

M20 Junction 10a

TR010006

Appendix 8.9 Protected Species Report - White-Clawed Crayfish

APFP Regulation 5(2)(q)

Revision A

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure)

Regulations 2009



Volume 6.3
July 2016

M20 Junction 10a

TR010006

Appendix 8.9 Protected Species Report - White-Clawed Crayfish

Volume 6.3

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Content

Chapter	Title	Page
	Executive Summary	8
1.	Introduction	9
1.1	Description of the Scheme _____	9
1.2	Purpose of the Report _____	9
1.3	Status and Legal Protection _____	10
1.4	Ecology _____	10
2.	Methodology	11
2.1	Desk Study _____	11
2.2	Habitat Assessment _____	11
2.3	Survey Objectives _____	11
2.4	Field Survey Methodology _____	11
3.	Results	13
3.1	Summary of Findings _____	13
3.2	Survey Constraints _____	13
4.	Discussion	14

Executive Summary

This technical appendix report has been produced to inform the Environment Statement (ES) of the impacts of both the Main and Alternative Schemes upon white-clawed crayfish *Austropotamobius pallipes* once mitigation has been implemented. This is 1 of a series of reports on nature conservation features that were identified as potential ecological receptors in the M20 junction 10a Scoping Report¹ that could be affected by the Main and Alternative Schemes. White-clawed crayfish were included as a likely receptor to be considered further.

Surveys were undertaken to confirm presence or likely absence. This survey data has informed an assessment of the potential impacts that the Main and Alternative Schemes could pose on them, and is presented in this report. Mitigation to reduce the impacts on the ecological receptors has been considered. This mitigation seeks to avoid impacts in the first instance, through carefully siting infrastructure away from sensitive habitat and timing works to avoid sensitive periods. Other principles adopted in the mitigation strategy are to ensure no net loss of valued habitats and to maintain dispersal corridors. Mitigation would reduce the potential for adverse effects and provide some potential positive effects.

This report details an assessment of effects for dormice in consideration of the impacts and mitigation described to determine the residual effect, and any further compensation measures that may be required in order to minimise the effects. The method of assessment (which follows guidelines within the Design Manual for Roads and Bridges (DMRB) and the Chartered Institute of Ecology and Environmental Management (CIEEM)), is detailed in the ES and is not reproduced in this Report. The findings of the surveys on white-clawed crayfish and the corresponding assessments of effects are summarised in Chapter 8 Nature Conservation, Volume 6.1.

¹ Highways Agency (2015) M20 Junction 10a Environmental Scoping Report (341755-90-140-RE-02 Rev D).

1. Introduction

1.1 Description of the Main Scheme and the Alternative Scheme

- 1.1.1 The Main Scheme consists of a new gyratory roundabout over the M20 motorway approximately 700m south east of the existing junction 10 and a new dual carriageway link road to the existing A2070 Southern Orbital Road (SOR) to the west of St Marys Church, Sevington. The Main Scheme includes demolition of the existing M20 Highfield Road Bridge, construction of 2 new bridges over the motorway, 4 new slip roads, closure of the existing east facing slip roads at junction 10, a new footbridge across the motorway, a new footbridge to replace the existing footbridge over the A2070 at Church Road and a new retaining wall at Kingsford Street.
- 1.1.2 The Alternative Scheme is the Main Scheme with the addition of an access to the proposed adjacent Stour Park development, which would comprise a three-arm roundabout located midway along the proposed A2070 link road.
- 1.1.3 Reference to 'the Scheme' refers to both the Main Scheme and the Alternative Scheme.
- 1.1.4 For a detailed Scheme description refer to Chapter 2 The Proposed Scheme, Volume 6.1.

1.2 Purpose of the Report

- 1.2.1 The Extended Phase 1 Report, contained in Appendix 8.1, Volume 6.3, and M20 junction 10a Scoping Report² identified the requirement to undertake white-clawed crayfish *Austropotamobius pallipes* surveys in order to determine whether the proposed Scheme has the potential to affect the conservation status of the species, and consider appropriate mitigation and the residual effect. Therefore the objectives of this report are to:
- Detail the surveys undertaken, including methodology and survey findings.
 - Identify presence or likely absence.
 - Consider species specific mitigation and undertake an assessment of the likely impacts in order to inform Chapter 8 Nature Conservation, Volume 6.1.

² Highways Agency (2015) M20 Junction 10a Environmental Scoping Report (341755-90-140-RE-02 Rev D).

1.3 Status and Legal Protection

- 1.3.1 White-clawed crayfish are legally protected under the Wildlife and Countryside Act 1981 (as amended) under Schedule 5. It is classified as endangered in the IUCN Red List. A significant part of the EU resource is found in the UK, but the species is now seriously threatened over most of its range in Britain. White-clawed crayfish is widespread in most parts of England, common in parts of eastern Wales, and present in south west Northern Ireland.

1.4 Ecology

- 1.4.1 White-clawed crayfish can usually be found in watercourses typically 0.75 to 1.25m deep, containing rocks and submerged logs which provide cryptic habitats. Other habitat characteristics associated with white-clawed crayfish include overhanging banks, woody vegetation and areas of heterogeneous flow with places of refuge. Breeding takes place between autumn and early winter, when the temperature drops below 10°C for an extended period of time. White-clawed crayfish are omnivorous but predominantly carnivorous, with a diet that includes worms, insects, small fish and algae.

2. Methodology

2.1 Desk Study

- 2.1.1 A desk study was undertaken to identify records of white-clawed crayfish within the study area and wider surrounds up to a distance of 2km from the red line boundary, where data is available. This included reviewing previous survey reports undertaken on the study site, an updated record search from Kent and Medway Biological Records Centre, and from the Highways England Environmental Information System (EnvIS). A search was also undertaken on MAGIC. The results of the desk study are outlined in Table 2.1.

Table 2.1 Records of White-Clawed Crayfish

White-Clawed Crayfish	
2008 (survey)	The Aylesford Stream was surveyed by Parsons Brinkerhoff for white-clawed crayfish during August 2008. No evidence of crayfish was found.
2010 (survey)	White-clawed crayfish surveys were repeated by URS in August 2010. No signs of crayfish presence were observed.
2015 (records search ³)	No records of white-clawed crayfish were returned from KMBRC (that were dated within ten years of the inquiry), or from Highways England EnvIS.

2.2 Habitat Assessment

- 2.2.1 Aylesford Stream was considered to have potential for white-clawed crayfish as the habitat along the stream bed includes patches of cobbles and tree roots that provide potential refugia. The banks are also suitable for burrows, and adequate foraging opportunities were available as macro invertebrates were abundant and small fish present.

2.3 Survey Objectives

- 2.3.1 The objective of the survey was to determine presence of white-clawed crayfish to consider impacts of development and appropriate mitigation.

2.4 Field Survey Methodology

- 2.4.1 The white-clawed crayfish surveys were undertaken in accordance with current guidelines⁴.

³ Kent and Medway Biological Records Centre (2015)

⁴ Peay, S (2000) Guidance on works affecting white-clawed crayfish. English Nature

- 2.4.2 Ten traps were deployed in the Aylesford Stream between TR04324131 and TR03554124 on the 29 July and retrieved on the 30 July 2015.
- 2.4.3 Traps were laid where habitat was deemed suitable and where it was possible to access the stream. They were secured in place by rope tied to pegs in the bank. The traps were baited with cat food.
- 2.4.4 The traps were standard size at no more than 60cm in length and 30cm in width and with a constricted entrance aperture of circa 55mm. The surveyor was licenced by Natural England to survey for white-clawed crayfish. Environment Agency permission to carry out the survey was obtained and trapper identification tags were affixed to the traps.
- 2.4.5 Manual searching was also undertaken on 29 July where access was possible. Manual searching involved upturning potential refugia such as stones or cobbles in the stream bed to uncover any crayfish present underneath. Sweep nets were placed downstream of the search area to catch any disturbed crayfish. The nets were also swept through vegetation and under tree roots to search for crayfish.

3. Results

3.1 Summary of Findings

3.1.1 No white-clawed crayfish were recorded and it is considered highly likely that they are absent.

3.2 Survey Constraints

3.2.1 No survey constraints affected the surveys or the validity of the findings to confirm likely absence.

4. Discussion

- 4.1.1 As no white-clawed crayfish were found during the survey, white-clawed crayfish do not need to be considered as an ecological receptor as part of the Main and Alternative Schemes. Therefore no further assessment has been undertaken.