Hartest river corridor survey

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SUMMARY

Hartest Parish Council commissioned SWT Trading Ltd: Ecological Consultants to undertake an ecological survey of the river which flows through the village. The river is a reactive water-course with fluctuating water levels reflecting rainfall patterns. Otter are using the river and will find an adequate food resource in the signal crayfish present. The river is too shaded by bankside trees to have high floristic diversity but the stones and gravels of the river bed provide good habitat for fish such as bullhead. Himalayan balsam occurs frequently along this section of river and it is recommended that it is controlled. Adjacent habitat is dominated by gardens and where possible, if a buffer of bankside vegetation is left uncut in future, this will enhance the river habitat and increase the overall biodiversity

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1 INTRODUCTION

Hartest Parish Council commissioned SWT Trading Ltd: Ecological Consultants to undertake an ecological survey of the river and provide recommendations to enhance the channel and adjacent habitat. The information gathered from the survey will help inform the parish Neighbourhood Plan.

2 SITE ASSESSMENT

The river is a tributary of the River Glem, part of the Stour river catchment which is the county boundary between Suffolk and Essex. This is a reactive water-course which will take water from the surrounding arable ditches and as a result will have fluctuating water levels and is likely to be virtually dry in summer months. The stretch of river included in the survey is from north-west of the road bridge at TL 83290 52700 to the southern end of the village at TL 83246 51832. The river has steep banks up to four metres in height in places which are sometimes vertical with earth cliffs and bankside tree roots scoured out by high winter water levels.

The northern section of the water-course flows behind buildings and through gardens. Most of the banks along this section are either walls or have been reinforced so there is little natural habitat. Trees are frequent along the banks which shade the channel and the river bed is stones, boulders and gravel with sand and occasional silt. As a result there is no aquatic vegetation.

The southern section from Hartest Hill road bridge to the southern end of the village is steep banked, with a wider channel up to 4m wide in places. This section is more natural with vertical earth cliff banks, trees and scrub dominating each bank and shading the channel. Where the river flows through gardens towards southern end, the channel has been narrowed and the banks reinforced. In places particularly some gardens, there are fewer trees and the channel is more open and less shaded.

3 METHODOLOGY

A site visit was made on 11th September 2015 by Penny Hemphill on a warm sunny day. Water levels were low allowing the survey to be conducted from the channel where access was possible. The river was assessed for fauna and flora particularly protected species including otter and water vole.

4 RESULTS

The results are shown on Map 1 and are summarised as follows:

- Otter activity was recorded along the northern stretch. Footprints in soft mud on the left bank and a spraint was located on a boulder under a bridge. The spraint was full of signal crayfish shell.
- Scrub habitat and occasional mature trees provide potential otter holt sites along the southern section particularly on the left bank where there are no gardens but a belt of trees and scrub between the river and adjacent arable land.
- Signal crayfish burrows recorded on the southern section of the river low down along the bank at water level. The river bed is ideal for this species which live under stones and

boulders and it is known that the River Glem has a high population of this non-native species.

- Floristically the river is devoid of aquatic plants due to the shaded conditions and stone dominated channel. Willowherb, bramble and nettles occurred on the banks most frequently along with Himalayan balsam a non-native species which was recorded generally as single plants throughout the survey section. Ferns and liverworts thrive in the shaded conditions afforded by the bankside trees - ferns were recorded growing out of walls and liverworts covering stones and boulders in the northern section. There was a short stretch of more open water along the northern section where water parsnip dominated the channel.
- The habitat is not suitable for water vole and no field signs were recorded. Water vole thrive in areas where the channel is not shaded and where there is an abundance of emergent bankside vegetation so could be present upstream of the northern road bridge where the habitat appeared from observation to be more suitable.
- Fish fry were seen along the channel and it is likely that bullhead is present under the stones in the river bed where water levels allow.
- Kingfisher burrows were recorded high up on a sand cliff along the left bank in the southern section.
- A toad was recorded crossing the river.
- Evidence of the river being used as a compost heap by residents was recorded and at one point a load of rubble had been deposited in the channel.
- The various methods of reinforcing the river banks are inventive and effective, however in some instances have reduced the ecological value of the channel.
- The section of river by the rectory was inaccessible. From observation from the public footbridge it appears the water levels are held up by a weir creating habitat more suitable for water vole.

5 RECOMMENDATIONS

The river is of high ecological value and acts as a corridor for otter: a European protected species. The nature of the river makes it difficult to make any improvements to the adjacent habitat as much of it consists of private gardens.

- The tree and scrub habitat on the left bank along the southern section is ideal habitat for otter and there are occasional mature trees which are suitable holts sites for the animals. This habitat should remain undisturbed.
- Himalayan balsam is an invasive species which will eventually become the dominant plant along the river if not controlled. The seeds are dispersed by an explosive action when touched, so it is important to pull the plant when it is in flower and before it has set seed to avoid further dispersal of the seeds. Either the residents could be encouraged to pull the plant along their section of river, or Suffolk Wildlife Trust could assist through their 'Water for Wildlife' Project. Any work along this river could be hazardous due to the steep banks, so that must be taken into account before any work in the channel is attempted.
- The current impact from signal crayfish on the channel is minimal however they will affect the invertebrate and fish populations of the river and can cause bank erosion through burrowing. If residents wish to remove them from the river it is necessary to apply for a trapping licence from the Environment Agency to do so. Co-ordinated trapping is not recommended, as this results in the removal of the largest crayfish and this has been shown to have an adverse effect on fish and aquatic invertebrate populations. This is because the

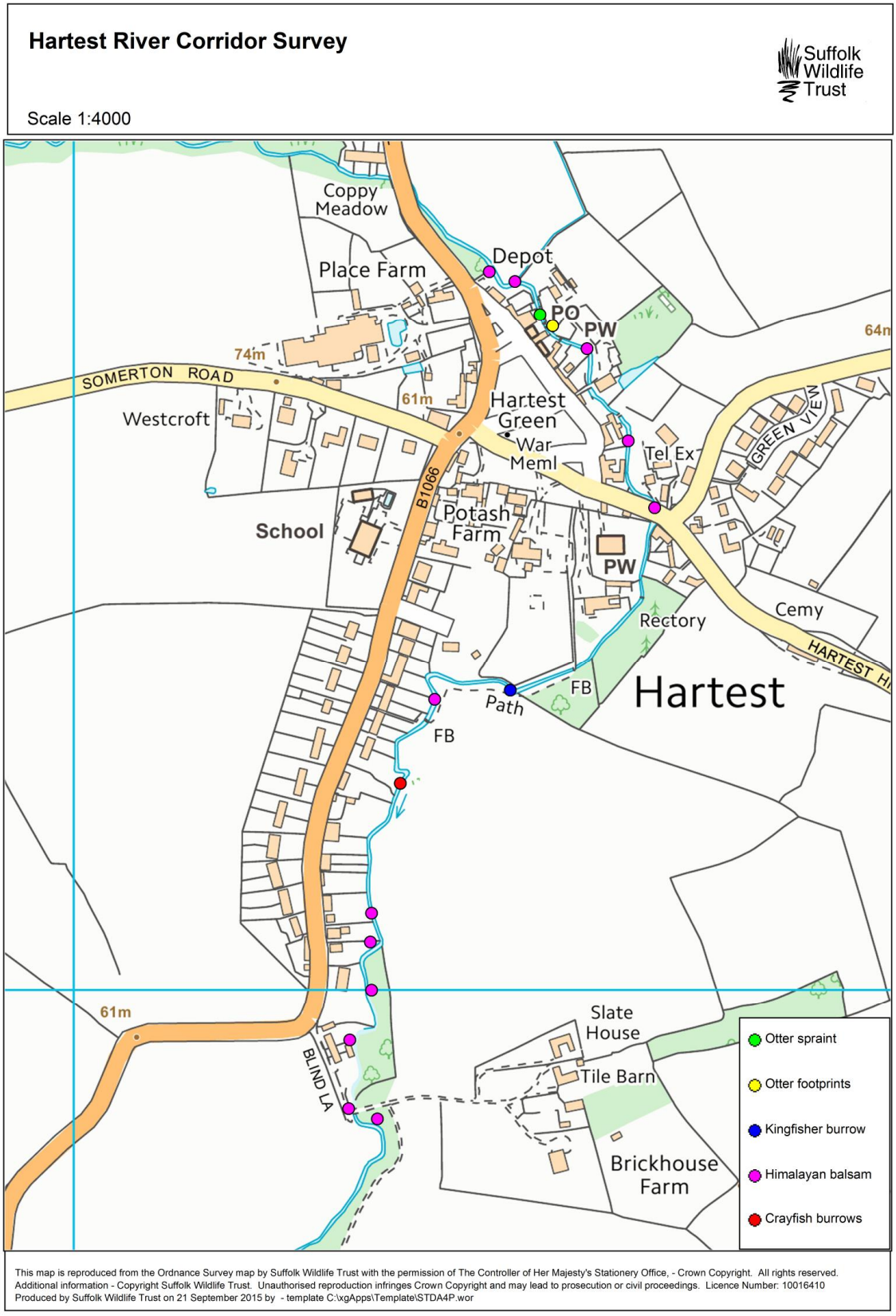
larger crayfish prey on the smaller crayfish and to some extent this reduces the impact on this non-native species.

- Although water vole was not recorded on this stretch of river, they may be present further upstream where the habitat is more suitable. It is possible that mink travel along the river and if any residents would be interested in having a mink raft to monitor any mink activity, Suffolk Wildlife Trust can lend rafts and traps and give the necessary training.
- In general the gardens do not impact on the river corridor itself. However, it is recommended that residents are encouraged not to put garden waste or rubble in the river. Where the lawns meet the river, it is recommended that a 1m strip of bankside vegetation is left uncut. This will provide habitat for invertebrates and small mammals and enhance the habitat for water vole by providing suitable cover if the animals are passing through.

6 CONCLUSION

The survey found that the river which flows through Hartest is of high ecological value and acts as a wildlife corridor for species such as otter. The river is a reactive water-course with fluctuating water levels reflecting rainfall patterns. Otter are using the river and will find an adequate food resource in the signal crayfish present. The river is too shaded by bankside trees to have high floristic diversity but the stones and gravels of the river bed provide good habitat for fish such as bullhead. Himalayan balsam occurs frequently along this section of river and it is recommended that it is controlled. Adjacent habitat is dominated by gardens and where possible if a buffer of grass is left uncut this will enhance the river habitat and increase the overall biodiversity.

7 APPENDICES



Photographs


Steep sided river channel


Himalayan balsam


Earth cliff & tree roots scoured out by high flow


Kingfisher burrows in top of cliff


Signal crayfish burrows


Stones and boulders on river bed suitable for crayfish

Otter footprints recorded on muddy ledge right bank

Otter footprints

Otter spraint on boulder, river channel dry

Good otter habitat on both banks southern section

Ferns & liverworts in shaded channel northern section

Liverworts covering boulder

Various methods of bank reinforcement along the channel