

Annex 1

Pryor's Field Management Work Plan

Meg Game and Rob Renwick

June 2012



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2012

1.0. Site description

1.1 Location

Pryor's Field lies near South End Green, and is bordered by East Heath car park, Lime Avenue, East Heath Road and the lower Hampstead stream and the Mixed Bathing pond. It extends to 8.4 hectares and is centred on grid reference 527,029 186,159. Map 1 shows its location and boundary.

1.2 Geology, Soils and Hydrology

For the most part, Pryor's Field faces south or south-east, dropping from about 97m in the north-west corner to 80m in the south-east. According to the British Geological Survey¹, most of the area is underlain by the Claygate Beds, with a band of London Clay along the southern and eastern edges. There is a damp patch in a hollow in the centre of the field located, according to the geological map, at a junction of the Claygate and London Clay Beds. Its origin stems from water flowing down through the more porous Claygate Beds until it meets the underlying impervious London Clay, where some of it spreads horizontally, eventually seeping out at the surface.

1.3 Ecology

Pryor's Field is largely open grassland, but also included in this compartment are belts and patches of scrub, trees, a damp patch, and an area of woodland dipping down along the north-western edge to Lime Avenue and towards the Hampstead Stream near the northern corner.

Map 2 (page 5) shows an overview of habitats and species; the base air photo dates from May 2010.

Habitats

Grassland

The open grassland of Pryor's Field faces roughly south-east, so is well warmed by the sun. It is a complex mosaic of habitats.

Most of the lower, southern grassland is of very little botanical diversity. Further north the soil is less fertile and the grassland is dominated by common bent, a fine-leaved grass. Similar grassland also occurs in the south-west of Pryor's Field. Ant hills are common in these areas and sheep's sorrel and lesser stitchwort grow on some of them. There are patches of heath grass in the centre of the field and a small but thriving colony of tormentil in the north, growing among soft rush. Both indicate acidic soils. Vaughan², in about 1999, reported heath bedstraw in Pryor's Field, but this has not been reported more recently. Some of the grassland on the northern, flatter, ground is bare, due to overuse: it is used by people for physical training.

Map 1: boundary of Pryor's Field and position in relation to Hampstead Heath

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Large areas of the Field which were formerly grassy are now dominated by a mix of grasses and invasive plants. These latter comprise hogweed, creeping thistle, rosebay willow-herb and bramble, which are native, and pink or white Michaelmas daisies, which are not native to Britain. Several patches of soft rush grow near the northern edge.

An area where the ground is damper contains much reed sweet-grass, creeping thistle, common nettle and purple loosestrife.

A small section of this compartment in the extreme north, separated from the main part of Pryor's Field, comprises an area of long grass part-shaded by trees.

A long-standing colony of common spotted orchid grows within the Pryor's Field compartment.

Scrub and trees

Much of the western side of Pryor's Field fronts East Heath Road or The Pryors flats. At the north end of this edge is a mixture of trees and scrub. Further south, a band of scrub forms a barrier between the road and grassland, with much hogweed, bramble and regenerating elm scrub on the field side. Further south again, the Field is bounded by ash, hornbeam, birch and crack willow trees, mixed in with hawthorn, sapling trees and bramble. In places the vegetation is becoming 'leggy', revealing the road from the grassland.

Scrubby woodland edge habitat lies at the northern edge of the main grassland, with some gorse and planted heather. A steep tree-covered slope then leads down to Lime Avenue, or to the Hampstead stream at the north-east corner of Pryor's Field. This is dominated by English oak, with lesser amounts of holly, yew, hawthorn, rowan and sycamore saplings, with a sparse cover of bramble beneath the trees.

The eastern edge of Pryor's Field consists of a dense barrier of scrub and trees adjoining the fenced enclosure of the Mixed Bathing Pond. The southern end of this consists of a dense, wide barrier of blackthorn and some hawthorn, both of which have grown 'leggy' and bare beneath, allowing people to create paths through it and litter to collect. Bramble grows alongside this scrubby edge.

There are several clumps of trees or isolated specimens within the main grassland area and near the south-west corner. A band of planted willows and white poplars lies along the southern edge of the field, and there is a ditch between this and the adjacent car park. Bramble surrounds the clumps of trees or forms individual patches.

Fauna

Whitethroats breed regularly in patches of bramble in the grassy areas of Pryor's Field. Four pairs nested in 2011 according to Sash Tusa. Breeding whitethroats require open habitat with bushes or patches of scrub. Whitethroats have often nested over recent years in the central bramble area (patch 1 on Map 2). Green woodpeckers and kestrels are regularly seen in Pryor's Field, the former enjoying ants in the grassland and the latter hunting for field voles and other small prey. Seeds of thistles provide autumn food for seed-eating birds, particularly goldfinches, and the patches of thistle and bramble are good places to look for birds on passage, such as stonechat. The scrub on the western side is good for many small birds, including blackcap.

Yellow meadow ant colonies have created large ant hills in several areas of the Field, notably the north-west and south-west, as indicated on Map 2. Those in the north-west are being damaged by overuse of the area; it is not known how active they are. The ant hills in the south-west are generally larger, but are being engulfed by bramble.

A white-letter hairstreak butterfly was seen not far from Pryor's Field in 2011. A patch of elm suckers near the western boundary of the Field, south of The Priors flats, may

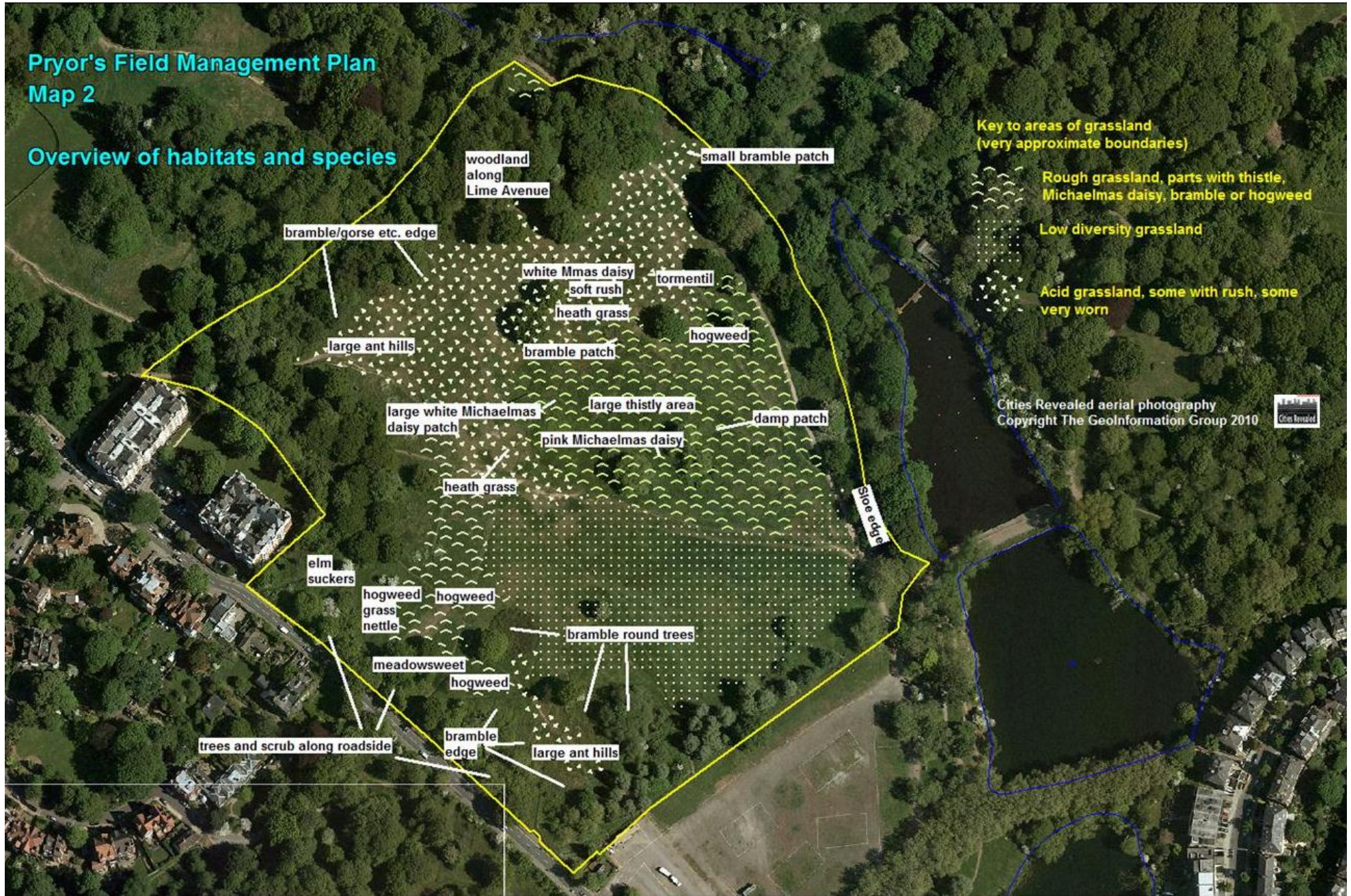
have supported a colony of this butterfly but it is not known if it continues to do so. Skippers are seen along the northern fringe of the grassland, and gatekeeper and meadow brown butterflies probably breed in the grassland. Larvae which may be those of stag beetle or lesser stag beetle inhabit the wooden posts running alongside the footpath beside East Heath road.

Two notable weevils were found by Dan Hackett in 2007 in clumps of thistle grading into bramble on a southerly slope. These were *Rhynocyllis conicus*, a 6-7mm long black weevil covered in tufts of grey hair, and *Trichosirocalus horridus*, a reddish 4.5mm dumpy weevil with prominent flat scales all over it. The spiders *Tapinocyboides pygmaeus*, *Lepthyphantes insignis* and *Europyrys aequipes* have been recorded here by Edward Milner.

Pryor's Field Management Plan

Map 2

Overview of habitats and species



1.4 Public and educational uses

Pryor's Field lies on the edge of the Heath, adjacent to East Heath car park, and close to South End Green and Hampstead, and to Hampstead heath Overground station. The grassland is heavily used by the public both for general recreation and access to the rest of the Heath. The lower edge is used for recreation and fairs and circus events are held on the adjacent Fairground. The northern area is used for fitness training.

The Field is sheltered from East Heath road by a band of scrub and trees. The north end of the Field has an elevated view to the south over built-up areas and the Royal Free Hospital. However, the view upwards from the south presents a pleasant aspect of meadow in the foreground with a backdrop of woodland stretching over the elevated ground to the north.

Pryor's Field is too far from the Education Centre for regular use for formal educational purposes.

1.5 History

The Ordnance Survey map of the 1870s shows all the land considered here as open grassland, with a very few scattered trees. There are no trees along Lime Avenue/Boundary Path; these were probably planted in the first decade of the 20th century. According to Tony Vaughan¹, an aerial photo of 1917 which includes this compartment shows it as open and worn. The line of trees along Lime Avenue is just visible by then, but there is no fringe of woodland along the south side of the Avenue. He states that, according to other sources, there were allotments near East Heath Road and The Pryors around the time of the First World War.

Ikin³ states that there were allotments during the Second World War "near the Pryors". In October 1947, according to Vaughan, 21.5 acres near the Pryors were "de-requisitioned"; a note in 1948 refers to an anti-aircraft site near the Pryors, and one of 1949 to the reinstatement of the anti-aircraft site, presumably to grassland. Air photos from shortly after the War show marks all over Pryor's Field, as shown in Map 3. These do not appear to be from allotments, and so are presumably due to anti-aircraft defences or rubble from bomb clearance after the war, which may have been dumped in the Field. Thus it can be assumed that little of the original ground has been left undisturbed, which is confirmed by the uneven nature of the central area of Pryor's Field today.

More recently, over the past ten years or in some cases longer, the following management has generally taken place. The coarse grassland on the lower slopes of the field has been cut annually, the arisings being removed. The ditch line running along the south of the field has been regularly cleared of leaf litter and debris. Two small patches of Japanese knotweed have been controlled by pulling during the growing season and treating with herbicide in September/October. Bramble edges are regularly cut back into this to form 'scallop' of woodland edge habitat.

Other management has also aimed at controlling and monitoring unwanted plants or those which have become or are becoming too extensive; this is detailed in Section 1.6.

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Vale of Health pond
North end of Pryor's Field

Map 3: Late 1940s air photograph

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A hoggin path running along the eastern edge of Pryor's Field requires annual maintenance where puddles appear. Another path traverses diagonally across the field towards The Pryors flats and the Lime Avenue; this route is well used and is compacted and bare in places. In the north-west corner by the flats the footpath has been built up with imported aggregate to stabilise the ground where standing water appeared in winter.

1.6 Natural and human-induced trends

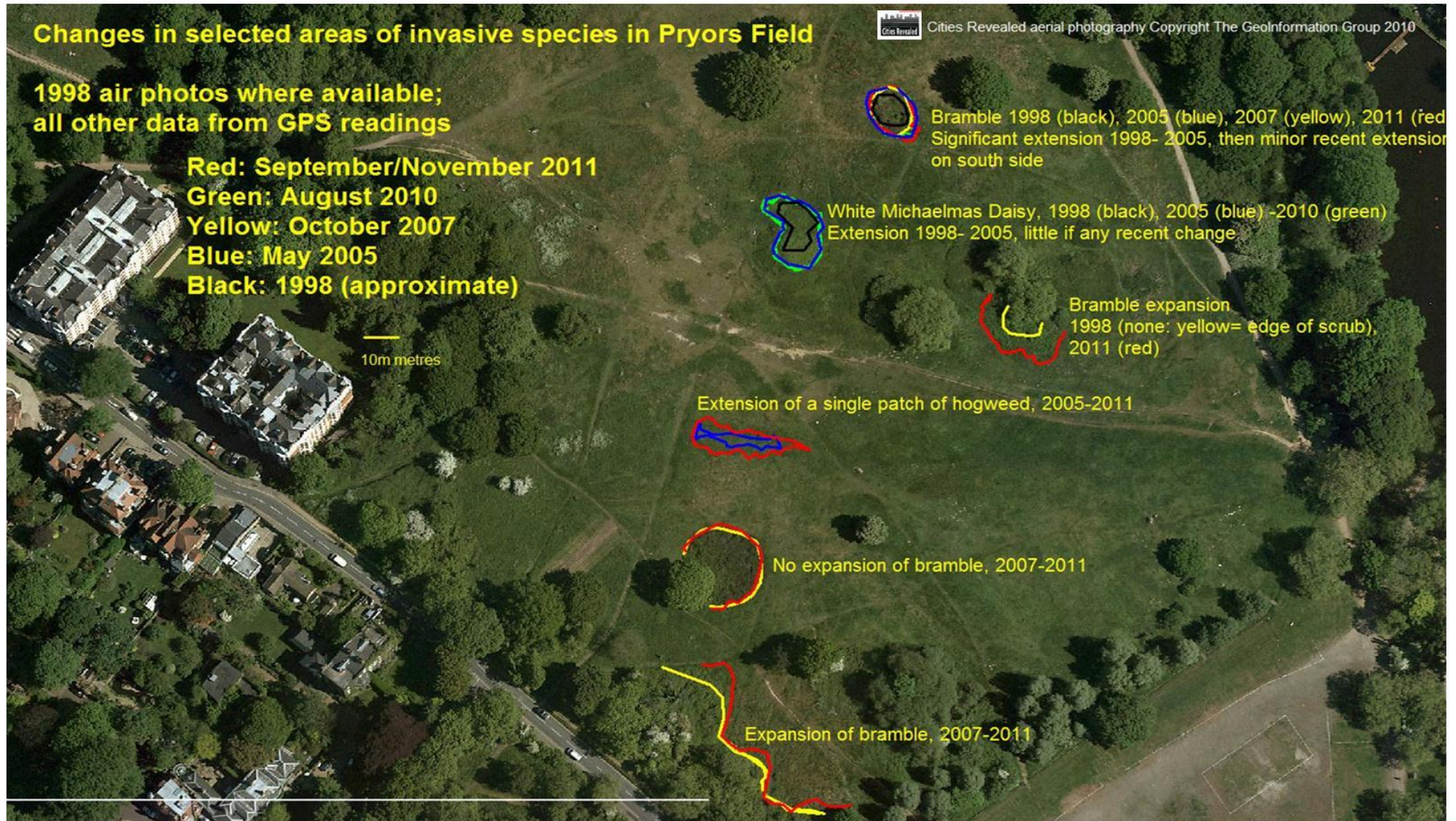
Overuse is causing areas of Pryor's Field to become bare or only covered in sparse grass. This is occurring on the areas underlain by nutrient-poor soil, which are predominantly towards the north of the grassland, and are exacerbated by fitness training, which is popular on the flat area also at the north. Unfortunately it is the areas of poorer soil which give rise to the more important acidic grassland, so it is these that are the most affected.

Other major trends in Pryor's Field are the 'invasive' plants which are spreading in the grassland, or would do so without on-going management. Most of these are native plants, which are additions to the flora and often valuable for fauna, but which can unfortunately come to dominate large areas if not controlled. These species may be spreading due to a combination of factors, such as: the various uses or misuses of the site in the 20th century, resulting in bare soil and lack of management and so allowing species to colonise and spread; relaxation of grassland mowing in the late 1980s and the 1990s; and climate change. Hogweed seems to be getting commoner generally, and this in particular may be an effect of climate change. Map 4 shows how the extent of selected areas of some of these invasive species have changed.

Michaelmas daisy: in the centre of the Field, a large patch of white Michaelmas daisy, a non-native plant, has been cut back around the perimeter by 1-2m before flowering to stop it spreading. This management was in place prior to 1993, but it is not known how long before that it was being implemented. Map 4 suggests that, based on an air photo dating from 1998 and more recent information from GPS surveys, the size of the clump expanded considerably between 1998 and 2005. However, the interpretation of the 1998 air photo is not very accurate as pixel size is 0.5m. The clump has been almost stable between 2005 and 2010, based on more accurate GPS readings, but over about the past five years several small patches of white Michaelmas daisy have sprung up in rough grassland or among rush in the north of the field.

Hogweed: since at least 2003 and probably earlier, hogweed in the open grassland has been treated by removing the flower- or seed-heads, and/or occasionally by mowing or spudding (cutting with a spade just below ground level). This management has usually been undertaken by Heath Hands volunteers. In 2009, an experimental strip was cut just below ground using turf cutter; this was unsuccessful in controlling the plants as many regrew from the roots. An area of hogweed towards East Heath road has been left unmanaged.

Despite management, hogweed is spreading. Map 4 shows an example of how a sample patch has spread over six years. New patches have arisen in the past decade in the north-east of the Field (see Map 2).



Map 4

Bramble: Small patches of bramble in the north-east corner of the field have been cut regularly with the aim of eradication, now almost achieved. The bramble edge along the northern end of the field has been cut back annually by scything to protect the ant hills and to halt encroachment into the grassland.

A larger oval bramble island marked on Map 2 as patch 1 is maintained at its current area by cutting round the edge annually, except in the last two years; the Himalayan balsam which has established within this patch has until recent years been removed throughout the growing season. It appears that the patch may (subject to the limitations of the 1998 air photo) have expanded slightly between 1998 and 2005, but the outer edge is almost stable more recently except for a small extension on the southern edge due no doubt to the patch not being cut in 2010 or 2011. However, the inner part of the patch has become almost devoid of bramble, perhaps due to the impact of people picking blackberries.

A patch of dense bramble near a large tree towards the south-west has not spread over the past 4 years, unlike those further south and near the damp patch (see Map 4).

Creeping thistle: Creeping thistle dominates large areas to the north and east of the central willow area and damp patch. About half of this is cut annually, usually in July, with sizeable patches being retained closer to the damp patch for the benefit of fauna. Thistle has proved difficult to monitor, but is clearly extending its range to the north at least.

Soft rush: there is an area of soft rush in the north-east corner of the grassland. It is probable that this is expanding slowly.

Another major influence is over-use and erosion. This affects not only main paths, especially one running up the grassland towards The Pryor's flats, but also the upper, northern grassland, which is used by people for personal training. In places the ground is bare and soil, which appears to be light and free-draining, is exposed.

1.7 External influences

None not covered elsewhere in this Plan.

2.0. Evaluation

2.1 Natural landscape

Pryor's Field is an important area for birds due to its varied rough grassland and patches of bramble and scrub. Several pairs of whitethroats nest here in patches of bramble. Whitethroats are uncommon so close to central London and this is the best area on the Heath for them. It is a particularly good place to see green woodpeckers, which enjoy feeding on the yellow meadow ants, and kestrels hunting for field voles which populate the long grass, thistly and, especially, brambly areas. Unusual migrant birds may sometimes be sighted perching on the thistles and brambles, to the interest of birdwatchers.

Pryor's Field supports an abundance of invertebrates. Some of the hills of yellow meadow ants are large, and probably provide specialist habitat for other invertebrates. Hogweed and creeping thistle provide nectar for a range of invertebrates. The two notable weevils were found by Dan Hackett in 2007, *Rhynocyllis conicu*, and *Trichosirocalus horridus*, were only recorded in three or four counties between 1970 and 1992, and Dr Hackett's records were probably the first for the London area. The spider *Tapinocyboides pygmaeus* is a Red Data Book (RDB3) species.

Most of the site is not of particular botanical interest. However, areas of acidic grassland are present. The northern area contains heath grass, which is rare in north London and surrounds; Pryor's Field is a stronghold for this characteristic species of acid grassland. Another characteristic acid grassland plant here is tormentil, which is also rare on the Heath. Acid grassland is uncommon in London and is a London Biodiversity Priority Habitat. Common spotted orchid, a plant which is rare on the Heath and is particularly attractive, is present.

2.2 Public and educational uses

Pryor's Field is popular with dog walkers and for sitting and picnics; the benches are well used. Local people enjoy the flowers and some are resistant to cutting hogweed and Michaelmas daisy. It is a portal to the Heath. It is enjoyed by naturalists, especially ornithologists.

Pryor's Field is too far from the Education Centre for use for most educational purposes.

2.3 History and built environment

Pryor's Field does not contain any historic structures, but its uses during and after the Second World War may be of interest.

2.4 Overall vision

The overall vision for Pryors Field is to maintain and where possible improve its important ecological interest whilst providing an attractive, welcoming area for people to enjoy for itself and for access to the wider Heath.

More specifically, the vision is:

- To maintain and improve the existing areas of grassland, scrub and woodland
- To stop or reduce the spread of invasive plants
- To monitor invasive species
- To maintain and improve public access and views
- To maintain the existing dense bands of scrub and trees between the grassland and East Heath Road and the car park, and to improve these where appropriate
- To improve the woodland edge habitat along the northern and eastern edges of the Field.

2.5 Relevance to achieving the 2007-2017 Hampstead Heath Management Plan

Overriding Objectives, Essential Actions and Aspirational Goals from Part I of the Hampstead Heath Management Plan which are particularly relevant to the management of Pryor's Field are as follows:

- **NL1:** Retain and enhance the Heath's habitats and natural resources to enable continued quiet enjoyment and appreciation of the natural environment
- **NL4:** Manage the Heath's woodlands and scrub to enhance their nature conservation value and improve their distinctiveness
- **NL7:** Manage the Heath's heathland and dry acid grassland to enhance their nature conservation value
- **NL12:** Monitor changes in the Heath's ecology
- **NL14:** Control certain invasive and inappropriate species

Policies from the Natural Landscape chapter of the Part II Management Plan which are particularly relevant to the management of Springett's Wood:

Policy 1: The Heath will be managed to maintain and preserve its unique wild and natural aspects and its ecology, and enable quiet enjoyment and appreciation of the natural world by visitors

Policy 4: The existing areas of natural grassland will be managed to protect and enhance their nature conservation importance

Policy 5: The City proposes to retain grassland cover at roughly its present area

Policy 6: Grassland will not be allowed to revert to scrub or woodland

Policy 7: Mowing regimes will be adopted which maintain grassland and support and encourage desirable flora and fauna. Refuge areas will be left for invertebrates

Policy 13: The existing areas of acid grassland and heathland, including heather and gorse, will be managed to protect and enhance their nature conservation importance

Policy 16: The existing areas of woodland and scrub will be managed to protect and enhance their nature conservation importance and improve their distinctiveness

Policy 17: Woodland and scrub cover will be retained at roughly their present extent

Policy 20: Woodland edge habitat, i.e. a gradation from trees or shrubs to long grass, will be encouraged

Policy 34: The spread of scrub will generally be limited and will be managed to prevent it becoming woodland

Policy 46: Populations of plants and animals protected by law, identified as being Priority Species in national and local Biodiversity Action Plans, or subsequently identified as worthy of protection will be protected and enhanced

Policy 50: Selected invasive and inappropriate species will be controlled

Policy 56: Management will remain vigilant and responsive to research and advice on climate change to ensure the Heath is flexible enough to absorb whatever changes lie ahead.

3.0. Prescription and work programme

See maps 5a, b and c for locations of area-specific items

6.1 Regular management tasks

<u>Objective</u>	<u>Prescription</u>	<u>Frequency</u> <u>p.a. where</u> <u>relevant</u>	<u>Month(s)</u>	<u>Years</u>	<u>Who by</u>	<u>Priority: low,</u> <u>medium or</u> <u>high</u>
To maintain and improve the existing areas of grassland, scrub and woodland	Mow a section of the more fertile lower grassland and remove arisings	Once	As required	All	Rangers	High
	Remove or cut any saplings invading grassland	As required	Any	As required	Cons team	High
	Cut or dig up patch of blackthorn suckers on western side of path along Mixed Pond side of field (see map 5a)	Once	Any	All	Cons team	Medium
	Check area where common spotted orchid grows to ensure it is not being outcompeted; manage appropriately if so	Once	June	All	Ecologist/ Cons team	High
	Clear sycamore saplings and laurel from woodland strip along north edge	Once	Any	Every 5 years	Cons team	Medium
Stop or curtail the spread and in some cases reduce the existing area of	Remove hogweed flowers before seeding and take off site in all areas except that specified on map 5b	Twice	June-August	All	Cons team	High
	Cut or top (depending on height) creeping thistle as specified on map 5b	Twice	July-September	All	Cons team	High

invasive species	Cut annual extension of bramble	Once	October- mid-March	All	Cons team	High
	Cut 1m round large area of white Michaelmas daisy annually (see map 5c)	Once	July	All	Cons team	High
	Dig up if possible, or cut four times p.a. if not, any small clumps of white Michaelmas daisy and all purple Michaelmas daisy (see map 5c)	4 times if cut	June- September	All	Cons team	High
	Pull any Himalayan balsam in damp patch. Pull Himalayan balsam in central bramble patch only if whitethroat not breeding	2-4	June- August	All	Cons team	High
Monitor invasive species	Monitor selected areas of hogweed, bramble, white Michaelmas daisy and creeping thistle	Once	June-July	All	Ecologist	High
Maintain and improve public access and views	Make sure main paths are clear of bramble and in good order, and ditch line running along the south of the field has been regularly cleared of leaf litter and debris.	As required	All	All	Rangers	High
Improve the woodland edge habitat along the northern and eastern edges of the Field	Blackthorn shrubs along Mixed Pond fence line: remove oak sapling, coppice blackthorn to within 2.5m of fence and lay remaining shrubs along fence line. Achieve this through cutting 3 tranches on a 9 year rotation (see map 5a).	Once	October- February	2013, 2016, 2019	Cons team	Low
	Cut 1/3rd of the scalloped eastern edge of Pryor's Field between the path and shrubs	Once	September-	All	Cons	Medium

	(excluding the area dominated by blackthorn) on a rotational basis (see map 5a).		February		team	
	Maintain gorse along northern edge by clearing bramble as necessary (see map 5c).	Once	September - February	All	Cons team	High

6.2 One-off tasks

Objective	Prescription	Month(s)	Year	Who by	Priority
Curtail the spread and in some cases reduce the existing area of invasive species, retaining selected areas of bramble, thistle and white Michaelmas daisy for ecological benefit	Cut a small area of bramble in north-east of field with aim of eradicating it (see map 5c)	One in winter, two in spring-summer, depending on growth	2012 & 2013 then review	Cons team	High
	Reduce the extent of areas of bramble as specified on map 5b, cutting by hand where ant hills are present. If extent is eventually reduced, cut annual extension as elsewhere.	October-mid-March	All, until achieved	Cons team	High
	Consider placing additional brash within central bramble patch if required to deter people trampling inside, in order to preserve habitat for nesting whitethroat (see map 5c)	September-mid-March	2012	Cons team	High

Maintain existing dense bands of scrub and trees between the grassland and East Heath Road and, the car park for both visual screening and for ecological benefit, and improve these where appropriate	Remove sycamore trees and saplings from large willow area on the southern edge near the fairground site (see map 5a)	Autumn or winter	2012 or thereafter	Cons or Arb team	Low
	Plant a band of shrubs such as hazel and hawthorn adjacent to the white poplars along the south-east boundary to shield views of the fairground site and improve the sense of enclosure (see map 5a)	Winter	2012 or thereafter	Cons team	Low
	Coppice selected areas of shrubs on the Field side of the scrub band parallel to East Heath road, in order to thicken it up. Plant hazel or hawthorn where additional shrubs are required. This will improve the visual screen and the habitat for birds. Carry out in two tranches, one within 3 years, the other in perhaps 10 years' time, to be assessed (see map 5a).	November - February	By 2015, then by 2022	Cons team	Medium
Maintain and improve public access and views	Remove some bramble from north-west corner access path on both sides to make entrance to Pryors Field more attractive, with a better view of the field (see map 5c).	October-February	2013 or thereafter	Cons team	Low
	Remove small hawthorn growing too close to path to road from south-west corner of Field before it interferes with access (see map 5a)	October-February	2012 or thereafter	Cons team	Medium
Improve the woodland edge habitat along the northern and eastern edges of the Field	Plant more gorse in small area recently cleared of gorse (see map 5a).	November-February	2012 or thereafter	Cons team	Medium

Pryor's Field Management Plan Map 5a

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General management
excluding hogweed,
thistle, Michaelmas
daisy and bramble

clear sycamore saplings & laurel
from woodland

plant gorse in small recently-cleared area

pull Himalayan balsam annually
if whitethroat NOT breeding

cut scalloped grassy/brambly edge
on 3-year rotation

pull Himalayan balsam annually

coppice blackthorn and lay shrubs along
fenceline in 3 tranches

cut blackthorn suckers annually

mow annually
or as required

plant line of native shrubs behind poplars

coppice shrubs on Field side
in say 10 years

clear ditch of leaf litter and debris

coppice shrubs on Field side soon

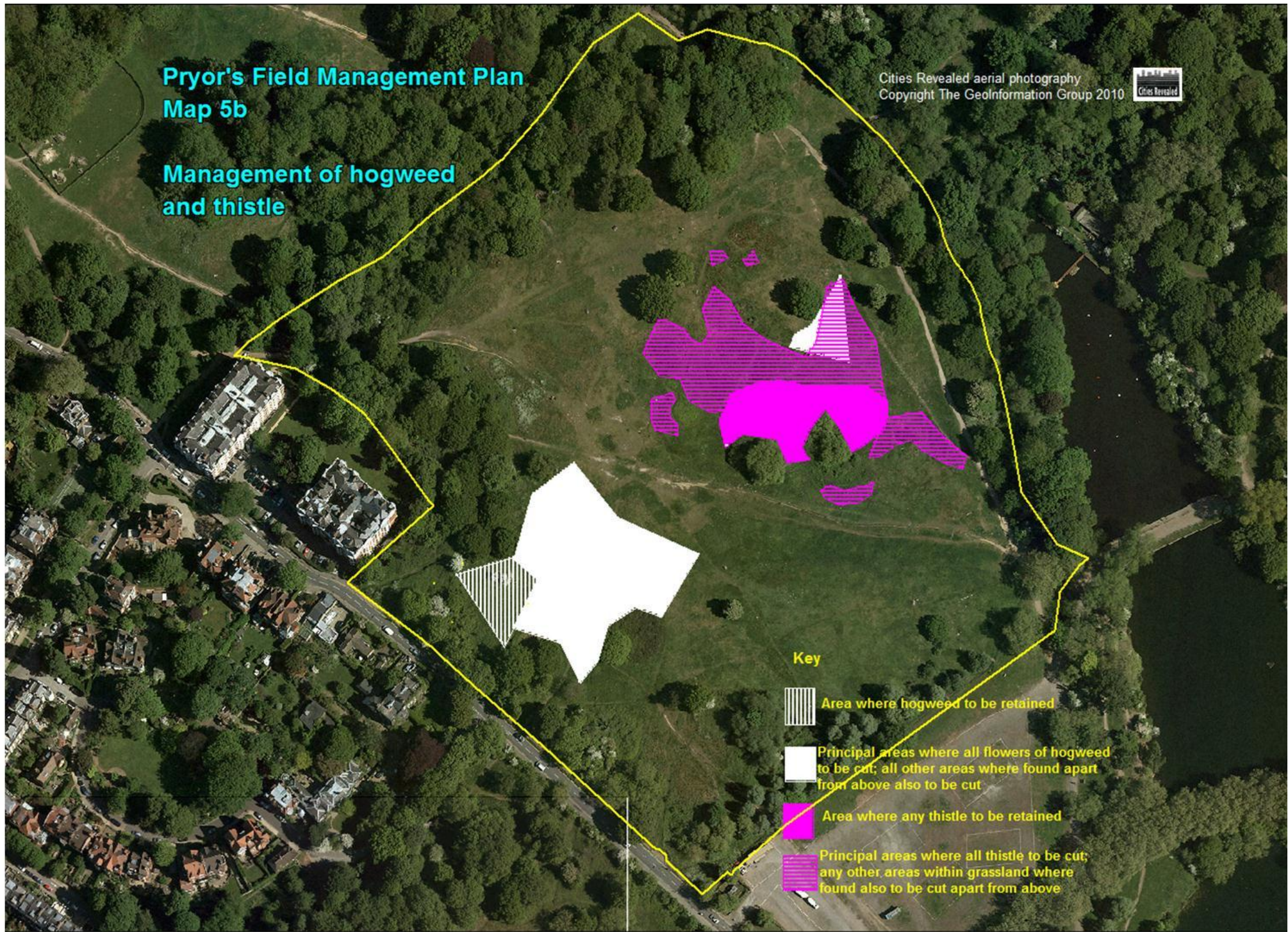
remove sycamores from among other trees

remove small hawthorn too close to path

**Pryor's Field Management Plan
Map 5b**

**Management of hogweed
and thistle**

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Key



Area where hogweed to be retained



Principal areas where all flowers of hogweed to be cut; all other areas where found apart from above also to be cut



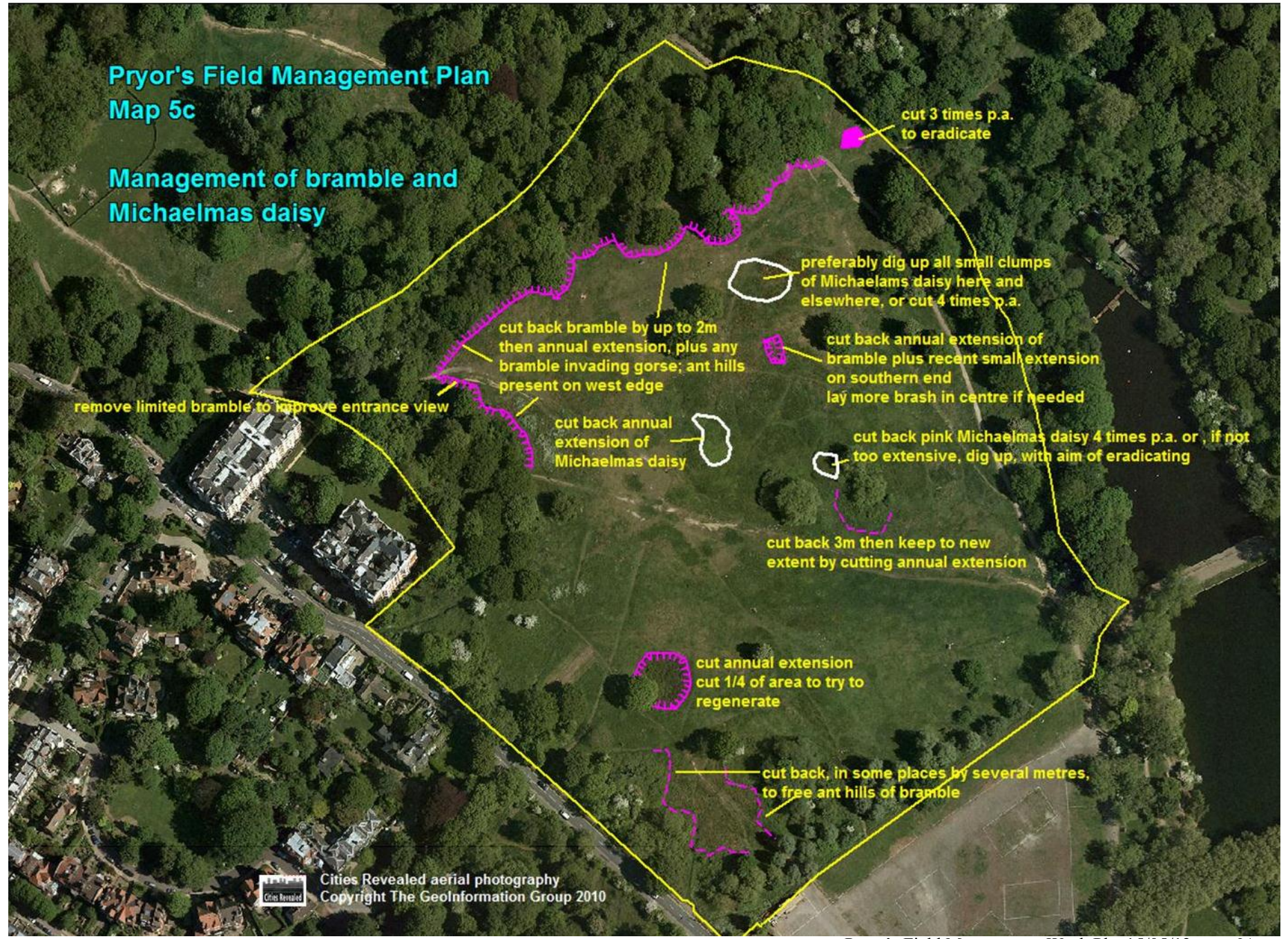
Area where any thistle to be retained



Principal areas where all thistle to be cut; any other areas within grassland where found also to be cut apart from above

**Pryor's Field Management Plan
Map 5c**

**Management of bramble and
Michaelmas daisy**



cut 3 times p.a.
to eradicate

preferably dig up all small clumps
of Michaelmas daisy here and
elsewhere, or cut 4 times p.a.

cut back bramble by up to 2m
then annual extension, plus any
bramble invading gorse; ant hills
present on west edge

cut back annual extension of
bramble plus recent small extension
on southern end
lay more brash in centre if needed

remove limited bramble to improve entrance view

cut back annual
extension of
Michaelmas daisy

cut back pink Michaelmas daisy 4 times p.a. or, if not
too extensive, dig up, with aim of eradicating

cut back 3m then keep to new
extent by cutting annual extension

cut annual extension
cut 1/4 of area to try to
regenerate

cut back, in some places by several metres,
to free ant hills of bramble



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4.0 Review

To be left blank, to be filled in as time goes by

Author	Date	Task	Observation, event or alteration to task

5.0 References

1. British Geological Survey 1:50,000 Sheet 256 North London
2. Tony Vaughan, unpublished, London Natural History Society, ca. 1998
3. Kit Ikin, *Hampstead Heath, How the Heath was saved for the public*, London Natural History Society, 1985