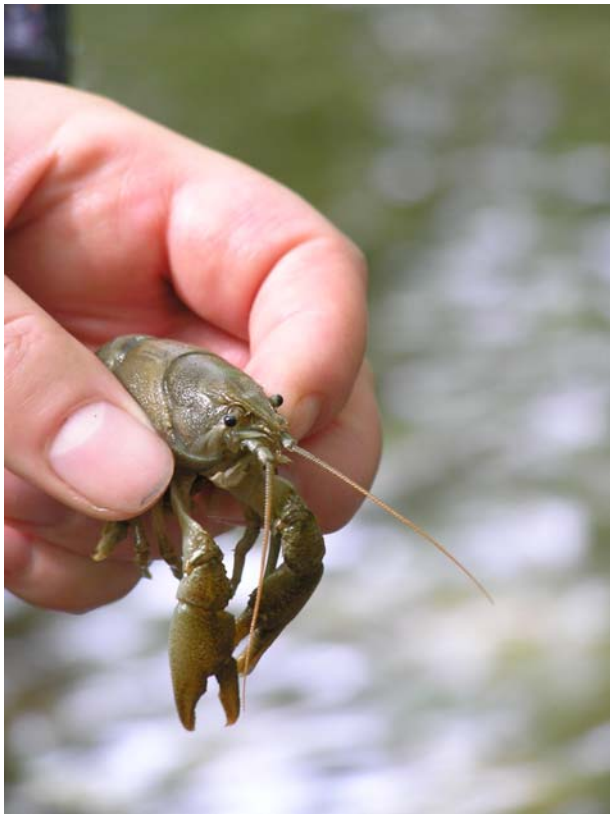
LOWLAND DERBYSHIRE

LOCAL BIODIVERSITY ACTION PLAN

WHITE-CLAWED CRAYFISH SPECIES ACTION PLAN
2007 – 2010



Picture courtesy of Chesterfield Borough Council

Prepared by the Lowland Derbyshire Biodiversity Partnership

Finalised in February 2007, following consultation

WHITE-CLAWED CRAYFISH SPECIES ACTION PLAN

TREND IN LOWLAND DERBYSHIRE: Used to be recorded on all main rivers in lowland Derbyshire, now only recorded on a very small number. Unless unchecked, a combination of crayfish plague and non-indigenous crayfish are likely to make the white-clawed crayfish extinct in lowland Derbyshire in the near future.

NATIONAL BAP SPECIES: White-clawed crayfish.

ASSOCIATED BAP PRIORITY HABITATS:
Rivers and streams, Standing Open Waters, Lowland Swamps, Mires, Fens and Reedbeds and Wet Woodland.

A vision for the future of white-clawed crayfish in Lowland Derbyshire

A river catchment approach to white-clawed crayfish is taken where remnant populations are protected within the planning system and from the potential introduction of crayfish plague. Opportunities, through partnership, are taken to set up ark sites, in ponds and lakes away from rivers and streams where white-clawed crayfish may be re-introduced and be viable for the long term.

1. INTRODUCTION

Background information on white-clawed crayfish and their known distribution in lowland Derbyshire can be found in the document 'White-clawed crayfish in Lowland Derbyshire'.

2. FACTORS WHICH HAVE AN ADVERSE IMPACT ON WHITE-CLAWED CRAYFISH.

An impact ✔ *A significant impact* ✔ ✔

	Historic	Current
Land and Recreation Management		
River alteration	√ √	√
Water abstraction	√	√
Inappropriate habitat management	√√	√√
Inappropriate angling practices	√√	√
Development	√	√√
Disease and Pollution		
Porcellan disease		√
Crayfish plague	√	√√
Pollution incidents	√√	√√
Lack of Knowledge		
Lack of knowledge on species ecology	√√	√
Lack of knowledge of distribution	√√	√
Predation and competition		
Predation by mink, otters and others	√	√
Direct competition from Signal and other non-native crayfish	√	√√
Catering trade removing native crayfish from the system		√
Miscellaneous		
Climate change		√√

3. CURRENT ACTION

3.1 Designated Sites

White-clawed crayfish are listed on the citation for the River Mease SAC. They have been recorded within the SSSIs at Kedleston Park, Calke Abbey, and may be present in the Moss Valley SSSI and Mercaston Marsh and Mugginton Bottoms SSSI. SSSIs can be designated for white-clawed crayfish[1].

Wildlife Sites can be designated for the presence of white-clawed crayfish (Guideline Inv1[2]). A number of Wildlife Sites are known to have populations of white-clawed crayfish including Markeaton Brook, Kedleston Lake, Staunton Harold Reservoir, Codnor Park Reservoir and Carsington Water.

3.2 Current Initiatives

Chesterfield Borough Council

During the summer of 2006, Chesterfield Borough Council and the Environment Agency undertook a survey of crayfish within the Rother catchment, focussing mainly on the borough of Chesterfield. The survey had two aims:

[1] JNCC (1992) *Guidelines for selection of biological SSSIs.* (Chapter 17 invertebrates)
[2] Derbyshire Wildlife Trust (2003) *Derbyshire Wildlife Sites Handbook Volume 2 – Guidelines for the selection of Wildlife Sites*. Accessed on line from www.derbyshirebiodiversity.org.uk.

1. To identify populations of white-clawed crayfish remaining within Chesterfield and the surrounding areas

2. To identify any potential ark sites within Chesterfield.

The survey identified a healthy population on the Barlow Brook as far as the Industrial Estate at Sheepbridge but not into the River Drone. An extensive search of the Hipper and it's main tributaries revealed no trace of what was once considered to be a stable population of white-clawed crayfish, the reason for this loss is not clear. The survey did not identify any populations of American signal crayfish.

Derby City Council
The Land Drainage and Flood Defence team at the City Council have undertaken sympathetic management of bankside vegetation. Derby City Council commissioned an ecological baseline study and management plan of the Markeaton and Mackworth Brook in 2004. This study included an analysis of the population of white-clawed crayfish. The City Council is looking towards maintaining the Markeaton Brook catchment as an ark site through partnership action. It has a Wildlife Alert Map which gives planning officers information on the location of wildlife features, including protected species.

Derbyshire Wildlife Trust
Derbyshire Wildlife Trust carries out surveys of Wildlife Sites and provides land management advice to landowners. The Wildlife Site Selection Guidelines includes guidelines for selecting site with populations of white-clawed crayfish. The Wildlife Sites Officers and Water for Wildlife Project provide advice to the local authorities on development control issues associated with Wildlife Sites and some protected species. Nationally, the Wildlife Trusts have a representative on the UK White-clawed crayfish steering group.

Environment Agency
The Environment Agency license movement of white-clawed crayfish (they are classed as fish). Nationally the Agency fund research on white-clawed crayfish. They do carry out survey and monitoring work for white-clawed crayfish in the LBAP area. Through their Fisheries department they work with angling clubs and promote the East Midlands Crayfish Code of Practice. Officers in various departments comment on development control issues relating to white-clawed crayfish.

Greenprints
Greenprints are essentially borough or district level Biodiversity Action Plans w will translate both UK and Lowland Derbyshire Biodiversity Action Plans (BAPs) to a local level. Greenprints identify local priority habitats and species and set out detailed targets and action plans for protecting, conserving and enhancing them. It is hoped that the documents will be used by Local Strategic Partnerships, conservation groups, businesses and local communities to identify what they can do to help their local wildlife. They are currently produced by Derbyshire Wildlife Trust, in consultation with local groups and partners, on behalf of the Local Authorities. To date Greenprints have been produced for Derby City, Chesterfield and Bolsover. The white-clawed crayfish is listed as a priority species in both the Derby City and Chesterfield Greenprints and therefore has associated actions and targets. When Greenprints are produced for other local authorities, the white-clawed crayfish will be considered as a priority species if it is known to have been recorded in the area.

National Trust
The National Trust has produced a Conservation Plan for white-clawed crayfish on its properties in the East Midlands. They are present at two properties in lowland Derbyshire. At Kedleston Park the National Trust recently reviewed angling practices by banning nets and ensuring equipment is sanitised. At Calke Abbey they recently removed carp from one of the main lakes with white-clawed crayfish.

Natural England
Natural England (when English Nature) funded and let a contract to set up and provide annual updates of a protected species database. The database collated all records for all European protected species recorded in Derbyshire which includes white-clawed crayfish. Records have also been

collected through this process for some non-native crayfish. Copies of the database and annual updates are provided to local authorities and some other LBAP partners. Natural England also comment on some development control issues that may affect white-clawed crayfish.
Although the Countryside Stewardship and Environmentally Sensitive Area Schemes are now closed, a number of agreements are still running and are having positive benefits for white-clawed crayfish through wetland management. The new land based England Rural Development Programme scheme, Environmental Stewardship, was launched in March 2005. Environmental Stewardship has three main elements: Entry Level Stewardship (ELS) is a 'whole farm' scheme open to all farmers and land managers who farm their land conventionally. Acceptance will be guaranteed provided scheme requirements are met. For those with a mix of conventionally and organically farmed land, or whose land is all farmed organically, there is the Organic Entry Level Stewardship (OELS) scheme. This is a 'whole farm' scheme similar to ELS, open to farmers who manage all or part of their land organically and who are not receiving aid under the Organic Aid Scheme (OAS) or the Organic Farming Scheme (OFS). Higher Level Stewardship (HLS), which will be combined with ELS or OELS options, aims to deliver significant environmental benefits in high priority situations and areas. The ELS scheme has the potential to address large scale issues through basic land management options, whereas the HLS scheme is a competitive highly targeted scheme, which will be able to fund more complicated land management and offer funding for capital work programmes. Under HLS there will be potential to fence off river habitats, create margins, create wetland habitats and pond complexes and set land management appropriate to protect white-clawed crayfish populations.

Markeaton and Mackworth Brook Project

Markeaton Brook passes through the City of Derby, some of it culverted, it is currently designated as a Wildlife Site. It is well known for its populations of white-clawed crayfish and water vole, and forms an important wildlife corridor in association with its historic domain. Public amenity remains an increasing pressure and flood defence is an important answer to many local problems but sometimes conflicts with conservation objectives. In 2004 the Mercaston to Markeaton Brook Project (MMB) convened to address the problems of high silt loads and potential flood risk in the catchment. To inform the project and the biodiversity process in the city, Derby City Council embarked on a two-year ecological report and management plan to determine the biological importance of the waterway and its catchment, on a local and national level. The information is to be used to inform management practice in order to retain and improve the ecological value of the site, and to reduce harmful impacts. In conjunction the National Trust have funded a soil survey to determine patterns of pollution and FWAG have been employed to present funding opportunities to land owners. The MMB Project, includes Derby City Council, the National Trust, Natural England, Environment Agency, Amber Valley Borough Council, and FWAG. It has extended to work in partnership with the Friends of Markeaton Brook, which is a collection of local people and landowners.

River Mease Conservation Strategy

The Conservation Strategy for the River Mease SSSI/PSAC has been drawn up and agreed by Natural England and the Environment Agency. Its purpose is:

- To provide a framework for action by the statutory agencies and a reference point for dealing with proposals which may affect the river.
- To ensure a common approach on river issues with third parties such as local authorities, landowners, farming community, developers and such like.
- To improve the understanding of the river and its ecology and the measures needed to safeguard it.
- To ensure the obligations to further conservation are met.

Severn Trent Water

The White-clawed crayfish is listed as a priority species within the Severn Trent Water Company BAP. The targets in the BAP are:

- Safeguard known populations inhabiting our property from being affected in the course of our management, and if changes in operational regimes or new engineering schemes are proposed.
- Take any opportunities that arise to enhance or create habitat both on our property and on land held by others through our capital investment programme.

- Carry out an internal information advisory campaign using out IT system and internal publications.

In August 2003 Severn Trent Water transferred 450 white-clawed crayfish from their reservoir at Nanpantan, Leicestershire to Carsington Water. The two relocation sites at Carsington Water were monitored in 2005 and crayfish were found to have spread along suitable habitat around the reservoir. White clawed crayfish are also known to be present at Staunton Harold Reservoir associated with the population at Calke Abbey.

3.3 Known white-clawed crayfish sites owned and/or managed by key LBAP partners

The following LBAP partners are believed to own/manage the known white-clawed crayfish sites listed below:

Derby City Council: Markeaton Park
Friends Of Markeaton Brook: Markeaton Brook and adjoining land
National Trust: Kedleston Park and Calke Abbey
Severn Trent Water: Carsington Water, Staunton Harold Reservoir

Potential ark Sites:
Chesterfield Borough Council: Holmebrook Valley Country Park.

4 ACTION PLAN OBJECTIVES AND TARGETS

4.1 National Objectives and Targets

The revised national SAP targets for the white-clawed crayfish are as follows:

- To maintain the current range of white-clawed crayfish in the UK (281 10km grid squares in the UK, 194 of which are in England)
- Achieve an increase in the range of white-clawed crayfish in the UK by 59 10km grid squares to 300 by 2030.
- Maintain key populations of white-clawed crayfish in the UK (19 key populations identified in the UK, 14 of which are in England)

4.2 Lowland Derbyshire objectives and targets

Objective 1: Identify and maintain viable populations within the Lowland Derbyshire BAP area.

Targets
1. Maintain the range as recorded in 2005 (see Map 1 in the document ”White-clawed crayfish in Lowland Derbyshire)

2. Maintain the local key populations at:

- **Markeaton catchment**
- **Barlow Brook**
- **River Mease**
- **Carsington Water**
- **Staunton Harold and Calke Abbey**

Objective 2: Take active measures to expand the range recorded in 2005 using suitable ark sites

Targets
2.1 Identify and develop ark sites for 4 river catchments areas in the LBAP area by 2010.

Land management
Some sites are in private ownership and this may constrain the delivery of habitat enhancement and creation measures.

Resources
Lack of resources may hinder development of significant habitat enhancement and creation schemes.

Lack of knowledge
Lack of knowledge about the current status and distribution of white-clawed crayfish in some sub catchments may lead to inadvertent damage and/or constrain the success of habitat management, enhancement and creation schemes.

Climate change
Severe flooding or drought events may constrain the long-term success of habitat management, enhancement and creation schemes.

5. ACTIONS

Partners: British Waterways (BW), Chesterfield Borough Council (CBC), Derby City Council, (DC) Derbyshire County Council (DCC), Derbyshire Farming and Wildlife Advisory Group (FWAG), Derbyshire Wildlife Trust (DWT), Environment Agency (EA), Friends of Markeaton Brook (FoMB), Local Records Centre (LRC), National Trust (NT), Natural England (NE), Severn Trent Water (STW), and Wildlife Sites Panel (WSP).

Other abbreviations: LAs = Local Authorities (Amber Valley Borough Council, Bolsover District Council, Chesterfield Borough Council, Derby City Council, Derbyshire Dales District Council, Derbyshire County Council, Erewash Borough Council, North East Derbyshire District Council and South Derbyshire District Council)

	ACTION	**Timescale**	**Key Partners**
DATA COLLECTION & ANALYSIS			
WCC1	Compile all the crayfish records (White-clawed and non-native) in one place. Split records into historic (pre 2001) and post 2001 records.	2007	**NE,** EA, CBC, DC, BW, LRC
WCC2	Provide updates of records to this database	Ongoing	**NE,** EA, NT, STW, DC, BW, CBC, DWT, FoMB, LRC
WCC3	Analyse existing data in WCC1 to identify gaps	2007-2008	**NE**
SURVEY & MONITOR			
WCC4	Monitor local key populations	Ongoing	**NT, ST, FoMB, DC, EA,** other landowners
WCC5	Survey gaps in information identified in WCC3. Confirm presence/absence in historical sites.	Ongoing (funding dependent)	**LBAP co-ordinator to co-ordinate**
WCC6	Monitor habitat condition for local key population sites	Ongoing	**NT, STW, FoMB, DC, EA,** other landowners
RESEARCH			
WCC7	Keep up to date with current best practice in crayfish conservation. Review actions and targets as appropriate	Ongoing	**EA,** NE. LBAP co-ordinator
WCC8	Fund crayfish research as appropriate. Commission student projects on crayfish	Ongoing	**EA**, NE, NT, STW, CBC, DWT, BW, DC
WCC9	Identify potential ARK sites	2008	**NE, EA, DWT, DC, BW**
WCC10	Develop projects to set up ARK sites following appropriate analysis	Ongoing (subject to resources)	**EA, NE,** STW, NT, CBC
WCC11	Carry out appropriate land and habitat management for white-clawed crayfish	Ongoing	**NT, STW, EA, FoMB, DC and other**

			landowners
WCC12	Target appropriate sites for HLS/ ELS options to favour white-clawed crayfish	2008	**NE**, DWT, FWAG, EA
WCC13	Identify and consider designating sites for white-clawed crayfish that meet criteria for SSSI or Wildlife Site designation.	Ongoing	**NE,** DWT, WSP
POLICY & REGULATION			
WCC14	Ensure policy documents, including Local Development Frameworks, include appropriate guidelines for the safeguard and enhancement of wetland habitats for white-clawed crayfish.	Ongoing	**NE, Local Authorities,** DWT, EA
WCC15	Ensure all planning applications and General Development Orders are adequately assessed in relation to their impact on white-clawed crayfish, where appropriate, and that opportunities for habitat management and enhancement are considered in relevant planning decisions as well as opportunities for potential ark sites.	Ongoing	**NE, Local Authorities,** DWT, EA
AWARENESS RAISING			
WCC16	Liaise with angling clubs to inform them about the Environment Agency's Crayfish Code and encourage adoption	Ongoing	**EA,** NT, STW, CBC, DC, DWT, FoMB
WCC17	Distribute appropriate land management information to landowners, angling clubs etc.	Ongoing	**EA,** DWT, FWAG, NE, FoMB,
WCC18	Provide general awareness of crayfish issues to the general public through formal education, guided walks, events, newsletters, media articles etc	Ongoing	**EA,** STW, NT, DWT, CBC, DC, NE, FoMB and other LBAP partners as appropriate

6. RESOURCES

Additional resources will be required to:

- Survey and monitor sites
- Carry out land management to enhance sites for white-clawed crayfish
- Fund developing ark sites
- Research into white-clawed crayfish
- Continue the objectives of the Markeaton and Mackworth Project