



**Sheffield &
Rotherham**

20th January 2016

Reference: **English Elm tree and associated biodiversity Chelsea Rd/Union Rd,
Netheredge**

Dear Sheffield City Council, Amey and the Independent Tree Panel

We wanted to write to you with our position on this tree and its associated biodiversity to consolidate our emails and press statements. We understand the trees on Chelsea Rd have been referred to the Independent Tree Panel for further consideration and we hope this letter will be taken into account.

As you know, most of the mature English Elm trees (*Ulmus minor*) were lost to Dutch Elm disease - the second epidemic wiping out most of the remaining 25,000-30,000 million trees in the 1970s and 80s.

There are very few mature English Elm trees remaining in Sheffield, most large elms in Sheffield tend to be Huntingdon elms (*Ulmus x hollandica* 'Vegeta') and other specimens are younger or Wych Elm.

This means that the magnificent, mature, healthy specimen in Nether Edge, which we understand to be about 150 years old, has high ecological and historical value in itself as a survivor. The tree is in a conservation area and has been registered as a Notable Tree in the Woodland Trust's Ancient Tree Inventory.

In addition, the tree supports its own biodiversity.

In the summer of 2015, Ben Keywood¹, a lepidopterist (butterfly expert) who works for the Trust, confirmed a record of an adult White-letter Hairstreak butterfly (*Satyrrium w-album*) in the bedroom of a neighbour of the Elm tree in question. He concluded at the time, due the lifecycle of the butterfly and there being no other nearby suitable host trees, that the Elm tree on Chelsea Rd supported a colony of White-letter Hairstreak butterflies.

Myself and Ben visited the Chelsea Rd tree on Friday 8th January to look for eggs of the White-letter Hairstreak butterfly and did find an egg on the tree (most would be higher up the canopy and harder to see from the ground) confirming there is a colony using this particular tree . See photograph below.



As Ben stated in his letter sent to you on 5th January (which he sent as an individual rather than a representative of the Wildlife Trust – however we support the content of his letter quoted below):



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“This species of butterfly has declined rapidly in the UK and is one of our rarest and most threatened species. A single elm tree can support a colony of butterflies and this is the ONLY larval foodplant. If you remove the tree you destroy the colony- it's as simple as that.”

White-letter Hairstreak is an extremely sedentary species, it doesn't move or migrate and is restricted to the area around the elm tree where it feeds, pairs and lays its eggs. The butterfly rarely visits flowers (except occasionally thistles growing around the base of any colony tree) and instead feeds on sticky residue on elm leaves caused by aphids. The butterflies essentially never leave the vicinity of the tree in any stage of their life cycle. At the moment the eggs laid by the females last autumn will be on the branches overwintering ready to hatch out as caterpillars when the elm flowers appear in March or April. The caterpillars feed first on the flowers then move to the developing leaves before pupating in the tree and emerging as butterflies in July. Only mature flowering elm trees can support the butterfly in this way.”

Because of this specific association between the butterfly and the Elm tree, the White-letter Hairstreak is now a conservation priority. It is a BAP Priority species and a Section 41 species of principal importance under the NERC Act (see below). The recently published State of the UK's Butterflies 2015 report from Butterfly Conservation and the Centre for Ecology and Hydrology² reveals that the White-letter Hairstreak has suffered a 96% decrease in abundance over the last 40 years, of which 77% has occurred since 2005. The report highlights this species as a prime example that has suffered “very substantial decreases” in both abundance and occurrence over the last four decades.

In response to the suggestion of a potential butterfly translocation, we welcome the opportunity to discuss potential solutions with you, but unfortunately we think this one is highly unlikely to succeed. The caterpillar would be unable to crawl the kind of distances from the ground to the tree canopy and is likely to be killed before it even got off situ. The eggs in principle could be moved to another tree but this would be absolutely painstaking as you would have to carefully cut each twig containing an egg off the original tree and then somehow tie it onto a suitable twig on the host tree.

This species is highly localised and habitat specific- hence its scarcity and decline. The adults choose specific trees that presumably meet certain conditions and criteria (maybe associated species- i.e. they need aphids to provide the honeydew to feed on as adults etc.) And once they've chosen the specific tree it then specific places eggs on the tree (largely known only to them). In the past we have examined rows of elms and found that one tree could be used by the butterfly and another ignored- there has to be a reason for this and means that simply transferring them might not have any sustainable impact.



The final point to consider is that this species is highly cannibalistic as a caterpillar! Probably another good reason that the female butterfly chooses the positioning of her eggs very carefully and only on large, mature trees. If one caterpillar comes into contact with another it will eat it so the eggs are usually laid well apart- a single egg deposited carefully in a very specific area of the tree to ensure its best chance of survival.



We believe the only one way to absolutely guarantee the continuation of this colony of butterflies is to maintain the tree in its current position, whilst ensuring its roots are protected from disturbance and damage for the short and long term.

In addition to the White-letter Hairstreak, the tree is likely to support other biodiversity. On just one visit, we noted several birds including a pair of bullfinch (nationally Amber-listed). Elm is very species-rich in general and the tree would benefit from a full invertebrate survey. Ben has previously found that Elm trees supporting White-letter Hairstreak were often similarly chosen by other specialist species.

We would like to remind the Council of its Biodiversity Duty Section 40 of the NERC Act (2006) “(1) Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

(3) Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.”

The White-letter Hairstreak is listed as one of the species of principle importance for the purpose of conserving biodiversity in Section 41 of the NERC Act and therefore particularly need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

We would also like to remind Amey of its commitment in the Streets Ahead contract to write and implement a Biodiversity Action Plan. The purpose of such a plan is to protect and enhance biodiversity. We are disappointed that we are so far into the contract and there is no Biodiversity Action Plan in place that has been agreed with partners.

In conclusion, we feel very strongly that there is a special case to protect this fantastic healthy Elm tree from being felled, both for the value of the mature Elm tree itself (so limited nationally) and the biodiversity it supports. It is also has enormous community value to the residents of Nether Edge as demonstrated by a petition, active local campaign group and peaceful demonstration. We also feel that it is the duty of Sheffield City Council and Amey to do everything in your power to retain this tree. We understand engineering solutions are being explored. If cost is the only issue, please be open to discussion with local residents and/or ourselves before making a final decision. If we can be of any further assistance in this matter, please get in touch.



We look forward to your response.

Regards

Nicky

Dr Nicola Rivers
Living Landscape Development Manager
Sheffield and Rotherham Wildlife Trust



Notes.

1. Ben Keywood (FRES - Fellow of the Royal Entomological Society) is a lepidopterist who has recorded butterflies for many years in the Sheffield area. He has contributed to management plans for Rotherham Borough Council for the protection and creation of butterfly habitats and his records and reports have been published widely. He is an employee of the Sheffield and Rotherham Wildlife Trust.
2. <http://butterfly-conservation.org/1643/the-state-of-britains-butterflies.html>



8/1/2016 White-letter Hairstreak butterfly egg on the English Elm tree on Union/Chelsea Rd Netheredge, photograph taken by Nicky Rivers, egg found by Ken Keywood