

Your name <input style="width: 90%;" type="text"/>	Date <input style="width: 95%;" type="text"/>
Square: 4 figure grid ref e.g. SP1243 (see your map) <input style="width: 90%;" type="text"/>	Pond: 8 figure grid ref e.g. SP 1235 4325 (see your map) <input style="width: 95%;" type="text"/>
Pond name (if known) <input style="width: 90%;" type="text"/>	Great Crested Newt licence number <input style="width: 95%;" type="text"/>
Determiner name (<i>optional</i> - if someone confirms the identity of the species you've recorded) <input style="width: 90%;" type="text"/>	Voucher material (<i>optional</i> - comment if you've taken a photo to confirm identification) <input style="width: 95%;" type="text"/>

Please complete a separate sheet for each visit and each pond surveyed in your 1 km grid square.

You need experience, time and a licence to do this survey, which uses traditional methods to survey Great Crested Newts. If you already have a licence, enter the licence number (above). If you want to get a licence to undertake torching and egg searching for this survey, please contact us for information about training.

METHOD

- Visit each survey pond 4 times between April and mid-June to see if Great Crested Newts are present.
- Each visit should include: information about survey conditions, a visual search for adults, larvae and eggs and 'torching' which needs to be undertaken at night, and a pond habitat survey (pages 2 to 4). You can also take and upload photos.
- Bottle or other traps, netting and other techniques, can also be used if you are already licenced, but they are *not required* for the PondNet survey.
- **At the end of the season, enter the results online: www.freshwaterhabitats.org.uk/projects/waternet**

SURVEY CONDITIONS:

Visit number:

(which of your 4 visits is this?)

PondNet asks you to make up to **4 visits to each pond** in your 1 km grid square. However, the survey statistics only needs a record of Great Crested Newt presence or absence - not numbers. So *as soon as Great Crested Newts are recorded as present in a pond, there is no further need to revisit that same pond this year.*

Start time (24hr clock)	:	Finish time (24hr clock)	:	% Shoreline surveyed	%
Temperature over 10°C	(tick)	Wind disturbing water	(tick)	Rain (score 0, 1, 2, 3)	
Bright moonlight	(tick)	Water clarity Score 1-4		Number of traps	
Torch power (<i>choose one</i> : candle power ≥ 500,000 or ≥ 1,000,000)					

Rainfall: 0=none, 1=yesterday, 2=earlier today, 3=during survey. **Water clarity:** 1=clear, 2=moderately clear, 3=mod. turbid, 4=turbid

SURVEY METHOD USED: Tick all that apply, but note that only torching and egg searching are essential for PondNet.

Torching Egg searching Netting Bottle trap Other technique (please specify)

SURVEY RESULTS: Record the presence of Great Crested Newts if seen. If none are recorded, tick the last box. Please note that 'Not seen' records are very important to PondNet, so be sure to enter these data online.

GREAT CRESTED NEWT: The priority species for PondNet	Tick, add numbers and a range*				Tick	
	Adult	Immature	Efts	Eggs	Not seen this visit	Identification uncertain
				*		

OTHER SPECIES: If you see other amphibians during your surveys, please record them here:	Tick, add numbers and a range*				Tick	
	Adult	Immature	Tadpole/ larvae or efts	Eggs/ spawn	Pond searched, but not seen	Identification uncertain
Common Frog						
Common Toad						
Palmate Newt						
Smooth Newt						
Non-native amphibian (list)						

Notes (e.g. number of males and females):

* For range values choose one of the following options: 1, 2-5, 6-10, 11-20, 21-50, 51-100, 101-200, 201-500, 501-1000, 1001-2000, 2001+

* if you have experience (and a licence) you may want to record presence of Great Crested Newt or other newt eggs that you find. Unwrapping leaves to identify newt eggs can be damaging, so please minimise the number looked at - record presence (not abundance) of newt eggs.

Please complete a POND HABITAT SURVEY sheet at each pond surveyed.

This is a really important part of the survey at your pond. The variables will be used to calculate a Habitat Suitability Index for Great Crested Newts. Critical HSI metrics are indicated by a shaded box – we cannot calculate an HSI score for the pond unless these have been submitted. Other metrics will give us a full picture of pond quality.

Go to: www.freshwaterhabitats.org.uk/projects/pondnet/survey-options/habitats for survey guides and more information.

Is the pond new? (less than 10 yrs old) <input type="checkbox"/> yes, no, unknown	Year of creation? <input type="text"/> date, decade, unknown	Pond Altitude <input type="text"/> (m)
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Area m² **Note:** This is the *surface area of the pond when the water is at its highest level* (usually in early spring). It will probably *not* be the current water level of the pond. The high water level line should be evident from wetland vegetation like rushes at the pond's outer edge. Measure by pacing (single pace = 0.8-1m) or use online maps.

Pond dries? **1 = Never dries, 2 = Rarely dries:** no more than two years in any ten year period, or only in drought, **3 = Sometimes dries:** dries between three years in ten to most years, **4 = Dries annually.** Deduce pond permanence from local knowledge (e.g. landowner) and personal judgement e.g. water level at the time of the survey. Ponds that dry out annually usually have a hard base.

1 = never dries
2 = rarely dries
3 = sometimes
4 = annually

Overhanging trees & shrubs % of pond overhung by trees and shrubs
 % pond margin overhung to at least 1m from the pond margin

This is an estimate of how much of the pond is *directly* overhung by trees and shrubs, i.e. that would be shaded if the sun was overhead (use the diagram (below) as a guide).

Waterfowl impact
 1 = major
2 = minor
3 = none

Major = severe impact of waterfowl e.g. few or no submerged plants, water turbid, pond banks have patches where vegetation removed, feed put down; **Minor** = waterfowl present, but little impact on pond vegetation, pond still supports submerged plants and banks are not denuded of vegetation; **None** = no evidence of waterfowl impact (moorhens may be present).

Fish presence
 1 = major
2 = minor
3 = possible
4 = absent

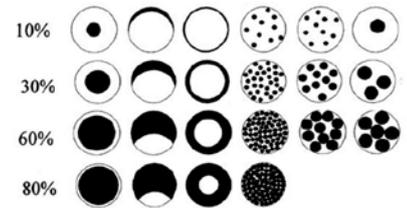
Major = dense populations of fish known to be present; **Minor** = small numbers of Crucian Carp, goldfish or stickleback known to be present; **Possible** = no evidence of fish, but local conditions suggest that they may be present; **Absent** = no records of fish stocking and no fish revealed during survey.

Disturbance by dogs
 1 = major
2 = minor
3 = none

Major = dogs repeatedly use the pond, compacted edges with little vegetation, water very turbid; **Minor** = dogs use the pond, but little impact on pond vegetation, pond still supports submerged plants and banks are not denuded of vegetation; **None** = no evidence that dogs are using the pond.

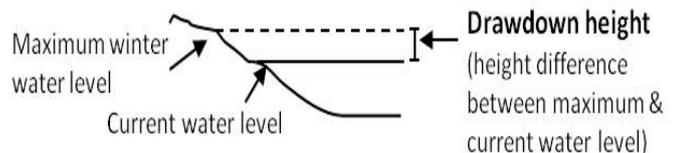
Aquatic vegetation: includes emergent, floating and submerged plants
 % of the whole pond (wet and dry) occupied by emergent vegetation – incl. plants like grasses, water mint and rushes, but not floating (e.g. pondweed) or submerged (e.g. water-crowfoot) species.

% of pond water surface area covered by all vegetation (emergent, floating (excl. duckweed) and submerged).



Water left in the pond %
 % of water area in pond relative to maximum water level. This can be 0% if the pond has dried out.

cm
 Drawdown. The height drop from the maximum winter water level to current level (see diagram).



Grazing
 Tick if there is evidence the pond is grazed by livestock. If **yes**, complete the following boxes:

%
 % of whole pond grazed (note: stock can wade into shallow ponds to graze).

%
 % of pond perimeter grazed (note: stock can wade into shallow ponds to graze otherwise inaccessible edges).

Grazing intensity: rank 1-5 (1=infrequent or low intensity to 5 = margins heavily poached and almost bare).

Pond management (tick): use tick boxes to list management within the last 12 months. Use 'other' box for any extra info.

<input type="checkbox"/> Fully dredged	<input type="checkbox"/> Partly dredged	<input type="checkbox"/> >5% vegetation removed	<input type="checkbox"/> <5% vegetation removed
<input type="checkbox"/> Trees planted	<input type="checkbox"/> Trees clear-felled	<input type="checkbox"/> Trees cut back / coppiced	<input type="checkbox"/> Pond changed shape / size
<input type="checkbox"/> Plants introduced	<input type="checkbox"/> Bank plants mown	<input type="checkbox"/> Structural work e.g. to dam	<input type="checkbox"/> Straw added

Add other or more detail

Water quality:

Turbidity / water clarity: Estimate turbidity looking down into c.20cm depth of water in the pond.

1 = clear; 2 = moderately clear; 3 = moderately turbid; 4 = turbid

Inflows and outflows: (tick if inflow or outflow present or leave blank)

Inflow present

Outflow present

Water chemistry: If suitable kits and meters are available (or leave blank)

pH

Conductivity ($\mu\text{S cm}^{-1}$)

Nitrate (NO_3^- -N ppm): PPW kits provided by FHT

(tick one from the following range categories)

<0.2 0.2-0.5 0.5-1 1-2 2-5 5-10 10 +

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Phosphate (PO_4^{3-} -P ppm): PPW kits provided by FHT

(tick one from the following range categories)

<0.02 0.02-0.05 0.05-0.1 0.1-0.2 0.2-0.5 0.5-1 1 +

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Pond base:

This refers to the *geology* (i.e. rock-type) that immediately underlies the pond. You may know, or be able to see the underlying geology in the base or banks of the pond, especially in new ponds. If not, check a geology map or leave this section blank.

Choose one of the following to categorise the % composition of **each** of pond base: 1= 0-32%, 2= 33-66%, 3= 67-100%

Silt/ clay

Sand, gravel, cobbles

Hard rock

Peat

Other (please specify)

Surrounding land use:

Estimate the percentage of surrounding land-use in distance zones from the pond perimeter (i.e. the maximum winter water level) used to assess pond area. In many ponds the 0-5m zone will include surrounding trees/scrub.

Habitat	0-5m	0-100m	Examples
Trees, woodland & scrub	%	%	Deciduous and coniferous woodland, individual trees, scrub and hedgerows.
Heath & moorland			Lowland and upland heathland, moorland and mountain; includes bracken.
Rank vegetation			Unmanaged grass, neglected and abandoned land, set-aside, verges and buffer strips.
Unimproved grassland			Herb-rich, calcareous and acid grassland (good quality plant indicators usually present). Low percentage of agricultural grasses. Not fertilised, little or no drainage.
Semi-improved grassland			A transition category. Grasslands modified by fertilisers, drainage, herbicides or intensive grazing, but retaining elements of natural grassland types in the area.
Improved grassland			Fertile agricultural grass, often bright green and lush; including parks and golf greens.
Arable			All crops. Includes flower and fruit crops (e.g. strawberries) and ploughed land.
Urban buildings & gardens			Areas in curtilage (associated with buildings); including glass-houses and farm yards.
Roads, tracks & paths			Including car-parks and footpaths.
Rock, stone & gravel			Cliffs, rock-outcrops, gravel-pits, quarries, areas of sand and gravel or stone.
Bog, fen, marsh & flush			Wetland vegetation and blanket bog.
Ponds & lakes			Permanent and seasonal waterbodies; including trackway pools.
Streams & ditches			Rivers, streams, ditches, springs and canals.
Other (state)			E.g. maritime vegetation, saltmarsh, sand-dune, orchards and railways.

Is the pond in a protected area? (e.g. nature reserve, SSSI, etc.)

(choose one option - yes, no, unknown)

Invasive non-native species: Record any non-native invasive species you know to be present in the pond, or leave blank if you are unsure. Visit <https://freshwaterhabitats.org.uk/projects/pondnet/survey-options> for tips on identification (please tick all that apply).

New Zealand Pigmyweed
Crassula helmsii

Floating Pennywort
Hydrocotyle ranunculoides

Non-native Pondweed, e.g.:
Canadian Pondweed *Elodea canadensis*,
Nuttall's Pondweed *Elodea nutallii*,
Curly Waterweed *Lagarosiphon major*

Parrot's Feather
Myriophyllum aquaticum

Water Fern
Azolla filiculoides

Location score for Great Crested Newts (select pond location based on map to right)

A (optimal), B (marginal) or C (unsuitable)



Number of ponds: Note: ponds are <2ha in size - to help you calculate the total use the PondNet map, an OS map, Google maps, or other mapping tool):

Number of *other* ponds (exclude the survey pond) in a 1km radius circle centred on the pond centre. Omit ponds separated by amphibian barriers e.g. large rivers or roads.

If there are more than 12 ponds present in the 1km radius, you can just tick this box.

Habitat quality for amphibians: (choose one option - 1 = none, 2 = poor, 3 = moderate, 4 = good)

None = clearly no suitable habitat within immediate pond locale; **Poor** = habitat with poor structure that offers limited opportunities for foraging and shelter (e.g. amenity grassland); **Moderate** = offers opportunities for foraging and shelter, but may not be extensive; **Good** = extensive habitat that offers good opportunities for foraging and shelter completely surrounds pond e.g. rough grassland, scrub or woodland.

Water quality for amphibians: (choose one option - 1 = bad, 2 = poor, 3 = moderate, 4 = good)

Bad = clearly polluted, only pollution-tolerant invertebrates, no submerged plants; **Poor** = low invertebrate diversity, few submerged plants; **Moderate** = moderate invertebrate diversity; **Good** = abundant and diverse invertebrate community, often surrounded by semi-natural land e.g. grassland, heath, woodland.

How much of pond perimeter could be surveyed? Note areas of the pond which were not accessible.

Comments box: e.g. new ownership, changes since previous visit, any other information about the pond.

Pond sketch map: Make a sketch map of your pond, marking on variables such as amount of shade and patches of emergent vegetation. These will help you to calculate percentage cover and provide a record of the pond which you or others can use on future visits.

www.freshwaterhabitats.org.uk/projects/waternet