MACCLESFIELD ROAD
BUXTON

ECOLOGICAL ASSESSMENT
(Doc Ref: TEP 2011.001)

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Prepared by TEP for:

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1.0 EXECUTIVE SUMMARY

1.1 TEP was commissioned by Heathcote Design and Development to undertake water vole, white-clawed crayfish and Japanese knotweed surveys at land to the rear of 20, 22 and 22a Macclesfield Road, Buxton. These potential ecological/wildlife issues were identified in sections 4 and 6 of the High Peak Borough Council arboricultural consultation report, dated 27th January 2009.

1.2 The River Wye runs along the northern boundary of the site, linking the site with other private gardens, woodlands and parkland in Buxton.

1.3 There is a patch of the alien invasive weed, Japanese knotweed (*Fallopia japonica*) on the eastern boundary of the site in the north (see Drawing D2011.001).

1.4 Water vole is present on the River Wye adjacent to the site. Water vole and water vole habitat are statutorily protected.

1.5 No evidence of white-clawed crayfish was identified during survey. It is unlikely that white-clawed crayfish are present in the stretch of the River Wye adjacent to the site due to a lack of suitable refuge opportunities.

1.6 A Japanese knotweed method statement will be required to prevent the spread of this species during development. Alternatively, a report will be required confirming that all material contaminated with Japanese knotweed has been removed from site prior to commencement of works.

1.7 No development should take place within 5m of the southern bank of the river in order to protect water vole habitat.

2.0 INTRODUCTION

2.1 TEP was commissioned by Heathcote Design and Development to undertake water vole, white-clawed crayfish and Japanese knotweed surveys at land to the rear of 20, 22 and 22a Macclesfield Road, Buxton. These potential ecological/wildlife issues were identified in sections 4 and 6 of the High Peak Borough Council arboricultural consultation report, dated 27th January 2009. This report provides information on the results of these surveys which will be used to support a planning application for residential development.

2.2 A general overview of planning policy and legislation in England is available to download from the TEP website (www.tep.uk.com).

3.0 SITE DESCRIPTION

Figure 1: Aerial photograph of the site

3.1 The site comprises land to the rear of 20, 22 and 22a Macclesfield Road, Buxton. The majority of the site is overgrown with scrub vegetation; e.g. nettle (*Urtica dioica*) and bramble (*Rubus fruticosus*). Land nearer to the properties is managed as a domestic garden. There are a number of mature trees along the boundaries of the site.

3.2 The River Wye runs along the northern boundary of the site, linking the site with other private gardens, woodlands and parkland in Buxton. Within the site there is a band of marginal aquatic vegetation, approximately 6m wide,

bordering the river (see Drawing D2011.001). This is dominated by branched burr-reed (*Sparganium erectum*), with occasional greater reedmace (*Typha latifolia*) and one patch of the introduced Indian rhubarb or umbrella plant (*Darmera peltata*).

3.3 There is a patch of the alien invasive weed, Japanese knotweed (*Fallopia japonica*) on the eastern boundary of the site in the north (see Drawing D2011.001).

4.0 METHODS

Japanese knotweed survey

4.1 The site was visited on 7th May 2009 by ecologist David Sweeting MIIEM CEnv and was inspected for presence of Japanese knotweed.

Water vole survey

4.2 A water vole survey was undertaken on 7th May 2009 by David Sweeting CEnv MIEEM. The banks of the River Wye, which runs from west to east along the northern boundary of the site, were examined for water vole field signs.

4.3 Details of water vole legislation, ecology and field signs are presented at Appendix Two.

White-clawed crayfish survey

4.4 A white-clawed crayfish (*Austropotamobius pallipes*) survey was undertaken on 7th May 2009 by David Sweeting CEnv MIEEM (Natural England White-clawed crayfish licence 20090357). A manual search of the riverbed of the River Wye was conducted. The river runs from west to east along the northern boundary of the site. Stones were lifted with a hand-net being held downstream of the stone to catch any animals disturbed.

5.0 RESULTS

Japanese knotweed survey

5.1 A patch of Japanese knotweed of approximately 40m^2 was identified on the eastern boundary of the site in the north (see Drawing D2011.001).

Water vole survey

5.2 Two water vole burrows were identified on the southern bank of the river, on the northern boundary of the site (see Drawing D2011.001). One pile of water vole feeding remains was identified near to one of the burrows.

5.3 The marginal aquatic vegetation on the northern boundary of the site provides good food and cover opportunities for water vole.

White-clawed crayfish

5.4 No evidence of white-clawed crayfish was identified during the survey. The habitat is suboptimal for the species. Suitable refuges on the riverbed (e.g. stones) were only present for approximately 15m in total of the stretch of river surveyed, with the remaining river substrate being silt.

6.0 CONCLUSIONS

6.1 The alien invasive weed, Japanese knotweed, is present on site. A Japanese knotweed method statement will be required to facilitate development of the site. Alternatively, a report will be required confirming that all material contaminated with Japanese knotweed has been removed from site prior to commencement of works.

6.2 Water vole is present on the River Wye adjacent to the site. Water vole and water vole habitat are statutorily protected.

6.3 No evidence of white-clawed crayfish was identified during survey. It is unlikely that white-clawed crayfish are present in the stretch of the River Wye adjacent to the site due to a lack of suitable refuge opportunities.

7.0 RECOMMENDATIONS

7.1 A Japanese knotweed method statement will be required to prevent the spread of this species during development. Alternatively, a report will be required confirming that all material contaminated with Japanese knotweed has been removed from site prior to commencement of works.

7.2 No development should take place within 5m of the southern bank of the river in order to protect water vole habitat. This exclusion zone should be fenced off with metal security fencing to prevent vehicles from accessing this area. If works are required within this zone (such as partition fencing), this should be supervised by an ecologist.

7.3 A bund or alternative measure should be constructed inside of the security fencing to prevent runoff from the development works from entering the river.

8.0 REFERENCES & FURTHER READING

Strachan, R. & Moorehouse, T. (2006) *Water Vole Conservation Handbook Second Edition* Wildlife Conservation Research Unit, Oxon

APPENDIX ONE
Water voles: legislation, ecology and fieldsigns

WATER VOLE LEGISLATION, ECOLOGY AND FIELD SIGNS

1.0 LEGISLATIVE CONTEXT

1.1 The water vole receives full protection under the *Wildlife and Countryside Act, 1981 as amended*.

1.2 The water vole is also listed as a Priority Species on the UK BAP and Cheshire BAP.

2.0 ECOLOGY AND FIELD SIGNS

2.1 The water vole is the largest of the British voles, weighing 200 – 350g. The species is semi-aquatic and adapted to living in burrow systems along the banks of watercourses. Changes in land-use and riparian habitat management have resulted in a general loss and degradation of water vole habitat, causing fragmentation and isolation of water vole populations. This has led to an increased vulnerability to predation, especially by the American mink. Researchers suggest the most effective mechanism for arresting this decline and encouraging recolonisation is through habitat restoration projects and more sensitive bank management practices.

2.2 The identification of water vole fieldsigns is used to determine the presence/absence of the species. Fieldsigns to record (in approximate order of usefulness as an indication of occupation and for density estimates) are:

- Latrines, showing discrete piles of droppings;
- Feeding stations or chopped vegetation;
- Burrows above or below water (those above water may have a cropped 'lawn' around the tunnel entrance);
- Paths and runs at the water's edge, runs in the vegetation and footprints in the mud;
- Sightings, sounds of entering the water.

2.3 The best index of abundance is the number of latrines counted. This provides an indication of the relative abundance of water voles, based on the presence of breeding individuals (visiting and maintaining latrines) at that site and is useful for comparison between sites and future surveys. Very approximately six latrines equate to one female territory, and therefore one 'breeding unit', although this may vary markedly between different habitats and different months of the year.

DRAWINGS

River Wye

line of 1:100 year flood zone

Proposed dwelling

existing mature trees and shrubs screen neighbouring properties

existing outlook uninterrupted

existing mature trees and hedging screen neighbouring properties

existing mature trees and shrubs screen neighbouring properties

visibility splay

visibility splay

MACCLESFIELD ROAD

WYE GROVE

WYE GROVE

90m

90m

2.4

26

24

22a

22

20

8

8a

8b

9

10

4

1

18

16

Key

- Site boundary
- Water vole burrow
- Water vole feeding remains
- Outfall
- Footbridge
- Marginal aquatic vegetation
- Japanese Knotweed

Rev	Description	Drawn	Approved	Date

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Project

Macclesfield Road Ecology

Title

Water Vole Survey 2009

Drwg No D2011.001

Scale	Date
1:500 @ A3	10/07/09

Drawn	Checked	Approved
SW	CB	DCS