

# Valley Park Woodlands LNR Management Plan

## 1. DESCRIPTION

### 1.1 General Information

#### 1.1.1 Location (See Map 1)

Valley Park Woodlands are located north of Chilworth and east of Chandlers Ford in the south of the Borough of Test Valley. Flexford Road borders the site in the north, Great Covert to the east, Knightwood Road to the west and Castle Lane to the south. The five separate woods surround a large housing development built on former agricultural land.

OS Map 1:50 000 Sheet 185 Grid Reference centred on SU416209

Parish: North Baddesley  
County: Hampshire  
Local Planning Authority: Test Valley Borough Council

#### 1.1.2 Summary Description

The site lies on a gently sloping south-facing plateau of mainly acidic soils over Bracklesham Beds. The area contains a rich flora and fauna despite being surrounded by extensive housing development. The site consists of six stands in five separate blocks of woodland: Zionshill Copse, Tredgoulds Copse, Clothiers Copse & Knightwood, Sky's Wood and Little Covert (See Map 2).

The most prominent habitats are oak and ash high forest, neglected hazel coppice with oak/ash standards, alder Carr and small areas of heathland. Beech and yew are less frequent and mainly confined to the north of the site on inroads of alluvial soils. Birch is also present in the canopy where bare ground has allowed colonisation. The majority of the stands are of a limited age range and suffer from sycamore or robinia invasion.

An area of Zionshill Copse was cleared in the late 1980's and the ground flora now includes heather (*Calluna vulgaris*), heath speedwell, sedges (*Carex pilulifera*, *C. ovalis*, *C. binervis*), heath bedstraw and blinks. The woodland species include common solomon's-seal, bracken, wood-sorrel, wood anemone, bluebells, common figwort, yellow archangel, stitchwort, violets, cowslips and lower plants such as the mosses *Leucobryum glaucum*. There are orchids within the north-east corner of Zionshill Copse and include early purple (*Orchis mascula*), and common spotted (*Dactylorhiza fuchsii*).

The site is possibly derived from woodland pasture from the historic Baddesley Common complex and therefore has many similar characteristics with other woodland pastures.

The closest surviving remnant of this type of woodland in Hampshire is the New Forest. The site also contains an above average number of Woodland Indicator Species for woodlands of their size.

Five of the woodlands are on the English Nature Register of Ancient Woodland in Hampshire.

### 1.1.3 Land Tenure

The woodlands are to be managed by Test Valley Borough Council's Leisure Services, primarily for conservation and education with informal recreation for local residents.

Type of holding: Public Open Space  
 Total woodland area: 42.5 hectares (104.9 acres)  
 Boundaries: See Map 2  
 Owner : Test Valley Borough Council  
 Address: Leisure Services, Beech Hurst, Weyhill Road, Andover,  
 Hampshire SP10 3AJ  
 Telephone: (01264) 343201

### 1.1.4 Map Coverage

OS Map 1:50 000 (Landranger) Sheet Number 185  
 1:25 000 (Explorer) Sheet Number 132

Geological Map 1:50 000 Sheet Number 315

### 1.1.5 Photographic Coverage

*Table 1. Aerial Photographic Coverage of Site*

Date	Copyright	Repository	Film ref.	Frame	Scale	Type
1996	HCC	HCC	Run 13	123	1 : 20 000	Colour
1991	NRS	HCC	Run 28	44	1 : 10 000	Colour
1984	-	HCC	Run 28	147	1 : 10 000	Black/white
1971	-	HCC	Run 25	72	1 : 10 000	Black/white

### 1.1.6 Tenancy

Limited grazing licences may be issued in the future to prevent further loss of open habitats and glades as an ecologically beneficial alternative to mowing.

### 1.1.7 Access

There are two Public Rights of Way affecting the site (See Map 3). The first path in the north of the site enters Knightwood from Knightwood Road at SU421211, runs west and exits between the southern end of Sky's Wood and the northern tip of Tredgoulds at SU414209.

The second footpath does not enter the site, but runs north from Castle Lane at SU415196, along the west side of Little Covert, continuing north to Zionshill Copse before turning west at SU414204 to travel past Great Covert.

Various permissive waymarked paths exist in the woods and it is proposed that these will link up to create a circular route.

*Table 2. Permissive Paths*

<b>Name of Wood</b>	<b>Map Number</b>
Zionshill Copse	4
Tredgoulds Copse	5
Sky's Wood	5
Little Covert	6
Clothiers Copse	7
Knightwood	7

There is no permitted vehicular access on site apart from that necessary for management purposes.

*Table 3. Vehicular Access*

<b>Name of Wood</b>	<b>Grid Reference</b>	<b>Map Number</b>
Zionshill Copse	SU415203 and SU418204	4
Tredgoulds Copse	SU414209	5
Sky's Wood	SU415214	5
Little Covert	SU416200	6
Clothiers Copse	SU417214 and SU418216	7
Knightwood	SU417214	7

## 1.2 Environmental Information

### 1.2.1 Physical

#### 1.2.1.1 Size

*Table 4. Breakdown of Woodlands by Area*

<b>Name of Wood</b>	<b>Area in Hectares (ha)</b>
Little Covert	1.7
Knightwood & Clothiers Copse	11.6
Zionshill Copse	16.4*
Sky's Wood	9.4
Tredgoulds Copse	3.3**
<b>Total</b>	<b>42.54</b>
* 2A & 2B	5.4 & 11
**Open area to be taken away from total	0.14

### 1.2.1.2 Hydrology

The site is low-lying with poorly draining soils. The average precipitation is around 800 millimetres a year leading to water logging after heavy rainfall. There are seasonal ponds in the north of Skys Wood and in the west of Clothiers Copse. Through Little Covert a small stream flows which originates in the north-west of Great Covert, which leads to the waterlogged soil and the alder Carr habitat to be found within Little Covert. Alder Carr also exists in the south of Tredgoulds Copse. To the east and north of Zionshill Copse there are three balancing ponds to collect storm water from the new housing development and the surrounding roads, which first passes through interceptors.

### 1.2.1.3 Geology and soils

The geology of Hampshire is comprised of mostly Upper, Middle, and Lower chalk ridges overlain with clay and flints. The geology of Valley Park Woodlands is Bracklesham Beds (glaucanitic sand and clay), overlaying Upper Chalk (soft chalk with flint nodules), with inroads of alluvium to the north of the site. In the south of the site the soils are acidic to neutral clay (pH 5.0 - 6.0), which is poorly to well drained. To the north east of the site the soils are more typically of a poorly drained Wickham 3 profile, which are slowly permeable seasonally waterlogged fine loams over clay and coarser clay soils (pH 5.5 - 6.5).

### 1.2.1.4 Aspect

The aspect of Valley Park Woodlands is southerly, rising from 30 metres in the south to around 45 metres in the north.

## 1.2.2 Biological

### 1.2.2.1 Habitats

- i) Ancient Semi-natural Woodland
- ii) Secondary woodland
- iii) Alder / Willow Carr
- iv) Open rides / glades
- v) Hazel coppice
- vi) Heathland
- vii) Seasonal woodland ponds
- viii) Dead Wood

1.2.2.2 Flora

A number of surveys have been carried out in the past:

Table 5. Past Floral Surveys

Surveyor	Area	Date
Unknown	Part of site	August 1975
APN House	Skys Wood	August 1978
APN House	Knightwood	August 1978 & 1979
Unknown	Part of site	September 1984
HAT / R. J. Smithers	Zionshill Copse	March 1988
R. J. Smithers	Skys Wood	March 1988
HAT / R. J. Smithers	Tredgoulds Copse	March 1988
HAT / R. J. Smithers	Knightwood	March 1988
Hampshire Wildlife Trust	Whole site	June 1990
J. G. Kelsey	Wet meadow area	October 1994

Full floral listings found within the woodlands can be seen in Appendix II.

**(i) Ancient Semi-natural Woodland (ASNW)**

- See Map 8 for Valley Park on inventory of ASNW in Hampshire as compiled by English Nature, 1995.

**a) Tredgoulds Copse** (see Appendix II for survey card)

*3.3 hectares of ASNW dominated by oak and alder*

Peterken stand types present within Tredgoulds Copse:

7Ab: Valley alder on mineral soil

3Aa: Acid pedunculate oak-hazel-ash on heavy soil form

6Cc: Lowland sessile oak wood

6Dc: Lowland hazel-pedunculate oak wood

NVC: **W10** *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland

Typical sub-community

This is a stand of mainly oaks (*Quercus robur* & *Q. petraea*) with north-east corner cleared in the past and now an area of bracken invasion. New oak plantings under old Woodland Grant Scheme failed as lack of after care and protective tubes placed the wrong way up. Centre of stand occupied by pheasant release pen and cleared game ride. Rhododendron and Austrian pines occasionally present, especially in the north and west of the stand. Hazel coppice stools locally abundant. The south of the stand is comprised of mainly late pole stage alder coppice. Field layer consists of giant horsetail, nettles, bluebells, bracken and rush

33 species of Ancient Woodland Indicator species were recorded in this stand.

**b) Skys Wood** (see Appendix II for survey card)

*9.4 hectares of woodland, with 6 hectares described as ASNW dominated by oak and ash.*

Peterken stand types present within Skys Wood:

3Aa: Acid pedunculate oak-hazel-ash wood with heavy soil form

6Cc: Lowland sessile oak wood

6Dc: Lowland hazel-pedunculate oak wood

NVC: **W10** *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland

Typical sub-community

The stand is mainly of ASNW, with secondary woodland comprised of sycamore and some birch to the north between the prominent woodland bank and Flexford Road. Sycamore saplings make up the shrub layer in the north-west corner of the stand. Hazel coppice occurs in the north-east of the stand, with a field layer of bracken, bluebells, ivy, wood sedge, herb robert and bramble. A seasonal pond occurs in the north of the stand in the stretch of secondary woodland. An area cleared for game, comprising a ride of north to south alignment and open area for the rearing of pheasants, exists in the centre of the stand. Aspen occurs along the side of the ride, with a large number of dead ash and sycamore, some of which shows evidence of squirrel damage. To the east there is a large open area cleared for growing game crops. The track which separates this open space and the woodland boundary consists of sycamore invasion, occasional mature oaks and ash regeneration with a field layer of twayblade, primrose, bugle, yellow pimpernel, enchanters nightshade, bedstraw and woodsedge. Another track exists to the south of the stand with coppiced hazel, bramble and wild flowers along the side. To the west the stand consists of ash, birch and sycamore with a field layer of broad leaved twayblade, hawthorn, hazel, holly and guelder rose.

The woodland contains 33 species of Woodland Indicators.

**c) Clothiers Copse** (see Appendix II for survey card)

*4.8 hectares of ASNW dominated by oak and birch.*

Peterken stand types present within Clothiers Copse:

3Aa: Acid pedunculate oak-hazel-ash wood with heavy soil form

6Db: Lowland birch-pedunculate oak wood

6Dc: Lowland hazel-pedunculate oak wood

8b: Acid pedunculate oak-beech wood

NVC: **W10** *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland  
Typical sub-community

Oak dominated stand with occasional beech and chestnut. Various tracks within stand used for feeding game in the past. To the east of access road to Knightwood Farm hazel coppice under oak and ash. Seasonal pond and open glades exist. To west of access road the stand is dominated by oak standards over neglected hazel coppice with early pole stage birch and high density of robinia invasion. North of stand consists of mainly sycamore and robinia between bank and Flexford Road. Occasional conifer. Field layer of bramble, ivy, honeysuckle, wood violet, slender false broom, barren strawberry, woodruff, yellow archangel, germander speedwell, bugle, butcher's broom and yellow pimpernel.

35 Woodland Indicator species found within Clothiers Copse and Knightwood.

**d) Knightwood** (see Appendix II for survey card)

*6.8 hectares of ASNW dominated by oak and beech.*

Peterken stand types present within Knightwood:

3Aa: Acid pedunculate oak-hazel-ash wood with heavy soil form

8b: Acid pedunculate oak-beech wood

NVC: **W14** *Fagus sylvatica*-*Rubus fruticosus* woodland

Dominated by oak and beech on alluvial soils, with a large beech to the north-west. Cleared area of oaks with failed replanting in the central eastern part of the wood; again suffering from protective tubes in place the wrong way up and lack of aftercare. Occasional Portuguese laurel present along with bracken invasion. Crown damage to existing trees from wind disturbance. Hazel coppice locally abundant, especially in the north and over possible Pre-historic bank running east/west through stand. Yews in the

south of the stand adjacent to Public Right of Way. South of stand contains high density of sycamore invasion and dense holly. To the east there is a small cleared area for game with a ride and keepers shed. Field layer comprises bramble, hawthorn, cherry, nettle, speedwell spp., foxglove, figwort, rye grass, yellow pimpernel, ivy, bugle, butchers broom, greater stitchwort, red campion and enchanters nightshade.

**e) Zionshill Copse** (see Appendix II for survey card)

*16.4 hectares of woodland dominated by oak, of which 15 hectares are classed as ASNW.*

Peterken stand types found within Zionshill Copse:

3Aa: Acid pedunculate oak-hazel-ash wood with heavy soil form

NVC: **W10** *Quercus robur-Pteridium aquilinum-Rubus fruticosus* woodland  
Typical sub-community

Predominately oak (*Quercus robur* & *Q. petraea*) woodland with hazel understory in north-west, central south and north-east. Large game ride of east / west alignment exists in centre of stand. Sky's Wood Road dissects wood in half. Sycamore invasion over whole stand, but locally pure in south-west and east of stand with large trees presents. Dense sycamore saplings create field layer in some areas. Occasional larch found in north of stand. Ash (coppice and maidens) dominant in east of stands over hazel and sycamore. Possible pre-historic settlement under oaks to central south-east of stand with birch in canopy. Occasional rhododendron, crab apple and holly. Field layer comprises common Solomon's-seal, bramble, bracken, wood sorrel, blue bells, foxglove, ivy, *mentha*, stitchwort, wood anemone, yellow archangel, figwort, St. johns-wort, honey suckle, lords and ladies and violet spp.

**(ii) Secondary woodland**

There are four main areas of secondary woodland on site: Little Covert, the piece of woodland connecting Clothiers Copse to Knightwood and the narrow strips between the north of the boundary bank and Flexford Road of Sky's Wood and Clothiers Copse. Apart from Little Covert that comprises alder coppice, the main species to be found within the secondary woodland are sycamore, robinia and silver birch. The ground flora of these areas are poor resulting from shading and intense competition.

**(iii) Alder Carr**

Two areas of alder exist within the Valley Park Woodlands complex; Little Covert which is of a typical streamside alder habitat, and the southern section of Tredgoulds Copse. This alder was historically coppiced on a short rotation of about 15-20 years to provide material for a number of uses including gunpowder, charcoal (very high calorific value), and clog making. The stools are now neglected and are probably 50 or more years old. Retention of the present state will result in a loss of these stools through windthrow and decay. Many species of lower and higher plants are associated with these wetland habitats and of great importance, such as yellow flag iris. The damp nature of the stand also means that

it is a haven for entomology. 16 Ancient Woodland Indicator species were found within Little Covert along with various meadow species. The north of Little Covert is drier than the south, and has fewer old stools with some maidens and regeneration present. To the north east alder becomes less frequent and ash, hazel and hawthorn become dominant.

#### **(iv) Open rides / glades**

There are three game rides -Zionshill Copse, Tredgoulds Copse and Skys Wood. The ride within Zionshill Copse is of east / west alignment and very wide (15 - 20 metres across). The vegetation is rank with locally abundant *Deschampsia flexuosa* and ragwort. Birch regeneration is encroaching on the open ground that is seasonally waterlogged. Violets and primroses are evident with small amounts of bramble along the ride sides. The boundary between the tall oak woodland on either side is distinct and abrupt with few younger trees or vegetation creating the edge effect so desired by many species.

The remaining two rides are of north / south alignment which are deemed as less beneficial to wildlife.

#### **(v) Hazel coppice**

The remaining stools are neglected and of poor vigour resulting from shading and lack of competition deriving from a low stool density. There are seven areas of existing coppice-with-standards within Zionshill Copse, Clothiers Copse and Tredgoulds and a further two areas of planned reinstatement of coppice in Zionshill Copse and Clothiers Copse. Coppicing will allow light demanding wild flowers to thrive as the canopy is reduced periodically. This will benefit those species associated with food plants, such as butterflies. Increasing stool density will be aided by the process of layering (known as plashing in Hampshire).

#### **(vi) Heathland**

This is a recently cleared area of mature oaks for game with a failed replanting scheme of oak in protective tubes placed the wrong way up within Zionshill Copse. The area of heathland regeneration comprises locally abundant ling heather (*Calluna vulgaris*) with a large rhododendron in the centre. Holly has become dense with birch regeneration occurring on open ground over the heather and *sphagnum spp.* Bracken has invaded the compartment and is threatening the regeneration of the heather through shading and competition. The trees around the edge have become crown damaged from exposure to wind.

Glades such as in Sky's Wood should be maintained by continuation of coppicing of trees around edge to create layered effect, and cutting of grass on rotation.

#### **(vii) Seasonal woodland ponds**

These are present within Clothiers Copse, Sky's Wood and Little Covert and their presence in woodland greatly increases the site's diversity. The ponds have become overshadowed by the surrounding trees and as with all woodland ponds, in danger of silting up.

### **(viii) Dead wood**

Old, dead and dying trees provide habitat for a wide range of species of invertebrates, birds and bats. Lichens, mosses and fungi are also abundant on this habitat. Any dead wood on site will be left in place, preferably in shade so as not to dry out. A constant supply of dead wood differing in size and state must be maintained throughout the site.

#### 1.2.2.3 Fauna

##### 1.2.2.3.1 Birds

The nature of the site means a wide range of birdlife uses the woodland. A record of birds will be created with the use of a Common Bird Census (CBC), or similar type of survey that will be carried out over the whole site. Local residents and interested parties will assist the Officer in this project. Because of the number of mature trees in the woods available for supporting natural nest holes, bird boxes are not seen as a priority at this stage.

See Appendix III for listings.

##### 1.2.2.3.2 Invertebrates

The close proximity of the balancing ponds to the woods, especially Zionshill Copse, provides excellent habitats for dragonflies and damselflies, as the newly emerged Teneral (young individuals), need the protection of tree cover as soon as they leave areas of water. Transects will be carried out over the entire site to compile records. The ponds will also be used for pond dipping by local schools and this can be used to record water invertebrates. See Appendix IV for listings.

##### 1.2.2.3.3 Butterflies

Butterfly transects will be carried out covering the whole site.  
See Appendix V for listings.

##### 1.2.2.3.4 Mammals

Sightings of mammals by the Officer and residents have been noted. The most notable species seen have been Roe deer, foxes, squirrels and badgers. The woodlands are obviously a great habitat for such species; however, the continuing development will undoubtedly have an impact as disturbance pushes them further out of the area. Dog exercising will undoubtedly cause further disturbance. Small mammal trapping could be

carried out within the woodlands to compile records. This operation would be carried out by a Mammal Society trained and licensed operator. See Appendix VI for listings.

### **1.2.3 Cultural**

#### **1.2.3.1 Archaeology**

Extensive features of archaeological interest have been discovered within the woodlands of Valley Park. These were in-turn surveyed by Berkshire Archaeological Service between December 1998 and January 1999. The findings of this survey can be seen in the accompanying Valley Park Archaeological Earthwork Recording Survey.

#### **1.2.3.2 Past land use**

The existence of possible Bronze Age (1700 to 600 BC) and Iron Age (600 BC to 43 AD) features within the woods suggests that the site was farmed by extended families and the resulting landscape would typically have been areas of woodland with large clearings for arable crops. These field systems have been disturbed in turn by Roman ploughing after the invasion of Britain in 43 AD. Intensive farming systems introduced, coupled with technical advances in agriculture (eg curved blade of plough), led to widespread woodland clearance over all of Britain. This intensive agricultural system and close proximity to the Roman road to the east of Zionshill suggests that the majority of the site was historically agricultural and not woodland.

By 1588, Ralph Treswell's map of Hursley shows the area of Valley Park as being part of Baddesley Common - an expanse of rough grassland and heathland (See Map 9). By 1802 the First Ordnance Survey map shows the woodland boundaries as seen today, but by 1826 a survey of Thomas Chamberlayne estates which included Valley Park, showed the woodland boundaries of Tredgoulds Copse, Sky's Wood, Clothiers Copse and Zionshill Copse.

The 1867 Enclosure map and 1872 Ordnance Survey map show changes had occurred since 1826, the most noticeable being that Clothiers Copse and Knightwood had been established on an area of former pasture.

As the woods were part of the Baddesley common complex, they were probably used as woodland pasture for foraging pigs and the like until the two former farms on site (Zionshill and Knightwood), claimed the area for themselves during the enclosures.

Historic woodland activities are also in evidence including hazel coppice in Zionshill Copse, Knightwood and Clothiers Copse and alder coppice in Tredgoulds Copse and Little Covert. More recent activity can be seen from the stumps of felled mature oaks throughout the site, probably carried out during the Second World War (1939 - 1945) as the demand for home produced war materials rapidly increased with the threat of blockade by German U-boats.

There was more recently a sporting interest in the area, and remnants of this can be seen in some of the woodlands with release pens, areas cleared for game crops and shooting rides. In 1988, an area of 0.8 hectares of Zionshill Copse was cleared of mature oaks

(supposedly with the aim of increasing the sporting potential of the wood), and is now regenerating with heather which could be a historic link to when the area was part of the Baddesley Common complex.

Further details of past land use can be seen in the accompanying Valley Park Archaeological Earthwork Recording Survey.

#### 1.2.3.3 Past management for conservation

There has been no specific management for conservation within Valley Park Woodlands until Test Valley Borough Council adopted the area from developers. The areas cleared for game in the past have been incidentally beneficial to some species; noticeably woodland butterflies that thrive in dappled shade conditions.

#### 1.2.3.4 Public interest

With the close proximity of the development to the woodlands, the level of public interest is obviously high:

- i) There are various informal paths within the woodlands that are used by walkers and dog owners, either as a throughway to another part of the site or as an area to exercise dogs
- ii) Many residents use the site for informal recreation, including cycling. Unfortunately children use the historic banks within the woods as bicycle jumps. This damage will hopefully diminish with the construction of a purpose built BMX track that is part of the proposed recreational facilities development for Valley Park
- iii) The majority of the local residents appreciate the wildlife of the woodlands. Some residents are interested in helping in compiling records of species by monitoring the various transects to be set up in 1999. Other local naturalists are also interested in helping to create records of other species, such as bats and mosses.
- iv) Some local residents are interested in helping in practical conservation tasks, such as hazel coppicing and general woodland management.

#### 1.2.4 Ecological Relationships and Implications of Management

The alder and other species associated with the waterlogged soils of Little Covert, depend on the continuing existence of the stream in the middle of the woodland. Any abstraction or disturbance to this water source would result in loss of habitat. Coppicing of the alder stools will result in the drying-out and compacting of the soil that may potentially lead to a temporary loss of species during reinstatement of rotation.

Removal of non-native species such as sycamore and rhododendron will allow native species to regenerate in their place and therefore be more typical of the historic ecological structure of the site. The underlying soil structure of the site is characteristic of ancient woodland, and the removal of non-natives, especially sycamore, will lessen damage to this valuable soil profile.

Coppicing of hazel, some of which is derelict, in coupes and along rides and glades will allow more light to reach the woodland floor. This will increase the numbers of light demanding wild flowers and orchids that have been dormant in the soil, such as early purple orchid (*Orchis mascula*), common spotted orchid (*Dactylorhiza fuchsii*), and common twayblade (*Listera ovata*), found in Zionshill Copse. These wild flowers will hopefully lead to an increase in numbers of insects, especially butterflies and moths that use these plants as a food source.

Removal of invasive species such as bracken from rides and glades, will favour light demanding wild flowers species which will benefit plant-feeding species. The removal of bracken from the cleared area of woodland within Zionshill Copse will allow further regeneration of the ling heather (*Calluna vulgaris*). This historic link with Baddesley Common is an important habitat for many species of butterfly, especially within a woodland ecosystem. Heathland is also important for reptiles and many species of invertebrates.

Cutting of grass swards at differing heights along rides, glades and paths will favour many species of insects, invertebrates and birds. This will also favour native plant species as the cuttings will be removed and so lower the nutrient level leading to less vigorous competition.

New planting of local provenance species within Zionshill Copse, Tredgoulds Copse, Clothiers Copse, Knightwood West and Skys Wood will create the edge effect and an uneven aged woodland mosaic desired by many species.

The use of waymarked permissive paths by walkers and dog walkers will disturb the fauna on site, and dog excrement may change the pH and nutrient levels of the soil in certain localities.

## **2. EVALUATION AND OBJECTIVES**

### **2.1 Conservation status of site**

The site is defined in Policy H5 of the Deposit Test Valley Borough Local Plan. Sky's Wood, Tredgoulds Copse, Zionshill Copse, Knightwood and Clothiers Copse have been classed as areas of Ancient Semi-natural Woodland. These are areas as categorised by the Hampshire Ancient Woodland Inventory (February 1995), which describes ASNW as having the following characteristics:

- A stand of Ancient Woodland that does not obviously originate from planting.
- Having birch occurring on disturbed ground.
- Woods containing self-grown sycamore with a scattering of conifers or sweet chestnuts.

The woodlands are of great conservation value as they are:

1. Ancient in characteristic.
2. Derived from pasture and contain features recognised as being of a high value amongst ancient woodlands.
3. Relatively rich in species when compared with woodlands of the same type.
4. Diverse in supporting both woodland species and those typifying heathland habitats.

The site is recognised by Hampshire County Council as being of a standard to be classified as a Site of Importance for Nature Conservation (SINC). SINC's will be identified in the Local Plan in the future and a policy will be framed constraining any damaging operations to the site.

No other conservation status has been assigned to date, but it has been suggested that the archaeological structures found within the woodlands be registered with English Heritage / Hampshire County Council, and that Local Nature Reserve status is sought from English Nature.

#### **2.1.1 The Planning History of the Site**

The development at Chandlers Ford is one of five principal growth sectors in south Hampshire. The policy history originated in October 1988 with the Extension to Valley Park Planning Brief (Draft) published and land for 1500 dwellings identified. The development was designed to meet housing requirements by concentrating development to minimise the impact on the countryside and not overload existing town facilities. The allocation of about 900 dwellings in this area was a requirement of the South Hampshire

Structure Plan: First Alteration for the period to 1996, with an outline consent for a further 550 dwellings given in March 1997. The development around the woodlands was described in the Test Valley Borough Local Plan in 1992 as "...the option least damaging to the wider landscape, countryside gaps and ecological interests is to allocate land to the west of the existing growth sector (Chandlers Ford)".

### **2.1.2 Operations Likely to Damage Site**

- Further development of housing into woodland areas
- Destruction of ancient banks and field systems
- Use of pesticides and herbicides without out proper guidance
- Use of heavy machinery leading to soil compaction
- Too many fire sites for burning brash
- Allowing 'right to roam' policy over entire site
- Use of ill equipped / advised forestry contractors
- Planting of non-native stock
- Allowing invasive species to out-compete native flora
- Use of fertilisers / manure or allowing dumping of garden waste which increases soil nutrient levels leading to higher levels of competition
- Dumping of any other substances damaging to flora
- Resumption of game management
- Change of soil structure and pH
- Construction or maintenance of pipelines / cables above or below ground
- Erection of permanent structures within woodland
- Removal of any flora by public
- Release of non native species of fauna and flora
- Construction of roads / tracks through woods
- Drainage of damp areas
- Change of water table levels
- In-filling of ancient ditches
- Extraction of minerals - including drilling

- Killing or removal of any animal from site

### **2.1.3 Site Definition and Boundaries (See Map 2)**

Valley Park Woodlands cover an area of approximately 42.5 hectares (104.9 acres). The site is located in the south of the Borough of Test Valley, north of Chilworth, east of Chandlers Ford and west of North Baddesley. Flexford Road borders the north of the site with Great Covert to the east, Knightwood Road to the west and Castle Lane to the south.

## **2.2 Evaluation of Features**

### **2.2.1 Criteria for evaluation**

#### **2.2.1.1 Size**

The nature conservation value of woodlands increases with size, more so if they are areas of ASNW. Therefore Valley Park is a valued conservation site and is large enough to be managed sustainably to increase this value.

The nature of the site being that the woodlands are in five separate blocks that are at present not linked, does mean that species movement is restricted and this may have repercussions on the stability of the endemic gene pool (Single Large or Several Small and Island Biogeography theories).

#### **2.2.1.2 Diversity**

There is a wide range of habitats including hazel coppice, oak and ash high forest, birch colonisation, heather regeneration, veteran beech trees, open rides, glades, woodland ponds, sycamore invasion and areas of wild flowers and orchids.

The character of the site allows a large number of Ancient Woodland Indicator Species to be found that covers an extremely diverse range of woodland plants.

The species associated with the wet alder coppice is of considerable value and is becoming increasingly scarce nationally and is therefore listed in the European Community's Habitat Directive.

#### **2.2.1.3 Naturalness**

Virtually all habitats in Britain have either been created or affected to some extent by human intervention. Woodland sites that have maintained a continuous cover of trees are more usually more valuable than those that have suffered a break in continuity. The primary woodland was cleared millennia ago, and as described in 1.2.3.2, the land use before the present woodland cover was probably intensive agricultural and common land. This in no way should detract from the value of the site as semi-natural species have

become well established. The spread of non-native species that change the character of natural sites is a national problem and shows a lack of management since traditional woodland skills deteriorated.

A useful method of gauging the naturalness of woodland is to measure the number of Ancient Woodland Indicator Species to be found. Because of their almost incapability to spread back into areas fragmented from the historic woodland coverage, many of the Indicators are absent from re-established woodland. Therefore they are reliable indicators of ancient woodland. All of the ASNW in Valley Park are above average in the number found in comparison with other woodlands of their size and type. Details of this survey can be seen in Appendix VII.

#### 2.2.1.4                      Rarity

The archaeological features within the woodlands are of great rarity and importance and sympathetic management on and around these structures must be practised.

The ecology of ASNW's are important habitats and therefore should be conserved as much as possible. With further management, the diversity and abundance of species including those listed as Ancient Woodland Indicators (that only establish after long periods of time in stable woodland conditions) should hopefully increase. Further surveys of higher and lesser plants are required to highlight rarities.

#### 2.2.1.5                      Fragility

The natural trend of woodlands is for succession climax to high forest with large mature trees and periodic open glades around fallen trees. If non-native species including sycamore are allowed to continue to shade out native stock, then native plant species deemed as valuable will be lost. Continuing management, such as removal of highly competitive species and coppicing of hazel, will allow further growth of more ecologically important species.

The natural trend for open grass areas is for seral succession to rankness, scrub and eventually woodland. The open grass areas and existing heath on site will require constant management to prevent these habitats scrubbing up and losing their ecological distinctiveness.

The development of former agricultural land around the woodlands has increased the human pressure on the site with constant risks of littering, fires, vandalism and habitat destruction.

#### 2.2.1.6                      Typicalness

The site is typical of lowland deciduous woodland over underlying chalk with acidic clay soils.

#### 2.2.1.7 Recorded History

Extensive prehistoric archaeological features have been discovered in Valley Park and these results can be seen in the Valley Park Archaeological Earthwork Recording Survey (see Subsection 1.2.3.2 Past Land Use), which includes more recent historical evidence.

#### 2.2.1.8 Position in Ecological Unit

The spread of development in the area has turned the site into an ecological island. This will have implications on the movement of species between the separate woodlands on site.

The north end of Skys Wood and Clothiers Copse are within close proximity to the wooded area of Castle Hill (across Flexford Road), and may act as a reservoir for species to cross onto the site. There is a similar link to the west of Zionshill Copse with Great Covert; therefore development of this site should be minimal, as it is the only other piece of woodland which could act as a link.

#### 2.2.1.9 Potential Value

The site has suffered due to a decline of traditional management that created the historic nature of the site, with techniques including coppicing and woodland pasture no longer being practised.

Reinstating coppice rotation, the removal of invasive species and sympathetic woodland management will undoubtedly lead to an increase in diversity and value. The site has high potential for development as a resource for environmental education involving both local schools and residents.

The site also has potential for achieving status as a Local Nature Reserve.

#### 2.2.1.10 Intrinsic Value

The site is important to the local residents who use the area for a number of different reasons (see Subsection 1.2.3.4 Public Interest). Many of the residents stated that the woodlands around the site were a salient reason in finalising a move to the new development. The wild nature of the site is a strong contrast to the surrounding highly well kept open spaces and is of inherent value to wildlife and residents.

### 2.2.2 Confirmation of Important Features

*Table 6. Confirmation of Important Features*

Feature	IMPORTANCE		
	National	County	Local
Ancient Semi-Natural Woodland	*		*
Secondary Woodland			*
Alder Carr	*	*	*
Wet Meadow			*
Open rides / glade			*
Hazel Coppice		*	*
Archaeological structures	*	*	*
Heathland	*	*	
Woodland ponds			*

### 2.2.3 The Site in a Wider Perspective and Implications for Management

The importance of the site for local residents, as well as the flora and fauna, can not be overstated. The on going development northwards from Chandlers Ford and the extensive development in other areas of Hampshire, has meant that more and more areas of conservation are lost.

### 2.2.4 Specified Limits

Heathland:	Should not be allowed to scrub up
Coppice:	No more than 25% canopy cover from standards
Non-natives:	Prevent further spread
Bracken:	Prevent further growth by cutting and spraying in active areas
Archaeological features:	Prevent further degradation of banks and structures
Grass rides:	Keep maintained to prevent loss of habitats
Bare ground:	No more than 20% of site to be bare ground
Seasonal woodland ponds:	Prevent further shading by trees
Sycamore:	Cut stump treatment to prevent further spread

### 2.2.5 Ideal Management Objectives

- To maintain and enhance existing habitat diversity
- To conserve and restore area of existing heathland
- Coppice neglected alder in Little Covert to preserve historic stools

- Coppice hazel throughout site
- Reinstate coppice in Clothiers Copse
- Plant with native stock areas previously felled for game crops
- Meet all legal obligations
- Increase educational value of site
- Increase public access and awareness while restricting access to certain areas
- Create circular nature trail through all separate areas of woodland
- Remove all non native species
- Actively control invasive species eg bracken
- Thin mature oaks to benefit most favourable individual trees
- Enhance the biodiversity of the site
- Control areas specifically for dog exercisers
- Prevent vandalism and dumping of material on site
- Prevent further damage to archaeological features
- To designate Valley Park Woodlands as a Local Nature Reserve
- To encourage further volunteer activity from local residents
- Compile base-line environmental records of fauna and flora on site using volunteer help
- Continue with aerial and fixed point photography of site
- Create sense of 'ownership' of site with local residents
- To enhance the diversity of rides and glades by mowing grasses at differing sward heights
- To remove all cuttings from site to lower levels of nutrients within soil to encourage wild flowers
- To provide interpretation boards and information leaflets for users of site
- To keep recreation activities damaging to site separate from the woodlands
- Create a mosaic of uneven aged stands

## **2.3 Factors Influencing Management**

### **2.3.1 Natural Trends**

The trend of the site is a reversion to high forest with natural clearings around fallen trees. This would lead to a decline in light demanding species, such as wild flowers, albeit with a gain of others. The alder and hazel coppice, which are historically important as well as beneficial to wildlife, will become neglected and single themselves to create high forest. Areas of open grass would scrub up and revert to woodland with the loss of the endemic species. Non-native and invasive species, if not actively managed, will spread and lead to a change in the ecological character of the site. Grey squirrel and roe deer may require positive management if the level of damage becomes unacceptable. If control is not acceptable, then all areas of coppicing must be fenced resulting in higher costs.

### **2.3.2 Human Induced Trends**

Excessive recreational pressure on the site will disturb the wildlife and habitats, especially the larger mammals and nesting birds. Woodland sites in close proximity to housing are often seen as a waste ground of low value that can be used as a free dumping ground. Littering and fly tipping of domestic, industrial or garden waste is a danger to both humans and wildlife and should be discouraged. Regular clearance of litter and a low tolerance level to littering should be adopted. Any unauthorised vehicular access to the site will increase the level of disturbance to soils and wildlife. Dog fouling is a serious problem, as is the exercising of dogs without leads in a conservation area. Other domestic pets, such as cats, are also a major disturbance to small mammals and birds.

Vandalism of the site is regarded as a problem in the future.

### **2.3.3 External Factors**

Any change in the water table over the entire site will have a detrimental effect on the condition of the mature oaks and beech on site. A fall in water level of the stream through Little Covert will lead to a decline in species associated with waterlogged soil.

There is a possibility of pollution of the soils and waterways surrounding the site due to the amount of urban run off from houses and roadways.

Further development around the area may increase the isolation of the woodlands to a greater extent.

### **2.3.4 Obligations**

Local Authorities have an obligation to the residents in how open spaces are managed and also an obligation to preserve areas for wildlife conservation with public consultation under the guidelines of Local Agenda 21. The areas of open spaces owned by the council must therefore be safe, clean, satisfy local requirements, be managed to the highest standard available and confer with respective byelaws.

Permissive paths are the council's property and are therefore obliged to keep them to the required standard. The two Public Rights of Ways which cross the site remains the property of Hampshire County Council and are therefore their responsibility to maintain.

The council is obliged to seek permission from the Secretary of State to undertake work on trees covered by Tree Preservation Orders (TPO), which all of the trees in Valley Park are (Tree Preservation Order no. TPO TVBC 190 made in 1989). A felling licence is also required from the Forestry Commission as the amount of timber to be removed is more than the 5 m<sup>3</sup> per calendar quarter permitted without licensing.

To help cover the costs of maintaining the woodlands, a grant from the Forestry Commission will be sought under the Woodland Grant Scheme (WGS), and the Woodland Improvement Grant scheme (WIG). A separate felling licence is not required if a WGS is approved. Under these schemes, the council will be obliged to carry out works when and how as stated in the contract (Contact Hugh Milner, Forestry Commission, South East England Conservancy, Alice Holt, Wrecclesham, Farnham, Surrey GU10 4LF Tel. 01420 23337). Other grants such as the Countryside Stewardship Scheme from the Countryside Commission may be sought in the future

If the site achieves LNR status there will be an obligation of the council to maintain the value of the site.

#### **2.3.4.1 Past Grants**

There was a previous Woodland Grant Scheme in operation under the title of Baddesley Woodlands which incorporated Valley Park Woodlands and Castle Hill to the north of the site. Startermile Limited, c/o Woolley and Wallis, 4-6 Bell Street, Romsey, Hampshire made the application on the 13.4.1989. Forestry Commission reference number PW 4514/4. The applicant failed to comply with the contract on various points and the entire grant was reclaimed in 1994. Remnants of failed planting can be seen in many of the woods, especially with the use of protective tree shelters placed the wrong way up.

### **2.3.5 Health and Safety of Employees**

Procedures will be followed as laid out by Test Valley Borough Councils Health and Safety Policy and through liaison with the Health and Safety Officer.

### **2.3.6 Legal Constraints**

These include TPO's, any overhead or underground cables, Public Rights of Way (PROW), felling regulations as of Forestry Act, maintenance of open spaces, access for any Wayleaves on site and any potentially damaging operations.

### **2.3.7 Management Constraints**

Valley Park Woodlands are to be managed by Test Valley Borough Council. There will therefore be constraints on management techniques used in the woodlands through conflicting interests with local residents and interested organisations.

Many operations will need high levels of publicity to advise residents of the reasoning behind certain seemingly destructive activities.

Time of year and weather may constrain management operations. Cutting of timber after February is not to be considered because of the disturbance to nesting birds. Extraction of timber should be confined to times when least disturbance will be incurred by wildlife and soil compacted.

### **2.3.8 Impact Assessment**

An internal Environmental Impact Assessment (EIA) should be carried out before any operation commences on site. This could specify limits of disturbance that may occur from an operation and help in the design of a method statement.

## **2.4 Operational Objectives and Management Options**

### **2.4.1 Rationale for Proposed Management Options**

The primary aim for Valley Park Woodlands is to preserve and enhance the ancient woodland characteristics that are deemed as being richer in species composition than woodlands that are less well established. Preventing succession climaxing to high forest by creating rides, glades, uneven-aged stands and coppice rotations allows an increased level of ecological diversity.

The creation of a conservation site is highly important in such a large area of new development. This is not only an important site locally, but also nationally as the woodland sites like Valley Park come under increasing pressure from intensified agricultural practices and development. The need for preservation of these sites for wildlife, and for the enjoyment of the local residents can not be overstated. Increasing the public awareness and the economic sustainability of the woodlands will increase the value of the site to the council.

To achieve this goal, the woodlands will be actively managed to benefit conservation and public recreation. Historic management has shaped the character of the woodland with techniques such as coppicing, which was a traditional method of woodland management that has its origins in prehistory. Coppicing is now seen as a major benefit to conservation because of the periodic cutting of the stool allowing light to reach the woodland floor and thereby encouraging light demanding wild flowers to grow.

Non-native species present in natural woodlands, particularly sycamore and rhododendron can enhance the floral diversity of a site. However, if the proportion of these non-native species becomes too great, then only through direct management of these alien species will the loss of the natural woodland state be prevented. Invasive species such as bracken and bramble, if left unmanaged, will grow to such an extent that they swamp other flora and shade out light demanding species leading to a loss of diversity.

## 2.4.2 Identification of Operational Objectives

### 2.4.2.1 Conservation of Features

Long term aims for the site can be categorised into 4 Management Options:

- A - Active Conservation Management
- B - Monitoring and Research
- C - Education and Access
- D - Administration and Public Relations

*Table 7. Conservation of Features*

<b>Feature / Habitat</b>	<b>Management Option</b>	<b>Outline Prescription</b>
Ancient Semi-natural Woodland	A	Remove non-native species and thin to benefit best individuals
Secondary Woodland	A	As above
Alder Carr	A	Coppice neglected alder to prevent loss of stools - either sell as standing timber or use contractors
Open rides / glades	A	Cut grass at 3 differing sward heights along ride - cut in spring (before April) or autumn (before late September)
Hazel coppice	A	Coppice percentage of trees in winter in coupes throughout site to reinstate 8 year rotation
Heathland	A	Restore heath species (heather) by controlling bracken and removing trees and shrubs in compartment 13c
Butterflies	B	Involve and support local residents with butterfly transects on site to compile base line information. Send results to Butterfly Conservation

Dragonflies & Damselflies	B	Support transects of dragonflies on site to compile base line information. Involve British Dragonfly Society and other local naturalists
<b>Feature / Habitat</b>	<b>Management Option</b>	<b>Outline Prescription</b>
Birds	B	Conduct a Common Bird Census (CBC) with assistance from British Trust for Ornithology (BTO) members and local residents
Mammals	B	Record and note species seen by local residents and Officer to compile database
Other invertebrates	B	Survey area for invertebrates
Public access	C & D	Create permissive paths through site - circular route and leaflets of site
School involvement	C	Involve local children in projects on site
Interpretation of features	C & D	Commission interpretation boards for where required, especially coppice coupes, new planting and archaeological features
Control of invasive species	A	Control where appropriate or possible
Increase public awareness	D	Through interpretation boards, talks, local newsletters and work parties
Non-native species	A	Remove from site where possible. Leave sycamore in compartment 12a as established on archaeological features. Allow ash to regenerate and then remove sycamore

Management options provide a broad guide for the operational management of the site if used in conjunction with appropriate objectives. They also provide a standard reference

for inter-site comparisons. Therefore, for Valley Park Woodlands the following categories have been chosen using the Management Option codes:

- A3** *Active management* - create or maintain a defined habitat
- B3** *Encouragement and Increase* - action required to increase the number of a species or group of species
- C4** *Open Facilities & Public Access* - any request to carry out study/research will be granted and encouraged. Restricted Access policy with use of permissive paths and byelaws to protect sensitive areas
- D3** *Active Publicity* - site to be used for education, locally publicised, interpretative materials such as booklets and displays to accompany nature trails produced.

#### 2.4.2.1.1 Charcoal Production

Material from coppicing, thinning and removal of non-native species could be used to produce charcoal to be sold in local shops. This would require full time supervision during a burn plus the purchase or hire of a suitable kiln. Selling appropriate timber as a standing crop to a recognised producer may lower these capital costs.

#### 2.4.2.2 Legal and Other Obligations

##### 2.4.2.2.1 Involvement with Other Parties

Relations with local residents and users of the woodlands should be maintained and increased through active publicity, especially before new projects commence in the close proximity of housing. This can be achieved by the use of newsletters and both permanent and temporary interpretation boards. The objective of the site is being an area of nature conservation not an amenity area for local residents should be made clear from the outset.

The continuation of partnerships with interested organisations such as the British Trust for Conservation Volunteers (BTCV) would provide a pool of extra volunteer labour.

##### 2.4.2.2.2 Public Access

The nature of the site with its close proximity to housing will result in heavy usage of the site. An open access policy could lead to a destruction of habitats, so restriction on access to parts of the site is envisaged. Monitoring of public use should highlight the need for a greater provision of access and visitor management in the future.

#### 2.4.2.3 The Provision of Facilities

##### 2.4.2.3.1 Paths

At present there are many informal paths through the woodlands. To cater for public access, a network of waymarked permissive paths will be created as part of a circular walk that may link into a nature trail. The paths must be 1.2 metres wide in a woodland habitat increasing to a width of 2 metres in open areas. These paths must be kept clear at

all times. Some residents, especially dog walkers who will be asked to keep dogs on leads in some areas, will not use these permissive paths and will walk where they wish. Zoning of the public with fencing may be appropriate.

#### 2.4.2.3.2 Boardwalk

A boardwalk is proposed through the alder Carr of Little Covert to link up the two housing estates to the west of Knightwood Road in the south of the site. This path may also travel west along the stream to link up with the second public right of way between the site boundary and Great Covert (see 1.1.7).

#### 2.4.2.3.3 Interpretation

Interpretation boards are to be placed at the main entrance points to each of the woodlands. Smaller information boards are to be designed and placed at each entrance point informing the public of the name of the wood and vital information. Other boards can be placed at focal points of interest around the woods, by coppice coupes or rides for example which explain the reasons why a certain technique is being used.

Interpretation of the archaeological features should be low key and outline the history of the site in context with the woodlands.

#### 2.4.2.3.4 Infrastructure

Construction of plays areas (football pitches, BMX track, artificial turf etc), and Informal Play Areas (IPA's) are planned for the residents of the new development in open areas outside the woodlands. A wide stretch should be left where these areas directly adjoin woodland boundaries. These can then be left or cut on a long rotation to create an edge for the benefit of wildlife.

#### 2.4.2.3.5 General Litter and Dog Litter Bins

Litter is a potential hazard to wildlife and the public. A low tolerance to littering should be adopted and any litter should be dealt with accordingly.

Dog waste is a contentious issue. Children regularly play in the woodlands, and apart from the danger to wildlife, it is unsightly and off-putting to residents. Dog Bins will be strategically placed where the highest concentration of fouling occurs for dog walkers to use and these will be emptied regularly.

The use of fines could be imposed on non-compliance with dog fouling, fly-tipping regulations and byelaws.

### **3. PRESCRIPTIONS**

This section describes the management objectives in detail and ascribes specific prescriptions to achieve them. The woodlands have been divided into compartments that largely relate to either habitats or areas requiring different management.

#### **3.1 Compartment Prescriptions and Management Proposals**

##### **3.1.1 Project Prescriptions**

##### **Clothiers Copse and Knightwood -See Map 10**

##### **Compartment 1a: *Oak/Beech dominated ASNW***

- Remove sycamore and control regrowth
- Gap up hedges with hazel and hawthorn along entrance road off of Flexford Road
- Sympathetic management over archaeological features. Two possible options: a) remove trees over bank and prevent further growth, or b) leave existing trees, remove those only in danger of falling which could result in root disturbance to soil structure. The best course of action will be decided after consultation with Berkshire Archaeological Services with the aid of the completed preliminary survey in February 1999.

##### **Compartment 1b: *Open Area- Remaining Beech and Oak Crown Damaged ASNW***

- Restock with local provenance oak (80%) and beech (20%) at 2 x 2 metre spacing in tubes. Reuse tubes from failed previous planting scheme
- Control bracken
- Remove sycamore and treat stumps

**Compartment 1c:** *Oak/beechn Dominant ASNW*

- Remove sycamore and treat stumps in south west corner
- Thin where required to favour best individual trees

**Compartment 2a:** *Cherry/Oak ASNW*

- Area with pond – remove invasive species
- Clear vegetation around pond

**Compartment 2b:** *Ash/Birch Secondary Woodland with Open areas*

- Remove sycamore/robinia and treat stumps
- Replant with local provenance oak and beech at 2 x 2 metre spacing

**Compartment 2c:** *Ash/Birch Secondary Woodland and Oak/Beech ASNW*

- Area of Veteran Beech Tree – remove holly from base of tree
- Remove sycamore and treat stumps
- Site of new footpath/cycleway to Knightwood School

**Compartment 3a:** *Ash/Oak ASNW*

- Restock open areas in 1.2 metre tubes with local provenance oak, ash, blackthorn, hazel, hawthorn and salix
- Conservation coppicing/plashing of hazel
- Minimal intervention
- Remove sycamore

**Compartment 3b:** *ASNW Invaded by Birch/Robinia*

- Clear fell all trees except oak - monitor robinia regrowth and control if necessary
- Fence whole area for rabbit and deer protection
- Coppice existing hazel and restock with hazel to required stool density
- Stump back hazel in year 5 (cut all hazel to ground level)
- Create 8 coupes (therefore 8 year rotation), in chequer-board fashion

Yr 1	Yr 3	Yr 4	Yr 2
1	7	3	5
8	2	6	4

- After stumping back, commence rotation for coupe 1
- Design interpretation boards for public awareness

**Compartment 3c:** *ASNW Strip between bank and Road, Invaded by Sycamore/Robinia*

- Remove robinia and sycamore and treat stumps
- 'Gap-up' where necessary with local provenance hawthorn, blackthorn, field maple and oak

**Compartment 3d:** *Mature Oak Dominated ASNW*

- Remove sycamore and treat stumps
- Remove any trees interfering with mature oak crowns

**Skys Wood and Tredgoulds Copse - See Map 11**

**Compartment 4a:** *Dense Birch with Aspen and Oak ASNW*

- Remove sycamore and treat stumps
- Conservation coppicing of hazel on 8 year rotation and slashing to 'gap up'
- Allow natural regeneration

**Compartment 4b:** *Woodland Edge ASNW*

- Keep areas open by mowing
- Cut brambles etc in scalloped areas on long term rotation so as to create ecotones along side of track
- Coppice any trees or shrubs along track

**Compartment 5a:** *Oak/Ash Dominated ASNW with Open Rides*

- Limited intervention area
- Treat as oak/ash high forest
- Remove sycamore and invasive species
- Allow natural regeneration, especially in open rides
- Encourage stand of Aspen (*Populus tremula*), between 5a & 5b

**Compartment 5b:** *North to South Alignment Open Ride - Previously ASNW*

- Cut grass using a tractor-drawn swipe or mower and the material removed for the benefit of butterflies and invertebrates. Divide the ride into roughly 3 parallel zones with scalloping along edges. Cut the central area to a short sward twice yearly– first cut in march with a second cut in October. Cut the second zone (2-3 metres), on a 4-year cycle; again at the same times as for the central zone. Cut the third zone (2-3 metres), on a 8 year cycle following the same time frame as above.
- Prevent brambles swamping ride
- Control bracken by cutting in mid June and late July and remove material. Repeat for 3-4 years or until under control. Spray with herbicide (Asulox), as directed if cutting not meeting required specifications
- Remove remnants of pheasant rearing equipment

**Compartment 5c:** *Area of Previously Cleared Oak ASNW for Game Crops*

- Remove sycamore and control regrowth
- Fence area using the chicken wire of the old pheasant release pen
- Replant with local provenance oak/ash mix
- Remove remnants of pheasant rearing equipment

**Compartment 6a:** *Secondary Woodland with High Density of Sycamore and Chestnut*

- Remove sycamore and control regrowth
- Encourage natural regeneration of native species
- Open clear trees around pond area leading to border shrub planting
- Gap up along road edge with hawthorn, blackthorn, oak and ash
- Coppice available hazel along ride edges
- Keep rides open for permissive paths and extraction

**Compartment 6b:** *Open Glade Area*

- Control bracken by cutting in mid June and late July and remove material. Repeat for 3-4 years or until under control. Spray with herbicide when plants green if needed (Asulox)
- Remove any trees in open area
- Mow grasses and remove material. Cut grass at 3 different sward heights around glade: Divide the ride into roughly 3 parallel zones with scalloping along edges. Cut the central area to a short sward twice yearly– first cut in march with a second cut in October. Cut the second zone (2-3 metres), on a 4-year cycle; again at the same times as for the central zone. Cut the third zone (2-3 metres), on an 8-year cycle following the same time frame as above.

- Scallop edges of glade and coppice any suitable trees

**Compartment 6c:** *Area of Semi-mature Oaks Outside of ASNW Boundary*

- Remove sycamore and treat stumps
- Maintain as high oak woodland through natural regeneration
- Thin around most favourable trees

**Compartment 7a:** *Oak ASNW Cleared in the Past / Failed Replanting Scheme*

- Restock with local provenance oaks in 1.2m tubes to required density (2m x 2m spacing) and maintain

**Compartment 7b:** *Oak ASNW Over Depleted Hazel*

- Remove sycamore, rhododendron and other non-native species and control regrowth
- Allow natural regeneration
- Leave remaining conifer trees

**Compartment 7c:** *Open Spaced Oak ASNW*

- Remove non-native species (rhododendron, sycamore) and control regrowth
- Allow natural regeneration which will shade out bracken
- Remove remnants of pheasant rearing fencing which could possibly be used as a deer fence in other planting areas e.g. 7a

**Compartment 8a:** *Open Spaced Oak ASNW*

- Remove non-native species and control regrowth
- Thin oaks where needed to favour best individuals

**Compartment 8b:** *Open Ride of North South Alignment*

- Maintain open space and create differing sward heights for butterflies following prescriptions as for compartment 6b
- Scallop woodland edge
- Remove non-native species and control regrowth
- Control bracken following bracken control prescriptions as for compartment 6b

**Compartment 8c:** *Area of Oak ASNW over Depleted Hazel*

- Coppice and slash remaining hazel
- Selectively fell birch to favour oak and hazel
- Remove sycamore and control regrowth

**Compartment 9:** *Late Pole Stage Alder Coppice with Semi-Mature Oak ASNW*

- Coppice alder (at a height of 6-9"), and recommence 20 year rotation. Count stools and divide by 20 to achieve yearly cut rate
- Retain oaks around perimeter
- Remove sycamore and control regrowth
- Coppice derelict hazel stools

**Zionshill Copse - See Map 12**

**Compartment 10a:** *Oak Dominated ASNW with Hazel/Cherry*

- Mow grass along side of track to favour butterflies and invertebrates
- Conservation coppicing/plashing of hazel in north west corner of compartment
- Lay boundary hedge to north of compartment and gap up where necessary with hawthorn, hazel and blackthorn
- Remove sycamore and control regrowth

**Compartment 10b:** *Oak Dominated ASNW with Dense Holly Understory*

- Thin oak at 20% basal area (1 in 5)
- Reduce holly density by 30-40%
- Remove sycamore and control regrowth

**Compartment 11:** *Oak/Ash Dominated ASNW with Hazel Understory*

- Selectively thin birch
- Remove sycamore and control regrowth
- Conservation coppicing and plashing of hazel
- Dead hedge to protect coppice using cut material
- Remove trees to benefit best individuals
- Lay boundary hedge to north of compartment and gap-up where necessary with hawthorn, hazel and blackthorn

**Compartment 12a:** *Sycamore Dominated ASNW - Area of Archaeological Importance*

- Leave late pole stage and larger sycamore over archaeological features (possible Roman field systems), apart from those in danger of windblow.
- Prevent further spread of sycamore by pulling whips by hand and cut stump treatment
- Plant ash in 1.2 metre tubes at 2m x 2m spacing in groups of 5
- Thin sycamore to favour ash growth
- Allow ash natural regeneration under sycamore
- Remove sycamore when ash established and treat stumps

**Compartment 12b:** *Sycamore Dominated ASNW*

- Remove sycamore and treat stumps
- Allow oak/ash natural regeneration

**Compartment 13a:** *Semi-mature Oak Dominated ASNW*

- Selectively fell oak and birch to favour best individual oaks
- Remove sycamore and treat stumps
- Leave dead wood where possible
- Coppice hazel on northern boundary

**Compartment 13b:** *Small Glade on ASNW with Birch Colonisation*

- Remove birch in centre of glade allowing density of heather and wild flowers to increase
- Allow birch regeneration to reach glade sides to create less severe boundary
- Coppice woodland edge on long term rotation (12-15 years) so as to create woodland edge
- Remove any bracken by hand

### **Compartment 13c: *Cleared Area of Oak ASNW with Heather Regeneration***

- Liase with Hampshire County Council Officer for Heathland
- Remove 99% holly leaving best individual trees for butterflies (e.g. holly blue), and as feed source for small birds
- Remove birch/rhododendron and control regrowth
- Coppice suitable trees around edge of glade
- Rotovate soil to increase speed of heather recovery - optional
- Remove dead bracken material and 2" top soil - optional
- Leave to see results (2 yrs)
- Control bracken by cutting in mid June and late July and remove material. Repeat for 3-4 years or until under control. Spray with herbicide (Asulox), as directed if cutting not meeting required specifications
- Allow heather to regenerate
- Remove tree shelters (save if reusable) and transplant any growing oaks to glade edge

### **Compartment 13d: *Oak Dominated ASNW***

- Remove sycamore and treat stumps
- Allow natural regeneration of oak
- Selectively thin birch
- Selectively thin 20% basal area of oaks
- Remove interfering trees from mature oak crowns to favour best individual trees

### **Compartment 13e: *Cleared Wide Game Ride of East to West Alignment***

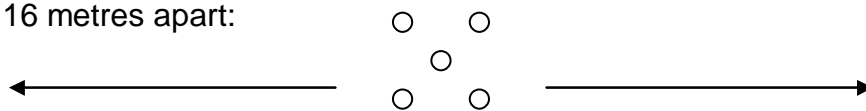
- Add sinuosity to track by planting native provenance shrubs, trees and wildflower mix in 4 clumps of 0.1 ha each along ride edge for benefit of butterflies and other woodland edge species
- Cut existing grass and spray with Roundup. Prepare ground in September for tree and shrub planting in February to March. Establish wildflowers under shrub/tree canopy with autumn broadcasting and rolling with a number of plugs at the same time
- Mow grasses and remove material. Cut grass at 3 different sward heights. Divide ride into three parallel zones. Cut the central area to a short sward twice yearly– first cut in March second cut in October. Cut the second zone (2-3 metres), on an 4-year cycle; again at the same times as for the central zone. Cut the third zone (2-3 metres), on an 8 year cycle following the same time frame as above

- **Compartment 13f:** *Oak Dominant ASNW over Archaeological Features*

- Possible remains of prehistoric settlement
- Sensitive management required – remove trees which may be prone to wind-throw and therefore liable to destroy subsoil archaeological remains

**Compartment 14a:** *Oak/Ash Dominated ASNW over Hazel Coppice*

- Remove sycamore and control regrowth
- Remove birch/ash over hazel while leaving oak
- Coppice and slash hazel and reinstate 8 year rotation
- Gap up hazel to required density
- Create dead hedge using cut material and sycamore poles cleared from cmpts 14a, 14b and 14c
- Restock oak standards in 1.2 metre tubes in-groups of 5 as below. These groups to be spaced 16 metres apart:



- leave screen to track E

**Compartment 14b:** *ASNW Invaded by High Density of Sycamore*

- Remove sycamore and control regrowth
- Allow natural regeneration of ash and oak
- Selectively coppice hazel where required i.e. over areas of twayblades and orchids to south-west of compartment

**Compartment 14c:** *Oak/Ash Dominated ASNW with Low Density of Beech and Sycamore*

- Remove sycamore and treat stumps
- Thin by 20%
- Allow natural regeneration
- Decide on further management after removal of sycamore

## **Little Covert - See Map 13**

### **Compartment 15:** *Neglected Alder Coppice Dominated Secondary Woodland*

- Random coppicing of alder to prevent loss of habitat - count stools and divide by 20 for each years cut
- Reintroduce 20 year coppice rotation
- Remove sycamore and control regrowth
- Leave screen of oaks around compartment
- Clean out ponds and stream
- Selectively thin trees around ponds
- Fence around woodland
- Construct boardwalk

### 3.1.2 Project Register and Group

- A - Administration
- R - Records
- M - Management

Table 8. Summary of Management Projects

PROJECT	COMPARTMENTS	GROUP
Reinstate hazel coppice	3b, 14a	M
Continuation of coppicing and plashing	3a, 4a, 8c, 11, 13a, 14a, 14b	M
Coppicing of Alder	9, 15	M
Remove sycamore and treat stumps	Whole site (apart from 12a)	M
Remove litter	Whole site	M & A
Other new plantings	1b, 2b, 3a, 3c, 5c, 7a, 12a, 13e, 14a	M
Lay and gap-up hedges	1a, 6a, 11	M
Waymark permissive paths	Whole site	M & A
Ride management	4b, 5b, 6b, 8b, 10a, 13e	M & A
Maintain glades	6b,	M
Regeneration of heather	13b, 13c	M
Control bracken	5b, 6b, 8b, 13b	M & R
Construct deer and rabbit fence	3b, 5c	M
Remove other non-native species	Whole site	M
Thin to favour best individuals	Whole site	M
Construct boardwalk	15	M
Interpretation boards	Whole site	A
Sympathetic management over major archaeological features	1a, 1b, 12a, 13f	M,R, A
Clear ponds / stream	2a, 6a, 15	M
Thin oaks stands by 20%	10b, 13d, 14c	M
Education	Whole site	A & R

Table 9. Summary of Monitoring Projects

PROJECT	COMPARTMENT	GROUP
Monitor vegetation change after coppicing	3a, 4a, 8c, 11, 13a, 14a, 14b	R
Survey birds	Whole site	R
Survey dragonflies / damselflies	Whole site	R
Survey lower plants (lichens)	Whole site	R
Survey invertebrates	Whole site	R
Monitor public use	Whole sites	R
Monitor dog exercising / fouling	Whole site	R
Survey grass species on mown rides	4b, 5b, 6b, 8b, 10b, 13e	R
Monitor school usage	Whole site	A, R
Monitor mammal species	Whole site	R
Regular fixed point photography	3a, 4a, 8c, 11, 13a, 14a, 14b, 9, 15, 4b, 5b, 6b, 8b, 10b, 13e, 13b, 13c	R

### 3.1.2.1 Survey Times for Habitats and Species

Table 10. Survey Times

HABITATS AND SPECIES	TIME TO SURVEY
Freshwater	May - September
Woodlands	March - July (spring vegetation: March - April)
Heathlands	June - September
Mosses & lichens	All year, but best after rain
Fungi	March - May, and September - November
Higher plants	April - November
Birds	March - June (breeding), October - March (overwintering)
Invertebrates	April - October (breeding), October - March (overwintering)
Bats	April - October (breeding), October - March (overwintering)

## **3.2            Work Parties**

### **3.2.1           Contractors**

Contractors will carry out the majority of the work involving the cutting of timber and operations on a large scale. The problems of contractors include high financial cost, lack of enthusiasm and disregard for environmental issues. Constraints will be put on contractors to use biodegradable chain saw oil, employ most environmentally proactive woodland management techniques and extra care when extracting.

The contractors must fulfil Test Valley's Health and Safety statutory requirements as stipulated by the Health and Safety Officer.

### **3.2.2           Volunteers**

For smaller projects including coppicing, plashing, small scale planting and dead hedging, volunteer working days will be arranged for the large number of local residents who expressed an interest in practical tasks through the questionnaire sent out in the summer of 1998. Other interested volunteer parties such as BTCV, HWT, after-school groups (e.g. Duke of Edinburgh ward students from Mountbatton School), and Hampshire Conservation Volunteers will also be involved.

Problems with volunteers include Health and Safety aspects (Risk Assessments etc), sporadic attendance and different personal motivations.

Volunteers can also be involved in surveying work - butterfly / dragonfly transects, tree wardens etc. Officers of Test Valley Borough Council or interested conservation organisations could supply training for regular volunteers (e.g. BTCV Pioneer Scheme).

### 3.3 Work Schedule

#### 3.3.1 Work Programme

Table 11. 5 Year Work Schedule

OBJECTIVE	PRESCRIPTION	COMPARTMENT	YEAR				
			1	2	3	4	5
<b>Reinstate 8 year rotation hazel coppice with standards</b>	Selectively fell existing trees and restock with hazel at required density with standards at 16 metres spacing	3b				*	
		14a		*			
<b>Coppice existing hazel and create dead hedges around coupes</b>	Cut stools to ground level between October and February. Gap up where required by plashing	3a				*	
		4a				*	
		8c					*
		11	*				
		13a		*			
		14a		*			
		14b	*				
<b>Coppice alder</b>	Count stools and divide by 20 to achieve yearly cut rate between October and February	9				*	*
<b>Coppice alder</b>	Count stools and divide by 20 to achieve yearly cut rate	15	*	*	*	*	*
<b>Remove sycamore</b>	Cut trees between October and January. Treat stumps with herbicides	Whole site (apart from 12a)	*	*	*	*	*
<b>Remove litter</b>	Regular litter picking - use of byelaws and regulations for non-conformity	Whole site	*	*	*	*	*
<b>Way marking</b>	Erection of waymarking posts and creation of nature trail	Whole site	*	*	*	*	*

<b>Maintain glade</b>	Cut grass at 3 differing sward heights around glade. Remove material. Cut central area twice yearly. Cut second area on 4 year cycle and third on 8 year cycle. First cut after April and second before late September	6b			*		
<b>OBJECTIVE</b>	<b>PRESCRIPTION</b>	<b>COMPARTMENT</b>	<b>YEAR</b>				
			<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>New plantings</b>	Prepare ground in September for February to March and October to November planting <sup>1</sup>  Maintain for 3 years post planting	1b					*
		2b			*		
		3a			*		
		3c				*	
		5c				*	
		7a					*
		12a		*			
		13e	*				
<b>Lay boundary hedges and gap where required</b>	Lay existing hedges between October and February. Plant appropriate species to gap up	1a					*
		6a					*
		11	*				
<b>Ride management</b>	Divide ride into 3 parallel zones. Cut central ride twice yearly, second zone every 4 years and third zone every 8 years. All cutting to be done before April and before late September. Material to be removed and cut to add sinuosity to path. Scaloping of trees along ride edge	4b				*	*
		5b				*	*
		6b				*	*
		8b				*	*
		10a	*	*	*	*	*
		13e	*	*	*	*	*
<b>Control bracken</b>	Cut in mid June and late July and remove material.	5b				*	*

	Continue for 3-4 years or until under control. Spray with Asulox/Asulam as directed if cutting not meeting required objective	6b				*	*
		8b				*	*
		13b	*	*	*	*	*
OBJECTIVE	PRESCRIPTION	COMPARTMENT	YEAR				
			1	2	3	4	5
<b>Erect fence around new plantings</b>	Erect deer and rabbit proof fence before planting. Erect in September-December. Maybe use old pheasant release pen wire	3b				*	
		5c				*	
<b>Non-native species</b>	Remove non-natives from site by cutting and treating stumps	Whole site	*	*	*	*	*
<b>Thin oak stands</b>	Selectively thin oak stands by 20%. Remove those trees of bad form, diseased or in danger of windthrow first. Carry out operation between October and January	10b		*			
		13d			*		
		14c				*	
<b>Thin to favour best form trees</b>	Selectively thin around trees of best form to encourage crown growth and to allow light to woodland floor. Between October and January	Whole site	*	*	*	*	*
<b>Construct boardwalk</b>	Construct after alder coppiced. Carry out between April and September	15	*				
<b>Clear ponds</b>	Remove tress around pond to allow light to penetrate. Remove any fly-tipped rubbish	2a				*	
		6a				*	
		15	*				

<sup>1</sup> Dependant on local weather conditions

## **3.4 Control**

### **3.4.1 Plan Review**

A management plan is not a rigid strategy that has to be strictly adhered to. Flexibility to implement new or revised ideas should be encouraged.

The management plan should be reviewed every 5 years and the opportunity taken to revise any of the objectives or prescriptions previously stated if they are deemed to be unsuitable because of unforeseen circumstances.

An annual work programme will be created using the 5-year work schedule describing work to be carried out in the relative management year. It is hoped that TPO consent will be granted for this 5 year work schedule. A new application will be made every 5 years.

### **3.4.2 Monitoring and Progress**

Changes in vegetation occurring from management should be monitored and recorded, especially in areas of coppice, through surveying flora before and after the operation. Any changes in management of the woodlands will affect associated species such as butterflies, birds, mammals, dragonflies and other invertebrates. Regular surveying of these species by the use of transects, will create a database of baseline information allowing any changes to be monitored.

The use of aerial and fixed-point photography is recommended for monitoring the long-term changes in vegetation. Aerial photos are available from Hampshire County Council who commissions these surveys on a regular basis. Markers (either painted tantalised posts or magnetic 'Filo' markers), and compass bearings will be used to insure accurate fixed-point photographic information of ground flora - see Appendix VIII for records.