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AMPHIBIAN CONSERVATION PLAN

REVISION 'A' (JULY 2022)

Project name:	HOLT LODGE
Species:	Great Crested Newt
Grid Reference:	SJ47063713
Date:	21/07/2022
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1 BACKGROUND

Planning consent is being sought for the creation of a fishing lake and car parking area at Holt Lodge.

The proposals include the construction of a new fishing pool within a grass field. Access will be gained via an existing field entrance point off a minor road with a small length of hedge being removed to create a visibility splay. Although the lake will be situated in the centre of an improved grass field, this could have ecological implications for certain protected species including badgers and great crested newts.

A Preliminary Ecological Assessment of the site was carried out in November 2017. Records obtained from COFNOD have subsequently identified three ponds within 250 metres of the site for which records exist for great crested newts. The location of these ponds is shown in Figure 1.

Given that the proposed fishing lake is situated within 250 metres of these ponds, there is a possibility that great crested newts may use this site for foraging and perhaps also hibernation, if conditions were suitable.

A European Protected Species development licence may be required if the proposed works “are considered likely to breach species protection legislation”.

The following document has been prepared to evaluate whether or not the proposed works are likely to result in a breach of species protection legislation (the Risk Assessment) and also to set out a Conservation Plan, including mitigation, compensation and enhancement, which will ensure that the favourable conservation status of GCN at the site and in the area is maintained.

This report has been revised to include additional information requested by NRW in their response to the planning application dated 8 April 2022.

2 PREDICTING THE IMPACT OF DEVELOPMENT

Records show that three ponds within 250 metres support great crested newts. Two of these are at approximately 250 metres from the proposed working area and one is within 160 metres. NRW point out that they consider GCN populations in the environs of the Wrexham Industrial Estate area to be of national significance.



All 3 ponds have very suitable terrestrial habitat within their immediate vicinity including scrub and hedgerows. Jehle (2000) demonstrated that 95% of all GCN summer refuges fell within 63m of the breeding pond and it is considered reasonable to assume in this case that the vast majority of GCN breeding in Ponds 1-3 are using the habitat found immediately adjacent to the pond as terrestrial habitat. This is especially likely given the relatively poor suitability of terrestrial habitat in the project site field. NRW recognize in their response that the habitat in the project field is not 'optimal' but is 'typical'. GCN will use grassland habitats for foraging and shelter. However, foraging opportunities for GCN on the proposal site are limited due to the current land use which includes silage making and intensive grazing. The hedgerow on the southern boundary, a small length of which will be removed for access, is a small target for GCN.

Pre- and Mid-Development impacts

- Potential harm to individual GCN: The area of the site to be developed is mown and grazed improved grassland which offers sub-optimal habitat to GCN. The hedgerow at the roadside boundary will be removed for highway visibility. In the absence of mitigation, hedgerow removal, site clearance and ground works have the potential to kill or injure individual GCN.

Long-term impacts

- Loss/damage to aquatic habitats: the proposed development will not result in loss or damage to aquatic habitats.
- Loss of foraging habitat: the habitat within the proposed development site to be lost is made up of mown or grazed improved grassland. GCN are unlikely to use this habitat for foraging purposes given its management and the distance from breeding ponds. Permanent loss of improved grassland will not have a detrimental impact on the GCN population at a larger scale. A length of the roadside hedgerow will be lost as a result of the development but a replacement hedgerow will be provided, like-for like.
- The adoption of an amphibian conservation area (including rough grassland, pond creation, woodland creation and scrub planting) will ensure that the development will provide a net gain in good quality hibernation, foraging and sheltering habitat for GCN at the site.
- With appropriate mitigation and enhancement of the site, the overall predicted impact of the development on site is: low.

Risk assessment

The risk of a breach of species protection legislation by the proposals is considered to be minimal, given:



- The distance of the breeding ponds from the proposal area
- The intervening habitat forming a barrier to dispersal into the proposal area
- The abundance of high-quality habitat around the breeding ponds reducing likelihood of newts dispersing beyond it
- The length of hedge to be removed is a small 'target' in the landscape.

This report recognises that the proposals to disturb the area of grassland would represent a small risk to GCN in two ways:

1. Posing a risk to individual GCN during the construction phase.
2. Removing a small area of grassland foraging habitat.

The first risk factor can be mitigated for and removed by adopting appropriate avoidance measures, including the erection of a one-way amphibian fence prior to and during the construction phase.

The second risk factor can be adequately compensated for by a range of habitat compensation and improvement measures outlined below.

It is considered that the adoption of compensation measures and risk avoidance measures will ensure that the conservation status of GCN is unchanged and probably enhanced and that therefore a derogation licence will not be required.

3 LEGISLATION

Great Crested Newts (GCN) are a European Protected Species (EPS) and they and their habitats are fully protected under national (Wildlife & Countryside Act 1981 (as amended)) and European law (The Habitats and Species Regulations 2017 (as amended)). The combined legislation makes it illegal to:

- deliberately capture, kill or injure a great crested newt;
- damage or destroy a breeding site or resting place
- intentionally or recklessly obstruct access to any place used for shelter and protection including resting and breeding places, whether occupied or not;
- deliberately, intentionally or recklessly disturb a great crested newt when in a place of shelter;
- possess a great crested newt, or any part of it, unless acquired lawfully;
- sell, barter, exchange or transport or offer for sale great crested newts or parts of them.



4 MITIGATION

In order to minimise any residual risk of any offence, mitigation will be put in place in the form of:

1. Erection of a one-way amphibian fence.
2. A Reasonable Avoidance Method Statement incorporating Risk Avoidance Measures, as below.

Site induction

- A toolbox talk will be given to all site personnel in order to make them aware of the possible presence of GCN, how to identify this species and the avoidance measures to be used on site.
- A paper copy of the avoidance measures will be retained on site together with the contact details of the GCN licensed ecologist.

One-way amphibian fence

This will be erected around any areas to be disturbed during the construction phase including the new open water area, the area designated for spoil storage, the car park and access track.

The fence will be put in position 4 weeks prior to work commencement to allow any GCN within the working area to disperse.

Any gaps in the fence required for access by machinery will be closed during hours of darkness (i.e. when GCN are mobile).

Reasonable Avoidance Measures

Timing & duration

- All works will take place during daylight hours when GCN are unlikely to be moving around.
- Timing of Clearance Works: All works to prepare the land onsite for development will be undertaken ideally during the spring/summer season (April to mid-June) when GCN enter into / around aquatic habitat to breed, and outside the hibernation period (avoiding November to February, inclusive).



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- Hedgerow removal should be carried out outside the breeding season i.e. between mid-March – mid-August.

Hedgerow removal

- The length of hedgerow to be removed for access will be coppiced following the end of the bird-nesting season (Mid-August) and all arisings will be removed from the site. Coppicing will reduce the height of cut stems to around 15cm ensuring minimal ground disturbance.
- The increased light and decreased humidity levels in the base of the hedge will render it less suitable habitat for any GCN and thus encourage dispersion away from the hedge, if present.
- The hedge will be retained in this state for at least 4 weeks and then removed. This will be carried out with due diligence and with supervision by an ecologist.
- If any GCN are discovered at this stage, all work will cease until a European Protected Species Development Licence is obtained from NRW.

Site clearance

- The area designated for the lake will be soil-stripped only after the vegetation in this area has been removed through the use of herbicides. This vegetation removal will be carried out in the months of April to September and at least one month prior to soil stripping. The bare and open conditions will be inimical to GCN and ensure that no GCN are using this area for foraging.
- The same precautionary measures will be carried out in the area designated for soil mounding and for the car park.
- A thorough finger-tip search of the area will be carried out by a licensed ecologist.
- Any possible objects which may conceal GCN such as large stones, logs or other materials will be inspected and removed from site.
- If any GCN are discovered at this stage, all work will cease until a European Protected Species Development Licence is obtained from NRW.

Site compound

- No site compound will be required.

Construction methods and special precautions

- All excavations on site will be covered at night or ramps will be provided to allow amphibians to exit excavations. All excavations will be checked for amphibians each morning prior to the re-commencement of works.



- All stored building materials e.g. drainage pipes, that might be used as temporary resting places by amphibians, will be stored off the ground on pallets or similar.

5 COMPENSATION AND ENHANCEMENTS: GCN CONSERVATION AREA

Habitat loss

Table 1. Habitat loss on site due to development.		
Habitat	Quality	Area lost
Improved grassland	Low quality terrestrial	2.13 ha
Hedgerow	High quality terrestrial	0.003 ha
Total habitat loss:		<u>2.133 ha</u>

Habitat creation

An area of the field will be designated as a GCN Conservation Area and managed solely for GCN conservation (see Figure 1).

This area will include rough grassland, wet grassland, two ponds, amphibian hibernacula and an area of tree/shrub planting.

Table 2. Habitat creation on site.		
Habitat	Quality	Area created (ha)
Native trees and shrubs woodland	High quality terrestrial	0.50 ha
Native species hedgerow	High quality terrestrial	0.022 ha
Hibernaculum x2	High quality terrestrial	2m ² per hibernaculum
GCN pond x2	High quality aquatic	0.02 ha
Species-rich grassland	High quality terrestrial	0.25 ha
Rough grassland	Medium quality terrestrial	0.53 ha
Total high-quality habitat creation:		<u>1.322 hectares</u>



In addition, an area of open water (new fishing pool) will be created extending to 0.537 ha.

Creation of wildlife ponds

Two new small ponds will be created in the south eastern corner of the field and managed solely for the purpose of GCN conservation. The ponds will be designed and created to follow the GCN Mitigation Guidelines to ensure they are suitable for use by GCN and other aquatic wildlife.

This is a damp area of the field and it is intended that overflow from the fishing lake will be used to create an area of wet grassland within this area,

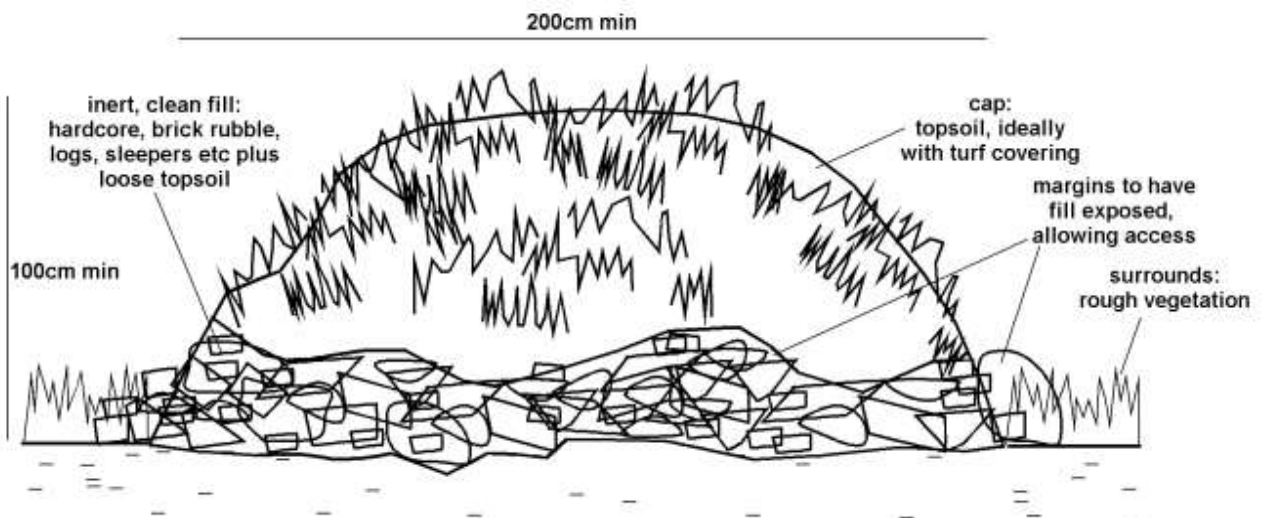
The new ponds will be irregular in shape in order to create diversity around the margins. The overall surface area will be at least 200m². Natural regeneration will rapidly vegetate the margins of the ponds. The wetland area will be securely fenced and no fish will be introduced into the ponds.

Creation of amphibian hibernacula

Two amphibian hibernacula will be created on site, one within 10m of each of the new ponds. The hibernacula will measure 2m long by 1m wide and be at least 1m high, to

Figure 3: Suggested hibernaculum design

This design mimics artificial and natural conditions in which great crested newts have frequently been found over-wintering. Dimensions should not be below 2m length x 1m width x 1m height. The illustrated design would be suitable for locating on an impermeable substrate. On free-draining substrates, the design is largely similar but the bulk of the fill is sited in an excavated depression in the ground. Hibernacula should ideally be positioned across a site, both close to and distant from breeding ponds, always in suitable terrestrial habitat and above the flood-line.



follow the 'Suggested hibernaculum design' within Figure 3 of the Great Crested Newt Mitigation Guidelines.



The base of the hibernacula will be constructed using hardcore, brick rubble, logs, rough timber and loose topsoil. There will be sufficient ground-level gaps between the materials to allow newts to enter in several locations. The hibernacula will be built up in layers and overlaid with topsoil and a final layer of turf.

Tree and scrub planting

An area of dense scrub will be planted along the northern and eastern boundary of the field to create further terrestrial habitat for amphibians. The scrub will comprise native species including hawthorn, hazel, guelder rose and dogwood.

Creation of GCN Conservation Area

The area of damp grassland, species-rich grassland, rough grassland, ponds, woodland and scrub, amounting to approximately 1.3 ha, will be designated as a GCN Conservation Area. A Management Plan for the long-term management of this area will be produced.

New native hedgerow planting

Approximately 55m of native species hedgerow will be planted around the car park perimeter of the proposed development to mitigate for the loss of the roadside hedgerow. The hedgerow will include the following species: hawthorn, blackthorn, hazel, holly, alder and dogwood. The planted hedgerow will be protected by spiral guards and any losses in the first 3 years will be replaced.

6. LONG-TERM MANAGEMENT OF THE SITE

A detailed long-term management plan will be put in place to ensure the favourable conservation status of the local GCN population. Part of the plan will include a financial plan to resource mitigation, compensation, monitoring, site management or wardening as appropriate.

The management plan should be a condition of the planning consent and produced once permission has been gained. The details of this plan will be submitted to the LPA for approval alongside the CEMP and will include details of: persons responsible for carrying out monitoring, frequency of monitoring, contingency prescriptions as necessary, areas to be monitored and details of additional GCN conservation licences which may be needed.



The land will be retained by the landowner who will ensure sufficient resources are available for ongoing management. Appendix 1 of the Great Crested Newt Mitigation Requirements (Local planning guidance for Wrexham County Borough) will be used as a guide for the resources needed for successful management.

Table 3 below is an indication of the management options that will be necessary given the proposed habitat creation and enhancement.

Table 3. Habitat management considerations.		
Assessment	Frequency	Action to be taken
<u>Terrestrial</u>		
Check presence and extent of all tree planting.	Annually for three years.	Replace any tree loss experienced in first 3 years.
Scrub management.	Annually.	Scrub development closely monitored. Strimming/cutting where necessary. If woody species take hold in open grassland areas, an additional cut should be carried out in March with a minimum cut height of 15cm.
Hedgerow management.	Annually.	Any losses within the first 3 years will be replaced. Hedgerows will be cut outside of the bird nesting season as per ongoing management.
<u>Aquatic</u>		
Pond management.	Every other year.	The ponds will be assessed based on the Habitat Suitability Index to ensure they continue to provide appropriate opportunities for GCN. Any necessary management prescriptions will be documented and carried out.

A log book and detailed schedule of any management will be kept and updated with results as part of the compliance audit on an annual basis.

The site owners will be responsible for ensuring that habitat management is carried out when required to follow a finalised maintenance schedule.



7 CONTINGENCY PRESCRIPTIONS

Below is a table of possible problems (and their solutions) which may be encountered during and after construction. Any necessary management will be incorporated into the annual management plan and details of works carried out will be recorded. All issues identified and actions stated will help to ensure the long-term favourable conservation status of the local population of GCN.

Table 4. Contingency measures. All contingency actions will be carried out under licence where necessary.	
Issue	Action to be taken
GCN found on site during construction.	Works in the area will be halted immediately and the licenced ecologist under which the licence was obtained will be informed. They will attend the site to handle and where necessary, relocate any GCN to outside of the exclusion fence line.
Incidental killing of GCN after works are complete.	All conservation areas marked within the site will be fenced to prevent members of the public from accessing them. This will reduce the risk of accidental killing. As GCN only move around at night time, incidental killing through human disturbance is unlikely.
Introduction of fish into one or more of the breeding ponds.	Any ponds effected will be drained during the winter months under guidance from NRW and any necessary licences.
Pond leakage caused by damage	Ponds will be repaired and refilled where necessary. Works will be carried out during winter months when GCN are not present.
Introduction of invasive species onto site.	NRW will be contacted and the most recent management of identified invasive species will be carried out.

REFERENCES

Department for Environment, Food and Rural Affairs (DEFRA) (2018) European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC): Fourth Report by the United Kingdom Under Article 17 on Implementation of the Directive



from January 2013 to December 2018. Conservation status assessment for the species: S1166 Great Crested Newt (*Triturus cristatus*) Defra

English Nature (2001) Great crested newt mitigation guidelines. Version: August 2001.

Gleed-Owen, C. (2007) Development of a National Amphibian and Reptile Recording Scheme (NARRS), Phase 2 – Historic, current and future conservation status of the great crested newt (*Triturus cristatus*) in northeast Wales. Final report for CCW: contract UC29-006 and RQ03-022. Countryside Council for Wales

Haubrock, P.J. and Altrichter, J. (2016) Northern crested newt (*Triturus cristatus*) migration in a nature reserve: multiple incidents of breeding season displacements exceeding 1km. The Herpetological Bulletin, 138, pp.31-33.

Haysom, K., Driver, D., Cartwright, M., Wilkinson, J. and Foster, J. (2018) Great Crested Newt in Wales, with specific references to its long-term prospects and within its stronghold in North-East Wales. NRW Science Report Series. Report No: 259. pp 113, Natural Resources Wales, Bangor

Jehle, R. and Arntzen, J.W. (2000) Post-breeding migrations of newts (*Triturus cristatus* and *T. marmoratus*) with contrasting ecological requirements. Journal of Zoology, 251(3), pp.297-306.



Ecological compliance audit

The compliance audit will be based on the NRW template, to include Key Performance Indicators suitable for the type of development.

Natural Resources Wales licence reference number:		Site name:	
		Site grid reference:	
Name of licence holder:		Name of developer if different from licence holder:	
Name of ecological consultant:		Date/s of audit (dd/mm/yy):	
Date licence issued (dd/mm/yy):	Date licence expired:	Licence implemented between (dd/mm/yy)	
		From:	To:

No	Performance Indicator	Evidence required - this list should be adapted to reflect the agreed method statement	Pass (Yes/No), comments	What action is required as a result of findings?
1	Before starting work the licensee will advise NRW Species Officer of the date the works will start.	Written or electronic documentation of notification of start of works.		



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2	A suitably experienced licensed ecologist will be appointed and retained during the life time of this licence to provide on-site advice.	Letter, contract or other document outlining the appointment of an Ecologist for the lifetime of the project.		
3	Prior to the start of any works on site, all site workers will be inducted by the Project Ecologist. This induction will cover the legal status of the species, the method of working, and action to be taken if protected species are encountered.	Copy of documents from ecological induction, showing content of induction. List of induction attendees		
4	Preparation and implementation of a bio-security risk assessment as detailed in E.5 of the method statement	Bio-security risk assessment is available for inspection. Log of implementation of bio security measures is available for inspection and shows that they have been implemented.		



		Field observation shows that bio security measures are in place e.g. foot washes		
	E.1 GCN capture and exclusion			
5	Design and installation of amphibian fencing to the specifications provided in the CCW guidance sheets/ EN (2001) and as detailed in the method statement:	Log and field observation show that one-way amphibian fencing has been installed as detailed in the method statement, including: - fencing has been installed so there is a minimum 1 m access strip left for maintenance on all sides - fencing layout does not contain gaps through which newts may pass. - vehicle access points have been installed using gates of heavy plastic or ACO stop-grids; - fence-posts have been located on the outside of the receptor area; fencing membrane has been installed without noticeable creases or folds; - joints in the membrane have been 'curl-joined' and well secured to a post with pads and nails. The jointing method continues underground as well as above		



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6	Amphibian fencing has been subject to inspection and maintenance according to CCW guidance sheets/ EN (2001) and as detailed in the method statement throughout the translocation and construction periods.	A fence inspection log of all inspections and all repairs required has been maintained and is available to NRW at 48 hours' notice to show that: - the fence has been inspected by a suitably qualified/ licensed ecologist every 24 hours - any repairs have been completed within 12 hours throughout the duration of construction works. - that 99% or more of the length of the exclusion fencing has been maintained in a satisfactory condition - fencing has been kept clear of vegetation or other materials that may enable newts to climb over the fence		
7	Works within amphibian habitats will not commence until working areas are confirmed to be clear of amphibians by the licensed ecologist.	Log of activities, including clearance activities, is available for inspection recording captures.		



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8	Any works outside the amphibian fence are to be in accordance with a methodology as approved by NRW supervised by a licensed person.	Log of works undertaken, including evidence of licensed person on site, available for inspection.		
	E.2/E3 GCN habitat modification and creation for mitigation and compensation			
9	All mitigation and compensation measures have been implemented as per section E2 and E.3 of the Method Statement:	Log of works demonstrates habitat creation /enhancement implementation Design and installation of hibernacula: log and field observation show installation was in accordance with the method statement including: - dimensions - construction materials - number and locations Design and creation of great crested newt ponds: log and field observation show installation was in accordance with the method statement including: - location		



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		- dimensions - depth - planted or not, as appropriate - water quality and supply - provision of artificial egg laying substrate where appropriate		
10	The compensation/receptor site has been subject to appropriate management during construction as specified in section E.2.1 of the Method Statement	Log and field observation show that appropriate management activities have been implemented eg - grazing - cutting		
11	The implementation of surveillance or monitoring of schemes, pre, during and post development as specified in section xx of the Method Statement.	Log shows that surveillance and monitoring have been implemented pre, during and post development and results passed to appropriate data holder		
	F and H: Long Term Site proposals			



12	Implementation of <u>habitat/site management and maintenance</u> and, <u>habitat monitoring</u> as detailed in F.1 and F.2 of the method statement	If audit undertaken <u>during development phase</u>: - Habitat management plan demonstrates measures are in place to ensure ongoing land management of retained, modified and newly created habitat post-development If audit undertaken <u>post-development</u>: - log or report demonstrate habitat management plan has been implemented - site management works are maintaining the ecological functionality of the mitigation/compensation site		
13	Implementation of long term site safeguard proposals as detailed in F.4, H.1 and H.2 of the method statement	Log of works demonstrates implementation eg: (i) land transfer or other legal interest proposal (ii) mitigation/compensation site been listed as a local land charge		



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	<i>NB Not all schemes will require all of the activities</i>	(iii) proposed legal agreements and contracts been completed (iv) wardening requirements implemented to proposed timescales and in accordance with the submitted Method Statement (v) financial plan in place to resource mitigation, compensation, monitoring, site management or wardening		
	Any other points to note/comments from auditor:			



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Auditor name and organisation	Signature	Date



Biosecurity risk assessment

The following will be used as a template but may be subject to change as the final details of the development are yet to be decided.

SITE NAME: HOLT LODGE			
BIOSECURITY PROTOCOL			
DATE:			
SPECIES	POTENTIAL CONTAMINATION ROUTE	LIKELIHOOD OF RISK	OPERATIONAL PROCEDURES/ ACTIONS TO MINIMISE RISKS
Himalayan Balsam	Introduction of species via: • construction machinery • contaminated soil	Low. Not known to be present on site or in the immediate locality. There are no requirements to import soil.	Ensure owner and contractors know what Himalayan Balsam looks like. If any plants are found these should be pulled up and left to dry before the seeds set (July/August).
Japanese Knotweed	Introduction of species via: • construction machinery • fragments in contaminated soil	Low. Not known to be present on site or in the immediate locality. There are no requirements to import soil.	Ensure owner and contractors know what Japanese Knotweed looks like. If it is identified on site, refer to the Environment Agency's Japanese knotweed Code of Practice.



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Invasive aquatic plants: Water fern, Parrots-feather, Floating pennywort, Australian swamp stonecrop, Water hyacinth, Water primrose, Canadian waterweed, Curly waterweed, Nuttall's waterweed, Least duckweed, New Zealand pigmy weed.	Introduction of species via construction machinery and as propagules on boots, waders, bottle traps, and nets.	Medium. Surveyors and contractors may well have previously been to sites where these species are present.	Avoid entering ponds/watercourse whenever possible. Consider using survey techniques that constitute a lower bio-security risk (e.g. torching). Use bottle traps on a site-specific basis. Consider using nets and other equipment on a site-specific basis where non-native species have been recorded. Clean equipment, boots/waders and clothes after each survey. Where surveys entail two or more ponds, consider provision of duplicate equipment. Based on degree of risk, consider survey ponds supporting invasive species last or use a team to specifically survey ponds supporting non-native species.
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Fish	Deliberate introduction.	Low.	Continued agreement with land owner.
Chytrid fungus	Ecologists, aquatic survey equipment.	Low.	Ecologists and other contractors to disinfect boots and equipment before entering ponds.



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FIGURE 1 HABITAT ENHANCEMENT PLAN

