Ham Lands

Management plan 2024-34

September 2024 (v1)

LONDON BOROUGH OF RICHMOND UPON THAMES

Wild Future

Contents

Appendices

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1. Introduction

Our management plan

Ham Lands is one of the most important natural sites in Richmond and, as a Metropolitan Site of Importance for Nature Conservation, indeed London as a whole. It is the largest conservation site cared for by Richmond Council in the greenest borough in the capital.

Its meadows, scrub, woods and wetlands are not just home to fascinating flora and fauna, but the scene for thousands of visitors through each of the year's seasons. It is a nature reserve, a natural and historical classroom, a place of exploration and discovery, and of peace and well-being.

Each aspect of the Lands requires stewardship and the hard work of so many. This ten-year plan encapsulates the strategies and actions that the Council and the community agree should be in place to both preserve and enhance the natural health of the site, whilst facilitating the access and enjoyment of the site that is important to so many in a way that nature is greater understood and valued, but not significantly impacted. The plan sets out details of the site's important components and the prescriptions needed to deliver against the strategic goals.

This decade began with Richmond declaring a climate emergency. Our biodiversity is also in crisis. Richmond Council and its partners across the borough have long led from the front on these vital themes and, during the next ten years at Ham Lands, the evolving principles being applied to respond to both crises will guide our hand as we seek to make Ham Lands the best place it can be for wildlife and people, managed in a sustainable way. Working with the Ham United Group, Richmond Biodiversity Partnership and all partners, we will seek to embrace local nature recovery and contribute where we can to the borough's climate emergency action plan.

The plan has been drafted for a broad audience interested in the development of Ham Lands, namely:

- Site visitors and borough residents
- Parks and Open Spaces Service officers
- The Friends of Ham Lands
- Volunteers and biological recorders
- Other services and departments within Richmond Council
- Elected members, ward councillors and portfolio holders
- National agencies
- Contractors

The plan will run from April 2024 to March 2034, but it is not set in stone. There must be scope to constantly review, re-programme and re-prioritise in response to our experiences, the changing needs of local communities and the course that nature and our climate take. The plan will be updated each year and an action plan developed from the rolling work programme for the following April to March period. The plan will be reviewed in years 5 and 10.

2. Site description

Site background

2.1 Site summary:

Location	Riverside Drive, Richmond, TW10
Grid Ref. (centroid)	Ham Lands North TQ 16416 72723 Ham Lands South TQ 16616 71986
Ownership	London Borough of Richmond upon Thames
Designation	Site of Metropolitan Importance for Nature Conservation (SMINC); Metropolitan Open Land (MOL); Local Nature Reserve (LNR); Ham Fields Archaeological Protection Areas (Tier 2 APS).
Plan area	63.1 ha (153.7 acres) • north 28.0 ha, south 35.1 ha
LBAP habitats	Semi-improved neutral grassland; Scrub; Broad-leaved woodland; Reedbed
LBAP species	Bats; badger; breeding birds; stag beetle; white-letter hairstreak; pollinators
Other key features	Rare grassland plants; notable invertebrates; complex mosaic of habitats; important site within wider landscape

The site comprises a large area of open space on the edge of the River Thames between Richmond and Kingston, supporting a mosaic of open grassland, scrub & broad-leaved woodland. Edge habitats include scrub and tall herb communities, and within wetter areas small pockets of reedbed and swamp have formed. Together these provide a unique, important and locally distinctive haven for flora and fauna, which continues to support many London rarities.

A number of specific site surveys have been conducted to identify the biological importance of the site, and this has included the following:

- Breeding bird survey – 2022
- Trail camera survey – 2022
- Habitat Mapping – 2022
- SINC Review 2021
- Bumblebee Conservation Trust BeeWalk survey – since 2019
- UK Butterfly Monitoring Scheme transects – since 2018

In addition, through its importance to the local community, floral and faunal datasets have been meticulously recorded, and collectively this information has been used to inform the prescriptions within this plan.

The landscape

2.2 This area of London is extremely fortunate in having an abundant source of greenspace. Ham Lands forms a large area of semi-natural habitat on the edge of the river Thames, within a meandering bend between Richmond and Kingston. The river

provides connectivity to the wider landscape with direct green corridors to Richmond Park, Ham Common and Wimbledon & Putney Commons. Ham House lies directly to the north-east of Ham Lands, which at one time was all under the same ownership. Slightly further afield, but also edging the river Thames to the south is Home Park, Hampton Court Palace and Bushy Park, with Marble Hill, Old Deer Park and Royal Botanic Gardens Kew to the north.

2.3 The site has recreational opportunities for its visitors, particularly those that reside in the Ham community directly to the east and people from Teddington who access the site via the foot bridge. With this close association, a dedicated team of volunteers has arisen who perform an invaluable service of habitat management, monitoring and communication.

The site

2.4 The area covered by the management plan comprises 63.1 hectares (ha) of restored gravel workings, where woodland, scrub and grassland has established to form a rich mosaic of habitats. The infilling of the site with WWII bomb debris and topsoil from all over London and the south-east has created unusual conditions, creating a unique diversity of flora and fauna, including an abundance of London rarities. There are also old undisturbed floodplain meadows and fen. The site boundary also includes the bund and highway verges along Riverside Drive.

2.5 Ham Lands is of regional importance for nature conservation and is designated as a Local Nature Reserve (LNR), Site of Metropolitan Importance for Nature Conservation (SMINC) and Metropolitan Open Land (MOL).

History

2.6 Early maps of the area show a farmed environment that supported water meadows, fields and open grazing land, and fields used as arable and market gardens, known at the time as Ham Fields. At that point, the area regularly flooded, giving rise to poor soils over flood plain gravels. Following heavy flooding, the New Teddington Lock was constructed in 1894, and the resulting spoil was used to build a towpath alongside the river. Teddington Lock remains to be the tidal limit of the Thames, and the waters upstream of this are carefully controlled so that flooding is now very rare on site (though this is expected to increase in future).

2.7 During the 17th, 18th and 19th centuries, the Earls of Dysart lived at Ham House and owned the surrounding lands, including Ham Lands. In 1904, the then Earl leased part of the site to William Brice for sand and ballast excavation, which was conducted by the Ham River Grit Company Ltd. As part of this, a processing plant was constructed on the riverbank, also providing access to barges for exportation. A narrow-gauge railway linked the site to the main road, and the route is now one of the main paths within Ham Lands South, running parallel to the towpath. The plant was regarded as an eyesore by Twickenham residents, and protests led to the creation of an internal lagoon which created a screened environment for works to continue. This lagoon still exists today at Thames Young Mariners and is used for water-based recreational activities. It is owned by Surrey County Council on a 10-hectare (25-acre) site, including the lake and direct surroundings, and separates Ham Lands north and south.

2.8 The gravel pits reached their maximum in the 1940s, covering the majority of the site. They were then successively infilled with rubbish, rubble and soil from WWII bomb sites

across London and south-east England. This was completed by the early 1960s and resulted in the land being slightly higher than the original surface, purposefully done to reduce flooding events.

2.9 The Council purchased the remaining area of the site and, after public opposition to redevelopment plans, only the Locksmeade Estate development proceeded and the remainder was designated as Metropolitan Open Land and Public Open Space, to be managed for nature conservation and informal recreation.

2.10 Ham Lands has been fortunate in having a rich and varied botanical community and has been well known to local botanists since before its establishment as a nature reserve. Instead of the more acidic fluvial deposits which would have been present should the site have remained a natural floodplain, the underlying rubble has provided more alkaline conditions which has given rise to unusual floristic communities. Many rare plants, including Nottingham catchfly, autumn squill, Maiden pink, and great dodder, colonised the area following the infilling however these have since disappeared, a likely impact of successional change. Over 400 species of higher plants have been recorded, including numerous London rarities, making it one of the richest sites in London.

Environmental factors

Geology & soils

2.11 The bedrock geology here is the London Clay Formation, comprising clay and silt which is a sedimentary bedrock formed between 56 and 47.8 million years ago during the Palaeogene period. The London Clay would have been overlain by sands and gravels of the Kempton Park Gravel Member which were deposited by the River Thames during the last Ice Age (Devensian Stage). Although some remnants of this member remain, the majority of the site has been disturbed by gravel extraction, up to a depth of at least 3.5 metres. The pits were infilled with debris created by WWII bomb rubble and topsoil brought in from around London and the south-east, and, with this, floral diversity has been influenced by the resulting substrates and seed which has travelled with the spoil.

Ecological interest & features

2.12 Habitat maps are included in Appendix 1.

Flora & Fauna

2.13 The habitats of greatest extent comprise broad-leaved woodland, scrub and semi-improved neutral grassland. The majority of the woodland hugs the riverside, with the scrub and grassland habitats woven together to create a diverse mosaic. The grassland has been well documented and supports a herb-rich community, in which many rarities have been recorded. As is common in these well managed reserves, ruderal herb assemblages edge the scrub and woodland, providing a valuable array of microhabitats throughout the site.

2.14 Although contiguous, a tidal lagoon - known as Thames Young Mariners - separates the site into two distinct areas, Ham Lands north and Ham Lands south. The lagoon is outside the scope of this management plan. The towpath and a linear area of scrub provide recreational and green linkages across the areas.

2.15 During the infilling of the gravel pits up to the 1960s, the land was made higher than the original level to prevent flooding. Wetter habitats are therefore limited, however a small area of dry reedbed is still present to the south of Thames Young Mariners where the soil retains a higher level of ground water. In addition, in the very north of the site where the land is lower lying, an area of original flood meadow has survived, although this has been heavily degraded, as well a small area of lowland fen. Small areas of amenity grassland and hardstanding are also located in the southern and northern extents of the site.

2.16 Most of the habitats at Ham Lands are relatively young and have established since the infilling of the pits. The use of rubble and soil from London and across the south-east has meant that the much of the habitat is more comparable to those on higher alkaline soils, as opposed to those of floodplain meadows. There are also patches of acid soils. In addition, the floristic assemblage that first established would have resulted from seed transported in the soils, along with colonisers from nearby and those deposited by the river. As is typical of early successional habitats, the resulting flora would have been highly diverse and reliant on disturbed, open habitats, which have since largely been lost. The subsequent loss of some of the rare plants is therefore likely a symptom of succession, and opportunities to restore these have been given due regard in this report. More recent arrivals (e.g. red bartsia, keeled leek) may have been spread by contractor's equipment.

Woodland and Scrub

2.17 Two areas of woodland appear older than the rest: an area north of Thames Young Mariners where some larger trees remain, and a narrow strip dominated by mature willow, ash and poplar that fringes the river along the towpath and old railway. Given the relative infancy of most of the site, young pockets of woodland and large swathes of scrub have established inland providing structural diversity and ecotones amongst the grasslands. These areas are being continually managed to reduce encroachment into the meadows and glades. The dominant scrub species include bramble (*Rubus fruticosus* agg.), elder (*Sambucus nigra*), dog-rose (*Rosa canina* agg.) and hawthorn (*Crataegus monogyna*), with other rarer species including sweet-briar (*Rosa rubiginosa*), broom (*Cytisus scoparius*) and gorse (*Ulex europaeus*) which are declining here. The scrub also includes an intriguing variety of fruit trees especially apple (*Malus domestica* and *M. sylvestris*), pears (*Pyrus communis*) and plums (*Prunus* spp.). Broad-leaved helleborine *(Epipactis helleborine*) has recently established in one of the woodland compartments. Stone parsley (*Sison amomum*) persists within a small glade.

2.18 Non-native species feature sporadically at Ham Lands, many of which provide additional foraging resources for a range of wildlife, particularly pollinators. However, if left unchecked these species can become problematic, and selective control of holm oak (*Quercus ilex*), Turkey oak (*Quercus cerris*), false acacia (*Robinia pseudoacacia*), Norway maple (*Acer platanoides*) and sycamore (*Acer pseudoplatanus*) has been adopted to prevent these becoming invasive.

2.19 Glades and rides intersect the woodland and scrub, providing integral connections and localised microhabitats which benefit an array of invertebrate and fungal life. Lepidoptera has been well documented on site, and butterfly species have increased during the last few years. Amongst the more common species of these habitats, such as speckled wood (*Pararge aegeria*), holly blue (*Celastrina argiolus*) and ringlet

(*Aphantopus hyperantus*), the rarer brown hairstreak (*Thecla betulae*) and white-letter hairstreak (*Satyrium w-album*) have been recorded in recent years. Reliant on elm (*Ulmus*) of varying ages, the white-letter hairstreak benefits from the sheltered mixed scrub and woodland edge habitats of Ham Lands. The brown hairstreak is associated with clumps of blackthorn (*Prunus spinosa*) and other *Prunus* spp. Alexanders (*Smyrnium olusatrum*) is present near the riverbank towards the south end of Ham Lands South.

2.20 Stag beetle (*Lucanus cervus*) has also been recorded at Ham Lands, and this saproxylic species is likely to be using the mature woodland habitats which provide suitable conditions for its larval stage.

2.21 Being the dominant habitats on site, the woodland and scrub supports an abundance of faunal life. Badgers (*Meles meles*) and foxes (*Vulpes vulpes*) are a common sight, and these large mammals benefit from an abundance of cover, forage and commuting opportunities. Muntjac deer have been sighted. Of the known eleven bat species that occur in the borough, nine have been identified at Ham Lands. Amongst the more common species, including soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula)* & Daubenton's bat (*Myotis daubentonii*), two nationally rare species, Nathusius pipistrelle (*Pipistrellus nathusii*) and Leisler's bat (*Nyctalus leisleri*) have been identified on site. The mosaic of habitats provides an abundance of invertebrate food sources, as well as dark corridors which provide an important commuting resource, particularly for those species which are more sensitive to light. The mature wooded habitats along the riverside may also provide roosting opportunities for bats, where trees support lifted bark, woodpecker holes, cavities and thick ivy.

2.22 The scrub and woodland also provide an important feeding and nesting resource for an assemblage of birds associated with urban, wetland and woodland habitats. Of particular note and importance in London are song thrush (*Turdus philomelos*) and house sparrow (*Passer domesticus*), which use the scrub and woodland for cover and nesting opportunities, but also frequent the grasslands for foraging. The site has historically been noted for its number of song thrush territories (26 in 2005) and supported breeding spotted flycatcher (*Muscicapa striata*), lesser whitethroat (*Sylvia curruca*) and tawny owl (*Strix aluco*), and the two common species of woodpecker (*Picus viridis & Dendrocopos major*), goldcrest (*Regulus regulus*) and long-tailed tit (*Aegithalos caudatus*) are relatively common. Redwings (*Turdus iliacus*) and fieldfares (*Turdus pilaris*) flock in winter to feed on the fruit which is often found in abundance. Nesting boxes erected for raptors are in use by kestrel (*Falco tinnunculus*).

Semi-improved neutral grassland

2.23 At the north-west extent of Ham Lands North, a low-lying area of original flood meadow has survived excavation and infilling. Flooding events are frequent and several species indicative of wetter conditions can still be found including cuckooflower (*Cardamine pratensis*), meadow-sweet (*Filipendula ulmaria*), and amphibious bistort (*Persicaria amphibia*). Calcareous influences have also provided conditions for salad burnet (*Sanguisorba minor*), great knapweed (*Centaurea scabiosa*) and autumn hawkbit (*Scozoneroides autumnalis)*, alongside species of established neutral meadows such as oxeye daisy (*Leucanthemum vulgare*) and tansy (*Tanacetum vulgare*).

2.24 Along the south-eastern edge of the flood meadow is a steep bank, rising up to the level of the landfill at the steps, and then gradually sloping towards Thames Young

Mariners. On this, historically a wasteland community had developed, but has since been lost to woodland, scrub and open grassland. These habitats extend to the south of the lagoon (Ham Lands South), where a complex mosaic of dry grassland and scrub exists.

2.25 The areas of grassland support a highly diverse herb component, which is a likely result of the complex geology found here. An unusual assemblage of plants has established, and many of the rarer species present are reliant on open grassy swards with availability of bare ground. The dry grassland community is complimented by many leguminous plants, including yellow vetchling (*Lathyrus aphaca*), hairy vetchling (*Lathyrus hirsutus*), grass vetchling (*Lathyrus nissolia*) and hare's-foot clover (*Trifolium arvense*), many of which are scarce or rare in London and the UK. Other uncommon plants here include meadow saxifrage (*Saxifraga granulate*), common centaury (*Centaurium erythryaea*), warty cabbage (*Bunias orientalis*), common corn salad (*Valerianella locusta*), star-of-Bethlehem (*Ornithogalum umbellatum*), sand leek (*Allium scordoprasum*), keeled leek (*Allium carinatum*), hoary cinquefoil (*Potentilla argentea*), bee orchid (*Ophrys apifera*), pyramidal orchid (*Anacamptis pyramidalis*), and dittander (*Lepidium latifolium*). The hemiparsitic red bartsia (*Odonites verna*) was first recorded in 2007 and was abundant by 2017, but it is not clear if it is having any beneficial impact in suppressing grass growth. Lesser meadow-rue (*Thalictrum minus*) was re-discovered on Ham Lands South in 2024 for the first time in around 50 years.

2.26 The nationally scarce Deptford Pink (*Dianthus armeria*) was recorded in 1991 but was a casual, and only observed that year. The succession of wasteland communities, which would have established post-infilling, to more established grasslands has resulted in the loss of species like Deptford Pink which rely on open and bare ground.

2.27 Unsurprisingly the grasslands support a high diversity of invertebrates, including an important assemblage of pollinators, ants, grasshoppers and crickets. Ant hills form an important feature of the grasslands. The once rare bee wolf (*Philanthus triangulum*) has been found on site, alongside the bumblebee hoverfly (*Volucella bombylans*), common carder bee (*Bombus pascuorum*), and the nationally notable red bartsia blunthorn bee *(Melitta tricincta*). The informal BMX track is noted for mining bees.

2.28 The diverse range of grasses and herbs within the grasslands have attracted a fantastic assemblage of butterflies and moths, and Ham Lands now supports just under half of the species known to breed in the UK. Amongst the commoner species, such as orange tip (*Anthocharis cardamines*), meadow brown (*Maniola jurtina*), marbled white (*Melanargia galathea*) and common blue (*Polyommatus icarus*), a number of less common species have recently been recorded including brown argus (*Aricia agestis*).

2.29 A good selection of spiders and other arachnids (harvestman and gallmites) have also been recorded on site including goldenrod crab spider (*Misumena vatia),* triangle spider *(Hyptiotes paradoxus*) and angular orbweaver (*Araneus angulatus*), the latter two regarded as nationally scarce.

2.30 Although many of the bird and mammal species use the wooded environments for cover, commuting, and nesting, the grasslands also offer important forage resources for these animals. Wood pigeon (*Columba palumbus*), starlings (*Sturnus vulgaris*) and swifts (*Apus apus*) utilise these habitats to hunt and harvest foods, and song thrush and badgers will be foraging on a number of molluscs such as the common chrysalis snail (*Lauria cylindracea*), Draparnaud's glass snail (*Oxychilus draparnaudi*) and

leopard slug (*Limax maximus*), all of which have been found on site. Kestrels have also been seen hunting, reflecting the abundance of small mammals using the grasslands.

Wetland Habitats

2.31 Ham Lands is situated along the banks of the River Thames; Teddington Lock, towards the southern extent of Ham Lands South, marks the usual tidal limit. The riverbanks and towpath between Richmond and the Kingston boundary are covered under a separate management plan (Ham Towpath Management Plan), but flooding from the river is a strong influence on parts of Ham Lands, particularly the floodplain meadows and fen / reed-canary grass (*Phalaris arundinacea*) bed in Ham Lands North; common meadow rue (*Thalictricum flavum*) is present here.

Other freshwater habitats within the site boundary include the tidal Thames Mariners lagoon and another small bed of reed canary-grass and a dry reedbed in Ham Lands South. Although small in extent, the aquatic habitats further diversify the wildlife within the site, adding an extra layer of interest. The riverside habitats are difficult to access, either being screened by mature broad-leaved woodland or privately owned, and therefore have been studied less. However, a range of common water birds have been recorded including heron (*Ardea cinerea*), grey wagtail (*Motacilla cinerea*) and cormorant (*Phalacrocorax carbo*), as well as breeding reed bunting (*Emberiza schoeniclus*) and kingfisher (*Alcedo atthis*). These habitats also support a range of Odonata, including emperor dragonfly (*Anax imperator*), black-tailed skimmer (*Orthetrum cancellatum*) and banded demoiselle (*Calopteryx splendens*) which hawk around the grasslands and reedbed.

Access and visitor usage

2.32 Ham Lands is highly regarded by the local community of Ham, and is heavily used for recreational activities, such as dog-walking, jogging, horse riding, blackberry & apple picking, and wildlife spotting. Ham Lands South is more regularly visited, and Ham Lands North tends to stay slightly quieter.

2.33 There are multiple entrances to Ham Lands from Riverside Drive, which separates Ham Lands from the built environment of Ham. Three main paths enter the site at Ham Lands South and form an abundance of intertwining routes through the grassland and glades within the woodland and scrub. These meet a main path which runs north to south along the old railway line. There are two entrances to Ham Lands North, one from Riverside Drive and a main one from Ham Street, near the car park.

2.34 In addition to these, the Thames towpath runs along the western extent of the site (to be covered by its own management plan), providing access at the northern and southern extremes, and the Thames cycle path dissects Ham lands South towards its southern extent. Bridle paths run across Ham Lands North.

2.35 Other recreational facilities include the football pitch at Beaufort Court, which is situated towards the southern extent of the site, as well as the informal BMX track which is nestled within the woodland and scrub at the south-western extent of Ham Lands south, towards Teddington Lock. A Forest School uses the site. Burnell Avenue Open Space is adjacent to the southern end of Ham Lands.

Evaluation of key features

Ecology

2.36 The key features of the site comprise the broad-leaved woodland, semi-improved neutral grassland, scrub and reedbed. These habitats are locally important, and in some cases are of national conservation significance. The conservation of these habitats should ensure the species they support are in turn protected, however some key species have declined so drastically that they require specific action. Those of importance at Ham Lands comprise a number of rare plant species which are further discussed below, stag beetle, white-letter hairstreak, bats, badgers, breeding birds (song thrush & house sparrow) and pollinators.

2.37 Broad-leaved woodland is a priority habitat in the UK, and locally within LBRuT. The Local Biodiversity Action Plan for Richmond includes a Habitat Action Plan (HAP) for broad-leaved woodland, and this identifies the threats and actions required for this specific habitat. Flagship species which are characteristic within this community include a number recorded on site; bats, stag beetle, pedunculate oak (*Quercus robur*) and purple hairstreak.

2.38 Semi-improved grassland is a locally important habitat within LBRuT, and a local HAP has been created to safeguard this important natural resource. Flagship species of neutral grassland, identified at Ham Lands includes bird's-foot trefoil (*Lotus corniculatus*), common knapweed (*Centaurea nigra*), goat's-beard (*Tragopogon pratensis*), oxeye daisy (*Leucanthemum vulgare*), lady's bedstraw (*Galium verum*), meadow brown, common blue butterfly, green woodpecker, and goldfinch (*Carduelis carduelis*). Due to the mosaic nature of the grassland, patches of acid and calcareous grassland are present. Species such as sheep's sorrel (*Rumex acetosella*) and field wood-rush (*Luzula campestris*) provide indicators of the more acidic areas.

2.39 Reedbeds are a nationally scarce habitat and have been designated as priority habitats for conservation in the UK. Although small in extent, the dry reedbed on Ham Lands South represents an important resource due to their scarcity.

2.40 Although not identified in local policy, the extensive scrub habitats within the site play an extremely important role in protecting the diversity of the site. Many of the key faunal species rely on the mixed scrub, and although this habitat requires continual control, it should be recognised as one of the key features of the site.

2.41 The site supports a number of London notable plants. Notable is defined as species which were recorded from 15% or fewer of the 400 two-kilometre recording squares (tetrads) in Greater London in the Flora of the London Area (Burton 1983). These include the nationally scarce yellow vetchling, hoary cinquefoil, dittander and marsh ragwort. These species form a priority in their own right, and specific management prescriptions have been included to safeguard their populations.

2.42 Richmond has a nationally important native black poplar population, which is subject to a local and London HAP. Whilst not currently recorded at Ham Lands as a mature tree, a number of young trees propagated from the local unique clones were planted in spring 2024.

2.43 Ham Lands is an important part of a series of connected spaces along the river whose overall relationship and continuity is perhaps as important as each site's individual management. Ham House Meadow / Ham Riverside Meadows, Queen Elizabeth

Fields, Petersham Lodge Woods and Dysart Open Space to the south in Kingston should be all be considered as part of this joined-up landscape.

Open space

2.44 The site is valued by residents as a green space and its breadth of heritage and natural features.

Constraints

2.45 Constraints to be considered during management planning include:

- Presence of invasive species: Japanese knotweed, Himalayan balsam, horse radish, sand lucerne, hemlock, patient dock and goat's-rue. Specific prescriptions may be needed for these species, and during routine management it is important that these species are identified, and prescriptions adjusted if necessary.
- Much of the site is covered by the Ham Fields Archaeological Priority Area, Tier 2, summarised in this appraisal report. The formerly quarried areas are excluded. Previous finds have been at the surface or whilst digging gravel. If excavations are to be carried out as part of management, for example during pond creation, the site should be monitored for potential archaeological finds and appropriate steps taken if any are discovered.
- Anti-social behaviour: the site has some hidden and remote areas which can attract anti-social behaviour, including damage to trees and fire setting, which may make some people feel unsafe.
- Difficult access during wet periods: there are no surfaced paths on Ham Lands and some areas along main routes are wet in winter. This can make access for machinery difficult or damaging in wet periods, particularly during the winter.

3. Policies

Strategic principles for Parks & Open Spaces

3.1 The borough has the largest area of public open space per head of population of any London borough. The Council has a local and national reputation for quality and leadership in the delivery of excellent parks. To ensure the quality of Parks and Open Spaces remains at a high level, following public consultation the Council developed a series of strategic principles by which parks will be managed:

1. Our parks and open space management will have biodiversity, climate change and sustainability at the forefront.
2. Community participation with our Friends and Community Groups will continue to be encouraged and supported.
3. Our parks will promote active, healthy living and social inclusion for people of all ages and abilities.
4. The management of Parks and Open Spaces will create a sustainable legacy for future generations.
5. The quality of our Parks and open spaces will continue to define LBRuT.
6. Richmond will lead in the delivery of excellent parks and open spaces services.
7. Through innovation, the future development of the parks will be ensured.
8. Richmond's Parks will offer positive experiences to all visitors.

All Council owned and managed parks and open spaces are controlled by Public Space Protection Orders (PSPOs). These orders impose various restrictions to dog control and other activities in our parks and open spaces.

The London Plan

3.2 The Mayor for London is responsible for the strategic planning in London. Their duties include producing a 'Spatial Development Strategy' for London - the London Plan. Local (Local Authority level) plans must be in 'general conformity' with the plan. The London Plan 2021 recognises "the current and potential value of open space to communities, and to protect the many benefits of open space including those associated with sport and recreation, regeneration, the economy, health, culture, biodiversity, and the environment". The London Plan 2021 - Table of Contents | London City Hall.

London Borough of Richmond upon Thames planning strategies

Local Plan

3.3 Richmond upon Thames' Local Plan for 2018 recognises the importance of open space in the Borough. The extensive areas of open land create a varied and distinct landscape prominently defined by Richmond Hill and the River Thames valley in addition to Kew Gardens, two Royal Parks and many smaller open spaces and water courses. The importance of open space as an urban structure, providing relief from the built environment, is acknowledged, as is the importance of providing for play and recreation. These collectively contribute to quality of life in the Borough.

3.4 The role of ecology and open space's ability to provide a range of habitats is recognised, leading the Borough to protect areas of nature conservation value and to manage and enhance wildlife habitats. The strategy seeks to promote open space as a network of recreational, ecological and landscape assets which both serve the people of the Borough and help enhance and preserve the Borough's physical entity. A Draft Local Plan is currently undergoing consultation for adoption in 2024.

3.5 Ham Lands is affected by several of the borough's specific spatial policies. The site is designated as Metropolitan Open Land (policy LP 13) for protection of its character and openness, as an Other Site of Nature Importance (policy LP 15, Biodiversity) to be safeguarded and enhanced and also falls within the Thames Policy Area (policy LP 18, River corridors) where the distinctive character of the area needs to be considered.

Richmond's Local Biodiversity Action Plan (LBAP)

3.6 To conserve Richmond's biodiversity, the decline of valuable species and habitats needs to be reversed. The origin of Biodiversity Action Plans was to explain how to promote the conservation of biological diversity and the sustainable use of biological resources.

3.7 The borough's LBAP prioritises habitats and species that are rare, in decline or characteristic of Richmond, and aims to use them to help raise the profile of biodiversity in the borough. The BAP's strategy is based around protecting and celebrating local wildlife and improving the quality of wildlife habitats and the environment in our borough.

3.8 There are currently twenty Biodiversity Action Plans covering selected habitats (HAP) and species (SAP) for Richmond. The Council is committed to developing and implementing the objectives enshrined in these plans into their management practices. The plans that have most relevance to Ham Lands will be broad-leaved woodland, semi-improved neutral grassland, reedbed, bats, badger, house sparrow, song thrush, stag beetle and white-letter hairstreak.

London Borough of Richmond upon Thames Nature Conservation Policy

3.9 Richmond Council adopted a new Nature Conservation Policy in 2019 in which the Council recognises the special and diverse wildlife found within its Borough and its' duty to protect and preserve biodiversity. The Policy outlines the ways the Council will achieve this through management of its land, planning obligations and monitoring.

London Borough of Richmond upon Thames Tree Policy

3.10 Richmond Council has a tree management policy which recognises the benefits of trees and outlines a responsible management approach towards trees within the Borough.

The Thames Landscape Strategy

3.11 The Thames Landscape Strategy formed in 1994 and is a non-profit partnership organisation whose remit is '*To conserve, promote and enhance for the future, one of the world's great river landscapes between Weybridge, Hampton and Kew*.' Ham Lands

intersects with one of their key purposes, protecting and enhancing the Arcadian Thames.

3.12 Their objectives are:

- To champion community action by bringing together a partnership of organisations, individuals and community groups that have an interest in the Arcadian Thames.
- To implement the policies, projects and management proposals set out in the Thames Landscape Strategy and to develop new initiatives and opportunities.
- To improve sites of nature conservation value and create new opportunities for biodiversity and flood risk management.
- To protect and enhance historic buildings, historic parks and gardens, landscapes and ancient monuments.
- To raise awareness of the Thames Landscape Strategy, increase educational opportunities and promote understanding of the Thames environment and ways of protecting, conserving and enhancing that environment.

'Landscape is not only seen with the eye, it is felt in the heart'

3.13 The Thames Landscape Strategy is about people, and the ways they connect with their physical, aesthetic, historic, natural, recreational and spiritual landscape. At the core of this organisation, is the acknowledgement that landscape assessment is based on more than aesthetic or heritage interest alone.

3.14 The Thames Landscape Strategy accounts for this specialness – setting out ways to conserve and enhance this unique landscape for the benefit of all, for the next 100-years.

4. Site vision and objectives

Vision and Strategic Goals

4.1 The vison governing our plans for Ham Lands is:

Be a leading example of a community-managed nature reserve; protect our important wildlife and enhancing their habitats, whilst maximising other opportunities for biodiversity; keep climate change and sustainability at the forefront of our management; create a welcoming visitor experience and lifelong learning opportunities for connecting with nature and wild places.

4.2 To achieve this vision, we will work towards four strategic goals:

- Conserve the mosaic of habitats at Ham Lands to protect its unique floristic and faunistic qualities;
- Provide a plan which is sensitive to climatic change;
- Provide a natural and safe space to be enjoyed by the local community;
- Create and maintain a close relationship with contractors, the local support groups and the community.

Objectives

4.3 Four objectives flow from the vision and goals:

1. **Nature Conservation:** Restore where appropriate, maintain and improve the existing habitats to ensure the unique qualities of the grassland, scrub and woodland are optimised. This will entail management to ensure optimal habitat conditions are maintained for key species and groups, particularly those identified by local policy. This will include prescriptions for creating and maintaining open grassland and managing the woodland and scrub to improve structural diversity and attempt to reinvigorate historical seedbanks or provide opportunities for reintroduction.
2. **Visitor access**: Maintain the amenity grassland areas, permissive horse paths, footpaths, and infrastructure throughout the site to promote its provision as a local source of safe enjoyment and cleanliness.
3. **Community Involvement**: Support the volunteer community, including Friends of Ham Lands and local recorders, ensuring volunteering working parties are regularly available and suitable for a range of abilities. Engage with community groups and local users, including horseriders and dogwalkers.
4. **Management planning and Monitoring**: Monitor key habitats and species to ensure management actions are achieving site goals. Review management annually and amend the work programme where necessary.

Higher Level Stewardship Agreement

4.4 Currently parts of the site are under Natural England's' Higher Level Stewardship Scheme (HLS). The HLS aims to deliver significant environmental benefits. It involves more complex environmental management regimes utilising advice from local advisers, to develop a comprehensive agreement over a longer period of time. Richmond Councils HLS agreement is a five-year scheme that is due to finish in 2027.

Target Performance Indicators

4.5 Success will be measured at the end of this ten-year period by assessing the following performance indicators:

Indicator 1: Habitat Condition

At the end of the ten-year period, the key habitats within Ham Lands will be in a more favourable condition than they were at the beginning of this period. Where necessary, baselines will be taken in year 1. Habitat condition will be reviewed in years 5 and 10.

Grassland

- Increased floristic diversity and retention of rare and scarce species, especially London notables;
- Restoration of meadow areas which have been lost to scrub encroachment;
- Decrease in coverage of species which are negative indicators for grassland condition within the main meadow areas, such as horse radish, creeping thistle, hogweed, docks, hemlock, bramble and traveller's-joy (*Clematis vitalba*).
- Eradication and/or control of Schedule 9 invasive species, such as Japanese knotweed & Himalayan balsam.

Scrub

- Improvement in structural diversity of the scrub, particularly edge habitats;
- Removal of scrub where this has encroached former grassland areas.

Woodland

- Improved structural diversity, particularly along rides and glades;
- Increase woodland microhabitats, in particular standing and fallen deadwood, along with creation of stag beetle loggeries;
- Increase diversity through planting new standards, such as Black Poplar.

Wetland

- Reedbeds to be in active management
- Increase floral diversity in original floodplain area at Ham Lands North;
- Create at least one small pond to increase diversity on site.

4.6 As an addition, it is recommended that baseline habitat condition assessments using the most up to date version of the DEFRA Biodiversity Metric are carried out to allow for measurable long-term comparisons to be made, extending beyond the period of this ten-year plan. This would also be supplemented by a Grassland Monitoring Survey, which would involve long-term botanical assessment of the grasslands using permanent quadrat and National Vegetation Classification (NVC) surveys.

Performance Indicator 2: Access & Cleanliness

4.7 Upon surpassing of the ten-year period, the accessibility and cleanliness of Ham Lands will have been maintained to a high standard and wherever possible, improved through targeted action. The areas of focus upon which this will be assessed are as follows:

- Main pathways and countryside furniture to be kept clear of overhanging branches and encroaching vegetation throughout the year;
- Main paths to be maintained to ensure access is viable, particularly through winter months;

- All areas are kept clean from litter, fly-tip and abandoned items (e.g. tents, bicycles, trolleys etc);
- Infrastructure and signage are maintained and improved with new facilities provided, such as nature trails and more benches.

5. Management overview

5.1 For the purposes of the management plan, the site has been divided into 56 compartments – 37 covering Ham Lands South, and 19 covering Ham Lands North. These parcels are primarily divided along habitat boundaries, so that it is clear where management prescriptions are to be carried out. Some boundary scrub is included within grassland compartments, as this interface needs to be managed together. The Ham Towpath will be the subject of a separate plan, which will dovetail with the Ham Lands management plan.

5.2 The following table provides habitat details, key features and main aims for each compartment. The compartments maps can be found in Appendix 2.

Com	Section	Habitat Type	Key Features	Management
1	Ham Lands South	Ride – other neutral grassland	Vehicle entrance, main pathway	Grassland mowing, scrub edge maintenance.
2	Ham Lands South	Mixed Scrub		Scrub edge maintenance
3	Ham Lands South	Meadow - Other Neutral Grassland, scattered mixed scrub	Orchids (occasional)	Grassland mowing, bare ground creation, scrub edge maintenance
4	Ham Lands South	Mixed Scrub & Lowland Mixed Deciduous Woodland	Veteran oak, veteran crab apple, two tall lime trees Broad-leaved helleborine	Scrub/woodland edge maintenance and partial removal
5	Ham Lands South	Meadow – other neutral grassland with bramble scrub & mixed scrub	Dittander Main pathway	Grassland mowing, scrub edge maintenance
6	Ham Lands South	Mixed scrub	Carr with willows, adjacent to reedbed	Scrub edge maintenance
7	Ham Lands South	Reedbed	Expanding dry stand of *Phragmites*	Reedbed investigations and restoration / pond creation

8	Ham Lands South	Mixed Scrub	Song thrush	Scrub edge maintenance
9	Ham Lands South	Mixed Scrub		Scrub edge maintenance and partial removal
10	Ham Lands South	Meadow – other neutral grassland, with scattered bramble and mixed scrub	Main pathway Interpretation board	Grassland mowing, scrub edge maintenance and partial removal
11	Ham Lands South	Meadow - Other neutral grassland, with pockets of lowland mixed deciduous woodland and mixed scrub	Hoary cinquefoil, grass pea, broom, lesser meadow-rue Orchids (occasional) Main pathway, interpretation board	Grassland mowing, bare ground creation, scrub and woodland edge maintenance,
12	Ham Lands South	Lowland mixed deciduous woodland and mixed scrub		Scrub and woodland edge maintenance
13	Ham Lands South	Mixed Scrub	Song thrush, stone parsley, veteran oak	Scrub edge maintenance & partial removal
14	Ham Lands South	Glade/Ride – other neutral grassland and mixed scrub	Pathway through scrub	Grassland mowing, scrub edge maintenance
15	Ham Lands South	Mixed Scrub		Scrub edge maintenance and partial removal to create glade
16	Ham Lands South	Glade/Ride – other neutral grassland and mixed scrub	Pathway through scrub	Grassland mowing, scrub edge maintenance

17	Ham Lands South	Meadow - Other neutral grassland & pockets of mixed scrub and lowland mixed deciduous woodland	Hairy pea	Grassland mowing, scrub/woodland edge maintenance
18	Ham Lands South	Mixed Scrub		Scrub edge maintenance and partial removal
19	Ham Lands South	Lowland mixed deciduous woodland and mixed scrub		Scrub edge maintenance
20	Ham Lands South	Lowland mixed deciduous woodland		Woodland edge maintenance
21	Ham Lands South	Meadow - Other neutral grassland and pockets of mixed scrub, bramble scrub and lowland mixed deciduous woodland	Yellow vetchling, grass pea, meadow saxifrage, orchids (occasional) Within Thames Water's DRA proposals	Grassland mowing, scrub and woodland edge maintenance
22	Ham Lands South	Mixed Scrub	Song thrush Shaded woodland path	Scrub edge maintenance and partial removal to create deeper scallops
23	Ham Lands South	Meadow – other neutral grassland, mixed scrub and a small pocket of lowland mixed deciduous woodland	Song thrush, soapwort (*Saponaria officinalis*), broom	Grassland mowing, and scrub and woodland edge maintenance & partial removal
24	Ham Lands South	Mixed scrub and bramble scrub	Song thrush, veteran walnut tree, gorse, broom Shaded woodland path	Scrub edge maintenance
25	Ham Lands South	Other neutral grassland and mixed scrub	Pathway	Grassland mowing and scrub edge maintenance

26	Ham Lands South	Ride – other neutral grassland and mixed scrub	Main pathway (historical railway track)	Grassland mowing, scrub/woodland edge maintenance, path surface maintenance
27	Ham Lands South	Lowland mixed deciduous woodland and mixed scrub	Song thrush Forest School base	Scrub/woodland edge maintenance
28	Ham Lands South	Glade – other neutral grassland & mixed scrub	Veteran pear tree	Grassland mowing, scrub edge maintenance & partial removal
29	Ham Lands South	BMX track - Unvegetated, unsealed surface	Mining bees, pollinators	
30	Ham Lands South	Mixed Scrub	False acacia	Scrub edge maintenance
31	Ham Lands South	Mixed Scrub	Sand leek Main pathway	Scrub edge maintenance and partial removal
32	Ham Lands South	Meadow – other neutral grassland with pockets of mixed and bramble scrub & lowland mixed deciduous woodland	House sparrow Song Thrush Main pathway and cycle route	Grassland mowing, scrub/woodland edge maintenance
33	Ham Lands South	Pathway – other neutral grassland, bramble scrub and lowland mixed deciduous woodland	House sparrow Song Thrush Pathway	Grassland mowing, scrub/woodland edge maintenance
34	Ham Lands South	Football pitch - Unvegetated, unsealed surface		

35	Ham Lands South	Lowland mixed deciduous woodland and mixed scrub	Abuts towpath	Scrub/woodland edge maintenance
36	Ham Lands South	Mosaic of other neutral grassland, lowland mixed deciduous woodland and mixed scrub	Alexanders Pathways	Grassland mowing, scrub/woodland edge maintenance and partial removal
37	Ham Lands South	Other neutral grassland, modified grassland, mixed scrub and mixed lowland deciduous grassland	Pathways Abuts towpath	Grassland mowing, scrub/woodland edge maintenance
38	Ham Lands North	Floodplain meadow - other neutral grassland, swamp, tall herbs, mixed scrub & mixed lowland deciduous woodland	Original area of floodplain meadow *Phalaris* bed, common meadow rue Elm, blackthorn, native black poplars Within Thames Water's DRA proposals	Floodplain mowing, scrub and woodland edge maintenance
39	Ham Lands North	Meadow - other neutral grassland, mixed scrub and mixed lowland deciduous woodland	Pathways Wetter areas with meadowsweet	Grassland mowing, scrub and woodland edge maintenance and partial removal
40	Ham Lands North	Meadow - other neutral grassland, mixed scrub and mixed lowland deciduous woodland	Pathways – Great River Avenue view Wetter areas with meadowsweet	Grassland mowing, scrub and woodland edge maintenance and partial removal
41	Ham Lands North	Mixed scrub and mixed lowland deciduous woodland		Scrub and woodland edge maintenance and partial removal to create glade

42	Ham Lands North	Ride - mixed scrub	Permissive horse ride – Great River Avenue	Scrub edge maintenance, track surface maintenance
43	Ham Lands North	Ride - mixed scrub	Permissive horse ride – Great River Avenue	Scrub edge maintenance, track surface maintenance
44	Ham Lands North	Mixed scrub and mixed lowland deciduous woodland		Scrub edge and partial removal
45	Ham Lands North	Meadow - other neutral grassland, mixed scrub and mixed lowland deciduous woodland	Hairy pea Main pathway	Grassland mowing, scrub and woodland edge maintenance and partial removal
46	Ham Lands North	Mixed Scrub		Scrub edge maintenance
47	Ham Lands North	Mixed Scrub		Scrub removal within central area to create glade
48	Ham Lands North	Meadow - other neutral grassland, mixed scrub and mixed lowland deciduous woodland	Salad burnet, greater knapweed colt's-foot Main pathway – Great River Avenue view	Grassland mowing, scrub and woodland edge maintenance and partial removal (including scrub and tree islands)
49	Ham Lands North	Mixed lowland deciduous woodland		Woodland edge maintenance
50	Ham Lands North	Glade - other neutral grassland & mixed lowland deciduous woodland	Pyramidal orchids, greengages Main pathway	Grassland mowing, scrub and woodland edge maintenance
51	Ham Lands North	Mixed scrub and mixed lowland deciduous woodland	Steep-sided seasonal ponds	Scrub and woodland edge maintenance, pond enhancement

52	Ham Lands North	Mixed scrub		Total scrub removal
53	Ham Lands North	Mixed scrub	Tall white willows	Scrub edge maintenance and partial removal
54	Ham Lands North	Meadow - other neutral grassland and mixed scrub	Main pathway	Grassland mowing, scrub edge maintenance and partial removal
55	Ham Lands North	Mixed scrub and mixed lowland deciduous woodland	Scrub mostly of planted, fruit-bearing cherry plum Main entrance and pathway	Scrub and woodland edge maintenance
56	Ham Lands North	Meadow – other neutral grassland, with hedge boundary and mixed scrub	Highway verge	Grassland mowing, scrub edge and hedge maintenance

6. Management prescriptions

The following detailed prescriptions are designed to manage the site features to deliver the vision and objectives; the detailed management aim and rationale are given where relevant. The management is not set in stone and must be reviewed and updated based on evidence observed on site, even year to year, so that management is in response to the observed condition or any environmental change.

Prescription 1: Grassland management

Aim: Maintain, improve and increase the unique diversity of the open grasslands. Manage grasslands every year through mowing, with all arisings removed from site, minimising coarse species and creating conditions for a wide diversity of herbs. Ecotones to be created to form smooth transitions between grassland and scrub/woodland communities. The overall aims are to leave 10% of the grassland uncut each year, 50% will receive a once annual cut in early autumn and 40% will receive an additional early cut each spring to open up the sward and reduce competitive species. Grassland communities will also benefit from reducing the amount of scrub islands present, aiming for 5% within the meadows.

Rationale: The grassland has been the focal point in terms of nature conservation, supporting a wealth of plants which are rare or scarce regionally, and in some cases nationally. The historical open nature of the grassland has been inhibited by the establishment of scrub across much of the site, and so continual management of this is required to restore its former quality.

P1.1	Each winter, an annual hay cut plan will be created, determining the cutting regime for each area and identifying areas to be left uncut. The plan for the main hay cut can be tweaked in late summer as needed.
P1.2	10% of the grassland is to be left uncut each year, along scrub boundaries. In early years of the plan – when additional meadow and marginal areas are being created within the compartment boundaries – the amount left uncut may be lower than 10% to maintain core meadow quality. The marginal grassland and tall herb communities which develop (nettles, thistles, teasels, and bramble) will be maintained and managed by mowing on a 3-year rotation to ensure succession is managed. Where desirable, narrow strips of up to 2-3m may be left longer but should be subject to some scrub management (see P2.2). Whilst much of this will be undertaken by contractors, there is opportunity for volunteer groups to selectively manage marginal habitats, particularly where rare plants and notable species are present.
P1.3	40% of the grassland should receive an early cut, to remove the first lush growth and check coarse species. All arisings to be removed from site. Manage the sward height through mowing to create a mixed sward height of 5-15cm.
P1.4	Except the area to be left uncut, all meadow grassland areas are to be cut in early autumn. The HLS scheme permits this from 1 August, but ideally the haycut

	should generally be left until September, though varied slightly from year to year. All arisings to be removed from site.
P1.5	The bund and verge can be cut from early August onwards. All arisings should be collected. Areas becoming dominated by negative indicator species may need a targeted earlier intervention (see P1.6)
P1.6	Control negative indicator species - hemlock, horse radish, traveller's-joy, ivy, docks and thistles - within the main body of the grasslands through mowing and strimming (removing the flowers before they set seed). In some circumstances, the root systems for bramble and traveller's joy may need to be dug out but overall cutting is preferable. The presence of key invertebrates should be considered prior to cutting. The timing of management many vary from year to year. Whilst much of this will be undertaken by contractors, there is opportunity for volunteer groups to selectively manage specific species, particularly where this involves small-scale trial management. Management for invasive Schedule 9 species are detailed in Prescription 7.
P1.7	The floodplain meadow (Ham Lands North) should be thoroughly surveyed in year 1 to decide the management regime and prescriptions added.
P1.8	Where scrub species, such as elm, blackthorn, plum, cherry, cherry plum and bramble are encroaching into the grasslands, undertake mowing and hand-removal to control spread. Maintain existing islands of scrub within the grasslands, control encroachment into the grasslands through mowing. Removal of light bramble or small-stemmed scrub encroaching into open habitats can continue all year. Removal of dense or larger scrub should be avoided during spring and summer; where it is necessary, a breeding bird check must be undertaken no less than 48 hours prior to removal. Whilst much of this will be undertaken by contractors, there is opportunity for volunteer groups to selectively manage marginal habitats, particularly where rare plants and notable species are present. This should include areas blackthorn, elm and other *Prunus* spp to ensure these habitats are maintained appropriately for the rarer butterfly species, brown and white-letter hairstreaks.
P1.9	Manage grasslands for rare and notable species. Sward management is required to ensure areas supporting rare species are maintained as finer swards. When conducting annual/bi-annual mowing, areas supporting rare species to be checked to ensure they have set seed. Cut specifically when seed has been set. Where required, ground disturbance to be undertaken in specific areas by hand. Care should be employed to prevent flattening of ant hills with mowers. Whilst sward management may require mechanical intervention (particularly where invasive species, such as sand lucerne, are increasing within the grasslands), this will be managed largely by volunteer groups to ensure specific

	areas are maintained for the existing rare species. Focused ground disturbance can be completed using hand tools.
P1.10	Creation of 5% bare ground in appropriate areas of Ham Lands South. This will be focussed in dry areas, such as along the south-west facing side of the bund abutting Riverside Drive, and within the main body of meadows in suitable locations.
P1.11	Explore introducing tower mustard (*Turritis glabra*) to sandy parts of Ham Lands, likely through seed or young plants grown on from seed from the population at Stain Hill Reservoir or other relatively local site. This new introduction could be used as a demonstration site. See tower mustard SAP for more information.
P1.12	Carry out a feasibility study for establishing grazing on Ham Lands.

Prescription 2: Scrub management

Aim: Continue to selectively remove scrub which has encroached into grassland areas, particularly where restoration is achievable in the short-term. During restoration, allow space for future marginal habitats between new grassland and dense scrub.

Scrub abutting grassland should be managed on a mixed rotation to diversify the habitat.

Ensure scrub alongside paths is kept under control and trimmed back regularly to ensure access is always kept open.

The management of denser areas of scrub will be a lower priority in early years of the plan, but hotspots of diversity needing attention should be prioritised if resources are available.

Rationale: The site formally supported larger swathes of open grassland, however natural succession has allowed a large proportion of this return to scrub and woodland. Where overall habitat diversity will be improved, and no uncommon species harmed, scrub should be returned to more open habitats.

Timing: All works should be completed outside of the breeding bird season (April to August inclusive), unless a search for breeding activity is conducted beforehand. Where possible, this should be completed between November and February.

P2.1	Carry out selective removal of scrub in areas where grassland restoration is feasible in the short-term, i.e., where grassland is still existing beneath the scrub. Cut additional scrub between new meadow areas and dense scrub, to create space for marginal habitats and enable a desirable ecotone to develop. English elm should be retained, apart from where it threatens grassland habitats. Creation of age diversity within this species is important for invertebrates, particularly white-letter hairstreak. This should be conducted by hand to diversify the age structure of this species. Similarly, clumps of blackthorn (restricted to Ham Lands North) should be retained and young growth at the edges retained where possible as this is the preferred egg laying site for brown hairstreak butterflies.

	Thickets of the many varieties of plum (*Prunus insitia*) on South, should be treated similarly. Whilst much of this work will be undertaken by contractors, there is opportunity for volunteer groups to selectively manage marginal habitats, particularly where rare plants and notable species are present.
P2.2	Scrub between meadows and dense, closed canopy scrub should be maintained on a mixed rotation of 3-7 years.
P2.3	Within the denser areas of scrub, manage the existing shrub layer to maximise diversity. Undertake management where ground flora remains and is being suffocated. Where there is sparse understorey, there should be no rush to remove non-native species where it provides valuable cover or food.

Prescription 3: Ride & glade management

Aim: Maintain existing rides & glades and create scalloped edges to create open space for increased light, warmth and a more diverse flora and fauna. A variety of vegetation heights should be maintained where possible to create a graduated effect and offer a range of habitats. Where space permits, a strip of grassland and tall herbs should be retained, which grades into scrub / coppice and then the outer edge of the woodland. Shading should be reduced along paths.

Rationale: Open spaces within woodland and scrub are significant structural features. They are one of the most important mechanisms for enhancing biodiversity and creating green corridors. Nettles and brambles are key features in this context, but diversification is desired.

Timing: All works should be completed outside of the breeding bird season (April to August inclusive), unless a search for breeding activity is conducted beforehand. Where possible, this should be completed between November and February.

P3.1	Grassland and tall herb communities within glades and rides should be mown on a mixed frequency. The central components may receive an annual cut to maintain an open sward if needed, otherwise all grassland should be managed on a 3-year rotation. All arisings should be removed.
P3.2	Any bramble or scrub regeneration (including invasive species) within the glade and ride grassland component should be managed on an annual basis by cutting back or complete removal. Small patches of brambles and elm are of interest but should be maintained rather than allowed to expand. Whilst much of this will be undertaken by contractors, there is opportunity for volunteer groups to selectively manage marginal habitats, particularly where rare plants and notable species are present.
P3.3	Create new niches and reduce shading through cutting the scrub along rides and glades to create scalloped edges which will provide dappled light and localised micro-climates. Coppice / treat any regeneration within this zone and consider removing larger trees if any.

	Whilst much of this will be undertaken by contractors, there is opportunity for volunteer groups to selectively manage marginal habitats, particularly where rare plants and notable species are present.
P3.4	Investigate potential for new glades and rides - particularly running east to west – to be created.

Prescription 4: Woodland management

Aim: Manage the woodland edges to achieve a more open and diverse structure, creating dappled light conditions via lifting, coppicing and general thinning to establish canopy spacing. Non-native and invasive species will be considered first for removal.

Rationale: Through lack of management, the secondary woodland has a dense canopy, and the structure has become less open, resulting in lower temperatures within the wood and a species-poor ground flora. This situation leads to an increase in soil nutrients which only perpetuates those species which prefer high nutrient levels. Changes should be made gradually throughout the woodland to create a more diverse ground flora, particularly on woodland edges. Trees selected for removal should first be those of non-native species unless they are of historic/local importance and then those either of poor form or unfavourably located. Creating sudden full light conditions can lead to coarse fast-growing species out-competing other woodland flora.

Timing: All works should be completed outside of the breeding bird season (April to August inclusive), unless a search for breeding activity is conducted beforehand

P4.1	Select semi-mature trees on woodland edges for removal and undertake this gradually throughout the lifetime of the plan, responding to the species and habitat monitoring to guide the location and extent. Invasive and non-native species must be considered for removal first. Use stump treatment to prevent regrowth, if necessary and appropriate, stump grinding may be used. Ensure bat roost assessment is carried out for any trees being considered for removal (see P5.2).
P4.2	Manage the existing shrub layer to maximise diversity. Remove where suffocating ground flora. Where the understorey is sparse, there should be no rush to remove non-native species where they provide valuable cover or food.
P4.3	Encourage and protect natural regeneration of native tree species. Select young trees of good form and potential to be future specimens, haloing around them where necessary.
P4.4	Install bat and bird boxes targeting appropriate species.

Prescription 5: Mature and feature tree management

Aim: To retain the majority of the existing mature tree resource with selected removal of ash, white poplar and oak where these have encroached into grassland areas, and maintain, enhance and plan replacement of Ham Lands' numerous and diverse unpruned fruit trees.

As far as possible, retained trees should be allowed to age naturally. Dead branches should be left on the tree where possible or not impacting health. The fruit trees may need some restorative pruning on occasion, with only a small percentage of a tree pruned in any one year. Management intervention should balance tree health, safety and access with landscape and biodiversity. Ivy should not be removed from mature trees unless there is a specific reason for doing so.

Rationale: Mature trees are limited on site, restricted to the riverside and scattered around the site. Tree health and visitor risk issues will arise on an increasing basis but the most site sensitive, safe option should be employed wherever possible.

Timing: All works should be completed outside of the breeding bird season (April to August inclusive), unless a search for breeding activity is conducted beforehand

P5.1	Undertake initial survey to identify important and veteran trees. Undertake further condition surveys at no more than three-year intervals (shorter where individual tree circumstances require). Recommended actions should be prioritised with clear timescales and undertaken. Any tree being monitored can be discreetly tagged / numbered for record keeping.
P5.2	Where tree work is required, a bat roost assessment should be carried out to determine the potential of mature trees. Subsequently, where works are proposed to trees with bat roost potential an ecologist must survey the trees first.
P5.3	Where regeneration beneath the mature tree or where nearby trees are creating unhealthy competition for light or resources, these trees may need to be removed. If the trees are of a reasonable age (semi-mature or older) this should be done gradually over a number of years to prevent sudden exposure.
P5.4	Planting of both male and female Black Poplar trees is planned to promote regeneration of this species. Trees to be monitored for health on a yearly basis and maintained or replaced accordingly.
P5.5	There is a resource of non-native trees on site, many of which are championed by the local community. These should be identified as part oif the survey at P5.1 and monitored in the same way, with any spread carefully controlled to prevent native species/habitats from being affected.

Prescription 6: Retain deadwood in appropriate locations

Aim: Maintain a variety of different types including standing, canopy, and lying deadwood, both scattered and in low piles. Some should be left *in situ* or as close to source as possible. Plan for the next generation of deadwood. Ensure that the quantity or location of deadwood does

not conflict with other conservation or operational objectives and consider visitor amenity where close to paths.

Rationale: Deadwood is a fundamental base to the woodland ecosystem, but is sometimes regarded as a source of disease, sign of neglect or obstruction to efficient management. However, deadwood is vital in providing soil with nutrients, supporting fungi and harbouring invertebrates, many of which are rare, and those of high abundance are a vital food source for other, more visible woodland wildlife including birds.

Larger and longer pieces of deadwood are more valuable, but a large volume of small deadwood can also be important. Dappled shade locations close to open space are most probably valuable, many deadwood invertebrates as adults feed on nectar from plants in these areas. It is also helpful to replenish or expand the deadwood in areas where it is already valuable, to provide continuity. Deadwood species are not very mobile so may not expand to new areas.

It is usually preferred to leave it lying rather than create piles; however, from areas that need to be kept clear or open, deadwood can be placed into low piles with as few air gaps as possible; this can be achieved by stacking end to end and then cutting into the piles to compress them.

P6.1	When operations produce deadwood, consider distribution or removal. Most brash should be removed or chipped, but where possible this could be made into dead hedges. Some of the larger cordwood should be scattered throughout the wood in at least small amounts so it is found in all conditions from sun to shade, lying, piled and half-buried.
P6.2	Create stag beetle loggeries with half-buried timbers in a partly shaded location. Use trees which have been harvested from the site for management purposes.

Prescription 7: Wetland enhancement

Aim: Management of the fen / reed canary-grass at Ham Lands North, through vegetation management, scrub removal and possibly creation of a pond.

Enhance the expanding reedbed at Ham Lands South, including investigation into ground water inputs, soil profile and vegetation accumulation, and managing through rotational cutting of reeds, scraping some areas, and possibly creating a pond. Monitor the small reed canary-grass bed nearby and intervene as needed.

Enhance the steep-sided seasonal ponds in compartment 51.

Rationale: Historically the area comprised floodplain meadows, however the majority of the site was raised through gravel extraction processes and only a fragment of the original flood meadow remains, much of which has been degraded. Through restoration and creation of new wetland habitats, there is an opportunity to provide substantial enhancements for biodiversity.

P7.1	Flood meadow / swamp: floodplain management included within prescription 1.6.

P7.2	Reedbed: for the *Phragmites* reedbed on Ham Lands South, investigate soil profile and ground water inputs to inform future management.
P7.3	Pond creation: investigate habitat quality, ground and surface water supply to see if pond creation is viable for the sites in 7,1, 7.2 and the subsided area in compartment 10 near the entrance to compartment 26 (old railway line). Discuss outcomes with other partners including TLS. Action any agreed pond creation.
P7.4	Steep-sided ponds: the ponds should be thoroughly surveyed in year 1 to decide the management regime and prescriptions added.

Prescription 8: Invasive species management

Aim: Remove Schedule 9 species and other designated invasives from the site, and where this is not possible, control to prevent further spread.

Rationale: Himalayan balsam and Japanese knotweed are present on site. These species grow and spread rapidly, and quickly become invasive, outcompeting existing native vegetation. Both species are notifiable invasive non-native species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to plant, or otherwise allow it to spread in the wild.

Other species considered invasive by London Invasive Species Initiative present or potentially present: holm oak, Turkey oak, false-acacia, goat's-rue, Spanish bluebell.

New prescriptions for additional species to be added to plan as needed over time.

P8.1	Map all areas of priority invasive non-native plants on the site: Japanese knotweed, Himalayan balsam. Update maps annually.
P8.2	Report all new invasive species sightings to the Council as soon as possible.
P8.3	Japanese knotweed – identify and map all areas of Japanese knotweed on site, treat and remove using specialist contractor. When mowing the grasslands, leave a buffer of 3m around the stands.
P8.4	Himalayan balsam – where balsam is mixed in with other species, it should be managed by hand pulling. The roots must be removed otherwise it will regrow and flower in the same season. In spring, pulling seedlings as soon as they can be positively identified is effective as long as care is taken to get the root out. Once pulled, the stems should be folded and crushed and the plants piled, preferably on existing brash or log piles so that the roots do not touch the ground. If extensive single species stands are present, brush-cutting can be used and conducted after flowering has just begun but prior to seed formation. Arisings should be gathered and piled as above.

Prescription 9: Create an improved visitor environment

Aim: Provide a welcoming and clean visitor environment with clear entrances, paths and sightlines, always considering the site's natural resources. In addition, the natural and local heritage of the site, including important viewpoints, should be managed and made known to the visitor.

Rationale: Improving the presentation, interpretation and accessibility of the site will enhance visitors' impressions of the site and encourage them to enter and explore to a larger or more frequent degree.

P9.1	Additional interpretation panels should be created and installed to inform visitors about the history and the ecological significance of the site and to create a nature trail. Installation of wayfinding signage from the main entrance to key features.
P9.2	Informal paths through the grasslands and woodlands should look natural and unkept but continue to allow access. Most paths should be mown monthly during the growing season to maintain 0.5m wide pathside strips through the grassland.
P9.3	Main pathways, cycle routes and permissive horse rides: maintain vegetation at a minimum of 3m width and 3m height. Maintain path surfaces in accordance with national guidance.
P9.4	Keep views and user sightlines clear along the whole length of Great River Avenue, from Ham Riverside to the Thames.
P9.5	Maintain view from the corner of Beaufort Road and Burnell Avenue towards the Thames by annual cutting of the area between the two informal paths and lifting of any tree canopy as required.
P9.6	Monitor main pathway condition through the winter period and investigate drainage or surface improvements where problems occur with excess water and mud.
P9.7	Overhanging branches, canopy dead wood and dangerous trees along pathways to be reported to the Tree team for assessment and removal where causing a H&S concern.
P9.8	Interpretation boards, benches and bins to be neatly strimmed around on a monthly basis during summer months.
P9.9	Litter collection on a regular basis.
P9.10	Undertake review of permissive horse paths on the site, to ensure they remain in the correct places from an access and habitat perspective.
P9.11	Increase the number of benches in appropriate locations along main pathways or in main meadows. The use of fallen or felled timber is preferred.
P9.12	Maintain fencing around BMX area and consider need for further fencing.
P9.13	Research / create and agree parcel names for specific parcels of land to improve visitor directions and ease of recording wildlife.

Prescription 10: Monitoring natural features of the site

Aim: Completion of additional surveys to improve our understanding and appropriate management of Ham Lands, and to monitor how the habitats have changed over the course of this plan period. This will include the key species and habitats including, but not restricted to, those featured within the Richmond Biodiversity Action Plan and those classed as 'priority' by the Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

Rationale: Create a body of accessible information which identifies the floral and faunal assemblages supported by the site, to ensure management regimes are fit for purpose. This will also engage the local community more and provide additional opportunities for volunteering.

P10.1	Create a database and mapping tool of key species / features (including fruit trees) and management activities specifically for Ham Lands.
P10.2	Every year identify a key component to monitor to inform management success: a key vegetation community / habitat, or species / group. Examples are breeding song thrushes; foraging bats; key plants; or groups such as deadwood invertebrates. Expert help should be sought where required, from volunteers if possible. See further detail below table.
P10.3	Create a Grassland Monitoring Survey Assessment for the life-time of the plan. This would comprise monitoring of the grassland through surveys using NVC methodology, long-term permanent quadrats, and UKHab surveys. Following completion of the plan, measurable long-term comparisons would be made using the DEFRA Biodiversity Metric.
P10.4	Carry out soil sampling to underpin grassland monitoring and tower mustard introduction.
P10.5	Review HLS agreement in 2024

Prescription 10.2: Monitor Key species and habitats

To inform future management plans, species and habitat information should be collated. Key species and habitats including, but not restricted to, those featured within the Richmond Biodiversity Action Plan and those classed as 'priority' by the Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

After a site visit:

- Any sightings are to be collated and reported back to the Appropriate Council Officer and Habitats and Heritage (H&H) for recording.
- Where a sighting is immediately important to the management of a site (such as bird nesting, uncovering of a badger sett/fox earth etc) the impacts must be discussed with the Appropriate Council Officer and a decision taken on continuing the work.

The following surveys should be undertaken as appropriate over the management plan period:

Survey type	Expected timing	Survey details
Grassland surveys	April-Aug	See P10.3
Reptile survey	April-Sep	Survey grasslands for reptiles during spring/summer to determine a) presence/likely absence and b) population size where present.
Breeding bird survey	March-Sep	Carry out a breeding bird survey on Ham Lands.
Small mammal survey	Jan-Dec	Survey using live capture traps for small mammals
Invertebrate surveys	May-Sep	Site-wide invertebrate survey including interception traps for saproxylic invertebrates
Bioacoustic surveys for bats	May-Oct	Use static bioacoustics recorders to survey for bat species across the site each season
Moth trapping	March-Oct	Set up light traps to survey for moth species
Butterfly transects	March-Sep	Following UK BMS protocol
Bee survey	March-Oct	Following BeeWalk protocol

Prescription 11: Monitor management success and review the plan

Aim: Ensure the management is delivering the objectives of this plan. Maintain necessary resources to deliver the worked needed. Maintain records of site work and wildlife monitoring, and review plan accordingly.

Rationale: Ensure that management remains on track to deliver the site vision and objectives. No plan can anticipate every situation or environmental response and it is vital that management be reviewed every year and the subsequent work programme adjusted. The plan should be seen as a live document for editing and updating.

P11.1	Parks, FoHL and contractors to meet regularly to ensure management is co-ordinated.
P11.2	Maintain a rolling 3-year work programme, updated at least annually. Monitor resources required from the annual work summary (see P11.3) and ensure they are in place.

P11.3	Each year, a simple summary of the work completed should be produced with an annotated map, as a record. Include hours worked by volunteers and contractors against each prescription.
P11.4	A major review should be undertaken in year 5 to check that the vision and objectives remain correct. In year 9, plans should be put in place for completion of the new plan in advance of the new period.

7. 3-year rolling work programme

Work programme

7.1 The 3-year work programme begins on page 36. Maps will be added as the prescriptions develop in year 1.

7.2 Work programme key for Resources:

AC	Arboricultural contractor
FoHL	Friends of Ham Lands
GC	Grounds contractor
IPC	Invasive plant contractor
LBRuT	London Borough of Richmond upon Thames
NCC	Nature Conservation contractor / consultant
ACO	Appropriate Council Officer
Vol	Volunteers

Priority levels

7.3 **1** – Very important for the maintenance of the key habitats, species, heritage interest or visitor amenity (i.e., annual meadow cut); programmed priority 1 tasks should reflect the bare minimum of what should be achieved each year.

2 – Of secondary importance to the key tasks, to be done if more time / resources are available (i.e., coppicing / thinning a secondary woodland boundary to a meadow, or additional survey work); priority 2 tasks could become priority 1s if not completed for a number of years.

3 – Luxury, wish list tasks: nice to do but not crucial if resources are not available; these items might become priority 2s over time if not completed but are unlikely ever to reach priority 1 unless significant change in other factors.

1 – Priorities in red in previous years mean the task was not completed as scheduled.

R – Reactive, unplanned work, may be coupled with a numerical priority, i.e., R1.

Rolling 3-year work programme **Prescription summary** **(see chapter 6)**	**Location / habitat (see 5.1)**	**24/25**	**25/26**	**26/27**	**Timing**	**Resources**	**Notes**
1. Grassland management							
P1.1. Create annual hay cut plan	All	**1**	**1**	**1**	Jan & Jul	ACO	Including bund and roadside verges
P1.2. Leave 10% uncut.	Meadow	**1**	**1**	**1**	All year	NCC	To be specified in annual hay cut plan
P1.3. 40% of grassland to receive an early cut.	Meadow	**1**	**1**	**1**	Mar-Apr	NCC	To be specified in annual hay cut plan
P1.4. Except the 10% left, cut and collect all meadow areas.	Meadow	**1**	**1**	**1**	Sep	NCC	To be specified in annual hay cut plan
P1.5 Cut and collect bund and verges.	Meadow	**1**	**1**	**1**	Mar & Aug-Sep	NCC	To be specified in annual hay cut plan
P1.6. Extra cut for undesirable species	Meadow	2	2	2	July-August	NCC, FoHL	Cut to be determined by flowering period of targeted species 30and may differ from year to year; check for key invertebrates prior to cutting
P1.7. Floodplain meadow haycut	Floodplain meadow	**1**			TBC	ACO, NCC	Survey is year 1 to agree regime.
P1.8. Control scrub encroachment	Meadow	**1**	**1**	**1**	All year	NCC, FoHL	Conservator contractor to carry out, and volunteer parties to undertake selected areas; light scrub only in spring /summer
P1.9. Manage grasslands for rare flora – ensure seed has set prior to cutting, create bare ground	Meadow	**1**	**1**	**1**	Directly prior to hay-cuts	FoHL	Potential volunteer task, with communication required between LBRuT & NCC
P1.10. 5% bare ground creation	Meadow	3	3	3	Sep	NCC	To be completed alongside the late hay cut
P1.11. Explore introducing tower mustard.	Meadow	2	2	2	TBC	ACO, FoHL	Carry out soil survey first.
P1.12. Grazing feasibility study	Meadow	3			All year	ACO	Probably focused on Ham Lands North

2. Scrub management							
P2.1. Removal of scrub to increase extent of meadows	Scrub	**1**	**1**	**1**	Nov-Feb	NCC, FoHL	Largely NCC task, but potential vol tasks, e.g., elm management
P2.2. Manage marginal scrub on a mixed rotation of 3-7 years.	Scrub	**1**	**1**	**1**	Nov-Feb	NCC, Vol	
P2.3. Manage the existing shrub layer to maximise diversity	Scrub				Nov-Feb	ACO, Vol	To be completed from year 4 onwards. ACO and FoHL to identify locations. Potential volunteer task.
3. Ride and glade management							
P3.1. Glade/ride grassland to be mown on 3-year rotation	Glade/ride	**1**	**1**	**1**	Sep	NCC	Arisings to be removed. One third of the grassland to be mown in any one year
P3.2. Scrub regeneration within grassland to be removed	Glade/ride	**1**	**1**	**1**	Sep-Feb	NCC, FoHL	
P3.3. Create scalloped edges to glades / rides through scrub removal	Glade/ride	2	2	**1**	Nov-Feb	NCC, FoHL	
P3.4. Investigate creation of new glades/rides	Glade/ride		2		All year	ACO	
4. Woodland management							
P4.1. Select semi-mature trees for removal	Woodland	**1**	2	2	Nov-Feb	ACO, FoHL	Ensure bat roost assessment undertaken.
P4.2. Manage the existing shrub layer to maximise diversity.	Woodland				Nov-Feb	NCC, Vol	To be completed from year 4 onwards. Parks to do & ask FoHL for Vols help if required. Potential volunteer task.
P4.3. Encourage natural regeneration of native trees	Woodland	2	2	2	All year	ACO, FoHL	Potential vol task
P4.4. Bird and bat box installation	Woodland	2	2		All year	ACO, FoHL	Potential vol monitoring
5. Mature & feature tree managem't							
P5.1. Tree survey to identify veteran and important specimens.	Woodland	**1**			All year	NCC	Undertake subsequent recommended actions.

P5.2. Undertake bat roost assessment of trees requiring works	Woodland	R	R	R	All year	ACO, NCC	Complete when required, and during winter if possible
P5.3. Selective tree removal where competition is problematic	Woodland	2	2	**1**	Nov-Feb	NCC	To be costed following production of the tree survey
P5.4. Maintain black poplar planting	Woodland	**1**	**1**	**1**	Nov-Feb	ACO, NCC, FoHL, Vol	Planting plan to be completed prior to commencement of MP
P5.5. Monitoring of mature non-native tree resource	Woodland	**1**	2	2	All year	ACO, FoHL	Undertake subsequent recommended actions.
6. Retain deadwood							
P6.1. Manage deadwood arising from works. Create dead hedges where possible.	Woodland	R	R	R	Any	ACO, FoHL, Vol	Consider when undertaking tree / scrub works. ACO to advise, NCC role included under prescriptions, Vols to potentially assist.
P6.2. Create stag beetle loggeries	Woodland	**1**	2	3	Any	FoHL, Vol	Potential volunteer task.
7. Wetland enhancement							
P7.1. Floodplain management	Wetland	See P1.7					
P7.2. Reedbed restoration investigations	Wetland	**1**			All year	NCC	
P7.3. Creation of ponds	Wetland	**1**			All year	ACO, FoHL, NCC	Investigations into pond creation feasibility at reedbed and north-west floodplain meadow; pond creation date to be determined.
P7.4 Steep-sided pond management	Wetland	**1**			Jun-Sept	ACO, NCC	Survey in year 1 to agree works needed
8. Invasive species management							
P8.1. Identify and map all areas of invasive non-native plants.	All	**1**	**1**	**1**	Aug-Oct	NCC, FoHL	Monitor and update plan in years 2 & 3.
P8.2. Report new invasive species.	All	**1**	**1**	**1**	All year	All	P8.4. Report new invasive species.
P8.3. Control Japanese knotweed	All	**1**	**1**	**1**	Aug-Oct	IPC	

P8.4. Control Himalayan balsam	All	**1**	**1**	**1**	June-Aug	FoHL, Vol	Vols currently pull a large stretch
9. Visitor environment							
P9.1. Install interpretation panels and wayfinding signage	All			3	All year	LBRuT, FoHL	
P9.2. Maintenance of informal paths through mowing	All	**1**	**1**	**1**	All year	NCC, GMC	
P9.3. Maintenance of main paths, including cycle routes and permissive horse rides	All	**1**	**1**	**1**	All year	NCC, GMC	
P9.4. Maintain views and user sightlines along Great River Avenue	42, 43, 48, 49, 50	**1**	2	2		NCC, AC	
P9.5. Maintain view from the corner of Beaufort Road / Burnell Avenue towards the Thames.	36	**1**	1	1		NCC, FoHL, Vols	
P9.6. Monitor and maintenance of path surfaces, investigate resurfacing where problematic	All	**1**	2	2		ACO, FoHL, NCC	
P9.7. Report tree safety defects along pathways	All	**1**	**1**	**1**		All	
P9.8. Strim around bins, benches and interpretation	All	**1**	**1**	**1**		GMC	
P9.9. Litter collection	All	**1**	**1**	**1**		GMC, Vols	Supplemented by volunteers where needed, NCC to remove any in the course of their work.
P9.10. Review of permissive horse paths.	Ham Lands North & 36	**1**	**1**	**1**		ACO, FoHL	
P9.11. Increase number of benches	Main paths	**1**	2	2		ACO, FoHL, NCC	Use fallen or felled timber to create benches
P9.12. Manage BMX area fencing	29	2	**1**	2		ACO, FoHL, NCC	
P9.13. Research / create parcel names	-	3	3	3		ACO, FoHL	

10. Monitor natural features							
P10.1. Create record database and mapping tool	-	**1**				ACO, FoHL	
P10.2. Undertake monitoring for key habitats and species groups	All	**1**	**1**	**1**		NCC	See Prescription 10 for details of survey requirements
P10.3. Complete Grassland Monitoring Assessment	Meadow	**1**	2	2		NCC	
P10.4. Carry out soil survey	Meadow	**1**				ACO, NCC	
P10.5. Review HLS agreement	All	**1**	**1**			ACO	
11. Review management							
P11.1. Regular meetings to co-ordinate management	-	**1**	**1**	**1**	All year	All	
P11.2. Maintain a 3-year rolling work programme	-	**1**	**1**	**1**	April	NCC	
P11.3. Produce an annual summary of work completed for each financial year	-	**1**	**1**	**1**	April	NCC	
P11.4. Review management plan in year 5 and plan to create new MP in year 10.	-					ACO	First review in 2029

8. References

1. Archer, J. & Curson, D., *Nature Conservation in Richmond upon Thames* (1993): London Ecology Unit.
2. SINC citation, Ham Lands, RiL06: Greenspace Information for Greater London (GiGL), www.gigl.org.uk
3. Ham Lands habitat mapping, Salix Ecology (2022)
4. SINC Review 2021, Salix Ecology

9. Glossary

FoHL	Friends of Ham Lands
GiGL	Greenspace Information for Greater London, the capital's environmental records centre
GLHER	Greater London Historic Environment Record
HAP	Habitat Action Plan, a subsection of the LBAP relating to a specific habitat
LBAP	Local Biodiversity Action Plan, focusing on the protection, conservation and enhancement of wildlife in Richmond-upon-Thames
LBRuT	London Borough of Richmond upon Thames; Richmond Council
LNR	Local Nature Reserve, a statutory designation under the National Parks and Access to the Countryside Act 1949 for land of special natural interest or educational value.
SAP	Species Action Plan, a subsection of the LBAP relating to a specific species
SINC	Site of Importance for Nature Conservation, a designation denoting London's most important wildlife sites in three tiers: Sites of Metropolitan Importance (highest), Sites of Borough Importance and Sites of Local Importance.