

## Stanmore Country Park management plan supplement

This document is to be read in conjunction with the management plan in Forestry Commission format, to give greater background and discussion on aims and techniques. It is based on a document dated February 1999 by the London Ecology Unit fully updated to 2017. Text in italics is taken unedited from the 1999 document.

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## **1. DESCRIPTION**

### **1.1 General**

#### **1.1.1 Location and Access**

Stanmore Country Park is a 33.3<sup>1</sup> hectare public park, situated to the north of Valencia and Glanleam Roads and east of Dennis Lane, Stanmore, in the London Borough of Harrow (Appendix 1, Map 1). It is bounded on the north by, from west to east, private grounds currently owned and occupied by the Swaminarayan Satsang - Shree Swaminarayan Temple, then the public open space of Wood Farm, and finally the public open space of Scouts' Field, part of the Pear Wood local nature reserve. To the west, south and east are housing. The national grid reference is TQ 173 929 (to the centre of the site).

The site is accessible from two places along Dennis Lane (one of which has a car-park); from Wood Farm; from Scout's Field, and from Kerry Avenue. A kissing gate and path linking the Country Park to Brockley Hill Field to the east was created in 2012/2013 but remains closed due to a dispute over land ownership. An extensive path network provides access to most of the country park, although there are no statutory public rights-of-way leading through it.

#### **1.1.2 Status**

The site is within the Green Belt in the L B Harrow Unitary Development Plan (1994) . The majority of the site is included within the Site of Metropolitan Importance for Nature Conservation, M67 ("Pear Wood and Stanmore Country Park"), as defined in Ecology Handbook 13 - Nature Conservation in Harrow (London Ecology Unit 1989). The site was declared as a country park by the Greater London Council (GLC) in 1978.

#### **1.1.3 Ownership and Tenure**

The site is owned entirely by L B Harrow.

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<sup>1</sup> SCP perimeter 17020502.kml

#### **1.1.4 Survey Information**

The 1999 document by the London Ecology Unit lists the following surveys:

Ecological survey made from 1977 to 1979 by D. Moxey (1981) (see Appendix 4)

GLEU Wildlife Habitat Survey (1984-5), site no. 29021 (parcels 6, 7 & 8) "Pear Wood, Stanmore" carried out for a report accompanying a planning application to L. B. Harrow by Maurice Pickering Associates. In 2017 we could not locate any copies of this document although they might perhaps still exist in the archives of the Harrow council planning department.

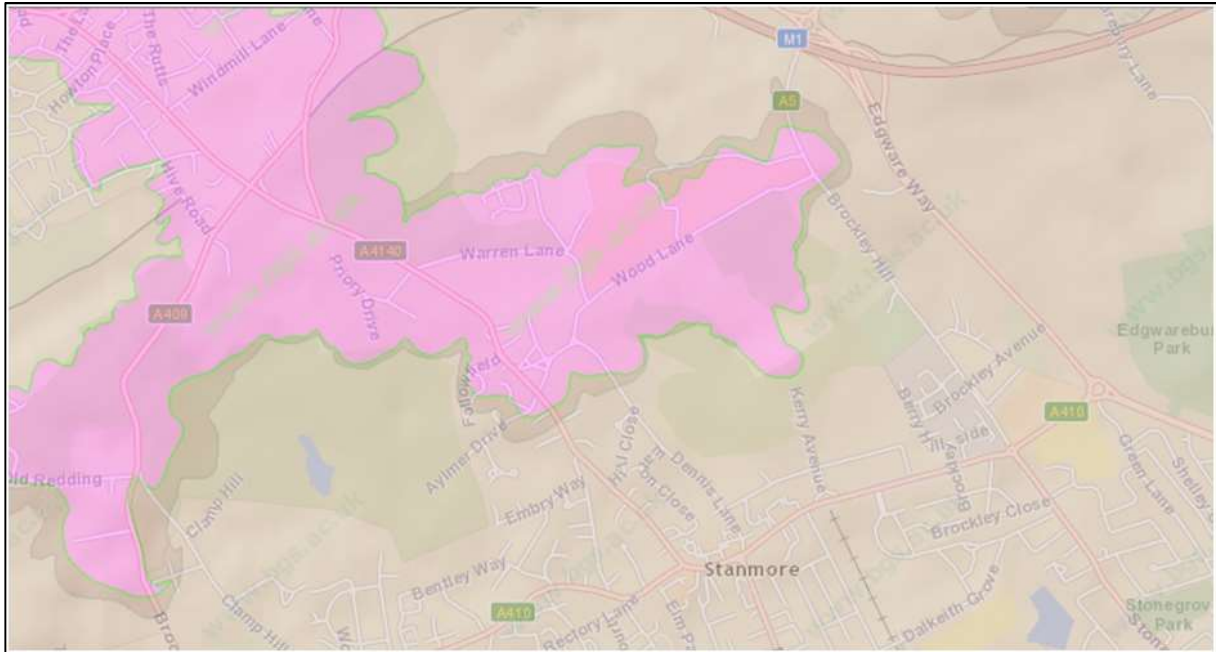
London Ecology Unit surveys 1992-1999. This is not to our knowledge accessible as a complete document although data from the London Ecology Unit surveys appeared in their 1999 document and has been entered in the HNCF database (see Appendix 3).

Howard Matthews regularly surveyed the site for ferns from July 2000 to October 2012. A summary of his work is at Appendix 5.

A phase 2 habitat survey of the southern part of 40 Acre Field (compartment 1) was carried out by Denis Vickers and Steve Bolsover in August 2013 and is summarized in Appendix 6.

## 1.2 Physical

### 1.2.1 Geology & Soils



Above: Geology of the Harrow Weald ridge, received in 2012 from Dave Brook of the Harrow and Hillingdon Geology Society. Pink = Stanmore gravel. Dark greenish fringe = Claygate beds. Remainder = London Clay

Stanmore Country Park lies principally on London Clay, which is overlain by Claygate Beds on the upper slopes in the north-west and centre of the site. The Stanmore Gravel overlays the Claygate Beds on the north-central boundary. The soils derived from these underlying strata are principally heavy clays with a neutral pH on the lower slopes, and a thinner, sandier and more acidic soil over the Claygate Beds and Stanmore Gravel on the upper slopes. However, Moxey (1981, Appendix 4) points out that patches of gravel are found south of the main band of Stanmore Gravels while elsewhere soils formed from the London Clay are admixed with sand washed down from the Claygate beds.

### **1.2.2 Topography**

The country park occupies ground sloping mainly to the south-east, from a maximum height of 130 metres at the northwest corner of Cloisters Field, compartment 11, down to 85 metres at the south-east corner of 40 Acre Field, compartment 1 (see maps 1 and 5). The fall of the slope is dissected in the west by the broad stream valley of Cloisters Brook flowing south. Two man-made depressions are situated in the south and east; one of these comprises compartment 3 (40 Acre Pit), and the other forms part of compartment 6. Both are shown on old maps to have held water in the past.

There is some debate over the origin of 40 Acre Pit; it is shown on a map of 1838 as a pond, but this is absent on later maps. One possibility is that like Pear Wod lake higher up the slope it was a reservoir, part of the system that supplied the fountains at Canons House with water. However Paul Moxey in his 1981 survey (appendix 4) argues that it was a quarry excavated for gravel or clay. The presence of an arched brick opening on the south side of the dam to the south of 40 Acre Pit supports the idea that it was not intended to fill with water.

The depression in compartment 6 was probably dug specifically to hold water and did so until at least 1919 (ref: 1999 management plan).

### **1.2.3 Hydrology**

The site drains naturally to the south and south-east. The junction of the free-draining Claygate Beds with the less permeable London Clay produces local spring-line conditions. Cloisters Brook drains the western part of the country park, flowing south-east and then south. Its most obvious sources are two drainage pipes just south of the fence delimiting the northern boundary of Cloisters Field (compartment 11) supplemented in compartment 8 by the outflow from the pond in Wood Farm which is fed in turn by the waste water treatment for the housing development “The Cloisters”. Cloisters Brook leaves the site at the southwest corner on Dennis Lane, where its course has been diverted to fill two small “Balancing Ponds” in compartment 9.



To the east a second stream, which runs down the eastern boundary of Wood Farm, crosses compartment 2 to run into 40 Acre Pit but runs only intermittently downstream of 40 Acre Pit. A third intermittent stream arises in Pear Wood and enters Stanmore Country Park close to the eastern boundary.

A much smaller damp area (possibly the remains of a pond) is situated on the northern edge of compartment 6 (image below).



Remains of a pond in the northwest corner of compartment 6. Stephen Bolsover image 17022209.

## **1.3 Biological**

### **1.3.1 Vegetation**

Most of the country park is composed of relatively young, even-aged secondary woodland dominated by pedunculate oak, which has invaded from former field boundary hedgerows. This has largely replaced the original rough pasture and meadow land, but significant areas of acid grassland have survived with management assistance in compartments 4, 5 and 7, together with larger areas of more neutral grassland in compartments 1, 9, 11 and 12. The vegetation of each compartment is described separately (the names given to the compartments are those used by Moxey in his 1981 report (Appendix 4).

Since recording began in 1977 a total of 33 ancient woodland indicator plant species have been recorded at Stanmore Country Park (see Appendix 3), however the last dedicated survey was in 1999. The eastern half of compartment 2 is recorded as ancient woodland by Natural England (Appendix 1 Map 4) while areas of compartments 6, 8 and 10 support impressive carpets of English bluebell and might therefore be expected to contain other ancient woodland indicators.

**Compartment 1 (Lower Forty Acres)** - *The largest single area of semi-improved neutral grassland in the site. The sward is dominated by bents and Yorkshire fog, with frequent false oat-grass and cock's-foot. Frequently occurring herbs include common bird's-foot-trefoil, selfheal, creeping buttercup, common mouse-ear, meadow vetchling, red clover and lesser stitchwort. Less frequent are yarrow, white clover, common sorrel, greater bird's-foot-trefoil and various vetches, and agrimony, common knapweed and common hemp-nettle are rare. Invasive species include broad-leaved dock, creeping thistle, common nettle and common ragwort. The field has been invaded by scrub species, and there are several established clumps of hawthorn, pedunculate oak, ash, bramble and wild roses, especially in the north-east. Also found here are species of damper conditions including hard rush and great willowherb.*

A phase 2 survey in 2013 (Appendix 6) confirmed that this characterization is likely to remain true. Grazing by cattle began in 2017 and will likely modify the species mix, and hopefully increase diversity.

**Compartment 2 (Upper Forty Acres)** - *This compartment is composed of young secondary woodland with some scrubby glades. The species composition is quite varied; the south-east corner is dominated by suckering English elm with a ground flora of mosses and ivy and has much fallen and rotten timber.*

*Blackthorn is frequent along the southern boundary (with compartment 1), having suckered from the original dividing hedge. Further north and west this grades into typical secondary oak woodland\*, with little ground flora except for a few common ferns and some heath bedstraw. The uncommon soft-shield fern *Polystichum setiferum* is also present. The north and north-east boundaries have older, more open woodland of mature beech, hornbeam and oak, with an understorey of holly, birch, elder and hawthorn. The "heathy" ground flora includes much bracken and a plant occurring rarely within the site - wood-sorrel.*

*\* "Typical" secondary oak woodland at Stanmore country park is between 25 and 85 years of age, is densely spaced and has very few associated understorey and ground flora species. Old anthills (relics of former grassland) occur on the bare woodland floor, but are mostly unvegetated apart from some heath bedstraw on their crowns. Male and broad buckler ferns occur occasionally. Where light still penetrates, small glades are dominated by bramble and rosebay willowherb.*

The north and north-east boundaries of compartment 2 are recorded as ancient and semi-natural woodland by Natural England.

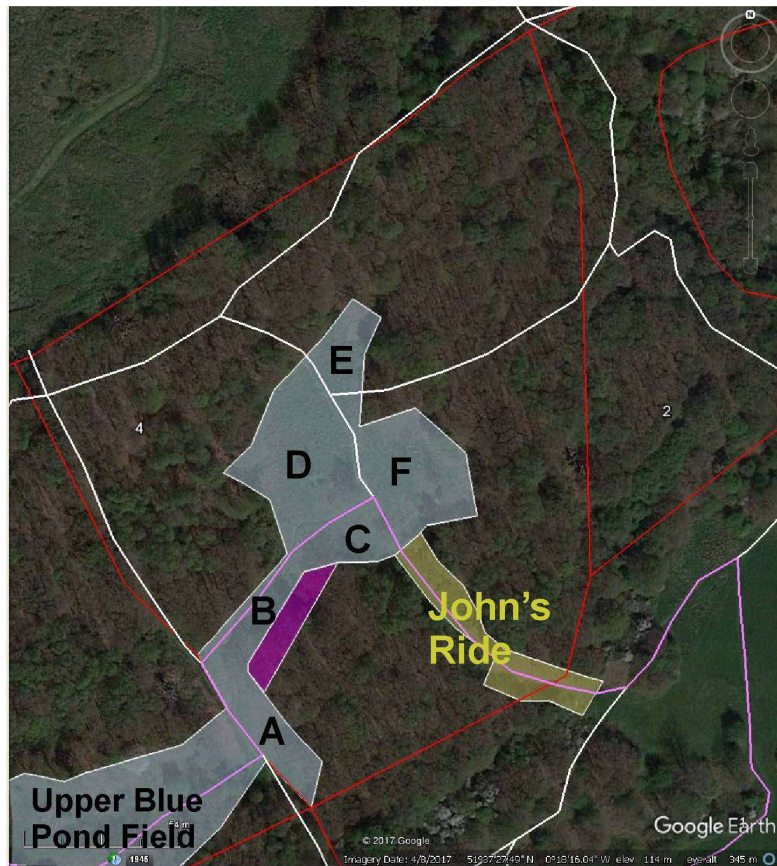
Howard Matthew's more recent surveys (Appendix 5) do not record Soft Shield Fern (*Polystichum setiferum*) in this compartment, although it is present elsewhere on the site. Harrow Nature Conservation Forum records do not include any more recent records of wood sorrel anywhere on Stanmore Country Park.

**Compartment 3 (Forty Acres pit)** - *Enclosed by compartment 2, the possible origin of this pit is discussed above (see 1.2.3). This area holds fluctuating depths of water, mostly in the winter months. Willows are present and English elm is establishing from compartment 2 in the south and east. Bramble, wild roses and common nettle are all abundant. Grassier areas are dominated by tufted hair-grass, meadow foxtail and rough meadow-grass, with various damp-loving species including soft rush, common horsetail and marsh thistle. Invasive species include common couch, creeping thistle and false oat-grass. Infrequent species include agrimony, spiked sedge and meadow vetchling.*

Since 1999 succession to woodland has continued so that many of the grassland species are unlikely to be still present.

**Compartment 4 (John Hall's Field)** - *This compartment includes the largest remaining area of acid grassland. Recent management has extended the area of grassland quite significantly. Approximately half of the compartment is typical secondary oak woodland and gorse-dominated scrub (mostly around the perimeter). The acidic grassland community is dominated by common bent and Yorkshire fog, with heath bedstraw, sheep's-sorrel and lesser stitchwort. Also occurring are early hair-grass, mouse-ear hawkweed, tormentil and foxglove. Damper areas contain tufted hair-grass. Some very large (>0.4 metre crown diameter x 0.5 metre tall) meadow anthills are a prominent feature of the grassland here.*



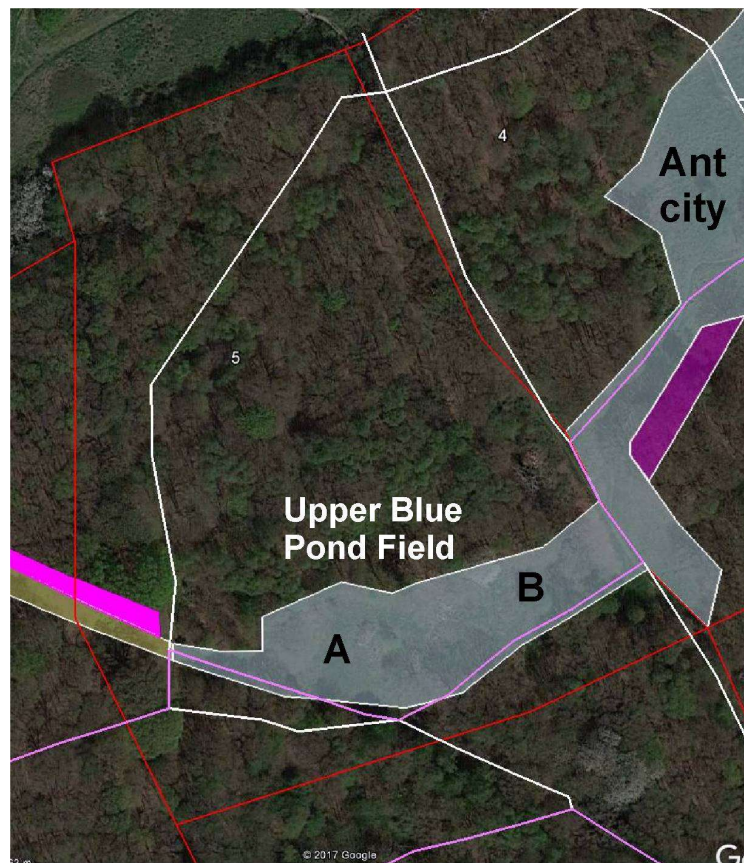


The open area of acid grassland in the centre of compartment 4, called ant city from the large number of meadow anthills, has expanded and contracted in the years since 1999, with periods of encroachment by gorse and birch terminated by clearance by volunteers or contractors. By 2015 an area east of the path that runs north-south through the glade, shown as F in the plan above, was fully overgrown with young birch trees. These were cleared by contractors in the winter of 2015/2016. The trees were pulled up by the roots, which left only the stony subsoil of Stanmore gravel. This should have the welcome effect of causing the vegetation that regrows to be true acid grassland species.

A major aim of management since 1999 has been to connect the various open areas by grassland rides. Clearance by volunteers and in particular by John Hollingdale has linked ant city with compartment 1 to the southeast via John's Ride, and to Upper Blue Pond field in compartment 5 to the southwest. It is proposed to improve the latter link by clearance of the strip shown in pink in the plan above.

The remainder of compartment 4 is typical secondary oak woodland. A cluster of wild service trees grows alongside a path at the northeast corner, on the northern boundary of the Park.

**Compartment 5 (Upper Blue Pond Field)** - *This compartment is similar to Compartment 4. Recent management has extended the area of grassland here also, although regrowth from cut stumps has not been checked quite so successfully. The southern end has been disturbed and is composed of younger scrub including gorse, hawthorn, sycamore and birch with much bramble and rosebay willowherb. Former hedgerows follow the eastern and western boundaries, which both feature lines of mature, full-crowned oak trees. A wide, grassy ride runs along the bottom of the compartment and just inside the trees of the western boundary, where oval sedge occurs rarely.*



The name Upper Blue Pond Field is now used to refer to the wide, grassy ride rather than the whole compartment. Management since 1999 has maintained the grassland at A in the plan above. By 2012 area B had become overgrown with young birch

trees, these were cleared in a series of operations beginning in the winter of 2012-2013 and completed by the removal of stumps in early 2017.

It is proposed to improve the link through to Wood Farm to the west by clearance of the strip shown in pink in the plan above.

**Compartment 6 (Lower Blue Pond Field)** - *This compartment encloses the old pond site (walled on its southern edge) and consists entirely of secondary woodland and scrub. Woodland on the northern and western banks is dominated by oak, although ash and sycamore occur frequently and wild cherry, wych elm and rowan are occasional. On the floor of the old pond itself hawthorn, blackthorn, birch and elder form a dense canopy. The north-eastern corner is also scrub-dominated, with a dense belt of blackthorn, bramble, wild roses and gorse either side of the branching trackway leading into the site from Kerry Avenue (one branch of which is maintained as a gas way leave).*

*On the north-west corner (just south of the main east-west trackway) is a small damp area, possibly the remains of a silted-up pond, where soft rush, marsh thistle and common marsh-bedstraw occur. The ground flora of this compartment is slightly more diverse than elsewhere in the site and besides abundant ivy and common nettle, also includes violets, bugle, red campion, bluebell and honeysuckle, as well as some fine cascades of male and broad buckler fern on the steep banks of the old pond.*

We suggest that the large depression walled on its southern edge be referred to as the old reservoir to distinguish it from the much smaller dried up pond in the northwest corner. The latter can still be made out (see image above in section 1.2.3), immediately below the berm that forms the boundary between compartments 6 and 5. There is little obvious sign of a vegetation different from the surrounding woodland, but it is quite possible that clearing the small trees and allowing light in would rescue plants in the seed bank.

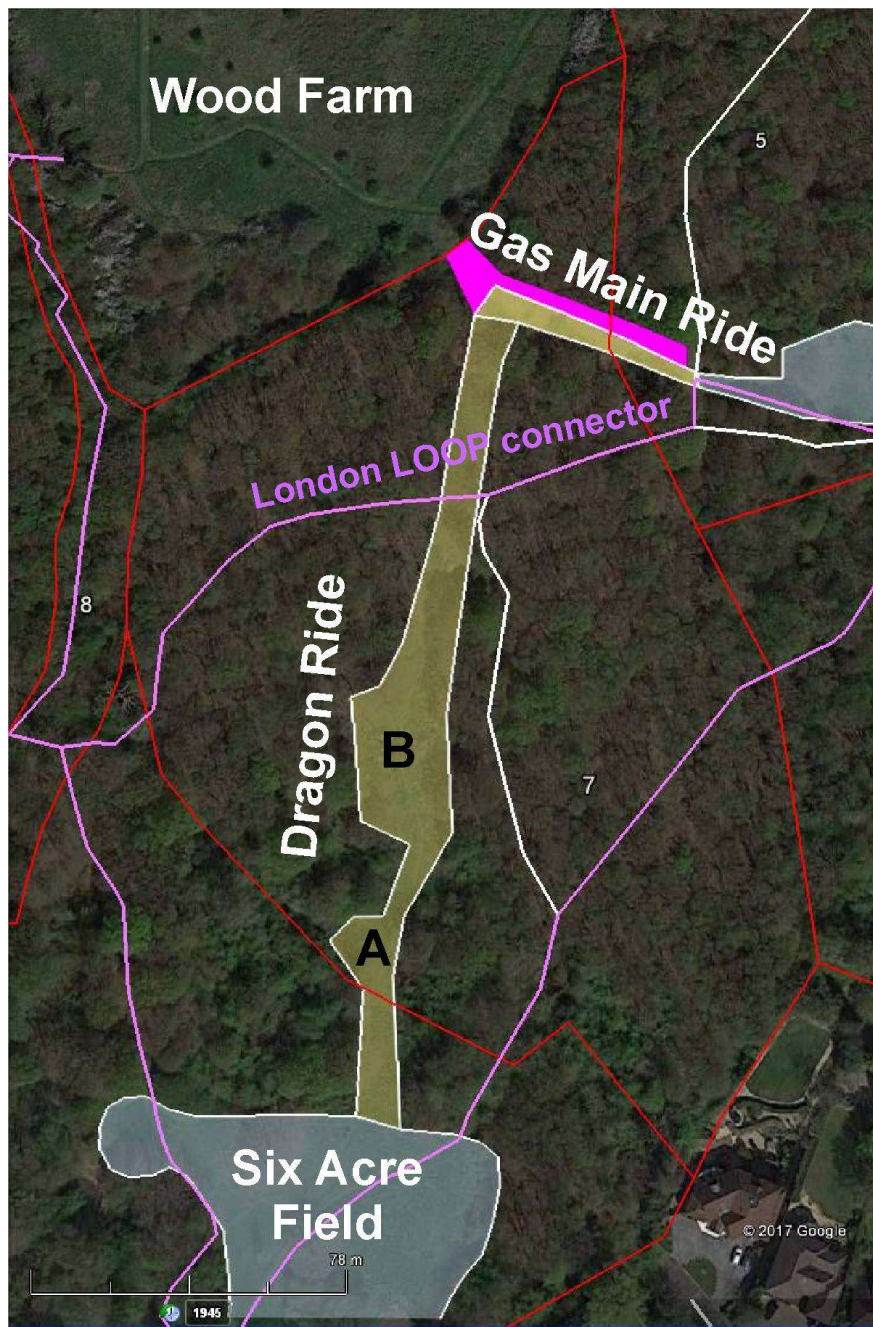
A significant population of English elm, including significant trees, is found at the extreme southeastern corner of compartment 6, next to the entrance from Kerry Avenue. White-letter hairstreak butterflies *Satyrrium w-album* are seen here regularly.

The whole area of compartment 6 is subject to a tree preservation area order (Appendix 1 Map 2), but Rebecca Farrar, Harrow's Arboricultural Officer, wrote on 11<sup>th</sup> August 2017 that this covers only those trees in place when the order was made and therefore does not cover even quite substantial young trees.

**Compartment 7 (Hilly Field)** - *This is one of the larger compartments of the country park and is roughly split into northern and southern sections by the main trackway. North of this, the compartment is composed of typical secondary oak woodland, broken only by a continuation of the gas wayleave mentioned above. There is abundant bracken along the northern boundary of the compartment.*

*South of the trackway, secondary oak woodland again dominates although a sizeable central area of acidic grassland survives (the second largest in the site), being composed of common bent, Yorkshire fog, red fescue and false oat-grass, with sheep's-sorrel, heath bedstraw and tormentil. Recent management has linked this area with open areas in compartment 5. Towards the boundary with compartment 6 sycamore becomes prevalent, together with a few seedlings of horse-chestnut. Soft shield-fern is present here also.*





By “the main trackway” the 1999 management plan means the London LOOP connector path.

By 2015 all that remained of the “sizeable central area of acidic grassland” were small remnants of grass under sizeable oak trees at A and B in the plan above. Work in the winter of 2015-2016 funded by the “Dragon Finder” project of Froglife felled a number of mature trees within this grassland remnant and created a continuous open ride, “Dragon Ride” linking Six Acre Field in compartment 9 to the south to the gas

wayleave. The gas wayleave itself was widened by volunteers around the same time and is now a grassy ride. The result is that all the grassland areas of Stanmore Country Park, with the exception of the northwest grasslands of compartment 12, plus the open space of Wood Farm, are linked by grassy rides, facilitating movement of reptiles and invertebrates. This clearance was probably too late to rescue an acidic grassland flora. While the grassy areas at A and B in the plan above have not been surveyed recently, they do not obviously contain acid grassland herbs.

A significant population of English elm comprising bushes and small trees is found along both margins of the southern end of Dragon Ride. White-letter hairstreak butterflies *Satyrion w-album* are seen here regularly.

Another effect of the continued development of secondary woodland is that bracken, although still present, is no longer abundant in any part of compartment 7.

The southern half of compartment 7 is subject to a tree preservation area order (Appendix 1 Map 2), but Rebecca Farrar, Harrow's Arboricultural Officer, wrote on 11<sup>th</sup> August 2017 that this covers only those trees in place when the order was made and therefore does not cover even quite substantial young trees.

**Compartment 8 (Stream Wood)** - This compartment includes the oldest woodland of the site, forming a southward extension of the woodland in the east of compartment 11. It is composed of mature oak and sycamore, with a variety of ex-coppice understorey species including field maple, hazel, hornbeam, hawthorn, holly and elder. Towards the northern end (Cloisters Wood) blackthorn and aspen become dominant. The 1999 document by the London Ecology Unit stated "*Although the stream-bed itself is un-vegetated, the ground flora on the banks includes ivy, pendulous and remote sedges, bugle, male and broad buckler ferns, bluebell, honeysuckle and common figwort.*" A single specimen of Soft Shield Fern (*Polystichum setiferum*) was recorded here in 2012 by Howard Matthews.

**Compartment 9** - This is the entrance compartment of the country park, adjacent to the main point of access from the car park on Dennis Lane. An open grassy area (Six Acre Field) is composed principally of semi-improved neutral grassland maintained

by regular mowing. The remainder of the compartment is secondary woodland. Along the western boundary are two interconnected balancing ponds.

The 1999 document by the London Ecology Unit stated “*The grassland consists of false oat-grass, Yorkshire fog and rye-grass, with a variety of herbs including some of damp grassland such as square-stalked St John's-wort, tufted hair-grass, marsh thistle, wild angelica and various rushes. Patches of longer grass support common knapweed, meadow vetchling, sneezewort and greater bird's-foot-trefoil, while less-frequently mown areas around the perimeter support common hemp-nettle, devil's-bit scabious and heath groundsel. Small, isolated patches of scrub in the middle of the open area are dominated by bramble and raspberry, as is the scrub towards the north of the compartment.*”

The 1999 document by the London Ecology Unit stated “*The ponds have developed an impressive wetland flora which includes bulrush, common water-plantain, false-fox sedge, great willowherb, floating sweet-grass, soft rush, broad-leaved pondweed, pendulous sedge and celery-leaved buttercup, water mint, with young planted osier and alder trees around the edges.*” To our knowledge this remains true today.

**Compartment 10** - In this document we diverge from the 1999 document by the London Ecology Unit in combining all the wooded area west of Cloisters Brook (compartment 8) as compartment 10. This therefore includes all the wooded sections of compartments 10, 11, 12 and 13 of the 1999 document.

This large compartment is dominated by secondary oak woodland. Within this some distinct areas can be discerned:

- The eastern part of the compartment, equidistant from the London Loop connector path and Cloisters Brook, used to contain a grassland remnant. The 1999 document by the London Ecology Unit described an “*all but disappeared central glade dominated by dense bramble and wild roses. The ground flora is extremely limited but includes bugle.*” Succession to woodland has continued in this area although grassland species likely still persist in the soil seed bank.
- The northeastern part of the compartment, along both sides of the nature trail that follows the gas wayleave, appears to have scrubbed over more recently

than other areas of Stanmore Country Park and contains frequent birch and hawthorn. Damp areas near Cloisters Brook contain grey and goat willows, ash and aspen. The 1999 document by the London Ecology Unit stated “*The flora of the wayleave includes species of former damp meadow conditions, including tufted hair-grass, hard rush, square-stalked St John's-wort and marsh thistle.*”

- The London Loop connector path follows the line of an old field boundary (Appendix 1 Map 7). Oaks grew up in the rough hedge along this boundary and persist as large mature trees clearly distinct from the secondary woodland about them. Bluebells are prominent on the woodland floor along this line, which has some of the characteristics of ancient woodland (Appendix 2 Images 1).

**Compartment 11 (Cloisters Field)** - This compartment was added to Stanmore Country Park in around 2008. It comprises a large central area of open grassland with scattered young oak and other trees including one fine specimen wild service tree. A belt of woodland separates the open ground from Dennis Lane on the west. This wooded strip is old (Appendix 1 Map 7) and contains some large mature oaks. A salient of land in the extreme northeast contains a remnant of the ancient woodland of Cloisters Wood, although most of the remaining part of the ancient Cloisters Wood lies in Wood Farm to the east. Cloisters Brook begins at two drainage pipes just south of the fence delimiting the northern boundary of Cloisters Field and runs down the eastern border of the compartment through what is now dense woodland, although this valley was open grassland in 1945 (Appendix 1 Map 7). To the north the open grassland is divided from the amenity grassland of the Swaminarayan Satsang - Shree Swaminarayan Temple by a wire fence.

**Compartment 12 (Spinney Field and Spring Meadow)** - This compartment comprises a strip of open grassland. The strip is narrow in the south, scarcely wider than a woodland ride, where it is called Spinney Field. Further north it widens to south Spring Meadow, narrows again where an intermittent stream (formed by a spring which rises near the boundary of compartments 10 and 11) crosses the open grassland, and widens again into north Spring Meadow. The 1999 document by the London Ecology Unit states that “*the open grassland (of Spring Meadow) is*

*composed of coarse invasive species including cock's-foot, false oat-grass and Yorkshire fog, with damp meadow species especially in the base of the valley, such as tufted hair-grass and soft rush... The damp grassland (of Spinney Field) is composed of tufted hair-grass and Yorkshire fog with invasive false oat-grass, various rushes and many damp grassland herbs including greater bird's-foot-trefoil, square-stalked St John's-wort, creeping buttercup, great willowherb, wild angelica and (on the border with Spring Field), a small population of pepper-saxifrage."*

### **1.3.2 Fauna**

Apart from birds and more recently, lepidoptera (butterflies and moths), most records of the site's fauna have been accumulated on a casual basis only. Birds have been recorded by D. Broughan for a 1984-5 report for Maurice Pickering Associates, during surveys for the 1999 document by the London Ecology Unit, and up to the present by members of the Harrow Natural History Society and Harrow Nature Conservation Forum. Several notable species occur (see 2.1) and the full list of species appears in Appendix 4.

The 1999 document by the London Ecology Unit stated "*mammal fauna includes rabbit *Oryctolagus cuniculus* (common in open areas), weasel *Mustela nivalis*, fox *Vulpes vulpes*, wood mouse *Apodemus sylvaticus* and grey squirrel *Sciurus carolinensis*. Muntjac *Muntiacus reevesii* reportedly visit the site. Other common species are also undoubtedly present.*" More recent sightings confirm the presence of rabbit, fox and muntjak - the last have likely increased in recent years and almost certainly breed on the site. No recent records of wood mouse or weasel exist, but Pear Wood to the northeast has recorded weasel (2011) and wood mouse, bank vole, field vole, yellow necked mouse, pygmy shrew and common shrew (2016). Stanmore Country Park has never been surveyed for bats.

Grass snakes are common on the site. Although we have received a number of second hand reports of adders in Scout's Field to the northeast (Appendix 1 Map 1) we have no first hand reports or photographic evidence. In 2017 a survey by Clive Herbert of the London, Essex and Hertfordshire Amphibian and Reptile Trust found no evidence of reptiles other than grass snake on Stanmore Country Park.

Moths and butterflies have been regularly recorded by the volunteer warden John Hollingdale. 24 species of butterflies have been recorded, including regionally uncommon species such as the White-letter hairstreak *Satyrrium w-album*. 164 moth species have been recorded, including several locally notable or declining species such as the red-green carpet *Chloroclysta siterata*. John Dobson recorded other invertebrate groups and important finds include the hoverflies *Epistrophe nitidicollis*, *Eupeodes nitens* (nationally scarce), *Pipizella virens* and *Xanthandrus comtus*. Dragonflies are seen regularly: in 2014 John Hollingdale reported the Broad-bodied Chaser *Libellula depressa*, the Brown Hawker *Aeshna grandis*, the Common blue Damselfly *Enallagma cyathigerum*, the Common Darter *Sympetrum striolatum* and the Southern Hawker *Aeshna cyanea*.

The 1999 document by the London Ecology Unit stated “*Common field grasshoppers Chorthippus brunneus are abundant in compartment 1, Roesel’s bush-cricket Metrioptera roeselii is also present.*” These statements are likely to be still true but need to be confirmed - the HNCf species record has no entries for Orthoptera at Stanmore Country Park.

#### **1.4 Management and Land-use History**

*The period of original woodland clearance in the Stanmore area is not exactly known. The earliest reference to the present field pattern dates back to the Tithe map of 1831. Up until the end of the 18th Century, the upper slopes of the country park could well have supported a mosaic of lowland heath, acid grassland and scrub, similar to that of neighbouring Stanmore and Harrow Weald Commons which both remained as open heathland until around 1900.*

*The combined effect of steep slopes and poor quality soils would have kept these fields traditionally managed as rough pasture with periodic hay cutting on the lower slopes throughout much of the 17th, 18th and 19th centuries. The original boundary hedgerows (containing a high frequency of mature trees) could possibly date from the clearance of original woodland, but are more likely to have been planted between 1750 and 1800. The stream of compartment 8 follows the old parish boundary*

*between greater and lesser Stanmore, and the hedgerows bounding this feature are likely to be of greater antiquity than the others in the site.*

*Clay or gravel winning was probably carried out during the early 19th century, resulting in the depression of compartment 3. The "Blue Pond" of compartment 6 may have originated as a fish pond, and held water for longer than compartment 3. A building occupied the southern end of compartment 5 in the 1930's, and the existing gas wayleave may coincide with the original access drive between this and Kerry Avenue.*

*Traditional management ceased over the majority of the site between 1950 and 1960. The provision of recreational facilities was associated with designation of the site as a country park by the GLC in 1978. The path network was established at this time, as well as entrances and signboards. Compartment 1 has always been separately fenced from the rest of the country park. With the abolition of the GLC in 1986, control of the country park was passed to L B Harrow.*

In 1990 John Hollingdale became volunteer warden and carried out considerable maintenance and improvement work all the way through to 2017. Harrow council established the car park off Dennis Lane and constructed the two balancing ponds on Cloisters Brook, all in compartment 9. The fence around compartment 1 was refurbished to cattle-proof standard by Trimlock Services Ltd. in 2010 and repaired by volunteers in 2017 in preparation for the arrival of cattle. In 2012 a cattle trough was installed in the southwest corner of compartment 1. From 1986 onward the council paid for annual grass cuts in compartments 1, 9, 11 and 12. In 2017 the grass cutting changed; a cut was not necessary in compartment 1, where a small herd of Red Devon cattle grazed over the summer, while mechanical cutting was additionally carried out in the Central Glades: Dragon Ride, Gas Main Ride, Upper Blue Pond Field and John Hall's Field.

National Grid maintains a 5 metre wide wayleave along a gas pipeline that runs through the site. This is most obvious in compartments 5, 7, 10 and 11, though it is likely that the pipe also runs through compartment 1. We must obey rules governing this wayleave, see Appendix 10. In general it seems OK to run broad-wheeled

tractors for grass cut and collection over the gas main, but National Grid must be consulted if we or the council intend to take heavy caterpillar tracked vehicles over the pipe (as happened during the clearance of Ant City in compartment 4). An electricity sub-station is sited in compartment 6 near the Kerry Avenue entrance.

## **1.5 Ecological Relationships**

### **1.5.1 Soil and vegetation patterns**

The soils derived from the Stanmore Gravel and to a lesser extent, the Claygate Beds found on the upper slopes of the site are free-draining, of low pH and are relatively nutrient-poor. Following woodland clearance, the resulting semi-natural vegetation over much of the site would have been rough pasture supporting a plant community with a high proportion of calcifuge species; dwarf shrubs such as heather *Calluna vulgaris*, bell heather *Erica cinerea* and bilberry *Vaccinium myrtillus* juxtaposed with acid grassland of bents, fescues, wavy hair-grass *Deschampsia flexuosa*, tormentil, heath bedstraw and sheep's-sorrel. Bracken, gorse and broom would also have been common.

Downslope, pasture over the heavier and more neutral soils derived from the London Clay would naturally support a higher diversity of species, consisting of a wide range of grasses and herbs. Agricultural improvement introduced this century has led to a steady decline in the original diversity, continued through neglect and the invasion of coarser grassland species, eg. false oat-grass, common couch and cock's-foot. Compartments 1 and 9 still contain neutral grassland with a relatively high floristic diversity.

The vegetation along the old boundary hedgerows comprises species native to the former woodlands of the area, with a high density of pedunculate oak throughout, holly and beech on the upper slopes and ash, hazel, field maple and elm lower down. Being derived from parent trees and shrubs of the hedgerows, this variation is also reflected in the species composition of the secondary woodland which dominates so much of the country park today.



### **1.5.2 Succession**

*The former patchwork of open fields and their dividing hedgerows is now almost entirely replaced by relatively young woodland dominated by pedunculate oak. Dense mixed scrub forms an intermediate stage in the succession to woodland, and is best developed towards the centre of some of the larger compartments (eg. compartment 10). The largest compartments have retained some of their original grassland, although scrub species are fast closing in from all directions. Rabbit grazing may have helped to delay scrub invasion in such areas.*

*Succession here has progressed from the rough pasture described above (1.5.1), through a scrub stage (featuring bramble, wild roses, hawthorn, blackthorn and localised English elm and gorse), to woodland dominated by pedunculate oak in the main, but becoming more mixed on the lower slopes with ash, elm and hazel. The former open water area and associated wetland habitats of compartments 3 and 6 have declined in extent, through both the lowering of the water table and the accumulation of organic matter from overhanging trees. Trees and scrub species have invaded these areas too, but these include many wetland species (e.g. willows).*

Since the 1999 plan was written changes have progressed and in many places stabilized. Scrub invasion of the grasslands of compartments 1, 4, 5, 7, 9, 11 and 12 has essentially stopped thanks to management led and in the main carried out by John Hollingdale. In contrast progression of the former open grassland within compartment 10 to woodland is now essentially complete.

### **1.5.3 Faunal changes**

*Vegetational succession will have brought about associated changes in the animal community. On the whole, the avifauna will have increased its diversity, although some specialised species of open habitats (eg. meadow pipit, skylark and possibly snipe) will have substantially declined or become extinct as breeding species in the country park. The birds currently present are a community of generalised woodland, woodland edge and scrub species.*

*The invertebrate community will have gone through similar changes. An obvious example is the decline in the meadow ant *Lasius flavus* population. As regards butterflies, species presently occurring are largely those found typically along woodland edges and in scrub. Species associated with the relict acid grassland of the upper slopes are still present, however, e.g. the small copper. The secondary woodland is, as yet, probably too recently developed to have gained many colonisers from the vast diversity of specialist woodland invertebrates (especially Coleoptera, Lepidoptera and Diptera) that could potentially arrive. Given the close proximity of two long-established woodlands as sources (Pear and Cloisters Woods), the process of colonisation will undoubtedly have begun, however.*

*Woodland mammals, being more mobile, would have been relatively quicker to respond to the vegetational succession, expanding from long-established populations resident in the older hedgerows and woodland of compartments 8 and the north of 2.*

## 2. ANALYSIS AND ESTABLISHMENT OF MANAGEMENT AIMS

### 2.1 Evaluation of Important Features

*The most important habitats within the site are the relict acid and neutral grasslands which support the majority of the site's more notable plant species (see below). The secondary oak woodland is relatively ubiquitous and is increasing in extent at the expense of the open habitats. Older woodland and its associated features in compartments 2 and 8 are of higher value for their inherent ecological interest and also for their important role in accelerating the colonisation of the more recently developed woodland.*

*Of importance too are the wetland habitats, i.e. in compartments 3 and 13<sup>2</sup>. In being the only substantial attempt to create new wetlands, the ponds of compartment 9 are also significant features within the site.*

*Scrub and dense woodland edge habitats contribute significantly to the overall habitat diversity of the site, and are important for supporting the majority of the breeding birds as well as some notable invertebrates.*

*Together, the grassland and wetland habitats support an impressive list of regionally rare and uncommon plant species. These are:*

*Early hair-grass* *Aira praecox*

*Sneezewort* *Achillea ptarmica*

*Oval sedge* *Carex ovalis*

*Spiked sedge* *Carex spicata*

*False fox-sedge* *Carex otrubae*

*Sheep's fescue* *Festuca ovina*

*Common marsh-bedstraw* *Galium palustre*

*Square-stalked St John's-wort* *Hypericum tetrapterum*

*Narrow-leaved bird's-foot-trefoil* *Lotus glaber*

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<sup>2</sup> Now compartment 12. This presumably refers to two areas: the wet area or spring close to the top of compartment 12, and the wet area at its southern tip.

*Grass vetchling Lathyrus nissolia*

*Greater burnet-saxifrage Pimpinella major*

*Pepper-saxifrage Silaum silaus*

*Heath groundsel Senecio sylvatica*

*Devil's-bit scabious Succisa pratensis*

*By contrast, woodland supports substantially fewer regionally uncommon plants and the majority occur in or near the older woodland of compartment 2.*

*These are:-*

*Heath speedwell Veronica officinalis*

*Wood sorrel Oxalis acetosella*

*Barren strawberry Potentilla sterilis*

*Primrose Primula vulgaris*

*Ramsons Allium ursinum*

None of these plants have been recorded on the site since 2010, however this reflects the lack of plant recording and does not mean that they have disappeared. For example, Square-stalked St John's-wort *Hypericum tetrapterum* is certainly still present in the wet area at the southern end of compartment 12, but has not been formally recorded.

Since recording began in 1977 a total of 33 ancient woodland indicator plant species have been recorded at Stanmore Country Park (see Appendix 3), however the last dedicated survey was in 1999. The eastern half of compartment 2 is recorded as ancient woodland by Natural England (Appendix 1 Map 4) while areas of compartments 6, 8 and 10 support impressive carpets of English bluebell and might therefore be expected to contain other ancient woodland indicators.

Better records have been kept for invertebrates (see appendix 3). Notable recent records include:

Spotted bee fly *Bombylius discolor* in 2017

Cinnabar moth *Tyria jacobaeae* consistently seen to date (2017)

Oak hook-tip moth *Watsonalla binaria* 2014  
Rosy minor moth *Litoligia literosa* in 2016  
Shaded Broad-bar moth *Scotopteryx chenopodiata* in 2012  
Shoulder-striped wainscot moth *Leucania comma* in 2016  
Small phoenix moth *Ecliptopera silaceata* in 2014 and 2016  
White ermine moth *Spilosoma lubricipeda* in 2016  
White-letter hairstreak butterfly *Satyrrium w-album* in 2015

This nationally scarce woodland hoverfly *Eupeodes nitens* was recorded in Stanmore Country Park in 1996 but there have been no more recent professional or expert surveys.

## **2.2 Site Potential.**

*There is potential to continue to increase the overall area of open grassland and woodland edge habitats, thus seeking to enhance the diversity of the habitat mosaic. This would make secure local populations of the rarer plant and invertebrate species currently threatened by scrub invasion and maturation to woodland.*

*Within the secondary woodland compartments, selective thinning would improve structural diversity, promoting the development of a defined understorey and ground flora where these are entirely absent in most areas. These areas could then support a more diverse assemblage of interdependent plant and animal species. Control of certain invasive alien tree and shrub species (eg. sycamore, horse-chestnut) would contain their expansion at the expense of native species.*

*Wetland habitats could potentially support a richer variety of constituent plant species.*

*Use of the country park as a recreational and educational facility could be better promoted, for example by providing limited seating. A way-marked and professionally-interpreted nature trail might be implemented in order to fulfill the site's potential as a formal and informal educational resource for the study of natural sciences at all levels.*

*The local conservators group also requires development. Publicity may gain it further members who might assist the volunteer warden in management tasks as well as biological recording and monitoring.*

In the years since the 1999 management plan was produced, the open grassland areas have been stabilized and in places enlarged.

In contrast there has been no management of the woodland. Selective thinning to improve the age structure and preserve the bluebell populations, and haloing around veteran oaks, should be performed.

Improvement of wetland habitats would increase habitat diversity. In particular:

- A sunlit pond could be created within the wet area at the northern end of compartment 12.
- The wet area at the north of compartment 6 (see section 1.2.3) that has been proposed to be a dried up pond could be restored by digging. Selective tree felling to the east, south and west of the restored pond should be performed to increase light levels.
- Action could be taken to raise the water level of the seasonal pond in compartment 3.

Until 1975 several nests of Southern Wood Ant *Formica rufa* existed in Pear Wood, which adjoins Stanmore Country Park to the northeast, with more colonies on the other side of Wood Lane in the grounds of the Royal National Orthopaedic Hospital. This represents one of only two populations in Greater London. In 1975 the Pear Wood colonies began to decline dramatically, until by 2005 Pear Wood contained only one moribund nest. The nests in the RNOH site remain healthy but are threatened by the proposed redevelopment of the site. In 2007, Philip Attewell and volunteer wardens began to harvest from the colonies in the RNOH site to establish new nests in Pear Wood. This has been highly successful and there is now a large and self-sustaining population of wood ants in Pear Wood. Several sites in compartments 4 and 5 of Stanmore Country Park are highly suitable for *Formica rufa*,

with southern facing wood edges and very similar acid grassland to that found on Grimsdyke in Pear Wood where the ants are thriving.

## **2.3 Management Objectives**

The principal aim of management at Stanmore Country Park should be to maintain and enhance the nature conservation value of the site, and to promote its appreciation.

The priorities given below are disinterested ones based on our own assessment. If the Forestry Commission approves our management plan, and we are successful in our application for Countryside Stewardship funding, then all the objectives listed in that plan would necessarily become high priority.

### **High priority**

- Control invasive herbs, shrubs and trees.
- Maintain a suitable grazing/mowing regime in compartment 1, if possible using a heritage cattle breed, to improve grassland biodiversity.
- Maintain links with the wardens of Wood Farm and Pear Wood so that management actions complement and work towards a common goal.
- Maintain, improve and perhaps slightly enlarge the open grassland, connecting rides, and associated woodland edge habitats in compartments 1,4, 5, 7, 9, 11 and 12.
- Recruit and retain a volunteer group specific to Stanmore Country Park who feel allegiance to this particular site (and from whom wardens might be recruited in future).
- Remove litter and any fly tipping as and when necessary.

### **Medium priority**

- Continue outreach to the general public: maintain the nature trail, revise the nature trail leaflet and web pages as necessary, organize guided walks and other outreach activities.

- Fell small trees at the southern end of Dragon Ride in compartment 7 that shade specimens of English elm, to improve the survival of the elm. Plant a Dutch elm disease resistant variety of elm at the southwest corner of compartment 1, close to the cattle trough, to become a specimen tree and provide additional support for the white-letter hairstreak population in the adjoining part of compartment 6.
- Maintain access around the Park, including opening of the access route from Brockley Hill Field.
- Open up the canopy around veteran oaks to maintain them in good health as they age.
- Selectively thin the secondary woodland to improve the structural diversity of the woodland to allow diversity of flora in the ground layer and allow space for younger trees, especially oaks, to mature.

#### **Low priority**

- Carry out a comprehensive bat survey then work with the Herts and Middlesex bat group to improve the site for bats.
- Create a hedge of native shrub and tree species along the northern boundary of compartment 11.
- Create small ponds and increase and improve wetland areas.
- Create tiny glades within the woodland and suntrap scallops at the edges of the open grasslands.
- If nests of Southern Wood Ant *Formica rufa* within the RNOH site are threatened by the ongoing development consider transferring these to suitable sites in compartments 4 and 5. Increasing the area colonized by the ants will improve their chances of survival in the long term.
- Plant Black Poplar *Populus nigra* around the balancing ponds in compartment 9.
- Survey for diptera to assess whether the rare hoverfly *Eupeodes nitens* is still present, if it is, devise and implement a management program to support it.
- Survey the ground storey plants within the woodland, concentrating on the ancient woodland (eastern half of compartment 2) and the areas of



bluebells in compartments 6, 8 and 10. Re-introduce those ancient woodland indicators that have been present in the past but are no longer found, sourcing the plants from nearby locations such as Stanmore Country Park and Harrow Weald Common.

- The program of GPS mapping of veteran oaks should be completed by mapping the oaks in compartments 1, 2, 3 and 4.
- Work with the London, Essex and Hertfordshire Amphibian and Reptile Trust to introduce common lizard and/or slowworm to suitable locations within the site.

### **3. MANAGEMENT PRESCRIPTION**

#### **3.1 Recommended Action**

##### **3.1.1 Grassland and Scrub**

###### **Compartment 1 (40 Acre Field):**

Grazing by a small herd of Red Devon cattle began in 2017 and should be continued for a few years after which the state of the field should be assessed to determine whether the regime should change. To facilitate this study, five quadrats were surveyed in 2013 (see appendix 6) and the metal posts left in situ in the hope that they can be detected using a metal detector and surveyed again to see what changes have occurred.

The 1999 management plan by the London Ecology Unit stated: *Ideally, there should be a break in mowing or grazing during the flowering period between June and August.* Grazing would then recommence in late summer to remove all growth, and allow seeds to be trampled into soil. If in the future Stanmore Country Park gets funding, e.g. from Countryside Stewardship, allowing a grazier to be paid to provide grazing services, such fine tuning of grazing may be achievable.

Grazing should not be so intense as to reduce all growth to a short sward; areas should remain tall to provide lepidopteran habitat. Similarly, if grazing ceases and the field returns to control by mechanical cutting, parts of the field should be cut alternate years only, so that each year some long vegetation persists through into winter.

Where mechanical mowing does occur, all arisings should be removed from the site. Any spread of scrub species should be kept in check by the grazing/mowing regime, but if scrub appears to be extending its current limits, pruning may be necessary.

### **The Central Glades: Grasslands in compartments 4, 5 and 7**

These should be cut once per year. Some areas must be cut by strimmer or brushcutter either because tree stumps would damage the tractor-pulled flail, or because the flail would damage ant mounds (Appendix 7). These areas should be cut at a different time from the main mechanical cut: for example, some cut in July, some in October; this will allow plants that set seed at different times of year to reproduce successfully, and will also ensure that there is always some long growth and some new growth in different areas of the Central Glades.

### **Grasslands in compartments 9 and 11, and compartment 12**

The present mowing regime, with a single cut in late August/early September, is adequate to maintain the open areas. Parts of the fields should be cut alternate years only, so that each year some long vegetation persists through into winter. A regime of two cuts per year, at the end of May and early September, would be better since it would prevent thick grass dominating the sward. If in the future Stanmore Country Park gets funding, e.g. from Countryside Stewardship, such fine tuning of the cut may be achievable.

A traditional hedge of trees and shrubs should be planted along the northern boundary of compartment 11. This should include alder buckthorn, the food plant for caterpillars of the brimstone butterfly, lime, the food plant for caterpillars of the lime hawkmoth, and *Ulmus japonica* Sapporo Autumn Gold for white letter hairstreak. The hedge should also include spindle tree as well as wild service tree, dog rose, aspen and dogwood - in the case of the last four, using seeds and/or cuttings from existing plants on the reserve.

#### **3.1.2 Woodland rides and woodland edge**

Over the last ten years, significant clearance work has reclaimed open areas in the Central Glades and connected them by open rides with Wood Farm, 40 Acre Field (compartment 1) and 6 Acre Field in compartment 9. Two small areas remain to be

cleared, widening (i) the ride joining John Hall's Field to Upper Blue Pond field, and (ii) Gas Main Ride between Upper Blue Pond Field and Wood Farm (see Map 8).

A graded marginal zone between woodland and grassland is extremely important to some invertebrates and breeding birds. Reptiles such as adders and viviparous lizards also use these areas to bask in the sun, with scrub being used to hide from predators. At many places in the Central Glades, clearance has occurred too recently for a marginal zone to develop, so that open grass abuts woodland floor with no marginal zone. In these locations management should encourage development of a marginal zone, e.g. by making sure that mechanical cutting or brush cutting does not continue right up to and into the shaded woodland. Where a marginal zone exists, it should be managed by a 5-10 year rotational programme in which tree and shrub species are cut-down or pruned back then left to regrow.

The population of English elm at the southern end of Dragon Ride in compartment 7, that supports a population of white-letter hairstreak butterflies, should be supported by felling small trees of other species that shade specimens of elm.

### **3.1.3 Woodland**

With the exception of the eastern half of compartment 2, which is recorded as ancient woodland by Natural England, the woodland on Stanmore Country Park has grown up since agriculture ceased in around 1950 and is therefore of a very even age. Striding across this even aged secondary woodland are lines of veteran oaks aged 200 to 250 years which grew in the field boundaries of the pre-1950 landscape (Appendix 1 Map 7). Significant stands of native bluebells grow in compartments 6 and 10; in the latter case these clearly align with the line of veteran oaks (Appendix 2 Images 1). In several areas and particularly in compartments 6 and 10, sections of woodland floor show a thick growth of spindly ash (Appendix 2 Image 2) or sycamore saplings. In particular our Countryside Stewardship application in 2018 called for the removal of sycamore saplings and young trees from the region of compartment 10 bound by the nature trail, Spinney Field, Spring Meadow and the London LOOP connector.

Management of the woodland should aim to encourage maturation towards a more uneven aged structure by the growth and maturation of selected saplings. Selective felling should be performed within the areas of woodland that have a relatively even age distribution. Small ash saplings (Appendix 2 Image 2) should be brush cut in winter, leaving isolated stands that after a few years will be weeded to leave one strong sapling. Small sycamore saplings should be brush cut leaving native saplings, particularly oak and field maple, where they are found.

Selected, spaced young trees in the range 7 to 25 cm diameter should be felled to increase light levels at the forest floor and encourage the growth of saplings. Felled trees should usually be left where they fall although occasional trees could be logged to create habitat piles. Trees to be felled should be selected by a team comprising the Harrow Council tree officer, the Harrow Council biodiversity officer, and the volunteer warden. The work would be done by a contractor and is contingent on Stanmore Country Park being awarded Countryside Stewardship or similar funding.

The program of GPS mapping of veteran oaks should be completed by mapping the oaks in compartments 1, 2, 3 and 4. To help the veteran oaks survive and thrive a program of haloing should be carried out in which understorey saplings and scrub are removed up to the extent of the veteran tree crown. Cut stumps should be treated with herbicide to prevent regrowth. 25% of the total area under the crown should be cleared every year. The first trees to be haloed should be numbers 4, 8, 9, 10, 11, 12, 23, 59, 60 and 69 (Appendix 1 Map 7) since these are particularly fine, prominent and/or thickly overgrown.

All felling work should be performed outside bird nesting season, that is, in the period September through February.

#### **3.1.4 Wetland Management**

The balancing ponds of compartment 9 should continue to be periodically cleaned-out of tall emergent vegetation (mainly bulrush *Typha latifolia* and water mint *Mentha aquatica*). The two ponds should be managed in this way alternately however, as uncommon invertebrates such as the bulrush wainscott *Nonagria typhae* moth have

been recorded here. Dredgings should be left on the pond bank for some time to enable invertebrates and amphibians that have been unintentionally removed to return to the pond. The 1999 document by the London Ecology Unit suggested: *Other water plants might be introduced to these ponds to promote further diversity such as branched bur-reed, lesser pond-sedge Carex acutiformis, purple-loosestrife Lythrum salicaria, yellow flag, water figwort Scrophularia auriculata, fool's water-cress Apium nodosum, gypsywort Lycopus europaeus.* Of these yellow flag and branched bur-reed were certainly present in 2017.

The wetland tree Black poplar *Populus nigra* is, according to the Forestry Commission, the most endangered native timber tree in Britain. It is the foodplant for the caterpillars of many moths including the hornet, wood leopard, poplar hawk and figure of eighty, while the catkins provide an early source of pollen and nectar for bees and other insects. It would be good to plant black poplar around the balancing ponds, using only saplings that are genetically pure. However this should not be at the expense of reducing the light reaching the ponds; planting should therefore be on the northern rim of the ponds, and/or replacing some of the extensive poplar population.

Consideration should be given to creating or enhancing water featured at three other locations:

1. A small pond could be dug in the northern part of compartment 12, in a permanently wet area of grassland just south of a spring on the boundary between compartments 10 and 11.
2. The wet area at the north of compartment 6 (see section 1.2.3) that has been proposed to be a dried up pond could be restored by digging. Selective tree felling to the east, south and west of the restored pond should be performed to increase light levels.
3. The 1999 document by the London Ecology Unit suggested: *An opportunity exists to enhance wetland features in compartment 3. Here, the seasonal pond could be made more permanent by blocking the overflow pipe which emerges in compartment*

*2. Clearance/ maintenance of some of the shrubs should also take place, especially on the southern bank.* Progression to woodland has continued since 1999 so a wetland, if created, would be at least initially a wooded one, rather like Pynding Mersc at Stanmore Common. A first step in assessing the feasibility of this idea would be to locate the inner terminus of the overflow pipe; if it is well above the level of present seasonal water body then blocking it would have no effect.

### **3.1.5 Access, Recreation and Interpretation**

Access should be maintained around the site by cutting-back overhanging and encroaching vegetation as and where necessary. Bridges should be maintained and repaired as necessary (there are three - two cross a small stream in compartment 2, and one carries the nature trail and London LOOP connector path over Cloisters Brook in compartment 8).

The nature trail leaflet and web pages should be updated as necessary to reflect changes in the site and its management. Other activities to increase public awareness and appreciation of the site could include guided walks, moth trapping evenings and bat walks.

### **3.1.6 Work program**

Appendix 8 is the program of work proposed in the management plan as submitted to the Forestry Commission. This includes all the management tasks that should be done repeatedly to maintain the site. The only point we would add is that management of the open areas and woodland rides should encourage development of a marginal zone, e.g. by making sure that mechanical cutting or brush cutting does not continue right up to and into the shaded woodland. Where a marginal zone exists, it should be managed by a 5-10 year rotational programme in which tree and shrub species are cut-down or pruned back then left to regrow.

In contrast, the list of objectives in Section 2.3 includes many one-off actions that are not listed in the program of work proposed in the management plan as submitted to the Forestry Commission.

#### **4. REFERENCES**

Nature Conservation in Harrow: Ecology Handbook 13 by Teresa Farino, Charlotte Pagendam, Sue Swales and Mathew Frith (London Ecology Unit) (1989) ISBN 1-871045-09-6

Stanmore Country Park Management Plan by the London Ecology Unit (1993) (The 1999 revision, as below, gave M. Waite as the author of this document; no authorship is stated in the document itself).

Stanmore Country Park Management Plan (First Revision) by the London Ecology Unit (1999)

A number of physical copies of the 1989 document are in circulation in the Harrow Nature Conservation Forum and Harrow Natural History Society. Steve Bolsover has digital copies of all three documents and can forward them to anyone interested.