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Crayfish Ark sites and Conservation

White-clawed crayfish require a particular set of ecological conditions in order to maintain and safeguard healthy populations. Much work has been done to research and implement good management practice in natural habitats, and in the development of the use of Ark sites as a conservation tool.

In this document we provide links to information resources for ecological professionals on habitat management for White-clawed crayfish, crayfish monitoring, translocation techniques, Ark sites, and how to develop regional conservation strategies for White-clawed crayfish.

Selecting Ark Sites for Crayfish

Potential Ark sites for conserving White-clawed crayfish should ideally be isolated, free from non-native crayfish species and the threat of colonisation by non-native crayfish, with suitable White-clawed crayfish habitat, and be sustainable in the long-term. Currently there is an urgent need to establish these Ark sites to safeguard the long-term survival of White-clawed crayfish across their UK range. However, they need to be thoroughly assessed as part of a regional/area strategy.

There are a number of Ark site resources available below to assist with Ark site assessment including:

- The first stage is to identify sites within a region that could potentially be capable of supporting White-clawed crayfish in sufficient isolation from non-native crayfish. This can be done using GIS. To see how GIS can be used in finding potential sites, download this report: ['Using GIS to prioritise and identify regional Ark sites for White-clawed crayfish'](#).
- Once potential sites have been identified, the attributes of these sites need to be thoroughly assessed and criteria has been developed to assess the quality of prospective Ark sites (Peay, 2009). **See Criteria For Assessing Potential Ark-sites (page 2)**
- A further stage is to assess whether there are any existing populations of protected species or species of conservation concern that might be affected by the introduction of White-clawed crayfish and if so whether this would significantly affect the status of the species or habitat. To assess impacts on amphibians see the downloadable resource: ['Ark sites: White-clawed crayfish and amphibians'](#).
- Once suitable sites have been identified the final step is the actual establishment of ark sites. A publication has been produced for the Aggregates Industry: ['Ark sites for White-clawed crayfish - guidance for the aggregates industry'](#).



Criteria for assessing potential Ark Sites

Crayfish specialists and Buglife have been developing a set of criteria for selecting new Ark sites for White-clawed crayfish conservation. The current format is a MS Excel-based tool and is [available to download from the front page of Crayfish for Professionals](#). The Ark site selection tool is in the testing phase of development, so we would encourage those who are looking to identify new Ark sites to use this tool and please [give us feedback](#).

Ark Site Selection process

The selection process has two stages:

Stage 1 eliminates unsuitable sites quickly. Sites which pass this initial assessment should then be assessed in finer detail in stage 2.

Stage 2 involves grading a site using a series of tables, each on a different topic. This process identifies the risks to White-clawed crayfish and guides decision-making based on the threats to crayfish at the site and in the catchment or region.

If a site, following the assessment, is considered to be a good potential Ark site, it can go to the next stages:

- Detailed site investigation
- Identifying a donor population
- Obtaining permission from the statutory agencies and securing resources.

Once all the essential preparation is done, a stock of White-clawed crayfish can be introduced (subject to obtaining the relevant licences and permissions). If successful, the population will survive and expand in the new Ark site.

Existing populations

The criteria can also be used to assess the risks to an existing population of white-clawed crayfish. If the risks are low it can be considered as an established Ark site. The criteria allows for an analysis of whether any new measures are needed to safeguard it. Alternatively, it may be that a population is under severe threat and in need of a potential ark site as soon as possible.

Translocations and introductions

In order to establish Ark sites and for other conservation work it may be necessary to translocate crayfish and so introduce or re-introduce individuals from one site to another (note that licenses from CCW/NE are needed to undertake this work). For guidance and more information about crayfish translocation protocols, take a look at [Reintroducing the White-clawed crayfish](#).



Crayfish conservation strategy

[A Tool-kit for Crayfish Conservation](#) — This tool-kit will guide those looking to develop conservation strategies for use at either a catchment or a river basin level.

The crayfish conservation tool kit will guide you through how to assess your region or area and plan a conservation strategy.

White-clawed crayfish face similar threats across the UK, but different approaches are needed for different counties and regions.

A regional strategy for White-clawed crayfish conservation will most often include:

- Confirming the status of extant wild populations
- Establishing the level of threat to surviving populations
- Reducing the risks to these populations where feasible – for example ensuring habitat and water quality, protecting from damaging activities, improving biosecurity and reducing risks of non-native crayfish introductions
- Establishing Ark Sites to conserve high risk populations

Crayfish habitat

Assessment of habitat is a key aspect in both Ark site creation and the management of wild populations. This document provides information on evaluating and appraising of good White-clawed crayfish habitat:

[White-clawed crayfish—species management sheet](#)

Crayfish works guidance

River maintenance and infrastructure works are often required in White-clawed crayfish habitats and appropriate mitigation needs to be carried out. This document by Stephanie Peay sets out what is needed during these works:

[Guidance on works affecting White-clawed crayfish](#)



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Crayfish monitoring

Monitoring White-clawed crayfish populations is a primary facet of good species management practice. This example from work carried out on the tributaries of the River Eden is a very useful monitoring template.

[Monitoring the White-clawed Crayfish, Field-testing in River Eden Tributaries, Summer 2002](#)

Crayfish ecology and surveying

Also available here is a comprehensive list of research papers, journals and project reports containing abundance of information about the latest understanding of crayfish ecology and surveying methods.

Link to: [Ecology and surveying references](#)



A White-clawed crayfish © Buglife