

Great Crested Newts Survey & Mitigation

February 2019

Introduction

The following tool has been produced by the IP Signalling Environment team to help projects manage risk associated with great crested newts in **ENGLAND ONLY**. The flow diagram and appendices should be used in conjunction throughout the project life-cycle in order to commission surveys and implement the correct mitigation (where required).

Although the latter stages of the flow diagram on Page 2, focus on mitigation of constraints associated with great crested newts, the mitigation hierarchy of **AVOID, MITIGATE AND COMPENSATE** should always be followed (e.g. by moving the location of a proposed new asset) prior to mitigating the impact or compensating for it.

Glossary

Table 1 below provides details of the acronyms used through this document:

Table 1: Glossary of terms

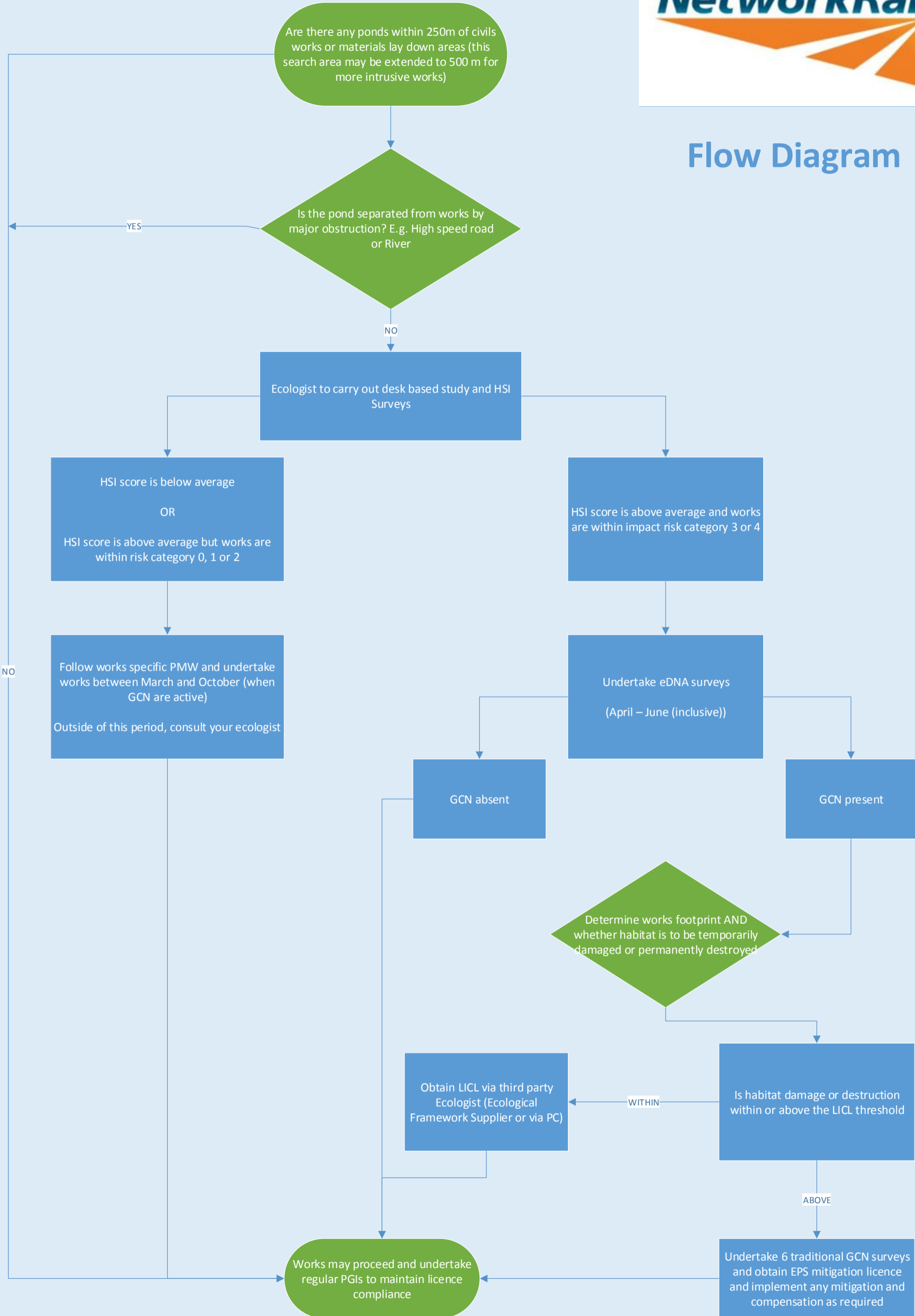
| Acronym | Meaning |
|---------|-----------------------------------|
| eDNA | Environmental DNA (water samples) |
| EPS | European protected species |
| GCN | Great crested newt |
| HSI | Habitat suitability index |
| LICL | Low impact class licence |
| PC | Principal Contractor |
| PGI | Planned General Inspection |
| PMW | Precautionary method of works |

Survey and Result Timescales

- eDNA Surveys can only be undertaken between April and June (inclusive);
- Traditional surveys should comprise six surveys, spread between March and June, employing 3 survey techniques per visit (selected from netting, torch surveys, egg searches and bottle trapping), to determine population size;
- Mitigation licence decisions from Natural England can take up to 30 working days;
- Where mitigation licences are granted, the specified mitigation or compensation must be in place prior to starting works;
- The above timescales must be considered in the project program.



Flow Diagram



Appendix A: Impact Risk Categories

| Impact Category | Rationale | Example Works | Works Description |
|-----------------|---|--|---|
| 0 | No works are to be undertaken within 250 m of the waterbody. | N/A | N/A |
| 1 | Works to be undertaken, within 250 m, will result in a temporary and very low level of localised disturbance. Upon works completion, habitat would return to its original condition immediately. | Cable route refurbishment | Removal of troughing lids and insertion of new or replacement of old cables into the existing trough. |
| | | Automatic Train Warning System (ATWS) | Installation of 1 m ² piece of equipment within the 4 foot |
| | | Train Protection Warning System (TPWS) | |
| | | Axle Counter | Attachment of small piece of equipment (0.5 m) to the rails. |
| | | Line side sign or Signal Post Telephone (SPT) | Installation of sign and post using post-crete (0.5m ²). |
| | | Material delivery | Delivery of material by road or rail, using existing roads and tracks and materials stored on hard standing or lightly vegetated area. |
| | | Hollow bearer | Removal of solid wooden or concrete sleeper and replacement with hollow metal sleeper. Requires the digging out and temporary removal of ballast. |
| | Permanent or temporary excavation in sub-optimal habitat | Excavations a for permanent or temporary works such as buried cable route, drainage, foundations through sub optimal terrestrial habitat such as; compacted bare ground/hardstanding, amenity grassland. | |

| Impact Category | Rationale | Example Works | Works Description |
|-----------------|--|--|--|
| | | Temporary or permanent material storage/removal in sub-optimal habitat | Temporary Storage/removal of materials (e.g. loose ballast, sleepers, troughing, rail, etc.) in an area of sub-optimal terrestrial habitat such as; compacted bare ground/hardstanding, amenity grassland. NOTE: Palletised materials would count as sub-optimal habitat regardless of the habitat beneath. " |
| 2 | Works to be undertaken, within 250 m, will result in low level habitat damage (rather than destruction). Upon works completion, habitat would be allowed to return to its original condition naturally. | Signal erection | Erection of new signal post, set within new or refurbished concrete base buried beneath the ground (approximately 0.5 m ²). |
| | | Point heating control cubicles (PHCC) installation | Installation of PHCC connections within the 6 foot/10 foot resulting in small localised disturbance of ballast. |
| | | Equipment decommissioning | Decommissioning of all the equipment listed in this table. Footprint of areas affected is likely to be similar to the area originally occupied. |
| | | Vegetation management | De-vegetation (inclusive of trees, bushes and scrub) to a height greater than 150 mm. |
| | | Temporary excavation in optimal habitat | Excavations for temporary works such as crane platform, haul road, trial holes, ground investigation, etc.) through optimal terrestrial habitat such as ballast, rough grasslands, scrub or woodland. |
| | | Temporary material storage/removal in optimal habitat | Temporary Storage/removal of materials (e.g. loose ballast, sleepers, troughing, rail, etc.) in an area of optimal terrestrial habitat such as ballast, rough grasslands, scrub or woodland. |
| 3 | Works to be undertaken, within 250 m, will result in moderate level habitat destruction. Upon works completion, habitat is likely to be lost permanently. | Point heating control cubicles (PHCC) | Installation of PHCC within the lineside or cess (approximately 1 m ²). |
| | | New cable route | Shallow trench is dug in the lineside or cess into which concrete troughs are laid. New cables inserted. (approximately 0.5 x 0.5 x 0.5 m). |
| | | Relocatable equipment building (REB) | Installation of lineside building on concrete platform (approximately 4m x 2m). |
| | | Principal supply point (PSP) | Installation of lineside building on concrete platform (approximately 25m x 8m). |
| | | Location case (Lock) or Functional Supply Point (FSP) | Installation of lineside cabinets on concrete plinths (approximately 1 m ² per cabinet and locs are often installed in 'suites'). |
| | | Signal gantries | Installation of gantry (approximately 1 m ² either side of the track). |
| | | Walking route | Creation of hard standing walkway, usually within the cess but likely to |

| Impact Category | Rationale | Example Works | Works Description |
|-----------------|--|--|--|
| 4 | | | require some light de-vegetation due to safety requirements which will be managed to ensure safe passage. |
| | | Vegetation clearance | De-vegetation (inclusive of trees, bushes and scrub) to a height less than 150 mm. This may also include soil stripping. |
| | | Piling and driven foundations | Supporting structures driven or screwed into the ground. |
| 4 | Works to be undertaken, within 250 m, will result in high level habitat destruction. Upon works completion, habitat is likely to be lost permanently. | Under track crossing (UTX) and Under road crossing (URX) | Chambers (approximately 1.5 m ² are dug either side of the track or road and cables run between them. |
| | | Access point | Impact dependent on location, however, likely to require de-vegetation and grading of earth from the cess to the boundary fence. |
| | | Site compound | Creation of large lay down areas of site compounds whereby all, natural, surfaces are often overlaid with a hard-standing material or aggregate. Site accommodation is also often installed for the life of the project. |
| | | Track works/Track renewals | Removal of existing rail, sleepers, and ballast all of which are replaced with new or refurbished materials. The footprint of these works will vary by site and track layout. |
| | | Permanent excavation in optimal habitat | Excavations a for permanent works such as buried cable route, drainage, foundations through optimal terrestrial habitat such as ballast, rough grasslands, scrub or woodland. |
| | | Drainage ditch maintenance (e.g. dredging) | Dredging, jetting, desilting, pumping out or clearing lineside drainage ditches, catch pits and culverts. |
| | | High output ballast cleaning | Ballast is vacuumed into large chamber and tumbled with water and industrial detergents and subsequently replaced. |
| | | Track lowering/renewal (including trackbed and ballast shoulder replacement) | Trackbed, rails and ballast are fully replaced. |
| | | Tamping | Forks from a large train are inserted into the ballast and vibrated to enable ballast to lie compactly. |
| | | RRAP/S&C installation | Installation of large rubber mats adjacent to and between the rails to allow access for road/rail machines/Installation of moving equipment such as crossovers or points onto the railway. |

Appendix B: Low Impact Class Licence (LICL) Thresholds

Permanent damage or destruction of terrestrial habitat

Permanent terrestrial habitat destruction permitted under a LICL increases with the distance from a confirmed GCN waterbody. The thresholds are provided below:

- <50m distance, permitted terrestrial habitat loss is ≤ 0.01 ha;
- 50-100m distance, permitted terrestrial habitat loss is ≤ 0.2 ha;
- 100-250m distance, permitted terrestrial habitat loss has to be ≤ 0.5 ha;

Temporary damage or destruction of terrestrial habitat

Temporary damage of terrestrial habitat permitted under a LICL increases with the distance from a confirmed GCN waterbody. The thresholds are provided below:

- <50m distance, permitted terrestrial habitat loss is ≤ 0.05 ha;
- 50-100m distance, permitted terrestrial habitat loss is ≤ 0.5 ha;
- >100m distance, permitted terrestrial habitat loss is > 0.5 ha.

Mitigation and Compensation

When temporarily damaging GCN habitat when undertaking works under a LICL, mitigation is mandatory. This may include;

- Fencing and pitfall trapping;
- Cutting vegetation by hand and strimming;
- Destructive searches.

When permanently destroying GCN habitat when undertaking works under a LICL, compensating that loss of habitat is also mandatory.