

1. General Information

1.1 Land Tenure

This is not a legal document. Horndean Parish Council has held a freehold ownership over Hazleton Common since 1996. The site is managed by the Parish Council's Countryside Team, guided by the Countryside Ranger.

1.2 Site Area

HECTARES	15.96
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ACRES	39.44
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Field size obtained from the Rural Land Register, 2008.

1.3 Location

Hazleton Common lies on the southern boundary of the parish of Horndean, within East Hampshire. Immediately west of the site is the Hazleton housing estate and to the east is the A3(M). Hazleton Common is only 150m to the southeast of Dell Piece West; another smaller nature reserve managed by Horndean Parish Council. A busy road however, divides the 2 sites. South of Hazleton Common there is a 10-acre field currently used as rough grazing for horses. Future residential development of this field cannot be ruled out. The main entrance to Hazleton Common lies at Hollybank Close, grid reference 703124. Ordnance Survey Landranger Map number 197, 1:50,000.

See *Appendices 1a and 1b* for site location maps.

1.4 Conservation Status

Hazleton Common was designated under section 21 of the 1949 National Parks and Access to the Countryside Act, as a **Local Nature Reserve (LNR)** in the year 2000. Natural England is therefore a statutory consultee for all planning matters regarding land adjacent to the site. A Local Nature Reserve (LNR) must be managed so that the features which gave the place its special interest are maintained. When declaring an LNR, the local authority accepts responsibility for ensuring that the special interest of the land is maintained. There are now over 1280 LNRs in England.

Hazleton Common is also a **Site of Interest to Nature Conservation (SINC)**. This SINC status was acknowledged in 1996 by the County Council Ecologist and was given because of *1a* its ancient woodland flora and fauna and *3a* for its assemblage of heathland and acid grassland flora and fauna. SINC's are of lesser ecological value than the nationally or internationally important Sites of Special Scientific Interest (SSSI). Sites are designated in accordance with a published list of criteria and the system is operated across the United Kingdom by local authorities and supported by Natural England. SINC's do not automatically receive statutory protection but are protected from damaging development by local and national planning policy.

1.5 Legislation Affecting Site

The following pieces of legislation should be understood by anyone attempting to make land management decisions affecting Hazleton Common. For more information contact the relevant authorities.

- National Parks and Access to the Countryside Act, 1949
- Health and Safety at Work Act, 1974
- Wildlife and Countryside Act, 1981
- Occupiers Liability Act, 1984
- European Community Habitats Directive, 1992
- Conservation (Natural Habitats) Regulations, 1994
- Countryside and Rights of Way Act, 2000

Due to the sites entry into the Environmental Stewardship Scheme, it is also affected by the Common Agricultural Policy (CAP), which is still undergoing continual change. Entry into this scheme is only possible due to the agricultural use that takes place on site, namely grazing. More information on ‘cross-compliance’ (management requirements affecting subsidies) is available at the parish council office.

1.6 Byelaws

At the time of writing no byelaws exist affecting Hazleton Common and despite its name, no commoners’ rights exist.

1.7 Access

Appendix 2 shows all of the access on site. Pedestrian access onto Hazleton Common is possible at the cul-de-sacs of Hillview and Hollybank and at 4 points along the bridleway to the east of the site. Disabled access is also possible at Hillview and Hollybank and at 2 points along the bridleway. The 4 disabled access (RADAR) gates were bought in 2002 with money granted by the Forest of Bere Grant Fund. There are also 4 vehicular access points available to the countryside team.

1.8 Overhead Electricity Cables

There are 2 sets of power lines that cross the site. All overhead power lines are owned and maintained by Scottish and Southern Electricity (SSE). One line is made up of high voltage wires carried by large steel pylons and the other has lower voltage wires with wooden pylons. The route of the power lines can be seen in *Appendix 3*.

The use of kites on site is actively discouraged. Vegetation near power lines must also be continually monitored. If trees that are growing underneath or near lines are deemed an imminent threat to the electrical cables or pylons, SSE employees can fell them. Management of the site should consider this and therefore vegetation under lines should favour low herbs, grasses and shrubs.

1.9 Infrastructural Assets

The following infrastructural assets, owned by Horndean Parish Council, have been installed on site. A map showing the location of all manmade structures, including those **not** owned by Horndean Parish Council, is included as *Appendix 3*.

- Perimeter and internal fenceline, including coralle
- 3 water channelling drainage ditches
- 2 compacted stone tracks traversing the site
- 1 water trough connected to water mains
- 9 kissing gates
- 5 field gates
- 4 disabled access gates
- 1 stile
- 4 boardwalks
- 1 oak log site name sign
- 3 oak plank site name signs
- 1 interpretation panel
- 2 noticeboards
- 3 dog waste bins
- 1 litter bin
- 3 wooden benches

1.10 Management Agreements

Documents outlining the terms of the grazing on site are held at the Parish Council office. A copy of the water supply agreement is also held at the office.

1.11 Tree Preservation Orders

Only certain regions along the western perimeter are affected by a Tree Preservation Order (TPO number 142 in parish council office). These TPO protected regions are shown in *Appendix 4*. For more detail contact the East Hampshire Arboricultural Officer.

‘Area Tree Preservation Order’ is the type of TPO covering small areas of Hazleton Common. This statutory protection of specific trees was designated in 1983.

‘Area’ Tree Preservation Orders protect all trees that were present at the time of designation. This means any tree that is deemed to have germinated after 1983 is not protected. This is different to a ‘Woodland Tree Preservation Order’ where *all* trees are protected over a diameter of 2 inches at breast height. Generally speaking, Area Tree Preservation Orders are being phased out in favour of Woodland Tree Preservation Orders because legislation protecting them is more easily implemented.

Since Hazleton Common as a whole, is already protected by its designation as a Local Nature Reserve, it is not recommended to impose further TPO’s upon any trees on site. Any management decisions are slowed by the process of application to proceed with works upon trees covered by a TPO.

1.12 Photographic Coverage

Fixed-point photography began on Hazleton Common in the year 2002 and was repeated again in 2004 and 2006. The original number of photographs taken each time was low and so the total number taken was increased greatly in 2009 to 31. The quality of the photos is unfortunately very variable. The 31 photographs are taken from fixed points and aim to give rough coverage of the entire site. The photos are also stored on the parish council computer system and therefore can be enlarged on a networked computer. This on-going photographic record should be updated at least every 4 years and should be used as a tool to help monitor the development of the site.

A map of the fixed points is included as *Appendix 5* and copies of the March 2009 pictures are included as *Appendix 6*.

Ground and aerial photos, circa 1960, are also available from Waterlooville library.

1.13 Compartments

In order to simplify the process of implementing this management plan, the site has been divided up into distinct compartments, called Management Zones. A map showing the division of these compartments is included as *Appendix 7*.



A snow covered boardwalk delineating part of the division between management zones 7 and 8

2. Physical Information

2.1 Climate

The last climactic estimate made for the site was carried out by the Met Office in April 2001. The results have been summarised and are listed below.

Ten year average maximum temperature	13.6° Centigrade (C)
Ten year average minimum temperature	6.5° C
Annual mean temperature	10.05° C
Annual mean humidity	83%
Ten year average maximum hours of sunshine (June/ July)	6.9 hrs/day
Ten year average maximum monthly rainfall (Nov/Dec)	90mm
Ten year average minimum rainfall (July)	47mm
Annual mean rainfall	839mm
Ten year average days of snowfall	13 days, lying for 5.7 days
Ten year average wind speed, <i>prevailing wind from southwest</i>	8.6 knots

Hazleton Common changes seasonally, experiencing fairly low contrasts in temperature and receives moderate but regular rainfall. Wind speeds are not exceptional. The general climactic conditions of Hazleton Common are therefore considered 'typical' for southern England.

2.2 Geology

Hazleton Common is underlain by a stratum of argillaceous rocks and sandstone, interbedded. The content of argillaceous rocks is slightly higher than that of sandstone.

Argillaceous rocks include shales, argillites, siltstones and mudstones and are comprised of particles of less than 0.06mm across. They are the most abundant sedimentary rock type and are based upon consolidated silt and clay.

Sandstone is also a sedimentary rock composed mainly of sand-sized particles of rock or mineral. It is slightly more porous than argillaceous rock and therefore can store or move water more easily. Fine-grained rock types, such as sandstones are more apt at filtering out pollutants from the surface than are rocks with cracks and crevices, such as limestones.

See *Appendix 8* for a map showing local geology. Map provided by Mr A. Cleal, Flood Management Engineer, Environment Agency, Winchester.

2.3 Hydrology

Hazleton Common lies within an area of complex surface and groundwater systems. Within the site there are 3 large sinkholes. These are large naturally occurring depressions in the ground and are underlain by a layer of chalk. All of the sink holes are fenced off from the grazing area and are covered in semi-natural woodland. It is very important to understand the movement of water on site so that waterlogging and flood issues on footpaths can be foreseen in advance. As well as this it helps the site manager to understand the transportation of nutrients and where the wet habitats are situated.

The general movement of water on site is shown in *Appendix 9*.

According to the Local Environment Agency Plan the sinkholes are connected directly to the Havant and Bedhampton springs. Water movement has been tested using dyed water and it takes a matter of just 3 days to reach these springs from Hazleton Common. The water at these springs is then used as potable water for Portsmouth and the surrounding area. Clearly these sink holes must be protected from any contaminating pollutants.

2.4 Geomorphology

The site is relatively flat although does slope gently downwards towards the southern end of the site, before reaching its lowest point in the most south-westerly corner. The ground also slopes slightly downhill towards the most north-westerly region. The highest point on site is found in the north-eastern region close to the site of a large electricity pylon. Hazleton Common lies approximately 75-100 metres above sea level.

2.5 Soils

Clay is the dominant soil type across Hazleton Common although some small but thick layers of organic humus can be found on top of the clay within the wooded areas. Clay deposits are mostly composed of clay minerals (phyllosilicate minerals), which impart plasticity and harden when dried. Organic materials which do not impart plasticity may also be a part of clay deposits.

Clay minerals are typically formed over long periods of time by the gradual chemical weathering of rocks. Clay deposits may be formed in situ as residual deposits, but thick deposits are usually formed as the result of a secondary sedimentary deposition process whereby they are eroded and transported from their original location of formation.

Clay deposits are typically associated with very low nutrient levels and a high acidity and this is generally the case on Hazleton Common, where clay is widespread.

Further soil tests are required in order to assess the variances in acidity across the site and to monitor the changes over time.

3. Cultural Information

3.1 Archaeological Records

Consultation was made with the Archaeology and Historic Buildings Record section of Hampshire County Council in May 2001. A printout of the record for the parish of Horndean is stored at the Parish Council office. The following is a statement within the record that refers to Hazleton Common,

“SU71SW 85 nat. grid ref. SU 703119. A lithic core and some 48 flint flakes were found on the footpath in Hazleton Woods where they had been washed out of the slope. They probably date to the Mesolithic period (12-7,000 years ago). The finds are now in Portsmouth City Council Museum Acc. No. 272/1979” (Hampshire County Council, 2001).

Flint flakes would normally have been used to make knives or spears. The lithic core refers to the stone that is left over after many flint flakes have been removed from it. This too was often shaped into a tool of some kind.

3.2 Previous Land Use

This region was once covered in ancient natural woodland and for centuries formed part of the Royal Forest of Bere. The former Royal Forest was a hunting ground for royalty and once stretched from the River Test at King's Somborne in the west through Hursley, Eastleigh, Bishop's Waltham and Denmead to Rowland's Castle in the east.

Previous to Horndean Parish Council owning the land it was owned by a Mr. S.E Borrow and formed part of his estate. The land was used for grazing dairy cattle, with occasional experiments with arable crops. Roughly 20 years ago much of the site was deep ploughed and the furrows left standing causing the soil structure to be badly damaged and the flow of groundwater to be greatly affected. As well as this, the natural seedbed was virtually destroyed.

3.3 Present Land Use

Hazleton Common is a Local Nature Reserve and therefore the current land use is one that befits such a protected area. It is managed in order to conserve wild habitats and species. It is a popular public open space used mostly by local people for walking, often accompanied by a dog.

Hazleton Common can and should be utilised as an educational resource for local people. Some of this education can be provided by the Parish Council Countryside Team. At the Hollybank Close entrance there is an information noticeboard that is specifically for the use of writing site management updates, allowing the general public to be informed of any changes.

4. Biological Information

Appendix 6 contains a photographic record of the site and *Appendix 7* shows the distribution of habitats.

4.1 Phase 1 Habitat Survey

A phase 1 habitat survey provides a synopsis of the habitat types that are present on any given piece of land. A 'habitat' is the natural physical environment that surrounds a species population. The *National Vegetation Classification (NVC)* describes and codes plant communities within habitats and enables them to be classified precisely. There are many 'untypical' plant communities present on Hazleton Common and this makes it difficult to classify the habitats according to the *NVC*. The presence of untypical plant communities is often a clear sign that a habitat is still going through a period of relatively fast change, usually following a disturbance by man. An example of this on Hazleton Common is the large number of Bluebells *Hyacinthoides non-scripta*, that still flower in certain areas of open grassland. They are clearly a remnant woodland species and thus indicate that the site was covered in trees in the near past. Further site surveys, including a full soil survey, will enable the classification of the habitats according to the *NVC*.

The existing habitats of Hazleton Common are deemed by the Countryside Ranger to be in a relatively juvenile state but developing at a rapid rate. At this time, Hazleton Common resembles Lowland Heathland, with pockets of Semi-natural Woodland.

The heathland consists of **Acidic Grassland** and **Wet Heath** but also includes smaller regions of **Dry Heath**, **Transitional Heath** and premature **Carr Woodland** as well as a small pocket of **Mire**. These heathland areas are all still in an infantile state and although developing well, need constant work in order to maximise their conservation value.

The woodland on Hazleton Common is small, fragmented and has been subjected to a great deal of disturbance in recent times. Some fairly ancient features do still remain in parts though. The site has a virtually continuous perimeter of maturing trees around it but due to its location is slightly isolated from the wider countryside.

If left unmanaged; Hazleton Common will steadily develop into woodland typified by Oak *Quercus spp*, Birch *Betula spp*, Hazel *Corylus avellana* and Bramble *Rubus fruticosus*; a common woodland type found in drier regions of the south of England.

The furrows left by the ploughing of the site 20 or so years ago can still be seen in many areas. The ploughing destroyed the general soil structure and due to the depth of it, caused the initial loss of most of the natural seedbed, slowing natural succession. Perhaps advantageously though, this action has now left a very distinctive and unusual micro-topography. Where furrows still exist; there is a wealth of micro-habitats available to many species of lichen and lower plants as well as some useful niches for invertebrates. Examples of these can be seen quite clearly. It is predicted that the furrows will naturally flatten out in time and these micro-habitats will eventually be lost.

4.2 *Extended Definitions and Descriptions of Habitats*

Once again; further surveys, including a full soil survey, will enable the classification of the habitats according to the *National Vegetation Classification*. Habitats are identified by determining the ‘indicator species’ that are found within them. An indicator species is any biological species whose presence somewhere, defines a trait or characteristic of that particular environment. For example, the presence of Common Club-Rush *Schoenoplectus lacustris*, will almost certainly tell you that you are in a region of wet grassland, since it only grows in this habitat type.

Lowland Heathland

With the exception of some minor examples, lowland heathland has developed and been sustained entirely due to human impacts; namely, deforestation followed by grazing. Lowland heathland supports a large number of rare or range-restricted species and is a very important landscape for biodiversity conservation. **The term ‘lowland heathland’ relates to a landscape which encompasses a range of vegetation communities that have developed on extremely impoverished, acidic soils.** The result is a characteristically open landscape dominated by low-growing shrubs (scrub) and areas of coarse grassland, with some bare ground. Wetlands often form an important ingredient as well. Heather species *Calluna spp.* are especially characteristic of this type of habitat. Other important plant species that are characteristic of lowland heathland include European Gorse *Ulex europaeus*, Dwarf Gorse *Ulex minor*, Purple-moor Grass *Molinia caerulea* and Bracken *Pteridium aquilinum*. The last of these species, Bracken is one of the most common plants in the world and can colonise vast areas quickly.

The following types of habitat can currently be found within the regions of heathland;

‘*Dry Heath*’ communities form on free-draining soils, where there is no water retention, even in winter. They are often species poor and often dominated by dwarf shrubs. The very small areas of dry heath on Hazleton Common are found on the areas of higher ground near the bridleway along the eastern perimeter.

‘*Wet Heath*’ develops on soils that are waterlogged for all or part of the winter. In the case of Hazleton Common this is caused by the presence of an intact clay pan. Waterlogging can suppress the growth of shrubs and therefore provides opportunity for a rich diversity of plant species. Peat does not form in these areas. **Wet heath is an important habitat to conserve and is the dominant habitat type on Hazleton Common.**

‘*Transitional Heath*’ refers to a habitat type that lies between wet and dry heath.

‘*Permanent Ponds*’ exist on Hazleton Common and are important as permanent regions of standing water. Amongst other things, they support an important newt population.

‘*Acid Grassland*’ is grassland that grows on nutrient poor ground with a low pH and therefore a high acidity. Grass does not grow vigorously here and is easily out-competed for space by shrubs. This means areas of acidic grassland are often unstable and only persist due to regular grazing by livestock. Conversely, over-grazing by livestock can

reduce soil fertility and also lead to dwarf shrubs invading. Well managed acid grassland can support many uncommon species of flower and provides important feeding grounds for many birds and insects. Hazleton Common's grassland is floristically poor and also includes some agricultural cultivars of grass; although only in small amounts. It has the potential to improve dramatically though through time.

'Carr Woodland' is basically wet heath that has been allowed to become overgrown by water-loving species of tree such as Downy Birch *Betula pubescens* and Goat Willow *Salix caprea*. Conditions usually become less acidic due to the presence of trees. Wet heath is generally more species rich than carr woodland but nevertheless, carr woodland is still a valuable habitat in its own right, particularly for several species of bird such as the Grasshopper Warbler *Locustella naevia*, which has been identified on site in the past. The main area of carr woodland is found in the south western region of the site.

'Mires' occur where waterlogging is sufficiently permanent to prevent the decomposition of dead vegetation and therefore prevent the formation of peat. Nutrient levels are very low in mires and Sphagnum mosses dominate the ground layer. Shrubs and trees find it extremely difficult to establish themselves. Several very rare native species of flower are only found in this habitat type. One such example is the Bog Orchid *Hammarbya paludosa* (may be re-named: *Liparis paludosa*). The mire habitat on Hazleton Common is very small and merges with the area of carr woodland.

Semi-natural Woodland

Ancient woodland is the UK's equivalent of rainforest, home to more rare and threatened species than any other UK habitat. For these reasons ancient woodland is often described as an irreplaceable resource, or 'critical habitat'

Hazleton Common's woodland is not technically ancient. 'Ancient Woodland' is a term used in Britain to refer specifically to woodland dating back to before the year 1600 (or 1750 in Scotland). Before this time, planting of new woodland was uncommon and therefore a wood dating back to this time is likely to have developed naturally. True ancient woodland has a relatively high and established tree canopy that allows a lower understory of shrubs and smaller plants to thrive underneath it. Within ancient woodland the lower ground flora community is said to be in a fairly 'stable' state since generally it is not threatened by a mass of juvenile trees. This stability is only broken when a canopy tree falls, thus creating an explosion of new growth below the canopy gap. A stable understory of lower vascular plants is crucial when identifying true ancient woodland. British ancient woodland indicator species include, Butchers Broom *Ruscus aculeatus*, Wood Spurge *Euphorbia amygdaloides*, Wood Sorrel *Oxalis acetosella*, Dog's Mercury *Mercurialis perennis*, Solomons Seal *Polygonatum multiflorum* and Bluebell *Hyacinthoides non-scripta*.

There is probably no completely 'natural' woodland left in Britain since man has been interfering with it for millennia, therefore all British woodland is correctly referred to as being only 'semi-natural'.

‘Semi-natural woodland’, like that found on Hazleton Common, is relatively young woodland that has not been planted. It is not often rich in species although can support large numbers if allowed and encouraged to mature correctly. Non-native garden escapees such as *Rhododendron ponticum* and *Cherry Laurel Prunus laurocerasus* are often found in relatively young woodland and can dominate large areas. Young trees that all germinate at the same time after an area is deforested often dominate large areas within semi-natural woodland. In these regions trees are competing hard for light and space creating conditions where it is almost impossible for any smaller plant species to grow. Silver Birch *Betula pendula* is an example of a ‘pioneer’ tree species, meaning it is often the first tree species to appear on freshly cleared land. A large presence of Silver Birch gives a clear indication that a wood is still young. This *is* the case in the regions of semi-natural woodland found on Hazleton Common.

There are 3 areas of permanent woodland on site and they are all ‘copse’ size. Each of the copses has, in their current state, been identified by the ranger as being semi-natural and not ancient. They are all fenced off from the grazed area allowing a speedier regeneration of vegetation generally.

The largest area of woodland, situated in the middle of the site (opposite Hollybank entrance), **is** actually listed within the East Hampshire District Local Plan as being ‘Ancient Woodland’ and is referred to as *Dell Piece Gully*. Most of the habitat within this copse however, **is not** technically ‘ancient’. Due to the mass disturbance that has occurred within this copse in the last 30 years (including deforestation, some ploughing, some ill-advised coppicing and the erection of electricity cables and pylons), most of the ancient woodland habitat has been destroyed and only very small pockets of land within it now show any signs of actually being ‘ancient’. There are a few examples of English Oak *Quercus robur*, Turkey Oak* *Quercus cerris* and Yew *Taxus bacata* that date back around 100- 150 years within this copse and therefore although the woodland habitats are generally not ancient, they do show some signs of great age. A small number of ancient woodland indicator species such as Solomons Seal, can also be found in specific areas of the understory. As well as this, the flatter areas that have been left unploughed have a thick layer of peat over a foot deep in places, indicating that woodland has stood here for some time.

The 2 smaller of the 3 copses are not listed under any other permanent woodland record outside of the parish council. The smallest of the 3 copses, to the north of the site, is comprised mostly of young Birch, Oak and Hazel, with some Holly as well; all Turkey Oaks have been removed already. Within the centre of the copse there are 1 or 2 examples of relatively old Oak and Yew and a small number of Bluebells and Wood Anemones can be found around the perimeter in spring. The other small copse is situated to the south of the main entrance at Hollybank Close. It lies within a steep sided and naturally occurring sink hole. It is comprised mostly of young to medium aged Ash trees although there are 1 or 2 more interesting understory plants such as Butchers Broom.

* Introduced into commercial forestry in Britain in 1735, this non-native species has now ‘naturalised’ into the countryside, meaning it readily germinates in the wild. It is an ‘aggressive’ coloniser of open land.

5. Hazleton Common Management Objectives

5.1 Long Term Site Management Objectives

- ❖ Maintain and where possible improve the site for the purpose of nature conservation
- ❖ Continue and where possible expand current site survey and monitoring programmes
- ❖ Provide sufficient public access for informal recreation
- ❖ Provide interpretative media
- ❖ Protect the infrastructural assets and provide a litter collection service as required

5.2 Objectives Specific to Site Compartments

Appendix 6 contains a photographic record of Hazleton Common's appearance at the time of writing this report. *Appendix 7* shows the division of the site into compartments or 'management zones'. **Here, objectives specific to each compartment have been listed.** It is vital to refer to *Appendices 6* and *7* whilst using this section of the report.

Management Zone 1

- Protect infrastructural assets including perimeter fence, stile and gates
- Enable some limited access only
- Allow heath habitats to naturally succeed to a woodland state
- Protect larger trees from any harm or tough competition until well established
- Control or eradicate non-native species
- Occasionally coppice stands of European Gorse
- Monitor and assist growth of planted hybrid Elms
- Continue with reptile monitoring programme
- Protect the single small pond as a permanent source of water for wildlife
- Retain separation from grazed land
- Monitor fenceline next to private dwellings for illegal access or dumping
- Monitor the safety of the trees and deal with unsafe, dangerous trees
- Consider the installation of 1-2 bird of prey nest boxes of differing type

Management Zone 2

- Protect infrastructural assets including perimeter fence
- Discourage access
- Speed development of woodland habitat where possible
- Protect ancient features of woodland habitat
- Allow woodland habitat within copse to largely develop naturally

- Retain sightlines into copse to allow surveillance for anti-social behaviour
- Protect perimeter fence from encroaching scrub or trees
- Control or eradicate non-native species
- Retain separation from grazed land
- Monitor the safety of the trees and deal with unsafe, dangerous trees
- Discourage the building of dens
- Consider a nest box for birds of prey

Management Zone 3

- Protect infrastructural assets including drainage ditches
- Maintain and encourage access along the footpaths
- Monitor and assist growth of planted hybrid Elms
- Maintain predominance of wet acid grassland habitat with only a few trees
- Encourage the spread of Heather into small scrub regions
- Pollard large trees near electricity lines particularly Oaks
- Coppice Gorse stands periodically to maintain their structure
- Control regions of wet heath scrub and maintain at current low levels
- Control or eradicate non-native species
- Monitor the safety of the trees and deal with unsafe, dangerous trees



1 of 2 drainage ditches crossing the main track within zone 3

Management Zone 4

- Protect infrastructural assets including kissing gates
- Maintain and encourage access along the footpaths
- Maintain a slight predominance of acid grassland habitat
- Encourage the spread of Heather into scrub regions
- Pollard large trees near electricity lines particularly Oaks
- Coppice Willow and Birch near power lines
- Coppice Gorse stands periodically to maintain their structure
- Continue with reptile monitoring programme
- Control or eradicate non-native species
- Monitor the safety of the trees and deal with unsafe, dangerous trees

Management Zone 5

- Protect infrastructural assets including the cattle corral and water trough
- Maintain and encourage access along the footpaths
- Maintain predominance of wet, dry and transitional heath habitats
- Maintain areas of acid grassland
- Coppice Gorse stands periodically to maintain their structure

- Encourage the spread of Heather into scrub regions
- Control or eradicate non-native species
- Continue with reptile monitoring programme
- Monitor the condition of the 2 man-holes marked in *Appendix 3*
- Monitor the man-hole outside the Hollybank entrance, containing the water trough tap
- Monitor fenceline next to private dwellings for illegal access or dumping
- Monitor the safety of the trees and deal with unsafe, dangerous trees
- Maintain the ride that doubles as a vehicle track from zone 5 to the south of the site



Part of the drainage ditch as it passes under the boardwalk in zone 5

Management Zone 6

- Protect infrastructural assets such as the set of steps within the copse
- Protect ancient features of woodland habitat
- Encourage access to be restricted to the single path through the copse
- Allow woodland habitat within copse to largely develop naturally
- Speed development of woodland habitat where possible
- Coppice under power lines and remove cut material
- Control or eradicate non-native species
- Retain sightlines into copse to allow surveillance for anti-social behaviour
- Protect perimeter fence from encroaching scrub or trees
- Monitor the safety of the trees and deal with unsafe, dangerous trees
- Discourage the building of dens
- Retain separation from grazed land
- Consider the installation of a bird of prey nest box

Management Zone 7

- Protect infrastructural assets such as boardwalks
- Maintain and encourage access along the footpaths
- Maintain predominance of wet, dry and transitional heath habitats
- Maintain large areas of acid grassland
- Maintain small region of carr woodland situated near the 3 main ponds
- Coppice Gorse stands periodically to maintain their structure
- Encourage the spread of Heather into scrub regions
- Pollard large trees near electricity lines particularly Oaks
- Coppice Willow and Birch near power lines
- Control or eradicate non-native species
- Continue with reptile monitoring programme
- Monitor the safety of the trees and deal with unsafe, dangerous trees
- Maintain the planted hedge along the eastern perimeter with a view to laying it
- Control regeneration from large Turkey Oaks along western perimeter

Management Zone 8

- Protect infrastructural assets including the interpretation panels and benches
- Maintain and encourage access along the footpaths
- Maintain predominance of dry, transitional and in particular wet heath habitats
- Coppice Gorse stands periodically to maintain their structure
- Encourage the spread of Heather into scrub regions
- Plant new native hedge along southern boundary
- Maintain grassland firebreak along western perimeter
- Monitor the condition of the 2 man-hole covers within the entranceway at Hollybank
- Control or eradicate non-native species
- Continue with reptile monitoring programme
- Monitor fenceline next to private dwellings for illegal access or dumping
- Monitor the safety of the trees and deal with unsafe, dangerous trees

Management Zone 9

- Protect the ponds as a permanent source of standing water for wildlife
- Protect and where possible improve the breeding habitats within the ponds
- Control or eradicate non-native species
- Retain about 40% open water within the ponds
- Control encroaching scrub and minimise bankside tree cover to 2-3 small trees
- Consider introducing new floral pond species

Management Zone 10

- Protect the site perimeter fence line
- Discourage access by not creating proper paths into this ecologically sensitive area
- Maintain region of carr woodland
- Maintain small region of mire
- Control or eradicate non-native species

- Continue with reptile monitoring programme
- Monitor fenceline next to private dwellings for illegal access or dumping
- Monitor the safety of the trees and deal with unsafe, dangerous trees



Sundew *Drosera rotundifolia*, a carnivorous insect-eating plant, within the mire habitat dominated by *Sphagnum* moss, found on Hazleton Common

Management Zone 11

- Protect the perimeter fence line around this zone
- Discourage access
- Control or eradicate non-native species
- Allow woodland habitat within copse to largely develop naturally
- Speed development of woodland habitat where possible
- Retain sightlines into copse to allow surveillance for anti-social behaviour
- Retain separation from grazed land
- Monitor fenceline next to private dwellings for illegal access or dumping
- Monitor the safety of the trees and deal with unsafe, dangerous trees

6. Implementation of Management Objectives

6.1 Quick Guide to Achieving Long Term Site Objectives

It is vital that the site is maintained as a haven for wildlife. This will only happen if management decisions are made with wildlife conservation in mind. Land managers of Hazleton Common should be properly qualified in making such decisions and should understand the long term implications of any changes that they make within the habitats. They should not be afraid of asking for advice from other wildlife and conservation bodies. **Effective management decisions are based on knowledge gained from monitoring and understanding the species and habitats that are present on site.** It is also necessary to consider species that might visit the site for just part of the year. Special consideration should be given to providing for rarer native species and to maintaining the more unusual habitats. Site surveys and monitoring should be undertaken by a wide

variety of people, not least the site manager, on a regular basis. Results from the monitoring process should be used to assist in making any land management decisions.

There are currently 6 public entrances into the site which is sufficient at the present time. Within the site, the wet nature of the paths during winter can restrict access for certain people and so **a compromise is needed between providing ample access and protecting the intrinsic natural beauty of the site**. The ability for the general public to access a good proportion of the site the whole year round should be maintained, without jeopardizing the wildness of the natural habitats. **This may mean creating solutions to access problems that do not involve using large amounts of compacted aggregate.**

Providing interpretation of Hazleton Common is vital as it helps local people to fully appreciate the site ecologically and as a recreational resource. Good quality interpretive media should include some form of interpretation panel on site but other possible forms could include newspaper or newsletter articles, web-based information, leaflets and leading guided walks.

The most basic maintenance service provided by the countryside team should aim to offer a regular litter collection service. **Litter patrols of the site also offer an excellent opportunity for land managers to engage with members of the public and exchange information about the site.** People are encouraged to take litter home with them and so there is just one litter bin on site. There are currently just 3 seats on site since they can be targeted by anti social behaviour such as littering and the starting of small fires. The woodland areas often have dens built within them which should be cleared immediately in order to set a standard. **The 3 dog waste bins on site need emptying weekly and people should be actively encouraged to make use of them.** Dog bins are currently emptied by an outside contractor. The general public should be constantly reminded about the importance and necessity to use dog bins. Interpretation and signage can help with this but stronger tactics can be used in certain circumstances and land managers ought to be fully trained in the issuing of fines to people that refuse to clear dog waste.

6.2 Guidance in Managing the Heathland Habitats in Accordance with Best Practice for the Purpose of Nature Conservation

Managing nature for the purpose of species conservation is best done on a habitat scale. This means monitoring nature on a habitat scale and creating objectives specific to each habitat type. This section describes how to manage the heathland habitats on site.

Grazing

Grazing is by far the most important site management tool used on site. **Grazing plays a leading role in achieving many habitat management objectives and also keeps large areas of the site open as grassland, therefore allowing wider access to the public.** Without regular grazing the heathland habitats will soon change unacceptably.

Hazleton Common is grazed annually by stock owned by Horndean Parish Council. Different types of livestock graze in differing ways and so the stock used on Hazleton

Common have been chosen on merit for their ability to graze the site effectively. Longhorn cattle are hardy and able to eat coarse grass and even the more tender shoots of scrub species. The parish council have for some time now used the old breed of cattle, English Longhorn to graze the site. Despite the intimidating appearance of their horns, Longhorns are noted for their exceptional docility; an extremely important consideration when establishing a herd that are to graze a public space. An agreement has been made with a local farmer whereby the animals are held at his farm when they are not wanted on site. The farmer is responsible for feeding and checking the animals during this time. The parish council pays for this service; the amount is dependent on current feed costs and the length of time that they are at the farm and so varies annually. Transportation costs are also incurred. Documents regarding grazing on site are held at the Parish Council office. These include historic records as well as a copy of the current grazing agreement. Documents regarding cattle movement and subsidy payments are also at the office.

Grazing helps to keep nutrient levels in the ground low, since grass that is eaten has most of the nutrients removed from it before it is excreted again out of the animal. **This management of nutrient levels is vital in protecting the heathland habitats on site.**

Grazing animals affect vegetation through removal of dense grass. This removal allows less competitive plants, in particular small flowering species, to become established amongst the grass. Trampling by livestock also creates areas of bare ground in which new plants may germinate. Bare ground is also valuable to a range of animals such as insects and reptiles. Grazing can also help to suppress scrub. **Importantly, grazing creates a varied plant structure that is impossible to achieve using mechanical methods.**

Timing the grazing right and using the correct stocking density is very important. Since Hazleton Common is a relatively small area of lowland heathland the appropriate stocking density is low and the cattle do need to be removed for part of the year. The grazing regime has changed many times since Hazleton Common's conception and through this constant experimentation many lessons have been learned. Mire habitats are particularly vulnerable to overgrazing and are soon destroyed if overgrazed.

The correct stocking density for the site is 3-4 Longhorn steers for roughly 8 months of the year, avoiding the colder months. Stocking should be flexible though. The site manager should monitor the grass sward each year and decide how best to graze it. In 2008 for example, the ranger took the decision not to graze the site. This allowed grassland areas to develop more flowering species within them. It also gave the paths a chance to recover from poaching caused by slight overgrazing in the past.

Some adjustment of the fencing at Hazleton Common may be necessary in order to gain better control of the animals' ability to graze certain areas at certain times. This could include the sub-division of the grazed area in order to hard graze particular areas and/ or rest areas as appropriate. The most obvious place to sub-divide the site is by creating a new fence that runs from somewhere near the Hollybank Close entrance to the fence around the main wooded area. Any sub-division of the grazed area needs to be given serious thought beforehand though as it is not guaranteed to make anything better.

The introduction of supplementary feeds, other than mineral blocks, should be avoided if possible, as it brings extra nutrients onto the site. Animals should be checked daily by experienced people and vets should be available in case of problems. Clearly, fences need regular checking and the water supply must be constant. **The public need to be informed about the presence and importance of the grazing stock.** Efforts should be made every year to explain the need for grazing on site.



The 4 English Longhorn steers currently owned by Horndean Parish Council, picture actually taken on Catherington Down but animals usually graze Hazleton Common

Mechanical Cutting

Grassland is maintained by grazing but new areas can be created if scrub is removed using mechanical methods. There are many areas of acid grassland that have been newly created. These areas still have some scrub species growing within them, most commonly Bramble and Bracken; these species are impossible to eradicate in just 1 season and so further mechanical control is needed. Brambles will eventually die if regularly cut and although they are extremely common, they can usually be controlled with ease if the correct machinery is used. Bracken is a little trickier to control though as it grows from tubers deep underground; the only way to eradicate it is to gradually weaken these tubers each year until eventually after 5 years or so the plant disappears. **For best effect, Bracken should be cut during summer when it is growing at its most vigorous.** This causes the plant to bleed sap and therefore weakens the underground tubers. If repeated annually Bracken can be eradicated from areas. The down side to this summertime management technique is that inevitably other species may be adversely affected during the period of cutting. The way round this is to reach a compromise and cut different areas on a rota, ensuring it is only carried out on relatively cold days when many animal

species are in hiding. Bracken must be controlled because large stands of it have a low ecological value and support relatively few species.

Mechanical scrub control should aim to create a variety of small scrub islands with the maximum 'edge effect'. **The majority of the ecological value lies at the edge of a scrub island, where animals have the immediate use of open and closed plant communities.** In other words they can move from scrub to grassland easily and quickly and therefore avoid being eaten. The perimeter of each scrub island should be maximised by making its shape irregular.

Large heavy agricultural machinery can damage wet heath as the machine will likely sink into the ground. **Considering a large proportion of the site is wet heath it is recommended that cutting should only occur at the very start of winter, therefore avoiding times when the ground is waterlogged. This will be between late October and mid November.** Site managers should time it so that the ground is as dry as possible. A separate programme for controlling Bracken is clearly needed for the summertime.



A tractor mounted topper mower working on Hazleton Common

Further Heathland Management Requirements

- Control harmful weeds; five weeds are classified under the Weeds Act 1959, they are Common Ragwort *Senecio jacobaea*, Spear Thistle *Cirsium vulgare*, Creeping or Field Thistle *Cirsium arvense*, Broad-leaved dock *Rumex obtusifolius* and Curled Dock *Rumex Crispus*
- Remove invasive non-natives, especially Turkey Oak and control Buddleia
- Remove tall vegetation from around important blocks of Heather and temporarily fence them off from grazed area to encourage regeneration
- Introduce a small number of new stands of Heather and protect from any large grazing animals

- Generally control invasive Birch and Willow and prevent Scots Pine from gaining a stronghold to favour smaller scrub species
- Coppice Gorse stands on rotation every 7-10 years
- Monitor and assist growth of planted hybrid Elms
- Protect the general wetness of the site; including the permanent ponds and the seasonal hydrological flows
- Strictly control predominantly Bramble and Willow based scrub within very wet mire habitat; ensuring the continuation of the mire habitat by occasional thinning of trees and low scrub and by closely monitoring of the effects of grazing upon the ground flora
- Protect and allow to develop naturally the small carr woodland habitats
- Continue with the gradual on-going process of thinning out trees to prevent succession to woodland, whilst selecting some important trees that will remain; favouring Oaks whilst ensuring a wide native species variation remains
- Under electricity power lines; aim for a predominance of grassland habitat with occasional pocket of scrub and pollarded tree, favouring Oaks. Control of trees under the power lines is carried out every 2-3 years by a team from the electricity company, it is important to liaise with them and agree upon works beforehand

6.3 Guidance in Managing the Semi-natural Woodland Habitats in Accordance with Best Practice for the Purpose of Nature Conservation

Tree operations are roughly limited to the period early November until late March. The favoured explanation for this is that it avoids the bird-nesting season but to be fair there are a large number of other reasons why tree work should ideally only take place during these winter months. A detailed explanation is not included here.

Where possible the woodland habitats should be allowed to mature by natural succession. This is the preferred way of creating natural woodland; intervention should therefore be minimised. Previous woodland management on Hazleton Common has included small amounts of coppicing and the removal of non-native Turkey Oak, Rhododendron and Cherry Laurel. As well as this, the electricity company carry out vegetation control under the power lines within the main copse every few years. Apart

from this however, very little has occurred within the woodland habitats. Litterpicking and the removal of play 'dens' are the most common requirements related to the management of the woodland areas on Hazleton Common.

Informal recreational use within the woodlands must be regulated and kept at low levels. Woodlands can be dangerous places for children to play in and so to avoid any public liability the parish council should not encourage it. Deterring access or minimising it to just one easily accessible path will help to protect some of the important woodland ecological features.

It is important to conserve the ancient woodland features that are present within the 3 copses; namely the older and larger native trees and the ancient woodland indicator species that exist within the understory, for example, Hard Fern *Blechnum spicant* and Wood Speedwell *Veronica Montana*. Protection of these features may require some intervention such as vegetation control around them and the regulation of access to them.

It is important to increase the currently low levels of standing and fallen deadwood within the woodland areas. **Deadwood is a critically important habitat component within woodland and must be maintained.** Consider creating new wood piles in unvisited areas of woodland as well as several standing monoliths by ring barking selected trees. Non-native Turkey Oaks offer an ideal opportunity to create these log piles and standing deadwood features. It should be remembered that the danger of old and decayed trees is frequently greatly exaggerated. Injuries from such trees are very rare. Nonetheless, it is obviously necessary to take precautions to minimise danger, not least because there are important legal obligations on the owner of trees to do so. Any standing deadwood should not be within falling distance of a path but if it is, it should be monitored closely and made safe if necessary. The Parish Council Tree Safety Policy outlines how trees should be monitored and managed safely. A copy of this is available at the parish council office.

It is very important to maintain small breaks within a woodland canopy because a huge number of species of both flora and fauna rely upon these canopy gaps for their existence. Since the wooded areas on Hazleton Common are relatively small and by in large all cover large depressions in the ground, light is automatically shed upon much of the woodland floor simply by controlling the vegetation that grows along each of the perimeter fence lines. It important to remember that with the existence of the power lines passing through the main copse in the middle of the site, a constant break within its woodland canopy is already achieved. Management under these power lines needs to maximise the value of the woodland ride habitat by coppicing the trees on a rotation and not all at once and by ensuring that apart from the occasional wood pile and stray branch on the ground, all woody vegetation is removed from the rides. Other areas of existing coppice within the copses should also be retained by re-coppicing them on a flexible 5-10 year rota. Coppicing within the 2 smaller copses should only be carried out in very small amounts generally since there are too few trees to establish very much useful coppice.

The recent control and near eradication of invasive non-natives within the wooded areas has also acted as a method of getting more sunlight to penetrate through to the woodland

floor and therefore has also helped the spread of vascular plants such as Bluebells (Latin name given previously) and Wood Anemones *Anemone nemorosa*.

Where gaps in the woodland canopy are kept in a permanent state, the resultant ground vegetation will need to be controlled in order to prevent the regeneration of trees and the loss of small flowering plants and associated life. As well as trees, canopy gaps encourage a profusion of Brambles and Bracken, which also needs controlling.

It would be advantageous occasionally, to selectively thin a small number of trees in order to assist the growth of other more important species of tree, for example if a single Oak is surrounded and being suppressed by a multitude of Birch trees it would worth thinning the Birch slightly. It may also be advantageous to selectively thin around important specimens of smaller species such as Rowan *Sorbus aucuparia* or Crab Apple *Malus Sylvestris*.

The overall management regime consists of small scale coppicing, thinning and ride and edge management and aims to create a structurally diverse and wildlife rich native semi-natural woodland habitat. Structural diversity has been found to correlate with species diversity and is therefore extremely important. In short, structural diversity within woodlands refers to the need for trees of varying height and a wealth of smaller lower plants that culminate in creating a habitat where the maximum number of animal species can live or make use of it.

It might also be advantageous to create a small number of pollards within the woodland habitats since there is evidence that a pollarded tree, with its multitude of nooks and crannies, can support more wildlife than an un-pollarded tree.

6.4 Guidance in Managing the Permanent Ponds in Accordance with Best Practice for the Purpose of Nature Conservation

There are 4 permanent ponds on site and they all need to be protected as permanent sources of standing water for wildlife. 3 ponds are situated in the middle of the southern half of the site and are regularly and easily visited by members of the public. Another small pond lies in the far northern end of the site and is seldom visited by people.

The small pond in the northern end of the site probably plays a more important role in supporting wildlife than its size may initially suggest, although no survey exists.

The 3 larger ponds in the middle of the southern half of the site are ecologically important and warrant special attention. There is a healthy population of Smooth Newts *Triturus vulgaris* and a small population of Great Crested Newts *Triturus cristatus* that frequent them, although virtually no evidence of any other amphibians. All 3 of these ponds have only a few emergent plant species growing within them currently. The main

vegetation is a periphery of *Juncus* reeds. There is also only a small amount of open water due to the large volume of submerged and floating plant life that includes Duckweed *Lemna minuta*.

Roughly 40% of each ponds surface should be kept as open water in order to protect open water habitats which are important to newts for example, in facilitating courtship behaviour. Vegetation management of submerged and floating vegetation should occur at least every 3 years. Low nutrient levels on site causes aquatic vegetation to grow slowly. Open water areas should occur throughout the pond and not just favour the edges where removal of vegetation is easiest. Vegetation should be left by the pond side for a week after removal to allow creatures within it the chance to re-enter the pond.

New native species of bankside aquatic plant such as Watermint *Mentha aquatica*, Common Water Plantain *Alisma plantago-aquatica*, Arrowhead *Sagittaria sagittifolia* or Flowering Rush *Butomus umbellatus* should be introduced into the ponds in order to give the pond edges better composition and structure. These new species will improve the pond habitats and can possibly be found locally in nearby ponds, including those owned by the parish council. The introduction of new plants into the pond and pond edges will increase the requirement to control the bankside vegetation. Plant species diversity should not be affected by vegetation control though.

Only 2-3 small trees, up to 5 metres high, should be allowed to remain on the banksides of the largest pond in order to reduce the amount of leaf litter entering the ponds and thereby extending their life. Nearby Oaks should be kept small by pollarding them approximately on a 10-15 year rota.

Non- native species of plant and animal should be removed from the ponds if they occur and before they have a chance to establish a population. This might include the deliberate introduction of goldfish by ignorant members of the public.

An admirable survey of the 3 main ponds is kept at the Parish Council Office. It was made by Naturally Wild Consultancy, as part of the mitigation work to counteract the effects to the local area caused by road works on the A3M during 2007/8. DEFRA ordered the construction company to carry out the mitigation works as a requirement of allowing the roadworks to go ahead. As well as the survey the mitigation included the installation (at no cost to the parish council) of 4 hibernaculars on Hazleton Common, all within 50 metres of the ponds. They are fantastic places for small animals to hibernate, including newts. They consist of a 50cm gravel foundation for drainage which is then covered in logs and branches and finally earth. They are positioned in places where they shouldn't be prone to flooding or freezing. These hibernaculars need regular checking in case of human disturbance and the logs and earth piles should be added to every 2-3 years.

6.5 Guidance in Maintaining the Perimeter Features

Hazleton Common has many different boundary features on its periphery. Some of the features are man-made and some are natural. Not all are owned by the parish council.

On the eastern boundary, a line of mainly Turkey Oak trees separate the common from the bridleway. Towards the southern end of the site these trees are particularly large. **Whilst this feature is outside the area of parish council owned land, it affords great consideration due to its habitat value, tree safety issues, overhanging and encroaching limb problems and its role as a seed source for Turkey Oak regeneration.** Consultation should be met with the landowners of the trees regarding any works to them. In recent years a new native hedge has also been planted to enhance part of the eastern boundary. **This hedge should eventually be laid and then maintained as a laid hedge.**

Along the western boundary a fringe of mostly native semi mature trees provides another boundary habitat feature as well as a good screen from adjacent housing on the Hazleton housing estate.

The highway bund to the north of the site is an important refuge for wildlife. It is not owned by the parish council and comes under Hampshire Highways management. This area provides excellent cover for a range of wildlife and is not likely to be greatly disturbed.

The southern boundary of the site borders a field used for grazing horses and is currently lacking a proper hedge. **Since future development of this neighbouring field cannot be ruled out it is recommended to plant a new hedge along this southern boundary as soon as possible.**

Clearly, as well as the natural features, all man-made features such as gates and fences must be monitored and appropriately maintained.

It is important to monitor the safety of trees around the perimeter especially next to private residences.

6.6 Guidance in Monitoring and Surveying the Site

The need for site surveys and regular monitoring cannot be overstated. Without them good management decisions cannot be made and the effects of management cannot be assessed. Site surveys and monitoring should be undertaken by a wide variety of people, not least the site manager, on a regular basis. Survey and monitoring methods need to be objective, prioritised and able to provide the information required. Time and/or costs can be high so it needs to be well planned and to have appropriate resources allocated to it. Invariably, the amount of survey and monitoring work that is carried out will have to be balanced with the need to manage the site. **The priorities in survey and monitoring work must be to observe the plant community types and their condition and to assess the distribution and abundance of certain key species.**

Further surveys of the vegetation communities will enable the classification of the habitats according to the *National Vegetation Classification*. It is important to achieve this within the life of this land management plan. Once the habitats have been classified, subtle changes within them need to be closely monitored and recorded. A good survey tool for monitoring the vegetation on site is to have fixed quadrats that are permanently

marked by a metal stake and surveyed annually. This will help in identifying changes over time. Fixed quadrats do not currently exist on site so should be introduced as soon as possible. As well as fixed quadrats it would be advantageous to have random quadrats taken periodically. At least 30 are needed if significant changes are to be picked up.

Records of all surveys and monitoring schemes, including comprehensive species lists, should be stored safely at the parish council office. **Species lists are not included within this plan as they are too bulky and are subject to constant change.**

Since Hazleton Common was deep ploughed and the furrows left standing, the site is a particularly interesting case study for habitat restoration.

Weather conditions must be monitored so that long term changes can be understood. Climactic data is available from the local meteorological office.

Hydrological flows on site must be monitored in order to identify any significant changes that might occur.

Soils are very important and in the case of Hazleton Common need to be better understood. Further soil tests are required in order to assess the variances in acidity across the site and to monitor the changes over time. Soil samples can be sent for analysis to the environmental and agricultural specialists; ADAS UK Ltd. ADAS stands for Atomic Data and Analysis Structure.

Fixed-point photography occurs on site. This on-going photographic record should be updated at least every 4 years and should be used as a tool to help monitor the development of the site.

Animal monitoring is very important. It is important to monitor all animal groups, especially the invertebrates, as well as the more obvious birds and mammals.

Thanks to voluntary assistance, butterfly transects have occurred on site for many years but as yet, the information obtained from them has not been translated into a useful conclusive format.

Reptile populations on Hazleton Common have been monitored for 4 years now and the results are held at the parish council office. **9 metal sheets are dotted around the site within scrub islands and away from the public paths.** These corrugated metal sheets themselves require maintenance upon them, not least clearing vegetation around them. It has now been proven that there is a large population of Adders *Vipera berus* on site and a small population of Grass Snakes *Natrix natrix*, amongst others.

Appendix 10 shows the location of the metal sheets that are used to monitor reptiles.

6.7 Guidance in Providing Access for Informal Recreation

There are currently 6 public entrances points into the site which is sufficient at the present time. Within the site, the wet nature of the paths during winter can restrict access for certain people and so **a compromise is needed between providing ample access and protecting the intrinsic natural beauty of the site**. It is not recommended to lay down hard tracks across the entire site but it is important that people can access a good proportion of the site without too much difficulty. The ability for the general public to access a good proportion of the site the whole year round should be maintained, without jeopardizing the wildness of the natural habitats. **This may mean creating solutions to access problems that do not involve importing large amounts of aggregate.**

Hazleton Common is, under the Countryside and Rights of Way Act 2000, classed as Access Land and therefore the general public have the right to roam freely over it. There are of course some restrictions and the important points have been summarised here.

Schedule 2

Restrictions to be observed by persons exercising Right of Access:

1. *Section 2(1)* does not entitle a person to be on any land if on that land he;
 - (a) Drives or rides any vehicle other than an invalid carriage.
 - (e) Lights or tends a fire or does any act which is likely to cause a fire.
 - (f) Intentionally or recklessly takes, kills, injures or disturbs any animal, bird or fish.
 - (h) Feeds any livestock.
 - (j) Engages in any operations of or connected with hunting.
 - (l) Intentionally removes, damages or destroys any part of a plant

As well as these statutory restrictions, a landowner can apply for further restrictions to be introduced. Applications for these must be directed to Natural England. The most relevant of the further restrictions that are available to a land manager have been summarised here.

38. *Section 22* explains how landowners will have discretion to exclude or restrict access on up to 28 days in each calendar year.

39. *Section 23* provides that landowners will, in certain circumstances, have discretion to restrict access so as to exclude the taking of dogs. *Subsection (5)* provides that any exclusion of dogs under this provision does not apply to trained guide or hearing dogs.

40. *Sections 24-26 and 28* set out the circumstances when exclusions can be imposed. They include for the purposes of land management, the prevention of fire, the prevention of danger to the public, nature conservation and to protect sites of historic or archaeological importance.

Ensure that at least one site-circumnavigating path is kept open and easily accessible at all times throughout the year. Bikes are not permitted on site, although access across the 2 hard tracks that traverse the site is usually tolerated. Access to some areas of Hazleton Common should be discouraged and kept as sanctuaries for

wildlife. Unless demand to walk the site dramatically increases, grass paths should not be turned to hard stone tracks.

6.8 Guidance in Providing Interpretative Media

Good quality interpretive media should include some form of interpretation panel on site but other possible forms could include newspaper or newsletter articles, web-based information, leaflets and leading guided walks. At the Hollybank Close entrance there is an information noticeboard that is specifically for the use of writing site management updates, allowing the general public to be informed of any changes. **Providing interpretation of Hazleton Common is vital as it helps local people to fully appreciate the site ecologically and as a recreational resource.** It may also help to reduce the amount of anti-social behaviour that occurs on site.

Engage and inform the local community and general public with regard to management, nature conservation and recreational use of the site.

6.9 Guidance in General Site Maintenance

Provide regular patrols of the site, including the clearance of litter.

At present the site suffers from regular vandalism, criminal damage (both vegetation and estate fabric), gatherings of youth (including drug and alcohol use/abuse) and dumping. This must be actively and continually controlled.

Monitor and maintain all infrastructural assets and liaise with owners of manmade features not owed by the parish council. As well as this, conduct a full check of the perimeter fence at least fortnightly while cattle are grazing on site.

Liaise with other land management organisations to discuss general site maintenance. Share information and always be open to fresh ideas.

7. Site Management Work Schedules

7.1 Schedule of Habitat Management Work

Description of Works	Timing and Frequency of Works	Limits of Acceptable Change	Other Comments
Grazing by livestock	Annually with 3-4 large hardy cattle and for around 8 months of the year, avoiding the coldest months	Experimental changes to the grazing regime may be made occasionally including resting the site for a whole year or using different livestock. The site should never fall out of grazing generally though	Use hardy stock to minimise risk of animals requiring veterinary attention. If smaller species are used instead of heavy Longhorn steers a greater number of animals will be required
Mechanical cutting	Annually and at different	Change is acceptable	Be aware of the damage

with tractor mounted mower	times of the year; July to control Bracken and November to early March to control other scrub	over time since mechanical scrub clearance will become less necessary once the grassland areas become more stable	heavy machinery can do to land especially sensitive wet heath and mire habitats. Consider collecting cuttings and removing them
Maintain the extent of areas of acid Grassland	On-going	Areas of acid grassland should not diminish by more than 5%	Floral species richness should be encouraged within these habitats
Control injurious weeds	Annually and when needed.	Common Ragwort and Creeping Thistle in particular, should not be allowed to increase in frequency by any more than 5%	All injurious weeds need controlling to manageable levels but in this case Ragwort poses the greatest threat. Hand pulling is preferable
Remove non-natives across the whole site	On-going and mainly November to March to reduce effects of disturbance to other organisms	Non-natives should steadily decrease in number and should diminish by 75% during the life of this plan	Turkey oaks can be kept as deadwood. Buddleia plants are acceptable in small controlled numbers.
Encourage and assist colonisation and spread of Common Heather	On-going	Heather distribution should not lessen; it should be encouraged to thrive and spread. By the end of the life of this plan distribution of Heather should have increased by at least 100%	Protect existing Heather stands and establish new ones. Do not aim for very large single species stands of Heather since large scale burning or cutting to maintain the Heather stands is not recommended on this site
Control Birch and Willow to protect heathland habitats	Annually from November to March	The occurrence of Birch and Willow within the heathland habitats should diminish by 20% during the life of this plan	Select a fair proportion of trees to grow on to maturity
Control occurrence of Scots Pine	On-going	There are currently 2 semi-mature Scots Pine trees within the heathland areas. This number should be reduced to 1. A single tree can be saved as a feature	Remove single tree in southern half of site and retain single specimen near coralle. Monitor for seedlings and eradicate immediately. Scots Pine is an aggressive coloniser of Heathland
Retain conservation value of Gorse stands by coppicing	Coppice Gorse stands on 7-10 year rota, tackling 1-5 stands each year	Distribution of Gorse should not diminish but neither should increase by more than 15%	Gorse has limited conservation value once it is tall and leggy. Stands furthest from paths are most valuable

			to wildlife especially breeding birds
Protect and encourage growth of hybrid Elm trees	On-going	Elms should not diminish in number and should neither increase in number unless more are planted.	Retain protective fences until trees are at least 25cm's in diameter at breast height. The slim possibility of natural germination should be closely monitored since they are a hybrid species and long term effects of their presence are unknown
Protect general wetness of site	On-going	Wetness of site should not be caused to be diminished. Permanent ponds should remain and potentially be increased in number	Path maintenance and vegetation management should not harmfully affect hydrological flows and winter flooding grounds.
Maintain mire habitat	On-going	Species richness within the developing mire habitat should not be allowed to fall neither should the habitat extent	Remove some encroaching Willow scrub and monitor the effects of grazing closely
Maintain carr woodland habitat	On-going	Small carr woodland type habitats are spreading progressively, which must be controlled	Protect wet heath habitats but retain small areas of carr woodland as well in wet areas
Gradual reduction in number of trees within heathland habitats	On-going between November and March	Trees over 20cm at breast height should be diminished in number by 1-5 each year. Dense stands of smaller trees will require greater control. Numbers of trees in open areas of heathland should fall by 25% during the life of this plan	Select many trees to be left to reach maturity; favour Oaks but ensure a good species mix is retained. Consider creating pollards
Protect ancient woodland indicator features (AWI's)	On-going	Monitor old trees and occurrence and distribution of lower ancient woodland plant species. Ancient woodland features should not be allowed to diminish by more than 5% and should in fact be encouraged to increase	Due to certain fluctuations that are natural some ancient woodland indicator species may lessen in distribution. Old trees should be protected from anti-social behaviour and lower (AWI) plants protected

		in number	from scrub invasion
Maintain deadwood within woodland habitats in large amounts and a lesser amount in heathland areas	On-going	Create new log piles and monoliths at least every 3 years during the life of this plan and do not allow the overall number to diminish. Protect wood piles from scavengers	Monitor removal or disturbance of log piles and avoid problems by situating them in less visited areas of the site. Monitor safety of monoliths closely
Maintain regions of woodland coppice	Re-coppice small sections every 3 years ensuring each already coppiced plant is re-coppiced every 5-10 years	Small regions of coppice should not fall out of management.	Remove all brash and stack larger logs. Monitor closely the effects and usefulness of coppicing
Maintain regions of coppice under power lines	Work is carried out every 3-5 years	It is not expected that coppicing trees under power lines will ever end. Management of cut vegetation should not be allowed to cease either	Cut material should be removed from woodland areas if possible to protect ground flora
Selective thinning within woodland regions	Annually or when needed	Assessment of trees should take place every year and this should not change	Selective thinning may be needed especially within areas under canopy gaps and near to important trees but should always be a last resort management technique
Pollarding trees	On-going	Once pollarded trees must be re-pollarded on a 5-15 year rota depending on species type and vigour of growth. Aim for roughly 20 large pollards in heathland areas and about 10 within woodland habitats, favouring the edges of the woodland habitats	Some Oaks within Heathland areas, particularly below power lines have already been pollarded once
Vegetation control around woodland perimeters	Annually	Scrub and tree vegetation should not increase by more than 5% around woodland perimeter fences, this includes woody vegetation inside perimeter fences within the first 5 metres of the woodland habitats	Where present, Bracken control must occur twice annually during June to July. Protect integrity of fences as well as the ability of sunlight to penetrate woodland habitats via open perimeters.

Bankside pond vegetation control	Annually	Occurrence of bankside trees should not exceed 2-3 small trees up to roughly 5 metres high. Other non-woody bankside vegetation should occur on virtually all banksides	Trees should be lightly thinned regularly. Neighbouring trees especially Oaks, will need to be controlled as well to reduce the effects of shading of the ponds
Bankside pond vegetation introductions	Annually for 2 years	Non-woody bankside vegetation should increase in species richness by 100-300% within the life of this plan and its overall distribution should increase by around 80-100%	New native species need to be introduced to increase species richness. Consider plants with elliptical leaves 3-8cm's in length which are best suited to newts egg-laying habits, within the shallows
Submerged pond vegetation control	Every 3 years	Submerged pond vegetation should not exceed 70% surface cover, 60% being better suited in this instance	Ensure open areas are not just found in the shallow edges. Removed vegetation should be left by pond side for a week to allow small animals to return to pond
Maintain natural perimeter features	On-going	Tree cover around the perimeter should not lessen by more than 5%	Newly planted hedge along south eastern perimeter should be laid

7.2 Schedule of General Site Maintenance Work

Description of Works	Timing and Frequency of works	Limits of Acceptable Change	Other Comments
General site checks including litter picking and vandalism repair work	Once weekly during late spring, summer and early autumn and once fortnightly during late autumn, winter and early spring	Although it can be allowed to fluctuate overall litter levels should not be allowed to increase. It should be attempted to try and reduce the number of acts of vandalism on site by whatever appropriate means	Litterpicking can be done whilst other site work is carried out. Litter is most prevalent in the large depression within the largest copse, around benches and entranceways and around and within the main ponds and occurs mostly on weekends and during school holidays. Monitor the anti social behaviour that occurs on site and stamp out any destructive or illegal behaviour with the assistance of local

			Police and PCSO's. Local residents can be invaluable at providing useful information
Access maintenance	On-going	Access should not lessen. The fine balance between providing sufficient access and protecting natural habitats must be found, this includes necessary vehicular access for the countryside team	Improvements to access are best carried out in autumn and winter in order to avoid large scale disturbances to wildlife but in theory can occur at any time if absolutely necessary. The temptation to import large amounts of aggregate should be avoided, favouring more subtle solutions
Grazing animal maintenance	On-going	The health and welfare of the animals should never be compromised whilst using them to graze the site	Animals need secure land to graze and must be checked daily and be provided with at least one permanent source of water, not just including ponds. Supplying extra food for the animals on site is not recommended as it affects ground nutrient levels
Provision of site interpretation	On-going	Current levels of interpretation of the site should not diminish	Update the management information board after any large scale works have occurred or at least 6 monthly. Provide other interpretive media when and where possible
Infrastructure checks	Monthly	All infrastructure should be checked at least monthly although the fences and water trough need more regular checking when the cattle are on site	Infrastructure checks can take place whilst other site management work or litter picking is proceeding
Maintenance of unnatural perimeter features	On-going	Condition of perimeter features should not degrade	Dumping into the site from neighbouring properties should be stamped out. Dangerous trees should be monitored and made safe accordingly and all perimeter firebreaks should persist

Bird box introductions	On-going where required	Bird boxes should increase in number but not exceed 5-10 in total	Small wooden boxes are likely to be attacked by squirrels. Consider the introduction of boxes designed for the use of birds of prey and install in high remote trees
Monitor man-made features not owned by HPC	On-going	These features should not degrade in condition or safety	Liaise with owners of these features regularly to ensure they are maintained and ensure works are done in compliance with this plan, in particular those regarding the overhead electricity cables and pylons
Liaise with other countryside management bodies to exchange ideas and advice	With respect to this site alone, this should occur at least once every 2 years	Exchanging ideas should be an on-going and indefinite process, even if land managers are confident in their knowledge	Queen Elizabeth Country Park, the Wildlife Trust and trusted independent consultees are among those that should be consulted

7.3 Schedule of Site Survey and Monitoring Work

Description of Works	Timing and Frequency of Works	Limits of Acceptable Change	Other Comments
General monitoring of site development and changes	As often as possible throughout the year	General monitoring should not be reduced in frequency and should be consistently carried out by a range of people not least the site manager. Survey and monitoring methods need to be objective, prioritised and able to provide the information required.	Good general monitoring is an invaluable tool in determining and prioritising the day to day management of the site. Members of the public can and should be encouraged to assist. Members of the countryside team can conduct general site checks whilst other work is carried out
Survey of plant communities aiming to classify them according to the NVC	To be completed by end of 2012	The plant communities must be identified according to the NVC as soon as possible and ideally by the end of	Classification according to the NVC allows long-term changes in plant community types to be better monitored and

		2012. Deviation from this objective should be avoided	understood. This survey must be carried out by a competent person or body
Monitoring of vegetation communities	This can only occur properly once communities have been classified according to the NVC and thereafter, should occur seasonally and annually	It is possible to allow some change to monitoring of vegetation as long as at least one detailed survey is made annually by the land manager	Changes to plant communities generally occur due to natural succession or if ground conditions greatly change. Quadrats can and should be used to survey plant communities
Monitoring of key species	Annually and at times that are best suited for various individual species	Key species must be regularly monitored so that key conservation related site management objectives can be assessed	Key species include the Great-crested Newt, Stonechat, Adder, Grass Snake, Painted Lady and many more, including many plant species. The reptile monitoring programme has been the most regularly undertaken in recent years, aided by the presence of 9 metal sheets
Monitor weather conditions for local area	This should be done every 5-10 years	It is important at the moment to continue with monitoring of local weather due to the global changes that are currently being seen	Weather conditions must be monitored so that long term changes can be understood. Climactic data is available from the local meteorological office
Monitoring of site hydrology	Seasonally and annually	It is very important to closely monitor the sites hydrology. The monitoring of this should never be allowed to cease	Due to the fact that many habitats on Hazleton Common rely on the ground being waterlogged or generally wet, hydrological flows on site must be monitored in order to identify any changes that occur
Soil surveys and monitoring	The soils across the whole site should be properly examined, tested and described by 2012	Deviation from this objective should be avoided as the information will greatly assist the management of the site	<i>Soils are very important and in the case of Hazleton Common need to be better understood. Further soil tests are</i>

required in order to assess the variances in acidity across the site and to monitor the changes over time. Soil samples can be sent for analysis to the environmental and agricultural specialists; ADAS UK Ltd.

Fixed point photography	This on-going photographic record should be updated at least every 4 years	Photography can be useful in certain areas if done more regularly but for the site as a whole it should not be done less regularly than every 4 years at the present time	Photographical records of the site should be used as a tool to help monitor the development of the site and therefore assist in management decision making
Periodic surveys of particular genus (family) groups	This should occur every 2-4 years at times best suited for surveying the particular group	It would be valuable and worthwhile to continue with this trend of surveying a different group every 2-4 years	Although the countryside team or local volunteers could perform the surveys, it may be necessary to use independent specialists to survey particular genus groups such as spiders, grasses or fungi

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