

Pondwatch JE water quality testing handbook

Thank you for your interest in volunteering to be part of this project. Pondwatch JE is an island-wide effort to record Jersey's pondlife, with the aim of detecting changes in their conservation status. By taking part, you will also be helping us to improve our knowledge on the distribution and habitat requirements of Jersey's pond-dwelling wildlife. It's also a good opportunity for you to spend some time in nature too!

In this handbook you will find out everything you need to know to become a Pondwatch JE surveyor.

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Measuring water quality

(This information has been sourced from the Freshwater Habitats Trust and Earthwatch FreshWater Watch websites. Learn more at <https://freshwaterhabitats.org.uk/> and <https://freshwaterwatch.thewaterhub.org/content/your-test-kit.>)

Plants and animals living in freshwater environments can be badly affected by pollution from many sources. Pollutants can introduce excess nutrients in to the environment, which can lead to unnatural increases in algae, plant cover, fungi and bacteria. These increases can make aquatic habitats uninhabitable for many species, for instance due to reduced oxygen in the water. By testing the water quality of your pond you will help us find out which areas are still good for wildlife and which are in need of help.

What you will need to do

1. Request a water quality kit from the project coordinator (email N.Cornish@gov.je).
2. Using a survey form, record the location of the pond.
3. Collect a water sample from the pond.
4. Use the nutrient testing kits to measure nitrate and phosphate pollution in the water.
5. Submit your results online at <http://jerseybiodiversitycentre.org.je/>.

The equipment

If a water quality test needs to be done in your chosen area, a kit will be sent to you containing:

- nitrate water quality testing tubes
- phosphate water quality testing tubes
- colour charts for use with testing tubes
- plastic or latex gloves
- sample cup

You will also need

- a Pondwatch JE water testing survey form (available from <https://groups.arguk.org/jarg>)
- a mobile phone (in case of emergency)

- a pen or pencil to write with
- a smartphone to record the pond coordinates (optional)

How to collect the sample (also see Figure 3)

- Step 1:** Put on some disposable plastic or latex gloves, particularly if you have any cuts the water could get in to.
- Step 2:** Rinse out the sample cup in the pond water and submerge it to fill it halfway with water (don't just scoop up some surface water).
- Step 3:** Take the sample cup containing water somewhere safe you can carry out the water tests (e.g. somewhere flat near to the pond).
- Step 4:** Get out one phosphate and one nitrate tube. The phosphate is marked P on the base of the tube, and the nitrate is marked N.
- Step 5:** Pull out and discard the yellow pin leaving a small air hole.
- Step 6:** With the air hole pointing upwards, use your finger and thumb to squeeze out the air.
- Step 7:** Keeping the air squeezed out, turn the tube upside down and insert below the water in the sample cup.
- Step 8:** Gently release the pressure and suck up enough water to fill the tube just over half way.
- Step 9:** If you need to, turn the tube upright again, squeeze out a bit more air to suck up more water to just over half way.
- Step 10:** Gently shake the tube to mix the water and powder inside.
- Step 11:** Make a note of the time and wait for the colour reaction (**Nitrate: 3 mins, Phosphate: 5 mins**)
- Step 12:** Compare the tube with the colour chart as soon as the time is up, as the colour will continue to develop.
- Step 13:** Record the results on the survey form and submit them online or via email.

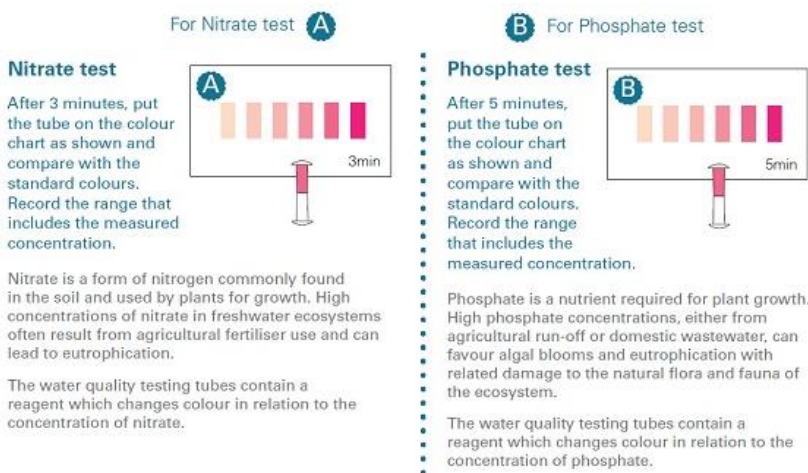
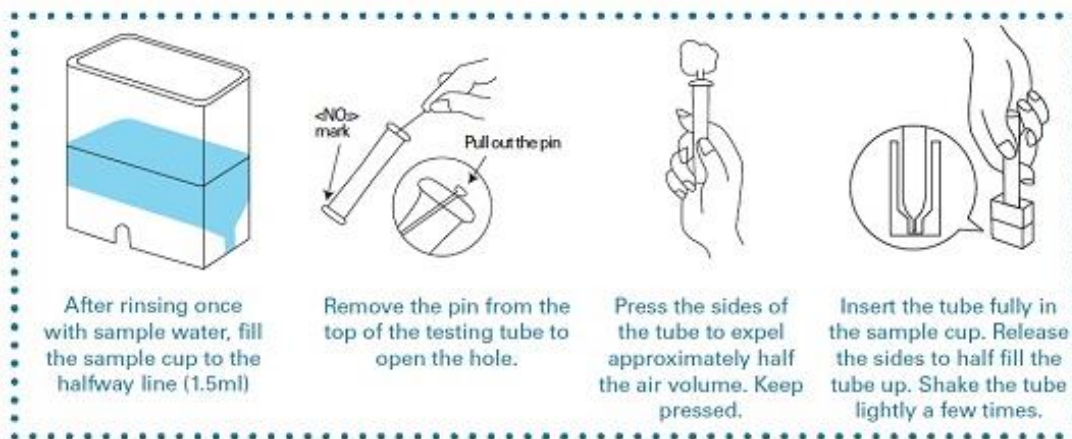


Figure 1 Visual guide to analysing water quality. Source: EarthWatch Institute

Safety

It is very important to make sure you are safe at all times during your survey. Working at night can present greater risk, so if you do want to look for pondlife at night you should make sure you first visit the pond during the day to assess any risks before visiting at night. If you have concerns, then you should not proceed with the survey. A [risk assessment template](#) is available at the end of this handbook which you should modify to your needs. You are under no obligation to participate or complete the survey.

Note that you do not need to enter the pond to conduct a survey and should only survey from accessible banks. Avoid surveying areas with steep banks or wet muddy ground. Carrying a fully charged mobile phone is also advisable in case of emergency.

It is best to do your survey with someone else, but if you are on your own then make sure you tell a responsible person where you will be and when you expect to be back. Lone working procedures are described in the [Volunteer Working Agreement](#).

Biosecurity

Amphibians are globally at risk from amphibian diseases. Furthermore, ponds can contain Invasive Non-Native aquatic plants. Both diseases and invasive plants can easily be transferred on equipment, footwear, clothing or other surfaces. It is therefore important that equipment and other items are properly cleaned and disinfected between surveys and between ponds. For further advice, see [ARG UK Advice Note 4. Amphibian disease precautions: A guide for UK fieldworkers](#) and the [Check Clean Dry](#) campaign.

Submitting your results

Once you have finished your survey, make sure you submit your data. The preferred way is using the online forms at <http://jerseybiodiversitycentre.org.je>. Alternatively, you can email a copy of your form to jbc@societe-jersiaise.org or post it to:

Pondwatch JE
Natural Environment, Growth Housing and Environment
Howard Davis Farm
Trinity
JE3 5JP

If you are carrying out a Level 2 survey, you will need to be invited to fill out the appropriate online forms by your coordinator.

Please only submit your data using one method, as submitting through multiple avenues can lead to information being duplicated.

Resources

The survey forms and all other information needed for completing pond surveys are available on the Jersey Amphibian and Reptile Group (JARG) website: <https://groups.arguk.org/jarg>.

Survey results can be submitted online to the Jersey Biodiversity Centre (JBC): <http://jerseybiodiversitycentre.org.je>.

Useful links:

Amphibian and Reptile Groups of the UK (Up to date guidance for Amphibian and Reptile Groups) - <https://www.arguk.org>

Jersey Amphibian and Reptile Group Surveyors Discussion Page (Facebook) - <https://www.facebook.com/groups/590112634750709/>

Growth, Housing and Environment,
 Howard Davis Farm, La Route de la Trinité,
 Trinity, Jersey, JE3 5JP
 Tel: 01534 441600
 Email: environmentenquiries@gov.je

Volunteer Working Agreement Form



Amphibian and Reptile Groups of the UK
 VOLUNTEERS WORKING FOR THE CONSERVATION OF AMPHIBIANS AND REPTILES

This form is for the purpose of registering as a volunteer with Jersey Amphibian and Reptile Group (JARG) affiliated under ARG UK CIO (Charity no 1165504) part of ARG UK. I understand that I am not under any obligation to carry out voluntary work for ARG UK nor is ARG UK under any obligation to use my services.

Volunteer details

Full name:		Contact number:	
Correspondence address:			
Post code:			
Emergency contact name:		Emergency contact number:	

Important information

Before signing this form please read the following consent information carefully. It explains how your information will be used and provides a brief description of your rights under Jersey's Data Protection Law. For further information on how the Department of the Environment handles personal data please visit <http://www.gov.je/howweuseyourinfo>

Your Consent - I am aware and agree

That the personal information supplied in this form, together with any other accompanying information, to be used for the sole purpose of processing my application to volunteer for ARG UK and I understand that it's an offence to knowingly submit false or misleading information with an application.

To my personal information being shared with your insurance provider in the event that it is necessary for me to make an insurance claim.

That any information I collect during my volunteering activities will be shared with other interested parties (such as the Jersey Biodiversity Centre) and will be used to provide published statistical data and reports.

I understand that under Jersey's Data Protection Law I have the right to withdraw my consent to the further processing of my information. (Should you wish to exercise this right please contact us on tel. 441600)

I have received sufficient training and/or instructions for the planned activities and believe that I am fit and healthy enough to carry out the voluntary work involved. I understand that it is my responsibility to consult my doctor if I have any concerns about my health prior to carrying out any volunteer work for JARG Jersey.

I understand that I should not do anything that I do not feel qualified to do and that I should not put others or myself in danger during the course of any voluntary activities and that I should contact the JARG Jersey co-ordinator for further advice and/or training if necessary.

I have read and understood the Surveying and Monitoring Risk Assessment (attached) and Lone Working Procedures (detailed below). I understand that the purpose of these documents are to remind me of any potential risks and I should use these to make my own assessment(s) prior to commencement of each volunteering activity.

I understand that I will not be covered in full by States of Jersey insurance unless I sign and return this form to the JARG Co-ordinator at the address above.

Volunteer consent

Signature:			
Name:		Date:	

Lone Working Procedures

The aim of the Lone Working Procedure is to ensure that there is always someone who knows where you are working so that you can be located and/or contacted in the event of an emergency. JARG strongly advise you to follow these procedures, but it is up to you to use them appropriately and responsibly.

The Lone Working Procedures should be applied to situations where a person is working alone. Lone working should take place only if you are confident that you are safe and able to work alone.

An assessment should be made of whether lone working is appropriate. Can the risks be minimised if more than one person is involved? Is the scope of the work such that it should not (or must not) be undertaken by a lone worker? The task needs to be assessed against our approach to undertaking Risk Assessments.

For all lone working, a 'buddy system' should be operated, whereby a buddy is nominated and informed of:

1. Location(s) of lone working (changes in itinerary need to be reported to the buddy).
2. Reporting-in times or estimated time of arrival (the frequency of reporting-in should be determined on the basis of risk and changes of location).
3. Contact details.
4. Travel/vehicle details (particularly important in the event of requiring emergency assistance).
5. The Emergency Procedure in the event of not calling in.

This information should be supplied to the buddy in a suitable format (e.g. in writing or phone message) which can be referred to in the event of an emergency.

Any changes in itinerary should be communicated to the buddy; this may require leaving messages on answerphones or mobile phones (buddies should check for messages before implementing emergency procedures). A third party may also be used to convey a message.

The lone worker is responsible for phoning ('reporting in') on time. Take account of the possibility of poor mobile phone reception, phones being lost or damaged, phone batteries running out, or that your buddy may be driving or doing some other activity that prevents them from using the mobile phone. A contingency must be in place for such events.

Emergency procedures: In the event of the lone worker not 'reporting in' the buddy should carry out the following:

Between half an hour and an hour after the due 'reporting-in' time, the buddy should call the lone worker on the number(s) given. If there is no response, they should leave a phone message with the time of the call, and state that the Lone Worker is overdue for reporting in.

Repeat this after 15 minutes, and a third time up to one hour after the due reporting-in time. This will give the lone worker one hour after the deadline to respond. If there is still no response then the Buddy should exhaust all other options before calling the emergency services.

If still unable to contact or locate the lone worker, the buddy should call the local police (use 999 only if you are sure there is an emergency, though it is better to err on the side of caution). The police should be advised of the Lone Working Procedures, the areas being visited, travel details, any known risks, reporting in times and any contact details; and they should leave a contact number should further information be required. If any other emergency services are involved, the buddy should also advise them of the details provided by the lone worker, notably the areas being visited, travel details, any known risks, reporting-in times and contact details.

Note: Mobile phones should not be used while driving or undertaking certain activities

ARG UK Generic Risk Assessment (modified for Jersey)



	Hazard	Risk	Control measures	Probability	Comment
1	Assault	Physical injury, sexual assault	Try to defuse any potentially confrontational situations. If possible, walk away. Contact police if unsure or feel threatened. Apply Lone Working Procedures.	Low	
2	Stings and bites	Diseases, allergic reaction	If known allergy to stings take appropriate medication on site. If feeling unwell after a site visit seek medical attention.	Moderate	
3	Ticks	Transmission of Lyme disease	Be aware of ticks (e.g. BADA-UK www.bada-uk.org) and take precautions in the field. Wear long trousers and long sleeves, use insect repellent, avoid brushing through tall vegetation, check clothing for ticks, consult a doctor in the event of tick bite.	Low to high depending on whether ticks present locally.	
4	Pond (etc.) water	Pond water may contain bacteria that may cause disease (e.g. <i>Leptospirosis</i> /Weil's disease).	Treat all pond (etc.) water as potentially pathogenic. Do not ingest, do not expose cuts on skin to pond water. Wear gloves to protect against scratches when working near water. Wash hands after immersion in pond water and especially prior to eating. If feeling unwell after accidental ingestion of pond water or contact with open wound seek medical attention.	High	
5	Ponds /deep water	Drowning	Take care when near water bodies. Do not lone work near water bodies. Take throw-rope when working near water.	Moderate	
6	Cold	Hypothermia	Wear appropriate clothing. Inform group leader if feeling cold.	Low/Moderate in winter	
7	Concealed holes/ditches	Physical injury, ankle injuries	Take care when walking through areas of deep habitat or areas where there is poor footing visibility. Avoid areas of poor footing visibility is possible.	High	
8	Dogs	Bites, lacerations, disease	Be wary of dogs off leads. Disinfect any bites and seek medical attention.	Moderate	
9	Exposure to sun	Sun burn	Where appropriate use sunscreen. Avoid midday sun if possible.	High	

10	Hazardous waste/fly tipping	Cuts, lacerations, chemical burns, infection	Wear gloves when handling waste. If unsure of contents of containers or if known to be hazardous contact emergency services.	Moderate	
11	Heat and difficult terrain	Exhaustion, dehydration	Walking difficult terrain will cause extra fatigue in hot weather. Do not rush and drink plenty of water.	Low	
12	Old and partially buried structures (eg buried fences)	Tripping, ankle injuries	Take care when footing is not clearly visible. Look for signs nearby of structures e.g, partially collapsed fence.	Moderate	
13	Sharp grasses and thorny bushes	Eye injuries, cuts, lacerations, infection	Do not bend down or kneel in areas of Sharp sea grass or other sharp plants. Disinfect any lacerations or punctures	Moderate	
14	Sharp objects (eg tins)	Cuts, lacerations, infection	Take care when picking up any potentially sharp objects. Wear gloves if appropriate or desired.	High	
15	Shooting	Physical injury	Do not approach any person suspected of carrying a weapon. If there is shooting allowed on site establish where and when shooting will take place and avoid. In cases of unauthorised shooting contact the police.	Low	
16	Steep slopes/ unstable ground	Physical injury, trips, ankle injuries	Try to avoid climbing steep slopes. Take care with footing.	Moderate	
17	Stock	Physical injury, trampling	Be aware of stock behaviour, if in doubt leave site. Do not take dogs on site.	Moderate	
18	Tree felling	Injury from felled timber	In forestry plantations look out for indications of felling in progress (posted notices, sounds of felling activity). Avoid areas where/when felling is in progress.	Low	
19	Working with children	Harm to children or allegation of improper behaviour made against adult	Ensure that any children attending an activity do so under the responsibility of a guardian.	Low	

Activity _____

Date _____

Assessor _____

Amphibian and Reptile Groups of UK (ARG UK) is a registered charity (number 1165504) committed to the conservation of native amphibians and reptiles and their natural environment by supporting the development of a network of independent volunteer amphibian and reptile groups (ARGs)

Growth, Housing and Environment,
Howard Davis Farm
La Route de la Trinité
Trinity, Jersey JE3 5JP
Tel: 00 44 (0)1534 441600
Email: environmentenquiries@gov.je



Landowner Survey Consent Form

I hereby agree to grant permission for ecological surveys to be carried out on my property/land by volunteers taking part in [] recording survey, coordinated by []

Full name and title	
Address of property/land to be surveyed	
Contact telephone number	
E-mail address	

Important information:

Before signing this form please read the following consent information carefully. It explains how the personal data will be used and provides a brief description of an individual's rights under Jersey's Data Protection Law. For further information on how the Department of the Environment handles personal data please visit <http://www.gov.je/howweuseyourinfo>

Consent

I am aware and agree to the personal information supplied in this form, to be used for the sole purpose of recording my consent to ecological surveys being carried out on my land under. I also agree to my personal information being shared with your insurance provider in the event that it is necessary for the volunteer to make an insurance claim.

I am aware and agree that any survey data that is collected by volunteers on my land will be shared with other interested parties (such as the Jersey Biodiversity Centre) and will be used to provide published statistical data and reports and you will only do so, where possible, after you have ensured that sufficient steps have been taken to protect my personal data unless it is legally required to do so.

Your right to withdraw consent

Under Jersey's Data Protection Law you have the right to withdraw your consent to the further processing of your information at any time. If you wish to exercise this right please contact the Department of the Environment on 441600.

Signature.....Print Name: Date.....

Sources

ARG UK (2010). Advice Note 5. Great Crested Newt Habitat Suitability Index. Available from <https://www.arguk.org/info-advice/advice-notes>.

ARG UK (2018). ARG UK Generic Risk Assessment.

British Dragonfly Society (2019) Dragonfly and Damselfly Identification Help. <https://www.british-dragonflies.org.uk/content/dragonfly-and-damselfly-identification-help>

GB non-native species secretariat (2019). <http://www.nonnativespecies.org/>

Oldham R.S., Keeble J., Swan M.J.S. and Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* **10**(4): 143–155.

UK Habitat Classification Working Group (2018). The UK Habitat Classification at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>