

Title	Commemorative Woodland and Associated Infrastructure on Land off Hafod Road, Johnstown, Wrexham – Great Crested Newt Licence Application, Method Statement
Annex	K5 – Biosecurity Risk Assessment and Method Statement
Date of Risk Assessment	5th July 2023

1 Introduction

Background

- 1.1 Marches Ecology was commissioned by the National Trust to apply for a Great Crested Newt ‘development’ licence for a proposed development site at land off Hafod Road, Johnstown, Wrexham (approximate OS Grid Ref. SJ 3133 4630). This Biosecurity Risk Assessment and Method Statement (BRAMS) forms part of the licence application.
- 1.2 A BRAMS identifies and assesses the risk posed due to the accidental spread of invasive non-native species (INNS) or diseases and proposes suitable control measures. The salient points will be included in any toolbox talk or site induction provided to site contractors. The delivery of a toolbox talk would ensure site awareness and identify individual responsibility.
- 1.3 The structure of the Risk Assessment has been adapted from that provided by the GB Non-Native Species Secretariat (NNSS)¹. This Risk Assessment was completed by Tom Knight of Marches Ecology on 15th May 2023.

The Development

- 1.4 The proposal concerns the creation of a commemorative woodland at Hafod. Tree and shrub planting commenced in November 2022 (which did not require planning approval). Planning consent was required for the hard-works of the proposal. The hard-works include the provision of a network of new wide accessible paths, seats, bike racks, a pedestrian crossing point from an existing car park, and the creation of several new waterbodies.
- 1.5 The existing site largely consists of three agriculturally improved grassland fields that have previously been used for (sheep) grazing. These fields are mostly bounded by hedges/ lines of shrubs with a few trees. There is also a large, shallow waterbody.

¹ https://www.nonnativespecies.org/assets/Document-repository/Biosecurity_Risk_Assessment_FINAL_1.pdf

2 Need for Biosecurity Measures

Introduction

- 2.1 'Section 14(1) of the *Wildlife and Countryside Act 1981* (as amended) makes it illegal to release or allow to escape into the wild any animal which is not ordinarily resident in Great Britain and is not a regular visitor to Great Britain in a wild state, or is listed in *Schedule 9* to the Act. It is also illegal to plant or otherwise cause to grow in the wild any plant listed in *Schedule 9* to the Act. The *Schedule 9* list of animal and plant species has been amended by the *Wildlife and Countryside Act 1981 (Variation of Schedule 9)(England and Wales) Order 2010*². Section 14 (1) covers spreading the species or transferring polluted ground material from one area to another.
- 2.2 The *Invasive Alien Species (Enforcement and Permitting) Order 2019* relates to the prevention and management of the introduction and spread of non-native species and the associated licensing/ permitting system.
- 2.3 The GB NNSS states that '*Biosecurity means taking steps to make sure that good hygiene practices are in place to reduce and minimise the risk of spreading invasive non-native species. A good biosecurity routine is always essential, even if invasive non-native species are not always apparent*'. Prevention of the spread of parasites and diseases could also be added to this statement.
- 2.4 It is not always possible to see INNS/ diseases and they can be transmitted accidentally by people moving between sites. They are most often transported in soil or organic material, such as plant debris, that can be carried on footwear, equipment or by the wheels of vehicles and machinery. Some pathogens are dispersed in water and so the risk of these being spread increases when conditions are wet.
- 2.5 Marches Ecology (2022)³ notes that '*The [Great Crested Newt] licence application will include a biosecurity risk assessment to be implemented during the works*'.

Known Status of INNS at the Site

- 2.6 The chytrid fungus has been recorded from Talacre and Johnstown in 2008. This fungus affects amphibians. Johnstown is near the site.
- 2.7 One INNS – Cotoneaster - listed on *Schedule 9* of the *Wildlife and Countryside Act 1981* was recorded from the hedgerow adjacent to Hafod Road, on the western boundary of the proposed development site. Based on Cofnod records, a number of *Schedule 9* plants have been recorded from the area surrounding the survey site including *Heracleum mantegazzianum* (Giant Hogweed), *Fallopia japonica* (Japanese Knotweed), *Crassula helmsii* (New Zealand Pigmyweed), *Cotoneaster horizontalis* (Wall Cotoneaster) and *Lagarosiphon major* (Curly Waterweed).
- 2.8 Marches Ecology (2022) also states that '*Basic biosecurity measures should be implemented throughout any works at this site. Best practice guidance is available on the Natural Resources Wales (NRW) website*⁴'.

² <http://www.nonnativespecies.org/index.cfm?pageid=67>

³ Marches Ecology (2022). *Proposed Commemorative Woodland on Land off Hafod Road, Johnstown, Wrexham – Preliminary Ecological Appraisal*. Produced on behalf of The National Trust.

⁴ <https://naturalresources.wales/guidance-and-advice/business-sectors/forestry/tree-health-and-biosecurity/how-to-practise-biosecurity-in-woodlands-keep-it-clean/?lang=en>

Vulnerable Species/ Habitats

- 2.9 There is a large waterbody within the proposed development site. This waterbody is frequently used by small numbers of waterbirds. Waterbirds are known to transport seeds/ vegetative material of non-native invasive plants such as Indian Balsam. Indian Balsam spreads solely by seeds which can be carried by wind or water. However, the most likely vector for the spread of these plants to the site during the proposed works is via contaminated soil on footwear, equipment and or vehicles/ machinery. It is considered that most parts of the site are vulnerable to the spread of these non-native invasive plants. Indian Balsam and Japanese Knotweed can colonise many habitats becoming dominant to the exclusion of native species.
- 2.10 Ash dieback is caused by a fungus that is generally spread via wind-blown spores. It can also be spread via the movement of diseased Ash plants and logs/ wood from infected trees though this is currently considered to be a low risk. Spores could also be transported on clothes, footwear and equipment/ vehicles. Ash dieback is found throughout the Wrexham area.
- 2.11 As Great Crested Newts and other amphibians are likely to be present on the site it will be important not to transfer amphibian diseases on/ off-site. This is most likely to occur during the implementation of the licensed Reasonable Avoidance Measures.

Other INNS that could be Brought to Site

- 2.12 It is possible that other INNS, besides those listed above, could be inadvertently transported to the site. However, further to the Risk Assessment conducted below it is considered that the proposed general control measures should be sufficient in this instance with respect to other INNS that could potentially be transported to the site. Similarly, the use of an appropriate disinfectant (if required) should be sufficient for the control of relevant amphibian diseases.

Amphibian Diseases

- 2.13 A number of amphibian diseases have caused concern in recent years, in particular the chytrid infection and ranavirus (ARG UK Advice Note 4). Spread of these diseases is largely associated with the handling of amphibians or activity at waterbodies. However, it is also possible that spores may be transported on to/ from a site on contaminated footwear, equipment and vehicles/ machinery.
- 2.14 There is the potential for diseases to be transferred to amphibians that may use the habitat within the site. Personnel associated with the proposed works and associated machinery/ equipment that will be used on site have the potential to transfer amphibian diseases on/ off-site. At present the biosecurity risk posed by the proposed works to local amphibian populations due to the potential for the spread of diseases is considered to be moderate. The proposed works do not require any access to any waterbodies. The general control measures detailed below are considered appropriate to address this level of risk.

3 Biosecurity Risk Assessment

Activities that may Cause Spread

- 3.1 No *Schedule 9* plants have been identified at the location of the Hafod Road crossing – the Cotoneaster previously identified would not be affected.
- 3.2 Any activities that involve disturbance of the soil/ substrate may cause the spread of invasive non-native plants and/ or plant diseases. Typical activities might include tracked vehicles accessing the site and excavation works, etc. This includes the transfer of soil on machinery/ equipment and human vectors on to or off-site. Animal diseases could also potentially be transferred in this way, as well as by being brought on to the development site via materials/ equipment etc. being used for the proposed works, and or contaminated footwear or equipment transferring diseases between the development site and other sites.
- 3.3 Existing parasites/ diseases could be transferred off site. Potential pathways for INNS/ diseases being brought onto the site include the transfer of soil on machinery and human vectors, and subsequent site works (such as the movement of excavated material around the site or off-site). Measures must therefore be implemented to prevent other INNS plant species (and/ or parasites/ diseases) being brought on to the development site and/ or transferred off site.
- 3.4 Hand/ destructive searches for amphibians will be conducted as part of the licensed Reasonable Avoidance Measures (RAMs). Should any amphibians be found, they would be moved to the Bonc Yr Hafod Country Park. Any handling of animals risks the introduction/ spread of parasites/ diseases.

Activity Risk Assessment

- 3.5 *Table A* on the following page presents the Activity Risk Assessment. For each activity the severity of impact (S), should the INNS be spread is assessed on a numerical (1-5) scale. Category 5 is the highest impact. The likelihood of spread (L) is similarly assessed on a numerical (1-5) scale. Category 5 is 'very likely' that the INNS would be spread.
- 3.6 The overall risk (R) for that activity is calculated by multiplying $S \times L$. The NNSS document provides a matrix that identifies three levels of risk rating - green-amber-red. A score of four or less (green) is usually considered acceptable. A score of 4-12 is amber; above 12 is red and is considered unacceptable.
- 3.7 Following this initial assessment control measures that should be undertaken to reduce the likelihood of INNS being spread are identified/ described. A rating of low-high (1-5) is subsequently assigned for the residual likelihood (RI) of INNS being spread after the control measures are implemented. The residual risk (Rr) is recalculated by multiplying $S \times RI$. The residual risk scale is as follows:
- **0-4 - Risk likely to be acceptable.**
 - **4-12 - Consider further options for reducing risk; if not available consider proceeding with caution.**
 - **12+ - Risk is too high; do not proceed until further consideration of control options has been taken into account.**

Table A - Activity Risk Assessment

Activity	Hazard Description	Risk Rating			Control Measures	Rr after Controls		
		S	L	R		S	RI	Rr
Amphibian RAMs	1). Contamination of vehicles/ machinery and subsequent spread of INNS/ diseases to other sites/ within site. 2). Use of contaminated footwear/ clothing/ equipment and spread of diseases on to and off-site. 3). Handling amphibians.	4	3	12	1). Follow ARG UK Advice Note 4. 2). Follow procedure for handling amphibians detailed below. 3). Wherever possible, avoid bringing vehicles/ machinery on to site. 4). Any machine/ equipment (e.g., buckets for carrying amphibians) that may recently have been used on site(s) with INNS/ amphibian populations will be thoroughly cleaned using brushes/ a pressure-washer (at an appropriate location) and/ or subject to disinfection prior to being utilised on the site.	2	2	4
Site hard-works: removal of vegetation, removal of soil, importation of materials, e.g., hardcore.	1). Contamination of vehicles/ machinery and subsequent spread of INNS/ diseases to other sites. 2). Removal of contaminated soil/ materials - potential to spread INNS/ diseases within, and to other sites. 3). Importation of contaminated materials.	4	4	16	1). Keep away from existing waterbodies as far as is possible. 2). As 3). above. 3). All machinery/ equipment to be used on the site will be assessed in terms of sites where it has been previously utilised. Any machine/ equipment that may recently have been used on site(s) with INNS/ amphibian populations will be thoroughly cleaned using brushes/ a pressure-washer (at an appropriate location) and/ or subject to appropriate disinfection prior to being utilised on the site. All soil and other debris/ vegetation will be removed. 4). Maintain good machinery hygiene (including before accessing the site). Keep vehicles free from accumulated mud, pay particular attention to tyres/ wheel arches; tracks/ under-carriage. 5). If machinery/ equipment/ footwear has entered waterbodies on other sites they will be disinfected before accessing site, and prior to leaving. 6). All machinery utilised for the work will remain on-site for the duration of the work. On completion of the work the machinery will be thoroughly cleaned using brushes/ a pressure-washer. All soil and other debris will be removed from, in particular, the tracks, undercarriage and arm/ attachment. This will be	2	2	4

					undertaken at an appropriate location. Hand-tools/ other equipment should similarly be cleaned.			
Moving vehicles/ machinery between sites.	1). Contamination of machinery (on tyres, tracks, buckets, etc) and subsequent spread of INNS/ diseases to this and other sites.	3	4	12	1). As 1-6 above.	2	2	4
Construction workers moving between sites.	1). Contamination of footwear/ hand-tools and subsequent spread of INNS/ diseases to other sites.	3	4	12	1). As 2-6 above. 2). Keep foot-wear/ hand-tools free from accumulated mud, pay particular attention to the treads on foot-wear. Thoroughly clean foot-wear/ hand-tools before entering site, and at the end of each day or leave on site.	2	1	2

4 Method Statement

Introduction

- 4.1 Biosecurity risks at the site include the potential for INNS/ diseases to be transferred on/ off and within site. Further to the appropriate implementation of the control measures this risk is likely to be deemed 'acceptable'.
- 4.2 The publication: Scottish Government (2010). *Biosecurity guidance for SEARS staff*. Revised October 2010; describes four levels of biosecurity control dependent on the perceived risk of the activity. Based on the Risk Assessment undertaken (Table A above) it is considered that most of the proposed works require Level 2 (Moderate Risk) biosecurity control as described in this guidance document and the general control measures detailed below are provided on this basis. The SEARS guidance is a useful source of general information on biosecurity.
- 4.3 Level 3 (High Risk) biosecurity control measures are likely to be applicable should any amphibians be found during the implementation of the RAMs, necessitating handling of any animals.
- 4.4 This Method Statement will be issued to the Site Manager (or equivalent) and it will be discussed with all contractors/ sub-contractors as part of a tool-box talk. It will be made available on site at all times.

General Control Measures

- 4.5 To minimise the risk of spreading INNS/ diseases to/ from the site the following precautions should be put in place and adhered to by all site personnel:

- 1) An appropriate location for the cleaning of machinery/ footwear as detailed below will be identified prior to the start of any works at the site. These facilities will be maintained throughout the works.
- 2) All machinery/ equipment to be used on the site will be assessed in terms of sites where it has been previously utilised. Should invasive plant species have been, or may have been, present, all machinery/ equipment will be thoroughly cleaned using brushes/ a pressure-washer (at an appropriate off-site, hard-standing, location) prior to being utilised on the site. All soil and other debris/ vegetation will be removed. As part of good machinery hygiene this approach should ideally be followed at all times.

Should the machinery/ equipment have previously been used in a waterbody then the procedure detailed above would be followed. In addition, the machinery/ equipment will be disinfected (e.g., with Virkon) in accordance with the guidance provided in the ARG UK Advice Note 4⁵.

When using disinfectant, the instructions should be read and safety information implemented, use should be in accordance with the instructions, contact with eyes and skin should be avoided and personal protection equipment should be worn as necessary.

- 3) The machinery utilised for the work will remain on-site for the duration of the work. On completion of the work the machinery will be thoroughly cleaned using brushes/ a pressure-washer. All soil and other debris will be removed from, in particular, the tracks,

⁵ ARG UK (2017). *Amphibian and Reptile Groups of the UK – Advice Note 4: Amphibian Disease Precautions: A Guide for UK Fieldworkers*. Version 2, revised March 2017. Available at: <https://www.arguk.org/info-advice/advice-notes/324-advice-note-4-amphibian-disease-precautions-a-guide-for-uk-fieldworkers-pdf-2>

undercarriage and arm/ attachment. This will be undertaken on hard-standing within the site but well away from waterbodies/ drainage features. Hand-tools/ other equipment should similarly be cleaned.

4) Refuelling of machinery or vehicles will be carried out in accordance with the appropriate Environment Agency Guidance for Pollution Prevention and all other relevant pollution guidance.

5) No vehicles will be allowed on site (areas where there is exposed soil/ substrate/ vegetation) unless they are required for the works. All other vehicles will be parked on existing areas of hard-standing.

6) Each contractor will use the same pair of footwear for the duration of the work and this footwear will be kept in the site compound throughout or will be thoroughly cleaned at the end of each day. This footwear will be cleaned using brushes and water/ a pressure-washer (on an area of hard-standing) prior to being utilised on the site. On completion of the work or at the end of each day all footwear will be thoroughly cleaned again at the same location. All soil and other debris will be removed from the footwear to avoid transferral of seed/ plant fragments to other sites.

As mentioned above should the contractor have entered any waterbodies on a previous site the footwear will be disinfected in accordance with the guidance provided in the ARG UK Advice Note 4.

7) Visitors (particularly those that will subsequently attend other sites) must clean their footwear before attending the site. The footwear used while accessing the work site must not be used when visiting other work sites until it has been thoroughly cleaned.

Other than where machinery/ footwear has entered a waterbody on a previous site it is currently considered unnecessary for anybody else accessing the site to disinfect their footwear/ vehicles - biosecurity hygiene being limited to cleaning with a brush/ water as described above.

4.6 In summary the Check-Clean-Dry mantra advised as part of the Stop the Spread campaign by the NNSS should be adopted at all times:

1) **Check** your equipment, clothing and boots and remove any plant or animal 'hitchhikers'.

2) **Clean** equipment, clothing and boots thoroughly, remove all mud, leaves and plant debris. If it is not possible to clean on site, securely bag items and clean at a suitable location where risk of transfer of diseases is minimised. Wash vehicle tyres and wheel arches if muddy and park on hard-standing if possible.

3) **Dry** thoroughly any equipment or PPE that has been in freshwater or the marine environment; some INNS can live on damp items for weeks.

Control Measures for Amphibian Diseases

4.7 The ARG UK Advice Note 4 provides further information on precautions to be taken to minimise the risk of spreading amphibian diseases. This Advice Note should be followed when undertaking any work at the site, or where amphibians may be handled. To minimise the risk of inadvertently spreading amphibian diseases, the following additional precautions should be put in place and adhered to by all site personnel:

1) All personnel will be questioned about their recent movements. Any footwear that may have been used on sites with amphibian populations, or whose owners keep non-native

amphibian species in captivity, will be subject to appropriate cleaning/ disinfection prior to being utilised on the site.

2) The recent use of all machinery/ equipment (e.g., buckets for carrying amphibians) on other sites will be reviewed. Any machine/ equipment that may have been used recently on site(s) with amphibian populations will be subject to appropriate disinfection prior to being utilised on the development site. In addition, all buckets *etc.*, used for transfer of amphibians, will be regularly disinfected.

3) Disinfection, if required, should follow the procedure provided in ARG-UK Advice Note 4 (refer to footnote 9, page 4): Use a brush to scrub off any debris, plant fragments, mud *etc.* and rinse with water. Then disinfect using one of the following methods: 1) Soak/ wash in a bleach solution (diluted with water to produce a 4% solution) for 15 minutes; OR 2) Virkon (10 mg/ml, as per supplier's instructions) for 1 minute. Rinse with clean water and if possible, allow to dry.

4) Should any diseased amphibians be located or suspected, the RAMs scheme will be halted and Amphibian and Reptile Conservation (ARC) (<https://www.arc-trust.org/>) NRW contacted for further advice. Works will only re-commence when it is confirmed that it is safe/ acceptable to do so.

5) Any nets used will be subject to disinfection.

Handling Amphibians

4.8 The following is a brief summary of biosecurity measures to be implemented when handling any amphibians. Further details are provided in the ARG UK Advice Note 4 which should be referred to for further information.

- Handle amphibians only when necessary.
- If handling amphibians, or if contact with pond water is necessary, wear powder-free disposable vinyl gloves which you rinse before contact with the amphibians. Use vinyl rather than latex or nitrile because the latter two may be harmful to amphibians.
- Use a fresh pair of gloves for each site (pond/ waterbody) visited.
- Ensure that all workers wash their hands thoroughly with soap or hand sanitising gel and water after each day/ before moving to another site.
- Wash all clothing on a 40°C cycle with biological detergent, after exposure to amphibians or pond/ ditch water.
- Do not release amphibians anywhere except at the place of capture.

This page should be signed by all those attending the tool-box that incorporates the Biosecurity Risk Assessment.

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