



**ARBORICULTURAL APPRAISAL**

**HELL WATH  
RIPON  
NORTH YORKSHIRE**

**Prepared for  
The Friends of Hell Wath**

**Prepared by  
M J Boddy *F Arbor A, FICFor, CEnv***

**22<sup>nd</sup> February 2024**

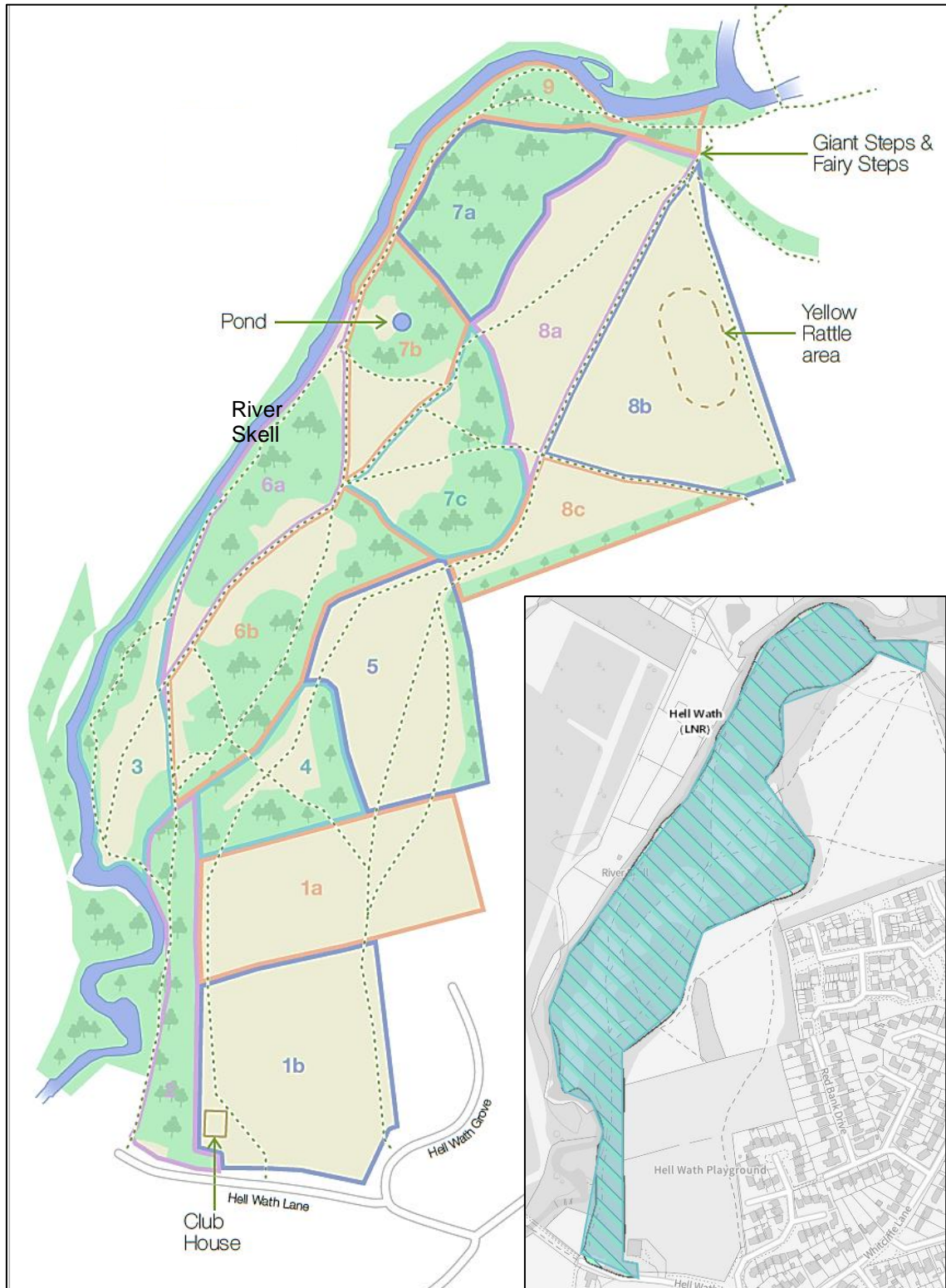
***Symbiosis***  
consulting

## 1.0 INTRODUCTION

- 1.1 My name is Michael Boddy; I am a Registered Consultant of the Arboricultural Association, a Chartered Arboriculturist and director of Symbiosis Consulting Ltd. I am instructed by the Friends of Hell Wath to undertake an initial appraisal of the trees and hedgerows growing on the Hell Wath site.
- 1.2 The objective of this initial appraisal is to provide an overview of the nature and condition of the trees and established hedgerows on the site, to help inform their future management, with a view to preparing a Tree Management Plan. Tree safety issues were not included in the brief as these are the responsibility of North Yorkshire Council (see para. 3.1.7).
- 1.3 This report is based upon data collected during a site visit undertaken on Monday 12<sup>th</sup> February, when I was accompanied by Carol Leo, Trustee of Friends of Hell Wath, who showed me around the various areas of the site and provided background information on its history and current management.
- 1.4 Hell Wath comprises a mix of habitats and land uses, including meadows, woodland, scrub, grass glades and formal playing fields, bounded by the River Skell. Of the total area, almost 9 hectares is designated as a Local Nature Reserve (LNR).
- 1.5 The site is owned by Tarmac but leased to North Yorkshire Council who are required under the terms of the lease to maintain it for open public access and conserve and enhance its character and wildlife value. Much of the practical maintenance and management is undertaken on by the Friends of Hell Wath, a registered charity no: 1195980, in conjunction with the National Trust, under the Skell Valley Project initiative. However, the Council remain responsible for tree safety inspection and management operations.
- 1.6 The majority of the LNR is scheduled under one of two tree preservation orders, 69/00001/TPORDR or 78/00001/TPORDR, which were made in 1969 and 1978 respectively. These are both area designation orders, whereby only those trees growing at the time they were made are protected, which becomes increasingly difficult to determine as time elapses in the case of specimens that are not yet fully mature. However, as the Friends are not responsible for the management of the mature trees or likely to be working on any of sufficient age to be protected by the orders, this is unlikely to be an impediment to their operations.

## 2.0 SITE PLAN

- 2.1 To assist with the preparation of this report I was provided with a schematic site plan with the various areas numbered for management purposes. This is reproduced overleaf with the extent of the LNR shown shaded on the inset plan.



**Figure 1: Management site plan with the extent of Local Nature Reserve shown shaded on the inset plan**

### 3.0 CURRENT ISSUES

#### 3.1 Tree Diseases

- 3.1.1 Elm and ash make up a significant proportion of the overall tree cover on the site.
- 3.1.2 The majority of the elm are infected with Dutch elm disease, caused by the fungus *Ophiostoma novo-ulmi*, and are either dead or moribund. There is little prospect of any of the currently uninfected trees surviving in the long-term and, for planning purposes, it should be assumed that all will ultimately be lost in their current form. However, it is probable that suckers will develop from the roots of a number of the trees and develop to a size where they will once again become susceptible to infection from the beetle vector.
- 3.1.3 A proportion of the ash trees, particularly the younger specimens, were showing symptoms of infection with Chalara dieback. This is caused by the fungus *Hymenoscyphus fraxineus* and is now present throughout much of the country. The fungus has two phases to its life cycle; sexual and asexual. The asexual stage grows in affected trees, attacking the leaves and bark, and girdling twigs and branches.
- 3.1.4 The sexual, reproductive stage occurs as tiny, white, mushroom-like fruiting bodies on infected rachises, or stalks, of the previous year's fallen leaves. These fruiting bodies burst open in summer to release thousands of infective spores which can be spread by the wind onto the leaves and bark of healthy trees, triggering the asexual phase and infection of the trees. The current understanding is that it takes a high dose of spores to infect a mature tree and that not all infected trees will die, as some are likely to have a degree of genetic resistance to the disease.
- 3.1.5 The initial symptoms are blackening and wilting of the leaves in the summer, which are then shed prematurely. The infection can then develop into the twigs and branches, often producing diamond-shaped lesions or cankers around the branch junctions as shown in the photograph below.



**Photograph 1: Example of a young self-set ash infected with Chalara dieback**

- 3.1.6** Given that this is a wind-borne disease, there is little that can be done to control its spread. Current experience is that young and coppiced ash trees can be killed quite quickly but older trees can live with the disease for some time until prolonged exposure, or another pest or pathogen, such as Honey fungus attacking them in their weakened state eventually causes them to succumb. Some infected trees are producing healthy new shoots from the base of the dead outer sections of infected twigs and branches, but it is unclear whether these will persist to develop a new, lower crown or if they will become infected and the dieback will continue.
- 3.1.7** Many of the dead and dying elms had been marked with a blue paint spot, as had several of the ash trees infected with Chalara, and occasional trees of other species, including alder, hawthorn and field maple. A number of the paint-marked trees also had an alloy number tag attached to their trunk. Whilst the Council have taken responsibility for safety-related tree works to date, I understand that the trees marked with paint spots were identified (presumably) for removal during a survey commissioned by Tarmac.
- 3.1.8** Whilst the removal of the dead and moribund trees within proximity to well-frequented paths is justified, it is debatable whether all of the trees marked currently require removal and the plans for these and the matter of which party is responsible for tree safety management requires further investigation and clarification. When the dead and dying trees are ultimately removed, it would be desirable for a number of those set back from the paths to be topped and their stems retained as standing dead wood, rather than being felled to ground level. To enhance their value, notches, holes or artificial cavities can be created in the stems to provide potential bat roosting and bird nesting features.



**Photograph 2: Example of an artificial bird nesting cavity created in a standing stem in a demonstration plot in Sherwood Forest**

## 3.2 Ivy

**3.2.1** Ivy is a significant issue affecting a number of the trees, particularly some of the ash and outgrown hawthorns in the hedgerow on the eastern side of the playing field 1b, and also further thorns in the northern boundary hedgerow. Ivy is not parasitic and a modest amount of growth on a tree is desirable, as it provides nesting opportunities for a variety of species of birds, some of which also eat its berries; its flowers are also a nectar source for various insects. However, once the ivy develops into a tree's crown it impedes growth and increases wind loading that can cause branch failure or uprooting in older, vulnerable trees.

**3.2.2** The most severely affected thorns are dying and/or becoming unstable as a consequence of becoming overrun with ivy. Several ash trees have become infested to the point that the branching in their lower crowns is being suppressed. A structured programme to manage the ivy on the most extensively affected specimens should be initiated, severing the dominant stems that are growing into the crowns whilst leaving the lower younger stems to maintain some cover. The severed stems should ultimately die and break up, falling to the ground. Where this could be a safety issue, the dead stems could be physically removed prior to them shedding. Whilst ivy can be severed at any time of the year, it should not be removed during the bird nesting season. Given the significant value of ivy to wildlife, control should only be considered where it is comprising the viability of important specimens or where there are overriding safety concerns. Overrun trees in areas with limited public access should be left to collapse naturally.



**Photograph 3: Heavily ivy-infested ash and hawthorn trees on the eastern edge of field 1b**

### 3.3 Squirrels

**3.3.1** There was evidence of bark stripping by squirrels on several sycamores but this generally appeared long-standing. However, if further succession planting is to be established, this will become vulnerable to irremediable damage by squirrels once it reaches pole-stage. Squirrel numbers should therefore be monitored and control measures taken to restrict them to an acceptable level as and when required. Links to Forest Research guidance are included below.

<https://www.forestresearch.gov.uk/research/management-of-grey-squirrels/>

[https://cdn.forestresearch.gov.uk/2019/12/ukfstn022\\_m7ldper.pdf](https://cdn.forestresearch.gov.uk/2019/12/ukfstn022_m7ldper.pdf)



**Photograph 4: Old squirrel-related damage in the crown of a sycamore which has left the branches weakened and vulnerable to breakage**

### 3.4 Encroachment of Hawthorn and Blackthorn

**3.4.1** In the absence of large browsing herbivores, areas of hawthorn and blackthorn will naturally expand, with the blackthorn developing into dense thickets. Whilst apparently a locally contentious issue, some control is necessary to avoid the thorns spreading excessively, damaging other habitats, such as species rich grassland. Pre-consultation with interested parties and posting of site notices in advance of the works being undertaken, explaining what is being done and why, might help to allay public concerns.

- 3.4.2** Where areas of hawthorn have been thinned out, a number of the retained trees are slender, with restricted high crowns. A proportion of these could be topped to initiate the production of new shoots at a lower level, promoting the development of dense, more compact crowns over time. As the response to such heavy pruning is unpredictable and can be affected by periods of drought in the summer after cutting, this treatment should be used selectively, where the loss of an occasional specimen will not be critical. Trees which already have some young live shoots are most likely to respond favourably.
- 3.4.3** There is a group of old hawthorns to the west of the Fairy Steps which are top heavy and beginning to collapse. Consideration should be given to the selective topping of those that are most susceptible to failure.



**Photograph 5: Example of old hawthorns being topped in a deer park to maintain their stability and promote new growth at a lower level but above browse height**

- 3.4.4** In addition to the more generic recommendations within this section of the report, I suggest that consideration be given to the implementation of the management works in specific areas of the site set out below.

#### **4.0 IMMATURE SHELTERBELTS ON THE EASTERN BOUNDARY OF AREA 5 & SOUTHERN BOUNDARY OF AREA 8C**

- 4.1** These linked shelterbelts bound the recent housing development comprising St Wilfrid's Close and Hutton Grove. The shelterbelts are around 15 metres deep and predominantly broadleaved but contain a small proportion of larch and Scots pine. The broadleaved species include ash, Norway maple, field maple, sycamore, silver birch, oak, whitebeam, crack willow, cherry and hybrid poplar; with some grey poplar and lime in the belt on the boundary of area 8c. There is an outgrown hawthorn hedge on the boundary of area 5 and a new hedge has recently been planted along part of the boundary of area 8c.



- 4.2** The shelterbelts have not been actively managed or selectively thinned as they developed and the dominant trees are generally tall and slender with restricted live crowns, whilst the less dominant species are suppressed. Several broadleaves are dead and many of the conifers are moribund; a number of the ash are infected with Chalara dieback. Due to the dense canopy there is no understorey and very little ground cover vegetation.



**Photograph 6: Looking north through the dense shelterbelt on the eastern boundary of area 5**

- 4.3** The hybrid poplars are particularly tall and several stems lean out towards the boundary of area 5 and the rear gardens of the adjacent properties on St Wilfrid's Close. Three of the grey poplar in the shelterbelt on the southern edge of area 8c have collapsed and others are vulnerable to failure.



**Photograph 7: Recently snapped decayed grey poplar in the shelterbelt on the southern edge of area 8c**

- 4.4** Both shelterbelts need to be selectively thinned, preferentially removing the dead, moribund, diseased trees and excessively slender trees, along with the poplars leaning excessively towards the adjacent properties or appear particularly vulnerable to failure. The long-term objective should be to open up and promote the development of the trees of the greatest long-term potential but this will need to be done gradually, over a number of years, to avoid suddenly excessively exposing the trees and leaving them vulnerable to windthrow. A number of the multi-stemmed trees, such as the field maples, could be topped to produce bushier specimens with dense low crowns. A proportion of the felled trees should be cut up and retained as dead wood habitat piles, provided there is limited risk of these being set fire to.
- 4.5** Whilst the shelterbelts do not appear to be protected by a tree preservation order, depending on how the works are phased, a felling licence may be required. I assume that the Friends will be organising this work in conjunction with the Council, who can deal with this as necessary.

## **5.0 POTENTIAL PLANTING SITE TO THE EAST OF HUTTON GROVE**

- 5.1** This is an area of rough grassland with a path running across it, linking Whitcliffe Lane to the meadow 8b. There are dense clusters of wild cherry stems on the western and southern edges, which require selective thinning.
- 5.2** This would appear to be an ideal site for the creation of an orchard, ideally using traditional local varieties of fruit trees and nut bushes. There is a Natural England technical information note on traditional orchards which can be downloaded from the internet by searching 'Natural England Technical Information Note TIN013'.

## 6.0 SUCCESSION PLANTING

- 6.1** The mortality rate of the existing tree stock is atypically high, due to a combination of the losses due to Dutch elm disease and, more recently, Chalara dieback affecting the ash, the ultimate impact of which is difficult to predict. Additional planting is required to compensate for the trees already lost and maintain a continuity of cover throughout the wooded areas of the site.
- 6.2** Within areas 7a and 9 there are groups of dead elms and diseased ash that could be cleared and expanded to produce clearings with sufficient light to successfully establish groups of canopy species trees with a shrub understorey around the periphery. A further suitable potential planting site was identified in area 3 adjacent to the river, where there is a large group of dead and dying elm, with some dying ash also present.
- 6.3** The majority of the trunks and main limbs of the fallen and felled trees should be retained in piles adjacent to the planting areas when these are cleared as dead wood habitat. It would be advisable to enclose the planting areas with chestnut pale fencing to exclude people whilst the trees and shrubs establish, and all plants will need to be fitted with rabbit guards. Potential species for planting include oak, small leaved lime, wild cherry, field maple, silver birch, rowan, grey alder, goat willow, hawthorn, holly, yew and hazel; with the addition of crack willow and common alder adjacent to the river.



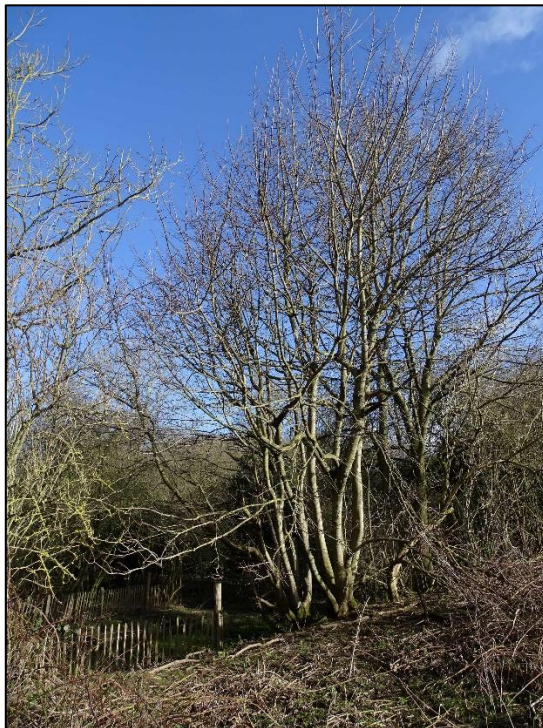
**Photograph 8: Potential site for clearance and planting in area 9**



**Photograph 9: Potential site for clearance and planting adjacent to the river in area 3**

## **7.0 SYCAMORE TREES ADJACENT TO POND**

- 7.1** Two multi-stemmed sycamores on the southern bank are excessively shading the pond in area 7b and would be better removed. These are relatively poor quality trees, the loss of which would be outweighed by the beneficial impact on the pond.



**Photograph 10: Sycamores for potential removal adjacent to pond**

## 8.0 VETERAN OAK IN AREA 6B (Tag 11642)

- 8.1 This is an especially fine, open-grown specimen with long-standing large diameter dead wood in the crown and basal fungal colonisation (Eiffel Tower Fungus - *Pseudoinonotus dryadeus*), making it particularly valuable from an ecological perspective.
- 8.2 There are elder bushes growing around the base on the eastern side and several slender hawthorns growing into the lower branches. This competing vegetation should be removed, along with the closest thorns on the western side. I did not identify any immediate remedial pruning requirements either on the oak or the veteran sycamore to the south.



Photograph 11: Veteran oak viewed from the south-east



Photograph 12: Closer view of the competing vegetation around the veteran oak with the hawthorns growing into the lower southern bracing arrowed

## 9.0 SUMMARY

- 9.1** The initial appraisal identified several areas where there is scope to enhance the existing tree cover at Hell Wath and take further steps to ensure it is maintained going forward, compensating for losses already sustained due to Dutch elm disease and those likely to result from the presence of Chalara dieback in the ash population.
- 9.2** Further work will be required to provide the detail needed to progress those suggestions and recommendations that the Friends decide to pursue, including identifying those trees to be proactively removed or pruned, so that the proposals can be put forward for discussion with the Council and other interested parties.
- 9.3** It appears that the issue of who is assuming responsibility for the tree safety inspection and management works on the site requires clarification, to ensure that unnecessary removals are avoided whilst maintaining the risks to users of the site at an acceptable level.

## 10.0 LIMITATIONS

- 10.1** In accordance with the agreed brief, this appraisal does not cover tree safety or duty of care issues in detail as these are the responsibility of North Yorkshire Council rather than the Friends of Hell Wath.

A handwritten signature in black ink, appearing to read "M J Boddy".

**M J Boddy F Arbor A FICFor CEnv**  
**22<sup>nd</sup> February 2024**





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