



# *Burgh Heath*

## *Site Management Plan*

2024-2033

SWT Ecology Services was commissioned by the Banstead Commons Conservators (BCC) to prepare ten-year management plans for Banstead Commons. This project was kindly sponsored by the Reigate and Banstead Community Infrastructure Levy Fund.

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### Acronyms and abbreviations

Acronym	Definition
AONB	Area of Outstanding Natural Beauty
BCC	Banstead Common Conservators
BCT	Bat Conservation Trust
BNG	Biodiversity Net Gain
BOAs	Biodiversity Opportunity Areas
BoCC	Birds of Conservation Concern
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
DEFRA	Department for Environment, Food and Rural Affairs
HPI	Habitats of Principal Importance
HSI	Habitat Suitability Index
IRZs	Impact Risk Zones
KPI	Key Performance Indicator
LNR	Local Nature Reserve
NERC	Natural Environment and Rural Communities
NPPF	National Planning Policy Framework
NVC	National Vegetation Classification
OPM	Oak Processionary Moth
PRoW	Public Right of Way
RAMS	Risk Assessment Method Statement
SAC	Special Areas of Conservation
SBIC	Surrey Biodiversity Information Centre
SNCI	Site of Nature Conservation Importance
SNP	Surrey Nature Partnership
SPA	Special Protection Areas
SPI	Species of Principal Importance
SSSI	Site of Special Scientific Interest
SWT	Surrey Wildlife Trust
TPO	Tree Preservation Order
SARG	Surrey Amphibian and Reptile Group

## 1 Vision statement

The vision for the site is to create an area rich in biodiversity with a mix of woodland, grassland and pond habitats in good condition supporting a range of species including a healthy population of Great Crested Newt. In addition, the site will serve the local community as a well managed and attractive open space forming an important part of the local green infrastructure.

Woodland management will focus on the removal of invasive species, particularly Cherry Laurel, maintaining and increasing the open space, further developing edge habitats (ecotones), thinning to reduce dominance of certain species (e.g. Holly, Sycamore, Birch) in areas where they form dense stands and creating opportunities to allow mature trees to develop into veteran trees. In addition the dead wood habitat will be increased.

The woodland glades and open areas will be managed by cutting annually and where resources allow, glades with greater than 20% Bracken cover will be cut twice a year in order to try and control the abundance of this species. 10% of the area of each glade will be left completely uncut each year as a refuge for wildlife.

The area of acid grassland (2.1 on Figure 1) will be managed by cutting/mowing no more than three times a year with the cuttings removed and leaving the margins long during the growing season with an annual cut. 10% of the grassland will be left completely uncut each year as a refuge for species such as insects, many of which spend part of their life cycles in dead stems, grass sheaths and seed heads. If resources allow, the area of modified grassland (4.1 on Figure 1) will also be managed in a similar way.

The ponds will be managed to increase their value for a range of species but particularly Great Crested Newt for which this site represents an important metapopulation. Priorities for management will include removing further bankside and overhanging trees and shrubs to allow more light into the ponds particularly on the southern side of the ponds. This will also reduce the rate of silting up due to leaf fall. Further de-silting some of the ponds will also be carried out. If resources allow, creating a new pond on the site could bring significant biodiversity gains and support the metapopulation of Great Crested Newt.

It is intended that this management plan will be a valuable resource to anyone with an interest in Burgh Heath and will help everyone work together towards the future wellbeing of the site. A flexible approach to management is important and, inevitably, the need for additional work may arise. In these circumstances, such tasks would be assessed according to the management objectives and priorities identified in this plan.

## 2 Summary

Surrey Wildlife Trust (SWT) Ecology Services was commissioned on 18 October 2022 by The Banstead Commons Conservators to prepare a management plan at Burgh Heath to cover the years 2024-2033.

The aim of the management plan is to assess the importance of the biodiversity recorded on the site and determine suitable management in order to further enhance biodiversity.

The following significant ecological features were identified on the site which have the potential to support locally, nationally and internationally important wildlife:

- Lowland mixed deciduous woodland
- Grassland (including lowland dry acid grassland, other neutral and modified grassland)
- Eutrophic standing waters (Ponds) (supporting Great Crested Newt)

Factors that were considered when producing this plan include:

- Value of these habitats and their potential to support notable species
- Legal and other obligations (including statutory site obligations and agri-environment scheme requirements)
- Public access / amenity value
- Survey, monitor and review

Figure 1 presents the habitats recorded, and their condition in Figure 3. Figure 4 presents the management measures. The works and monitoring programme are detailed in Tables 2 and 3.

The main body of the report provides background and describes the management measures. Appendices are provided in a separate document.

Table 1 details the biodiversity gains that could be generated as a result of implementing this management plan (further details of how this was calculated can be found in Appendix 2: Methodology and in the BNG Spreadsheet provided as a separate document).

**Table 1: Biodiversity gains**

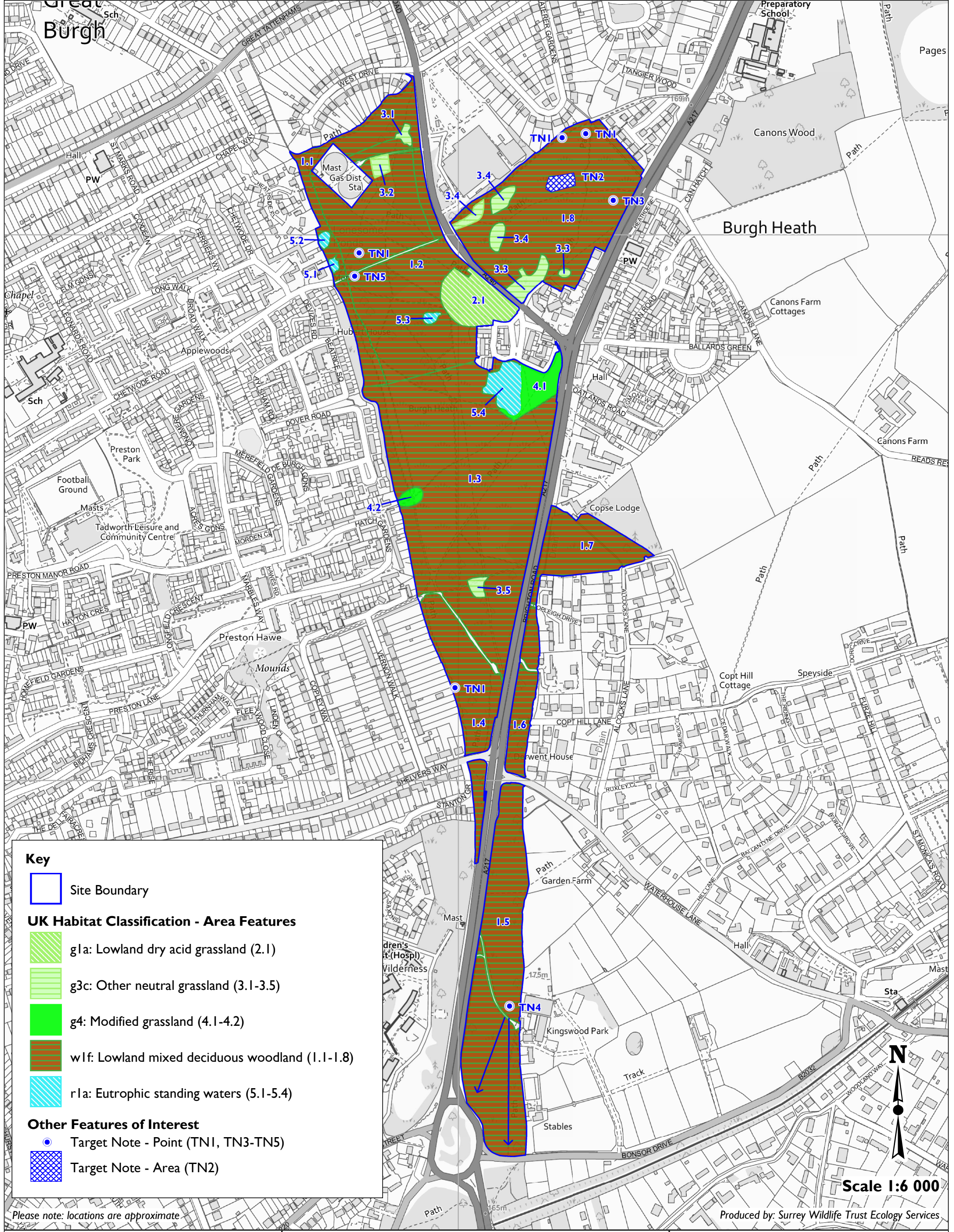
Headline results		Burgh Heath <sup>1</sup>
Onsite baseline	Habitat units	551.98
Onsite post-intervention	Habitat units	587.91
Total unit change	Habitat units	<b>+35.93</b>
Total % change	Habitat units	<b>+6.51%</b>

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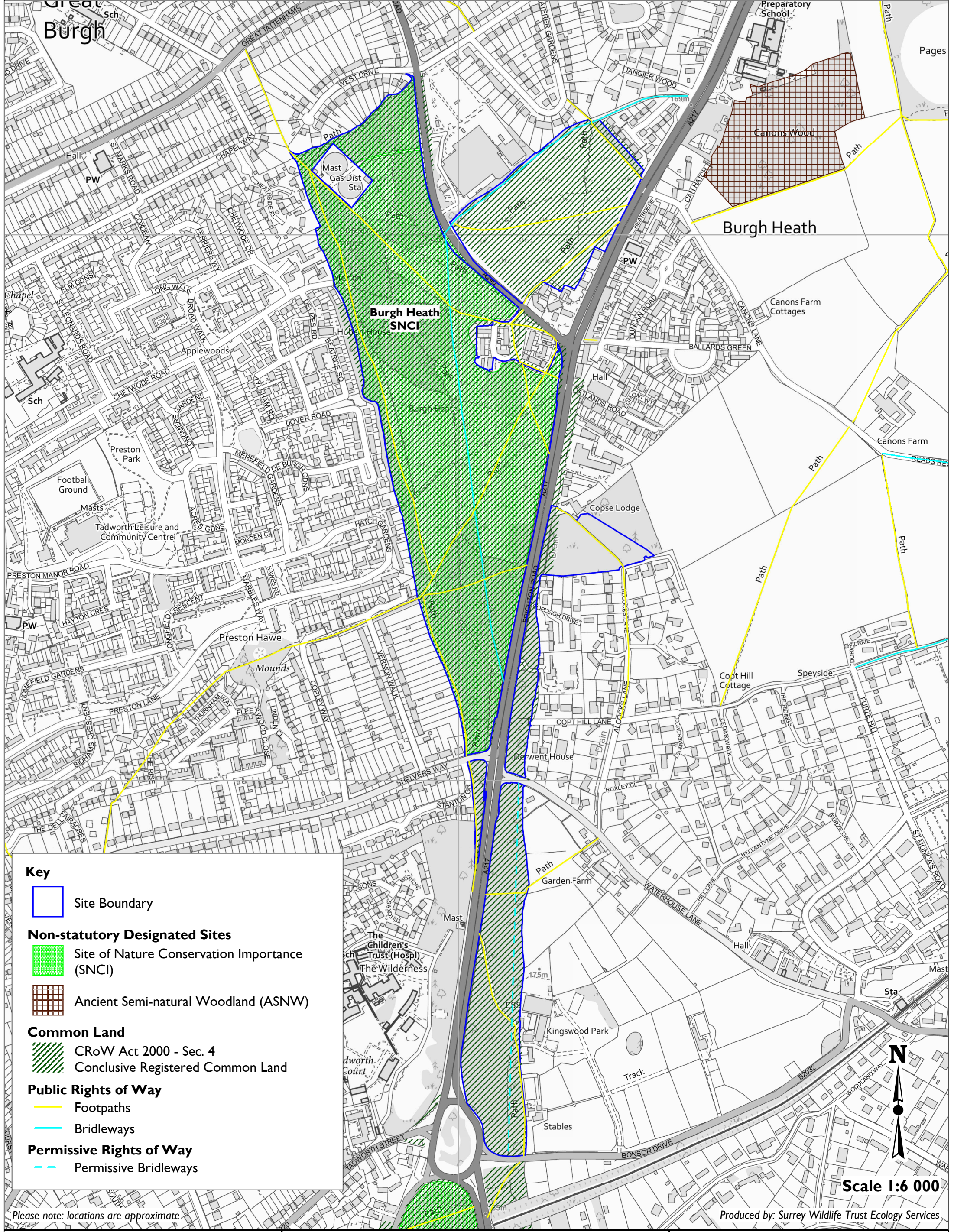
<sup>1</sup>

> 10 % gain	0 – 9% gain	< 0% gain
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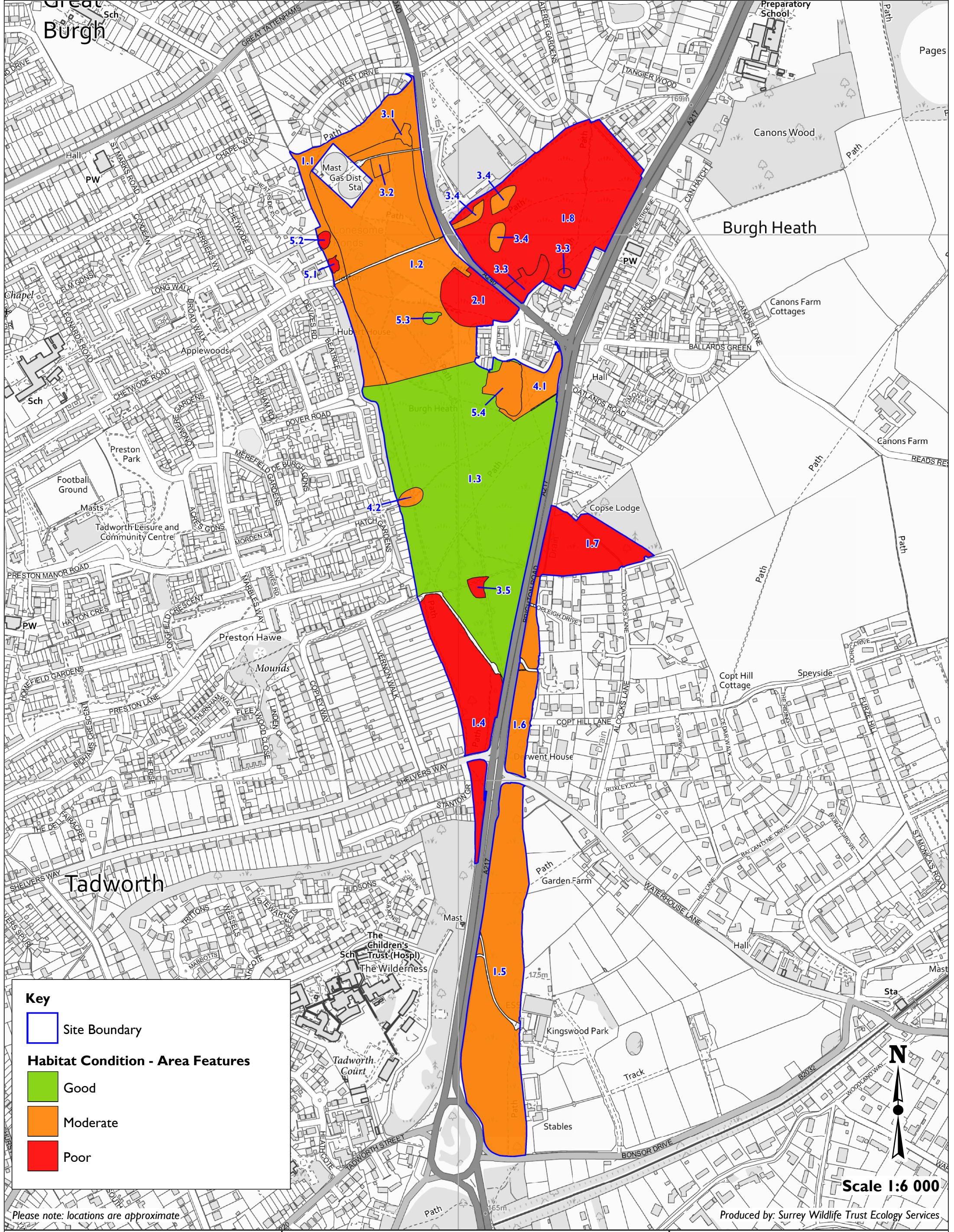




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**Figure 2: Burgh Heath -  
Statutory and Non-statutory  
Designations**





**Figure 3: Burgh Heath - BNG Habitat Conditions**  
(Assessed on 06/06/2023)



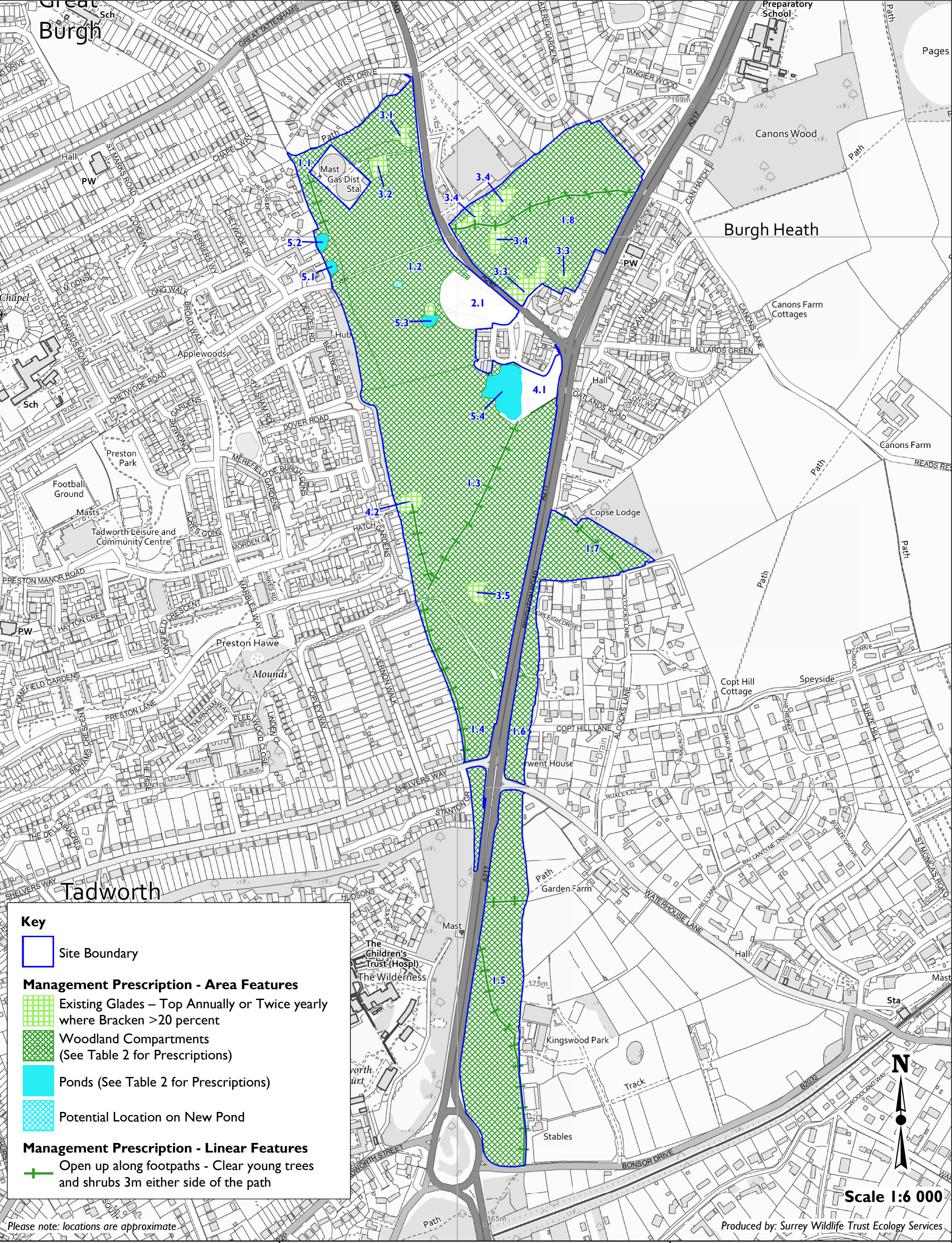


Figure 4: Burgh Heath -  
Management Map





Feature	Objectives	Map reference	Management measure	Priority	Timing of works												Year required											
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33		
Grassland	Retain the current area and increase the biodiversity value of the grassland on the site	2.1	Mow 3x/yr, leave cuttings for 2-3 days then remove	High																								
			Mow margins and area around trees 1x/yr	Mod																								
			10% unmown each year - rotated	Mod																								
			Regularly mow, 2m margin along Reigate Rd and paths	Mod																								
		4.1	Mow approximately 3x/yr as required	Mod																								
			Mow margins and area around trees 1x/yr	Mod																								
			10% unmown each year - rotated	Mod																								
			Regularly mow, 2m margin along Reigate Rd and paths	Mod																								
		3.1-3.5	Cut annually or twice if bracken cover > 20%	Mod																								
			10% unmown each year - rotated	Mod																								
Ponds	Increase the number of ponds on the site and increase their biodiversity value.	5.1	Remove fallen trees	Mod																								
			Re-coppice trees on southern bank every 3-5 years	High																								
			Consider dredging 1/3 of pond	Mod																								
		5.2	Remove fallen trees	Mod																								
			Cut back overhanging trees and shrubs	Mod																								
			Dredge a further 1/3 of pond	High																								
		5.3	Clear surrounding shrubs, cut back overhanging trees and coppice or pollard willows	High																								
			Add signage to discourage feeding of bread to ducks	Mod																								
			Investigate methods for removing terrapin and signal crayfish	Mod																								
		5.4	Consider electrofishing to remove fish	Low																								
			1.2 (see Fig 4 for suggested location)	Create new pond	Mod																							
		5.1-5.4	Create at least 1 hibernaculum and 2 log piles near each pond	Mod																								
Public access and amenity value	To maintain the public access across the site for enjoyment, recreation and education.	Whole site	Visual inspection of paths and tracks, with maintenance where required	High																								
		2.1 & 4.1	Mow paths through grassland (monthly throughout growing season)	High																								
		Whole site	Removal of litter and fly tipping (as required)	High																								
		Whole site	Visual inspection of furniture, with maintenance where required	Mod																								
		Whole site	Running of volunteer work parties	Mod																								
		Whole site	BCC Quarterly Meeting open to the public	Mod																								
		Whole site	Quarterly meetings for the Banstead Commons Consultative Group	Mod																								
		Whole site	Programme of public engagement including guided walks, family bioblitz days and presentations to local groups and societies	Low																								
Legal and other obligations	To comply with all legislation and other obligations relevant to the site.	Whole site	Follow precautions in section 8.3 of management plan to prevent committing an offence under protected species legislation	High																								
		Whole site	Up to date risk assessment for the site	High																								
		Whole site	Tree safety inspection	High																								
		Whole site	Patrol for site encroachments	Mod																								
		Whole site	Consult local council regarding tree preservation orders before any tree work takes place	High																								



### Table 3: Survey, monitor and review programme

[illegible]

## 3 Introduction

### 3.1 Background

SWT Ecology Services was commissioned on 18 October 2022 by the Banstead Commons Conservators to prepare a ten-year management plan for Burgh Heath to cover the years 2024-2033. The development of the site management plan was funded by the Reigate and Banstead Borough Council Community Infrastructure Local Fund and forms part of a larger project which will also see plans produced for the other sites managed by the Banstead Commons Conservators; Banstead Heath, Banstead Downs and Park Downs.

### 3.2 Scope of work

The scope of work included:

- A review of existing information for the site including past management plans, agri-environment schemes and past survey and monitoring data
- A data search for biological records within the site and an appropriate buffer
- A habitat survey following UK habitat classification methods
- Condition assessment of the vegetation on site and calculation of baseline biodiversity units
- An assessment of the likelihood of the site to support rare and/or protected species
- Site visit and meeting with relevant staff
- Identification of important features of the site and setting of objectives and targets
- Description of management measures required to meet objectives and targets including a monitoring strategy
- Ten year work plan and associated mapping

The information and data provided have been prepared in accordance with current best-practice guidance (CIEEM, 2022b), (CIEEM, 2021), (BSI, 2013) and (BSI, 2021). Our ecologists are bound by CIEEM's 'Code of Conduct' (CIEEM, 2022a). For the detailed methodology see Appendix 2.

## 4 Legislative and planning policy framework

Certain designated sites, habitats and species are protected under UK legislation and planning policies. These have been taken into account when writing this plan and it is important that this is taken into account when carrying out management of the site or when planning any future improvements on the site. Section 8.3 considers legal and other obligations relevant to the management plan. Relevant legislation is detailed in Appendix 6.

## 5 The site

Burgh Heath, presented in Figure 1, is located approximately 1.5km south west of Banstead and approximately 2km north east of Tadworth within the borough of Reigate and Banstead with a central grid reference of TQ240575. It is a triangular area of open space covering approximately 41ha. It lies within a relatively built-up area with roads and housing on most sides except for in the south where there is farmland to the east and where it connects with

Banstead Heath on its southern boundary. A large Asda superstore lies to the east of the northern most part of the site. The Brighton Road runs north-south through the site and the Reigate Road crosses the site in the north. The site supports a mosaic of woodland, grassland and pond habitats.

Further information on the site, along with historical information collected is detailed in Appendix 1.

## 6 Site information and baseline conditions

### 6.1 Designated sites

Most of the site (24.4ha) is selected as a Site of Nature Conservation Importance (SNCI) within the Reigate and Banstead Local Plan (see Figure 2 for the extent of the SNCI). Its nature conservation interest is cited as “*secondary broad-leaved woodland, scrub, grassland and ponds. Selected for mosaic of habitats and for supporting Great Crested Newt.*”

Apart from a couple of small areas that have been de-registered in recent years, most of the site is registered common land (see Figure 2).

### 6.2 Site within the wider area

The background data search (SBIC, 2023) revealed that there are no statutory sites within 1km of the site. However, in addition to the SNCI within the site itself, four further SNCIs were recorded within 1km of the site as shown in Table 4.

#### Biodiversity Opportunity Areas

A number of Biodiversity Opportunity Areas (BOAs) have been identified within Surrey. These areas are described by the Surrey Nature Partnership as “*extensive areas where improved habitat management, as well as efforts to restore and re-create Priority habitats will be most effective in enhancing connectivity to benefit recovery of Priority species in a fragmented landscape. They are therefore the basis for achieving Sir John Lawton’s vision of a ‘coherent and resilient ecological network’ in Surrey.*”

Although this site does not lie within one of Surrey’s BOAs itself, it does lie near to ND08, North Downs; Banstead and Walton Heaths BOA, which is only 100m to the south of the site.

The following habitats have been identified as important in the area statement for this BOA:

- Heathland
- Acid grassland
- Mixed deciduous woodland (restoration only)

The following species have been identified as important in the area statement for this BOA:

- Chamomile
- Woodlark
- Adder

It will be important to take these habitats and species into account if relevant when considering the management of the site.



### **6.3 Public access/amenity value**

This is a site right on the edge of a residential area, well used by the public. There is good vehicular access to the site with parking available for visitors on surrounding roads.

Many informal footpaths and public rights of way cross the site. Some of the paths provide direct links between residential areas and amenities such as the Asda superstore, local schools and bus routes. Given that the site is surrounded by high density housing there is a high level of pedestrian traffic throughout the year and it is well used by dog walkers. A bridleway provides cycle and equestrian access and links the A217 to the A240 through the centre of the site.

Although rarely free of traffic noise, the site provides visitors a welcome respite with its woodland, glades and ponds. The two main grassland areas are appreciated as informal open spaces often used for recreation as well as for walking and dog-walking.

The site also acts as an important screen and buffer between residential areas and the A240 and A217.

### **6.4 Ecosystem services**

Burgh Heath provides invaluable ecosystem services. As well as providing space for wildlife and natural processes such as nutrient cycling and photosynthesis, the site also contributes to sustainable drainage, flood and erosion control as well as contributing towards good air quality and carbon storage. Other important ecosystem services that the site provides includes cultural aspects such as its use for recreation and to improve people's physical health and mental wellbeing as well as providing a sense of place and opportunities for learning.

### **6.5 Ownership and management responsibilities**

The site is owned by Reigate and Banstead Borough Council. The Banstead Common Conservators (BCC) are legally responsible for overall site management and maintenance. Reigate and Banstead Borough Council are responsible for rights and duties associated with land ownership and management of highways trees. Roadside verges are either managed by BCC or Surrey County Council (SCC) depending on location.

### **6.6 Funding**

Reigate and Banstead Borough Council provides an operational grant to contribute towards the management of the site. There are no agri-environment schemes currently in place.

### **6.7 Recent management**

Recent and current ongoing management of the site includes;

- Upgrade to path from the eastern end of Chetwode Road to the A240 (2014) – this path was de-registered from the Common at this time to allow street lighting to be installed.
- Opening up glades within the woodland (2020)
- Pond management including some cutting back of trees and dredging (5.1 & 5.2) (2022)
- Keeping footpaths open
- Annual cut of grassland/Bracken within glades
- Cutting of the main grassland areas (2.1 & 4.1 on Figure 1) at least 3 times/year

## 6.8 Site restrictions

This site is influenced by its location surrounded by housing. Locals often have an expectation of how they want the site to 'look' and have strong opinions as to how the site should be managed. The Banstead Common Conservators need to achieve a balance between the aesthetic values wanted by local house holders and the need for conservation.

With the site being so close to residential areas certain problems have been and will likely continue to be a problem on the site. This includes;

- Littering (including in the Lonesome Ponds)
- Fly tipping (including tipping of garden waste from neighbouring properties)
- Inappropriate off road cycling
- Use of motorbikes
- Dog fouling
- Unlawful fishing
- Vandalism

For this reason interpretation on the site is limited. Interpretation boards and site furniture such as benches have been vandalised in the past.

Another restriction highlighted by the Banstead Conservators is the funding available to carry out management on the site. Income is received through the Higher Level Stewardship scheme for Park Downs, Banstead Heath and Banstead Downs. In addition some funding is provided by Reigate and Banstead Borough Council to manage all four sites. This allows the Banstead Conservators to employ just two full time staff and two part time staff to manage over 500ha of land over the four sites; Banstead Downs, Banstead Heath, Burgh Heath and Park Downs. The limited funding means that management tasks need to be prioritised and it may not be possible to carry out all recommendations.

## 6.9 Geology and soils

The bedrock geology underlying the site is sand (Thanet Formation). This is sedimentary bedrock formed between 59.2 and 56 million years ago during the Palaeogene period. On top of the sedimentary bedrock are superficial deposits of clay with flints formation - clay, silt, sand and gravel formed between 23.03 million and 11.8 thousand years ago during the Neogene and Quaternary periods (British Geological Survey, Viewed 29/03/2023).

The Cranfield Soil mapping tool shows that the site sits on freely draining slightly acid loamy soils (Cranfield Soil and Agrifood Institute, Viewed 29/03/2023).

**Table 4: Statutory and non-statutory designated sites desk study results**

Site name	Brief description	Distance from survey area (m)
<b>Non-statutory designated sites</b>		
Burgh Heath SNCI	Secondary broad-leaved woodland, scrub, grassland and ponds. Selected for mosaic of habitats and as site supporting Great Crested Newt ( <i>Triturus cristatus</i> ).	Survey site
Banstead and Walton Heath SNCI	Extensive Pedunculate Oak ( <i>Quercus robur</i> ) – Birch ( <i>Betula sp.</i> ) woodland, acid grassland, remnant heathland, ponds and scrub. Includes Walton Heath Golf Course. Selected for the diversity of habitats and species present.	100
Nork Park SNCI	Selected for mosaic of habitats including semi-improved calcareous and neutral grassland. 33 species typical of grassland of conservation interest in Surrey have been recorded on the site since 2008	200
Ruffett Wood SNCI	Ancient Semi-natural Woodland and calcareous scrub. Selected for more than 5ha of Ancient Semi-natural Woodland habitat with 10 ancient woodland indicator species recorded.	800
Pit Wood SNCI	Ancient Semi-natural Woodland. Selected for its Ancient Semi-natural Woodland and for its importance as an accessible natural greenspace within an urban area.	900

## 6.10 Habitats

### Desk study

#### Habitats recognised within SNCI citation

The following habitats are recognised within the SNCI citation for the site: secondary broad-leaved woodland, scrub, grassland and ponds.

#### Waterbodies

Much of the interest on the site is provided by the waterbodies.

The amphibian survey undertaken in 2013 (Land Management Services, 2013) found four ponds plus a seasonally wet depression to be present on the site. In addition, one waterbody was recorded offsite 215m to the west of the survey area. An initial Habitat Suitability Index (HSI) assessment determined that all the ponds on site could potentially support Great Crested Newt. Subsequent survey work found Great Crested Newt to be present in ponds 5.1, 5.2 and 5.3.

**Table 5: Ponds on and near site**

Pond reference (Land Management Services, 2013)	Pond reference in this report	Name	Breeding Great Crested Newt recorded?
P1	5.1	Lonesome Pond (south)	Yes – 2013 eDNA in 2020 - positive
P2	5.2	Lonesome Pond (north)	Yes – 2013 eDNA in 2020 - negative
P3	5.3	Sheepwash Pond	Yes – 2013 eDNA in 2020 - negative
P4	5.4	Burgh Heath Green Pond	No
P5	N/A	<i>Marble Pond (off site to west)</i>	<i>No</i>
P6	N/A	<i>Seasonally wet depression</i>	<i>No</i>

Other small garden ponds that were not on available mapping may be present within 500m of the site.

#### Ancient woodland and veteran trees

No parcels of ancient woodland were identified within the site.

Six parcels of ancient woodland were identified within 1km of the site, of which the closest is at 0.1km from the survey area. The ancient woodland parcels within 1km of the survey area total 20.4 ha.

The surveyor was not trained in arboricultural survey methods, and an accurate count of veteran trees present has not been recorded. Potential veteran trees are present, particularly within woodland compartment 1.2. One pedunculate oak tree within woodland compartment



1.5 has been assigned notable status within the Ancient Tree Inventory (Woodland Trust, 2023).

### **Habitat survey results**

Five habitat types were recorded during the habitat survey; lowland mixed deciduous woodland, lowland dry acid grassland, other neutral grassland, modified grassland and eutrophic standing water (ponds). A summary of each habitat type is provided in Table 6. The location of these is presented in Figure 1.

**Table 6: Habitat survey results**

Habitat and code	Compartment number	Description	Condition	HPI
w1f: Lowland mixed deciduous woodland	1.1	This section of woodland in the north of the site has a closed canopy dominated by ash and Sycamore. Horse Chestnut and Pedunculate Oak are rare. Young Sycamore is frequent in the sub-canopy along with occasional Hazel and English Elm. There is a dense shrub layer in which Holly is frequent along with occasional and locally frequent Cherry Laurel and occasional English Elm. Hawthorn, Rowan, Elder and non-native Snowberry are rare. On the ground Ivy is frequent and locally dominant along with occasional Lord's and Ladies, Bluebell, Male Fern, Bramble, Common Nettle, Hogweed, Wood Aven and Garlic Mustard. In the more open areas along paths or in the couple of small glades that are present, species more characteristic of open conditions such as Rough Meadow-grass, Cleavers, Bush vetch, Herb-Robert and Cut-leaved Crane's-bill are present. Bracken and Cow Parsley are locally frequent. Some recent felling and deadwood piles are present.	Moderate	Yes
w1f: Lowland mixed deciduous woodland	1.2	This is the most open area of woodland on the site. It is a mosaic of broadleaved woodland and open grassy areas with footpaths crossing throughout. Canopy trees include frequent Pedunculate Oak, Silver Birch and Sycamore with occasional Ash, Beech, Horse-chestnut, Yew and Goat Willow. Hawthorn, Holly, Rowan, Elder, Yew and non-native Cherry Laurel are all occasional in the shrub layer. Bramble is locally dominant on the ground with occasional Honeysuckle, Common Nettle, Ivy, Wood Aven and Male Fern. Bracken is frequent in the grassy glades along with frequent Yorkshire-fog, locally frequent Rough Meadow-grass and occasional Sweet Vernal-grass and False Oat-grass. The southern section becomes denser with areas of locally frequent Holly.	Moderate	Yes
w1f: Lowland mixed deciduous woodland	1.3	This is the central block of woodland on the site. It is a relatively open woodland although it gets more dense towards the south and along the western edge where Holly is dense in places. Silver Birch is frequent along with Pedunculate Oak. Yew and Sycamore are also occasional. Birch and Rowan form dense stands in places. Along with locally dominant Holly in the shrub layer other occasional species include Hazel, Rowan, Wild Cherry, Elder and Cherry Laurel. On the ground bramble is dominant over much of the area with occasional Bracken, Bluebell and rare Male and Broad-buckler ferns. Occasional small grassy glades are dominated by Yorkshire-fog and Rough Meadow-grass with occasional Common Sorrel.	Good	Yes
w1f: Lowland mixed deciduous woodland	1.4	Beech dominates the canopy in this area of woodland in the south of the site. A number of mature Beech specimens are present. Sycamore is also occasional and Ash rare. Cherry Laurel is frequent in this area. Other species in the shrub layer include Holly, Yew, Wild Cherry and Hazel. The ground flora is quite bare due to the dark conditions but Bluebell is occasional.	Poor	Yes
w1f: Lowland mixed deciduous woodland	1.5	Strip of woodland to the east of Brighton Road. The canopy is dominated by Pedunculate Oak and Ash, of which the latter is suffering from Ash dieback. Beech is occasional and more frequent towards the south of this area. Other occasional species in the canopy include Horse Chestnut, Silver Birch and rare Grey Willow. There is a dense and diverse shrub layer with Holly locally abundant particularly in the south. Cherry Laurel is occasional throughout. Other occasional species in the shrub layer include Sycamore and Ash saplings, Blackthorn, Hazel, Elder, Hawthorn, Wild Cherry and Yew. The ground flora is bare in areas where young Birch or Holly is frequent. In other areas Bramble is dominant. There is also a good diversity of other woodland plants including occasional Bracken, Male and Broad-buckler Ferns, Hart's-tongue, Common Ivy, Honeysuckle, Enchanter's Nightshade, Lord's and Ladies, Herb-Robert, Hedge Woundwort, Wood Aven, Garlic Mustard, Pendulous Sedge and Giant Fescue. Bluebell is locally frequent in the south and Wood Sedge and Cow Parsley are locally frequent along the footpath. To the south of this compartment, an Ivy cultivar is abundant (see target note 4). This has larger leaves and appears to be more invasive than the native variety.	Moderate	Yes
w1f: Lowland mixed deciduous woodland	1.6	This strip of woodland is dense and dark. The canopy is made up of frequent Pedunculate Oak and Ash with occasional Beech. In the shrub layer Sycamore is dense in places and Cherry Laurel is occasional and locally frequent. Other occasional species in the shrub layer include, Hazel, Holly, Elder, Hawthorn as well as Horse-chestnut and Norway Maple saplings. Common Ivy is dominant on the ground and also present as a climber. Bramble is occasional. Wood Aven is occasional on the edge and Ramsons is locally abundant.	Moderate	Yes
w1f: Lowland mixed deciduous woodland	1.7	This is a block of dark woodland with a dense shrub layer. Sycamore, Ash, Silver Birch, Common Lime and Horse-chestnut are present in the canopy. Cherry Laurel and Holly are abundant in the shrub layer with occasional Hazel, young Horse-chestnut and Wych Elm. Due to the dark conditions, the ground is relatively bare with occasional Common Ivy and Ramsons.	Poor	Yes
w1f: Lowland mixed deciduous woodland	1.8	<p>This block of woodland to the north of the site to the east of Reigate Road, supports relatively young trees and has quite an open feel in parts. Pedunculate Oak and Silver Birch are frequent in the canopy with locally frequent Sycamore and rare Ash and Sweet Chestnut. In the shrub layer species include Sycamore and Beech saplings, Hawthorn, Rowan, Elder, Holly and young Yew. Cherry Laurel is occasional and locally frequent and Rhododendron is rare along the eastern boundary with houses. On the ground Bramble is frequent and Common Nettle and Bracken are locally frequent. There is a good diversity of other species including Hogweed, Wood Aven, Enchanter's Nightshade, Male Fern, Wood Melick, Pendulous Sedge, Wood False-brome, Cleavers, Bluebell, Wood Speedwell, Cow Parsley and Creeping Buttercup. The woodland is quite open particularly in the south west with a number of grassy glades (3.3 &amp; 3.4 on Figure 1). The following target notes are including on Figure 1.</p> <p>TN1: Patch of Variegated Yellow Archangel (Schedule 9 invasive species)</p> <p>TN2: Location of a bike track in an area no longer within the management of the Banstead Commons Conservators – this has caused the destruction of the shrub layer and ground flora. Just scattered young Pedunculate Oak remain – see photograph.</p> <p>TN3: Location of treated Japanese Knotweed – only one healthy shoot present.</p>	Poor	Yes

Habitat and code	Compartment number	Description	Condition	HPI
g1a: Lowland dry acid grassland Secondary code: 11 (scattered trees)	2.1	This is an area of grassland in the north of the site, mown for amenity use. As it had been very recently mown, it was difficult to assess accurately. The grasses appeared to be dominated by a mix of Common Bent, Yorkshire-fog, Rough Meadow-grass and Fescue spp. Occasional herbs include Common Cat's-ear, Common Sorrel, Creeping Buttercup, Meadow Buttercup, Yarrow, Common Knapweed, Lesser Stitchwort, Heath Bedstraw and Field Wood-rush. As Heath Bedstraw and Field Wood-rush are indicators of acid conditions and other acidic indicators including Tormentil and Sheep's sorrel have been recorded here in the past (Cooper, 2008) and considering the recent mowing of the area which will prevent some species being visible, a precautionary approach has been taken and this area has been classified as lowland dry acid grassland.  Scattered trees in the east include Silver Birch and Pedunculate Oak.	Poor	Yes
g3c: Other neutral grassland	3.1	Glade within north west woodland. Grasses are dominated by Rough Meadow-grass, Yorkshire-fog and Red Fescue with occasional Cock's-foot and False oat-grass. It is relatively species poor although Common Sorrel is frequent. Other occasional species include Bramble, Bracken, Lesser Stitchwort, Broad-leaved Dock and Cleavers.	Moderate	No
g3c: Other neutral grassland	3.2	Species poor, grass dominated glade. Grasses are dominated by Red Fescue with locally abundant Yorkshire-fog and occasional Common Bent and Rough Meadow-grass. Bracken, Bluebell and Soft Rush are occasional.	Moderate	No
g3c: Other neutral grassland	3.3	This includes an open grassy area on the edge of the woodland in the northeast as well as a small open area slightly further north. In the larger area, tall rank grasses dominate with the grassland becoming more species rich towards the north. Cock's-foot, False Oat-grass and Rough Meadow-grass are abundant with locally frequent Barren Brome. Ground-elder is locally frequent. Other occasional species include Bramble, Bracken, Common Nettle, Cut-leaved Cranesbill, Common Vetch, Green Alkanet, Hogweed, Ox-eye Daisy, Common Cat's-ear and Curled Dock.	Poor	No
g3c: Other neutral grassland	3.4	Open glades towards the north west of woodland compartment 1.8. Yorkshire Fog dominates the grasses with False Oat-grass, Common Bent, Meadow Foxtail and Red Fescue also occasional. Bracken is frequent. Other occasional species include Bramble, Honeysuckle and Common Sorrel.	Moderate	No
g3c: Other neutral grassland	3.5	Open glade on edge of footpath. Grassy areas are dominated by Yorkshire Fog and Bracken. Bracken dominates over much with occasional Bramble.	Poor	No
g4: Modified grassland Secondary code: 11 (scattered trees)	4.1	This is a mown grassy area to the east of the main pond with scattered Pedunculate Oak and Silver Birch and occasional Gorse. This area appears mown regularly with the cuttings left in place. Perennial Rye-grass is frequent. Other grasses present include Yorkshire-fog, Cock's-foot, Rough Meadow-grass and Red Fescue. Creeping Buttercup is occasional but there are few other herbs.	Moderate	No
g4: Modified grassland	4.2	Species poor glade at the junctions of a number of footpaths at the western edge of the site. Dominated by Perennial Rye-grass and Yorkshire-fog.	Moderate	No
r1a: Eutrophic standing waters	5.1	This pond known as Lonesome Pond (south) is overshadowed by young trees including Goat Willow, Grey Willow and Crack Willow on the eastern boundary with more mature trees including Ash and Sycamore towards the northern boundary. Hazel and Hawthorn are present on the western boundary along with some fallen debris. Duckweed covers much of the surface. Emergent vegetation includes Yellow Iris and Floating Sweet-grass. Other vegetation along the edge of the pond includes Pendulous Sedge, Soft Rush, Rough Meadow-grass, Couch Grass, Perennial Rye-grass, Hedge Woundwort, Broad-leaved Willowherb, Garlic Mustard, Wood Avens, Creeping Buttercup, Silverweed, Broad-leaved Dock, Common Nettle and Creeping Thistle.	Poor	Potentially*
r1a: Eutrophic standing waters	5.2	This pond known as Lonesome Pond (north) is more open than 5.1. It is mostly open on the eastern edge with just one Goat Willow and Wild Cherry. Trees around the other boundaries include Yew and Ash. There are good amounts of emergent vegetation. Yellow Iris, Reedmace, Common Water Plantain and Soft Rush are occasional and Floating Sweet-grass locally dominant. Other species near to the water edge include Bittersweet, Gipsywort, Marsh Thistle and higher on the banks Rough Meadow-grass, Bramble, Cock's-foot, Herb-Robert, Creeping Buttercup, Wood Dock and Broad-leaved Willowherb. A Moorhen was observed on the pond.	Poor	Potentially*
r1a: Eutrophic standing waters	5.3	This pond known as Sheepwash pond is a small, very shaded woodland pond. Surrounding trees and shrubs include Pedunculate Oak, Crack Willow, Grey Willow, Yew and Cherry Laurel. Branches reach right into the water in parts. Two small patches of emergent vegetation are present which include Yellow Iris, Hard Rush and Reedmace.	Good	Potentially*
r1a: Eutrophic standing waters	5.4	Burgh Heath Green Pond is the largest pond on the site. Waterfowl including Mallard, Canada Goose and Moorhen are present and are fed by the public. The eastern banks and southern banks are very eroded, however there are significant areas of emergent vegetation. Bogbean is locally dominant. Other occasional emergents include Yellow Iris (including a pale variety). Other wetland species on the pond edge include Soft Rush, Gipsywort and Water Mint. Other species on the banks include Creeping Thistle, Ribwort Plantain and Bramble. The pond is relatively unshaded. Grey Willow is the most frequent bankside tree along with occasional Crack Willow and Pedunculate Oak. A small island within the pond supports Grey Willow.  It is thought that fish (likely Carp) were re-introduced to this pond in 2022 by the public. A Terrapin and Signal Crayfish have also recently been observed in the pond.	Moderate	Potentially*

## 6.11 Species

Below is a summary of known species information for the site gathered from past surveys and other documents relating to the site. It includes the results of the data search (SBIC, 2023) which lists protected species and species of conservation concern recorded within 1 km of the site. The full results of the data search are presented in Appendix 7.

### Fauna

#### Invertebrates

The survey area supports suitable habitat for invertebrates including lowland mixed deciduous woodland, acidic and neutral grassland and ponds.

The data search did not return any records of notable invertebrate species within the site itself however it did return records of 22 notable invertebrate species within 1 km of the site (see Appendix 7 for details).

Large numbers of dragonflies are often seen around the ponds in the summer (Banstead Commons Conservators, 2023).

The Signal Crayfish has been observed within the Burgh Heath Green Pond (5.4 on Fig 1). This is a highly invasive non-native species which is listed on Schedule 9 of the Wildlife and Countryside Act 1981.

Oak Processionary Moth (OPM) is present on Burgh Heath. As well as weakening the tree leaving it vulnerable to other threats, this species is also a hazard to human and animal health.

#### Amphibians

The survey area supports aquatic habitat suitable for amphibians including Smooth, Palmate and Great Crested Newt, Common Frog and Common Toad. Suitable breeding habitat includes the ponds with suitable terrestrial habitat including the woodland, scrub and long grassland areas.

The data search returned records of Great Crested Newt, Palmate Newt, Smooth Newt, Common Frog and Common Toad within the site itself and within the 1 km search area. Great Crested Newt and Common Toad are Species of Principal Importance (SPIs).

In addition a stable population of the European Green (Edible) Frog has been recorded within the pond outside the site approximately 215m to the west (Land Management Services, 2013) and the species is also known to be present in Burgh Heath Green Pond (5.4) (Morgan, 2020).

A survey in 2013 (Land Management Services, 2013) confirmed three of the ponds on site as Great Crested Newt breeding ponds (5.1, 5.2 & 5.3). The other pond on site was also considered to have some value for Great Crested Newt either as a potential breeding pond or foraging habitat (5.4). At that time, the site was considered to be of between district and borough value to this species.

An eDNA survey in 2020 only found evidence of Great Crested Newt in the southern lonesome pond (5.1) and the report (Morgan, 2020) suggested that the small metapopulation of Great Crested Newt on the site was declining.

The population of amphibians within the largest pond (pond 5.4) may be limited by the fish population which is known to have originated from unauthorised releases into the pond.

### **Reptiles**

The survey area supports suitable habitat for Common Lizard, Grass Snake and Slow-worm including within areas of tall grassland, dense Bracken, scrub, and woodland edge.

In addition there are records of the non-native Red-eared Terrapin within the Burgh Heath Green Pond (5.4).

No evidence of reptiles was recorded during the reptile survey of part of the site in 2013 (Land Management Services, 2013).

The desk study returned records of one reptile species (common lizard) within the site in 2016. In addition, the data search returned records of Common Lizard, Adder and Slow-worm, within the 1 km search area. All UK reptile species are SPI.

Although surveys are yet to pick up the presence reptiles other than Common Lizard on the site, this should not be entirely discounted as there is suitable habitat present particularly for Grass Snakes as they could forage for amphibians within the ponds on site. However the isolation of the site within a built up area and with the two busy roads running through the site may limit opportunities for reptiles to reach suitable habitat. Slow-worm could also be present, as they are often linked to urban areas and often found in tall grassland and compost heaps in gardens.

### **Birds**

The site supports suitable breeding bird habitat within the woodland, scattered trees, scrub, Bracken, longer grassland and pond habitats. The following bird species were recorded during the survey: Wren, Moorhen, Blackbird, Carrion Crow, Great Tit, Robin, Chiffchaff, Magpie, Chaffinch, Green Woodpecker and Song Thrush. Of these the Song Thrush is listed as an amber species on the latest Birds of Conservation Concern list (Stanbury, A et al).

In addition, the data search returned records of 11 notable bird species within the 1km search area, of which four species (Grey Heron, Mallard, Coot and Moorhen) have been recorded within the site itself. Of the 11 notable species, nine are Birds of Conservation Concern (two listed as red, the Common Swift and the Common Starling) and seven species are included in the IUCN red list species as Nationally scarce or rare.

### **Mammals**

#### ***Badger***

The survey area supports suitable badger habitat within the woodland.

No signs of Badger activity including setts, latrines, foraging signs, push-throughs, hairs were recorded during the habitat survey.

Badger setts have been recorded at Burgh Heath in the past (Thomson Ecology, 2012). This was not a comprehensive survey of the whole site, but was part of a survey for the De Burgh School. It recorded a partially-used outlier sett and a disused outlier sett near to the centre of Burgh Heath.



The desk study does not include Badger records and the local Badger Group was not consulted as part of the desk study. Historical records could also therefore be held by the local Badger group.

### **Bats**

The following habitats on site were recorded as being suitable for foraging and commuting bats. Details of these are provided in Table 7.

**Table 7: Habitats in the survey area suitable for use by bats**

Habitat	Suitable use for bats
Broadleaved woodland	Commuting, roosting and foraging
Grassland	Foraging
Ponds	Foraging

The desk study returned records of the following bat species within the site:

- Lesser Noctule
- Serotine
- Common Pipistrelle
- Soprano Pipistrelle
- *Myotis* species
- Unidentified bat species records

In addition, records of the following additional species were returned as part of the data search within 1km of the site:

- Brown Long-eared
- Noctule
- Nathusius' Pipistrelle

A bat survey undertaken in 2013 including Burgh Heath, de Burgh and Merland Rise Recreational ground (Batbox Ltd, 2013) as part of the Preston Regeneration project, recorded Common Pipistrelle commuting and foraging through Burgh Heath and using both lit and unlit paths through the site.

Very few passes from bat species other than Pipistrelles were recorded and the report commented that “it appears likely that the fragmentation of the habitat, caused by roads, built-up areas and paths with street lighting, has reduced the bat species diversity from what might have been expected in habitat such as the Burgh Heath woodland, with good potential for bat use. This has favoured use by Soprano (45kHz) Pipistrelles which are believed to be better adapted for life in semi-urban habitat than other bat species”.

Two less common species were recorded in very small numbers during the 2013 survey; Natterer's and Whiskered or Brandt's.

In addition, bats have been observed foraging over the ponds on site including the Daubenton's Bat (Morgan, 2020).

Noctule, Soprano Pipistrelle and Brown Long-eared Bat are all SPIs.

### ***Hazel Dormouse***

Hazel Dormouse is a SPI.

The survey area supports suitable Hazel Dormouse habitat in the form of broadleaved woodland. The dense understorey with an abundance of nut and fruit producing shrubs provides good habitat. However the site's suitability for this species is reduced due to the relatively recent nature of the woodland and the fragmentation of the landscape in which it sits.

The desk study did not return records of Hazel Dormouse within the site or within the 1km search area, however online records of the species were found 3.2km from the site.

Signs of Hazel Dormouse activity were not recorded during this survey however they were not specifically looked for. In addition no evidence of Hazel Dormouse was found during the survey (nut search only) carried out in 2013 as part of the footpath improvement works (Land Management Services, 2013).

Although this species is likely to be absent from the site, suitable habitat is present and as the site is within the known range of the species it could be present at such low densities that it remains undetected.

### ***Other mammals***

The desk study revealed historical records of Common Shrew and Hedgehog within 1km of the site. None of these records were within the site itself.

Suitable habitat occurs on the site for a range of other mammal species including Hedgehog, Fox, Rabbit and small mammals such as mice, voles and shrews. Hedgehog is a SPI.

One non-native invasive mammal species (Eastern Grey Squirrel) has been recorded within the site.

## **Flora**

One hundred and sixteen vascular plants were recorded during the survey. This is a fairly typical number given the habitats present and the time of year. A list of vascular plant species recorded within each habitat type and their abundance is provided in Appendix 3.

### **Rare and notable species**

The desk study returned records of the following 14 notable plant species within the site: Heather, Crosswort, Needle Spike-rush, Wild Strawberry, Fringed Water-lily, Bluebell, Wood Sorrel, Pillwort, Tormentil, Lesser Spearwort, a Bramble, Sanicle, Water-soldier and Wild Pansy. In addition the data search returned records of an additional 16 notable plant species within 1 km of the site.

Many of these including Fringed Water-lily, Pillwort, Lesser Spearwort and Water-soldier are associated with the ponds on the site. It has also been noted (Banstead Commons Conservators, 2023) that the attractive pale form of Yellow Iris (*Iris pseudacorus* v *bastardii*) occurs in good numbers around the large pond.

Of the plant species listed above only Bluebell and the pale form of Yellow Iris was recorded during the current survey. This does not mean that the other species are now absent from the

site as a one-day survey will not pick up all plant species due to the time of year the survey took place and the fact that some species may have been missed.

Particular effort was made by the surveyor to search for Pillwort at its past location at Burgh Heath Green Pond. The site was originally recommended as an SNCI by the Surrey Flora Committee (now Surrey Botanical Society) for the presence of this species (Surrey Wildlife Trust Ecology Services, 2008) which is a SPI, Nationally Threatened on the GB Red List and rare in Surrey. The last record of this species on the site is 1998 and it is believed to have been lost from the site as a result of pond management work in the past. It was not observed during this survey.

### **Invasive and non-native plant species**

The data search returned records of 11 invasive-non native Schedule 9 species within 1 km of the site. Of which the following four plants have been recorded within the site:

- Rhododendron
- Variegated Yellow Archangel
- New Zealand Pigmyweed
- Three-cornered Garlic

The following species listed under Schedule 9 of the Wildlife and Countryside Act 1981, as amended, were recorded during the survey:

- Rhododendron
- Variegated Yellow Archangel
- Japanese Knotweed

Furthermore, the following species that are not listed on Schedule 9 but which are known to be non-native invasive species were recorded:

- Cherry Laurel
- Snowberry
- Butterfly-bush

A Japanese Knotweed survey and management plan for the Banstead Commons including this site was undertaken in 2022 (Japanese Knotweed Specialists, 2022). This survey found one location of Japanese Knotweed towards the north east of the site to the west of Brighton Road (target note 3 on Figure 1).

Cherry Laurel is a particular problem on this site having been recorded in all the woodland compartments (1.1-1.8).

In addition to plants, Signal Crayfish, a Terrapin, Grey Squirrel and Oak Processionary Moth (OPM) are all non-native invasive species have all been recorded on the site.

### **Target notes**

Details of target notes recorded during the survey are presented in the table below.

**Table 8: Target notes**

Target note number	Description
1	Patches of Variegated Yellow Archangel (Schedule 9 invasive species). There may be more locations of this species within the woodland that were not picked up by the survey
2	Note: this area no longer forms part of the Common, but is marked on map due to its location within Burgh Heath Unauthorised excavations here have caused the destruction of the shrub layer and ground flora. Just scattered young Pedunculate Oak remain
3	Location of Japanese Knotweed (Schedule 9 invasive species)
4	Location of non-native Ivy spp.
5	Location of Snowberry

## 7 Management plan features

Based on the assessment above, the following ecological features have been selected as the focus of this management plan.

- Feature 1 – Woodland
- Feature 2 – Grassland (lowland dry acid grassland, other neutral and modified grassland)
- Feature 3 – Eutrophic standing waters (ponds) (supporting Great Crested Newt)

### 7.1 Feature 1 – Lowland mixed deciduous woodland

#### Assessment of significance

Burgh Heath is currently predominantly covered by broad-leaved semi-natural woodland. This is secondary woodland of relatively recent origin. Historical aerial photography accessed via Google Earth show that in 1945 all of the northern half of the site was open although it was wooded towards the south. By 2004, the site is predominantly woodland as is present today although aerial photography suggests that at this time it was quite open woodland.

Lowland mixed deciduous woodland is a Habitat of Principal Importance (HPI) under Section 41 of the NERC Act 2006. The woodland is likely to support a range of species including invertebrates such as butterflies in the glades and more open areas and potentially Stag Beetles. Amphibians including Great Crested Newt are likely to be supported by the woodland during their terrestrial phase. The glades and woodland edges could support reptile species. In addition, the woodland will support a range of breeding birds, and mammals such as bats and potentially Badger and Hazel Dormouse (See section 6.11 for more details).

The site has been assessed as being of county importance for its mosaic of habitats including woodland and for supporting Great Crested Newt (Surrey Wildlife Trust Ecology Services , 2008).

#### Objective

Retain the current area and increase the biodiversity value of the woodland on the site.



## Threats to habitat and associated species

Left unmanaged, woodland tends to deteriorate in terms of biodiversity value. This is generally due to a loss of open space due to a closure of the tree canopy. This can lead to a loss of ground flora and associated species such as butterflies as well as a lack of tree regeneration.

Other threats to woodland include the spread of invasive non-native plant species such as Japanese Knotweed, Cherry Laurel, Rhododendron, Snowberry and Variegated Yellow Archangel which have all been recorded within the woodland on this site.

Cherry Laurel is a particular problem within this site and can severely reduce the biodiversity of woodlands. If left unmanaged Cherry Laurel can easily spread and will subsequently become even more difficult to eradicate. Its tendency to form dense stands prevents natural regeneration of the canopy, understorey and field layer severely degrading the biodiversity value of the site.

Dumping of waste vegetation within woodland areas can cause nutrient enrichment and the spread of invasive non-native and garden species.

Over-zealous removal of standing and fallen deadwood can remove the habitat for a number of protected and notable species that rely on this habitat.

Grazing animals such as deer and invasive non-native Grey Squirrel can cause significant browsing damage to trees. Numbers of Grey Squirrel in England have been increasing in recent years and are predicted to continue rising (Matthews, 2018). Numbers of deer such as Roe Deer and Muntjac have increased in recent years and Muntjac is predicted to continue rising although Roe Deer are now considered to be stable (Matthews, 2018).

Tree diseases such as ash dieback will cause the loss of some trees over the coming years and is already present across the site.

The effects of climate change over the next decade are likely to have significant impacts on the woodland habitat. The greatest threat to woodlands from climate change is likely to be an increase in the frequency and severity of summer drought. This could lead to an increase in stressed trees which are more susceptible to insect pests and diseases (Natural England and RSPB, 2019). In addition the majority of insect pests that currently affect UK woodlands are likely to benefit from climate change as a result of increased activity and reduced winter mortality (Broadmeadow, 2005). In addition the risk of wind-throw may increase if the UK experiences more storms (Natural England and RSPB, 2019).

## Management measures and rationale

### Previous management

The Banstead Commons Conservators manage a large amount of land covering over 500ha split over four sites. Two of the sites are all or partly covered by SSSI designation. Two of the sites, including Burgh Heath are not SSSIs but are selected as SNClS in the Reigate and Banstead Borough Council Local Plan. Banstead Commons Conservators must use its limited resources to manage all four sites and inevitably priority is given to the sites with the SSSI designation. Therefore woodland management on this site in the past has mainly been limited to maintaining footpaths and tree safety issues. The main glades within the woodland are cut on an annual basis, see the grassland feature section for more information.

### **Future management**

The woodland on site is currently in varying condition. The results of the condition assessment of the woodland compartments on site is shown in Figure 3 with the detail given in Appendix 5. Priority will be given to enhancing the condition of the woodland blocks currently assessed as in poor condition (to moderate condition) before proceeding to enhancing those currently assessed as being in moderate condition (to good condition).

In general focus will be given to;

- Removal of invasive species – particularly Cherry Laurel
- Maintaining and increasing the open space within the woodland
- Further developing edge habitats (ecotones) at boundaries of woodland with other habitats
- Thinning to reduce dominance of certain species (e.g. Holly, Sycamore, Birch) in areas where they are dense
- Creating opportunities to allow mature trees to develop into veteran trees
- Increasing the deadwood habitat (both standing and on the ground)
- Creation of species enhancements such as hibernacula, Stag Beetle loggeries and bat boxes

A buffer zone of unmanaged woodland will be retained around the perimeter of the site to maintain a visual buffer from surrounding roads and development. This is particularly important on the eastern side of site to buffer the busy A217 and A240 roads.

Some areas of woodland will be left as non-intervention areas to provide a refuge for species that prefer undisturbed habitats such as some species of bat.

Tree safety will be ensured by following the BCC Tree Inspection Policy (Banstead Commons Conservators, 2023a) and Methodology (Banstead Commons Conservators, 2023b).

Further detail on the above areas of focus is given below with details including area of work and timing given in table 9.

### **Removal of non-native invasive species**

Although the removal of invasive non-native species as described below will be time consuming and costly, this management is essential in order to prevent the further deterioration of the woodland on the site. This is the most important priority in order to maintain and enhance the biodiversity of the woodland on the site and therefore if resources are limited to carry out all the recommendations in this plan, this should take precedence.

#### **Cherry Laurel**

Cherry Laurel is widespread throughout the woodland on the site and is becoming dominant in some areas. If left unmanaged this species will spread further and become even more difficult to eradicate. The species forms dense stands which prevents natural regeneration of the vegetation beneath and around it severely degrading the biodiversity value of the site. Therefore prioritising the removal of Cherry Laurel has the potential for significant biodiversity gains on the site.

Removing Cherry Laurel will open some areas up, especially closer to existing corridors and glades, and in time will encourage a more diverse shrub and field layer. It may take a few

years to remove this species as it will often sprout back up even if spot treated with herbicide. Mechanical removal by manually cutting and pulling the stump from the ground using a heavy duty hand operated winch is another option to consider. This technique can be effective at removing the root systems of these plants from the soil in a shorter timeframe although this may be more labour intensive. The cut material should be chipped and used on paths, burnt or removed from site to prevent its regrowth.

Cutting and then the use of herbicide (glyphosate) can be harmful to wildlife, therefore where possible it is recommended that environmentally friendly eco-plugs are utilised to prevent regrowth, or direct stump treatment where this is not possible. Drilling into the stump to create a hole and then inserting the glyphosate or a glyphosate containing 'eco plug' (see [Weed Killer For Woody Plants | Weed Control | ProGreen](#)) is an effective way to kill off the plant while reducing the potential contamination of surrounding habitat.

There is also a small amount of Rhododendron in compartment 1.8 along the eastern boundary with the houses. If allowed to spread this can have a similar effect to Cherry Laurel in terms of reducing the biodiversity value of the woodland. Therefore this will also be removed as a priority.

### **Japanese Knotweed**

Japanese Knotweed is present on the site within compartment 1.8 (see TN3 on Figure 1). This species is listed on Schedule 9 of the Wildlife and Countryside Act 1981. A small amount of re-growth was observed during the habitat survey. A management plan is already in place for the control of this species on the site (Japanese Knotweed Specialists, 2022) and this will be followed until the species is confirmed eliminated from the site. This recommends a herbicide treatment plan via spraying and/or stem injection. Treatment and monitoring will be carried out twice a year (June-Nov) in years 1-3 with an annual monitoring visit carried out in years 4 and 5 if required. Two monitoring growing seasons that show no evidence of Japanese Knotweed growth are required before monitoring can stop.

### **Variegated Yellow Archangel**

Several patches of Variegated Yellow Archangel were observed during the habitat survey (see TN1 on Figure 1). More locations are likely to be present. This species is listed on Schedule 9 of the Wildlife and Countryside Act 1981. It is extremely invasive and can quickly out-compete native woodland species. This species will be removed as a priority. Its presence is currently relatively localised, but if left, it could spread throughout the woodland.

It is difficult to completely eradicate this plant by mechanical methods alone. This is because any root or stem fragments left in the soil will quickly form new plants and the stems often break during manual removal. If manually removing, the plants should be pulled up by the roots followed by sifting through the soil for any remaining root or stem fragments. Autumn to early spring is the easiest time to do this when the soil is moist. Manual control combined with herbicide treatments is likely to be required to remove the plant from the site. Areas should be reassessed regularly to monitor for new plants.

### **Non-native Ivy Cultivar**

A non-native Ivy cultivar is present in the southern section of woodland compartment 1.5 (see TN4 on Figure 1). This has larger leaves and appears to be more invasive than the native variety and will outcompete other flora and potentially damage trees. Therefore this species

will be removed. Ivy species are not easily controlled with herbicide due to the waxy cuticle on their leaves, however they are relatively easy to pull out without leaving fragments behind due to their sturdy stems and roots. The roots are also relatively shallow. The plant will be pulled up by hand when the ground is wet. Vines growing up trees will be cut at ground level.

### **Snowberry**

Snowberry is also present on the site. This was observed in woodland compartment 1.2 (see TN5 on Figure 1). Although not listed on Schedule 9 of the Wildlife and Countryside Act 1981, this species is known to be invasive and has been recognised by Plantlife as potentially a risk to our native wildlife (Plantlife, 2010). It will be removed before it spreads further into the site.

### **Bracken**

Bracken is present across the site in both the woodland and grassland. Whilst it is a native species, in some of the woodland glades it has become somewhat invasive. There are several ways of managing this through cutting, spraying and rolling for example. Whilst the aim is not eradication, it should be controlled to allow other grassland species to thrive.

### **Oak Processionary Moth (OPM)**

The management and guidance as set out by the Forestry Commission for the management of OPM on Banstead Commons will be accorded with as well as reporting all new sightings of OPM via Tree Alert.

## **Maintaining and increasing the open space within the woodland**

As discussed above, a lack of open space can lead to a loss of ground flora and associated species such as butterflies as well as a lack of tree regeneration. Therefore existing open space within the woodland will be maintained and opportunities to increase the amount of open space will be sought.

Existing open areas and glades as shown on Figure 4 will be maintained by annual cutting. Where resources allow, glades with greater than 20% Bracken cover will be cut twice a year in order to try and control the abundance of this species.

In addition, work will be undertaken to open up the woodland 3m either side of a number of existing footpaths as shown on Figure 4. Young trees such as Sycamore and Birch and shrubs such as Cherry Laurel and Holly will be cleared and any Hazel coppiced. Where relevant Bracken will be cut back annually.

The clearance of Cherry Laurel as described above will also help to open the woodland up further.

In addition some Ash trees will inevitably need to be felled as Ash dieback takes hold and this will have the effect of further opening up the woodland.

## **Encouraging edge habitat**

The interface or ecotone between the woodland edge and surrounding natural habitat such as grassland is particularly important. This graduated transition from woodland to open area provides a sheltered microclimate for invertebrates, reptiles, birds and small mammals. Retaining this as a scrub edge and enhancing this as part of the on-going management of the site will help to provide an important habitat.



The best way to achieve this will be to allow a scrub border (3-5m) to develop where woodland meets the grassland habitat. On the edge of the scrub, a buffer zone of long uncut grass (at least 1m wide) should be maintained. In order to maintain this, the grassland strip and scrub will need to be cut every three years rotationally in sections so that only part of the strip is cut in any one year.

### Thinning

Thinning to reduce the dominance of certain species (e.g. Holly, Sycamore, Birch) in areas where they are dense will help to open up the woodland, let more light reach the woodland floor and will boost the health of the remaining trees.

When removing trees to achieve this, priority should be given to removing ash (showing signs of Ash dieback) or Sycamore. Mature trees will be avoided. It is important to note that before removing any trees an assessment should be made regarding the wildlife value of the target tree as some of these may support features which are suitable for roosting bats and birds.

### Encouraging future veteran trees

There are good numbers of mature trees on the site particularly along the boundaries and in woodland compartment 1.3. Management will encourage the development of veteran trees. In order to do this, clearings will be created around a number of selected mature trees to give space for greater growth.

### Deadwood

Decaying standing woodland and lying dead wood are vital for the health and longevity of woodland habitat and for many species including nesting birds, roosting bats and many invertebrate and fungi species. This valuable deadwood habitat comes in many forms from dead twigs to large decaying trunks. Some of the woody material left over from habitat management tasks can provide valuable decaying wood habitat and be placed along the edges of rides and glades as refuge and provide a food source and basking opportunities for many species, especially on south facing edges.

When undertaking thinning operations described above, some trees could be ring barked, pollarded or stripped of branches and crown to create standing deadwood.

### Species enhancements

Stag Beetles have undergone declines across Europe, primarily due to the loss of dead wood habitat which is required for their larvae. In the UK it is now Nationally Notable (Nb), protected under Schedule 5 of the Wildlife and Countryside Act 1981 (for sale only) and a Species of Principal Importance (SPI). The south east of England is a stronghold for this species and in order to encourage them on this site, a couple of Stag Beetle loggeries will be created in partial shade on the woodland edge adjacent to a glade/grassland. These consist of a number of logs partially buried upright in the soil. The buried deadwood could provide habitat for the Stag Beetle larvae. Details on how to create a Stag Beetle loggery is given in Appendix 8.

A lack of suitable roosting sites can be a limiting factor for the presence of certain bat species on a site and can limit the increase in numbers of others. Two groups of three bat boxes will be installed. Within each group, the boxes will be located on one or nearby trees but facing different aspects. This is recommended by the Bat Conservation Trust (BCT) to provide a

number of different options of temperature that the bats can move between based on their needs. At least one of the boxes in each group will have a south easterly to south westerly aspect. Most bat species will use higher positioned boxes (approximately 4 m high). This will help protect the bats from vandalism and potential predators (Bat Conservation Trust, 2018). It is important to locate access points where they are unobstructed by vegetation (see Appendix 9 for further information on installing bat boxes). It is recommended that 6 crevice type boxes such as the Schwegler 1FF, or Beaumaris Woodstone Midi or equivalent are erected within the woodland compartments.

Once installed the bat boxes should only be disturbed by an ecologist with a bat licence. It may be that a partnership could be developed with the Surrey Bat Group who may be able to monitor the bat boxes.

### Protected Species

Good practice guidance specifically developed to protect wildlife and habitats to legally undertake work in woodland and forests indicates that works must be planned carefully and necessary checks undertaken (Forestry Commission and Natural England, 2020). This must be implemented to ensure works comply with guidance and avoid the need for a mitigation licence for bats, Great Crested Newt and/or Hazel Dormouse. See section 8.2 for measures to be taken to reduce impacts on protected species while undertaking this work.

Table 9 presents a summary of the management measures for lowland mixed deciduous woodland and a full work programme for the site is given in Table 2.

**Table 9: Feature 1 – lowland mixed deciduous woodland - management measures**

Map reference	Action	Timing
General woodland areas	Regular tree safety surveys Fell/make safe Ash with signs of Ash dieback as necessary for health and safety reasons	As required (Sept-Feb)
	Retain standing wood where safe to do so	Ongoing
	Create dead wood piles (with wood created from management work)	Ongoing
	Create 2 Stag Beetle loggeries in partial shade on the woodland edge adjacent to a glade/grassland	2024
	Install bat boxes	2025
	Maintenance check of all bat boxes.	Annually (Oct-Nov)
	Remain vigilant for dumped vegetation from neighbouring houses and remove immediately if found	Ongoing
1.8	Continue Japanese Knotweed treatment programme	2023-2027 (June-Nov) Ongoing as required
	Remove Cherry Laurel and Rhododendron	2024



Map reference	Action	Timing
		(Sept-Feb)
	Remove Variegated Yellow Archangel (TN1)	2024 – ongoing as required (Oct-Mar)
	Maintain existing glades as shown on Figure 4 by annual cutting	Annually (July- Sept)
	Create and maintain ecotone between woodland and glades. Allow scrub and long grassland border to develop – then cut every 3 years (rotationally)	1/3 of ecotone each year (Sept-Feb)
	Open up footpaths as shown on Figure 4	2024 (Sept-Feb)
	Thin Birch in west if required	2032 (Sept-Feb)
1.4	Remove Variegated Yellow Archangel (TN1)	2024 – ongoing as required (Oct-Mar)
	Remove Cherry Laurel	2025 (Sept-Feb)
	Open up footpath as shown on Figure 4	
	Reduce Holly where dominating	
	Thin young Sycamore and Birch where dense	2032 (Sept-Feb)
1.7	Remove Cherry Laurel	2026 (Sept-Feb)
	Reduce Holly where dominating	
1.1	Remove Cherry Laurel and snowberry	2027 (Sept-Feb)
	Open up footpaths as shown on Figure 4	
	Reduce Holly and Sycamore where dominating	
1.2	Remove Variegated Yellow Archangel (TN1)	2024 – ongoing as required (Oct-Mar)
	Remove Cherry Laurel and snowberry	2028 (Sept-Feb)
	Maintain open space as well as existing glades shown on Figure 4 by annual cutting	Annually (July- Sept)
	Create and maintain ecotone between woodland and glades. Allow scrub and long grassland border to develop – then cut every 3 years (rotationally)	1/3 of ecotone each year (Sept-Feb)

Map reference	Action	Timing
	Reduce Holly and Sycamore where dominating	2028 (Sept-Feb)
1.5	Remove non-native Ivy	2024 (Sept-Feb)
	Remove Cherry Laurel	2029 (Sept-Feb)
	Thin Holly in south	
	Thin young Sycamore	
1.6	Remove Cherry Laurel	2030 (Sept-Feb)
	Thin young Sycamore	
1.3	Remove Cherry Laurel	
	Maintain open space as well as existing glades shown on Fig 4 by annual cutting	Annually (July- Sept)
	Open up footpaths as shown on Figure 4	2031 (Sept-Feb)
	Reduce Holly where dominating	2031 (Sept-Feb)
	Create clearings around a number of selected mature trees to help develop veterans	2031 (Sept-Feb)
	Create and maintain ecotone between woodland and glades. Allow scrub and long grassland border to develop – then cut every 3 years (rotationally)	1/3 of ecotone each year (Sept-Feb)

## Targets and KPIs

The targets and KPIs are detailed in Table 10.

**Table 10: Feature 1 - lowland mixed deciduous woodland - targets and KPIs**

Target type	Target number	Target	KPI
BNG	1	All woodland compartments to be in moderate or good condition by 2033	Condition of woodland compartments
BNG	2	Non-native invasive species such as Cherry Laurel and Variegated Yellow Archangel to be no more than rare on site by 2033	Extent of non-native invasive species
General enhancement	3	At least 6 bat boxes on trees throughout site by 2033	Number of bat boxes
General enhancement	4	At least 2 Stag Beetle loggeries on site by 2033	Number of Stag Beetle loggeries



## **7.2 Feature 2 – Grassland**

### **Assessment of significance**

#### **Lowland dry acid grassland**

An area which has been classified as lowland dry acid grassland is present to the south of Reigate Road (2.1 on Figure 1). This is locally known as The Green. As described in Table 6 a number of indicator plants of acid conditions have been recorded within this grassland. Lowland dry acid grassland is an uncommon and declining habitat and is recognised as a HPI under Section 41 of the NERC Act 2006. The lowland dry acid grassland habitat is an important part of the mosaic of habitats which make up the site at Burgh Heath which has been recognised as being of county importance.

#### **Other grassland**

The other areas of grassland on the site mainly form part of glades within the woodland. Whilst the habitat in itself is not a HPI, these open areas form an important part of the woodland habitat.

The grassland is likely to shelter and foraging habitat for a range of species including invertebrates, reptiles, amphibians, bats, birds, badger and small mammals including hedgehog. The edges between the woodland and grassland habitats will be particularly valuable.

### **Objective**

Retain the current area and increase the biodiversity value of the grassland on the site.

### **Threats to habitat and associated species**

Grassland requires active management in order to retain its conservation interest. Without management, tall vigorous grasses will dominate and dead plant matter will accumulate. This will suppress the less vigorous species and the botanical diversity of the grassland will decrease. Eventually without management natural succession will cause grassland to become scrub and finally young woodland.

If the grassland is managed by cutting without removing the arisings, the nutrients in the soil are put back into the soil and a thatch of dead plant material will accumulate. This also can lead to tall vigorous grasses dominating and little opportunities for new plants to germinate.

Invasive non-native species such as Japanese Knotweed can cause problems in grassland habitats as can invasive native species such as thistles, docks, Common Nettle, Field Bindweed and Bracken.

The hotter, drier summers and wetter winters with more extreme events predicted as a result of climate change is likely to alter the composition of grassland habitats. For example drier conditions will favour stress tolerant (e.g. deep-rooted) and ruderal species due to the increased gaps/bare ground in swards (Natural England and RSPB, 2020). The longer growing season may mean that more than one cut a year will be required to suppress the grasses (Plantlife, 2019).

## Management measures and rationale

### Previous management

The area of lowland dry acid grassland (2.1) and the area of modified grassland east of Burgh Heath Green Pond (4.1) have historically been mown regularly during the growing season at least three times per year with the cuttings left in situ.

The areas of other neutral grassland (3.1-3.4) within the woodland have been topped annually with the cuttings left in situ.

### Future management

#### *Lowland dry acid grassland (2.1) and Modified grassland (4.1)*

In order to maximise the biodiversity potential of these areas of grassland, it is suggested that they will be mown no more than three times a year in March/April, August and October. Importantly, following each cut, if possible the cuttings will be left in situ for 2-3 days to allow the seeds to drop and then removed. The margins (approximately 2m) of the area adjacent to woodland, scrub and scattered trees will be left long and only mown once per year in August. An additional 10% of the grassland will be left uncut each year as a refuge for invertebrates. These areas will be rotated each year so that they do not become scrubbed up. The cuttings should be composted or removed from site.

It is recognised that managing the grassland in this way will be more resource intensive than the current regime where cuttings are left in situ. If the cut and collect management regime can only be applied to one area of grassland on the site then the lowland dry acid grassland should be the priority.

In order to maintain the areas for amenity use, and make the cutting regime look intentional, a 2m margin adjacent to the Reigate Road and a number of paths through the areas will be cut more frequently.

#### *Other neutral grassland (woodland glades) (3.1-3.5)*

These areas of grassland which are essentially woodland glades can be managed via annual cutting as described under the woodland section above. Where resources allow, glades with greater than 20% Bracken cover will be cut twice a year in order to try and control the abundance of this species.

If resources allow, removing the cuttings from these areas following the cut would help to increase the diversity and habitat condition.

Management of the grassland glades will encourage the establishment of edge habitat (see paragraphs 7.2.33 and 7.2.34 above)

Table 11 presents a summary of the management measures.

**Table 11: Feature 2 – grassland - management measures**

Map reference	Action	Timing
2.1	Mow 3x/yr, if possible leave cuttings for 2-3 days then remove	March/April August October
	Mow margins and area border around trees 1x/yr	August
	10% unmown each year - rotated	N/A
	Regularly mow, 2m margin along Reigate Road and paths	Monthly during growing season (Apr-Nov)
4.1	Mow approximately 3x/yr as required	March/April August October
	Mow paths regularly through growing season	Monthly during growing season (Apr-Nov)
	Mow margins and area around trees 1x/yr	August
	An additional 10% unmown each year - rotated	N/A
3.1	Cut annually. If Bracken cover >20% cut twice a year Remove cuttings if resources allow. Leave an additional 10% uncut each year - rotated.	Annually Aug-Sept
3.2	Cut annually. If Bracken cover >20% cut twice a year Remove cuttings if resources allow. Leave an additional 10% uncut each year - rotated.	Annually Aug-Sept
3.3	Cut annually. If Bracken cover >20% cut twice a year Remove cuttings if resources allow. Leave an additional 10% uncut each year - rotated.	Annually Aug-Sept
3.4	Cut annually. If Bracken cover >20% cut twice a year Remove cuttings if resources allow.	Annually Aug-Sept



Map reference	Action	Timing
	Leave an additional 10% uncut each year - rotated.	
3.5	Cut annually. If Bracken cover >20% cut twice a year Remove cuttings if resources allow. Leave an additional 10% uncut each year - rotated.	Annually Aug-Sept

### Targets and KPIs

The targets and KPIs are detailed in Table 12

**Table 12: Feature 2 – grassland - targets and KPIs**

Target type	Target number	Target	KPI
BNG	5	All grassland compartments to be in moderate or good condition by 2033	Condition of grassland compartments

## 7.3 Feature 3 – Ponds

### Assessment of significance

The site supports four ponds. The ponds are particularly important for amphibians with Great Crested Newt, Palmate Newt, Smooth Newt, Common Frog and Common Toad all having been recorded. Great Crested Newt and Common Toad are SPIs. The ponds are HPIs.

The site has been assessed as being of county importance for its mosaic of habitats and for supporting Great Crested Newt (Surrey Wildlife Trust Ecology Services, 2008). In 2013 the site was considered to be between district and borough value for Great Crested Newt (Land Management Services, 2013).

The ponds will also support a range of other species including invertebrates such as dragonflies and damselflies, potentially reptiles such as Grass Snakes and birds such as Moorhen.

### Objective

Increase the number of ponds on the site and increase their biodiversity value.

### Threats to habitat and associated species

Non-native invasive species such as New Zealand Pigmy-weed and Parrot's-feather can be a particular problem in ponds where they can quickly spread and outcompete native species. Native species such as blanket weed can also be a problem if allowed to become too dominant.

Excess shading by surrounding trees and shrubs will reduce the diversity of emergent and bankside plants. Falling leaves can also cause the pond to silt up. Eventually if left

unmanaged, succession will cause invasion first by emergent vegetation as the pond becomes shallower and then by scrub and trees and in time loss of the pond altogether.

Excessive nutrients within the pond can cause a decline in water quality and species such as blanket weed and duckweed to become over dominant. Nutrient enrichment could be caused by natural processes such as leaf fall or man-made factors such as run-off from roads or people feeding ducks.

The presence of large fish within ponds limits the wildlife that can survive. These fish will predate on pond wildlife, particularly tadpoles, larvae, and invertebrates.

Dogs entering ponds can cause disturbance to species using the ponds as well as damage emergent vegetation and erode banks. Chemicals from flea and worm treatments can also pollute the pond and threaten species.

Climate change may lead to more frequent periods of drought. This could have a number of effects through the lowering of the water level including a reduction in water for species to drink from as well as habitat for aquatic species such as dragonflies and damselflies and the larvae of pollinators (such as hoverflies and craneflies). There could also be a reduction in water quality through a decrease in dissolved oxygen in the water column and stagnation of the water.

## Management measures and rationale

### Previous management

In the recent past the following work has taken place on the ponds;

- Lonesome pond south (5.1) – trees along the south eastern bank were coppiced in January 2022
- Lonesome pond north (5.2) – part of the pond was dredged in 2021 to open the pond up and some tree clearance was undertaken along the eastern edge
- Burgh Heath Green pond (5.4) – electrofishing has taken place (2009 & 2015) in an effort to remove fish from the pond (fish have since been re-introduced to this pond by local residents).

### Future management

It is important that the ponds on site are in good health in order to maintain the metapopulation of Great Crested Newt as well as to support a range of other species. The Great Crested Newt population, when assessed in 2020 was thought to be declining (Morgan, 2020).

Priorities for management will include removing further bankside and overhanging trees and shrubs to allow more light into the ponds particularly on the southern side of the ponds. This will also reduce the rate of silting up due to leaf fall. Further de-silting some of the ponds would also be beneficial. Creating a new pond on the site could also bring significant biodiversity gains and boost the metapopulation of Great Crested Newts. Further details on these options are given for the individual ponds below;

Due to the presence of the Great Crested Newt, a European protected species, it is important for work on the ponds, particularly any dredging to be carried out under the supervision of an experienced herpetologist and to use a contractor experienced with the excavation and desilting of wildlife ponds. Pond excavation should avoid the Great Crested Newt breeding

season. Generally the best time to clear out an overgrown pond is in the autumn from around mid-September to October. At this time of year activities such as mating and breeding will have stopped and the species will not yet be hibernating. If undertaking in the winter, it will be important to avoid disturbing good hibernation areas and to carefully clear back vegetation in any working areas, along access paths, and locations where silt/vegetation removed from ponds is going to be placed. Note that newts start returning to ponds again from February.

Ideally work to a pond should be staggered over a number of years, so that only up to a third, is disturbed per year. This will minimise disturbance to pond life such as Great Crested Newts.

It may be beneficial to consider signage or fencing to prevent dogs entering the ponds, particularly if access becomes easier due to tree/shrub clearance. Alternatively, brash created during management work could be used to block entrance points.

Amphibians such as Great Crested Newts are usually only present within the ponds themselves during the breeding season. At other times of year, terrestrial habitat is important and in the winter they need somewhere to hibernate. These places are natural hibernacula such as grass tussocks, small mammal burrows and root systems which will be present on the site, however they are often a limiting factor on sites. Therefore, creating some artificial hibernacula will add to the habitat available and provide refuge areas for amphibians on the site particularly during the winter for hibernation. Instructions on building a hibernaculum is shown in Appendix 10. They can be constructed from logs and brash, or bricks and stone, and are topped with soil to prevent frost. The hibernacula will also be used by other species such as reptiles, invertebrates and small mammals.

#### ***Lonesome pond south (5.1)***

The trees coppiced along the south eastern bank in 2022 will need re-coppicing on a regular basis (every 3-5 years or so) in order to keep this side of the pond open. In addition any tree falls such as that currently along the western boundary would ideally be removed. Consider dredging this pond to improve water quality. This management could help improve the condition of this pond from poor to moderate.

#### ***Lonesome pond north (5.2)***

Further cut back overhanging trees and shrubs surrounding this pond particularly on the southern side. Remove the ash tree which has partially fallen into the pond. Further dredging of this pond would be beneficial as it is still very shallow and this may help improve the water quality. This management could help improve the condition of this pond from poor to moderate.

#### ***Sheepwash pond (5.3)***

This pond is extremely shaded. The BNG condition assessment (see Appendix 5) describes it in 'good condition', but this is because it is being assessed as a woodland pond and the BNG assessment for such ponds do not take into account shading. From the point of view of supporting Great Crested Newts, this pond supported the species in 2013 (Land Management Services, 2013) but an eDNA survey in 2020 did not pick them up (Morgan, 2020).

Dredging is not a priority for this pond currently as the water quality seems quite good and the pond seems relatively deep. The priority for this pond will be to clear some of the surrounding



vegetation. Shrubs such as Cherry Laurel and Holly can be cleared and trees such as willows coppiced or pollarded.

#### ***Burgh Heath Green pond (5.4)***

A number of factors reduce the value of this pond for wildlife. The presence of high numbers of waterfowl and fish reduces its suitability for Great Crested Newt which have not been recorded here. The public feeding the ducks and geese has caused some wear to the banks and could be causing nutrient enrichment. In addition dogs frequently enter the pond disturbing sediment and suppressing plant growth. Although Pillwort, which is a SPI, Nationally Threatened on the GB Red List and rare in Surrey, has been recorded in the margins of this pond in the past (last record 1998) there are no recent records of this species and it was not seen during the recent survey.

Fish, thought to be Carp are present in this pond. Attempts to remove the fish by electrofishing has been done in the past (2009 and 2015) and unfortunately it is thought that a member of the public re-introduced carp to the pond in 2022. A non-native Terrapin and Signal Crayfish have also been observed in the pond.

Due to the factors above, and the fact that Great Crested Newt have not been recorded in this pond, this is the lowest priority on the site in terms of wildlife. This pond is however highly valued for its amenity value. Further attempts to remove fish by electrofishing would benefit biodiversity but may not be cost effective if they are subsequently re-introduced. Consideration should be given to removing the terrapin which will be preying on our native wildlife and the Signal Crayfish which are both listed on Schedule 9 of the Wildlife and Countryside Act 1981. Additional signage could be added to discourage people from feeding bread to the ducks and this may help to improve the water quality.

#### ***Additional pond***

An additional pond on the site would be of benefit to the meta-population of Great Crested Newts on the site as well as for a range of other wildlife. This would reduce the risk to the population caused by the potential of the public to introduce fish such as Sticklebacks to one of the ponds.

It is suggested that a new pond be created somewhere within woodland compartment 1.2 part way between pond 5.3 and the two lonesome ponds and away from footpaths. In order to facilitate this, an area should be located which is already relatively open, however some tree felling may be required in order to allow a large enough area to create a pond that is at least partially unshaded.

It is recommended that a contractor with experience in creating wildlife ponds be used for this. It may need extra puddling or a liner for it to hold water. The design should consider the following;

- Not too much shading by trees particularly on southern bankside
- Lots of shallows (most pond animals are found here) – 40-50cm deep
- Gradual edges so plants can grow – water plants will flourish in shallow water shelves about 1-15cm deep. Wavy-edges to maximise the marginal habitat
- Some deeper water is important to maintain a stable water temperature and help prevent a rapid build up of algae

- There will be no need to plant species within the pond as it will vegetate naturally. If planting does take place, only native species should be used.

**Table 13: Feature 3 – ponds - management measures**

Map reference	Action	Timing
5.1 Southern Lonesome pond	Remove fallen trees	2024
	Re-coppice trees on southern bank every 3-5 years	2026, 2030 (Sept-Feb)
	Consider dredging	2027
5.2 Northern Lonesome pond	Remove fallen trees	2024
	Cut back overhanging trees and shrubs	2025
	Dredge a further area	2025
5.3 Sheepwash pond	Clear surrounding shrubs, cut back overhanging trees and coppice or pollard willows	2025
5.4 Burgh Heath Green pond	Add signage to discourage feeding of bread to ducks	2024
	Investigate methods for removing Terrapin and Signal Crayfish	2024
	Consider electrofishing to remove fish	2024
1.2 (see potential location on Figure 4)	Create new pond	2026
General	Ensure there is at least 1 hibernaculum and 2 log piles within 250m of each pond but away from paths	Ongoing

## Targets and KPIs

The targets and KPIs are detailed in Table 14

**Table 14: Feature 3 – ponds - targets and KPIs**

Target type	Target number	Target	KPI
General	6	At least 5 ponds on the site by 2033	Number of ponds
BNG	7	All ponds to be in moderate or good condition by 2033	Condition of ponds
General	8	At least 1 hibernaculum and 2 log piles associated with each pond by 2033	Number of hibernacula and log piles

## 8 Other focus points considered within this plan

In addition to the habitat features above, the following aspects are also important focus points of this management plan;

- Focus point A – Public access and engagement
- Focus point B – Legal and other obligations
- Focus point C – Survey, monitor and review

### 8.1 Focus point A – Public access and engagement

#### Objective

To maintain the public access across the site for enjoyment, recreation and education.

#### Management measures and rationale

The site is surrounded by housing and criss-crossed by numerous pathways including a number of public rights of way which are well used by the public (see Figure 2). The woodland to the east of the road is less well used by the public although horse riders do use the bridleway.

Public rights of way will be regularly monitored and kept free of obstructions and encroaching vegetation. Regularly mown paths will be maintained through grassland areas 2.1 and 4.1. In addition, regular litter picking and the removal of fly-tipping will be undertaken.

Signage and interpretation on the site is currently limited to two notice boards, one located near to the southern lonesome pond and one located near to the entrance to the site near Asda. Past efforts to increase signage on the site has unfortunately suffered vandalism and therefore there are no plans to increase this.

The Banstead Commons Conservators have recently obtained funding to set up a volunteer group for the commons. It is hoped that this will help to engage the local community with the site. The volunteers could be used for tasks such as cutting back the Cherry Laurel, although trained Banstead Commons Conservator staff would need to treat this with pesticide following the cutting to prevent re-growth.



Quarterly Meetings are a statutory requirement and are open to the public. In addition, the Conservators facilitate a consultative group made up of user groups and biological recorders and liaison meetings with our primary funders Reigate and Banstead Borough Council both of which are held quarterly.

A programme of public engagement opportunities are held each year and include guided walks, family bioblitz days and presentations to local groups and societies.

**Table 15: Focus point A – public access and engagement - management measures**

Compartment reference	Action	Timing
Whole site	Visual inspection of all paths with maintenance where required	Every 3 months
2.1 & 4.1	Regularly mow paths through grassland	Monthly during growing season (Apr-Nov)
Whole site	Removal of litter and fly tipping	Every 3 months with fly tipping removed as soon as possible
Whole site	Visual inspection of furniture including notice boards, with maintenance where required	Once a year
Whole site	Running of volunteer work parties	Throughout the year
Whole site	BCC Quarterly Meetings open to the public	Every 3 months
Whole site	Quarterly meetings for the Banstead Commons Consultative Group	Every 3 months
Whole site	Programme of public engagement including guided walks, family bioblitz days and presentations to local groups and societies.	Throughout year

## 8.2 Focus point B – Legal and other obligations

### Objective

To comply with all legislation and other obligations relevant to the site.

The following legislation is relevant to the site:

- Metropolitan Commons and Metropolitan Commons (Banstead) Supplementary Act 1866 (including Banstead Commons Bye-laws)
- Commons Act 2006
- Health and Safety at Work Act 1974
- Wildlife & Countryside Act 1981(as amended)
- Protection of Badgers Act 1992
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Environment Act (2021)
- Countryside and Right of Way Act 2000
- Natural Environment and Rural Communities Act 2006

- Wild Mammals (Protection) Act 1996
- Forestry Act 1967 (as amended) – Felling Licences

### **Management measures and rationale**

In order to achieve this objective, liaison will take place as required with relevant authorities such as Reigate and Banstead Borough Council, Natural England and Forestry Commission. A risk assessment will be in place for the site. Table 16 presents the management measures, supported by the rationale detailed in the sections below.

An assessment of the likelihood of protected species being present on the site can be found in section 6.10 above and a summary of relevant legislation can be found in Appendix 6. Below is an outline of action that will be taken to prevent committing an offence under the relevant legislation.

#### **Breeding birds**

The broad-leaved woodland, scrub, and grassland habitats have the potential to support nesting birds. Any management of trees, grassland and scrub will be undertaken outside the bird nesting season (which is typically 1st March to 31st August inclusive) unless there is an overriding need e.g. health and safety. Where this is the case, the area should be checked for nesting birds prior to commencing the activity, and delayed if required in order for chicks to successfully fledge.

#### **Great Crested Newt**

As Great Crested Newts are known to be present on the site, caution will need to be taken to ensure that this species is not negatively impacted by habitat management work. Management operations on the site will need to strictly adhere to best practice guidelines in order to avoid the need for a mitigation licence.

Pond management work will need to be carefully planned to minimise the risk of deliberate killing, injuring or disturbing newts. Work should normally be carried out in late autumn through winter (see section 7.3 for more details on timings and methodology for reducing impacts on Great Crested Newts during pond work).

Great Crested Newts will also be using other habitats on the site as terrestrial habitat. The Forestry Commission have published best practice guidance for woodland management where Great Crested Newt are present (Forestry Commission, 2016). Depending on the nature and location of the management, works should avoid the migration periods (February/March), late summer when young are leaving the water, and during the hibernation period (mid-October to February/March). Grassland should be left at a minimum height of 10cm wherever possible. If any compost heaps or log piles need moving, they should be dismantled by hand and any animals discovered placed in a cool, damp, sheltered place. Particular care should be taken in winter, when animals may be hibernating and are vulnerable to injury or death.

The following are good practice operations most likely to affect Great Crested Newt and their habitat (Forestry Commission, 2016).

- Felling– phase any work near a pond used by Great Crested Newts over several years, so that within key areas of habitat only 25% of the area is affected in any one year. The

undisturbed areas will act as reserves of 'refugia' from which newts can colonise any worked areas as they become more suitable.

- Stacking - avoid stacking timber close to a pond used by Great Crested Newts unless such stacks are to be left solely as habitat. If you do have to stack timber in close to such ponds, then avoid key areas of habitat and remove the stacks within a few weeks and certainly before October.
- Extraction – where possible extract material using a forwarder rather than a skidder to reduce the risk of harming Great Crested Newts.
- Site preparation – try to avoid scarification or burning up of brash where Great Crested Newts use the woodland, but if it is necessary, ensure all site preparation is done before the area becomes suitable habitat – ideally within a few months of felling. Suitable habitat can establish very quickly and if brash etc is left in situ, then it could quickly be used by newts, especially if surrounding habitat is of lower value. Do not rake or burn brash, or scarify areas within key areas of habitat near breeding ponds.
- Mowing regimes – modify the ride and glade mowing programme in key areas of habitat to ensure only a small proportion of the grassland habitat is cut in any one year. The undisturbed areas will act as reserves of 'refugia' from which newts can colonise any worked areas as they become more suitable.
- Track construction or other ground-works – avoid undertaking such activities within key areas of habitat.

Should a Great Crested Newt be identified during management works an ecologist should be contacted.

## Reptiles

Common Lizard has been recorded on the site and there is potential for other reptile species to be present. These species are protected under Schedule 5, Section 9 (1 & 5a) of the WCA and are SPIs.

Ideally a reptile survey will be undertaken in order to establish which reptile species are present on the site and their key areas. Before this information is known the following precautions should be taken;

- mowing of areas of long grassland should only take place during the summer months when reptiles are active and can move away from harm.
- a high cut (above 10cm) will be undertaken where possible to avoid injuring reptiles.
- if possible, each block of grassland will be cut in intervals staggered over a few weeks so that there is always sufficient cover available and some longer sections of grassland (cut biennially) will be retained as a refuge following the annual cut.
- care will be taken to avoid cutting any obvious large grass tussocks or ant hills which can be used for refuge and reptile hibernating sites.
- areas of dead wood or vegetation piles will only be moved during the summer months as they may be used by hibernating reptiles in the winter months.

## Badger

A partially used outlier sett and a disused outlier sett have been recorded near to the centre of the site (Thomson Ecology, 2012). Any works using plant or breaking ground within 30m or hand tools within 10m of these setts or any newly identified setts are likely to require a



licence. Should works in these areas be required, an ecologist should be contacted to discuss the best way forward.

### **Bats**

The survey area supports suitable bat habitat including roosting opportunities within the broadleaved woodland and mature trees found in other habitats. Foraging and commuting opportunities for bats also exist over the grassland, scrub and ponds.

As far as possible, all the mature trees on site will be retained, however if any works are planned for mature trees with holes, split limbs or ivy cladding a preliminary ground level roost assessment of trees (PGLRAT)) and/or presence/likely absence survey will be undertaken prior to any work taking place. If felling of a tree supporting a bat roost cannot be avoided, a bat mitigation licence will be required.

The Forestry Commission and Natural England, with assistance from relevant conservation organisations, have produced guidance to help understand the legislation and to use good practice to operate within the law, avoid the need for licensing and benefit European protected species. Following the guidance will show that site managers have taken all reasonable steps to comply with the regulations (Forestry Commission, 2013).

### **Hazel Dormouse**

Although no Hazel Dormouse has been recorded on the site, as there is potential habitat and they could be present at low densities, a precautionary approach to woodland management works should be employed. The good practice guidelines produced by the Forestry Commission should be followed (Forestry Commission, 2019b). In summary this advises that woodland management work should be undertaken between November and the end of February when Hazel Dormouse are hibernating on the ground. Unnecessary disturbance to the ground will need to be avoided to prevent disturbing hibernating animals. Hand tools only should be used to minimise disturbance to the ground. Should a Hazel Dormouse or nest be found during any site works, these will need to cease immediately and an ecologist contacted for advice.

### **Tree safety**

There is a legal duty of care for BCC to take all reasonable steps to identify any possible sources of foreseeable danger and, as far as is reasonably practical, to remove or manage them on land that is under BCC's management.

To enable these priorities to be met sufficiently regarding tree safety on the Commons, the BCC has adopted a Tree Inspection Policy (Banstead Commons Conservators, 2023a) and Methodology (Banstead Commons Conservators, 2023b) which is adhered to when carrying out tree inspections.

### **Tree preservation orders**

It is unknown whether any of the trees on the site are covered by Tree Preservation Orders. The Local Council will be consulted regarding this before work to any trees takes place.

### **Felling licence**

Felling or thinning trees may require a felling licence issued by the Forestry Commission and any tree management should be undertaken in the winter months between November and

February (inclusive). In any calendar quarter you are allowed to fell up to 5m<sup>3</sup> on your property without a felling licence (in fallen timber this would generally look like the amount it would take to fill a small car). You are also allowed to lop off branches without a felling licence and remove trees under around 10cm in diameter at breast height (think bean can width).

For woodland compartments where some thinning is recommended an exception to the 5m<sup>3</sup> per calendar quarter applies to trees that have a diameter over bark of 10cm or less when measured 1.5m from ground level. For existing areas of coppice the exception applies to trees with individual stems that have a diameter over bark of 15cm or less (Forestry Commission, 2020).

However, it should be noted that the BCC is currently in communications with the Forestry Commission regarding an exemption under 'public open space'.

### Protected species licence

If good practice principles are strictly adhered to the requirement for a mitigation licence can be avoided prior to management work. If in doubt, contact an ecologist for advice. See Appendix 11 which gives a checklist for when a licence may be required when carrying out woodland operations.

### Biosecurity

It is important that biosecurity measures are considered to reduce the spread of non-native species and diseases within and between sites. See Appendix 12 for basic biosecurity advice.

**Table 16: Focus point B - Legal and other obligations – management measures**

Compartment reference	Action	Timing
Whole site	Follow precautions in section 8.3 of management plan to prevent committing an offence under protected species legislation	Ongoing
Whole site	Ensure an up-to-date Risk Assessment Method Statement (RAMS) is in place for any work being undertaken	As required, to be updated once every 6 months at minimum.
Whole site	Liaise with relevant organisations such as Reigate & Banstead District Council, Natural England and Forestry Commission	As required
Whole site	Tree safety inspection	Once a year
Whole site	Patrol for site encroachments	Regularly when on site
Whole site	Consult local council regarding tree preservation orders before any tree work takes place	As required

## 8.3 Focus point C – Survey, monitor and review

### Objective

This management plan will be monitored to ensure that the management remains effective and that the objectives and targets are achieved. Adequate survey data for the species and

habitats should be used to inform management activities. The plan should be reviewed in its entirety in 2033.

### **Management measures and rationale**

It is important that adequate survey and monitoring takes place so that sufficient information is available to make the best management decisions. It will also enable the KPIs to be reviewed and progress against targets assessed. This will highlight whether a change to management action is required. A summary of the survey and monitoring work to be carried out is given in Table 17 below.

The habitats on site will be monitored to ensure that targets are being met. As part of this an updated condition assessment of the woodland, grassland and ponds will take place after 5 and 10 years. A check for non-native invasive plant species will be undertaken annually. The number, condition and use of bat boxes will be monitored annually.

Local species groups, such as the Surrey Bat Group, Surrey Reptile and Amphibian group and Surrey Dormouse Group could be approached for assistance around species survey and monitoring.

Progress towards achieving the actions within this management plan will be reviewed annually with a more detailed review of progress towards achieving targets in 2028. The action plan will be amended as necessary to ensure that it remains realistic.

Outside funding opportunities should be explored when required, either formally through a Natural Capital Plan or informally. This could include agri-environment schemes, BNG offsite credits, carbon credit, fundraising or other means.

This management plan is designed to cover the next 10 years. In 2033 the entire management plan will be reviewed and ideally a new plan developed for the next 10 years. It should be noted that BNG targets span 30 years, these will need to be taken over to the new plan as required.



**Table 17: Focus point C - Survey, monitor and review – management measures**

Compartment reference	Action	Timing
Woodland (1.1-1.8)	Condition assessment following Biodiversity Metric 4.0 guidelines of all woodland units	2028 & 2033 (March-Sept)
Woodland (1.1-1.8)	Monitoring for presence of non-native invasive species	Annual (Apr-Sept)
Woodland (1.1-1.8)	Check number and condition of bat boxes. Investigate partnership with Surrey Bat Group to check usage of bat boxes.	Annual
Grassland (2.1, 3.1-3.5, 4.1, 4.2)	Condition assessment following Biodiversity Metric 4.0 guidelines of all grassland units	2028 & 2033 (May-Aug)
Ponds (5.1-5.4)	Condition assessment following Biodiversity Metric 4.0 guidelines of all ponds	2028 & 2033 (Mar-Sept)
All habitats	Investigate opportunity for species surveys for reptiles, amphibians, birds, bats, other mammals and invertebrates.	Ongoing
All habitats	Staff and visitor wildlife recording scheme.	Ongoing
Whole site	Review progress towards achieving actions.	Annually
Whole site	Intermediate review of progress towards meeting targets	2028 & 2033
Whole site	Review management plan and produce plan for the next 10 years.	2033

## 9 Biodiversity net gain assessment

Table 18 details the total biodiversity gains that could be generated as a result of implementing this management plan (further details of how this was calculated can be found in Appendix 2: Methodology and in the BNG Spreadsheet provided as a separate document).

**Table 18: Biodiversity gains**

Headline results		Burgh Heath <sup>2</sup>
Onsite baseline	Habitat units	551.98
Onsite post-intervention	Habitat units	587.91
Total unit change	Habitat units	<b>+35.93</b>
Total % change	Habitat units	<b>+6.51%</b>

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<sup>2</sup>

> 10 % gain	0 – 9% gain	< 0% gain
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