zealand pygmyweed, and Montbretia. Montbretia has been identified within the Shaft 4 working area, located amongst lowland deciduous

woodland. As this woodland will be retained, there will be no measures for the removal and treatment of this species as works will not encroach into this area and Herras fencing will be established to protect the woodland. New Zealand pygmyweed has been identified within the watercourse near the Bedhampton site but this falls outside the redline boundary and no measures will be put in place for this at this current stage as it lies outside the redline boundary but the watercourse near Bedhampton will be monitored by the project ECoW for any further development of this species due to its ability to spread quickly. Butterfly Bush is also located within the Bedhampton site but again, works will not be carried out near this species so no measures will be implemented. New Zealand mud snail has been identified within the waters of Hermitage Stream and Riders Lane. Measures will be put in place when working in water to prevent the spread of this INNS as detailed in section 2.5.1.

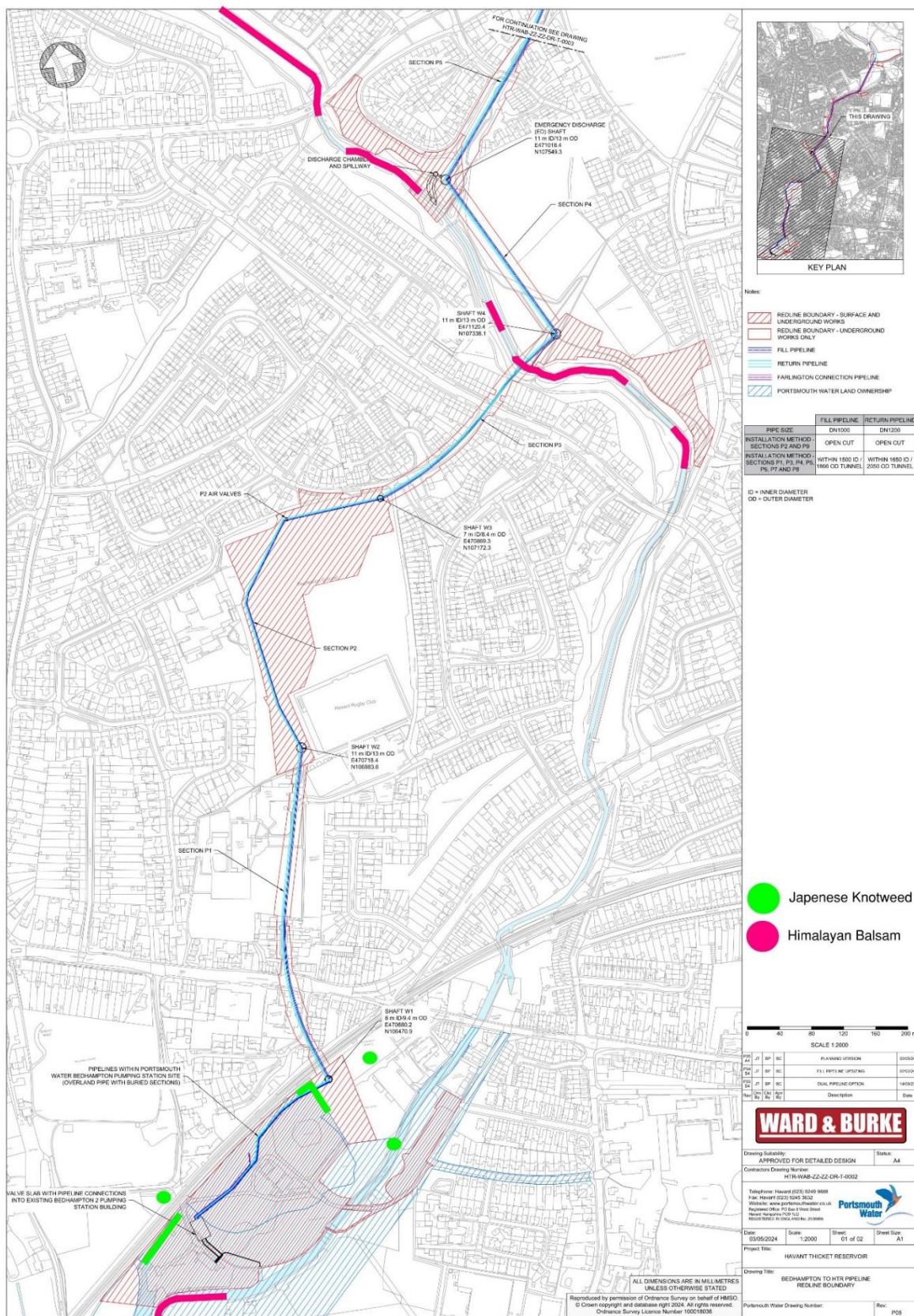


Figure 1: JK & HB locations affecting work areas along Hermitage Stream.

2.2 Objective of Biosecurity Management Plan

- The objectives of the BMP are to prevent the introduction or spread of INNS, weeds, pests, and diseases as a consequence of the project works. The biosecurity management plan includes measures to:
- Detect INNS, weeds, pests, and diseases and prevent introduction, spread and/or proliferation around or off the site.
- Control detected controlled weeds, invasive and INNS, animal and crop pests and diseases.
- Mitigate adverse impacts of any control and eradication actions on INNS, weeds, pests, and diseases.
- Assess risk, manage supply chains, inform all construction personnel, and manage and inspect vehicles and machinery coming onto site.
- Mitigate any INNS, weeds, pest, or disease impacts.
- Report and record any infestation or disease incidents.
- Undertake a review of the BMP and identify the need for any further studies or actions.

2.3 Existing and potential species requiring biosecurity controls.

A weed can be defined as an exotic species (foreign/introduced species) or a native species that colonises and persists in an ecosystem in which it did not previously exist and is unwanted in that environment. Weeds are able to successfully establish and spread due to their competitive edge over native species thereby changing the natural diversity and balance of ecological communities.

An induced disturbance to the natural environment (such as clearing) and movement of machinery, vehicles and equipment creates ideal conditions for weed growth and contribute to weed spread.

A number of weeds are a danger to animals, or cause problems to general land area if left to spread. The following weeds are controlled by law in the Weeds Act, 1959:

- Common ragwort.
- Spear thistle.
- Creeping or field thistle.
- Broad-leaved dock.
- Curled dock.

It is not an offence to have these weeds growing on land, but the occupier must:

- stop them spreading to agricultural land, particularly grazing areas or land used for forage, like silage and hay
- choose the most appropriate control method for the site, e.g. if it is a protected site.

If these weeds are allowed to spread onto someone else's property, Natural England could serve the occupier with an enforcement notice. A livestock keeper can also be prosecuted if they allow animals to suffer by eating these weeds.

2.4 Invasive and non-invasive species

INNS data searches and field surveys of all working areas will be undertaken before the project starts to identify any INNS. Some of the following have been identified within or in close proximity to the working areas from the Pipeline Ecological Update (HTR-ATK-XX-XX-RP-Z-0035).

- Localised stands of Japanese knotweed¹
- Localised stands of Himalayan balsam

¹ For more information on Japanese knotweed: <https://www.gov.uk/guidance/prevent-japanese-knotweed-from-spreading#how-to-dispose-of-japanese-knotweed-off-site>

These species are listed on Schedule 9 of the Wildlife and Countryside Act 1981, and section 14 states it is “illegal to plant or otherwise cause to grow in the wild” and persons must take “reasonable steps and exercised all due diligence to avoid” INNS spreading into the wild. Further INNS surveys would be undertaken if any new working areas or modifications to existing working areas are identified. In addition, pre-commencement checks of all working areas for INNS within our redline boundary and working areas will be undertaken at an appropriate time of year by the Ecological Clerk of Works (ECOW) or Ecologist prior to commencing any works on site.

2.5 Management Strategy

Biosecurity good practice refers to a way of working that would minimise the risk of contamination and the spread of animal and plant diseases, parasites, and non-native species. As disease causing agents, plant pests, parasites and non-native species cannot always be easily seen, they can be picked up and carried on clothing and footwear, and on vehicles and equipment to other locations, both around the site and off site.

Prevention is the most cost-effective method to control the infestation of INNS and weeds within the project area and their associated damage to the environment. Common means by which INNS and weeds are introduced or spread include:

- Movement of contaminated machinery, vehicles, and equipment into INNS-free areas.
- Importation and spreading of contaminated landscaping and construction material into INNS and weed-free areas.
- Implementing inadequate controls when undertaking works in contaminated area.
- Introducing INNS and weed species during reinstatement or environmental mitigation.

The following shall be carried out to prevent spread and provide information.

- Pre-commencement walkover survey will be undertaken to identify the current status of any weed or INNS present within the working easement, access/egress locations, storage compounds, and welfare facilities.
- All INNS identified within the working easement would be clearly identified with demarcation fencing. Demarcation fencing would be installed around any INNS present within or within close proximity to the working easement, including an appropriate offset which is to be advised by an Ecological Clerk of Works (ECOW) before any activities commence on site.
- All construction operatives will be given a toolbox talk on the presence of any weed or INNS, how to identify them and any associated biosecurity procedures.
- A strict protocol of CHECK-CLEAN and DRY for all plant, machinery and equipment would be employed prior to deployment to site.
- Further cleaning or disinfection may be required where any plant, machinery, equipment, and Personnel PPE disturbs or potentially disturbs any areas known to contain an INNS.
- Where disturbance of any INNS is required, a site-specific method statement outlining the treatment or control strategy would be prepared.

All employees are encouraged to:

- Ensure footwear is clean (visually free from soil and debris). If necessary, brush or wash in soapy water.
- Ensure vehicle/machinery to be used on the site is cleaned and disinfected as appropriate at the commencement of the works and thereafter is kept clean and remove any accumulated mud, especially when moving between holdings, and pay particular attention to tyres and wheel arches.
- Make use of any facilities provided to clean footwear and vehicles/machinery if required by the site manager.
- Not access areas unnecessarily and if practical do not take vehicles/machinery onto premises - keep to established and agreed access routes/tracks.
- Respect any notices or instructions.

- Scrape or knock soil from footwear, tools and equipment in the area where tools and equipment have been used.
- Report sightings or potential sightings of INNS.

2.5.1 Working in Water/Adjacent to Water

- Areas which involve working in water include the Emergency Discharge Chamber outflow, Dunsbury Way culvert upgrade, Dunsbury Way culvert upgrade, Riders Lane culvert upgrade, and the open cut section through Lake Stream. The main area which poses a threat of INNS is the Emergency Discharge outflow as there is known HB close to this area.
- New Zealand mud snail has been noted in the Aquatic Ecology Appendix of the Environmental Statement (HTR-ATK-ZZ-ZZ-RP-Z-0147) within the water in Hermitage Stream and Riders Lane which poses a biosecurity risk as this species can spread quickly by attaching itself to objects submersed in the water. The possible spread of New Zealand pygmyweed along Hermitage Stream also poses a biosecurity risk so it is important that pre-work surveys are carried out prior to entering the water for any potential new development of these species.
- If working in areas adjacent or in water, pre-work checks will be undertaken prior to work to follow best practice for decontamination.
- Where practical, any machinery and vehicles not essential for construction shall be parked on area of hard standing away from the watercourse.
- All equipment used for any in water construction must be cleaned at the area where construction takes place to prevent any potential spread of INNS from that location. Particular care is to be taken when working in areas of known INNS and tyres are to be cleaned of any mud and plant material before departure from site.
- All footwear and clothing which has been in contact with water to be sterilised and dried after use at that construction area to prevent cross contamination between different watercourses.
- If operatives come into contact with any INNS, these must be handled with disposable gloves and all equipment and clothing to be thoroughly decontaminated.

2.6 Management Options

The management of HB and JK on site should be overseen by the site manager and the project ECoW. The management plan should be kept on site during the works and communicated to all personnel on site. It is not the intention of this management plan to attempt to eradicate HB and JK. However, measures will be undertaken to prevent its spread as detailed below.

2.6.1 Himalayan Balsam

Although no work is planned for the direct removal of HB, works will be carried out within areas adjacent to known presence of this species. HB seeds are contained in a pod, which, as it ripens and dries, comes under tension before splitting and catapulting the seeds up to 7m from the plant. Therefore, a 7m exclusion zone should be implemented where possible, specifically from July to September which is typically the seeding stages of HB. The purpose of this plan is to prevent these seeds being released away from the site of existing infestation, there is no plan to remove HB stands. During habitat surveys in 2023, HB seedlings/plants were identified approximately 10m east of the Emergency Discharge (ED) Chamber. HB has also been discovered along the watercourse near the Shaft 4 working area. Pre-construction surveys will be carried out prior to works commencing at the ED chamber and Shaft 4 to monitor for any new presence of HB seeds and this plan will be updated based on any new sightings which may implicate works in these areas. HB has also been identified within the Bedhampton site where discussions are ongoing for the creation of a new PROW along the Hermitage Stream, this plan will be updated to reflect any new potential works that may be carried out in this area and for any potential removal of HB that may be required for this work.

2.6.2 Japanese Knotweed

To avoid the spread of JK, contact with all parts of the plant must be avoided. The following guidance should be followed:

- Any stands of JK will be fenced off with relevant signage during works, with a 7m exclusion zone where no ground works will be permitted. There shall be no excavation within 10m of known stands of JK due to the possible presence of JK rhizomes within the soil.
- If works require extending into the exclusion zone, this INNS management plan will need to be updated and provide information concerning biosecurity and waste removal in accordance with the management strategy (2.5).
- If any further JK is found on site during works, works should stop within 7m of this vegetation and the Environmental Coordinator contacted. A further site walkover will be undertaken, prior to works resuming, to identify any additional stands of INNS or changes to the current extents identified on site.
- A toolbox talk/ RAMS will be given to all site staff on the identification of JK and the site-specific control measures to be take.
- Signs will be placed around areas of JK to ensure site staff are aware if where control measure are located. This should ensure all site operatives are aware of the risks posed by JK and its spread.

In preparation of the Shaft 1 works, Ward and Burke have appointed a Sub-Contractor to plan the safe removal of JK within our access route to Shaft 1, who have supplied 3 x options of removal for the construction of Shaft 1. Ward and Burke are to investigate the 3 x options for JK removal. These are:

- Full excavation and removal to Landfill
- Reduced level removal and capping
- Full excavation and relocation onsite

The Plan is to be in place prior to construction works progressing in June 2024 and the chosen method of removal of JK will be updated on this plan. It is not predicted that there will be any other JK removal across the scheme. If any other areas of unknown JK are encountered across the scheme, the sub-contractor will be consulted and plans put in place for the safe removal of this.

Further information on the management of Knotweed can be found in the Management of Japanese Knotweed on sites document ² produced by the Environment Agency.

2.6.3 Other INNS

Other INNS have been noted within 1km of the scheme as mentioned in section 2.1. There is currently no management strategy for these INNS as it is not predicted that these species will affect works for the scheme at this time. Montbretia located within the shaft 4 work compound is located within an area of woodland and measures shall be put in place to prevent encroachment to this woodland area which will also act to prevent entering the area in which the Montbretia is present. The presence of New Zealand pygmyweed in the Hermitage stream poses a threat as this species can spread very easily. Although this species is currently not present in any of the working areas, it is possible that it may have spread to working areas prior to construction commencing. Monitoring shall be carried out by the project ECoW for any further development of these INNS prior and during construction and the management strategy will be updated if any new presence of these species may implicate works. The development

² (No date) *Managing Japanese knotweed on development sites*. Available at: https://cms.esi.info/Media/documents/19582_1313680771466.pdf (Accessed: 20 May 2024).

of Montbretia will be monitored at shaft 4 for any further spread or introduction of this species into our working areas.

2.6.4 Designated Washdown Area

A designated wash down area shall be located adjacent to works with known INNS. This shall be situated on an impermeable membrane to collect materials/effluent, and this must be disposed of appropriately. This will be disposed of via an authorised waste disposal company. Washdown areas will be located at least 10m from any watercourses or existing surface drains to minimise the likelihood of water run-off entering the watercourse.

Appropriate disinfectant shall be available for use on all machinery and equipment that has come into contact with any waterbody to reduce transmission of waterborne diseases. Disinfection areas must be located at least 10m from any watercourses or open drains within a bunded impermeable area to prevent run-off from occurring. Refer to disinfectant Safety Data Sheet (SDS) before use.

Disposal of disinfectant shall follow manufacturer guidelines. Chemicals can be harmful to aquatic life and shall be disposed of in compliance with local regulations.

2.6.5 Site Materials, Machinery and Equipment

No arisings from the works within the 7m exclusion zones around INNS shall be removed from the site as soil will likely contain viable HB seeds and potentially viable JK seeds/ fragments. Any material excavated which may contain INNS fragments/soil rhizomes will be stockpiled within a bunded area as close as reasonably practical to the location of excavation, and exclusion fencing established around the stockpiles. Care must be taken when establishing these stockpiles to ensure they are at least 10m from watercourses to minimise the likelihood of any run-off entering the water. Where removal of arising and/ or any geotextile membranes is required from these areas, these shall be treated as controlled waste. Loading and removing of this excavated material is to be taken with great care, ensuring not to overfill any lorries. Once the lorries have been loaded, wheels will be checked for any mud or plant material. Once the material is fully removed from site, the excavator is to be cleaned down and decontaminated and any mud/INNS material removed. To dispose of invasive non-native plant waste and contaminated soils off site you must:

- Use a registered waste carrier.
- Send it to an authorised landfill site or suitable disposal site.

Machinery, plant, PPE, and other tools shall be thoroughly cleaned in a designated clean-down area before moving to other sites (i.e. removing soils and plant debris), and strict biosecurity protocols shall be followed as per this Plan.

2.6.6 Reporting and Recording

Pre-works surveys will be conducted within areas of known INNS by the project ECoW. Any vegetation removal to be carried out across the scheme will be supervised by the ECoW and will include pre-clearance checks which will also include monitoring of any new unknown INNS. Records of vegetation removal will be maintained by the ECoW and any new sightings of INNS will be recorded and reported to the project management team. This plan will be updated to reflect the presence of any new INNS discovered across the scheme and management strategies will be updated to deal with the presence of new species. Records of vegetation clearance and any new INNS sightings will be kept within the site office.

3 Biosecurity Measures

Biosecurity Measures	Low-risk activities (general works – not disturbing the INNS area)	High risk activities (i.e. excavations, taking samples, disturbing the area)
Personal biosecurity Footwear & outerwear such as shoes, boots, wellingtons, waterproofs & gloves	• Wear footwear and outerwear that can easily be kept clean • Clean footwear and outerwear regularly, before and after each site visit and ensure they are visually free from soil and organic debris. • Chosen sub-contractor for JK removal must consult any detergent SDS before use. • DEFRA approved Virkon Detergent to be used where necessary with reference to Safety Data Sheet before use.	• Plan to visit high-risk sites last. • Clean footwear and outerwear between site visits by removing leaves, soil and other organic material. Virkon disinfectant solution is to be used when cleaning down PPE. Refer to safety data sheet for correct use and storage of this chemical. • When working in areas of JK, operatives will wear overalls to prevent contamination onto clothes. Overalls will be placed in a contamination skip at the end of each shift to be disposed of accordingly. • Spray cleaned footwear and outerwear with disinfectant until it runs off. Set up a hard standing impermeable tray in which the disinfectant is collected in to prevent any runoff entering water courses. These disinfectant areas must be set up at least 10m from any water course. (Upon rewarding of JK removal contract, contractors RAMS will be reviewed to ensure correct measures are taken for disinfectant strategies). • Work in accordance with the Site-Specific method statement for the INNS in the working area. • Ensure exclusion zones are adequately maintained. • All footwear and clothing which has been in contact with water to be sterilised after use; If working in areas known to contain non-native invasive plant species, pre-work checks will be undertaken prior to work to follow best practice for

		decontamination.
Vehicle biosecurity Cars vans, timber lorries and forestry machinery such as harvesters and forwarders	• Clean vehicles regularly, do not let mud and organic debris accumulate on tyres, wheels and under wheels arches	• Avoid vehicular access to high-risk sites, and park off site if possible and safe to do so. • Keep to established hard tracks. • Remove mud and organic debris from tyres, wheel, and wheel arches. • Clean and disinfect tyres and wheels on arrival and when leaving site in the designated wash down area, particularly if working in areas where JK is known to be present. • Vehicles working in an infested area and/or transporting infested material must be thoroughly pressure-washed in a designated wash down area on site before any further use. • Tracked vehicles should not be used within areas of known infestation as particles of the INNS can become lodged in the tracks and be transported to a different location. • Ensure exclusion zones are adequately maintained.
Equipment biosecurity Tools and equipment such as spades, shovels and hammers	• Restrict the equipment taken onto a site – take only what you need for the task. • Ensure all tools and equipment are clean, serviceable, and free from organic debris	• When taking samples, clean and disinfect cutting tools after each sample. • Clean and disinfect other tools and equipment before leaving site. • Keep any samples and containers. • Ensure exclusion zones are adequately maintained.

This management plan is based on best practice advice to avoid the spread of invasive species to the wild and is intended as guidance. For more information, please visit www.nonnativespecies.org