Reptilewatch JE Level 2 widespread reptiles handbook

Thank you for your interest in volunteering to be part of this project. Reptilewatch JE is an island-wide effort to record Jersey’s reptiles, 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 reptiles and other species. 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 Reptilewatch JE surveyor.

Contents:
- Level 2 widespread reptile surveys
- Safety
- Submitting your results
- Resources
- Identifying supplementary species
- Risk assessment form

Level 2 widespread reptile surveys

Please note that you must have completed training to carry out Level 2 surveys.

Where to survey

Sites will be assigned to 500 m squares to help ensure there is a representative distribution of sites being surveyed across the island and to allow results to be compared against previous years. You can either survey a new site, for example somewhere close to where you live that has not already been surveyed, or be allocated an area by the Reptilewatch coordinator. Landowner permission will be required prior to starting your survey (see below).

Arranging landowner permission

If you aren't the landowner, the coordinator will help you to identify and contact the owner to arrange permission to survey the site. A template introductory letter for requesting landowner permission is available from Natural Environment. Speaking with the landowner will also give you an opportunity to identify car parking locations, safety issues, where refugia may be laid (if allowed) and to build a relationship with them. A long-term aim of Reptilewatch JE is to gradually build the number of sites that can be accessed and repeatedly surveyed each year.

When to survey

Time of year: Jersey’s reptiles can be active between March and October; relying on heat from the sun to regulate their body temperature. There is a greater chance of seeing reptiles in the spring (April to June) and autumn (mid-August to mid-October) when the cooler weather means they have to bask for longer. In comparison, they do not need to spend much time in the open during the hottest summer months to get enough heat.

Time of day: The best time of day to find reptiles depends on the weather, but peaks of activity are generally during the morning and afternoon. As the days get hotter and longer, the time that reptiles may be visible whilst basking becomes reduced and shifts further towards earlier in the mornings and later in the afternoon. Good conditions for spotting reptiles include days with sun or partial cloud with temperatures between 10 and 20°C. Strong wind and heavy rain are generally bad conditions for looking for reptiles, but sunny periods after rain can be productive. Long periods of hot dry weather are not favourable, though you may still find green lizards and wall lizards in these conditions.

Number of surveys: You should aim to survey your site six times between March and October in suitable weather. If possible, conduct three survey visits in spring (April–June) and two in autumn (mid-August to mid-October). If you wish to, you can carry out more than six surveys.

Which species to record

You should record any observations of Jersey’s four native reptiles (see the reptiles of Jersey ID guide):
- green lizard (Lacerta bilineata)
- wall lizard (Podarcis muralis)*
- slow worm (Anguis fragilis)
- grass snake (Natrix helvetica)*

*Due to their restricted distributions, wall lizards and grass snakes may be encountered infrequently and so are additionally surveyed through other efforts.

If you see any non-native reptiles (e.g. terrapins, corn snakes) you should also record these.

If you have received training and feel sufficiently competent, you can opt-in to record some supplementary species. These are most likely to be encountered under refugia, and consist of four groups:

1. Small mammals
   a. Bank vole (Myodes glareolus ssp. caesarius)
   b. Wood mouse (Apodemus sylvaticus)
   c. Lesser white-toothed shrew (Crocidura suaveolens)*
   d. Millet’s, Common or French shrew (Sorex coronatus)*

2. Cockroaches (Family Ectobiidae)
   a. Tawny cockroach (Ectobius palidus)
   b. Lesser cockroach (Ectobius panzeri)

3. Beetles (Order Coleoptera)
   a. Glow worm (Lampyrus noctiluca)
   b. Lesser stag beetle (Dorcas parallelipipedus)

4. Butterflies and moths (Order Lepidoptera)
   a. Family Lasiocampidae
Reptilewatch JE Level 2 widespread reptiles handbook v1.1

i. Drinker (Euthrix potatoria) – larva only
ii. Fox moth (Macrothylacia rubra) – larva and cocoons
iii. Oak eggar (Lasiocampa quercus) – larva and cocoons

b. Subfamily Arctiinae (Tigers and ermines) – larva and cocoons
c. Shoulder stripe (Earophila badiata) – adults

*The two shrew species can be difficult to distinguish from one another in the field as they rarely stay still when disturbed. Therefore, we recommend you simply record them as ‘shrew species’.

ID guides for many of these species are available on the JARG website and further information is available in the identifying supplementary species section of this handbook.

How to survey

Equipment

You will need:
- a Reptilewatch JE Level 2 widespread survey form
- a pen or pencil
- a mobile phone (for use in the event of an emergency)
- 10–20 artificial refugia (available from Natural Environment, Howard Davis Farm, Trinity)
- A map of the survey site

Optional (recommended):
- a camera (a smart phone camera is fine)
- species ID guides
- Global Positioning System (GPS) / GPS phone app (e.g. Google maps) that allows you to record coordinates

The camera will allow you to take pictures of anything you are not sure about, which can help the Jersey Biodiversity Centre check the identification of what you recorded, and also so you can show others what you saw during your survey.

A GPS or mapping app will help you to record the precise location of artificial refugia and the start and end points of your survey route sections.

If you don’t have GPS, a printed map of your survey site will allow you to mark down your survey route and refugia locations so they can be transferred on to the online map when entering your data via the JBC website.

Preparation

Once you have chosen your site and arranged landowner permission (if required), carry out the following:

Step 1: Read, complete and return the Volunteer Working Agreement Form.

Step 2: Site Visit 1-Site assessment

Visit your chosen site during the day at least four weeks prior to surveying to familiarise yourself with the site;

- Complete a risk assessment as necessary.
- Plan a walking survey route that encompasses the most suitable reptile habitats of the site and that will take approximately 1–2 hours to survey (small sites may require less time). A map of the site can be useful for doing this.

Suitable reptile habitats can include: long or tussocky grass, heathland, boggy or wetland areas, scrub, bramble, dense herbs, uneven or sloping areas and banks (particularly sunny south-facing areas), forest rides, woodland edges and glades, habitat edges (e.g. where dense bramble and long grass meet), field margins, piles of logs, branches, rocks, rubble, manure or compost, brownfield areas, allotments, ‘wild’ gardens, roadside verges, track and path edges, hedgerows, dry stone walls, rock/scree and mosaics of vegetation interspersed with small patches of open or bare ground (refer to the Reptilewatch Training presentation for photos and tips).

- Make a note of potential places you could lay artificial refugia, recording the number you need (most sites require around 10–20, but small sites may be less). A map of the site is useful for doing this.

- Habitat connectivity - assess and record the connectivity and patch size of reptile habitat at your survey site by ticking the relevant box. This can be completed by using online aerials (e.g. Google maps)

- Patch size - estimate approximately the total area of habitats you’ve surveyed. Please only tick one box. This can be completed by using online maps (e.g. Google maps).

Notes:

- It can be helpful to plan your survey route ahead of your second visit using online maps. The coordinator at Natural Environment can assist, and it is sensible to discuss the route with the landowner and/or land manager in case there are areas they would like you to avoid.
- Contact the coordinator at Natural Environment to arrange collection or delivery of the refugia you require.

Step 3: Site Visit 2 (ideally four weeks prior to first survey). During this visit you will lay your refugia and carry out your survey route habitat assessment.

Laying Refugia

- Place artificial refugia in areas away from public disturbance and livestock, trying to spread them evenly along the route.
- Press the refugia in to the vegetation.
- Record the location of each refugia mat.

Note: You can record locations by marking them on a map or recording their coordinates using a GPS application or device (online recording will also provide this function). Recording a brief description of the location may also be helpful to find them in future, especially if they become obscured by vegetation.
• Give each refugium a number so they can be recorded on the 'refugia list' on the survey form, and to help you keep track of which ones you have checked on each survey.
• Share the location of all refugia with the landowner or manager. This is helpful in case any areas are scheduled for management such as mowing or grazing, which may result in damage to the refugia and to equipment, or harm livestock.

Habitat Assessment Method
• As you walk around your survey area, note where the vegetation changes are so that you can divide your survey site into areas/routes based on habitat type (Figure 1). In the field a map of the site will be needed for doing this. It is also useful to record which route section each of your refugia are within. If you need assistance with this, please contact your coordinator or an experienced surveyor.

Figure 1 Example map showing a reptile survey route split into sections based on habitat type. (Breaking down areas into habitat types will help in defining a survey route. The survey route example is divided in to six sections, over four different habitats. The example shows a continuous route, however, this is not always possible and the sections may be defined as separated areas.)

• Record the details of each survey route section in the survey route table (see Table 1).
  a. Number each section sequentially
  b. Record the section habitat type and code based on the level 3 Habitat classifications for Reptilewatch JE listed at the end of your recording form.
  c. Record the number of artificial refugia in each section.
  d. Estimate the length in metres using an online mapping tool (e.g. Google Maps). If you are not sure how, ask your coordinator or an experienced surveyor to assist you.

<table>
<thead>
<tr>
<th>Section number</th>
<th>Section Details</th>
<th>No. refugia</th>
<th>Section Habitat Type</th>
<th>Habitat code</th>
<th>Approx. Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>Track from interpretation panel walking past scrub and bramble to the sluice gate</td>
<td>1-3</td>
<td>Dense scrub</td>
<td>h3</td>
<td>150</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 Example survey route section table.

The habitat classifications
Further information on habitat classification is available in the additional resources section.

Dividing areas by different habitat types helps us to assess which habitats are best for which species and record changes in the habitat over time. Reptilewatch JE uses 17 habitat classes to define terrestrial and freshwater habitats as described in Level 3 of the UK Habitat Classification Scheme (UK Habitat Classification Working Group, 2018). Error! Reference source not found. A UKHab Reference Guide app can be purchased, which provides habitat descriptions and example images. This is available to download via the accountability.co.uk website.

Step 4: Register your site
Please go online and register your site.

• You will need a Jersey Biodiversity Centre account. Go to the Submit your results section to find out how to do this. You will need to be invited to fill out the appropriate online forms by your coordinator before you can register your site or enter your data.
• When you register your site online you will draw your survey route/areas on the map and will plot your refugia and upload their coordinates.
• If using a GPS you can record the start and end coordinates for each survey route section.

Step 5: Surveying Visits
Please complete six surveys if possible between March and October, carrying out the following steps. If possible, conduct three visits in spring (April–June) and two in autumn (mid-August to mid-October).

Step 6: At the start of each survey first record the date, the visit number, start time, air temperature and cloud cover. Also record which (if any) supplementary species you are recording.

Step 7: Spend 1‒2 hours visually searching for reptiles along your survey route and check the artificial refugia as you encounter them. If you encounter any pre-existing refugia then you should check those also. When possible, take photos of what you see but be careful not to disturb the habitat and wildlife. It’s therefore best to take photos from a distance or to have your camera ready when you lift an artificial refugium. Do not attempt to touch or handle any animals. Remember, much of Jersey’s wildlife is protected by law, and should not be harmed, taken or possessed, nor should their breeding or resting sites be disturbed.
Step 8: Throughout the course of the survey, keep note of which refugia you have checked by ticking them off of the refugia list on the survey form. When you encounter an animal during your survey, record as much of the following information as possible: the time, species, lifestage, sex, quantity, certainty of your identification (C=certain, U=uncertain), whether the animal was in the open (O), under (U) or on top (T) of a refugium, the route section the animal was found in and where possible, the refugium ID (if on or under a refugium) or location coordinates of where the animal was spotted.

If you need help identifying the species you saw, see the species ID guides on the JARG website.

Step 9: At the end of the survey you should record the end time, time spent surveying, the average wind speed during the survey using the Beaufort Scale (0–6) (see Table 2) and the rainfall (none, yesterday, earlier today, during survey) – choosing the most recent applicable option. You should also note the number of both artificial and pre-existing refugia checked.

Step 10: Submit your results, even if you don’t see anything. Absence data is very useful.

Table 2 Beaufort scale for assessing average wind speed on a scale of 0–6.

<table>
<thead>
<tr>
<th>Step</th>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0–1</td>
<td>Calm</td>
</tr>
<tr>
<td>1</td>
<td>1–3</td>
<td>Light air</td>
</tr>
<tr>
<td>2</td>
<td>4–7</td>
<td>Light breeze</td>
</tr>
<tr>
<td>3</td>
<td>8–12</td>
<td>Gentle breeze</td>
</tr>
<tr>
<td>4</td>
<td>13–18</td>
<td>Moderate breeze</td>
</tr>
<tr>
<td>5</td>
<td>19–24</td>
<td>Fresh breeze</td>
</tr>
<tr>
<td>6</td>
<td>25–31</td>
<td>Strong breeze</td>
</tr>
</tbody>
</table>

Safety

It is very important to make sure you are safe at all times during your survey. Avoid surveying areas with uneven or unstable ground. Carrying a fully charged mobile phone is also advisable in case of emergency. 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.

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.

Submitting your results

Once you have finished your survey, make sure you submit your data. The preferred way is online at http://jerseybiodiversitycentre.org.je. You will need a Jersey Biodiversity account and to be invited to the “Reptilewatch Level 2 Activity” by your coordinator before you can fill out the appropriate forms.

If you are unable to submit your data online, you can email it to wildaboutJersey@gov.je or post it to:
Reptilewatch JE
Natural Environment, Growth Housing and Environment
Howard Davis Farm
Trinity
JE3 5JP

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

Resources

The survey forms, species ID guides and all other information needed for completing reptile surveys are available on the Jersey Amphibian and Reptile Group (JARG) website: https://groups.arguk.org/jarg.

Useful links:

Species identification


Butterfly conservation - https://butterfly-conservation.org/

UK Butterflies - https://www.ukbutterflies.co.uk/index.php

Eggs, larvae, pupae and adult butterflies and moths - http://www.ukleps.org/

Insects of the Channel Islands Facebook group (Insects) - https://www.facebook.com/groups/518340844961982/

Jersey Wildlife Facebook group (all wildlife) - https://www.facebook.com/groups/225539340841170/

Other

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/


UK Habitat Classification (habitat classification documentation and guidance) - http://ecountability.co.uk/ukhabworkinggroup-ukhab

Google Maps (maps.google.co.uk) - useful for looking at satellite maps of your site and can also be used to record refugia locations and measure survey route sections using the ‘Maps’ option after clicking ‘Your places’ page from the menu.
Identifying supplementary species (see our ID guides and the information below):

Small mammals

(This information has been sourced from McGowan and Gurnell (2014). Learn more here)

Jersey’s small mammals regularly occur under reptile survey refugia. The four species of interest are:

- Jersey bank vole (*Myodes glareolus* ssp. *caesarius*)
- Wood mouse (*Apodemus sylvaticus*)
- Lesser white-toothed shrew (*Crocidura suaveolens*)*
- Millet’s, Common or French shrew (*Sorex coronatus*)*

It is unlikely that the two shrew species can be identified from one another during reptile surveys.

<table>
<thead>
<tr>
<th>Species information summary</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Jersey bank vole</th>
<th>Wood mouse</th>
<th>Lesser white-toothed shrew</th>
<th>Millet’s, Common or French shrew</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tail</strong></td>
<td>Short; approximately half the full body length (Flowerdew, 1993). Long. Hairs make it appear dark on upper and lighter underneath.</td>
<td>Body length (excluding the head).</td>
<td>Short; approximately body length.</td>
</tr>
<tr>
<td><strong>Head</strong></td>
<td>Blunt nose, small eyes and small ears. Large bulging eyes and large ears.</td>
<td>Small slender body. Long pointed snout with long fine whiskers. Small eyes and rounded ears. White teeth.</td>
<td>Pointed snout with whiskers and small eyes.</td>
</tr>
<tr>
<td><strong>Movement</strong></td>
<td>Short legs cause a scurrying type of movement. Large hind legs give it speed and a characteristic bouncing motion.</td>
<td>Quicker and more aggressive than the Millet’s shrew.</td>
<td></td>
</tr>
<tr>
<td>Jersey bank vole</td>
<td>Wood mouse</td>
<td>Lesser white-toothed shrew</td>
<td>Millet’s, Common or French shrew</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
<td>---------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td><strong>Breeding</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breeding period: throughout the year if there are good food resources, but typically March–October</td>
<td>Breeding period: March–October and throughout the year if conditions allow Gestation: 19–20 days, but longer if lactating due to delayed implantation.</td>
<td>Breeding period: March–September Gestation: 27–30 days</td>
<td>Breed period: May–September Gestation: approximately 20 days.</td>
</tr>
<tr>
<td>Gestation: approximately 18 days</td>
<td>Gestation: 19–20 days</td>
<td>Litter size: 1–6</td>
<td>Litter size: 3–7</td>
</tr>
<tr>
<td>Litter size: 3–5</td>
<td>Litter size: 2–9</td>
<td>No. litters per year: ≤ 5</td>
<td>No. litters per year: ≤ 6</td>
</tr>
<tr>
<td>No. litters per year: ≤ 5</td>
<td>No. litters per year: 4 (average)</td>
<td>Sexual maturity: &lt; 1-year-old</td>
<td>Sexual maturity: year following birth (MacDonald and Barrett, 1993)</td>
</tr>
<tr>
<td>Lifespan: approximately 18 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Habits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diet</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varied, including fleshy fruits and soft seeds, leaves and herbs, dead leaves, buds, moss, fungi, roots, grass, insects, worms and snails. Known to make food stores.</td>
<td>Varied and opportunistic, including seeds, seedlings, buds, fruit, nuts, snails, worms, fungi, moss, galls, larvae, arthropods and arable weeds. Known to make food stores.</td>
<td>Insectivorous, eating a variety of insects.</td>
<td>Insectivorous, feeding on earthworms, slugs, beetles, woodlice and spiders.</td>
</tr>
</tbody>
</table>
Cockroaches (Family Ectobiidae)

- Tawny cockroach (*Ectobius pallidus*)
- Lesser cockroach (*Ectobius panzeri*)

(This information has been sourced from the Identification guide to native earwigs, cockroaches and naturalised insects by B. Beckmann. See https://www.orthoptera.org.uk/sites/default/files/pdf/Earwigs%2C%20cockroaches%20and%20stick-insects.pdf)

Cockroach ID features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Tawny cockroach</th>
<th>Lesser cockroach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADULTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>8–9.5 mm</td>
<td>5–8 mm</td>
</tr>
<tr>
<td>Colour</td>
<td>Golden-yellowish brown all over</td>
<td>Darkish brown with speckled patterning on pronotum (shield) of both sexes, and on abdomen of female</td>
</tr>
<tr>
<td></td>
<td>A bit of dark brown on underside of abdomen (females only)</td>
<td></td>
</tr>
<tr>
<td>Wings</td>
<td>Both sexes, full</td>
<td>Males; full Females; short-winged, wings covering less than half the abdomen</td>
</tr>
<tr>
<td>Habitats</td>
<td>Woodland rides and clearings; Heathland; Dunes</td>
<td>Coastal scrub; Sand dunes; Vegetated shingle; Dry heathland</td>
</tr>
<tr>
<td><strong>JUVENILES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wings</td>
<td>Wing buds visible in late instar juveniles; they are shorter and appear thicker than adult wings</td>
<td>Left and right wing buds do not overlap (adult wings overlap left over right wing)</td>
</tr>
</tbody>
</table>

Beetles (Order Coleoptera)

- Glow worm (*Lampyris noctiluca*)
- Lesser stag beetle (*Dorcus parallelipipedus*)

Male glow-worms are more obvious than females as they possess wings with brown elytra, a clearer pronotum and a large brown spot in the middle. In comparison, females remain as larvae without wings, and are often twice the size of the males (up to 25 mm in length) (Source: https://www.naturespot.org.uk/species/glow-worm). They can be found under rocks, logs and refugia, particularly between May and August. They may be confused with the larvae of ladybirds or carrion beetles (Silphidae).

The lesser stag beetle is a large beetle (up to 30 mm) that is difficult to confuse for anything else. It is most likely to be seen during summer when they fly to disperse.

Butterflies and moths (Order Lepidoptera)

- Family Lasiocampidae
  - Drinker (*Euthrix potatoria*) – larva only
  - Fox moth (*Macrothylacia rubi*) – larva and cocoons
  - Oak eggar (*Lasiocampa quercus*) – larva and cocoons
- Subfamily Arctiinae (Tigers and ermines) – larva and cocoons
- Shoulder stripe (*Earophila badiata*) – adults

The larva of the Lasiocampidae are fairly distinctive due to their size and hair tufts. The Arctiinae are also relatively large and hairy caterpillars.
## ARG UK Generic Risk Assessment (modified for Jersey)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Risk</th>
<th>Control measures</th>
<th>Probability</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Assault</td>
<td>Physical injury, sexual assault</td>
<td>Try to defuse any potentially confrontational situations. If possible, walk away. Contact police if unsure or feel threatened. Apply Lone Working Procedures.</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>2 Stings and bites</td>
<td>Diseases, allergic reaction</td>
<td>If known allergy to stings take appropriate medication on site. If feeling unwell after a site visit seek medical attention.</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>3 Ticks</td>
<td>Transmission of Lyme disease</td>
<td>Be aware of ticks (e.g. BADA-UK <a href="http://www.bada-uk.org">www.bada-uk.org</a>) 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.</td>
<td>Low to high depending on whether ticks present locally.</td>
<td></td>
</tr>
<tr>
<td>4 Pond (etc.) water</td>
<td>Pond water may contain bacteria that may cause disease (e.g. Leptospirosis/Weil’s disease).</td>
<td>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.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>5 Ponds /deep water</td>
<td>Drowning</td>
<td>Take care when near water bodies. Do not lone work near water bodies. Take throw-rope when working near water.</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>6 Cold</td>
<td>Hypothermia</td>
<td>Wear appropriate clothing. Inform group leader if feeling cold.</td>
<td>Low/Moderate in winter</td>
<td></td>
</tr>
<tr>
<td>7 Concealed holes/ ditches</td>
<td>Physical injury, ankle injuries</td>
<td>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.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>8 Dogs</td>
<td>Bites, lacerations, disease</td>
<td>Be wary of dogs off leads. Disinfect any bites and seek medical attention.</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>9 Exposure to sun</td>
<td>Sun burn</td>
<td>Where appropriate use sunscreen. Avoid midday sun if possible.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>10 Hazardous waste/fly tipping</td>
<td>Cuts, lacerations, chemical burns, infection</td>
<td>Wear gloves when handling waste. If unsure of contents of containers or if known to be hazardous contact emergency services.</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Date</td>
<td>Assessor</td>
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</table>

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 |

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 |

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 |

Sharp objects (eg tins) | Cuts, lacerations, infection | Take care when picking up any potentially sharp objects. Wear gloves if appropriate or desired. | High |

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 |

Steep slopes/ unstable ground | Physical injury, trips, ankle injuries | Try to avoid climbing steep slopes. Take care with footing. | Moderate |

Stock | Physical injury, trampling | Be aware of stock behaviour, if in doubt leave site. Do not take dogs on site. | Moderate |

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 |

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 |

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)
Sources


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