# Reigate Heath LNR

## Management Plan - 2019 to 2029

(Susan Medcalf, 2017)

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Written by: Isobel Girvan BSc MCIEEM, Surrey Wildlife Trust

Edited by: Paul Ritchie BSc CBiol MRSB, Sorbus Learning
David Watts Countryside & Woodland Officer, RBBC

Prepared for: Reigate & Banstead Borough Council

**Surrey Wildlife Trust, School Lane, Pirbright, Woking, Surrey GU24 0JN**

# Preface

## Quality Control

The information and data is true and has been prepared and provided in accordance with the '*Code of Professional Conduct'* issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

| Version | Modifications | Author | Document title | Date |
|---|---|---|---|---|
| 0.1 | 1st draft | Isobel Girvan | Reigate Heath Management Plan Draft 1 | 10/10/2017 |
| 0.2 | 2nd draft | Isobel Girvan | Reigate Heath Management Plan Draft 2 | 22/01/2018 |
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| 0.6 | Reviewed & revised to reflect an integrated planning format after feedback from RHM Steering Group | Paul Ritchie & David Watts | Reigate Heath Management Plan Final (amended) | 20/05/2019 |

The contents of this report were correct at the time of the site visit. The report is provided for the sole use of the named client and is confidential.

# Contents

# Part one: description

## 1.0 Executive summary

This is a land management plan that focuses on how land at Reigate Heath (hereafter called the Heath) owned by Reigate & Banstead Borough Council (RBBC) can be best managed as a Local Nature Reserve (LNR). The Plan complements previous management plans and must be read in the context of referenced documents. The Plan is supported by the Reigate Heath Management Steering Group (RHMSG) who monitor progress and implementation of the Plan and advise RBBC about management of the Heath.

### 1.1 The Importance of Reigate Heath LNR

The Heath has an interesting history and is registered as common land. Commons are important for their cultural heritage, as well as the social, environmental and economic benefits for local communities. Eight Bronze Age barrows listed as Scheduled Monuments hint at a long history of human activity on the Heath. Other finds provide clues to this activity, which has influenced the semi-natural habitats and landscape we see today and the inclusion of the Heath in Surrey Hills Area of Great Landscape Value (AGLV).

The Heath is part of a Site of Special Scientific Interest (SSSI) of which it forms Unit 2 (see Magic Maps page 127). It is an irreplaceable and valuable asset in a local, county and national context due to its mosaic of special habitats and notable wildlife. Lowland heath, acid grasslands, mixed deciduous woodland and wet woodland are Habitats of Principal Importance (HPI). DEFRA contributes to the maintenance of the Heath through a Higher Level Stewardship (HLS) agreement since 2008. The mosaic of rare and common habitats support important plant communities and assemblages of rare animal species.

The Heath lies within a Biodiversity Opportunity Area (BOA) known as Wealden Greensands (WG10: Reigate Heaths), which includes Little Manor Farm SNCI, Priory Park SNCI, Lavender Sandpit SNCI and surrounding countryside. By adopting a BOA approach to the rationale for conserving natural and cultural heritage the Council enables the future management of the Heath to be considered in a county and regional context. This approach will also encourage better links with other landowners and organisations, as well as promote integration with other protected sites, local green infrastructure and the wider countryside.

The mosaic of diverse habitats and cultural features create a unique landscape with stunning views steeped in history and provides a place of beauty and tranquility. The Heath provides wider environmental services in that it functions as a corridor to other landscapes and links green spaces, allowing free movement of people, flora and fauna. The Heath is an important component of the wider BOA and AGLV, contributing to the rural landscape character of the Green Belt lying alongside the A25 between Reigate and Dorking.

The Heath is well used by visitors and provides them with an open landscape, in which to walk and play, relax, stay healthy and enjoy the moment. Surveys show that the Heath is well regarded by its users who state that parks, open spaces and playgrounds and access to nature are important factors, which make Reigate a good place to live. As such the Heath makes an important contribution to the health and well-being of local people and visitors from further afield.

In addition to informal recreational use and open access across the Heath and surrounding countryside the site also provides for more formal forms of sport and exercise. A golf course is located in the centre of the Heath and a football pitch is hired to a youth football club on a seasonal temporary basis. There are public footpaths, a public bridleway and a permissive horse ride around the perimeter of the Heath north of Flanchford Road.

This Plan seeks to balance the recreational needs of visitors with the fragile nature of the priority habitats, cultural heritage and important features of the Heath. It is worth noting that a key aspect of the recreational enjoyment of the site stems from the cultural and biological heritage of the Heath. Any perceived conflict between recreation and conservation needs to be managed carefully by RBBC and RHMSG through appropriate use of habitat management, education and interpretation.

Effective communication is crucial to the success of the management of Reigate Heath, and engaging with users of the Heath is particularly important. Views from public consultations and other sources were incorporated in this Plan. In recent visitor surveys 89% of users said that habitat management and that putting wildlife needs first were important. A key aspect of land management plans is consideration of an education programme and methods for interpreting information about important features and management so that local people become supporters and advocates of the site.

There are a variety of principles that apply to the protection and conservation of the Heath so that its important features are managed effectively. A fundamental aim is to maintain the open and semi-natural aspect of the Heath and inter-visibility between important features, which is threatened by natural succession of scrub and trees. Sometimes these principles appear to be in conflict and in such circumstances legal obligations tend to take precedence. Where it is not clear, which takes precedence, advice will be sought from statutory bodies, experts and members of the RHMSG.

RBBC has statutory responsibilities with regard to protecting the Scheduled Monuments and SSSI status of the Heath. However, a key obligation for owners of common land in a modern context and implementing provisions of the Countryside & Rights of Way (CRoW) Act 2000 is to provide them as public open spaces for the recreation and enjoyment of present and future generations. The Council has responsibilities with regard to public liability and health, safety and welfare of its employees, contractors, volunteers and the public that influence decision-making and the way management activities will be carried out.

Like most green spaces the Heath requires active management if its character and important features described in this Plan are to be restored, maintained and enhanced. In the context of Reigate Heath LNR active management includes felling trees, managing scrub, mowing grass, cutting heather, controlling bracken and clearing ponds. However, continued careful

and positive management of the Heath using good practice will ensure that it retains the important natural and cultural heritage that local people admire and that must be conserved for the national interest and future generations.

## 1.2 Highlights from Last Plan

In recent years important semi-natural habitats have been enhanced so that biodiversity has been improved on the Heath. There have also been successes in conserving the landscape, archaeology and history of the site, as well as positive contributions from users of the Heath and through education.

- Reigate Heath SSSI (Unit 2) is now in Favourable condition, meaning that the important features are being conserved and monitoring targets are being met.
- The Heath was declared a LNR in 2002 recognising the importance of its mosaic of habitats and biodiversity value for local people.
- Conservation of lowland heath, acid grassland and ancient woodland priority habitats is funded by DEFRA through a HLS agreement since 2008.
- Turf stripping has removed excess depths of organic litter in preparation for regenerating lowland heath and acid grassland.
- Remnant heather areas have been restored and these areas linked thereby increasing the probability of successfully restoring lowland heath and species-rich habitats.
- Retention of important plant assemblages with rare/notable plant species on the recreation areas, in particular the sports field and found in most of the fairways.
- Restoring a wet heath bog area in The Glade encouraging the reappearance of Cross-leaved Heath, Marsh Pennywort, wet-loving mosses and other wetland indicators species.
- Rare plants Dodder and Petty Whin identified and recorded on the some areas of restored lowland heath habitat.
- Cutting, pulling and treating tree seedlings and controlling scrub regeneration so that the restored areas of lowland heath and grassland maintained in good condition.
- Improving the ecotone between the lowland heath and open grassland and woodland edge near the playing fields.
- Applying good tree risk management practice by felling or carrying out preventative surgery on dangerous or diseased trees adjacent to footpaths or the horse ride.
- Controlling bracken using a variety of techniques including chemical spraying and/or rolling, with raking off of accumulated bracken litter.
- Enhancement of retained specimens of veteran and notable trees through ‘halo-release’ by removing encroaching smaller trees.
- Better understanding of the archaeological and historical monuments, which has translated into better management and protection of these important features.
- Removal of mature trees and scrub from the tumuli and scheduled monuments so that root damage and wind blow is reduced thereby protecting historic features.
- The degraded tumuli adjacent to the eastern car park in Flanchford Road protected using felled timber thereby preventing visitors from parking their cars over it.
- The circular permissive horse ride maintained with help and support from some local riders and other volunteers groups.
- Completing a visitor survey (Hill, 2016) with help from the RHMSG so that public use and potential recreational conflict with conservation put into perspective.

- Reigate Heath Residents Association (RHRA) joined the RHMSG and contribute to the representations made by the group.
- Duke of Edinburgh Award Scheme conservation tasks led by Reigate Area Conservation Volunteers (RACV) for local young people.
- Training for local people providing through start-up of volunteer conservation tasks led by the Reigate Heath Golf Club (RHGC).
- Two public exhibitions about lowland heath led by the Friends of Reigate Heath (FoRH) in the Cricket Pavilion (2007 & 2011) raising funds for interpretation material.
- Secondary education curriculum visits by Reigate Grammar School led by Simon Elson looking at important semi-natural habitats and fragile ecosystems.
- Tertiary educational activities for students at Hadlow College who were studying good site management practice with Land Management Services.
- Reigate Heath Golf Club won an award in 2009 from the Sports Turf Research Institute and Natural England for demonstrating ecological good practice.
- Several guided walks carried out by the RHMSG, Reigate Society, RBBC Rangers, FoRH and Holmesdale Natural History Society (HNHS).

Gatekeeper on Reigate Heath. Photograph courtesy of Graham Saxby

# 2 INTRODUCTION

## 2.1 Purpose of document

The purpose of this land management plan is to review the management, reassess the aims and important features, update the objectives and revise management prescriptions so that effective work programmes are developed and delivered. It is important to remember that this plan is only for managing RBBC land known as Reigate Heath LNR and must be read in conjunction with previous plans and other documentation listed in the bibliography.

## 2.2 Format of Plan

This Plan follows a recognised format that applies an integrated approach to the protection, conservation and management of important features and facilities on the site. It considers the social, environmental and economic factors that affect the site.

**Part one description**

This first part of the Plan is factual and describes in summary the information known about the site with regard to the physical, biological, cultural and recreational interest of the Heath so that an assessment of the important features can be completed.

**Section 1** Provides an executive summary of the Plan.

**Section 2** Describes the planning process and format of the Plan.

**Section 3** Outlines the principles and policy for future management of the Heath.

**Section 4** Sets out the legal obligations and strategy relevant to this management.

**Sections 5-10** Describes general features, physical conditions, ecological interest, cultural heritage, community involvement and recreational use of the site.

**Section 11** Process that evaluates the key features of the site in a local, regional and national context to identify priorities for management.

**Section 12** Consideration of factors that may have a bearing on future management of those important features.

**Section 13** Lists the various policy documents, reports, journals and other material read and referenced in this Plan.

**Part two discussion**

This part of the Plan is to some extent hypothetical and discusses how social, environmental and economic factors affect this physical, biological, cultural and recreational interest of the Heath so that an assessment of the important features is completed.

**Section 14** The important physical, biological, cultural and recreational features are considered in turn in the context of their current status, future vision, objectives, performance indicators and targets.

**Section 15** The management prescriptions are proposed and explained. This section includes a key to explain format of prescription table, a map showing the management compartments on the Heath and the table.

**Part three information**

This final part of the Plan is a record of all the information used to prepare this document and stored in the following forms:

Maps
Photographs
Surveys
Appendices

This information is complemented by previous 5-year management plans written since 1993 by Helen Neve at Land Management Services (RBBC 1993, 1999, 2006 & 2010).

## 2.3 Monitor Performance

An important aspect of preparing this Plan was the gathering and analysing the information about the Heath, its history and important features. Surveys provide invaluable background information for the description of the site in Part 1 and recommendations for management and setting of objectives in Part 2. The surveillance of habitats and species using targets will help managers evaluate the success in achieving these objectives.

However, monitoring performance against the targets set out in Part 2 of this Plan will help ensure that these management objectives remain specific, measureable, achievable, realistic and time-bound (SMART). This assessment of performance will inform the management task of reviewing the Plan and its objectives at regular intervals.

## 2.4 Review Plan

This management plan is supported by, and helps to implement, a variety of local, regional and national strategy and policy documents, which are themselves periodically introduced, revised or replaced. In addition factors such as political will, limited resources and climate change may have an impact on this Plan. In light of this 10-year plan should be reviewed annually and where appropriate revised to reflect such changes.

## 2.5 Glossary

This management plan is a technical document and as such the authors and editor have used technical jargon appropriate to its purpose. They have written scientific terms using their industry wide accepted definitions, which can be defined using an appropriate dictionary or using a web site or browser.

# 3 Management principles

The following principles apply to the management of the Heath so that important features are restored, maintained and enhanced whilst balancing competing interests. If principles appear to be in any conflict then legal obligations will take precedence, which include RBBC responsibilities with regard to public liability, health and safety, Common Land registration, SSSI status and Scheduled Monument designation (see Section 4).

## 3.1 Management Policy

**Biodiversity Opportunity Areas**
The Heath is located in the Wealden Greensands BOA adjacent to the North Downs BOA (see Appendix 1). The WG10: Reigate Heaths area extends from Reigate Heath LNR in the west to Priory Park SNCI in the east and comprises open and wooded commons and parks. This Plan applies the BOA strategy with its focus on conserving the priority habitats of lowland heath, acid grassland, mixed deciduous woodland and wet woodland; as well as the assemblages of priority species of plants, invertebrates, amphibians, reptiles, birds and mammals.

**Geology & Hydrology**
These are key physical factors influencing the historical land use, biodiversity and landscape of the Heath but little is known about the local geology and hydrology. In addition climate change, pollution and chemicals can have a significant detrimental impact on these physical features so that monitoring is important. Collation and interpretation of research would help the understanding of these features and future conservation and management.

**Archaeology**
The scheduled monuments and other historic features will be considered when planning and delivering habitat, visual amenity and recreation management tasks. The old Windmill is an important feature of the area but not managed under this land management plan. An important aspect of these features is maintaining inter-visibility between them so they can be viewed. Historic England consent and advice is needed before carrying out work activities likely to damage the scheduled monuments or other historic features.

**Common Land**
It is important to remember that the Heath is registered as common land and that this status has a bearing on future management as well as recognising the historic land use that gave rise to many important features of the site. Commons (and heaths, village greens and green spaces) are an important aspect of our cultural heritage and are valued in a modern world for providing open access to air and exercise for local people and communities. Annual work programmes and activities must ensure that these principles are not compromised.

**Historic Landscape**
Historic landscape on the Heath is an integral part of the wider AGLV (see Appendix 2) and a local Conservation Area. Habitat management has a significant impact on the landscape and views, which are valued for an open aspect. However, appropriate management will support both the variety and quality of the landscape and protect historical features. Management is

required to maintain inter-visibility between features and enhance views of the internal and external landscapes. Care will be taken that the site does not become too urbanised.

**Habitats**
The priority is to restore, maintain and enhance the lowland heath, acid grassland, wet alder woodland and mixed deciduous woodland habitats in accordance with BOA targets, the SSSI designation (see Appendices 3 – 6) and HLS agreement (see Appendix 7). However, the plans objectives should seek to retain a mosaic of habitats that include scrub, freshwater, wetland and bare ground because this supports the important assemblages of common, rare and notable species. Intensive practical work must not take place between the 1st March to 31st August to prevent unnecessary disturbance of wildlife. Natural England consent and advice is needed before carrying out operations likely to damage biodiversity.

**Species**
By following this Plan and monitoring targets for habitat management work activities should create conditions suitable for conserving common, rare and notable species and in particular assemblages of plants and invertebrates (see Appendix 9). It is important to ensure that the work programmes and activities are appropriate to safeguard wildlife and target species e.g. good practice in the use of methods, machinery and chemicals. Some species, either native or non-native, are potentially invasive and pose a threat to native species and communities, so if necessary these invasive species will be controlled using current good practice.

**Public Access**
Walkers, local horse riders and cyclists enjoy using the Heath for informal exercise and there are a number of rights of way that must be kept free of unnecessary obstructions, as well as a circular permissive horse ride. It is worth noting that cyclists are restricted to public roads and the public bridleway whilst horse riders may also use the permissive ride. Maintenance of access routes must seek to protect the fragile habitats, and use methods and materials appropriate to the location as well as improve access.

**Recreation**
Recreational use of the Heath and the potential detrimental impact that visitors may have on fragile habitats and archaeological features is a key consideration and a careful balance is required to ensure that the site is not overused (see Appendix 10). This is a challenge, and providing useful information will encourage a sense of pride and guardianship with users as well as community involvement will be essential. It should not be forgotten that practical conservation tasks are a popular recreational activity and as well as benefiting habitats and wildlife they are good for people's health and well-being.

**Community Involvement**
A key aspect of community involvement at the Heath is the RHMSG and the volunteers who help conserve the site. Effective communication and engagement with visitors, local people and communities will be vital for ensuring that management objectives are achieved and that outcomes from this Plan win support rather than objection where possible. This will be achieved by continuing to provide a range of recreational, education and interpretative events, activities and resources that explain the management objectives, importance of the Heath and reasons for conserving the site for wildlife and people.

**Health, Safety & Welfare**
National legislation and organisational policy and procedure is aimed at ensuring the health, safety and welfare of people working on, visiting or living near the Heath will be maintained when planning and delivering work activities on the site. Where practicable any hazards will be removed or access to them prevented but otherwise any risk identified will be reduced by taking reasonable measures to protect people, animals, habitats and property that may be affected by work. Such reasonable measures will include erecting temporary barriers, using warning signs, carrying out tree inspections, applying biosecurity, removing noxious or hazardous waste and providing information.

**Disposal of Waste**
RBBC will ensure that all noxious or hazardous waste removed from site will be disposed of responsibly in accordance with current good practice. As general principle all cuttings from management operations will be considered waste and removed from the site and disposed of responsibly. Ideally waste material should be removed at the end of the working day but if necessary it will be stacked at an appropriate location for collection within seven days. The aim should be to compost, reuse or recycle waste material and cuttings from conservation work off site but advice can be sought from Natural England to create habitat piles using either woody or non-woody vegetation at suitable locations.

**Use of Chemicals**
The general principle is to ensure the minimal but suitable use of appropriate chemicals on the Heath in accordance with advice from Natural England. Work programmes and activities will be reviewed annually to assess whether pesticides, fertilisers and other chemical additives are necessary and that there are no other feasible alternatives. Where deemed necessary chemicals assessed as causing least detrimental impact on the environment and people will be used.

**Surfacing Materials**
The use of hard surfacing materials to improve access for visitors and vehicles on footpaths, bridleways and tracks across the Heath should be avoided wherever possible. However, if materials are required to be imported from off-site then the most inert material should be used and wherever possible it should have similar physical and chemical properties to the local geology and soils.

**Planning Permissions**
It should be noted that the north east corner of the Heath adjacent to the A25 Dorking Road and Flanchford Road is included in the local Conservation Area so that proposals to install any structures, lay surfacing materials and carry out tree works must be referred to the RBBC Planning Officer. Similarly any of these or other activities that constitute a 'change of use' of the Common land must be referred to DEFRA with regard to consent.

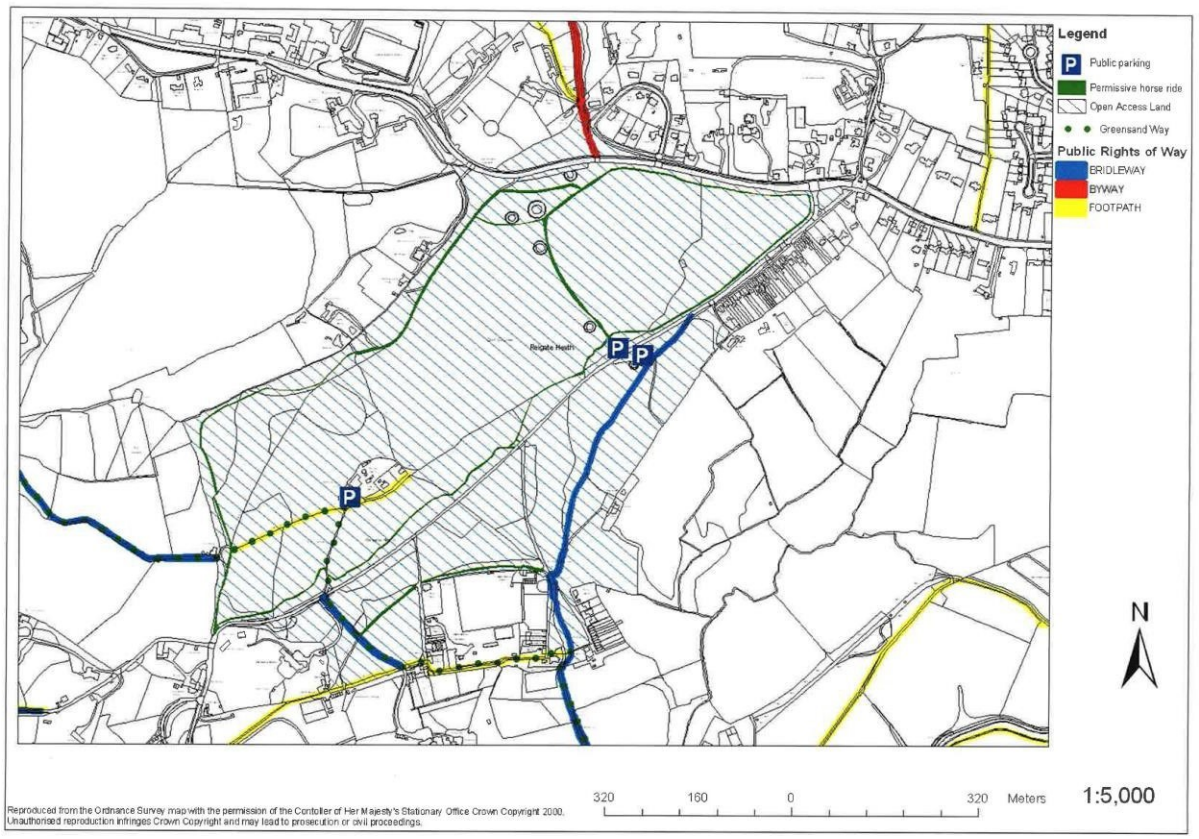
**NB: If when planning work programmes there appears to be a conflict in achieving two or more of these management principles and it is not clear which takes precedence, advice should be sought from statutory bodies, experts and the Steering Group.**

## 3.2 Map 1: PROW & Public Access on Reigate Heath LNR

This map shows the existing public footpaths, bridleways and byways listed on the Highway Authority (SCC) Definitive Map, as well as the Open Access Land that was established under the CRoW Act 2000.

There are Permissive Horse Rides maintained as access routes for use by walkers and horse riders ONLY. RBBC declares that these are temporary routes only and not intended for future dedication as additional PROW.

This map also shows the location of the three (3) Public Car Parks serving Reigate Heath LNR and the public highways that link to them.



# 4 Legal obligations & strategy

Reigate Heath is important for delivery of a range of strategies and plans at both national and local level. This aspect is supported or influenced by a range of legislation, strategy and policy documents, which identify where management planning should be focused and help provide guidance on planning issues that underpin this plan. The most relevant are listed below and most of these documents can be found in full on the internet.

## 4.1 Planning

**National Planning Policy Framework (NPPF) February 2019**
The NPPF sets out Government's planning policies and how to apply them with regard to open spaces and recreation; Green Belt; conserving and enhancing the natural environment; habitats and biodiversity; conserving and enhancing the historic environment. The north east corner of the Heath adjacent to the A25 Dorking Road and Flanchford Road is included in the local Conservation Area.

**A Community Plan for Reigate and Banstead 2008-2020**
This plan encourages residents to use, enjoy and protect the Borough's countryside, open spaces and parks. The Plan seeks to improve access to green spaces so that everyone has the opportunity to use them for leisure, learning and enjoyment; encourage involvement in environmental education and conservation projects; increase pride and interest in local heritage and places on interest; and protect best examples of landscape character and built heritage so that the Borough maintains its unique identity.

**RBBC Our Five Year Plan 2015**
The Borough's Five Year Plan 2015 - 2020 explains how they will prioritise their resources and deliver services to people living and working in the borough. One of the key strategy themes for encouraging healthy lifestyles, particularly through use of open spaces is directly relevant to this plan.

**RBBC Green Infrastructure Strategy (GISy) 2017**
Developed from Government's NPPF (2012) it looks at developing, enhancing and managing a network of green spaces and corridors, to complement housing development, to provide regeneration, and bring a range of social, environmental and economic benefits. The aim of enhancing priority biodiversity habitats and unique and characteristic landscapes is directly relevant to the Heath, which has a role in the delivery these objectives.

**RBBC Development Management Plan (DMP) 2018 – 2027**
This sets out the detailed planning policies for shaping development in the borough with regard to open space and heritage; protecting the historic and natural environment; and urban space assessment and review. Given the development pressures within the borough, there remains strong rationale for designating and safeguarding important open spaces within the urban area in line with the National Planning Policy Framework.

## 4.2 Archaeological

**Ancient Monuments and Archaeological Areas Act 1979 (as amended)**
This is a legal framework for the protection of scheduled monuments and this designation applies to eight Bronze Age barrows (or tumuli) found on the heath. Before any works that will affect a scheduled monument, whether above or below ground level, are carried out the owner must apply to the Secretary of State for prior written permission. Such works can include demolishing, destroying, damaging, removing, repairing, altering, flooding or tipping onto a scheduled monument or any part of it.

## 4.3 Nature Conservation

**The Wildlife and Countryside Act (WCA) 1981 (as amended)**
The Act provides law regarding SSSIs and other protected areas. It also makes provisions for protecting birds, animals and plants as well as measures for preventing the establishment of non-native species, which may be detrimental to native wildlife (see Appendices 3-6).

**Protection of Badgers Act 1992**
Under this legislation it is an offence to kill or injure a Badger; to damage, destroy or block access to a Badger sett; or to disturb a Badger in its sett. The Act also states the conditions for the protection of Badgers licence requirements.

**Natural Environment and Rural Communities Act (NERC) 2006**
This Act is implements key aspects of Government's Rural Strategy (2004) and addresses a range of issues relating to the natural environment. It places a duty to conserve biodiversity on public bodies in England, which may include enhancing, restoring or protecting a species population or habitat. It creates offences in connection with SSSIs, controls on pesticides and codes of practice with regard to invasive non-native species.

**White Paper: The Natural Choice - Securing the Value of Nature 2011**
This recognises that a healthy natural environment is the foundation of sustained economic growth, prospering communities and personal wellbeing. It contains plans to '*protect, restore and improve England's natural environment'*, whilst '*repairing damage done to the environment in the past*.' It sets out how the value of nature can be enhanced by protecting and improving our natural environment and reconnecting people and nature.

**Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services 2014**
This builds on White Paper and sets out strategic direction for national biodiversity policy to compliment international commitments, with an overall vision that biodiversity in UK will be valued, conserved, restored, managed sustainably and be more resilient and able to adapt to change. There are key outcomes for habitats and ecosystems, species and people to be achieved by 2020 that are relevant to the Heath.

**Biodiversity Opportunity Areas (BOA): Wealden Greensands 2015**
BOAs aim to establish a strategic framework for conserving and enhancing biodiversity at a landscape scale making wildlife robust to changing climate and socio-economic pressures. BOAs are where targeted maintenance, restoration and creation of Habitats of Principal

Importance (NERC Act 2006) take place. Reigate Heath SSSI lies in the Wealden Greensands (WG10: Reigate Heaths) BOA, which includes the Sites of Nature Conservation Importance (SNCIs) at Priory Park, Little Manor Farm and Lavender Sandpit (see Appendix 1).

**The State of Nature 2016 & The State of Surrey's Nature Report 2017**
The State of Nature 2016 gives a national overview of the state of nature in the UK. The State of Surrey's Nature (Waite, 2017) provides a county-wide perspective but represents how habitat categories relate to the conservation status of species. It helps focus decision-making about the conservation and management of Lowland Heathland, Acid Grassland, Mixed Deciduous Woodland and Wetland habitats on the Heath.

**Conservation of Habitats and Species Regulations 2017**
Provides for the protection of Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, European Protected Species and Habitats. European Protected Species include, but are not limited to Great Crested Newt, Natterjack Toad, Smooth Snake, Sand Lizard, all bat species and Hazel Dormice.

**A Green Future: 25 Year Environmental Plan 2018**
This plan states that the government will take action on a number of fronts, looking to join up policies in a way that maximises benefits and value for money. Four key areas apply to the Heath: using and managing land sustainably; recovering nature and enhancing the beauty of landscapes; connecting people with the environment to improve health and well-being; and increasing resources efficiently and reducing pollution and waste.

## 4.4 Landscape

**Surrey Hills Area of Great Landscape Value (AGLV) Review 2007**
This designation aims to conserve and enhance natural beauty and traditional landscapes and protect important flora, fauna, geological and landscape features. It aims to protect the area from inappropriate development, and promote the conservation and enhancement of the landscape. It also seeks to encourage management of open spaces and public rights of way for nature conservation and informal recreational use so that users are accommodated without detriment to the environment. SCC are planning to review the Surrey Hills AONB and a report recommends the inclusion of Reigate Heath (see Appendix 2).

**Borough Wide Landscape & Townscape Character Assessment: Assessment of Development Potential and Policy Recommendations 2008**
Reigate Heath is defined within Landscape Character sub-area B2, which frequently exhibits the characteristics of an integrated Heath and common landscape, either environmentally designated, or of high landscape sensitivity (RBBC, 2011).

**Surrey Landscape Character Assessment: Reigate & Banstead Borough 2015**
This assessment is based on the national landscape character areas and national landscape typologies. Key characteristics of the landscape were identified and Reigate Heath lies within **GW11: Skimmington Woodland Greensand Hills** characterised by prominent wooded hills, Low Weald farmland with small-medium fields, hedges and boundary trees. It makes specific

reference to the Heath with regard to its positive visual impact on local landscape, common land status and conservation value as lowland heath.

## 4.5 Recreational Use

**Reigate Heath Byelaws 1899 (updated 1993)**
Byelaws were made by RBBC under Section 1 of the Commons Act 1899 and updated in 1993 with respect of Reigate Heath (see Appendix 10). They seek to prevent activities that may harm important features or spoil public enjoyment of the Heath. For example they restrict cyclists to the public bridleway but horse riders may also use permissive rides. However, new threats can develop over time, such as drones, so the Council will seek permission from the Secretary of State to update the byelaws at appropriate times as resources permit.

**The Countryside and Rights of Way Act (CRoW) 2000**
The Act provides a right of public access on foot to areas of open land, heath and registered common land with safeguards for landowners and wildlife. It improved the rights of way legislation and enables the diversion of rights of way to protect SSSIs. The Act also increased measures for the management and protection of SSSI, strengthened wildlife enforcement legislation and provided for better management of AONBs.

**Common Act 2006 & Common Registration (England) Regulations 2014**
All of the land covered by this management plan has rights over common registered under the original Acts. These latest Acts seek to deliver positive management of common land to provide benefits for the economy, biodiversity, archaeology, recreation and community. Restricted works preventing or impeding access; resurfacing land and fencing; constructing buildings; or digging of ditches on common land are prohibited unless they have the consent of the Secretary of State.

**Common Purpose: A guide to Community Engagement about Common Land 2012**
Common Purpose was written originally for lowland commons with no active graziers, where there is a range of stakeholders with no legal involvement but a strong emotional interest in recreation, natural history or archaeology. A key principle applicable to the Heath is that any decisions affecting Commons should be determined through an open and inclusive decision-making process, which is achieved for the Heath by the RHMSG (see Appendix 12).

## 4.6 Buildings

**Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended 2009)**
The identification and protection of historic buildings and conservation areas is important in maintaining the nation's cultural heritage and the windmill is a Grade 2 listed building. The impact of planning permissions or development on any building adjacent to the Heath, its setting or any features of special architectural or historic interest will be considered. RBBC Planning Department should send applications for properties by the Heath to RHMSG for comment. The north east corner of the Heath lies in a local Conservation Area.

This land management plan is however, intended for the conservation of physical, biological and cultural features of the land known as Reigate Heath LNR. Whilst the Windmill is an

integral part of the landscape character of the Heath it is managed by the RBBC Property Services Department and other listed buildings are privately owned.

**Colley Lane & Flanchford Road Conservation Area (part)**
The north-east section of the Heath, including the area of the football pitch are part of the conservation area '*of special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance*.' The policy is to safeguard the conservation area from indiscriminate or ill-considered change and provides wider protection of trees.

**Reigate & Banstead Local Distinctiveness Design Guide 2004**
This document contains a sustainability checklist as a useful guide to the issues that need to be considered in achieving sustainable development. It recommends designs that encourage walking and cycling and discourages car reliance, as well as wildlife refuges and corridors and controlled access areas to maximise ecological benefits and encourage natural regeneration of woodland. However where there are conflicting considerations within plans, conservation and enhancement of the townscape should be the key concern.

## 4.7 Natural Capital

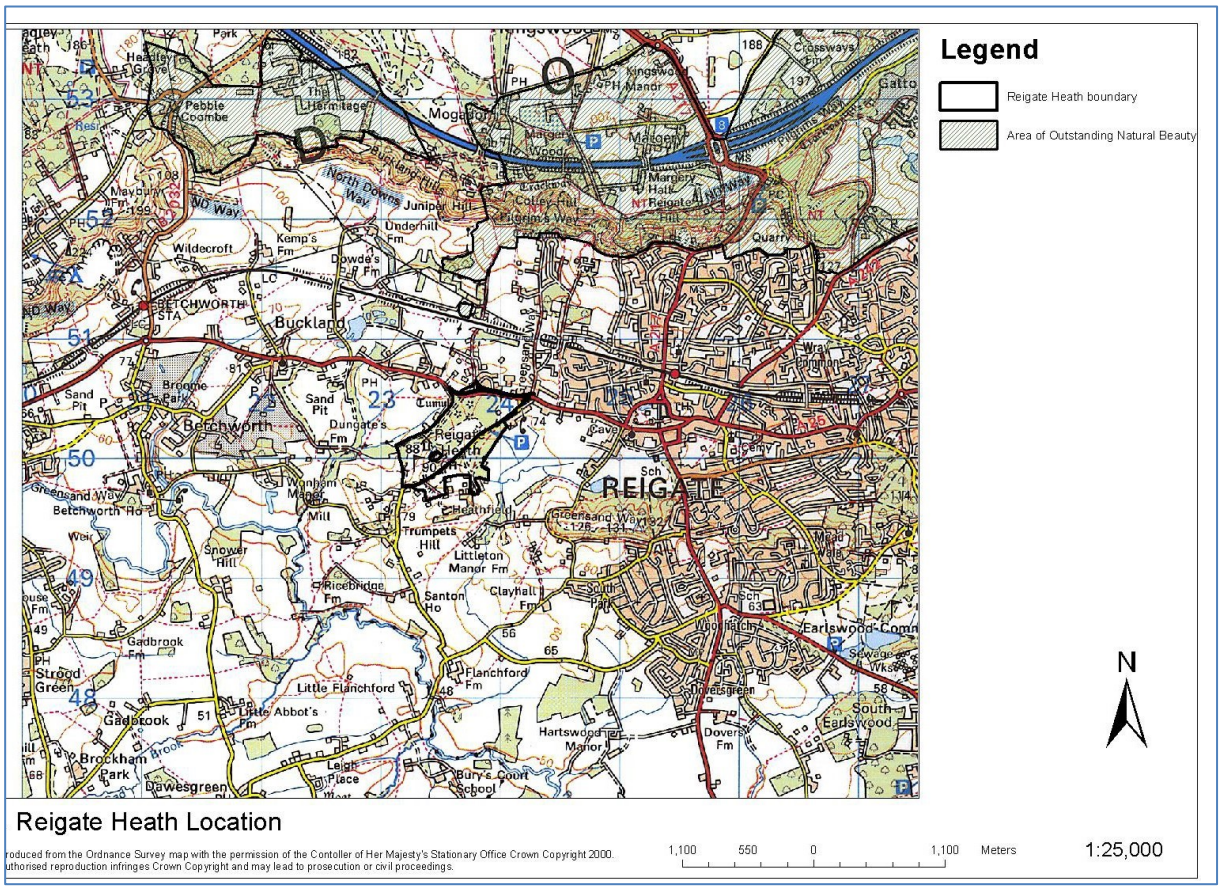
**Naturally Richer: A Natural Capital Investment Strategy for Surrey 2015**
Surrey Nature Partnership promotes a 'Natural Capital' approach with strategic priorities that are relevant to the Heath with regard to sustainable land management and the health, well-being and quality of life of local people and visitors.

**Natural Capital Investment Plan 2017**
Surrey Nature Partnership have produced a plan that sets out the broad actions required to achieve and maintain healthy natural assets in Surrey over the next 25 years. The vision is to develop ways to provide revenue to maintain natural assets and improve the accessibility of existing greenspaces for recreation, leisure and cultural purposes.

## 4.8 Monitor & Review
Many of these strategy documents expire before the proposed end of this document so that a process of monitoring and reviewing key policy statements should be included in the work programme of this and other site management plans. This role and responsibility lies with RBBC Compliance Officer based at the Town Hall in Reigate.

## Map 2: Location of Reigate Heath LNR

This map shows the location of Reigate Heath LNR in the context of Reigate Town Centre, Priory Park and the A25 Dorking Road.



# 5 General information

Reigate Heath is owned wholly by RBBC and managed by their Greenspaces Department. This section places the Heath in a local and regional context so that readers and planners have relevant information required for their decision-making and setting policy.

## 5.1 Location

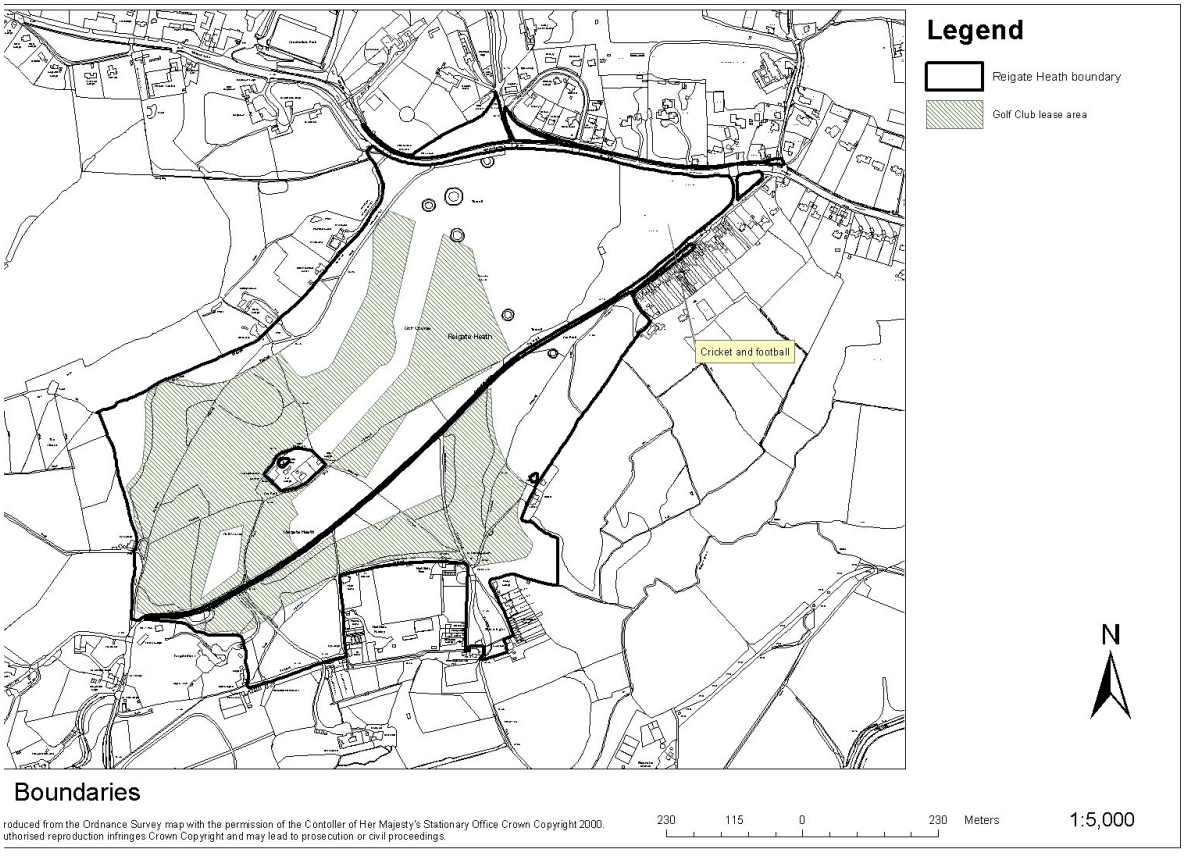
The Heath, including the golf course, covers 50.8 ha and lies to the west of the town of Reigate, less than 2km from the town centre and immediately south of the A25, Reigate to Dorking Road. Flanchford Road divides the Heath as it runs north east/south west through the site. The Grid Reference for the middle of the site is TQ 236502.

## 5.2 Site Boundaries

The Heath is a LNR and public open space surrounded by a mix of low density residential areas, fields, agriculture and small pockets of woodland. This plan covers the area owned by RBBC and therefore covers only part of the SSSI (61.7ha) described by Natural England as Unit 2. Unit 1 covers the western alder woodland to west of the Heath and Unit 3 is known as Skimmington grasslands and is located to the south of the Heath.

**Map 3. Boundaries of Reigate Heath**

This map shows the boundaries of Reigate Heath



## 5.3 Surrounding Area

Residential housing is located north of the A25, then fields, Colley Sandpit, railway and small woods. To the east is the urban sprawl of Reigate town centre. South are the Skimmington Fields, which is another part of the Reigate Heath SSSI and this connects with fields to Priory Park SNCI to the east. Dwellings adjacent to the southern edge of the Heath by Bonnys Road, Skimmington Castle, Heathfield and Dungate, are rural in character. On the western edge of the golf course are areas of small woods and fields.

## 5.4 Tenure

RBBC owns the majority of the site. Reigate Heath Golf Club (RHGC) own 0.65ha of land but rent the remaining land used for the golf course from RBBC, see Figure 2. Together they are the principal organisations for managing the site.

## 5.5 Designations

### 5.5.1 Common Land

All of the land covered by this management plan has rights over common registered under the original Commons Acts. Later Acts seek to deliver positive management of common land to provide benefits for the economy, biodiversity, archaeology, recreation and community. Restricted works preventing or impeding access; resurfacing land and fencing; constructing buildings; or digging of ditches on common land are prohibited without consent.

### 5.5.2 Scheduled Monuments

The eight Bronze Age barrows (or tumuli) on the Heath are listed under AM&AA Act 1979. RBBC has a statutory duty to take reasonable steps to conserve and enhance the scheduled monuments on their land. They must seek consent from Historic England before carrying out works that may affect a scheduled monument.

### 5.5.3 Site of Special Scientific Interest (SSSI Unit 2 only)

The Heath is designated because of its specific interest for priority habitats, the outstanding assemblages of plants and other features (see Appendices 3-6). RBBC has a statutory duty to take reasonable steps to conserve and enhance special features on the SSSI. They must seek consent from Natural England to carry out operations likely to damage the site.

### 5.5.4 Local Nature Reserve (LNR)

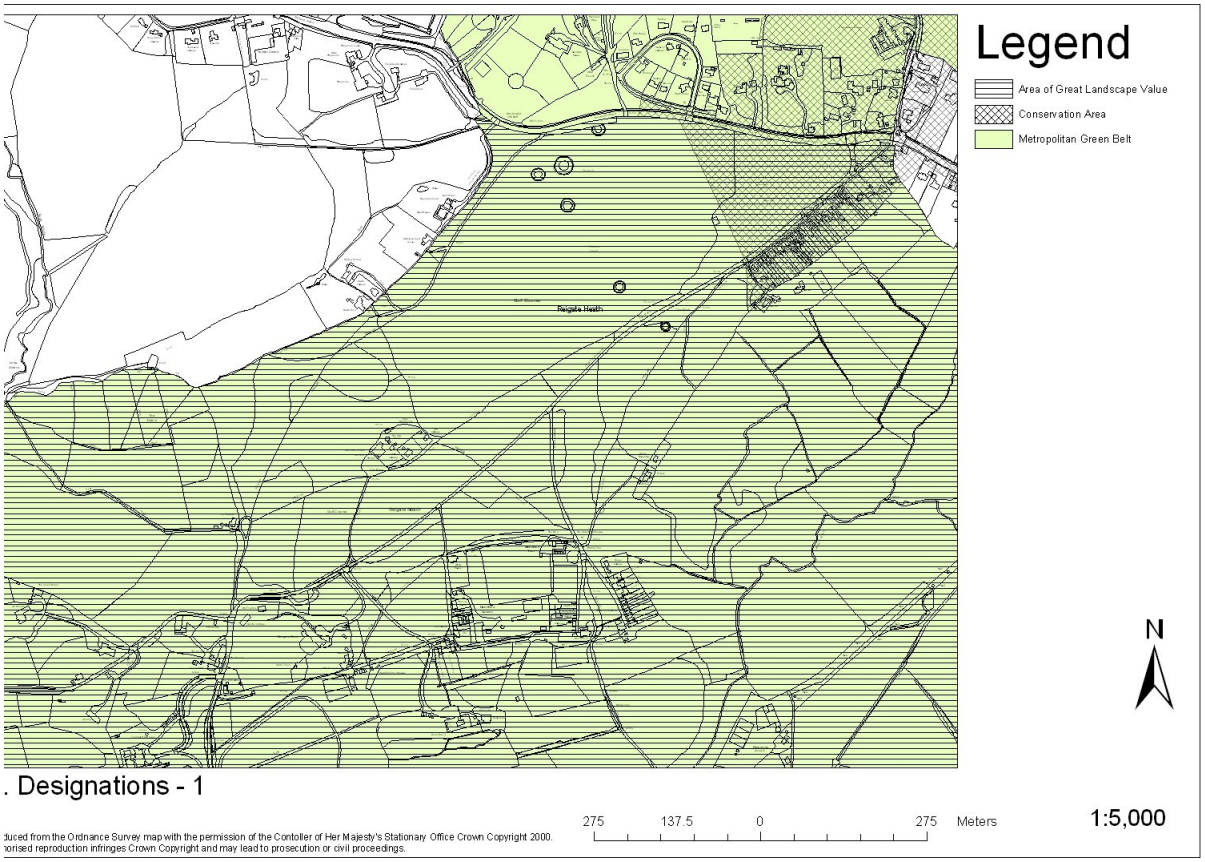
The 50.8ha of the Heath was declared an LNR because it has high natural interest locally to help safeguard rare, common, locally valued species, habitats and geo-diversity; high value locally for environmental education and/or research; and reasonable natural interests and of high value locally for the public to enjoy nature.

### 5.5.5 Surrey Hills Area of Great Landscape Value (AGLV)

The aim of designation is to conserve and enhance the natural beauty and the traditional landscapes and to protect the important flora, fauna, geological and landscape features. The Heath lies within the RS2: Greensand Hills & Wooded Weald area of the natural landscape character area NCA120: Wealden Greensands (see Appendix 2).

## Map 4. Planning designations

This map shows the Planning designations that cover Reigate Heath

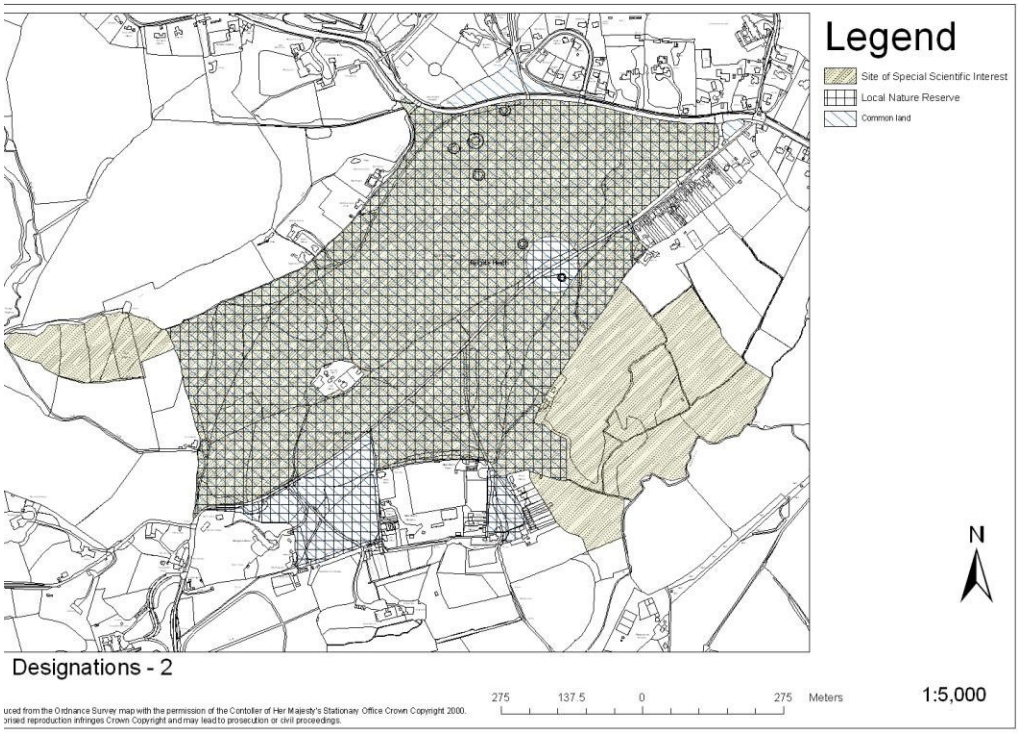



. Designations - 1



## Map 5. Other land based designations

This map shows other land based designations that cover Reigate Heath




Designations - 2

## 5.6 Other Information

There are key reports referenced within this Plan and further reading that will assist the reader to understand the subjects being discussed.

### 5.6.1 Bibliography

There is a bibliography of documents, reports and articles included at the end of Part 1: Description Section 12.

### 5.6.2 Maps

The site is shown on the following maps available to RBBC using I-Share GIS mapping tool for planning and recording management work on its gardens, parks and green spaces. There is an Ordnance Survey Explorer Series 146 Reigate 1:25000 and a variety of historical and modern maps are available on the internet. In addition the site is depicted on Maps 1 to 6 in this plan (see Part 3).

### 5.6.3 Photographs

Aerial photographs of the Heath and surrounding area can be viewed on the internet using the Google Earth or the RBBC I-Share GIS mapping tool. There are historical photographs and several sources of up to date photographs, some of which are held by RBBC.

### 5.6.4 Surveys

In addition to the comprehensive ecological surveys undertaken by Surrey Wildlife Trust (SWT) as part of the management planning process (see Appendix 13) there are records from a number of scientific, community and visitor surveys listed later in Part 3.

### 5.6.5 Appendices

There are also a selection of important documents and attachments that were used during the planning process and that provide important information to the reader, which are listed later in Part 3 and attached to this Plan.

# 6 Physical features

## 6.1 Climate

Specific climatic information for the site is not recorded. The nearest weather station is at Reigate Grammar School where the annual average temperature is 9.9$^{o}$c, the average annual rainfall is 692mm, with the lowest average recorded in February of 45mm and the average highest recorded in December of 71mm. On average the highest temperatures are recorded in July of 17.7$^{o}$c and the lowest month being January of 3.6$^{o}$c. The prevailing wind direction is West South West.

Key projections for Surrey up to 2050 are for more variable weather with more frequent and severe extreme events (SLRF, 2016). General trends are thought to include milder and wetter winters and drier summers. The UK Climate Impacts Programme project a rise in UK temperature of between 2$^{o}$c and 3.5$^{o}$c by the 2080s and inevitably this will directly affect Reigate Heath in the future in terms of biodiversity, land use and health.

## 6.2 Geology

The Heath lies on the Lower Greensand of the Weald, which comprise of (bottom to top) a basal series of pebbly sands, silver sands, a clay band and the upper pebbly sands. The silver sands, are a white pure quartz sand (also known as silica sand), and is a nationally scarce resource. Other names for this are foundry sand or glass making sand and this is the reason for the rise of commercial sand extraction in the locality (S Elson pers. comm., 2018). As the strata of the sand is inclined, dipping towards London, the different series are exposed over a wide area, but the Heath lies predominantly over the silver sands exposure.

In *The Geology of the Country Around Reigate* (Gosling, 1929) it states that the small sandpit south of Flanchford Road at the south-west corner of the Heath shows passage beds (i.e. those intermediate between the basal pebbly sands and silver sands). It also refers to fine silver sands on the Windmill Hill and again similar sand are visible on the A25 road cutting on the north side of the Heath.

Other areas have alluvium deposits washed over the Greensand and several areas of the Heath have pockets of peat deposited over it, indicative of the decomposition of organic material in wet conditions (S Elson pers. comm., 2018).

The Greensand lies adjacent to the Gault Clay and this could account for a spring line where sand meets clay, which may account for the wet flush in The Glade creating wet heath conditions. This geology is a major influence on the undulating landscape of small fields, hedgerows and frequent copses and woodlands, which typify the landscape to the south of Reigate and the wider landscape characterization area.

The Greensand based landscape of Reigate Heath forms a sharply contrasting environment, and supports a habitat which is nationally rare, not just because of the limited outcropping of its substrate, but because the increasing pressures of twentieth century development have destroyed much of this habitat. The eastern area of Alder woodland is located on peat overlying Folkestone Formation.

## 6.3 Topography

The Heath itself varies in height from nearly 89m Above Ordnance Datum (AOD) at the top of the hill by the Windmill, to a low lying area of less than 70m stretching from Flanchford Road in the east to woodlands on the western boundary. To the north-west, land gradually rises (to approximately 80m) to form an undulating tumuli ridge, running through the middle of the site and is of local, landscape and historic importance. The north east of the Heath forms a relatively level and low lying area (around 68m to 72m). South of the clubhouse hill, elevations gradually rise again, reaching 80m at the southern boundaries of the Heath and continuing to rise to over 95m at a high point at Heathfield, to the south.

## 6.4 Hydrology

The Heath lies within the catchment of the River Mole that arises near Gatwick Airport in West Sussex and flows north-west past Horley, Reigate and Dorking before passing through the Mole Gap in the North Downs to flow into the Thames at Molesey.

The Heath has experienced drying out in many parts of the site for over 150 years, which has had a significant impact on the local ecology. It is a complex issue and the causes of this are not yet fully understood with a number of factors involved. Some research has been carried out on the Heath and other parts of the SSSI (Medcalf, 2017) and includes data for The Glade scrape and flush as well and wet heath on the golf course.

During the 1970s chalk filled soakaways were constructed on the Heath, which will have contributed to changes in local hydrology. The golf club undertakes irrigation and drainage as part of its routine grounds maintenance programme.

Groundwater levels are predicted to rise following the cessation of dewatering associated with mineral extraction in the adjacent Buckland Sandpits as Tapwood Quarry Lake reaches its restoration levels. Reading of groundwater levels by the Environment Agency indicate that levels are rising within the Shag Brook and Wallace Brook catchments. Evidence of this can be seen across the Heath in ditches holding more water and the expansion of damp and standing water in part of the Heath.

Despite this potential rise in groundwater levels the current management plan focuses on the impact of the long-term drying out resulting from detrimental human activity and research seeks to understand the outcome of this environmental impact. Areas of Greater Tussock Sedge indicate where it has been wet in the past.

The Alder woodland in the south of the site in the past would have had water accumulation, due to impermeable layers as a perched table, however now it is reduced due to artificial drainage in the area. The damp boggy Glade is a result of a spring-line and is attracting damp heathland and wetland species.

Of the former wetland areas, one is a hollow to the east of Bonny's Road (known as Bonny's or Harlequin Pond), which was a pond into the twentieth century; another pond (The Long Pond) is located on the golf course fourth fairway; a third pond once existed alongside the Flanchford Road in front of the Heath Church; and there was a large waterlogged pocket of peat within the woodland on the eastern boundary of the Heath.

A number of small remnant wetland areas, which were once more extensive and supported a greater complex of wetland species such as the wet woodland have remained throughout the period of drying out, likely as a result of geological complexities and localised flow from the Lower Greensand.

There has been a 26% loss in wetland plant species in the SSSI since the period 1950-1993 and this species change is associated with the loss of low nutrient boggy ground, shallow ponds and muddy pond margins (Medcalf, 2017).

As there is an impact on special features within the SSSI, Water Level Management Plans for Reigate Heath SSSI were prepared by the Environment Agency in 1996, with updates in 2004 and 2006 and further hydrological conceptual and feasibility reports prepared in 2009.

## 6.5 Soils

This aspect of the Plan requires further research and interpretation of existing information to enable meaningful text to be written.

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[Reserved for additional text under Physical Features]

# 7 Cultural heritage

This section describes historical features that place the Heath in a local and regional context and reflects the findings of the HEFER undertaken as part of the HLS agreement (NE, 2018). The following sections consider history of the Heath i.e. study of past as described in written documents so other past events occurring before written records are considered pre-history. Archaeology is the study of human activity through the recovery and analysis of the material culture (artefacts, architecture, biofacts and landscape) from our past.

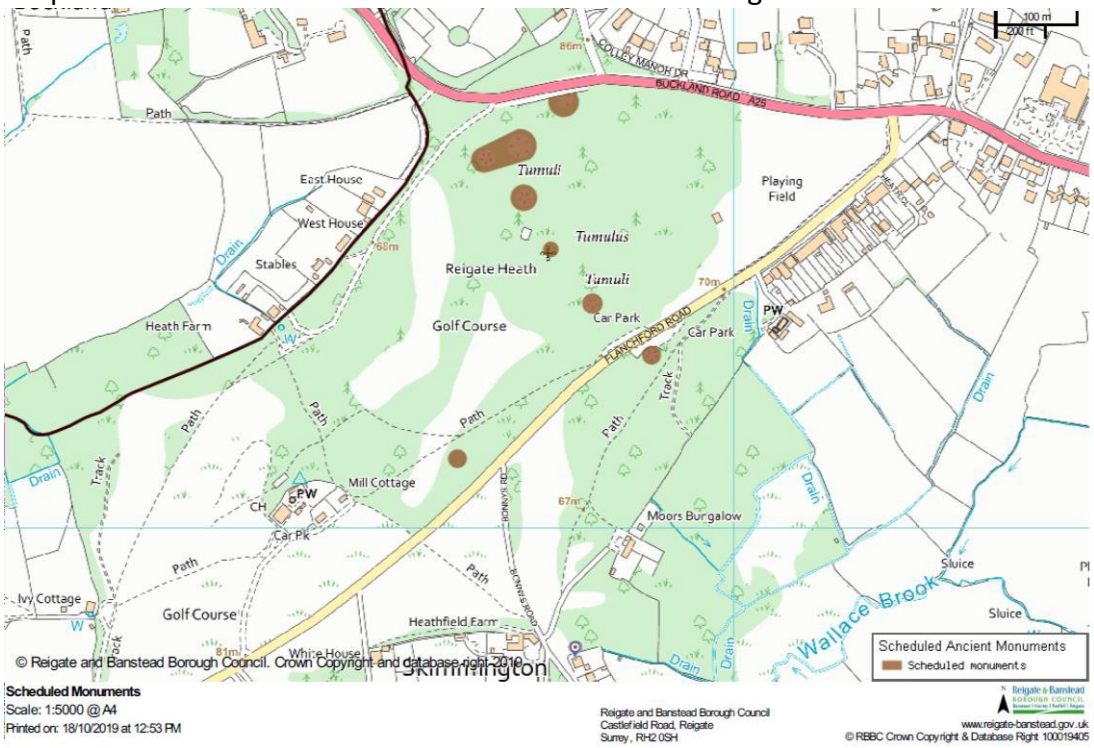
## 7.1 Archaeology

The Heath has a number of archaeological features, which are of significant national value. Information was gathered by survey including Reigate Heath Historic Landscape Survey (Bannister, 1997) and Surrey Archaeological Society (SAS) who undertook archaeological surveys over the winter of 2009/10. There are eight Bronze Age barrows (or tumuli) that are orientated north west/south east on a ridge in the northern area of the Heath. They are scheduled under the AM&AA Act 1979. Other possible barrow sites and archaeological features have been noted elsewhere on the Heath.

A SAS survey confirms that six of the eight scheduled monuments are probably barrows with the remaining two (including one not on the ridge) classed as 'uncertain'. These important features are vulnerable to damage by visitors, horses and machinery and are covered by self-seeded trees developing through natural succession. Not only do trees block views between the line of barrows they also constitute a risk of causing damage through root action and being blown over by the wind. English Heritage provide permission for appropriate works and ensure the important features are protected from harm.

**Map 6. Scheduled Monuments on Reigate Heath**

This map shows the location of Scheduled Monuments on Reigate Heath



There are a number of other finds and landscape features which are of significance such as, several mounds of uncertain origin, a Bronze Age cemetery, hollow ways, lynchets, old field systems, old tree rings and relict tracks with other finds such as worked flints.

Worked flints, some probably dating from the Mesolithic period have been found scattered across the Heath, and indicate that Mesolithic peoples hunted over the area. A collection of flints at Buckland Corner could possibly be interpreted as a flint working site. Worked flints also appear to be concentrated around and on the barrows, probably as a consequence of subsequent dragging up of the soil to form these burial mounds.

The 1892 Ordnance Survey map shows many of the barrows, and other mounds, as roundels planted with pines. Bannister considers the latter more likely to be tree rings than barrows but concludes that they should be treated as barrows until archaeological evidence suggests otherwise. South east of Flanchford Road, opposite the windmill, there is a well preserved example of the tree rings, probably of the early 19th Century.

The only recorded metal work found in the area of a looped palstave from the north-west area of the Heath. Evidence for later prehistory and the Romano-British period is largely lacking, although it is not clear if this is due to limited exploitation of the area or because artifacts and finds have not been located.

Other features on the Heath include a series of hollow ways and relict tracks entering and crossing the Heath from surrounding settlements and farms. Some tracks have been damaged by re-alignment of the golf course and by construction of the permissive horse ride. Evidence of possible field systems have also been noted. Elsewhere the line of the 19th Century racecourse can also be traced in part.

## 7.2 History

There is much evidence that the area was settled in the early medieval period. In the past, the Heath would have been exploited as common land as part of medieval Saxon manorial system. Crops were grown locally on land with richer soil whilst areas of poor land, such as the Heath, were used to provide grazing, turf, bedding and firewood. The common land remained within the ownership of the Lord of the Manor but the cottagers acquired rights recognised under common law, usually of pasture, over the Heath.

The entry in Domesday Book shows that the Heath was held by King William following the Norman invasion and occupation of Saxon lands. It was surrounded by the customary lands of the manor (i.e. lands held by custom and rights of the manor) and by freehold farms (i.e. held freely of the manor) and these holdings had commoners' rights within the local wastes including Reigate Heath.

A survey of the Reigate Manor (dated 1622/3) records that tenants had grazing rights on the commons and wastes. Stock would have been driven through lanes and drove roads, which fan out from the Heath, resulting in the modern layout of the Heath and its surrounds. As agricultural and economic systems changed, particularly in the late nineteenth century and first half of the twentieth century, most rights over the common fell into disuse. The Heath remained in the Lord of the Manor's estates until it was passed onto RBBC.

The most significant impact of that change in land use was the decline and eventual loss of grazing by livestock, which resulted in the natural succession of open heath, grassland and scrub to more closed canopy woodland. The impact of large herbivores on the landscape is now well accepted (Vera, 2000) and wild cattle, ponies, pigs and deer of pre-history were effectively replaced on commons and wood pastures by livestock. Today there are no rights over common remaining on the Heath. Commons, heaths and village greens are important for their cultural heritage, as well as their social, environmental and economic benefits for they provide for local communities (Ashbrook, 2015).

A windmill was built in 1765 on the highest point of the Heath, but it probably replaced an earlier mill building on this site. The mill worked until 1868 and in 1880 the roundhouse was converted to a chapel of ease to St Mary's Parish Church, Reigate. In 1900 the mill was bought by the Golf Club and leased to the Church, but cost of upkeep necessitated its sale to the then Borough of Reigate in 1962.

The Borough Council restored the mill in 1964 and its successor, the Borough of Reigate and Banstead, restored it again in 2000 (sails and exterior), 2003 (roof) and 2010 (renewal of some timbers / boarding and external painting with tar); it still continues as a chapel today. The building is Listed Grade II but is not subject of this land management Plan being kept and maintained by RBBC Property Services Department.

Bonnys Mineral Water Factory was established immediately to the south of the Heath, close to the Skimmington Castle Inn, in the 1860s. Water was drawn from a 300ft (90m) well sunk inside the factory and the company constructed factory buildings, workers cottages and the Victorian front of the public house. Production finally stopped in 1957 and the factory was demolished in 1971, although some cottages remain.

Horse racing was started on the Heath in the early 1830s and a course was laid out and later extended. Races were held from 1834 to 1838 but were not financially successful. There was a revival in 1863 and 1864 but the fixture proved not to be popular.

Historically, Reigate was an important market town and for many years weekly and monthly markets and an annual cattle fair during Easter were held in the centre. In addition, a second cattle and horse fair was established on Reigate Heath in the late 18$^{th}$ Century and was held every 9th December until 1913. It was the last of the local fairs to survive.

The Golf Club was formed in 1895 with 150 members. A lease was agreed with Lady Henry Somerset (Lord of the Manor) and the course itself opened in early 1896. The original Clubhouse was a tin shed but this was soon replaced by the present building, provided by Lady Henry, who was the club's first President. After problems over its condition and maintenance, Lady Henry sold the Clubhouse and its precincts, together with the mill and other outlying buildings, to the Golf Club in 1900.

Lady Henry Somerset died in 1922 and her son sold on the estate. The Heath passed to the then Reigate Corporation, with a stipulation that the Golf Club's lease should continue for another 21 years. After this period it was agreed that the Club should continue to use the

course for a small annual fee, without a lease being signed. This situation continued until 1993, when a new lease and rent was agreed.

Other sports have been played on the Heath with the grassland on the north eastern corner used as a sports pitch for football, stoolball and cricket for many years. There is a small club house and sports pavilion located on the western edge of this grass area that is maintained by RBBC Property Services. Various football clubs continue to play by hiring the pitch on a purely temporary seasonal basis.

## 7.3 Ancient Landscape

Early Ordnance Survey maps (1872 and 1896) record the majority of the Heath as more open landscape, with woodland in western and north-western areas. Clumps of Scots Pine were planted during the 19th Century, particularly on the Bronze Age barrows, and the Bannister reports the survival of Oak pollards in certain areas of the Heath and open grown maiden Oaks with a definite browse line. The conservation of these heritage features reminiscent of common grazing will require halo-release from younger developing trees.

Generally, records, including many early 20th Century postcards, indicate that there were far fewer trees on the Heath than today. There was an increase in woodland canopy on Reigate Heath during the 20th Century, largely due to the cessation of common grazing rights. Other factors have contributed to the dominance of bracken across the Heath, including a major fire, which lasted intermittently for days during the hot dry summer of 1921.

## 7.4 Amenity Value

The significance of the Heath is recognised in a landscape assessment commissioned by Surrey County Council (HDA, 2015). It subdivides the Borough's character into twelve zones and the Heath lies within the GW11: Skimmington Wooded Greensand Hill. The Heath is located in a narrow band of hills running west of Reigate town between the more open Greensand Valley to the north and the lower Wealden landscape to the south. This area is more urbanised than the rest of the Greensand in Surrey and Kent.

When viewed from within the surrounding Low Weald and Greensand Valley areas, these prominent wooded hills rise to a point marked by the Windmill at Reigate Heath. As open common land the Heath represents a historic and now relatively scarce landscape resource in the western suburbs of Reigate town merge into areas of common land. The Heath is vulnerable to further urban development and installation of recreational facilities that detract from the open aspect and semi-natural landscape.

In landscape terms the Heath has many positive attributes (LMS Ltd, 2007). These include views to and from the North Downs (part of the Surrey Hills AONB), the diversity of its own landscape (open heath and grassland, and small woods combined with an undulating topography) and the contrast with the more enclosed landscape to the south and the urban area of Reigate and Redhill to the east.

Other attributes include landmarks such as the Windmill adjacent to the Golf Clubhouse, which can be seen from many points within the locality (including the AONB). Also the adjacent listed buildings, rural settlement such as the cottages along Flanchford Road (part

of the Colley Lane / Flanchford Road Conservation Area) and the range of buildings around the Skimmington Castle public house and Bonnys Road area. Generally these landmarks complement the provision of a diverse landscape for the visitor.

The Greensand Ridge including the Heath is part of Surrey Hills AGLV. This designation aims to preserve landscape of national importance and enhance natural beauty and traditional landscapes of the area, including the protection of flora, fauna, geological and physical landscape features. This landscape and the views provided by it are under pressure from two main threats; increased urbanisation of the surrounding area and Green Belt, as well as the loss of an open aspect as trees establish closed canopy woodland through natural succession in the absence of grazing or active felling.

The Heath, along with other areas, were recommended for extension to the Surrey Hills Area of Outstanding Natural Beauty (AONB) in 2013 with information supplied to Natural England. A final decision has yet to be made (see Appendix 2).

The challenge for this Plan in maintaining this unique landscape character is to protect the Heath and surrounding area from inappropriate development and to promote measures for the conservation and enhancement of the landscape. In particular future site management must address the sometimes contentious issue of cutting scrub and felling trees to maintain inter-visibility of important features and views of the internal and external landscape. The value of mixed deciduous woodland is recognised as being of ecological interest.

# 8 Ecological interest

This section describes ecological features relevant to the site placing it in a local and regional context so that readers and planners have relevant information required for their decision-making and setting policy. The following paragraphs consider abiotic (physical) and biotic (habitats, communities and species) factors affecting the biological interest of the Heath and focusing on the important ecological features influencing nature conservation.

## 8.1 Habitats & Communities

There have been a number of habitat assessments of the site, including the SSSI designation in 1955 (see Appendices 3-6) and the Farm Environmental Plan and Options Map developed for the HLS agreement (see Appendix 7). The priority habitats on the Heath were identified in these documents and the BOA WG10: Reigate Heaths (see Appendix 1).

### 8.1.1 Mixed Deciduous Woodland

The 26.9ha of broad-leaved mixed woodland is a special interest feature of the SSSI and is an important habitat in a local context supporting a range of notable and rare species. Trees and shrubs have always been a feature of open habitats and landscapes such as lowland heath but the quality and extant of woodland canopy depended on the level of grazing and human interference that removed trees and maintained an open aspect.

The canopy consists mainly of lowland dry oak-birch woodland (NVC Type W16 woodland) with scattered Yew, Ash, Sycamore and stands of Scots Pine. There are priority habitats of wet and formerly wet alder-ash woodland (NVC Type W7 woodland). Understorey tree and

shrub species consist of English Elm, Holly, Rowan, Hawthorn, Alder Buckthorn, Elder, Hazel, Wild Privet, Dog Rose and Honeysuckle. There is a vigorous ground flora, ranging from pure stands of Bracken and Bramble to some areas of mixed herbaceous ground flora.

The remnant wet alder-ash woodland is a BOA priority habitat and a special interest feature of the SSSI although the habitat has suffered through drying out. Despite this impact these areas of woodland still support a different ground flora to elsewhere, although many of the herb species associated with wetter habitats appear to have been lost. The wood, east of Bonnys Road, is a result of natural succession to secondary woodland on a former Sphagnum bog with cotton-grass sp. and sundew sp. as it dried out since the 1950s.

Much of the existing secondary, wet and dry deciduous woodland has had minimal active management except felling on heathland. Some scattered trees and stands of Scots Pine and Silver Birch have been felled to restore the lowland heath priority habitat. Management of trees in wet areas could benefit the biodiversity value of these wet woodland habitats, which in some locations are becoming wetter due to the changing hydrology.

Future woodland management on the Heath will seek to retain small woods and trees as an important component of the mosaic of habitats characteristic of the site, including dry mixed broadleaved woodland, alder carr, pine trees and stands of mixed species. However, in areas where natural succession has resulted in woodland encroaching into open lowland heath and species-rich grassland habitats trees and shrubs will be removed or managed.

The SSSI identifies outstanding plant assemblages in Broad-leaved, Mixed & Yew Woodland as a specific designated features of the site. RBBC has a policy for conserving the retained mature and old trees of biological and cultural interest on the Heath.

### 8.1.2 Acid Grassland

Rare acid grassland only covers 0.15% of the county (Surrey Connects, 2015) and this priority habitat for the BOA contributes to local distinctiveness and importance of the Heath. The 8.5ha of acid grassland on the Heath hosts an outstanding assemblage of plants that are a special interest feature of the SSSI. This includes rare and notable plant species, and several acid grassland indicator species identified in a variety of surveys by Middleton. The Heath also has 4.7ha of neutral grassland (NVC types of grassland MG8 and MG10) that are special interest features on the SSSI designation.

Species-rich grassland found on the site is typical of nutrient poor acidic and neutral soils on commons and heaths where grazing has long ceased. There are typically plant communties of Fine-leaved Fescue and Common Bent, but also outstanding assemblages of grassland indicator species including rare or more unusual species. Long-term conservation of this habitat and associated plant species relies on a method of management that prevents trees and shrubs encroaching into open areas and maintains a diversity of sward height. In the absence of grazing this means mowing, collecting and removing the cuttings.

The sports field supports some significant areas of acid grassland, with a good population of Chamomile, a national rarity, as well as a healthy number of indicator species as well as Knotted Clover and Fenugreek. Other notable species include a population of Annual Knawel around football posts. Upright Chickweed is also notable and found on most of the golf

course fairways as well as sports field. Some interesting species have also been noted in the verges adjacent to the northern margin of Flanchford Road. Other important areas are found alongside footpaths and bridleways where scrub encroachment is controlled.

Wavy Hair-grass is a common invader from the areas of lowland heath but borders between habitats always show a mixing of species type. The presence of Daisy, Cat's-ear, Ribwort Plantain and Creeping Buttercup on the sports field and golf course fairways are considered indicators of increased enrichment of the soil and sward. It is necessary to monitor such changes and manage vegetation cover and topsoil if the nutrient poor conditions favoured by species-rich acid grassland and lowland heath are to be maintained.

Some areas of species-rich acid grassland and other grass areas are mown regularly during the summer season maintaining a short sward, which favours many key indicator species. The aim is to remove all the cuttings for the aforementioned reasons.

### 8.1.3 Lowland Heath

Lowland heath covers 3.57% of Surrey (Surrey Connects, 2015) and remnants of this open habitat contributes to local distinctiveness and importance of the Heath. The Heath has the largest area of this habitat on greensand in East Surrey. The Heath has 1.4ha of remnant dwarf shrub communities of both dry and wet lowland heath types and is classified as minor heath Calluna-Ulex (NVC Type H2). This extent of this habitat is listed as a feature of the SSSI and it is a priority habitat for the BOA WG10: Reigate Heaths (see Appendix 1).

Lowland Heath varies according to local climate, soil, drainage, topography and historical management but typically occurs on infertile and free-draining acidic sands, gravels and other superficial deposits. In seasonally waterlogged shallow peat and mineral soils wetter conditions favour plants more usually associated with bogs.

Usually lowland heath is part of a mosaic with other habitats including acid grassland, mixed deciduous woodland, wetland and bare ground. The characteristic dominant vegetation consists of Common Heather (Ling), Bell Heather, Cross-leaved Heath and Gorse as well as Dwarf Gorse. Grasses including Wavy Hair-grass with Bracken and tree species often include Pedunculate Oak, Yew, Silver Birch, Scots Pine and Rowan. Lowland heaths are dynamic ecosystems reliant upon disturbance to remain open and prevent natural succession to woodland.

On the Heath there is a mosaic of wet and dry heath with areas of Purple Moor-grass and rushes as well as areas of mixed heath and grass species, where heath is being restored. Also remnant wet heath areas exist across the site, on the south west slope near the first fairway in heather near the second green, in heather between the fourth and fifth fairways and in particular in a small bog in the north east of the site known as The Glade.

Lowland Heath is very rare in the east of Surrey so the challenge facing future management is whether characteristic lowland heath habitat can be restored from the remnant habitats and species assemblages on a relic heath so isolated from other more extensive and pristine heathland sites further west in Surrey.

The decline of grazing across the Heath has resulted in the development of scrub and closed canopy woodland across the open lowland heath and grasslands. Tree felling has helped to restore open areas of remnant wet heath particularly in the area known as The Glade. Active restoration and conservation management since 1989 has improved the quality of remaining dry lowland heath habitat and improved its important features to a Favourable Condition in Unit 2 according to the latest SSSI Condition Assessment (Steven, 2011).

Strategy for restoring lowland heath habitats on this site includes joining up the restored and remnant areas so that isolated pockets of heathland vegetation can proliferate and these fragile dry and wet heath communities can become more resilient to environmental and human pressures. Local rising groundwater levels may offer further opportunities to restore wet heath habitats and encourage the return of wetland species of conservation significance with appropriate management.

The long-term conservation of this habitat and associated plant species is reliant on adopting a favourable method of management that prevents encroachment by trees and shrubs, as well as maintaining a diversity of height and age of heather and gorse. In the absence of grazing this means cutting, collecting and removing the cut plant material. Also monitoring should identify and manage vegetation and topsoil conditions so that the nutrient poor conditions favoured by lowland heath communities is maintained.

### 8.1.4 Freshwater & Wetland

Freshwaters encompass a wide range of habitats where moving or standing freshwater arising from precipitation, surface run-off, groundwater and springs is a dominant feature and they are a key component of most landscapes in the UK. A network of ponds and ditches have been and should continue to be a feature of the Heath. In contrast wetlands occur in a diversity of situations as a consequence of different geological and hydrological conditions, and most are peat forming as a result of poor decomposition because of waterlogging. There are signs of wet heath, bogs, springs and flushes on Reigate Heath.

These wet habitats are important as they support a variety of common and rare species that favour damp and wet conditions to grow and reproduce. Like the other priority habitats on the Heath they are vulnerable to natural succession and loss of their open aspect, which can hasten drying out and the effects of changing water levels. These freshwater and wetland habitats require monitoring and active management to retain their important features and their intrinsic value to the mosaic of habitats found on this site.

### 8.1.5 Scrub

Scrub can be hard to define precisely, as it is usually a changing successional phase found in in a mosaic with other vegetation types in a variety of habitats, including lowland heath, species-rich grassland, woodland and wetland. Typically scrub is dominated by shrubs or bushes reaching no more than 5m in height but can include young trees, and is categorised as mixed-scrub, hedgerows and bracken. Once seen as undesirable it is generally considered an important component of semi-natural habitats albeit needing management to retain its interest and that of the surround mosaic.

Scrub, in the context of this management plan, includes small trees such as Alder Buckthorn, various species of thorn as well as shrubs such as Gorse and localised patches of Broom are

to be encouraged. Silver Birch and smaller scrub examples of Bramble and Bracken, whilst native species, can become invasive and will require some management so that they do not encroach on the priority habitats. Future scrub management will create varied structure and variety of age ranges. Structural diversity will continue to be a priority for the conservation of naturally important fauna.

### 8.1.6 Bare Ground

Bare ground is not generally recognised as either a broad habitat type or priority habitat in most classifications in the UK but it is considered an important component of other habitat types by providing ecological niches favoured by rare plant and animal species on exposed horizontal and vertical bare soil surfaces. It is an important feature of both lowland heath and acid grassland habitats found on the Heath.

Bare ground is characteristically found along access routes, banks of watercourses, trampled areas, recently cleared areas of vegetation and scrapes. It is found on the Heath in a range of forms including vertical faces such as on bunkers, edges of paths and the paths themselves. It provides an important micro-habitat for solitary bees, wasps and ants (hymenoptera), some of which are rare or notable species, as well as other fauna such as reptiles. Nectar sources need to be close by areas of bare ground to enhance the habitat for insects and surrounding vegetation cover offers refuge for basking reptiles.

Recreation and on-going management activities will continue to create bare ground but this process must be balanced with detrimental impact on other important features of the site, both ecological and historical. However, erosion and soil disturbance from wheeled vehicles, horses and increasing numbers of walkers remains an issue, particularly on existing car parks, sports pitches, the golf course, tracks and rights of way. The extant and impact of bare ground should be monitored to ensure a balance is maintained between recreation and conservation of both natural and cultural heritage of the site.

## 8.2 Species

The SSSI was designated primarily on botanical grounds but the site supports assemblages of plants and animals. There are records for the site and this Plan has a list of important species (see Appendix 9). The records were provided by a variety of different local naturalists and biological groups. Further surveys, surveillance and recording for all groups would benefit this Plan and recommend future management of the site (see Appendix 13).

### 8.2.1 Fungi

A number of field trips have taken place on Reigate Heath including with Surrey Fungus Study Group, West Weald Fungus Recording Group and British Mycological Society as well as by experts such as Dick Alder, some as recently as 2015. Some rare and unusual fungi have been recorded. The most productive areas were the woodlands with decaying trees. Also several waxcaps have been found in the acid grassland areas of the sports field and between the 1st and 2nd fairways, which are indicative of unimproved grasslands.

### 8.2.2 Lichen

In the woodland a variety of foliose, crustose and bushy lichen (small number of common Lichen were identified to species level) were noted during the 2017 visits (I. Girvan pers. comm., 2017).

Additional species have been recorded in past surveys, notably Middleton (2002, 2005-6, 2010-2011 and 2014) in association with the acid grassland around the area of the former cricket pitch. Cladonia sp. are an important component of heathland habitat

### 8.2.3 Bryophytes

There is little current data for bryophytes, although there are recent records available from Susan Medcalf. Additional species have been recorded in past surveys, notably Middleton (2002, 2015-6, 2010-2011 and 2014) in association with the acid grassland.

It is recommended that British Bryological Society are invited to record here as the bryoflora is likely to be varied owing to the mosaic of different habitats including woodland, old trees, decaying wood,heathland, grassland, wetland and bare ground.

### 8.2.4 Vascular Plants

There is an extensive list of flowering plants, trees and shrubs taken from the Species List at Surrey Biological Information Centre (SBIC, 2017). The SSSI designation cites the outstanding assemblages of plants associated with Broad-leaved, Mixed & Yew Woodland, Neutral and Acid Grassland priority habitats as special interest features. The rare and notable plant and indicator species for priority habitats are highlighted in the BOA (Appendix 1).

### 8.2.5 Fauna

Notable animal species are included in the list of important species (see Appendix 9) that was produced from recent surveys carried out by Surrey Wildlife Trust (see Appendix 13). This data complements previous surveys carried out by experts.

**Invertebrates**

During the recent invertebrate survey (Dodd, 2018) a total of 375 invertebrate species were recorded of which 14 species have a recognised conservation designation. This included two spiders, two weevils, one beetle, Tawny Cockroach, one leafhopper, one rhopalid bug, one mining bee, one jewel wasp, Brown Tree Ant and one solitary bee; as well as the Small Heath and Cinnabar Moth that are SPI. A further 62 species are considered to be Nationally Local in their distribution due to their restricted geographic range and/or habitat fidelity.

Statistical analysis using the Invertebrate Species-habitat Information Systems (ISIS) found the acid grassland, the lowland heath and scrub edge habitats were in Favourable Condition by the standards applied to Site of Special Scientific Interest.

An earlier invertebrate survey of the entire SSSI (Hawkins, 2005) recorded a total of 548 species of which 14 were Red Data Book species and 33 classed as Notable. Many species characteristic of lowland heath were found, including moths, beetles, bugs, flies and bees; this included a number of ground-living or ground-nesting species, typical of heathland or sandy soils such as solitary or digger wasps.

A later survey, specifically of the golf course bunkers, recorded mostly insects but also included five spiders (Hawkins, 2008). This survey concentrated on the bunkers and found *Harpalus anxius*, normally a coastal species of sand dunes with few inland records, but well established at this time. The bunker on the seventh fairway with adjacent flowering bank and close to woodland was the most prolific/species-rich.

Bees and wasps found typical of this habitat included mining bee A*ndreana barbilabris* and its cuckoo *Sphecodes pellucidus*. The Bee-wolf *Philanthus triangulum*, a solitary wasp that preys on honey bees. *Astata boops* a red and black wasp that preys upon shieldbug nymphs and its cuckoo *Hedychridium roseum*. The Five Banded Tailed Digger Wasp was recorded on the Heath and its conservation is critical in Surrey. It uses loose bare ground to burrow and lay its eggs, therefore this type of microhabitat is important.

Early (2007) and Baldock (2008) surveys brought the bees, wasps and ants total up to 187 species, at the time bringing it into the top ten sites for aculeate Hymenoptera in the county. This in spite of it being remote from the other nine sites which are all on or near the western lowland heath in Surrey and are mostly associated with species nesting in the dead wood of defunct willow trees on Old Moors Farm.

There was a butterfly transect undertaken by the Surrey & SW London Branch of Butterfly Conservation. The most recent data being for 2017 where 23 common species were noted, with the most common being the Meadow Brown, which is an indicator of lowland grassland habitats. None of the rarer species or species associated with lowland heath (Grayling or Silver-studded Blue) were seen.

Several moth trapping sessions have taken place over the years by local moth experts either immediately adjacent to the Heath or around the Golf Club and a variety of species recorded suggesting a more formal survey should be undertaken.

**Reptiles**

The recent survey (Guenioui, 2017) concluded that Slow-worm and Common Lizard were distributed across the site in multiple locations. Two Grass Snakes were recorded east of Bonnys Road and south of Flanchford Road, although anecdotal evidence suggests they are present across the site. Adders have been recorded in gardens on the northern boundary in the past but they are not thought to be present on the Heath itself.

**Birds**

The bird activity survey by SWT (Learmont, 2018), established that the Heath supports a medium diversity of bird species, given the mosaic of habitats present and the size of the site. Breeding behaviour was frequently observed across the site on all five survey visits. Male individuals were often observed singing in the same location on each visit indicating they were defending a breeding territory.

A total of 36 species of bird were recorded using the Heath of which nine species are Birds of Conservation Concern (BoCC4) and four are SPI (Linnet, Herring Gull, Dunnock and Song Thrush) and Redwing is listed as Schedule 1 species.

In general the woodland habitats supported the highest levels of bird activity and diversity. In particular, the woodland edges and woodland glades seemed particularly valuable habitat as this was where the majority of activity was observed. Furthermore, the areas of mixed broad-leaved woodland were favoured by most species over areas of Scots Pine dominated areas found on the eastern side of the site.

Woodland birds such as Wren, Great Tit, Blackbird, Robin, Blackcap and Nuthatch were also frequent in these areas. Treecreeper, Goldcrest, Stock Dove and Mandarin Duck were found but less frequently so. It is important to note that no bird species normally associated with lowland heath were recorded so it appears that historically recorded Dartford Warbler, Stonechat and Crossbill are now absent from the site.

However, the Gorse scrub is often associated with Bramble, Broom and developing Silver Birch trees, which attract a slightly different assemblage of bird species by providing alternative nesting opportunities and food sources. Dunnock and Common Whitethroat were found throughout the site using the areas of Gorse scrub, often on the ecotone between open habitat types and woodland. Approximately 20 Linnet were observed using the Gorse scrub in and around the golf course over a period of three months and across several site visits.

Another valuable feature being utilised by some bird species, are the mature trees found throughout the site. In particular where these trees are located either on the edge of woodland or out in more open grassland and heathland they are used as favourite singing perches. The community of veteran trees and oak pollards offer hole nesting opportunities for woodpecker and birds of prey.

**Mammals**

A small mammal assessment was incorporated into the SWT reptile survey (Guenioui, 2017). Sightings or field evidence included Wood Mice, Common Shrew, Field Vole, Grey Squirrel, Brown Rat, Badger and Rabbit. Plenty of Mole hills were evident during the 2017 site visits and Fox and Roe Deer have also been reported using the site.

A SWT bat activity survey (Girvan, 2018) was undertaken to determine which bat species utilise the site, the level of activity, and how they use the site for foraging and commuting. The range of bat species confirmed by this survey is high, with eleven confirmed species of out 18 within the UK, indicating a high diversity of species.

These are Barbastelle, Serotine, Daubenton's, Whiskered, Natterer's, Leisler's, Noctule, Nathusius' Pipistrelle, Common Pipistrelle, Soprano Pipistrelle and Brown Long-eared. The results of the surveys indicated that the site provides excellent quality habitat for Common Pipistrelle and good to moderate quality habitat for a range of other species.

## 8.3 Management Recommendations

In addition to identifying rare, notable, protected and common species found on the Heath the 2018 SWT ecological surveys made recommendations to create, restore, maintain and enhance the priority and common habitats to benefit wildlife (see Appendix 13). Although species are not evaluated as an important feature of the Heath in their own right the various

assemblages found on the Heath contribute to the biodiversity and scientific interest of the priority habitats identified in this Plan.

Therefore whilst the primary focus of future conservation is habitat management, restoring, maintaining or enhancing the diversity of rare, notable, protected and common species is both an indicator of the success of that management and health of the Heath. The main ecological recommendations are to create, restore, maintain and enhance the diversity in terms of species, age and structure of vegetation communities, bare ground, ecotones and connectivity between habitat types and features.

# 9 COMMUNITY INVOLVEMENT

This section describes various aspects of community involvement that are relevant to the management and protection of the Heath. This places it in a local and regional context so that readers and planners have relevant information required to assist their decision-making and setting policy. In addition to the variety of people and groups engaged in the process of planning and delivering work on the Heath this section considers educational activities and interpretation of information to inform visitors.

## 9.1 Consultation

An important aspect of engaging local communities in the protection and conservation of the Heath is by consultation about the important features and management activities. Views from public consultations and other sources fed into this Plan, including "A *Common Purpose – A guide to Community Engagement for those contemplating management on Common Land'* (Natural England, 2012).

This section recognises those organisations and groups that actively contribute to the past and present conservation and management of the site, or formally use, or have an interest (vested or otherwise) in the future of the Heath. This includes key stakeholders, the landowner, volunteers, statutory bodies, agencies and local residents.

### 9.1.1 Reigate and Banstead Borough Council (RBBC)

RBBC is the owner of the site. They are responsible for the contractors, staff and resources and are involved in the day-to-day operations for the site and specific management projects such as tree health and safety.

### 9.1.2 Reigate Heath Management Steering Group (RHMSG)

RHMSG has representative members from the groups below and is supported by two specialist sub groups, known as the Reigate Heath Habitats Sub-group and the Historic Environment Sub-group (see Appendix 12).

### 9.1.3 Reigate Area Conservation Volunteers (RACV)

Since 1989 this active group of dedicated volunteers has undertaken practical management on the Heath and continue to provide a vital service for maintaining and enhancing the site.

### 9.1.4 Natural England (NE)

NE has an advisory role on the habitat management and is responsible for monitoring the condition of the SSSI. Work in the Heath has been funded by a Higher Level Stewardship (HLS) grant for a ten-year agreement (see Appendix 7).

### 9.1.5 Surrey Archaeological Society (SAS)

This charity supports the study of the archaeology and history of Surrey.

### 9.1.6 Reigate Heath Golf Club (RHGC)

The Golf Club provides a practical management service of the golf course, including the feature habitats within the site.

### 9.1.7 Reigate Heath Riders Group (RHRG)

Reigate Heath horse riders and their interests are represented by one of its members on the Reigate Heath Management Steering Group.

### 9.1.8 Reigate Heath Residents Association (RHRA)

RHRA was set up in 2015 to protect the local environment and amenities and is represented on the RHMSG so that they can provide their views of the local residents and on matters of local interest.

## 9.2 Other Stakeholders

### 9.2.1 Friends of Reigate Heath (FoRH)

This group is not currently active. It was formed in 2005 and had a representative on the steering group to support the biodiversity interest of the Heath and provide communication from heath users. During its time it created and distributed newsletters, undertook guided walks around the Heath and assisted in exhibitions.

### 9.2.2. Reigate Society

This society has several aims including to '*conserve and improve the environments of Reigate'* and look to the *'retention and improvement of existing open spaces*.' (Reigate Society, 2018).

### 9.2.3 Reigate Priory Museum

The museum is currently closed, but it does hold a variety of information on Reigate Heath. There is no representative on the steering group.

### 9.2.4 Holmesdale Natural History Society (HNHS)

This charity exists to promote the study of natural history, local history, archaeology and geology in the vicinity of Reigate.

## 9.3 Communication

The effective collation, interpretation and communication of information about the Heath, its important features and their protection and conservation will be vital for successful future management of the site. In addition to the various people and groups already listed who are engaged in the process of planning and delivering work on the Heath, this section considers educational activities and interpretation of information to inform visitors.

### 9.3.1 Educational Use

The Heath is recognised as a valuable educational resource but there has been no formal development of this opportunity. However, visiting educational organisations and special interest groups have provided up-to-date research projects, surveys and data collection that make significant contributions to the interpretation of and learning about the Heath.

The site does not have any provision for large groups of visitors with limited facilities such as indoor cover or toilets available at the Sports Pavilion. It is unlikely such facilities would be built because there is a desire to restrict urban development and clutter of countryside and urban furniture so that the semi-natural conservation interest and visual amenity of the Heath is maintained.

Reigate Grammar School includes an annual site visit for GCSE Geography students to learn about fragile environments as part of their course work and carry out fieldwork tasks facilitated by the Steering Group. Hadlow College (affiliated with Greenwich University) has visited the site on a number of occasions with students studying Land Management.

The RACV task days provided informal training about practical nature conservation methods and ecology, to a variety of adults and groups of Duke of Edinburgh Award students.

An annual programme of guided walks on the Heath were led by RBBC staff and volunteers. Also HNHS, Surrey Fungus Groups and British Mycological Society have undertaken walks to look for wildlife.

In 2007, the Surrey Heathland Project's exhibition, 'Change on the Heath' was hosted for two weeks in the Sports Pavilion and over 700 visitors learnt about heathland conservation in Surrey and on the Heath.

### 9.3.2 Interpretation Provision

A notice board was erected in the Flanchford Road car park in 1998. This board carries details of events on the Heath, information on any impending management work, the byelaws and an informative map of the Heath. It is due to be replaced.

A leaflet on the Heath was first produced in 1998 and this was revised and re- published in 2003. The leaflet is available on the RACV and RBBC websites. Regular newsletters were produced and distributed by the FoRH between 2007 and 2010, but no longer undertaken as this group does not exist.

The visitor survey (Hill, 2016) failed to reach a consensus about signage with some users asked for less signs, but others wanted more information about recreational use However, 67% of respondents wanted more information to be available about the Heath itself to be provided on existing noticeboards. The questionnaire used for this visitor survey is attached to this Plan (see Appendix 14).

One of the conclusions of this survey was that providing information to raise awareness of rights and responsibilities towards other users and the natural heritage should be a priority. Interpreting information through a variety of media would help to alleviate some issues and inform visitors about the value of the important features, why conservation is necessary and the reasons for management activities.

In the context of preserving a natural aspect to the Heath and its surrounds it may be more appropriate to explore opportunities to develop online, mobile phone or print based methods for interpreting information about the site and its features and use so that a proliferation of physical signage and structures is avoided or reduced.

# 10 Recreational use

For those living and working in Surrey green spaces are all around, a vital part of everyday life; places to pass through on the way to work or school, open spaces where adults exercise and children play or where to encounter nature and wildlife. Green spaces such as the Heath are our open-air living rooms or outdoor leisure centres that contribute to our health and well-being, both physically and mentally. The challenge for site managers is to continue to provide this resource for people whilst conserving the wildlife and natural features that makes them so attractive to visitors.

The Heath is designated common and open access land under the ownership of the Local Authority and available for informal recreation at all times. Informal recreation on the Heath is rated as highly significant in public consultation exercises, particularly as the quality of this environment is unique within the Borough. Formal recreational activities such as golf and football are also permitted under tenancy and temporary hire agreements and are enhanced by the quality of the environment in which they take place.

The Heath is well regarded by many users with a Residents Survey (RBBC 2011) concluding that '*parks, open spaces and playgrounds*' and '*access to nature*' are in the top 10 of '*factors which are important in making somewhere a good place to live*'. The Heath is an integral component of the green infrastructure of the Borough and part of a network of diverse open spaces but it is important to remember that the site is not an urban park or garden and thus the provision of recreational facilities maybe considered inappropriate to its natural aspect in the wider countryside.

## 10.1 Access to Site

Users can arrive at the site from a variety of different ways including by car, horse, bike and foot (see Map 1). The Heath is immediately adjacent to the A25 road that runs west from Reigate to Dorking in the neighbouring Mole Valley District. This road provides access by private and public transport to the Heath.

RBBC maintains two small car parks either side of the Flanchford Road that serve the south, north central and east areas of the Heath. A third small car park is located adjacent to the golf course and clubhouse, which gives access to the western side of the Heath. RBBC also maintains access tracks to Ivy Cottage, Dungates and Heathfield.

There is an access road to the golf course that is maintained by the RHGC and RBBC (see Appendix 8). Vehicular traffic arrives via a track to the south of the compound and enters the building complex via the eastern boundary. Bonnys Road provides access to Skimmington Castle Pub and adjacent properties and is maintained by RBBC. There is another road on the northside of the Heath that provides access to residential properties in Mole Valley.

A network of public rights of way (footpaths and public bridleways) link the Heath with the surrounding countryside and local area (see Map 1). The Greensand Way Long Distance Path crosses the Heath and provides pedestrian links to Dorking and Redhill. A public bridleway links Flanchford Road to the area around the Skimmington Castle.

## 10.2 Carrying Capacity

Providing car parks and network of good paths makes the Heath accessible for visitors, which need to be balanced with the need to protect and conserve the important but fragile natural features of the site. Part of the consideration for managers in achieving this balance is the overall carrying capacity of the site and its potential detrimental impact on the Heath.

The carrying capacity is a measure used to evaluate the level of recreational use at a green space. The visitor survey (Hill, 2016) identified that 75% of visitors arrived at the Heath by vehicle. Thus, once the car parks are full, the site is at capacity. The public car parks on the Heath can accommodate a total of 64 vehicles broken down as below:

Flanchford Road (west) = 22 vehicles

Flanchford Road (east) = 22 vehicles

Windmill Golf Clubhouse* = 20 vehicles
(* excludes the private parking area for the Golf Club).

The projected carrying capacity of the Heath is 320 people. The car parks across the Heath are increasingly full at peak times and for longer periods over the day, so the Heath regularly reaches and exceeds this projected carrying capacity. Also the car parks are used by groups of hikers and horse boxes that reduce capacity at peak times.

However this projection only takes into account the amount of spaces currently available on the site and ignores other street parking. It also does not take into account the sensitivity of the important features on the Heath and the capacity of the site to absorb this level of visitor use (S Elson pers. comm., 2018). Visitor numbers and impact on the site should be monitored and methods of controlling access may need to be considered if important features are to be protected and conserved.

## 10.3 Rights of Way

Pedestrians have a right to roam over the Heath under the CROW Act and Greensand Way Long Distance Footpath crosses the Heath. Within the Heath horse riding is restricted to a public bridleway and a permissive horse ride. Cycling is only permitted on roads and public bridleway and is not allowed on the rest of the Heath or permissive horse ride, as stipulated in the byelaws. A map of public rights of way, permissive horse rides and access routes is attached to this Plan (see Map 1).

Some paths and routes have migrated as vegetation has changed or new desire lines have developed. Path surfaces vary from bare mineral soil to short vegetation, or imported surfacing materials, which should be appropriate to the surrounding geology. No systematic data is available on erosion or changes in path widths and this is an issue that should be monitored to ensure fragile habitats are protected.

Foot paths generally are not suitable for wheelchair access. Pushchairs can get access to some of the site, although some paths would be difficult to negotiate. There is a permissive horse ride along the edge of the sports field and open grassland used for easier access.

## 10.4 Visitor Surveys

The visitor survey (Hill, 2016) has proved useful in determining public opinion about the use and management of the Heath and has helped identify priorities (see Appendix 14). The user survey showed that the Heath is regularly visited by local people to take part in a variety of informal recreational activities and sports, which include:

- 60% to exercise (walking or running)
- 40% walking dogs
- 40% for golfing
- 31% using the Golf Clubhouse facilities
- 21% watching wildlife
- 20% meeting with friends and family
- 14% visiting the Heath Church in the Windmill
- 7% horse riding
- 7% cycling

When asked about the management plan for the Heath 95% of respondents considered that '*managing the heath's diverse landscape*' was important. Informal recreational activities such as walking, exercising of dogs and meeting up with friends and family on the Heath often occur because of the nature and enjoyment of the Heath. This enjoyment varies from simple appreciation of the landscape and open space to active interaction with wildlife and the environment in the form of bird watching or other observation of nature.

Golfers comment that they pay a great deal for maintenance of the Heath so have invested in the site. The survey showed that 16% of respondents visit every day, whilst 44% visited once a week. Data shows 63% visit on weekdays and weekends and 61% stay a short time of between one or two hours and that most visitors come by car.

The visitor survey also indicated that 88% of people questioned recognised the '*competing demands of activities sharing the same area of the site*' as important or very important. Only 34% polled thought '*improved sports facilities*' was important or very important but that may reflect the profile of respondents.

Visitor levels are likely to increase as the local population rises and people are encouraged to get outdoors for their health and well-being. Interestingly some visitors chose not to use the Heath for a range of reasons, including a dislike of changes by management, trouble parking, too crowded, too much dog waste and too much emphasis on golf. A challenge facing future management is balancing recreational demand and visitor expectations with maintaining the natural aspect and important features valued by visitors.

## 10.5 Facilities & Infrastructure

Remnant structure of the Windmill is Grade II listed and RBBC Property Services Department is responsible for interior and exterior maintenance of this old building. The lower part of the mill is rented to St Mary's Parish Church and used as a place of worship. Whilst internal maintenance is the responsibility of the Parish, any renovation works must be referred to RBBC for approval and exterior maintenance is the responsibility of the Council.

There is a private Clubhouse on the golf course includes an enclosed yard with maintenance buildings, water tank, two cottages and some car parking. The older, traditional structures associated with this area of historic rural development are listed buildings, including Mill Cottage, its own outbuilding and The Granary that are all Grade II Curtilage.

There is a Sports Pavilion building located next to the sports field in the north east corner of the Heath and it is currently used as a football changing room. It has been used previously for public events organised with RBBC and is maintained by the Council. As with the other buildings on site the maintenance and renovation of this built environment rests with the Property Services Department rather than Green Spaces who deliver the work activities described in this land management plan.

There are several benches across the Heath and the visitor survey (Hill, 2016) revealed that 61% of respondents favoured retaining seats on the site. There is a management policy to balance provision with detrimental visual impact.

## 10.6 Sport Activities

These activities are deemed those that are organised by a club or organisation and require some degree of additional recreational infrastructure for visitors to take part. Formal users represent a wide cross section of the public and not all will come from within the Borough. The sports activities on the Heath are controlled by tenancy agreements and temporary fee paying licences issued by RBBC Legal Services.

### 10.6.1 Golf

The golf course (18 holes played on a nine-hole course), occupies only 0.3% of the Heath and is managed by RHGC. The Club signed the current lease with RBBC in 1994 and it expires in 2048. Play is permitted seven days a week, except during the summer when, on Sundays from 1 June to 30 September, play ceases at 2.30pm.

Golfers are meant to stop play and give way to walkers crossing the Heath. Signs around the course are designed to help reduce the risk to visitors by alerting them to the hazard posed by flying golf balls. Byelaws for the Heath set out rules to help ensure that the recreation and enjoyment of all legitimate users is protected.

The Clubhouse complex, which includes variety of buildings related to maintenance of the course is located on the highest point of the Heath near the Windmill and together with the immediate surrounding area these structures are excluded from the SSSI.

Reigate Heath Golf Club, through its Greens Committee, maintains the leased area and is actively involved with the practical conservation of the SSSI, LNR and Common Land, which includes greens, tees, fairways and some areas of rough. Bonny's Pond is used as a water hazard as part of the 6$^{th}$ hole on the course.

### 10.6.2 Football

The Sports Pavilion and Pitch in the north east corner of the Heath was used historically by Reigate Heath Cricket Club but is now used primarily as a changing room for football since the Cricket Club closed.

Football has been played at this location for many years by Reigate Hill Football Club but since their lease lapsed the temporary pitch is now provided on hire through RBBC Green Spaces Department. Play is limited to a 15 week hire with matches played fortnightly during the season (September to April) only. RBBC is responsible for grass cutting, line marking, erection, removal and maintenance of goal posts, nets and corner flags. The hirers put up and take down posts and litter pick before and after each match.

## 10.7 Informal Recreation

These are activities can be best defined as those where visitors use the Heath as the primary recreational resource with no additional facilities over and above maintaining the rights of way. Those using the Heath for informal activities are a harder group to characterise as they have no formal representation through sport club membership.

Such users represent a wide cross section of the public and whilst frequent visitors are likely to be local to the Heath others are probably drawn from throughout the locality. Informal recreational activities are controlled by local byelaws. Communication with these users is restricted to noticeboards and signs on site, or canvassing by employees and volunteers sharing information and seeking views as in the recent survey.

### 10.7.1 Walking

Informal use is largely for walking and in addition to the local network of rights of way and the freedom to roam across the Common Land the Heath is crossed by the Greensand Way Long Distance Footpath.

Enjoying the experience of a green space, engendered particularly by the open aspect of semi-natural landscape of the Heath, is perceived as significant, but appreciation of the woodlands is also important. This is an all year activity and it is likely most walkers are local, albeit the long distance path will bring more committed hikers to the Heath.

### 10.7.2 Exercising Dogs

Many walkers who use the Heath informally for walking also exercise their dogs and there is anecdotal evidence of increased use by professional dog walkers. It is possible that Dog Control Orders on other green spaces in the Borough is encouraging dog walkers to move to using the Heath as their main venue further encouraged by dry ground conditions in the winter. This aspect of recreational use needs further investigation.

Dog faeces and urine poses a health hazard to people and other animals, as well as having a negative impact on fragile and important habitats that require low nutrient levels for their important features to be maintained. Ineffective dog control can result in the disturbance of wildlife and the quiet recreation and enjoyment of other visitors. This is another aspect that needs monitoring.

### 10.7.3 Riding Horses

The Heath is an attractive area in which to ride and in order to facilitate access RBBC created a 'figure of eight' permissive horse ride in agreement with the Reigate Riding Club, the Golf

Club and other users in December 1981. Off bridleway riding is now restricted to this way marked, permissive horse ride. The site is popular and well used.

Horse riders are drawn from a relatively wide area and the car parks are used by horse boxes for loading and unloading, as well as riders accessing the Heath on horseback from local bridle ways. This interest obviously increasing the numbers and weight of vehicles using the car park and surrounding roads. There is a detrimental impact of hooves on soft sandy soils causing ground erosion and rutting in the centre of bridleways and rides.

Whilst local horse riders are engaged in the Steering Group horses do have a detrimental impact on the site because of the unstable nature of a geology dominated by sands. For example in the north-west corner of the Heath the rare wet woodland priority habitat has been increasingly eroded over the years by horse riding and this damage needs addressing to protect and conserve this important feature.

The potential effect on fragile and important biological and historical features should be monitored and appropriate measures taken to reduce harm.

### 10.7.4 Cycling

Cycling is only permitted on the public bridleway and is not allowed on the rest of the Heath or permissive horse ride, as stipulated in the byelaws. Cycling to and from the Heath should be encouraged as potentially it will reduce the detrimental impact of cars. However, cycle routes converge at the Heath and some cyclists short cut across the site.

There is some misuse of the Heath by off-road cycling (i.e. off the public bridleway) causing disturbance to other visitors and damage to important features. In the context of conserving fragile and important habitats and scheduled monuments this misuse should be monitored and appropriate action taken if it is identified as a significant problem.

RBBC has made contact with a number of local cycling clubs to raise awareness about rights of access and the threat to important but fragile features. The clubs have offered to make their members aware of the Scheduled Monument and SSSI status of the Heath.

## 10.8 Enforcing Byelaws

There are byelaws in place for *'the Common known as Reigate Heath'* that were made under the Commons Act 1899 (Updated 1993) and attached to this Plan (see Appendix 10).

These laws control a number of informal pastimes and recreational activities, such as flying model aircraft, trading, hunting wildlife, grazing livestock, lighting fires, driving vehicles, riding horses, playing games, discharging missiles and drying laundry.

Officers from RBBC Greenspaces Department who carrying out grounds maintenance on the site work with their colleagues from the Joint Enforcement Team (JET) and Legal Services to enforce the byelaws.

# 11 Important features

The following section uses information gained in previous sections to identify and describe the most important features of Reigate Heath LNR. In particularly this section focuses on those physical, historical, ecological, cultural and recreational aspects of this protected site that require management to restore, maintain and enhance their interest.

## 11.1 Identification of Key Features

Broadly speaking the interest on the Heath is primarily archaeological, historical and ecological but includes community involvement and recreational use. The following is a selection of key features with a summary of their interest that represents previous site evaluations. The features are listed in no particular order of importance:

- **Geology & Hydrology** – these features influence vegetation cover and land use but the limited interpretation of data requires more analysis to inform decision-making.
- **Archaeology** – there are various archaeological finds including the collection of earth barrows or tumuli that are scheduled monuments and key features.
- **Common Land** – this modern designation with a right to roam represents an important historic land use with oak pollards and veteran trees hinting at past grazing.
- **Listed Buildings** – the various old buildings, in particular the windmill add to the historic interest of the site but are not subject of this land management plan.
- **Site of Special Scientific Interest** – designated for broad-leaved mixed & yew woodland (including W7 wet alder-ash & W16 dry oak-birch NVC types), neutral grassland (MG8 & MG10 NVC types) and outstanding plant assemblages associated with the three priority habitats and acid grassland.
- **Local Nature Reserve** – declared in context of WG10: Reigate Heaths BOA the mosaic of the priority habitats, with lowland heath, acid grassland, veteran & notable trees, scrub, freshwater, wetland & bare ground habitats has ecological interest. The Heath supports assemblages of rare, indicator & notable plants; and invertebrates.
- **Visual Amenity** – the landscape views enjoyed today are a product of past land use and the semi-natural habitats making the site an Area of Great Landscape Value.
- **Recreational Use** – all these key features combine to provide an open space available for informal recreation and enjoyment, as well as sport and an outdoor classroom for education and interpretation of information about conservation.

These key features have been discussed in greater detail in previous site management plans for Reigate Heath prepared for RBBC by local consultant Helen Neve at Land Management Services (RBBC 1993, 1999, 2006 & 2010).

## 11.2 Evaluation of Features

The above list of key features was selected based on information collated in these earlier management plans and the results of subsequent surveys described in the previous sections of this Plan. The next stage is to evaluate them in a national, regional and local context.

The lack of available data for geology and hydrology on the site meant it was not possible to evaluate these features effectively so they have not been included separately in the list of important features. The influence of these physical features are however, referred to as a significant factors affecting freshwater and wetland feature of the Heath.

From the various archaeological finds the **Scheduled Monuments** represent an important feature in their own right with regard to prioritising future management.

A combination of the common land status, veteran trees, listed buildings and amenity value of the Heath mean the **Historic Landscape** is an important feature. Listed Buildings were not included on their own because their conservation is outside the remit of a land management plan, albeit they contribute to the history and visual amenity of the Heath.

After considering the SSSI citation, BOA strategy and LNR declaration there are five habitats that merit priority conservation by RBBC in a national, regional and local context. Therefore **Lowland Heath**, **Acid Grassland**, **Mixed Deciduous Woodland**, **Wet Woodland, Freshwater** and **Wetland** habitats were selected as important features.

Whilst in ecological terms this site is valued mainly for its mosaic of diverse and rare habitats there are a number of notable species (flora and fauna) recorded. So whilst conservation activities will focus on habitat rather than species management, consideration must be given to those assemblages shown as specific features of interest for priority habitats.

All these key features combine to provide an open space available for informal recreation and enjoyment of the public, as well as opportunities for sport, education and interpretation of information. The results of visitor questionnaires and customer surveys support the selection of **Recreational Use** as the final important features for this Plan.

## 11.3 List of Important Features

The following table does not represent all the features found on the site but lists the higher priority features to be protected and conserved by this Plan. This list is up-to-date at time of writing but it is anticipated that annual reviews of this Plan will ensure that new data about features should be included when available.

1. Scheduled Monuments
2. Historic Landscape
3. Lowland Heath
4. Acid Grassland
5. Mixed Deciduous Woodland
6. Wet Woodland
7. Freshwater & Wetland
8. Recreational Use

## 11.4 Table of Important Features

| Feature | National Designation & Legal Protection | Features of Principal Importance | Red Data List | Regional & Local Importance |
|---|---|---|---|---|
| **Scheduled Monuments** | National significance - designated as Scheduled Monuments.<br><br>Legal protection of AM&AA Act 1979. | Collection of Bronze Age earth barrows or tumuli | | High regional and local importance to Surrey, the local borough and Reigate Heath. |
| **Historic Landscape** | **Common Land**<br>Registered as Common Land.<br><br>Legal protection Commons Act 2006, CRoW Act 2000 & Common Regs 2014. | **Landscape Value**<br>Part of the Surrey Hills Area of Great Landscape Value (AGLV) with possible inclusion into Surrey Hills AONB. | | This common (heath) important to Surrey, the local borough and Reigate.<br><br>Listed Buildings - windmill |
| **Lowland Heath** (Dry & Wet); including scrub, scattered trees & bare ground | National significance through its SSSI designation, with legal protection of the W&C Act 1981 (amended).<br><br>Dwarf shrub heath named as a special interest feature in the SSSI citation. | Nationally scarce Heathland HPI, protected by the planning system and NERC Act 2006.<br><br>Plant, invertebrate, amphibian, reptile, bird & bat SPI species listed in BOA (see Appendix 8). | Dodder<br>&<br>Petty Whin present. | Local Nature Reserve, high local importance regionally and locally. |
| **Acid Grassland**; including scrub, scattered trees & bare ground | National significance through its SSSI designation, with legal protection of the W&C Act 1981 (amended).<br><br>Acid grassland named as a special interest feature in the SSSI citation.<br><br>Outstanding assemblages of plants are named special interest feature. | Nationally scarce Acid Grassland HPI, protected by the planning system and NERC Act 2006.<br><br>Plant, invertebrate, amphibian, reptile, bird & bat SPI species listed in BOA (see Appendix 8). | Annual Knawel<br>&<br>Chamomile present. | Local Nature Reserve, high local importance regionally and locally. |

| Feature | National Designation & Legal Protection | Features of Principal Importance | Red Data List | Regional & Local Importance |
|---|---|---|---|---|
| **Mixed Deciduous Woodland**; including areas of lowland dry oak-birch wood & notable trees | National significance through its SSSI designation, with legal protection of the W&C Act 1981 (amended).<br><br>Broad-leaved Mixed & Yew Woodland is named special interest feature in the SSSI citation.<br><br>Outstanding assemblages of plants are named special interest feature. | Nationally scarce Mixed Deciduous Woodland HPI, protected by planning system and NERC Act 2006.<br><br>Plant, invertebrate, amphibian, reptile, bird & bat SPI species listed in BOA (see Appendix 8).<br><br>Notable trees (veteran trees, oak pollards & relic coppice stools) likely to qualify as HPI under Wood Pasture & Parkland and therefore protected by the planning system and NERC Act 2006. | | Local Nature Reserve, high regional & local importance to Reigate Heath as a mosaic of diverse habitats, including other woodland, oak pollards, relic coppice stools & bare ground. |
| **Wet Woodland** including scrub & secondary woodland | National significance through its SSSI designation, with legal protection of the W&C Act 1981 (amended).<br><br>Wet Alder Wood is a named special interest feature in the SSSI citation. | Nationally scarce Wet Woodland HPI, protected by the planning system and NERC Act 2006.<br><br>Bird & bat SPI species (see Appendix 8) protected through the planning system and NERC Act 2006. | | Local Nature Reserve, high local importance regionally and locally Important to Reigate Heath, as a mosaic with woodland. |
| **Freshwaters & Wetland**; including ditches, flushes, ponds, bogs & scrapes | National significance through its SSSI designation, with legal protection under the W&C Act 1981 (amended).<br><br>Wet heath is named special interest feature of the SSSI citation. | Associated with areas of Lowland Wet Heath HPI & Wet Woodland HPI, as well as ponds protected through the planning system and NERC Act 2006.<br><br>Geology & hydrology very important aspect but lack of data so needs further research. | | Local Nature Reserve, high regional & local Importance to Reigate Heath, as part of the mosaic of diverse habitats, including ditches, ponds, flushes & wet hollows. |
| **Recreational Use** | Protected under the Commons Act 2006, CRoW Act 2000 and Common Regulations (England) 2014. | Public Rights of Way legislation.<br><br>Reigate Heath Byelaws 1899 (updated 1993). | | Recreation access important regionally and high local significance. Education & interpretation important on a local basis. |

# 12 Factors

The following are key factors (strengths, weaknesses, opportunities and threats) that face managers of the Heath, which are likely to influence or affect the way in which a feature is managed. By considering the social, environmental and economic factors this represents a simple sustainability assessment. This Plan aims to balance the factors with the needs of visitors and the key attributes of the site, thereby ensuring that the important features are protected and conserved for future generations of people and wildlife.

## 12.1 Social Factors

### 12.1.1 Common Land

The Heath is Common Land, which has implications for access with a 'right to roam' under the CROW Act. Uncontrolled use an damage the Heath through erosion, trampling, dog waste, pollution, litter and disturbance of wildlife. All factors having a detrimental impact on the site but can be managed by using Byelaws and softer methods of controlling visitor use. Such control does not need to compromise the fundamental principles behind the common land status and freedom to wander for free air and exercise.

### 12.1.2 Erosion

The Heath is heavily used for informal recreation purposes and many aspects of this use are potentially harmful to the ecological, historical and archaeological interests of the Heath. The pressure is gradually increasing as the Heath is the nearest open green space for many hundreds of houses and local users. There is also the added pressure of further housing development in the vicinity for example housing in South Park, where many more people are likely to use the Heath, causing cumulative problems.

Trampling from walkers, cyclists and horse riders can adversely affect public rights of way and erode fragile but important semi-natural habitats. Some paths and rides have changed as vegetation has changed or new desire lines have developed, some of these routes are on fragile soils, which are prone to erosion. Path surfaces vary from bare mineral soil to short vegetation, or imported surfacing materials. No systematic data is available on erosion or changes in path widths.

Off track cycling appears to be eroding some tumuli, which provide inviting contours to the more adventurous rider. Some localised erosion can be beneficial by creating bare ground habitats for species such as solitary bees and wasps and improving the sward. The cultural value of the Scheduled Monuments and other historic landforms is affected negatively by erosion through over use by walkers and encroachment by off-track cyclists.

### 12.1.3 Sports Facilities

There are two areas designated for sporting activities and these are the Sports Pitch near the junction of the A25 and Flanchford Raod and of course, the 9 hole golf course and club. Use of the sports pitches can damage species-rich acid grassland through misuse or being overly used. There are concerns that some practices used during grounds maintenance by the Golf Club are detrimental to the important habitat features covered by their fairways.

Both facilities increase popularity of the Heath, which may have implications relating to over use of the site to the detriment of the important features.

### 12.1.4 Car Parks

The car parks are often at full capacity, and regularly exceeded, at weekends and at other busy periods. Overspill parking along Flanchford Road can be a problem, especially where vehicles are parked half on the Heath. The Golf Clubhouse car park can be extremely busy at times especially if there is an event, adding pressure from encroachment onto fragile habitats, erosion and compaction. Car parks make it easier for visitors to use the Heath, but this can have a negative impact on the Heath and its important features.

The carrying capacity of the site has been calculated at 320 people (S Elson pers. comm, 2018), but the carrying capacity is regularly being exceeded, and this is negatively affecting the sensitive nature of the habitats. The specific effects are difficult to quantify so that monitoring of detrimental impact should be an outcome of this plan.

### 12.1.5 Vehicles

There are times when vehicle access for conservation management is required, as well as access to the golf course for maintenance but overuse or driving off road during poor weather and ground conditions can cause problems such as erosion and loss of habitat. There is a vehicular maintenance access route map available to employees and contractors and emergency plan for fire brigade with RBBC.

### 12.1.6 Dogs

For many residents in Surrey dog ownership and walking pets is a cherished social activity that can facilitate access to open countryside for those who perhaps feel vulnerable alone through age, sex or mental well-being. However, the number of dog users, and increasing professional dog walkers using the Heath is putting added pressure on the Heath.

It is only the minority of dog owners that leave behind dog waste either without picking up, where it causes the enrichment of the local soil, or causing litter when left in bags. Dog faeces does represent a hazard to health of people and other animals. Dog waste bins are a solution, but in themselves can cause problems such as who will pick up the waste and how often that is required.

Dogs running off leads and into sensitive habitats can cause negative disturbance to bird populations, particularly ground nesting birds during the bird nesting season (season is between the beginning of March to the end of August).

### 12.1.7 Urbanisation

This factor involves residential and urban development on a large scale and dropping litter, fly-tipping, garden encroachment, arson, metal detecting, illegal excavations of minerals and the archaeological and historic features on a smaller scale.

However, it can result from those carrying out other grounds and highway maintenance so that clutter of structures, signs and countryside furniture can ironically have a detrimental impact on the natural aspect and views within the site. RBBC consult with Steering Group

with regard to proposals for new installations and replacements. Waste bins add to clutter of structures on the Heath and increase the perception of urbanisation.

A careful balance must be sought between the open heath and the recreation area that it provides. Such as the conflict on deciding on how much information should be provided in the form of signs and interpretation boards.

### 12.1.8 Operations Likely to Damage

The use of vehicles, machinery, equipment, substances, materials and methods if not used or undertaken with care can result in, management operations on the site that may harm the SSSI or Scheduled Monuments. The use of chemicals is controlled by consent and RBBC and RHGC maintain and review lists of approved chemicals (see Appendix 11).

### 12.1.9 Illegal Excavations

Illegal excavations could cause significant damage to archaeological features so that any planned excavation works on or near scheduled monuments require consent from English Heritage and the illegal use of metal detectors on the Heath should actively resisted. This has occurred on a minor scale in the past.

## 12.2 Environmental Factors

### 12.2.1 Climate Change

This is much debated issue and subject to continual learning and development of possible models for future climate in the UK. Possible effects could include warmer wetter winters and hotter drier summers with increased storms. This may provide better conditions for pests and diseases but more information needed before applied to Plan. Climate change will have a significant impact on the physical features of the Heath affecting hydrology and soil conditions, which in turn will affect plant and animal communities.

### 12.2.2 Pollution

Pollution from the roads, dust particles and airbourne pollutants can be a problem in the form of eutrophication. National projections indicate an ever increasing amount of road traffic. With Gatwick, a major international airport close to homes in RBBC, the issue of air quality will become increasingly important. RBBC has been engaged in a phased review process to identify the most significant pollutants in the air locally, and areas where they are most prevalent. The precise effect on the Heath is unknown.

The build-up of nutrients in vegetation, litter and upper soil layers, particularly nitrogen has been shown to have a negative impact on lowland heath and acid grassland habitats, as they are adapted to nutrient-poor conditions. Where the heather is weakened or removed, then grasses gain a competitive advantage both from the higher nutrient levels and from the increase in light and this triggers a conversion from heather to grass dominated plant communities with the loss of many specialist species of heaths.

Nitrate Vulnerable Zones (NVZ) is a conservation designation of the Environment Agency for areas of land that drain into nitrate polluted waters, or waters, which could become polluted by nitrates. The Heath lies within such an area, it has been designated within the

Nitrates Directive to reduce water pollution in the River Mole catchment and RBBC have put in various measures to tackle this.

### 12.2.3 Hydrological Changes

Since the cessation of Buckland Sandpit, and the de-watering pumps being turned off, there appears to have been a rise in groundwater levels across part of the Heath. Flooding may be an issue, but this change in hydrology also provides a significant opportunity to create wet lowland heath, ponds, wet woodland and other freshwater and wetland habitats. The hydrological aspects are not yet fully understood.

### 12.2.4 Natural Succession

Natural succession is a dynamic ecological process whereby plant communities go through a series of changes over time as environmental conditions change to suit different species. It is a process whereby bare ground and open habitats become colonised by pioneer species of vascular plants, shrubs and trees to create changing plant communities that will culminate in a climax community of mixed broad-leaved woodland.

In the absence of active management or grazing herbivores the open aspect of common land and priority habitats of lowland heath and acid grassland are lost and together with the species characteristic of these rare habitats. Secondary woodland shading out light loving plants and seasonal leaf fall increasing the nutrient levels in the poor quality soils characteristic of these priority habitats.

The self-generation of trees and the natural succession of scrub and woodland over the tumuli and other landforms, poses a significant risk to subterranean damage. Unchecked development of secondary woodland also reduces inter-visibility of important features above ground and has a profound effect on views within the Heath and of the surrounding countryside. However, contentious tree felling and cutting scrub is with the public and local people it is an important requirement for management.

### 12.2.5 Isolation

Lowland Heath as a priority habitat is incredibly scarce in the east of Surrey, which is a principle reason why Reigate Heath is so important. However, this scarcity also means the site is isolated from other large areas of heathland in the county and beyond. Previous habitat assessments determined that the remnant areas of lowland heath are too small to support viable populations of reptiles and birds characteristic of heathland.

This factor has significant implications restoring suitable habitat for successful populations of species characteristic of lowland heath to re-establish and reduces the ability of managers to provide buffering from catastrophic events. The Biodiversity Opportunity Areas strategy recognises such issues and seeks to facilitate better links between protected and rare habitats within a wider framework of green space.

### 12.2.6 Invasive Species

The majority of plants found on the Reigate Heath are native but there are examples that can be invasive under favourable conditions, including Bracken, Bramble, Purple Moor-grass and Silver Birch. These species rapidly colonise open or unmanaged areas on the

Heath so that they can encroach to the detriment of the priority habitats of lowland heath and species-rich acid grassland.

There are plants recorded on the Schedule 9 List of Invasive Species, W&C Act 1981 (amended) and include Himalayan Balsam invading wet wooded areas and shading out native vegetation, Japanese Knotweed, Variegated Yellow Archangel and the hybrid Spanish Bluebell. Under the Act it is an offence to allow these species to spread into the semi-natural environment.

There are also some non-native species arising from illegal dumping, garden throw-outs, planting, birds, or other means. Prevention is better than cure so patrolling boundaries and visitor points can help ensure the prompt removal of harmful dumped material.

### 12.2.7 Pests & Diseases

Monitoring for tree diseases such as Common Ash (Ash Dieback), Peduncluate Oak (Sudden Oak Death) and Alder (*Phytophthora* disease) and pests such as Processionary Caterpillar must be considered. All these pests and diseases are now frequent in Surrey and are known to be spreading rapidly across the county.

### 12.2.8 Animal Excavations

Animals, through excavations, and plants, via root systems, can have a detrimental impact on the archaeological and historic features. The Steering Group and RBBC intend to review the existing policy for controlling rabbits to ensure important features are protected. Any illegal excavations by humans must be resisted to prevent damage to features.

### 12.2.9 Grass Clippings

If the grass clippings are not removed during or after mowing the grassland, including the fairways and roughs, the result is nutrient enrichment, unwanted thatching and a gradual degradation of the sward condition. There is a cost of this approach, such as where cuttings are composted, machinery that is required for this activity and the time required.

## 12.3 Economic Factors

### 12.3.1 Resources

The Heath is owned and managed by RBBC and as a local authority it has been subject to significant cuts in funding from Central Government as part of its drive for efficiency. Whilst there are limited resources, staff and expertise for managing the site RBBC will proactively manage its resources to ensure the Heath is conserved.

In 2009 RBBC appointed two countryside rangers to assist the countryside manager in task of managing the Heath and other countryside sites. In 2018 following restructuring within the Council these posts were removed from the establishment so that works across the entire countryside estate are carried out by grounds maintenance team and contractors under the direction of the Countryside & Woodland Officer.

A significant challenge for RBBC is explore ways to use its resources more effectively to maintain the site, seek grant aid for key projects to restore and enhance the important features and develop closer links and support from volunteers.

### 12.3.2 Grant Aid

RBBC currently receives funding from DEFRA for conserving priority habitats of Lowland Heath and Acid Grassland under a ten-year HLS agreement signed with Natural England in January 2019. This funding is for delivering activities that restore, maintain and enhance the specific features of interest on the SSSI.

### 12.3.3 Volunteer Support

There is significant commitment by volunteers from the local community and further afield to help RBBC and RHMSG (itself comprising significant volunteer involvement) to create, restore, maintain and enhance the important features on the Heath.

Volunteer time and enthusiasm is a vital aspect of delivering practical work on the Heath and without expertise from local naturalists, the commitment of volunteer time and other community engagement the Heath would be a very different place. These groups are listed in the Community Involvement part of this Plan.

### 12.3.4 Health, Safety & Welfare

As explained there is a legal obligation on RBBC to ensure that employees, contractors and volunteers undertaking work on the site are trained appropriately for the tasks required; that risk assessments are completed for all work activities and where necessary, reasonable measures are taken to reduce risk to people, animals, property and the environment.

There is a financial cost for meeting this obligation in the way work is carried out and what machinery, tools and Personal Protective Equipment are used. However, that cost in terms of money and reputation can be exceeded by preventable accidents.

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# Part Two: discussion

This Part of the Plan is where the important features are considered with regard to their status and how factors will affect them in the future. The expected outcome of work will be represented on two maps, the first depicting the extent of important features and facilities as they appear on the Heath now; whilst the second map will show expected outcomes of the planned management prescriptions after the ten-year life of this plan.

## 14 Rationale

This section considers the eight (8) important features chosen by the evaluation process undertaken in Section 10 and applies the relevant social, environmental and economic factors that were identified in Section 11.

### 14.1 Summary of Important Features

As a general rule recreation, operations likely to damage, natural succession and limited resources apply to the successful future management of most of the following important features for the Heath. In addition some of the other factors described in this Plan have a significant impact on the condition of specific important features of this site thereby also generating some additional targets for future management.

**Important Feature 1:** Scheduled Monuments (including other important archaeological and historic finds found within the boundaries of the Heath).

**Important Feature 2**: Historic Landscape (including the common land status, Area of Great Landscape Value, Listed Buildings, veteran trees and pollards).

**Important Feature 3**: Lowland Heath (including dry heath, wet heath, dwarf heath scrub, bare ground, and scattered notable or characteristic trees).

**Important Feature 4**: Acid Grassland (including other grassland, bare ground, scrub and scattered notable or characteristic trees).

**Important Feature 5**: Mixed Deciduous Woodland (including small lowland dry oak-birch woods, stands of coniferous trees, notable trees and scattered trees).

**Important Feature 6**: Wet Woodland (including remnant alder carr and wet secondary woodland and scrub).

**Important Feature 7**: Freshwater & Wetland (including ponds, streams, ditches, flushes, bogs and other waterlogged areas).

**Important Feature 8**: Recreational Use (including the right to roam, Rights of Way, sport, informal recreation, education and interpretation).

## 14.2 Assessment Criteria

**Distribution**: A brief summary of the current distribution of the feature type is given.

**Current Status**: The current status of the feature is provided.

**Vision**: This is where a description of the desired future vision of the feature if all of the management is undertaken.

**Management Objectives**: These are the site specific objectives for the site.

**Performance Indicators**: These comprise the **Factors** (strengths, weaknesses, opportunities or threats) discussed in Section 11 and **Attributes** for the site, which by definition are the *'characteristics of the feature and can be monitored to provide evidence about the status of the feature'* (Alexander, 2016).

**Factors** are listed in this section in the order of what is considered to be causing the most significant detrimental impact on the important feature first, which could be considered subjective but is based on information available to authors at time of writing.

**Attributes** are based on Common Standards Monitoring attributes listed for each habitat type and are also used by Natural England for Reigate Heath SSSI.

**Targets** are set to provide limits for a performance indicator so that outcome outside these set limits means problems will have a negative effect on a feature. The targets are given a code (e.g. SMT1) that is included in the Section 14: Management Prescriptions.

The various attributes and targets have been gleaned from the SSSI designation, the BOA WG10: Reigate Heath statement and the options and prescriptions contained within the HLS agreement with Natural England.

## 14.3 Important Feature 1: Scheduled Monuments

This important feature includes references to other important archaeological and historic finds found within the boundaries of the Heath.

### 14.3.1 Distribution

There are multiple barrows (or tumuli) within the Reigate Heath Round Barrow Cemetery complex but the main cluster are found lying in a line along the ridge in north-east part of the site. There are various archaeological finds stored at locations in Surrey.

### 14.3.2 Current Status

The scheduled monuments are monitored on a regular basis. Scrub and Bracken control is being undertaken where necessary but trees and shrubs continue to encroach onto these features. All management activities within the immediate area of these features will be carried out with due care so as to avoid causing any damage and advice and consent sought from Historic England before potentially damaging works are carried out on site.

The Heath was subdivided into five archaeological management areas during the Historic Landscape Survey (Bannister, 1997) ranging from zones, which should not be disturbed due to the presence of significant important features to areas of no discernible archaeological interest. These zones should be used to inform management decisions (Map 6).

Bannister made a number of recommendations including that the golf course should stay contained within its present area and that any future course redesigns, including drainage and irrigation projects, should be carefully assessed for archaeological impact before any groundwork was undertaken. Surrey Archaeological Society (2010) raised concern about the condition of two barrows adjacent to Flanchford Road.

### 14.3.3 Vision

The Scheduled Monuments and historic features of the site will be in favourable condition and continue to be regularly assessed. They will continue to be an integral feature of the Heath. Any management activities near or on the important features will take into account the zones described by Bannister.

Scrub and trees will be absent from and between these features, unless too damaging to remove. This approach will prevent root damage to the features and enhance their visual appeal in the historic landscape. New projects and works on the Heath and golf course will take into account the potential impact on the archaeology and historic features.

### 14.3.4 Management Objectives

- **SMO1:** The Scheduled Monuments will be protected so that there is no loss of or damage to the burial mounds or tumuli.
- **SMO2:** The Scheduled Monuments will be conserved and activities carried out in accordance with good practice and legal requirements of Historic England.
- **SMO3** Factors that have a detrimental impact on these fragile archaeological features and the associated landscape will be under control or reduced.

### 14.3.5 Performance Indicators

**Factors**

**Erosion**
The Heath is a popular site for recreation and it is likely that more people will use the site more frequently in the future increasing erosion of these important features.

- **Target SMT1:** Monitor the extent of bare ground on the scheduled monuments.

**Natural Succession**
The roots of certain plants can cause damage to archaeological features, which on this site includes Bracken and tree and scrub species of particular concern.

- **Target SMT2:** No trees or shrubs present on the scheduled monuments or important historic features that are likely to cause damage.

**Operations Likely to Damage**
If not undertaken with care, management operations on the site may damage important archaeological and historic features.

- **Target SMT3:** Obtain advice and/or consent from Historic England before carrying out operations likely to damage the Scheduled Monuments or archaeological features.

**Illegal Excavations**
Illegal excavations can cause significant damage to archaeological features and this illegal behavior has occurred on a minor scale in the past.

- **Target SMT4:** No illegal excavations.

**Animal Excavations**
Animals such as wild rabbits and foxes, as well as domestic dogs can damage the historic features through digging.

- **Target SMT5:** Steering Group and RBBC to review the policy for controlling rabbits.

**Attributes**

**Presence & Condition**
The presence, extent and condition of the Scheduled Monuments and other archaeological features will be monitored on a regular basis to ensure that they are not declining.

- **Target SMT6:** No barrows will be lost or damaged and the extent and condition of the important archaeological features will be stable or improving.

## 14.4 Important Feature 2: Historic Landscape

This feature includes the common land status, rights over common, right to roam, AGLV, veteran trees, pollards and listed buildings.

### 14.4.1 Distribution

Rights over the entire 61.7ha of the Heath are registered on the Common Land Register (Ref. No.CL038) held by Surrey County Council. Commons are important for their cultural heritage and evidence of historic land use, as well as their social, environmental and economic benefits for local communities (Ashbrook, 2015). The Heath is crossed by the Greensand Way and close to the North Downs Way linking to a wider network of commons (and heaths, greens and public open spaces) characteristic of this region.

The Heath is an integral part of the AGLV (LCA: RS2 Greensand Hills & Wooded Weald) that is associated with the Surrey Hills AONB that stretches from Waverley and Guildford in the west across Surrey parallel with the North Downs through Mole Valley, Epsom & Ewell and Reigate & Banstead to Tandridge in the east. The Heath straddles the North Downs Scarp and Greensands Hill & Wooded Weald landscape character areas.

The previously described Bronze Age barrows provide prehistoric evidence of the long history of human activity on the Heath supported by archaeological finds. They hint at an open heath within a wooded hill landscape characteristic of the area. When viewed from the surrounding areas of Low Weald and Greensand Valley, these prominent wooded hills rise to a point marked by the Windmill at Reigate Heath. The presence of oak pollards and veteran trees provide evidence of a pastoral land use of the Heath.

Listed Buildings are not included in their own right in this land management plan because they are either privately owned or managed by RBBC Property Services. However, their contribution to the broader historic landscape is recognised in this Plan.

### 14.4.2 Current Status

The land registered as common at the Heath is wholly owned by RBBC and therefore it's boundaries remain intact. Some physical structures and facilities have been built on the Heath and any development or construction that constitutes a change of use of common land must be granted consent by the Secretary of State for DEFRA.

There are no rights over common registered for the Heath. There is a right to roam under the CRoW Act. Natural succession from heath through scrub to a closed canopy woodland since cessation of grazing threatens the open aspect of the Heath and ultimately restricting the free air and exercise across this common.

Early Ordnance Survey maps (1872 & 1896) provide evidence of the extent of the Heath and openness of a landscape dominated by rough grass and gorse. There is a hint of grazing livestock on the Heath from the common land status and the mature oaks with a definite browse line to their canopy. Early 20$^{th}$ Century postcards show a less wooded Heath than today and an increase in scrub and trees is a result of natural succession following cessation of common grazing rights.

As open common land the Heath represents a historic and relatively scarce AGLV close to the western suburbs of Reigate, which merges into areas of common land. There are open vistas providing beautiful views to and from the Heath, such as framed views of the Windmill at the highest point. The landscape incorporates the beauty of the semi-natural habitats that it supports including priority areas of lowland heath and acid grassland fringed by small woods, with scrub and scattered trees. It is a unique landscape.

However, the Heath is vulnerable to development and installation of recreational facilities or urban structures that detract from the natural aspect. Other detrimental influences on views include the A25 along the northern boundary, as well as visual clutter created by surrounding roads, signs, and car parks along the southern and central part of the Heath, which are exacerbated by overspill parking during busy times.

### 14.4.3 Vision

The Heath (common land) kept open and unenclosed for present and future generations to enjoy for free air and exercise. Trees and scrub actively managed to maintain a semi-natural aspect of the landscape so that visitors can undertake quiet recreation and enjoyment of this historic common. The Heath will continue to be a beautiful place in which to visit for a variety of activities.

Native species of old trees including oak pollards enhance views and landscape. Veteran trees and notable trees of local significance including oak pollards will be retained. Some will be kept free from encroachment by other trees and scrub species, known as 'haloing', allowing them a more open growth form within a woodland context. Additional mature oak pollards and/or veteran trees will be created on the Heath.

The landscape will continue to be an important local visual feature and a good example of a heath within this AGLV and mixed rural land use. The Heath and surrounding countryside will be included in the Surrey Hills AONB. The Heath will have the minimal amount of urban clutter as possible thereby retaining its semi-natural aspect. Its Common Land status will ensure that people have access to the landscape and amenities that the Heath supports. Significant views across the site will be enhanced.

### 14.4.4 Management Objectives

- **HLO1:** The Heath (common) will be protected from encroachment so that there is no loss of or restriction to rights over the common for the owner and public.
- **HLO2:** The Heath (common) will be kept open, unenclosed and unbuilt upon in accordance with good practice and legal requirements of DEFRA.
- **HLO3:** Factors that have a detrimental impact on the semi-natural aspect of the Heath and landscape character of the AGLV will be under control or reduced.
- **HLO4:** The community of mature oak pollards and veteran trees will be conserved in accordance with good practice and guidance from Natural England.

### 14.4.5 Performance Indicators

**Factors**

**Common Land**
A negative aspect associated with commons is the encroachment onto common land by neighbouring properties extending gardens and erecting structures.

- **Target HLT1:** Patrol the bounds of the common twice a year to check for evidence of encroachment and refer infringements to the Joint Enforcement Team.

**Natural Succession**
Natural succession to closed canopy woodland threatens open aspect but some trees such as veteran oak pollards and coppice stools hint at historic land use of common.

- **Target HLT2:** Woodland cover to be maintained at 45% of Heath, with 25% open heath and grassland and 30% other habitat types.

**Urbanisation**
Whilst recreational facilities and educational activities for visitors to the site are important such provision must be carefully balanced against cluttering the Heath to the detrimental of its historic views. Targets are given for IF08: Recreational Use.

- **Target HLT3:** No structures erected or surfaces laid without consulting the RHMSG and checking that with Legal Services if consent is need from DEFRA.

**Erosion**
The Heath is a popular site for recreation and it is likely that more people will use the site more frequently in the future increasing erosion of historic important features.

- **Target HLT4:** Monitor visitor numbers and review carrying capacity for site.

**Attributes**

**Veteran Trees**
Presence, extent and condition of oak pollards, veteran trees and other notable trees will be monitored on a regular basis to ensure that they are not declining.

- **Target HLT4:** Numbers and condition of the veteran trees will be stable or improving.

**Visual Appeal**
This is a subjective criteria but broadly speaking a well-managed open vista will enhance the local landscape. Targets for removing scrub and trees are incorporated in the relevant priority habitat important features.

**Viewing Points**
Views and viewing points are an important aspect of the historic landscape and an integral part of the enjoyment of a visit to the Heath.

- **Target HLT5** Collate old photographs, postcards, slides and other information to create a study on the history of views of and within the Heath.

## 14.5 Important Feature 3: Lowland Heath

This feature includes dry heath, wet heath, dwarf heath scrub, bare ground, and scattered notable or characteristic trees (Recommendations see Appendix 13).

### 14.5.1 Distribution

Heather is associated with the nutrient poor sandy soils predominantly around the golf course. Other areas are found where they have been kept clear of trees and scrub such as north-east area of the football pavilion and to the south of the Windmill. There are several small patches south of Flanchford Road and a small area mapped on the edge of the acid grassland in the recreational grassland at the eastern end of the site.

Bare ground habitats are associated with paths and rides including eroded edges, and the banks adjacent to paths that have exposed areas of Greensand, as well as bare ground either side of the tumuli. Bare ground is also created during heather restoration work, construction of sand bunkers on the golf course, and by grazing and digging of wild rabbits. Bare ground and banks are important for a range of common and rare invertebrates and as well as basking areas for reptiles on the Heath.

There are several patches of Gorse, Dwarf Gorse and Alder Buckthorn scrub of varying sizes across the Heath, which form important thickets for breeding birds. Gorse scrub is often associated with Bramble, Broom and developing Silver Birch trees. The majority of scrub is located close to the Windmill, with the two largest areas located between the Clubhouse and Flanchford Road, whilst another is due north west of the Clubhouse.

### 14.5.2 Current Status

The dwarf shrub heath specific feature of interest for SSSI is considered to be in Favourable Condition by Natural England (2011). This is because there is a good range of cover and composition of heather species and other heathland plants and the heather regeneration is growing back within the target range. There is a good amount of bare ground, although care should be taken with regards to excess erosion.

It is a priority habitat for the BOA WG10: Reigate Heaths. Areas of remnant lowland heath on the site need restoring and enhancing. The heath is well used, putting pressure on the site through erosion, trampling, disturbance to wildlife, nutrient enrichment, pollution, garden grabbing, litter and fly tipping. In addition, although Bracken is considered to be within target levels, care should be taken it does not dominate localised patches.

Whilst scrub typical of lowland heath is desirable other types, including Bracken, Bramble and young Silver Birch trees, can be invasive and require controlling. These species provide food and cover for insects, small mammals, birds and reptiles. Silver Birch has a tendency to invade the open areas, encouraging natural succession to woodland.

Species surveys by SWT in 2018 clearly showed that lowland heath and edges of woodland support healthy assemblages of fauna. However, it was remarked that bare ground and the sand bunkers were not in favourable condition for insects, despite bunkers and sandy paths continuing to provide some suitable nesting habitat for bees and wasps.

### 14.5.3 Vision

The lowland heath and its associated habitats and species will continue to be in Favourable Condition as defined by Natural England for the SSSI and the targets set in this document. Areas of heath will continue to be stable or increasing where possible. Cutting dwarf scrub vegetation will create and maintain a diversity of age, structure and lowland heath plant species. The Glade and other areas of wet heath will continue to be managed positively by various methods such as stripping turf and removing trees and scrub.

Opportunities to restore and enhance lowland heath will continue as it is a priority habitat for a variety of flora, including rare and notable species, as well as assemblages of insects, reptiles and birds. Restoration of open areas dominated by heather will seek to link existing areas of lowland heath using a variety of methods. Gorse, shrubs, Bracken and Bramble will continue to be present in various ages and structure as part of the mosaic of habitats, but managed for so that succession does not encroach onto the priority habitat.

Neighbouring woodland edge and scrub will continue to be important for Dunnock and the Common Whitethroat and the Gorse for Linnet. This ecotone is favoured by bat species known to use the site as areas to forage for invertebrates. Populations of rare and notable plants will be present and healthy. Non-native and invasive species will be controlled. There will be a healthy stable or increasing population of reptiles.

Bare ground will be an important feature of this habitat and created mechanically or as a consequence of erosion to provide micro-habitats for insects and reptiles.

### 14.5.4 Management Objectives

- **LHO1:** Extent of remnant lowland heath, including associated dry heath, wet heath, bare earth, scrub and scattered trees will be maintained to meet BOA target.
- **LHO2:** Areas of lowland heath and associated habitats will be restored or created to link these areas remnant heath so that this fragile habitat becomes more stable.
- **LHO3:** The lowland heath and associated habitats will support stable or increasing populations of notable species with conservation status.
- **LHO4:** The factors that have a detrimental impact on the fragile lowland heath and the associated habitats and species will be under control or reduced.

### 14.5.5 Performance Indicators

**Factors**

**Natural Succession**

The natural recruitment of young trees and scrub resulting in natural succession to wooded landscape threatens this open habitat through shading, leaf fall and soil enrichment.

- **Target LHT1:** Trees felled and scrub cut to retain a 90% open aspect on lowland heath in accordance with HLS agreement target.

**Isolation**
The area of remnant habitat is relatively small and cannot sustain viable populations of key species, which is aggravated by the isolation of the site from other lowland heath.

- **Target LHT2:** Restore or create additional areas of lowland heath to link the remnant areas together so that extent of habitat is increased and becomes more viable.

**Erosion**
The Heath is a popular site for recreation and it is likely that more people will use the site more frequently in the future increasing damage to these fragile habitats.

- **Target LHT3:** Less than 1% of the total feature area to be heavily eroded.

**Operations Likely to Damage**
If not undertaken with care, management operations on the site may damage these fragile habitats and associated important ecological features.

- **Target LHT4:** Obtain advice and/or consent from Natural England before carrying out operations likely to damage the protected habitats and/or species.

**Attributes**

**Habitat Extent**
The presence, extent and condition of this HPI priority habitat and associated features will be monitored on a regular basis to ensure not declining.

- **Target LHT5:** The extent of intact heathland will be stable or increasing over the site. Maintain area of priority habitat type set by BOA as 1.25ha.

**Bare Ground**
Bare ground should form a patchwork with vegetation and be present mainly in south facing slopes to provide ideal habitat for invertebrates such as solitarily wasps and bees.

- **Target LHT6:** Bare ground present between 1% and 10% of the total feature area.
- **Target LHT7:** Bare ground will include firm, sunlit, horizontal, sloping/vertical, exposed bare ground with no more than 1% heavily disturbed.

**Dwarf Shrubs**
This woody vegetation includes heathers, Ling, Bell Heather and Cross-leaved Heath growing in a patchwork of growth stages to encourage more diverse habitats for wildlife.

- **Target LHT8:** Dwarf shrubs will cover between 25-90% of the feature heathland areas.
- **Target LHT9:** At least two species of dwarf shrubs will be present and at least frequent within the feature area.
- **Target LHT10:** Heather will be present in all stages of growth, pioneer phase (10-40%), building/mature phase (20-80%), degenerate phase (<30%), dead (<10%) of total Heathers (ericaceous) cover within the total feature area.

**Gorse Scrub**
Gorse scrub in various ages and size provide invaluable shelter and food for birds and other wildlife characteristic of lowland heath.

- **Target LHT11:** Common Gorse will cover less than 25% of the area on dry heaths and less than 10% of the area on wet heaths.

- **Target LHT12:** At least 50% of Gorse will be maintained as patches of dense, compact, mature bushes (0.5-3m tall). Patches to be as widely connected as possible, including into Heather stands to maximise wildlife potential.
- **Target LHT13:** Winter cutting of 'leggy' stands of Gorse and removal of cut material will maintain Gorse at different growth stages and avoid nutrient accumulation in soil.

**Field Layer**

Although lowland heath is characterised dwarf shrubs and gorse scrub other plants are important components of the field layer of this open habitat.

- **Target LHT14:** Typical heathland graminoids (grasses, sedges and rushes), as defined by Natural England in their Conservation Objectives, will be present with at least 1 species frequent and 2 occasional within the feature area.
- **Target HT15:** At least 2 desirable forbs, as defined by Natural England in their Conservation Objectives, will be present.

**Bryophytes & Lichens**

- **Target LHT16:** On the dry heath areas, the cover of bryophytes (excluding Heath Star-moss *Campylopus introflexus*) and lichens will be maintained or increased.
- **Target LHT17:** On the wet heath areas there will be >10% cover of Sphagna and a >5% cover of lichens.

**Negative Indicator Species**

Various grasses are an important component of lowland heath but can be indicators of poor habitat condition if their cover is too high.

- **Target LHT18:** Wavy Hair-grass will be no more than occasional and will not exceed more than 25% cover in dry heaths. Purple moor-grass will be no more than occasional in the wet heath areas.
- **Target LHT19:** Heath Star-moss will be less than occasional in the feature area.
- **Target LHT20:** Bracken will not exceed 10% cover in the dry heath areas and 5% cover in the wet heath areas.
- **Target LHT21:** Common Ragwort, Common Nettle, thistle sp., Foxglove and other negative indicator species including exotic species will not exceed more than 1% cover across the heathland, see Natural England Conservation Objectives for other exotic species examples.
- **Target LHT22:** Trees and scrub cover less than 5% of dry heath areas and less than 10% cover in the wet heath areas. However scattered mature Scots Pine will be present in undisturbed locations in order to provide suitable nest sites for Hobbies and song posts for other birds but SWT recommendation for <10 trees/ha.

**Reptiles**

Species surveys showed that Slow-worm, Common Lizard and Grass Snake are present across the site and reptile populations are characteristic feature of lowland heath.

- **Target LHT23:** No loss in the range of reptile species recorded across the site.
- **Target LHT24:** The reptile population will be stable or increasing.

## 14.6 Important Feature 4: Acid Grassland

This important habitat feature includes other types of grassland, bare ground, scrub and scattered notable or characteristic trees (Recommendations see Appendix 13).

### 14.6.1 Distribution

A significant proportion of the Heath is short sward species-rich acid grassland, found on the fairways, tees and greens of the golf course, the football pitch, as well as verges on the northern side of the A25. There is considerable, if variable, botanical interest in these acid grasslands, largely because of their specialist sports use as well as extensive use by walkers (RBBC, 2011). Bare ground is a vital part of this habitat mosaic as are associated areas of scrub and scattered notable or characteristic trees.

### 14.6.2 Current Status

Natural England's latest Condition Assessment was undertaken in 2011 and stated that the Heath (SSSI Unit 2) was in Favourable Condition. Various indicator species characteristic of this priority habitat and a variety of other flowering plants and grasses were identified. This variety of plant species is especially important for providing summer pollen resource for the assemblages of insects and other invertebrates.

Surveys of part or all of the grasslands on the Heath were carried out over several years by Bruce Middleton (2011) and Pete Howarth (2019) and provide a useful picture of their changes in condition. This data shows that areas of species-rich acid grassland were lost between 2002 and 2011. The acid grassland is a priority habitat in the BOA WG10: Reigate Heaths and the outstanding plant assemblages are a specific interest feature under the SSSI designation.

### 14.6.3 Vision

The Acid Grassland and its associated habitats and species will continue to be in Favourable Condition as defined by Natural England for the SSSI and targets in this Plan. The habitat will continue to be stable or increasing where possible and continue to form an important mosaic with the heathland habitat as well as areas of neutral grassland, bare ground, scattered trees and scrub. Scrub, Bracken and scattered trees will be controlled to aid landscape as well as provide important habitat for birds but not enough to be considered encroachment into this open habitat.

The sward will have a good structural diversity and will support a diversity of plant species as well as invertebrates, mammals, birds and reptiles. In particular rare and notable plant population's characteristic of this priority habitat will be present and healthy. Non-native and invasive species will be controlled. There will continue to be varied and abundant population of invertebrates associated with this priority habitat.

A policy for managing the golf course will ensure that any re-turfing or re-seeding uses local provenance plant species suitable for lowland acid grassland. Maintenance of tees, greens, bunkers, approaches, fairways and roughs will aim to enhance grassland.

Bare ground will be an important feature of this habitat and created mechanically or as a consequence of erosion to provide micro-habitats for insects and reptiles.

### 14.6.4 Management Objectives

- **AGO1:** The extent of remnant acid grassland, including other types of grassland, bare earth, scrub and scattered notable or characteristic trees will be maintained.
- **AGO2:** Areas of open grassland habitats will be restored or created to link these areas remnant acid grassland so that this fragile habitat becomes more stable.
- **AGO3:** The acid grassland and associated habitats will support more stable or increasing populations of notable species with conservation status.
- **AGO4:** The factors that have a detrimental impact on the fragile acid grassland and the associated habitats and species will be under control or reduced.
- **AG05:** Populations of Funegreek (*Trifolium ornithopodioides*) and Upright Chickweed (*Moenchia erecta*) and other notable or indicator species will be maintained.

### 14.6.5 Performance Indicators

**Factors**

**Natural Succession**
The natural recruitment of young trees and scrub resulting in natural succession to wooded landscape threatens this open habitat through shading, leaf fall and soil enrichment.

- **Target AGT1:** Trees felled and scrub cut to retain a 90% open aspect on acid grassland in accordance with HLS agreement target.

**Erosion**
The Heath is a popular site for recreation and it is likely that more people will use the site more frequently in the future increasing damage to these fragile habitats.

- **Target AGT2:** Less than 1% of the total feature area to be heavily eroded.

**Operations Likely to Damage**
If not undertaken with care, management operations on the site may damage these fragile habitats and associated important ecological features.

- **Target AGT3:** Obtain consent from Natural England before carrying out OLDs.

**Grass Clippings**
Grass clippings removed to prevent soil enrichment and thatching, and maintain diversity.

- **Target AGT4:** Remove all grass clippings from the mown areas.

**Attributes**

**Habitat Extent**
The presence, extent and condition of this HPI priority habitat and associated features will be monitored on a regular basis to ensure not declining.

- **Target AGT5:** The extent of species-rich acid grassland will be stable or increasing over the site. Increased area of priority habitat type set by BOA as 1.0ha.

**Bare Ground**

Bare ground should form a patchwork with vegetation and be present mainly in south facing slopes to provide ideal habitat for invertebrates such as solitarily wasps and bees.

- **Target AGT6:** No more than 15% across important feature and no more than 0.25ha i.e. approximately 50 x 50m in each bare ground area.
- **Target AGT7:** The bare ground will consist of firm, sunlit, horizontal, sloping or vertical, exposed bare ground with no more than 1% heavily disturbed.

**Vegetation Litter**

Too much leaf litter indicates that not enough of the grass is being removed, leading to a build-up of organic material and soil enrichment.

- **Target AGT8:** Vegetation leaf litter no more than 25% of the acid grassland feature.

**Average Height**

The height of the grassland sward should be recorded during the summer growth period.

- **Target AGT9:** Acid grassland sward 5cm or less.

**Positive Indicator Species**

- **Target AGT10:** At least two species frequent and four species occasional throughout the sward. Indicator species for acid grassland listed in the SSSI objectives.

**Negative Indicator Species**

Lack of grazing and/or mowing can allow plants tolerant of rank conditions such as thistle, dock, Common Nettle, Bracken, Bramble and Great Willowherb to dominate.

- **Target AGT11:** No more than 20% acid grassland cover such as Wavy Hair-grass during April to mid-July.
- **Target AGT12:** No more than 10% acid grassland of coarse grasses such as Yorkshire-fog and Cock's-foot during April to mid-July.
- **Target AGT13:** No more than occasional of Common Ragwort throughout the acid grassland sward during April to mid-July.
- **Target AGT14:** No weed species such as thistle sp., Ribwort Plantain, Cat's-ear, Greater Plantain and Common Nettle more than occasional throughout the acid grassland sward or more than 5% cover.
- **Target AGT15:** No more than 10% cover across the acid grassland of Bracken during end-June to end-September.
- **Target AGT16:** No more than 5% cover across the acid grassland of all tree and scrub species considered together.

**Indicators of Local Distinctiveness**

Baseline acid grassland indicator species have been produced in a set of surveys by Bruce Middleton, see reports held at RBBC and Acid Grassland Indicator Species in 6.2.2.1.

- **Target AGT17:** No loss in the population size and extent of acid indicator species.
- **Target AGT18** SPI Chamomile and Annual Knawel should be present with no loss in current population extent (BOA target set as stable/recovering).
- **Target AGT19:** Species of interest including Upright Chickweed and Bird's-foot Clover to be present with no loss in current population extent.

## 14.7 Important Feature 5: Mixed Deciduous Woodland

Including small lowland dry oak-birch woods, stands of coniferous trees, veteran trees, notable trees and scattered trees (Recommendations see Appendix 13).

### 14.7.1 Distribution

It is likely that woodland cover on the Heath varies dependent on the levels of grazing and exploitation of the site by commoners. The Bluebell distribution shows where the remnant woodland belts are around the fringes of the Heath, particularly on the western areas of the site. Older and more mature blocks of woodland are located along west and north-west edges of the Heath (including relict Hazel coppice stools and historic Oak pollards) and to the south-east of Flanchford Road.

Today much of the Heath is under secondary woodland, which falls into broad categories of lowland dry oak-birch woodland, wet woodland, veteran and notable trees and coniferous stands. The small woods and stands of trees (particularly those of greater maturity) do have some local interest in their own right, particularly by increasing the range of habitat within the Heath. There are a number of mature Pedunculate Oak trees including old pollards in the north-west as well as ancient trees and trees of local significance.

### 14.7.2 Current Status

Mixed deciduous woodland (NVC type: W16 dry oak/birch/wavy hair-grass) is listed as a specific interest feature of the SSSI and a priority habitat in the BOA WG10: Reigate Heaths. It is generally in unfavourable condition because areas are even aged. A greater proportion of resource is allocated to the other priority habitats of lowland heath, acid grassland and wet alder woodland. Generally there is a low level approach to woodland management, dealing with health and safety issues, opening up of paths and removing trees encroaching into the other open priority habitats.

Non-native invasive species are not prevalent in the woodland but there are some invasive species. Holly is locally abundant and overall likely to be over the recommended target with regards to the woodland to the south of Flanchford Road. The veteran trees including oak pollards and other trees of local significance are being shaded by tall secondary woodland and in order to prevent further decline in health these notable trees need to be gradually ‘halo released’ and in some cases pollarded or re-pollarded.

### 14.7.3 Vision

The areas of broad-leaved mixed woodland will be retained on the site to provide a range of habitats that enhance the biodiversity of the site and improve the local landscape. There will be small lowland dry oak-birch woods, stands of conifers, veteran trees, notable trees and scattered trees across the site. Woodland blocks will continue to comprise a mix of mature woodland with natural regeneration of locally native trees species of all ages and plenty of seedlings and saplings in open areas to become trees of the future.

Decaying trees will also be an important part of this feature used by a variety of specialist invertebrates, roosting opportunities for bats and birds such as Green Woodpecker. All manner of deadwood, standing and fallen, will be retained within woods.

The small lowland dry oak-birch woods will be managed to restore and maintain a diversity of species, age and form, with an abundance of standing and fallen decaying trees. Dead wood will provide ecological niches for specialist invertebrates, fungi and other woodland species. Field and ground layers will be a patchwork of vegetation characteristic of lowland broad-leaved mixed woods. There will be an ecotone from open habitats to mature closed canopy woodland on the woodland edges, along paths and rides and in glades.

This important feature will continue to provide nesting opportunities, food and shelter for birds, particularly those species associated with woodland edge habitat, such as Wren, Great Tit, Blackbird, Robin and Nuthatch. Bats will continue to use woodland edges for foraging and commuting, particularly a large population of Common Pipistrelle.

Native species of notable old trees including Pedunculate Oak trees, including some ancient oak pollards, enhance the views and landscape. Mature Scots Pines will largely be retained as an important part of the landscape of the site, however there will be some small-scale removal of some trees where appropriate to improve views across the open Heath and to protect the scheduled monuments.

The habitat will not contain any non-native invasive species including Himalayan Balsam. The occasional distribution of Sycamore will be tolerated. The occasional distribution of native invasive species such as Bramble and Bracken will also be acceptable.

### 14.7.4 Management Objectives

- **BWO1:** The extent of mixed deciduous woodland and associated important features will be maintained.
- **BWO2:** Existing areas of dry oak-birch woodland will be managed and enhanced so that the small woods are diverse in species, age and structure.
- **BWO3:** The small lowland dry woods will support a stable or increasing populations of notable species with conservation status as well as typical woodland species.
- **BWO4:** The stands of coniferous trees, veteran trees, notable trees and scattered trees will remain where appropriate to enhance biodiversity or retain character.
- **BW05:** Populations of Italian Lords & Ladies (*Arum italicum*) and notable or indicator species forming outstanding assemblages of SSSI will be maintained.

### 14.7.5 Performance Indicators

**Factors**

**Invasive Species**
There are various non-native and native species that can invade important habitats to the detriment of native species. Whilst Sycamore can support a high biomass of invertebrates it can be highly invasive. In addition Holly and Bracken, although native, can spread to form dense sub-canopy casting shade to the detriment of woodland ground flora.

- **Target BWT1:** No increase in the current extent of non-native invasive species in the broad-leaved mixed woodland feature.
- **Target BWT2:** Holly and Bracken not more than 10% cover of the woodland feature.
- **Target BWT3:** Sycamore not more than 15% cover of the woodland feature.

**Attributes**

**Extent**

The main small woods on the site will be retained (see Habitat Extent 5). Some alterations to smaller blocks or of woodland and trees encroaching into the priority lowland heath and species-rich acid grassland open habitats will be undertaken.

- **Target BWT4:** No increase or loss of the current distribution of woodland blocks.
- **Target BWT5:** No reduction in number of ancient, notable or trees of local significance.
- **Target BWT6:** Loss of coniferous and encroaching tree stands where health and safety require it, or for priority habitat enhancement.

**Structure & Natural Processes**

The woodland should have a good cover of different layers, canopy, understorey and field layer. This is not the case for either the mixed or Scots Pine woodland stands, where the understorey or field layer is not always expected to be present.

- **Target BWT7:** Understorey (2-5m) present over at least 20% of total stand area of broad-leaved woodland.
- **Target BWT8:** Canopy cover present over 30-90% of stand area.
- **Target BWT9:** At least three age classes spread across the average life expectancy of the commonest trees.
- **Target BWT10:** At least 5-10 mature/over mature trees per ha.
- **Target BWT11:** A minimum of three fallen lying trees over 20cm diameter per ha and four trees per ha retained as decaying standing wood.

**Regeneration Potential**

Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density.

- **Target BWT12:** Signs of seedlings growing into saplings through to young trees at sufficient density to maintain canopy density.

**Trees & Shrubs**

Locally native species should dominate the canopy to benefit wildlife and be in keeping with the broad-leaved semi-natural woodland, wet woodland and mixed woodland present. Scrub is included in the attribute as it is an important component of woodland.

- **Target BWT13:** At least 95% locally native species in any one layer (including Scots Pine).
- **Target BWT14:** At least 5% woodland/scrub edge.

**Indicators of Local Distinctiveness**

- **Target BWT15:** 80% of ground flora cover referable to relevant NVC community.

## 14.8 Important Feature 6: Wet Woodland

This feature includes remnant alder carr and wet secondary woodland and scrub.

### 14.8.1 Distribution

The remnant wet woodland is located in three areas of the Heath; to the west by Western Alder Carr; north-west corner by Little Buckland Corner House; and to south-east side by Moor Bungalow. These areas comprise mainly veteran Alder trees but are increasingly invaded by Sycamore. The under-storey includes Broad Buckler-fern, decaying wood and young tree saplings, with invasive Bracken, Spanish Bluebell and Bluebell Hybrid.

### 14.8.2 Current Status

Mixed deciduous woodland (NVC type: W7 wet alder/ash/yellow pimpernel) is listed as a specific interest feature of the SSSI and a priority habitat in the BOA WG10: Reigate Heaths. Overall the status of wet woodland is described by Natural England as unfavourable. Non-native invasive species are not prevalent on the Heath, however as with most woodland close to residential housing, there is a certain amount of invasion by pest species. Holly is locally abundant and overall likely to be over the recommended target with regards to the woodland to the south of Flanchford Road. In general, the areas of wet woodland are even aged and, the approach to management will be maintained.

### 14.8.3 Vision

Areas of wet woodland will be retained in order to maintain a variety of habitats that add to the overall biodiversity of the Heath and enhance the local landscape. Priority will be given to maintaining alder carr in a favourable condition. The field and ground layers will be a mosaic of vegetation characteristic of wet woodland. There will be an ecotone from open habitats to dense and mature carr.

Wet woodland will be managed to restore and maintain a diversity of species, age and form, with an abundance of standing and fallen decaying trees and shrubs and deadwood. Dead wood provides ecological niches for many species including specialised invertebrates, fungi and other woodland species.

This important feature will continue to provide nesting opportunities, a food source and shelter for birds, particularly those species associated with wet woodland and alder carr. Bats will continue to use the woodland edge for foraging and commuting, particularly for the large population of Common Pipistrelle bat in The Glade.

The habitat will not contain any non-native invasive species including Himalayan Balsam. The occasional distribution of Sycamore will be tolerated. The occasional distribution of native invasive species such as Bramble and Bracken will also be acceptable.

### 14.8.4 Management Objectives

- **WWO1:** The extent of remnant alder carr, including associated other types of wet woodland, scrub and characteristic trees will be maintained.
- **WWO2:** Others areas of wet woodland habitats will be restored or created to link these areas remnant alder carr so that this fragile habitat becomes more stable.

- **WWO3:** The alder carr and associated habitats will support more stable or increasing populations of notable species with conservation status.
- **WWO4:** The factors that have a detrimental impact on the fragile wet woodland and the associated habitats and species will be under control or reduced.
- **WW05:** Populations of Italian Lords & Ladies (*Arum italicum*) and other notable or indicator species will be maintained.

### 14.8.5 Performance Indicators

**Factors**

**Hydrological Changes**
Changes in the hydrology of the Heath and surrounding land reduces ground water levels so that this wet habitat is threatened through drying out of the soil.
- **Target WWT1:** Survey and monitor the hydrology of the Heath and surrounding land.

**Natural Succession**
The natural recruitment of young trees and scrub resulting in natural succession toward a dry wooded landscape threatens this wet habitat through further drying out of soils.
- **Target WWT2:** Trees felled and scrub cut to retain 0.25ha of wet alder carr and scrub.

**Operations Likely to Damage**
If not undertaken with care, management operations on the site may damage these fragile habitats and associated important ecological features.
- **Target WWT3:** Obtain advice and/or consent from Natural England before carrying out operations likely to damage the protected habitats and/or species.

**Invasive Species**
A number of non-native invasive species, including Himalayan Balsam, are present within wet woodland and the effectiveness of control methods is reflected in the target.
- **Target WWT4:** No increase in the current extent of non-native invasive species in the woodland feature.

**Attributes**

**Habitat Extent**
The presence, extent and condition of this HPI priority habitat and associated features will be monitored on a regular basis to ensure not declining.
- **Target WWT5:** The extent of alder carr and wet woodland will be stable or increasing over the site (See Map 9). Increased area of priority habitat type set by BOA as 0.25ha.

**Structure and Natural Processes**
Wet woodland should aim to have a good cover of different layers, primarily alder carr but also a canopy, understorey and field layer.

- **Target WWT6:** Alder carr and understorey (2-5m) present over at least 20% of total stand area of wet woodland.
- **Target WWT7:** At least three age classes spread across the average life expectancy of the trees characteristic of wet woodland and alder carr.

**Regeneration Potential**

Signs of seedlings growing through to saplings to young trees at sufficient density to maintain the density and diversity of understorey and canopy layer.

- **Target WWT8:** Signs of seedlings growing into saplings through to young trees at sufficient density to maintain canopy density.

**Composition of Trees & Shrubs**

Locally native species should dominate the canopy to benefit wildlife and be in keeping with alder carr and wet woodland priority habitats

- **Target WWT9:** At least two species frequent and four species occasional in stands of wet woodland. See indicator species for NVC W7 and SSSI objectives.

**Indicators of Local Distinctiveness**

- **Target WWT10:** 80% of ground flora cover referable to relevant NVC community W7 Wet Alder/Ash/Yellow Pimpernel type.

## 14.9 Important Feature 7: Freshwater & Wetland

This feature includes streams, ditches, ponds, flushes, bogs and other waterlogged areas.

**Freshwater**

Freshwater includes a wide range of habitats from high tarns and fast flowing mountain streams to the large sluggish rivers in the lowlands of south east England. A high level of precipitation means that Surrey is rich in rivers, streams, canals and ditches. Natural lakes are quite rare in the southern lowlands, so most lakes and ponds in Surrey were created by gravel extraction or as reservoirs, fish ponds, mill ponds or for livestock.

Canals and ditches are artificial waterbodies, with little flow and have more in common with ponds than rivers. They can support much wildlife, often bringing it into urban areas and some are important for their aquatic flora and invertebrates. Ditches are an integral part of farmland surrounding the Heath and are a feature of land drainage.

**Ponds**

Ponds are generally small in size, ranging from one to twenty thousand square metres (or two hectares). Ponds are not connected to each other or to other water bodies and by definition are only fed by either rainwater or groundwater. Ponds are standing waters that lack directional flow and can be permanent or seasonal features of the landscape.

Whether located within the Heath, in a local garden, on a village green, or part of the wider countryside, ponds are oases for wildlife worth conserving. Even small ponds can support a wealth of native species of plants, invertebrates and amphibians. In the context of the Heath and the wider rural landscape or collectively as a semi-natural habitat, ponds play a key role in supporting freshwater wildlife.

**Wetlands**

Surrey has a large number of natural and artificial wetlands, including the semi-natural areas of reclaimed mineral extraction sites. Teeming with invertebrates, rich in aquatic plants and a haven for amphibians, birds and mammals, wetlands offer an unforgettable experience. These beautiful areas are a vital part of our natural world and the lives of aquatic plants, animals and people depend on their health.

Most wetlands are peat-forming. When the ground is too wet for vegetation to decompose, a dark, organic matter called peat forms. This very slow growing material is an extremely important habitat for plants, such as sundew and marsh violet, which in turn support local invertebrate and bird populations. As well as providing a valuable habitat for wildlife, peat is a ‘carbon sinks’, removing carbon from the atmosphere and storing it.

### 14.9.1 Distribution

The physical features of the site affect the location, frequency and longevity or permanence of freshwater and wetland habitats on the Heath. The underlying geology of Greensand and Gault Clay that is typical of the undulating landscape of the Low Weald, creates depressions for groundwater and rainwater to collect in. Physical factors create conditions suitable for freshwater streams, ponds and wetland habitats on or near the Heath.

There are two main river catchments on opposite sides of the county. In east Surrey the River Mole arises near Crawley in West Sussex and flows through Horley, past the Heath, Dorking, Leatherhead and Cobham before meeting the Thames at Molesey. The district is crossed by a network of streams that are headwaters for this river.

There are two key headwaters near the Heath. Shag Brook arises at Buckland near the A25 Dorking Road and flows south east for 1km close to the Heath to meet the River Mole at Wonham Mill. Wallace Brook arises on the southern boundary of the Heath near Littleton Lane and flows south for 2km to the Mole at Flanchford Bridge.

There are thought to be around 500,000 ponds in Great Britain, plus around three million garden ponds. There are the remnants of three ponds on the Heath, which require further investigation and mapping. Bonny's Pond forms in a hollow just east of Bonny's Lane; Long Pond is located on the 4th fairway of the Golf Course in the middle of the Heath; and Heath Church Pond lies by the church in Flanchford Road.

Wetlands vary greatly in size, structure and composition of vegetation. The wetland areas on the Heath are naturally localised, such as springs and flushes and low lying areas over impervious subsoils where ground and surface water collects. On the Heath there are two main areas in addition to the wet woodland habitat described previously. The Glade and a peaty waterlogged area on the eastern boundary of the Heath.

**14.9.2 Current Status**

Generally the upper reaches of the River Mole near the Heath and its local headwaters are in a reasonably natural condition without extensive channelisation. However, they are vulnerable to pollution, low water levels and invasion by non-native species of plants and animals. Recognition of these issues has led to the development of catchment-scale plans to protect and restore natural habitats. A fundamental principle is to restore the natural processes and allow freshwaters the freedom to revert to natural ecosystems.

Lakes such as the reclaimed local mineral pits are temporary features, eventually filling with sediment and developing fen vegetation, but this is generally far too slow a process to be appreciated over human timescales. Although many ditches hold little wildlife, those in areas that were once wetlands can be rich in plants and invertebrates, providing a refuge for species that were once more widespread such as amphibians and grass snake. The state of local lakes and ditches has an impact on the hydrology of the Heath.

Many ponds in Surrey have been drained (deliberately or as a result of falling groundwater levels) or neglected and have filled with silt and vegetation or stagnated under fallen leaves as they undergo natural succession to scrub and woodland. Because they are small, ponds are vulnerable to contamination by pollutants that run-off in rainwater from agricultural land and roads. Three remaining ponds on the Heath appearto be in poor condition. This Plan should aim to restore remnant ponds and create new ones that are not over-shaded, contaminated by alien plants or run-off.

Groundwater levels have been significantly affected by mineral and water extraction on and around the Heath reducing or damaging the freshwater and wetland habitats. There are gravel and sand pits throughout the area and the Bonny's Mineral Water Factory was

drawing water from a 300ft well since 1860. Many wetlands are dynamic and if left alone, over long time spans, would develop into a different wetland type, or into wet woodland following natural succession.

### 14.9.3 Vision

Ponds and areas of wetland will be retained in order to maintain a variety of habitats that add to the overall biodiversity of the Heath and enhance the local landscape. Priority will be given to restoring the three remnant ponds to a favourable condition. The aquatic and marginal layers will be a mosaic of vegetation characteristic of freshwater in Surrey. There will be an ecotone from open water to dense and mature marginal vegetation.

Ponds, ditches and wetland will be managed to restore and maintain a diversity of species, age and form, with an abundance of aquatic plants, invertebrates and amphibians. Trees and scrub around these features will be retained, coppiced and pollarded to provide birds with nesting opportunities, a food source and shelter, particularly those species associated with freshwater and wetland habitats. Bats will use the ponds for foraging.

The habitat will not contain any non-native invasive species including Himalayan Balsam and encroachment by native trees and shrubs will be controlled.

### 14.9.4 Management Objectives

- **FWO1:** The extent of remnant ponds, ditches and other types of wetland habitat will be maintained.
- **FWO2:** Ponds, ditches and other wetland habitats will be restored or created to link these features so that this fragile habitat becomes more stable.
- **FWO3:** Ponds, ditches and other wetland habitats will support stable or increasing populations of notable species with conservation status.
- **FWO4:** The factors that have a detrimental impact on the fragile ponds, ditches and other wetland habitats and associated species will be under control or reduced.

### 14.9.5 Performance Indicators

**Factors**

**Hydrological Changes**

Changes in the hydrology of the Heath and surrounding land reduces ground water levels so that freshwater and wetland habitats are threatened from drying out.

- **Target FWT1:** Survey and monitor the hydrology of the Heath and surrounding land.

**Natural Succession**

Natural recruitment of trees and scrub resulting in natural succession toward a dry wooded landscape threatens these habitats through further drying out and shading.

- **Target FWT2:** Trees felled and scrub cut to retain open ponds and wetland areas.

**Operations Likely to Damage**
If not undertaken with care, management operations on the site may damage these fragile habitats and associated important ecological features.

- **Target FWT3:** Obtain advice and/or consent from Natural England before carrying out operations likely to damage the protected habitats and/or species.

**Invasive Species**
A number of non-native invasive species, including Himalayan Balsam, are present within these freshwater and wetland habitats.

- **Target FWT4:** No increase in the current extent of non-native invasive species in the woodland feature.

**Attributes**

**Habitat Extent**
The presence and extent of freshwater and wetland habitats and associated features will be monitored on a regular basis to ensure not declining.

- **Target FWT5:** The number and extent of ponds and wetland areas will be stable or increasing over the site.

**Habitat Quality**
The condition and quality of freshwater and wetland habitats and associated features will be surveyed and monitored on a regular basis to ensure not declining.

- **Target FWT6:** The ponds and wetland areas will be surveyed and mapped and assessed using current good practice for ponds.

**Bat Habitat**
There is a lack of large water features on the site. The creation or reinstatement of ponds would help to concentrate invertebrate activity such as midges and be a hot-spot for bat feeding activity. Bats also need open water in which to drink.

- **Target FWT7:** The ponds will be restored and maintained in accordance with good practice to improve freshwater habitat for invertebrates.

**Indicators of Local Distinctiveness**
In addition to the assemblages of rare and protected plants and animals the Heath supports a diversity of other notable species distinctive to the site and indicators of habitats.

- **Target FWT8:** Maintain stable and diverse assemblages of aquatic plants, invertebrates and amphibians appropriate for the ponds, ditches and wetland found on site.

## 14.10 Important Feature 8: Recreational Use

This final feature includes the right to roam, public rights of way, sport, informal recreation, education and interpretation.

### 14.10.1 Distribution

The Heath is registered Common Land; declared as open access land under the NERC Act; and is in the ownership of the Local Authority provided as public open space available for informal recreation at all times. The Heath is an integral part of the green infrastructure of the Borough that includes a network of diverse green spaces that include gardens, parks and open spaces such as the Heath. It is located on the Greensands Way so linked to other green spaces and served by a number of other rights of way.

Informal recreational use of the Heath is rated as highly significant in public consultation, particularly as the quality of this historic landscape is unique within the Borough. People enjoy visiting the Heath to take part in a variety of pastimes and informal recreational activities such as walking, exercising their dogs and riding horses.

Formal recreational activities such as golf and football are allowed under legal agreements and the enjoyment of participants is enhanced by the environs in which they take place. It is however, important to remember that the site is not an urban park or formal garden and provision of more formal recreational facilities maybe considered inappropriate to its natural aspect in the wider countryside.

### 14.10.2 Current Status

The Heath holds interest to visitors undertaking informal recreational activities all year round, particularly for walking with dogs. Access to and within the site is generally of good standard with sufficient public parking and accessible footpaths and rides but there are areas for improvement. Increasing numbers of visitors and wet winters are taking a toll on the paths and rides, which are being eroded in places. The informal car parks on site need regular maintenance and repairs.

Information panels and signage provide visitors with a better understanding of the Heath, in particular the important natural and cultural heritage features of the site. Improvements could provide additional information they may not have been aware of and help to enrich their experience. This provision of information needs to be balanced with increasing the amount of structures erected on the Heath so self-led activities and innovative use of social media might help to educate users while maintaining the natural aspect.

Bins for litter and dog waste are provided on the Heath, but to the detriment of visual amenity and they require regularly emptying to avoid unsightly waste on the Heath. The rights of way need regularly cutting during the summer months to keep them open and unobstructed and grounds maintenance teams maintain the highway verges.

Developers promote the Heath in local developments to boost property value because it is seen as a positive aspect when moving to the area. This also means that local residents want to see the Heath managed positively.

### 14.10.3 Vision

The Heath will continue to be a tranquil place where people come for quiet recreation and enjoyment. Visitors will arrive in well-maintained car parks, to find effective interpretation boards with enough information to allow them to safely navigate the Heath.

Public rights of way will be well maintained but wherever possible grass cutting for amenity and recreational purposes will maintain or enhance the important features on the Heath as well as improve access.

Visitors will retain a right to roam over more informal paths and wider Heath so that they can enjoy the beauty of the historic landscape and rare habitats as they change through the seasons (see Appendix 20).

Various media will provide information about the natural and cultural heritage of the Heath so that visitors can develop an understanding and appreciation of the important features.

### 14.10.4 Management Objectives

- **RUO1:** Recreational activities, facilities and structures will be managed so that no damage is caused to ecological, historical and landscape features.
- **RUO2:** Paths and permissive horse rides will be managed to reduce conflict between different users (e.g. walkers, riders & cyclists).
- **RUO3:** Where resourcing allows the car parks and access roads will be maintained for users (e.g., extent, surface and type of vehicle access).
- **RUO4:** Create a balance between conservation of the Heath and user's needs.
- **RUO5:** Promote awareness of Reigate Heath management issues, to users as well as within RBBC and with external bodies.
- **RUO6:** Raise awareness of encroachment and byelaws such as cycling restrictions.
- **RUO7:** Work with RBBC Legal Department to ensure that legal issues are dealt with promptly and effectively.
- **RUO8:** Liaise with, encourage and support, RBBC officers and others to control misuse of Reigate Heath.
- **RUO9:** Work with RBBC to evaluate pressure on the site from overuse by investing in investigating alternative natural green spaces.
- **RUO10:** Engage with users (recreational users, dog walkers, horse riders, golfers) and local community using a variety of methods to understand their perspective.
- **RUO11:** Ensure that all relevant planning applications properly take into account the SSSI features, protected species and management features in this document.
- **RUO12:** Be aware of the issues relating to the community interest of the common land.

### 14.10.5 Performance Indicators

**Factors**

**Car Parks**

Overuse of the car park is a concern and should be high on the list of important factors for the site. There have been comments about the number of horse boxes using the car park, difficulty in finding space to park and frequent need to repair the surface. Some visit because parking is free but others thought that the introduction of parking fees could help subsidise maintenance of the Heath.

- **Target RUT1:** Existing car parks should continue to be repaired, but not expanded.

The carrying capacity of the site is being regularly exceeded, therefore some parts of the site are being over used and this is leading to other factors already discussed including erosion, enrichment, trampling, urbanisation activities and localised pollution. Targets are not known and therefore not currently set for this factor.

- **Target RUT2:** Review the carrying capacity of the site and car parks.

**Erosion**

Popularity of the site and the number of users has caused lot of trampling on the sensitive habitats, disturbance to flora and fauna, and erosion of paths. There is a network of public rights of way that must be kept open and unobstructed by RBBC but surfacing is an issue for the local Highway Authority (SCC). Whilst the use of surfacing materials improves access it can have a detrimental impact on fragile habitats.

- **Target RUT3:** Survey and monitor rights of way to ensure that they remain open and unobstructed and surfaces kept well maintained.
- **Target RUT4:** Monitor visible erosion of public rights of way and review the need for hard surfacing of these routes.
- **Target RUT5:** Ensure that only local or neutral surfacing materials are used.

Erosion also affects the car park, other seasonal paths, rides and access tracks , which creates problems for walkers on the site. Horse riding is restricted to bridleways and permissive rides.

- **Target RUT6:** Survey and monitor permissive rides, other tracks and paths to ensure that they remain open and unobstructed.
- **Target RUT7:** Monitor visible erosion of rides, tracks and paths and review location and provision of these temporary routes.

Cycling is not permitted on the Heath so in order to promote healthy living, and to prevent cyclists being tempted to ride rather than push their cycles, areas for locking bikes should be provided. This might help reduce the number of cars driven to the site.

- **Target RUT8:** Install bike locking areas in the three car parks.
- **Target RUT9:** Provide new signs and information using other media to guide walkers, horse riders and cyclists.

**Dogs**
RBBC enforcement officers are aware of the problem and challenge dog owners (as part of a wide range of duties across the Borough), although the timing of most offences (early and late in the day) means that fouling remains an issue. Ideally no dog waste would be left on the Heath, as stated in the target, but this is unlikely to be enforceable.

- **Target RUT10:** No dog waste across the Heath.

Dogs let off the lead during the bird nesting season can cause disturbance of wildlife such as ground nesting birds and reptiles. The number of users with dogs is likely to increase in the next 10 years. The number of professional dog walkers appears to be on the increase as well, causing further detrimental impact on the Heath.

- **Target RUT11:** The Local Byelaws should be adhered to with regards to dogs being on leads or under control and this should be reinforced with information boards, RBBC workers and locals. Fines can be used.

**Vehicles**
Access across the Heath by vehicles and machinery is necessary to undertake conservation management required. There is also access around the golf course for ground maintenance. However, care should be taken by drivers not to damage habitats or important features on the Heath through over use of vehicles and machinery or driving off road at inappropriate times such as during inclement weather.

- **Target RUT12:** Employees, contractors and volunteers to adhere to the Vehicular Access Plan.

**Urbanisation**
In addition to unchecked development of the environs of the Heath encroachments by the existing neighbours can be an issue for managers of common land. Other activities that add to the urbanisation of the rural landscape include littering and fly-tipping.

- **Target RUT13:** Visible reduction of urbanisation activities.
- **Target RUT14:** Suitable signage designed and sensitively located around the site.

The main indicators of urban clutter on the Heath are the number and location of bins for litter and dog waste, whilst balancing the provision of good interpretation and information boards across the site with increasing clutter is also an important consideration.

- **Target RUT15:** Review bins and ensure that bins placed in strategic points only.
- **Target RUT16:** Within in reason, regularly check and empty bins.

**Attributes**

**Education**
As an outdoor classroom the Heat offers chance to learn about the important features and methods needed to conserve them but this should be balanced with conflicts arising from over use of the site. Leaflets with self-guided activities may be a better solution. Users are regularly engaged with using surveys, questionnaires, leaflets, meetings, open days, social media including Facebook and Twitter to provide valuable feedback.

- **Target RUT17:** Develop an annual programme of educational activities and events.

# 15 Management prescriptions

The management prescriptions provide a list of work activities or tasks that are required to meet the objectives of this Plan. In the table the prescriptions are listed for each important feature with the relevant target and arranged by management compartment.

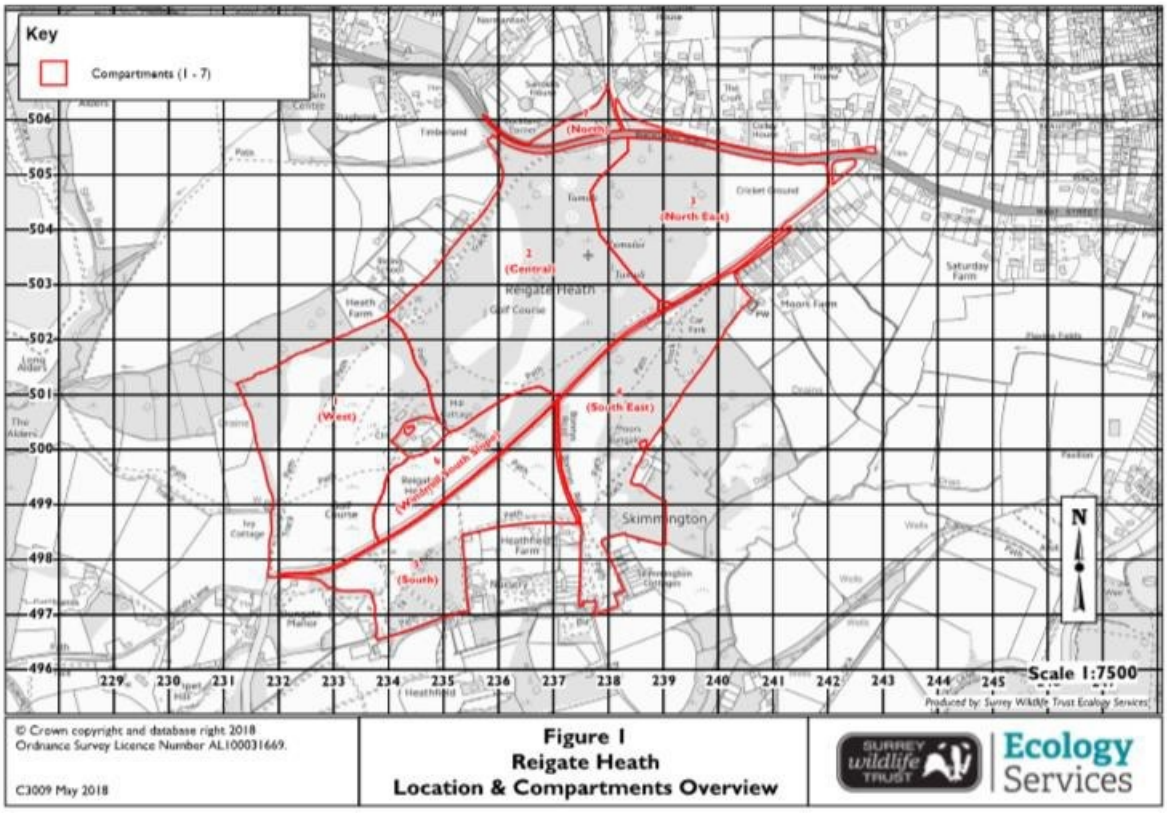
## 15.1 Key to Management Prescriptions

| | |
|---|---|
| **Feature title** | Refers to Important Feature and sub features to be managed |
| **Targets to achieve** | Details general targets that will be used to fulfill the specific objectives for each feature. The codes refer to the targets outlined above for each sub feature. |
| **Compartment Area** | West, Central, North East, South East, South West, South Central North of A25 Car parks and Golf Club area. |
| **Carried out by** | Identifies team to carry out tasks, although all RHMSG members and organisations may well be involved.<br>NE Natural England<br>RBBC Reigate and Banstead Borough Council<br>RHGC Reigate Heath Golf Club<br>RACV Reigate Area Conservation Volunteers<br>RHRG Reigate Heath Riders' Group<br>RHRA Reigate Heath Residents Association<br>RHMSG Reigate Heath Management Steering Group<br>SAS Surrey Archaeological Society<br>LR Local Residents<br>DW Dog walker representative |
| **Timing of work** | Gives the year in which the work should be carried out, where possible the month or dates (to be agreed for Annual Work Programme). The Annual Work Programme will pull out the relevant prescriptions from this master table and add in any relevant new tasks if appropriate and agreed. |

The objectives for each feature should be reviewed towards the end of the management plan in 2022, to ascertain if they are still appropriate by checking to see if the Targets have been met and the Visions accomplished.

## 15.2 Map 7: Management Compartments on Reigate Heath LNR

This map shows the various compartments of the Heath that have been selected by RBBC to assist their Green Spaces Department in planning, delivering and monitoring the annual work programme and specifications. Management compartments are usually chosen by using boundaries (e.g. hedgerows & ditches) and features (e.g. PROW & roads) that are clearly visible on the ground.



## 15.3 Table of Management Prescriptions (Work Programme)

Important Feature 1. Scheduled Monuments

| Feature | Compartment Area | Targets to achieve | Carried out by | Timings of works |
|---|---|---|---|---|
| All Barrows | Central & South East | Enhance visual appeal & retain integrity. Strim off invasive bracken. (SMO3) | RBBC | 2022,2025,2028 |
| Trees on Barrows | Central & South East | Described in woodland management. (SMT2) | Described in woodland management | Described in woodland management |
| Damage to Barrows | Central & Sound East | Review erosion/trampling and consider methods to reduce the problem. (SM01/03, SMT1) | RHSG Archaeology representative | To be discussed at meetings where required |
| Public information | Central | Increase visibility of Barrows and information on new signage. | RHSG | 2019 |

Important Feature 2. Historic Landscape (Some of the below are detailed in other management prescriptions but have been summarised here.

| Feature | Compartment Area | Targets to achieve | Carried out by | Timings of works |
|---|---|---|---|---|
| Encroachments | All areas | Monitor Heath for encroachments through 2 boundary patrols per year. Report to JET. (HLT1) | RBBC | Annually Winter and Summer |
| Ancient and historic trees | All areas | Preserve and enhance ancient and historic trees Described in woodland management. (HLT4) | RBBC | Described in woodland management |
| Urbanisation<br><br>**Table continues** | All areas | Reduce urban clutter. Any applications for sings/benches to go through RHSG for review. (HLT3) | RHSG | When required |

| | | | | |
|---|---|---|---|---|
| Erosion | All areas | Monitor erosion, develop strategies to reduce the impact on historic and ecological features. Described in Recreation.(HLT4) | RHSG | Agreed when required at meetings |
| Viewing points and visual appeal | All areas | Maintain viewpoints and identify new ones. (HL03,HLT5) | RHSG | Agreed when required at meetings |

Important Feature 3. Lowland Heath

| Feature | Compartment Area | Targets to achieve | Carried out by | Timing of work |
|---|---|---|---|---|
| Heather parcels | West, Central, North East, South East, South West (edge of 8th Fairway every 3 years*) | Create varied age structure (Pioneer, established mature, over mature) through cutting. Use cuttings to spread on new litter scrapes. (LHT10) | RHGC/RBBC (Both parties to agree) | Annually in Autumn<br><br>*Except edge of 8th Fairway |
| Gorse stands | West, Central, North East, South East, South West, South | Identify new areas of potential heathland restoration. Expand existing heathland by removal of invasive scrub and trees. Add to the annual programme.(LHT1,2, 5) | RBBC, RHGC, RACV<br><br>(All parties to agree works) | Annually in Winter months |
| Gorse stands | West | Create varied age structure of Common Gorse by rotational coppicing. Target over mature Gorse first. Treat stumps with herbicide in areas for Heather expansion. Clear all arisings. (LHT11,LHT13)<br><br>Clear Gorse obstructing sight lines on path leading to 1st & 3rd Fairway. | <br><br><br><br><br><br><br><br>RHGC | Winter 2020, 2024<br><br><br><br><br><br><br><br>Winter 2020 |
| Gorse stands | South | As above | As above | Winter |
| Gorse stands | South East | As above | As above | Winter |
| Gorse stands<br>**Table continues** | Central | As above | As above | Winter |

| | | | | |
|---|---|---|---|---|
| Lowland Heath parcels | Central – Area behind Flanchford Road car park<br><br>Left of Glade | Scrape off nutrient layer and seed with Heather arisings. (LHT2)<br><br>As above | RBBC/Contractor<br><br>As above | Summer 2020. Follow up with scrub control and herbicide treatment when required.<br><br>As above |
| Lowland Heath parcels | Central – Higher and lower slope between 4th and 5th fairways<br><br>Lower section of 4th and 5th Fairways | Scrape off nutrient layer. Control reoccurring scrub. (LHT2)<br><br>Remove 10 -30 trees to improve light. Maintain a screen from the 5th fairway. (LHT1) | RACV<br><br>RBBC/RAVC | Late Summer – Winter 2018. Follow up with scrub control when required and herbicide treatment when required.<br><br>2019,2022,2024 |
| Lowland Heath parcels | North East – West of Glade | Scrape off nutrient layer reseed with Heather cuttings.(LHT2) | RBBC/Contractor | Summer 2020. Follow up with scrub control and herbicide when required. |
| Lowland Heath parcels | South – Tumili Ridge | Scrub removal and scrape off nutrient layer. (LHT2) | RBBC | Winter 2019. Follow up with scrub control and herbicide treatment when required. |
| Lowland Heath parcels | South – South facing slope facing Flanchford Road | Removal of invasive Bracken, Scrub in preparation for Litter scrape. Leave 50% un scraped to create mosaic habitat. (LHT2) | RBBC/Contractor | Summer 2021. Follow up with scrub control and herbicide treatment when required. |
| Lowland Heath parcels | South - Top of 9th Fairway slope | Removal of bracken and bramble. Litter scrape. (LHT2) | RHGC | 2019,2021,2023,2025 |
| Lowland Heath parcels | West – Bank of 1st Fairway | Follow up with herbicide | RHGC | When required |

Important Feature 4. Acid grassland management inclusive of golf, sports and verges

| Feature | Compartment Area | Targets to achieve | Carried out by | Timing of work |
|---|---|---|---|---|
| Sports pitch | North East | Maintain Acid Grassland by early spring cut of football pitch and annual late summer cut of entire area. Clear arisings Disturb ground if football ceases to enhance Annual Knawel. (AGT4,5,9) | RBBC/Contractor | April (football pitch) and Late Summer (August/September) entire area |
| Recreation ground | North East | Mown throughout growing season. Clear arisings. (AGT4,5,9) | RBBC/Contractor | May -September |
| Golf course fairways | West | Ensure widths of fairways are agreed and adhered to. Repair divots with local soil from practice area. (AGT4,5,9) | RHGC in agreement with RHSG | To be agreed during meetings |
| Golf course grassland | West | Ensure all tees, greens and roughs are cut to agreed specifications. (AGT9) | RHGC in agreement with RHSG | To be agreed during meetings |
| Golf course bunkers | West | Enhance visual appeal. Retain acid grassland. When new bunkers are created, remove and retain turf and replace onto the new bunker within shortest period. Do not carry out works on any whole bunker during one year. | RHGC | Ongoing – where required |
| Golf club Acid grassland | West | Returfing should be carefully considered. Only use local provenance acid grassland with no Perennial Rye-grass present (AG04) | RHGC | Where required |
| **Table continues** | | | | |

| | | | | |
|---|---|---|---|---|
| Rough disturbance by 1st Fairway | West | Expand population of Upright Chickweed and other Acid Grass Indicators by gentle scarification around plant extent (AGT10) | RHGC | Annually in winter |
| A25 and Flanchford Road verges | North East | A25 and Flanchford Road verges to be cut to 75mm including junction sight lines. Arisings to be removed. | RBBC | Annually in August |

Reptile conservation (To coincide with Lowland Heath and Acid Grassland)

| Feature | Compartment Area | Targets to achieve | Carried out by | Timings of works |
|---|---|---|---|---|
| Hibernaculums | North East (The Glade), Central | Create three new hibernaculas, in dry, slope areas. Either build up log piles on the ground. Or dig out area, retain soil, pile with logs and replace soil and vegetation.(LHT23,24) | RACV or RBBC to be agreed at meetings | 2020,2021, 2024 |
| Habitat piles | South (Flanchford rd Woodland edge) | Create habitat piles in woodland edge but not in sight from the road. (LHT23,24) | RBBC | Where required or feasible to do so |
| Grass Piles | Golf course club area | Create 3 to 5 grass piles for reptiles around Golf club work area. (LHT23,24) | RHGC | Where feasible to do so |
| Reptile monitoring | All areas marked on Reptile Refuge map | Annual recording of Refuges and Hibernaculums. | Agree with Surrey Amphibians and Reptile Group (SARG) | Annually June – September |
| Bare Ground | All areas | Increase bare ground habitat. Targets by year 2 Heathland Areas (1-5%) and Acid Grassland Areas (1-2%) (AGT6,7,LHT 23,24) | All | |

Important Feature 5. Mixed deciduous woodland Management

| Feature | Compartment Area | Targets to Achieve | Carried out by | Timing of work |
|---|---|---|---|---|
| Woodland blocks | All areas | Preserve lying and standing deadwood where safe to do so. Enhance deadwood habitat. (BWT9,11) | RBBC, RACV and RHGC | Ongoing |
| Invasive tree species | All areas | Reduce cover of Sycamore and Holly through gradual thinning. (BWT2,3) | RBBC, RACV and RHGC | Winter |
| Tree safety | All areas | Maintain healthy tree stock via routine inspections for hazards, pests and disease. (BWT6) | RBBC Tree Officer | Routine inspections. Works carried out where required. |
| Tree works on Scheduled Monuments | Central, North East and South | Tree works to preserve archaeological features to be agreed with consent from Historic England. | RBBC Tree Officer and Historic England | Following reports from Historic England and Tree Officer |
| Woodland edge | Central (North edge of 13th fairway) | Thin secondary woodland. Halo release mature Oak. Thin Holly to expand Acid grassland. (BWT6,7) | RHGC, RACV, RBBC | Winter |
| | Central (edge of 4th and 5th Fairway) | Crown Lift/Fell Monterey Pines to expand Heather. (BWT6) | RBBC | Winter 2019 |
| | North East (North of Glade) | Retain Oak tree for visual landscape screen. (BWT5) | RACV | Winter 2019,2020 |
| | North East (between Pavillion and Glade) | Thin Silver Birch by cricket pavilion, enough to open up a vista towards The Glade, but not enough to expose the road. | RACV | Winter 2019,2020 |

**Table continues**

| | | | | |
|---|---|---|---|---|
| | North East (North edge of sport pitch woodland<br><br>South East | Thin Silver Birch but retain screen from Buckland Road. Enhance Heath and Acid grass edge. (BWT6).<br><br>Scallop edges of footpaths to enhance vegetation structure (BWT14). | RACV<br><br>RBBC. To be agreed at meeting | Winter 2020,2021, 2023,2025,2027,2029 |
| Veteran and Ancient Oaks | South East | Retain and enhance selected Oaks through Halo releasing and repollarding. (BWT5). | RBBC and RACV. To be agreed at meeting & added to annual work programmes | Winter |
| Inventory of Veteran and Ancient trees/ diseased trees | All areas | Develop inventory and map of notable and diseased trees. (BWT5). | RBBC Tree Officer | Following routine inspections |
| Woodland blocks by Skimmington Arms and White House | South West | Propose SNCI Survey for these woodland blocks to Surrey Nature Partnership (SNP) | RBBC | When SNP call for proposed sites |

Important Feature 6. Wet Woodland

| | | | | |
|---|---|---|---|---|
| Wet Woodland | West (NE corner of club house) | Consider recoppice selection of Alder to diversify age structure and thin out to create scrub edge. However, need to also carefully consider first the implications of the potential change in hydrology, especially in relation to the golf course. (WWT2,4,5,6,7) | To be agreed at meeting | Winter |

Important Feature 7. Freshwater and Wetland

| Feature | Compartment Area | Targets to achieve | Carried out by | Timing of work |
|---|---|---|---|---|
| Wet flush in Glade | North East | Visually monitor Marsh Pennywort, Cross-leaved Heath, Bog-mosses populations in The Glade. | RACV | Annually Spring/Summer |
| | North East (South of Glade) | Scrape out shallow hollow in amongst existing Purple Moor-grass and Soft Rush. Arisings and top soil to be used to create a small south facing lip for Hymenoptera and to help deter dogs. Encourage build up of Bramble and tall vegetation next on southern edge to discourage people. | RBBC and RACV to agree at meeting | To be agreed at meeting |
| Wetland Heath | North East | Expand wet heath plants in West of Glade by phased turf stripping. Create scrapes in South Glade. | RACV and RBBC. Work to be agreed in meeting. | To be agreed at meeting |
| | Central | Gradually thin some trees above 5th green and encourage boggy pools to hold back water. This may also reduce flooding down into the 5th green and thereby reduce sand erosion. Consult with golf course. | To be agreed with RHGC | To be agreed at meeting |
| Historic ponds/wet areas | All areas | Map locations of historic ponds and wet area for restoration (FWT5,6) | To be agreed at meeting | To be agreed at meeting |

Important Feature 8. Recreational use

| Location | Compartment Area | Targets to achieve | Carried out by | Timing of works |
|---|---|---|---|---|
| Permissive horse rides | West | Maintain access for horse riders. Cut back encroachments.(RUT6) | RBBC | Annually between July - September |
| Footpaths | All areas | Review network route of footpaths. Where required reroute to protect priority habitats, enhance view points, increase safety. (RUT7) | Agreed by RHSG | To be reviewed during meetings |
| Footpaths, Right of Ways and access points | All areas | Maintain access along footpaths and Right of Ways. Cut back encroachments. (RUT6)<br><br>Repair access points where required.(RUT6) | RBBC<br><br>RBBC | Annually between July – September<br><br>Spring/Summer |
| Signage and benches | All areas | Rationalise signage and benches to avoid clutter. Review condition of signs and benches. Repair/replace where required. (RUT13,14) | Repairs agreed by RHSG at meetings. | Where required. Repair works carried out in Spring/Summer. |
| Access roads | Central, West and South | Maintain access roads that are within RBBC/RHGC remits. (RUT12). | RHGC (Golf club roads) RBBC (Council owned roads) | Where required and in conditions not likely to damage the Heath |
| Access roads | Central, West and South | Monitor and enforce parking infringements on Heath | Report to RBBC JET Team | When required |
| Vehicular access | All areas | Avoid using vehicles in wet conditions. Obtain NE consent for extreme conditions. (RUT12) | RHGC and RBBC | When required |
| Car Parks (Flanchford Road and Golf Club) | Central, South East and West | Review condition of car parks. Make repairs using 'like for like' material under Commons Legislation. (RUT1) | RBBC Engineer | When required following routine inspections |
| Car Parks (Flanchford Road and Golf Club) | Central, South East and West | Enforce illegal parking (overnight and non heath use) | Report to RBBC JET. Enforced by RBBC JET. | When required |
| Waste bins on site | All areas | Keep the Heath free of litter. Maintain waste bins ensure they are emptied regularly and suitably positioned. (RUT15,16) | RBBC Waste and Cleansing | Routine emptying |

**Table continues**

| | | | | |
|---|---|---|---|---|
| Erosion of access points, paths and habitats | West<br><br><br><br>All Areas | Install rail along path by 2nd Hole to reduce erosion of Acid Grass and Heather.<br>Monitor erosion and develop remedial strategies. | RHGC<br><br><br><br>All parties | 2019<br><br><br><br>When required |
| Dog control | All areas | Reduce dog disturbance and fouling(RUT10,11) | RBBC Dog warden. Regular patrols. Report incidents to JET. | Routine inspections |

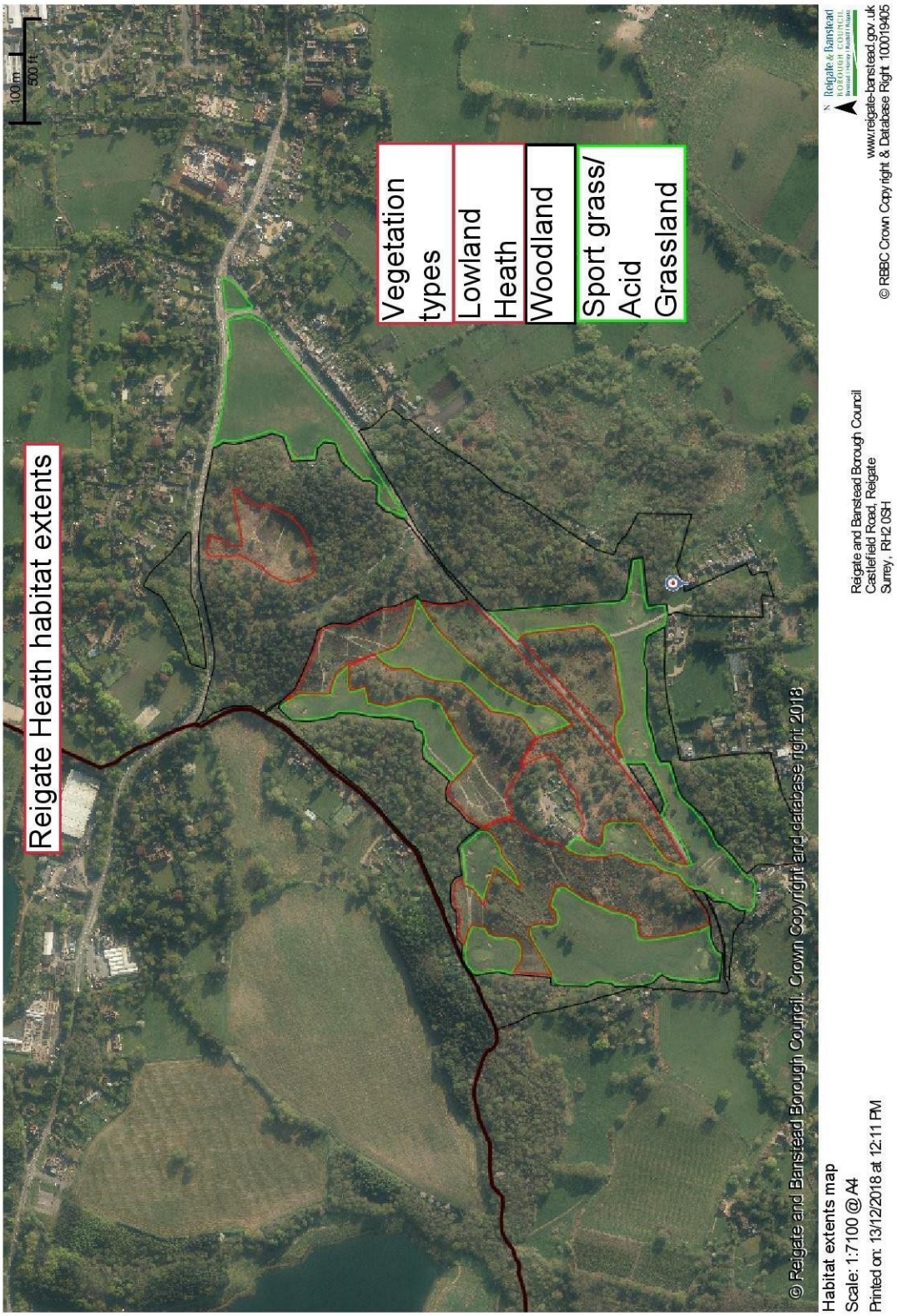
Invasive species coincides with above Important Features management prescriptions

| Feature | Compartment Area | Targets to achieve | Carried out by | Timing of work |
|---|---|---|---|---|
| Greensand footpath | West | Control spread of Wavy Hair grass along footpath edges by strimming (LHT18) | RBBC | Annually in Mid August |
| Litter scrape by West bank of 1st fairway | West | Control spread of Bracken, Bramble and scrub encroaching Lowland Heath litter scrape. Treat stumps with herbicide.(LHT1,20,21) | RHGC | As required in Winter months |
| Bank by 1st Fairway | West | As above. Coppice Gorse on rotation to create varied age structure. (LHT11,12,13) | RHGC | Winter 2020,2023,2026 |
| North West corner of Golf Course | West | Control Spanish and Hybrid Bluebell by hand pulling.(LHT21) | To be agreed in meeting | Spring and Summer |
| Woodland blocks | All woodland blocks | Reduce Sycamore cover in Woodland. Treat stumps with herbicide. (BWT1,3) | RBBC | Autumn and Winter |
| East of 4th Green and slopes | Central | Consider sod cutting to reduce invasive grasses dominating.(LHT18) | To be agreed in meeting | |
| Access road from Buckland corner | Central | Treat Japanese Knotweed via Herbicide Stem injection. (LHT21) | RBBC | Annually in September |
| Woodland verge opposite Bonnys Road entrance | Central | Treat Green Alkanet with herbicide to prevent its dominance. (LHT21) | RBBC | Spring and Summer |
| Bramble | Central (Northern edge of 3rd Fairway) | Strim off Bramble encroaching onto Heathland. (LHT21) | RHGC | Mid August 2021,2023,2025,2027 |

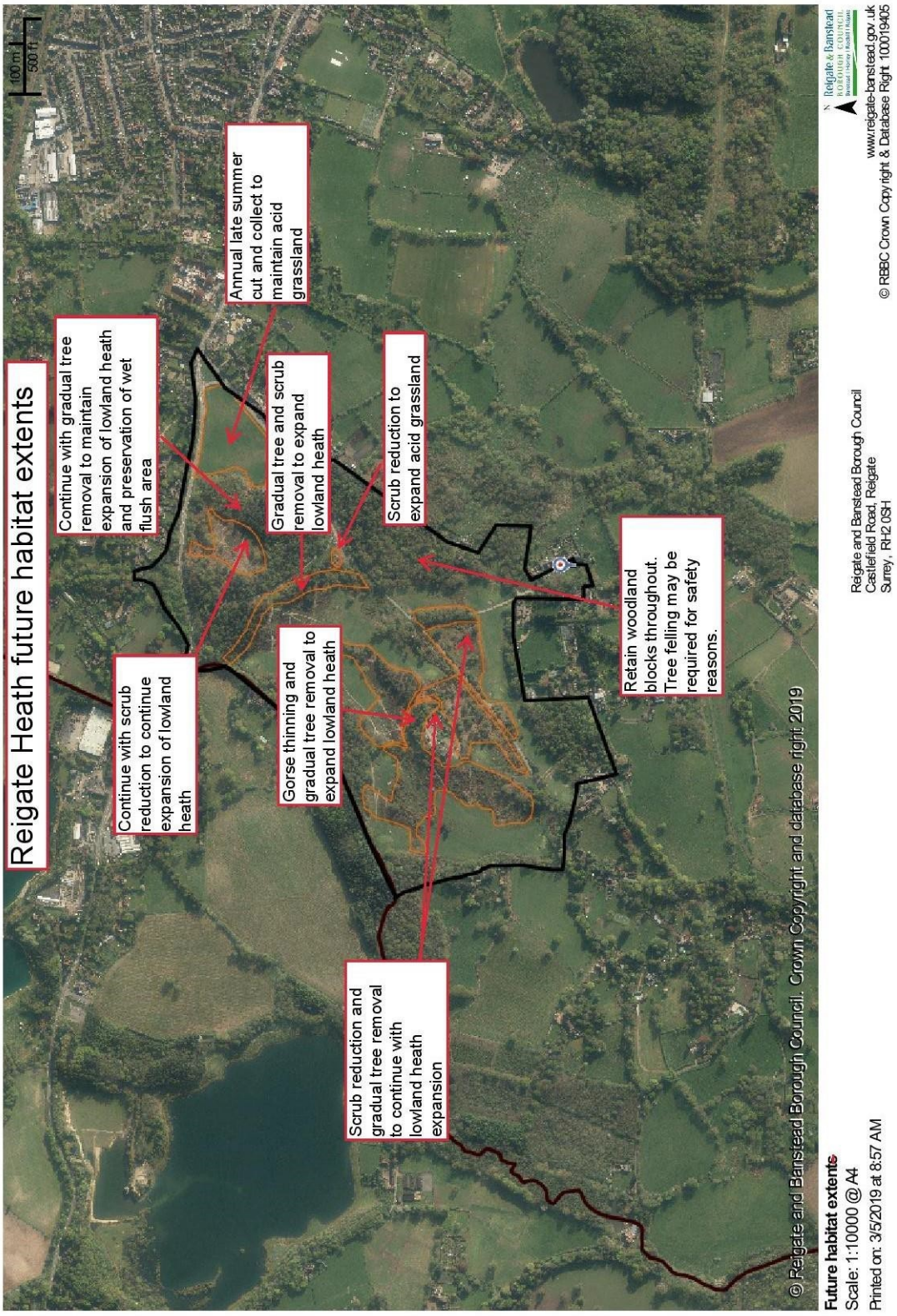
Biological Monitoring

| Feature | Compartment Area | Targets to achieve | Carried out by | Timing of work |
|---|---|---|---|---|
| Bare Ground | All areas | Collect data on negative erosion. (RUT3,4) | All | Annually |
| Bats | All areas | Bat survey prior to tree works (BWT5) | RBBC Tree Officer | When required |
| Reptiles | All Reptile refuges | Collect data of Reptiles present | In partnership with SARG | Summer annually |
| Botanical survey | All grassland areas | Survey of Acid Grassland | Consultant surveyor | Spring 2019 and 2027 |
| Carrying capacity survey | All areas | Survey to record carrying capacity and impacts of recreation. (RUT2) | Consultant surveyor | To be agreed |
| Invasive species | All areas | Survey and record invasive species | RBBC | During site inspections |
| Visitor questionnaire | All areas | Conduct questionnaire to increase knowledge of visitors. | RBBC | 2025 |
| Digital mapping | All areas | Map all trees of interest. (BWT5) | RBBC Tree Officer | Following inspections |
| Phase 1 Survey | All areas | Phase 1 Habitat Survey | Consultant surveyor | Spring 2021,2026 |
| Hydrology Report | The Glade, wet areas and ditches | Survey to develop knowledge. (FWT1). | Consultant surveyor | To be agreed at meeting |
| Rare Plant monitoring | West<br>2nd fairway near green. West facing slope 1st fairway. Dog-leg between 4th & 5th fairways. The Glade.<br><br>Central<br>2nd Fairway near green<br>West slope 1st fairway<br>Dog leg 4th and 5th fairways | Monitor populations of Cross Leaved Heath & Upright Chickweed<br><br>Monitor Cross Leaved Heath in wet habitat. (FWT6) | RACV<br><br>RACV | Summer annually<br><br>Summer annually |
| Wet flush monitoring | North East (The Glade) | Monitor Marsh Pennywort and Bog mosses. (FWT6) | RACV | Summer Annually |
| Football monitoring | North East | Monitor and record number of matches | RBBC | Summer Annually |
| Condition reports of SSSI Units | All areas | Monitor condition of SSSI Units | NE | Routinely prescribed by NE |

## 15.4 Map 8: Current Habitat Extent - Reigate Heath LNR



## 15.5 Map 9: Future Habitat Extent - Reigate Heath LNR



# Part Three – information

## Maps

**Map 01:** **Public Rights of Way & Permissive Horse Rides**

**Map 02:** **Location of Reigate Heath LNR**

**Map 03:** **Boundaries of Reigate Heath LNR**

**Map 04:** **Planning designations**

**Map 05:** **Other land based designations**

**Map 06:** **Scheduled Monuments on Reigate Heath LNR**

**Map 07:** **Management compartments on Reigate Heath LNR**

**Map 08:** **Current habitat extent – Reigate Heath LNR**

**Map 09:** **Future habitat extent – Reigate Heath LNR**

**Map 10:** **Higher Level Stewardship Options for Reigate Heath SSSI**

**Map 11:** **Reigate Heath golf course and fairways**

Current maps of the conservation status, landscape character and important features of the Heath are available through the DEFRA Magic Maps portal https://magic.defra.gov.uk/

## Photographs

Aerial photographs of the Heath and surrounding area can be viewed on the internet using the Google Earth or the RBBC I-Share GIS mapping tool. There are historical photographs and several sources of up to date photographs, some of which are held by RBBC.

## Surveys

In addition to the comprehensive ecological surveys undertaken by Surrey Wildlife Trust (SWT) as part of the management planning process there are records from a number of scientific, community and visitor surveys listed here in Part 3 (see Appendix 15).

- Bat Activity Survey - Reigate Heath, Isobel Girvan BSc MCIEEM (13/11/2018)
- Bird Assessment Report - Reigate Heath, Alex Learmont BSc ACIEEM (26/09/2018)
- Invertebrate Survey - Reigate Heath, Scotty Dodd MSc MCIIEM (30/09/2018)
- Reptile & Small Mammal Survey - Reigate Heath, Jamel Guenioui BSc (30/09/2017)

There are various other surveys, research and reports about the Heath and its important features some of which are held by RBBC.

## Appendices

There are a selection of important documents and attachments that were used during the planning process and that provide important information to the reader, which are listed here in Part 3 and attached to this Plan.

**Appendix 01:** Wealden Greensands BOA WG10: Reigate Heaths

**Appendix 02:** Surrey Hills AGLV RS2: Greensand Hills & Wooded Weald

**Appendix 03:** SSSI Citation

**Appendix 04:** Operations Likely to Damage SSSI

**Appendix 05:** Views about Management for Reigate Heath SSSI

**Appendix 06:** Conservation Objectives for Reigate Heath SSSI

**Appendix 07:** HLS Agreement Options & Prescription Map – Reigate Heath SSSI

**Appendix 08:** Reigate Heath Golf Course – Map of Fairways

**Appendix 09:** List of Important Species for Reigate Heath LNR

**Appendix 10:** Reigate Heath Byelaws

**Appendix 11:** List of Approved Chemicals – RBBC Green Spaces & Reigate Heath Golf Club

**Appendix 12:** Reigate Heath Management Steering Group - Terms of Reference

**Appendix 13:** SWT Ecological Surveys 2018 – Management Recommendations

**Appendix 14:** Reigate Heath User Survey 2016

# Appendix 01: Wealden Greensands BOA WG10: Reigate Heaths



## Biodiversity Opportunity Area **WG10: Reigate Heaths**

**Local authorities**: Reigate & Banstead, Mole Valley

### Aim & justification

The aim of **Biodiversity Opportunity Areas** (BOAs) is to establish a strategic framework for conserving and enhancing biodiversity at a landscape-scale, making our wildlife more robust to changing climate and socio-economic pressures. BOAs are those areas where targeted maintenance, restoration and creation of Natural Environment & Rural Communities (NERC) Act 'Habitats of Principal Importance', ie. **Priority habitats** will have the greatest benefit towards achieving this aim.

Recognition of BOAs directly meets **National Planning Policy Framework** policy for the planning system to contribute to international commitments for halting the overall decline in biodiversity, ***by establishing coherent ecological networks that are more resilient to current and future pressures*** (para. 109). Designation of BOAs in local plans will also fulfil NPPF requirements to ***plan for biodiversity at a landscape-scale across local authority boundaries***; *and* ***identify & map components of the local ecological networks*** (para. 117).

### *Explanatory*

*BOAs identify the most important areas for wildlife conservation remaining in Surrey and each include a variety of habitats, providing for an 'ecosystem approach' to nature conservation across and beyond the county. By working with larger, more dynamic ecosystems, it will be possible to create a wider range of habitats and their variants, which will in turn increase the ability of the landscape to support the largest variety of species.*

### 1. Overview

This Biodiversity Opportunity Area includes an area of open and wooded commons to the west of Reigate town. It extends from Reigate Heath in the west to Priory Park, Reigate in the east. The BOA is contiguous with LW07 along much of its southern boundary. **Area**: 160.7 ha

### 2. National Character Areas

Wealden Greensands (NCA 120)

### 3. Profile

#### 3.1 Geology

Lower greensand, Alluvium. A section of the Greensand ridge divided by the Wallace Brook, rising to 90m at Reigate Mill Church in the west and to 132m at Park Hill in Priory Park in the east

#### 3.2 Biodiversity

**3.2.1 Statutory protected sites**
***SSSI***: Reigate Heath
***LNR***: Reigate Heath

**3.2.2 Local Sites**
***SNCI***: 2 (plus 1 potential SNCI)

**3.2.3 NERC Act S.41**

***Habitats of Principal Importance*** (***Priority habitats***):
Heathland, Acid grassland, Mixed deciduous woodland, Wet woodland

***Species of Principal Importance*** (***Priority species***):
***Plants***: Annual knawel, Chamomile, Glandular eyebright*; Large-celled flapwort (a liverwort)
***Invertebrates***: Brown hairstreak, Small heath, Oak mining bee, 5-banded tailed digger wasp
***Vertebrates***: Bullfinch, Cuckoo, Dunnock, Lesser spotted woodpecker, Linnet, Marsh tit, Reed bunting, Skylark, Song thrush, Spotted flycatcher, Willow tit*, Yellowhammer; Adder*, Common lizard, Grass snake, Slow-worm, Common toad; Brown long-eared bat, Hedgehog, Noctule bat, Soprano pipistrelle bat

**3.2.4 Further important species interest**: Alternate-leaved golden-saxifrage, Bird's-foot clover, Bottle sedge, Bur chervil, Field mouse-ear, Greater chickweed, Lily-of-the-valley, Marsh violet, Petty-whin, Silver hair-grass, Upright chickweed, White sedge; *Chrysis gracillima*, *Crossocerus congener*, *Diodontus insidiosus*, *Hedychrum niemelai*, *Pemphredon rugifer*, *Stigmus pendulus* (all wasps), *Nomada lathburiana*, *Nomada signata* (both bees); Kingfisher

* probably extinct in BOA

**3.2.5 Ancient woodland**: present

**3.2.6 Landscape scale conservation activity**: Reigate Area Conservation Volunteers

### 3.3 Archaeology

Multiple bowl barrows within the Reigate Heath Round Barrow Cemetery complex; Priory Park

### 3.4 Access

**3.4.1 Publically-accessible Natural OS**: Reigate Heath, Priory Park (Reigate & Banstead Borough Council)

**3.4.2 Long-distance PRoW, etc**: Greensand Way

### 3.5 Key ecosystem services

Carbon sequestration; Flooding regulation; Pollination services; Recreational (golf, walking, equestrian); Spiritual uses

### 3.6 Socio-Economic

**3.6.1 Employment profile**: Agriculture sector; Equine livery & services; Leisure sector (golf, equestrian & hospitality)

**3.6.2 LEP**: Coast-to-Capital

## 4. Objectives & Targets

**WG10/O1:** SSSI units to achieve favourable condition. **T1**: 95% by 2020 (by area)

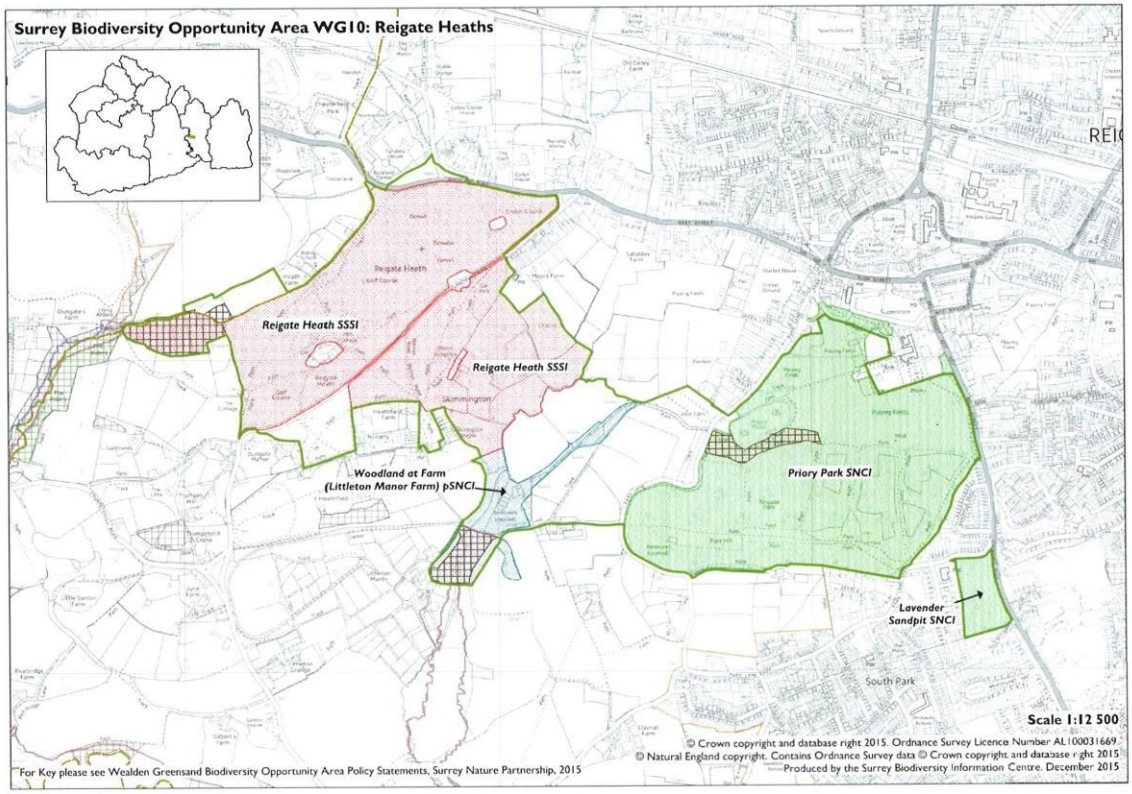
**WG10/O2**: SNCI protected by planning policy & in positive management. **T2**: All by 2020

**WG10/O3**: Priority habitat restoration & creation.

- **Heathland/T3a**: 1.25 ha by 2020
- **Acid grassland/T3b**: 1 ha by 2020
- **Wet woodland/T3c**: 0.25 ha by 2020

**WG10/O4**: Priority species recovery.

- **T4**: By 2020, evidence of at least stabilisation & preferably recovery in the local populations of listed Priority species:
  **Annual knawel** **5-banded tailed digger wasp** **Adder**
  **Hedgehog**



# Appendix 02: Surrey Hills AGLV: Greensand Hills & Wooded Weald

## REIGATE SHEET 1

### LANDSCAPE CHARACTER AREA North Downs Scarp

Reference No. RS1

**Description**

The prominent scarp slope of the North Downs provides a dramatic and dominant feature overlooking the farmed landscape of the Holmesdale Valley and wooded Greensand Hills to the south. The scarp comprises a rich mosaic of pasture, ploughed land, downland, woodland and scrub. The north facing dip slope is an open, undulating, large scale landscape, with wooded shaws, pasture, large arable fields, parkland, scattered small settlements, isolated farmsteads and narrow lanes. In contrast, the Holmesdale Valley is more densely settled with major road corridors, extensive industry and an agricultural landscape of mixed farming and dense hedges.

| **Characteristic Features** | RAONB1 | RAONB2 | R2a | R2b | R3b | R3c | R3d |
|---|---|---|---|---|---|---|---|
| South facing scarp slope | X | X | X | X | X | X | X |
| Diverse landscape pattern of species rich ancient woodland, open downland, heathland, wood pasture and commons | ✓✓ | ✓ | ✓ | ✓ | ✓✓✓ | ✓✓ | ✓✓ |
| Undulating northern dip slope | ✓✓✓ | X | ✓✓ | ✓ | ✓✓✓ | ✓✓✓ | ✓✓✓ |
| Valley of dense settlements roads and industrial activity | X | X | X | X | X | X | X |
| Sparse settlement of isolated farms | ✓ | X | ✓ | ✓ | ✓ | ✓ | ✓ |
| Major road corridors | X | X | ✓✓ | ✓✓ | X | X | X |
| Expansive views | ✓ | ✓ | ✓ | X | ✓ | ✓ | ✓ |
| **SUMMARY CHARACTERISTICS** | | | | | | | |
| RAONB1 | Consistent landform pattern of rolling open valleys with scrub on valley sides. Wooded ridges and pasture dominant. | | | | | | |
| RAONB2 | Large flat, arable fields and low, shallow dry valleys, open views and minimal woodland – tall well managed hedges and occasional hedgerow trees – some tree | | | | | | |
| R2a | Same as RAONB1 | | | | | | |
| R2b | Wooded heath with open areas utilised for golf courses but with characteristic features such as pines and heath retained. | | | | | | |
| R3b | Same as RAONB1 | | | | | | |
| R3c | Same as RAONB1 | | | | | | |
| **PERCEPTION** | | | | | | | |
| Views | Inter | Distant | Inter | Inter | Inter | Inter | Inter |
| Scale | Medium | Large | Large | Medium | Medium | Medium | Medium |
| Enclosure | Semi-enc | Open | Open | Encl | Open | Semi-enc | Semi-enc |
| Variety | Varied | Simple | Simple | Simple | Varied | Varied | Varied |
| Texture | Textured | Smooth | Textured | Textured | Textured | Textured | Textured |
| Colour | Colourful | Muted | Colourful | Colourful | Colourful | Colourful | Colourful |
| Movement | Peaceful | Active | Active | Peaceful | Peaceful | Peaceful | Peaceful |
| Unity | Unified | Unified | Unified | Inter | Unified | Unified | Unified |
| Naturalness | Tamed | Tamed | Tamed | Tamed | Tamed | tamed | Tamed |

## REIGATE SHEET 2

✓ = subtle ✓✓ = evident ✓✓✓ = conspicuous

## LANDSCAPE CHARACTER AREA Greensand Hills and Wooded Weald

Reference No. RS2

**Description**

The Hascombe countryside is an open rolling plateau with a pattern of rounded interlocking hills and steep sided valleys. It forms a large-scale landscape of pasture, wooded ridges and heaths. This secluded landscape has provided the inspiration and the setting for the Arts and Crafts Movement. The area has a pleasant rural atmosphere, concealing hidden villages and hamlets, with distinctive old cottages and Edwardian country houses, many constructed in local Bargate stone and tile hung.

| **Characteristic Features** | AONB | R1b |
|---|---|---|
| | | |
| Hills and interlocking valleys | ✓✓✓ | ✓✓✓ |
| Well wooded ridges end | ✓✓✓ | ✓✓✓ |
| Pockets of farmland | | |
| Conifers and ornamental shrubs | ✓ | ✓✓ |
| Dense hedgerows and network of lanes | ✓✓ | ✓✓ |
| Hamlets in valley | X | X |
| Villages on sandy ridge | ✓✓✓ | ✓ |
| | | |
| **SUMMARY CHARACTERISTICS** | | |
| EE1 | Large arable fields on rising ground with woodled ridge close the urban fringe of Epsom | |
| **PERCEPTION** | | |
| | | |
| Views | Distant | Distant |
| Scale | Medium | Small-medium |
| Enclosure | Semi-end | Semi-end |
| Variety | Varied | Varied |
| Texture | Textured | Textured |
| Colour | Colourful | Colourful |
| Movement | Peaceful | Active |
| Unity | Unified | Unified |
| Naturalness | Tamed | Tamed |
| | | |
| | | |

✓ = subtle ✓✓ = evident ✓✓✓ = conspicuous

# Appendix 03: Citation for Reigate Heath SSSI

**County: Surrey site name: Reigate Heath Borough/district: Reigate & Banstead; Mole Valley**

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authorities: Reigate & Banstead Borough Council, Mole Valley District Council

National Grid Reference: TQ 236502 Ordnance Survey Sheet 1:50,000: 187 Date Notified (Under 1949 Act): 1955 Date Notified (Under 1981 Act): 1986

Area: 59.6 (ha.) 147.3 (ac.) 1:10,000: TQ 24 NW, TQ 25 SW Date of Last Revision: 1975
Date of Last Revision:

Other Information:

Part of the site is managed as a public open space by Reigate and Banstead Borough Council, and much of it is Common Land.

**Reasons for Notification:**
This site encompasses a range of habitats including Reigate Heath itself which consists of open heath and acidic grassland, with some areas where bracken *Pteridium aquilinum* and oak *Quercus robur* have become dominant. The site also includes alder *Alnus glutinosa* woodland, and within the eastern boundary, some marshy meadows; these are the only examples of their type in Surrey that have not been destroyed by modern agricultural improvement. There is a golf course within the heathland area.

A small hill of the Lower Greensand series bears sandy acidic soils, which supports the heath and oak woodland. The remainder of the site lies over alluvium, overlain in turn by peat in the meadows.

The alder woods have a rich ground flora; in drier areas the dominant species are bluebell *Hyacinthoides non-scripta* and bramble *Rubus fruticosus*, while the wetter areas support marsh violet *Viola palustris*, marsh pennywort *Hydrocotyle vulgaris* and a county rarity, white sedge *Carex curta*.

The Heath is composed of ling *Calluna vulgaris*, bell heather *Erica cinerea* and wavy hair- grass *Deschampsia flexuosa*. Many plants of sandy soils, such as petty whin *Genista anglica*, soft trefoil *Trifolium striatum* and the uncommon bird's-foot fenugreek *T. ornithopodioides* are also found here. In areas away from the golf fairways and footpaths birch *Betula pendula* scrub and bracken have largely replaced the plants of open heathland, and in many places this succession has developed further into oak-birch woodland with alder buckthorn *Frangula alnus* and some areas of pine *Pinus sylvestris*.

The marshy meadows support a lush sward of Yorkshire fog grass *Holcus lanatus* and sharp-flowered rush *Juncus acutiflorus*, with abundant meadowsweet *Filipendula ulmaria*, wild angelica *Angelica sylvestris* and marsh marigold *Caltha palustris*. They also contain a large colony of the southern marsh orchid *Dactylorhiza praetermissa* which is rare in Surrey.

The stream which runs along the eastern edge of the meadows provides a feeding area for birds such as kingfisher and heron.

# Appendix 04: Operations Likely to Damage the SSSI

**Site name: Reigate Heath, Surrey**
**OLD1001127**

| Ref. No. | Type of Operation |
|---|---|
| 1 | Cultivation, including ploughing, rotovating, harrowing, and re-seeding. |
| 2 | Grazing and changes in the grazing regime (including type of stock, intensity or seasonal pattern of grazing and cessation of grazing). |
| 3 | Stock feeding. |
| 4 | Mowing or other methods of cutting vegetation. |
| 5 | Application of manure, fertilisers and lime. |
| 6 | Application of pesticides, including herbicides (weedkillers). |
| 7 | Dumping, spreading or discharge of any materials. |
| 8 | Burning. |
| 9 | The release into the site of any wild, feral or domestic animal*, plant or seed. |
| 10 | The killing or removal of any wild animal*, including pest control. |
| 11 | The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould and turf. |
| 12 | Tree and/or woodland management+. |
| 13a | Drainage (including the use of mole, tile, tunnel or other artificial drains). |
| 13b | Modification of the structure of watercourses (eg streams, springs, ditches, drains), including their banks and beds, as by re-alignment, re-grading and dredging. |
| 13c | Management of aquatic and bank vegetation for drainage purposes. |
| 14 | The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes). |
| 15 | Infilling of ditches, drains, ponds and marshes. |
| 16a | Freshwater fishery production and/or management, including sporting fishing and angling. |
| 20 | Extraction of minerals, including peat, shingle, sand and gravel, topsoil, subsoil, and spoil. |
| 21 | Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground. |
| 22 | Storage of materials. |
| 23 | Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling. |
| 26 | Use of vehicles or craft likely to damage or disturb features of interest. |
| 27 | Recreational or other activities likely to damage or disturb features of interest. |
| 28 | Game and waterfowl management and hunting practice. |

* ‘animal’ includes any mammal, reptile, amphibian, bird, fish or invertebrate.

\+ including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.

# Appendix 05: Views about Management of Reigate Heath SSSI

**Views About Management Reigate Heath**

**A statement of English Nature's views about the management of Reigate Heath Site of Special Scientific Interest (SSSI).**

This statement represents English Nature's views about the management of the SSSI for nature conservation. This statement sets out, in principle, our views on how the site's special conservation interest can be conserved and enhanced. English Nature has a duty to notify the owners and occupiers of the SSSI of its views about the management of the land.

Not all of the management principles will be equally appropriate to all parts of the SSSI. Also, there may be other management activities, additional to our current views, which can be beneficial to the conservation and enhancement of the features of interest.

The management views set out below do not constitute consent for any operation. English Nature's written consent is still required before carrying out any operation likely to damage the features of special interest (see your SSSI notification papers for a list of these operations). English Nature welcomes consultation with owners, occupiers and users of the SSSI to ensure that the management of this site conserves and enhances the features of interest, and to ensure that all necessary prior consents are obtained.

**Management Principles:**

**Dry lowland heath**
Heathland supports the greatest diversity of plants and animals (including a diverse invertebrate fauna and a number of characteristic bird species) where management maintains the open nature of the Heath, and promotes a varied structure of uneven- aged stands of native heathers and other characteristic plants. It is generally beneficial if all stages of the heather life cycle are present. Without such management heathland becomes progressively dominated by bracken, gorse and/or scrub and trees.

Low intensity grazing is a suitable means of managing dry heath. By feeding selectively in different areas and on different plants, free-roaming livestock help to maintain variation in the vegetation composition and structure. They can also suppress scrub encroachment and provide some light poaching to create small pockets of bare peat and sandy ground that are of benefit to a variety of specialised plants, invertebrates and reptiles. Sheep, cattle or hardy ponies can be used. An appropriate stocking rate should take into account local conditions and the timing and length of grazing, but an off-take of between 30-40% of the current growth increment is desirable. Care must be taken to avoid damage to the heather by trampling.

Alternatively, cutting or mowing may be useful options where a mosaic of patches of heather of different ages is desired. The cut material should be removed to avoid nutrient accumulation on site and to allow the cut plants to re-sprout successfully. However, mowing may not be suitable on mature stands of importance for rare reptiles. Prescribed burning can also be a useful tool for maintaining the structural diversity of some dry heathlands and for re-establishing areas of pioneer heath required by certain species, but special care is required when sensitive species are present. Burning must be used with caution, as inappropriate burning can be very damaging to both plant and animal communities and careful consideration should be given to the timing of the burn.

There is some benefit in retaining a few scattered individual trees some small patches of scrub. For example, the maintenance of scattered mature Scots pine in undisturbed locations will provide suitable nest sites for hobbies. However, this should not impact upon the open nature of the Heath. Mechanical control or manual cutting may be necessary to avoid this, followed by the careful

application of a suitable herbicide. The same treatment may be required to control dense bracken invasion.

Gorse requires active management to retain its heathland conservation value. Scattered stands with a bushy structure rather than large continuous blocks are of greater benefit to the characteristic bird and invertebrate species associated with gorse scrub. For example, Dartford warbler require areas of open heath (with less than 25 trees per hectare) with over 50% cover of mature heather (preferably over 30 cm tall) and patches of dense, compact, mature gorse bushes (0.5-3 m tall) to be maintained. Winter cutting of 'leggy' stands of gorse and the removal of cut material will maintain gorse at different stages of re-growth and avoid nutrient accumulation in the soil.

**Lowland acid grassland**

Free-draining, acidic soil is the key requirement of the grassland communities at this site, but their maintenance also depends on active management. If neglected, the sward becomes dominated by tall, vigorous grasses or bracken which, together with an associated build up of dead plant matter, suppress less vigorous species and reduce the botanical richness of the site. Eventually the sward reverts to scrub and even woodland. Traditionally, management has consisted of stock grazing and this remains the most appropriate management tool. Grazing, through the removal of plant matter and nutrients, helps to maintain an open sward of small tussocky grasses. It also, through disturbance and trampling, creates areas of open ground suitable for colonization by the lichens, ephemeral plants and invertebrates that are often characteristic of this type of grassland. However, rabbit grazing, though difficult to control, can also be a useful management tool in some situations. Where stock grazing is not possible, rabbit grazing may be supplemented by an appropriate mowing regime. Occasional management of invasive scrub and bracken may be necessary.

**Marshy grassland**

Marshy grassland requires active management if it is to retain its conservation interest. Generally, each year's growth of vegetation must be removed. Otherwise the sward becomes dominated by tall, vigorous grasses and rushes which, together with an associated build-up of dead plant matter, suppress less vigorous species and lower the botanical richness of the sward. Traditionally, this management is achieved by grazing. Cattle are often the preferred stock, being relatively tolerant of wet conditions and able to control tall grasses and rank vegetation. Cattle also tend to produce a rather uneven, structurally diverse sward. However, ponies, or even hill sheep, can be used if necessary. Grazing usually takes place at times between late spring and early autumn, but the precise timing and intensity will depend on local conditions and requirements, such as the need to avoid trampling ground-nesting birds or destroy Marsh Fritillary butterfly colonies. Heavy poaching should be avoided but light trampling can be beneficial in breaking down leaf litter and providing areas for seed germination. An element of managed scrub, both within and fringing a field can be of importance to birds and invertebrates, as can a surrounding hedge. Careful maintenance of existing ditches and drains is usually acceptable practice, but abandonment or deepening of ditches can be harmful.

**Lowland wet woodland**

Wet woodland includes a range of different woodland types but usually is dominated by ash, alder and willow species. It often supports important invertebrate species and assemblages.

Areas usually benefit from minimum intervention and are often best left undisturbed to limit damage to their fragile soils. This allows the development of old stands where individual trees reach maturity and die naturally to create gaps in the canopy, leading to a diverse woodland structure. However, works to remove dangerous trees in areas of public access may be necessary.

Where particularly important light-demanding or glade species interests are present, including where the woodland is spreading on to valuable open wetland habitat, it may be necessary to

periodically clear areas of vegetation. In some parts a more active programme of management by coppice may be appropriate, where this has been the historical management and the conditions are such that it will not lead to heavy ground disturbance.

**Broadleaved semi-natural woodland**

There are many different ways in which broadleaved woodland can be managed to conserve its value for wildlife. The following gives broad views on a range of regimes that may be appropriate on your site.

A diverse woodland structure, with open space, a dense understory, and a more mature overstory is important. A range of ages and species within and between stands is desirable. Some dead and decaying wood, such as fallen logs, can provide habitats for fungi and invertebrates. However, work may be needed to make safe dangerous trees in areas of high public access. Both temporary and permanent open spaces benefit groups of invertebrates such as butterflies. They may require cutting to keep them open, and should be of sufficient size to ensure that sunny conditions prevail for most of the day.

Felling, thinning or coppicing may be used to create or maintain variations in the structure of the wood, and non-native trees and shrubs can be removed at this time. To avoid disturbance to breeding birds the work is normally best done between the beginning of August and the end of February. Work should be avoided when the ground is soft, to prevent disturbing the soil and ground flora. Normally successive felling, thinning or coppicing operations should be spread through the wood to promote diversity, but where there is open space adjacent plots should be worked to encourage the spread of species that are only weakly mobile. Natural regeneration from seed or stump regrowth is preferred to planting because it helps maintain the local patterns of species and the inherent genetic character of the site.

Deer management and protection from rabbits or livestock are often necessary. Whilst light or intermittent grazing may increase woodland diversity, heavy browsing can damage the ground flora and prevent successful regeneration. Invasive species, such as Rhododendron or Himalayan balsam, should be controlled.

Parts of a wood should be left unmanaged to benefit species that do best under low disturbance or in response to natural processes. Within these areas some trees will eventually die naturally and dead wood accumulate.

**All habitats**

The habitats within this site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to parts of this site, and any recreational activities within, may also need to be managed.

# Appendix 06: Conservation Objectives for Reigate Heath SSSI

Conservation objectives & definitions of favourable condition for designated features of interest:

These Conservation Objectives relate to all designated features on the SSSI, whether designated as SSSI, SPA, SAC or Ramsar features.

| **Name of Site of Special Scientific Interest (SSSI)** |
|---|
| Reigate Heath |

| **Names of designated international sites** |
|---|
| Candidate Special Area for Conservation (SAC) – N/A |
| Special Protection Area (SPA) – N/A |
| Ramsar : - N/A |
| Relationship between site designations – N/A |

| **Version Control information** | **Answers** |
|---|---|
| **Status of this Version (Draft, Consultation Draft, Final)** | Draft |
| **Prepared by:** | Jo Clarke |
| **Date of this version:** | 07/12/2007 |
| **Date of generic guidance on favourable condition used:** | EN CSM Guidance for vascular plants: February 2004 |
| **Other notes/version history :** | Draft prepared by Ralph Hobbs: 25 March 2005 |

| **Quality Assurance information** | **Checked by** |
|---|---|
| **Name:** | |
| **Date:** | |
| **Signature:** | |

## Conservation Objectives and Definitions of Favourable Condition: Notes for Users

**Conservation Objectives**

SSSIs are notified because of specific biological or geological features. Conservation Objectives define the desired state for each site in terms of the features for which they have been designated. When these features are being managed in a way which maintains their nature conservation value, then they are said to be in 'favourable condition'. It is a Government target that 95% of the total area of SSSIs should be in favourable condition by 2010.

**Definitions of Favourable Condition**

The Conservation Objectives are accompanied by one or more habitat extent and quality definitions for the special interest features at this site. These are subject to periodic reassessment and may be updated to reflect new information or knowledge; they will be used by Natural England and other relevant authorities to determine if a site is in favourable condition. The standards for favourable condition have been developed and are applied throughout the UK.

**Use under the Habitats Regulations**

The Conservation Objectives and definitions of favourable condition for features on the SSSI may inform the scope and nature of any 'appropriate assessment' under the Habitats Regulations. An appropriate assessment will also require consideration of issues specific to the individual plan or project. The habitat quality definitions do not by themselves provide a comprehensive basis on which to assess plans and projects as required under Regulations 20-21, 24, 48-50 and 54 - 85. The scope and content of an appropriate assessment will depend upon the location, size and significance of the proposed project. Natural England will advise on a case by case basis.

Following an appropriate assessment, competent authorities are required to ascertain the effect on the integrity of the site. The integrity of the site is defined in para C10 of PPG9 as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. The determination of favourable condition is separate from the judgement of effect upon integrity. For example, there may be a time-lag between a plan or project being initiated and a consequent adverse effect upon integrity becoming manifest in the condition assessment. In such cases, a plan or project may have an adverse effect upon integrity even though the site remains in favourable condition.

The formal Conservation Objectives for European Sites under the Habitats Regulations are in accordance with para. C10 of PPG 9, the reasons for which the European Site was classified or designated. The entry on the Register of European Sites gives the reasons for which a European Site was classified or designated.

**Explanatory text for Tables 2 and 3**

Tables 2 and 3 set out the measures of condition, which we will use to provide evidence to support our assessment of whether features are in favourable condition. They are derived from a set of generic guidance on favourable condition prepared by EN specialists, and have been tailored by local staff to reflect the particular characteristics and site-specific circumstances of individual sites. Quality Assurance has ensured that such site-specific tailoring remains within a nationally consistent set of standards. The tables include an audit trail to provide a summary of the reasoning behind any site-specific targets etc. In some cases the requirements of features or designations may conflict; the detailed basis for any reconciliation of conflicts on this site may be recorded elsewhere.

**Conservation Objectives**
The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

**Habitat Types represented (Biodiversity Action Plan categories)**
Broadleaved, Mixed and Yew Woodland
Neutral Grassland
Acid Grassland

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

## Last Condition Assessment 2011

Active heathland restoration works and conservation management during the 1990s has improved the quality of the heathland such that it is in Favourable Condition according to the latest SSSI Condition Assessment (Steven, 2011) for Unit 2:

'*Area of heath is intact, restoration areas showing pioneer heather on 80-90% of cleared areas. Ling dominant with all age classes represented, also Bell Heather occasional. Bare ground present.*

*Bracken - needs further management, but across site approximately 5-10%.*

*Acid grassland areas intact and forb rich, with very few weedy species and no invasive species. Frequent common Cat's-ear, Chamomile, abundant Bird's-foot, Sheep's Sorrel, Red Fescue, Mouse-ear Hawkweed, Tormentil, Three-veined Sandwort, Slender Trefoil, Bermuda Grass and a variety of other flowering plants and grasses identified by Bruce Middleton in 2010.*'

The present Higher Level Stewardship agreement with Natural England includes a species list of Indicators of Success (IOS) for both LH1 (Management of Lowland Heath) and GS6 (Management of species rich grassland). The IOS is shown below.

Option Code GS6: Management of species rich grassland
Parcel numbers TQ2450 07444 and TQ2350 5918

| Indicators of Success (Not binding) | |
|---|---|
| IOS1 | By year 2, there should be between 1% and 2% cover of bare ground, including dry crumbly soil, soft damp soil, bare rock and encrusting lichens in small patches |
| IOS27 | By year 2, there should be scarce acid grassland plants such as annual knawel, fenugreek, upright chickweed, chamomile, bridsfoot, parsley piert, little mouse ear and mat grass present and at least occasional/(locally) frequent across the grassland and flowering during May-July |
| IOS68 | By year 2, there should be an average sward height of 1-3cm |
| IOS83 | By year 2, there should be less than 5% cover of weeds such as field thistle, spear thistle, ragwort and dock |
| IOS97 | By year 2, there should be between 20% and 90% cover of wildflowers in the sward (excluding weedy species but including rushes and sedges). At least 40% of wildflowers should be flowering during May and July |

Option Code LH1: Management of lowland heathland
Parcel numbers: TQ2350 5918, TQ2349 7399 and TQ2350 7043

| Indicators of success (not binding) | |
|---|---|
| IOS1 | By year 2, there should be between 1% and 2% cover of bare ground, including dry crumbly soil, soft damp soil, bare rock and encrusting lichens in small patches |
| IOS27 | By year 2, there should be scarce acid grassland plants such as annual knawel, fenugreek, upright chickweed, chamomile, bridsfoot, parsley piert, little mouse ear and mat grass present and at least occasional/(locally) frequent across the grassland and flowering during May-July |
| IOS68 | By year 2, there should be an average sward height of 1-3cm |
| IOS83 | By year 2, there should be less than 5% cover of weeds such as field thistle, spear thistle, ragwort and dock |
| IOS97 | By year 2, there should be between 20% and 90% cover of wildflowers in the sward (excluding weedy species but including rushes and sedges). At least 40% of wildflowers should be flowering during May and July |

| | |
|---|---|
| ISO3 | By year 5, there should be a mosaic of short vegetation and patches of undisturbed bar ground of varying size spread throughout the area. The bare ground should cover between 1% and 5% of the area/heath. |
| IOS28 | By year 5, there should be 2 species from the table in **appendix 9** present/at least occasional/(locally) frequent across the area. |
| IOS35 | By year 5, there should be between 25% and 90% cover of dwarf shrubs (except when bog-mosses (sphagnum) or other wetland indicators are dominant, with at least 2 species at least frequent. |
| IOS36 | There should be a wide range of age classes of dwarf shrubs present. This should include between 10% and 40% cover of pioneer stage/between 20% and 80% cover of building/mature stage/no more than 30% cover of degenerate stage/ no more than 10% of dead dwarf shrubs. |
| IOS57 | By year 5, there should be between 2% and 5% cover of common gorse present in a range of age classes from pioneer through to degenerate. 90% of gorse cover should be dense, compact stands, usually less than 0.5 ha. |
| IOS85 | There should be no more than 33% cover of purple moor grass in dry heath and 66% cover in wet heath. It should not dominate to the exclusion of other species but there can be some dense tussocks to help provide structural diversity. |
| IOS94 | There should be at least 5-10% cover of mosses sphagnum and lichens. |
| IOS119 | By year 5, there should be between 5% and 15% cover of trees and scrub excluding mature woodland |
| IOS120 | There should be no signs of recent (within the last three years ) over at least 80% of the area |
| IOS144 | By year 5, there should be the same or increased extent of open heath, natural processes permitting. |

## Table 1 Individual designated Special Interest Features

| BAP Broad Habitat type / Geological Site Type | Specific designated features | Explanatory description of the feature for clarification | SSSI designated interest features | SAC designated interest features | SPA bird populations dependency on specific habitats | | | Ramsar criteria applicable to specific habitats | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Annex 1 species | Migratory species | Waterfowl assemblage | 1a Wetland characteristics | 2a Hosting rare species &c | 3a 20000 waterfowl | 3c 1% of population |
| **Broadleaved, Mixed and Yew Woodland** | *Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum* woodland (W7)<br><br>*Quercus spp.-Betula spp.-Deschampsia flexuosa* woodland (W16) | Alder-Ash-Yellow pimpernel woodland<br><br>Oak spp.-Birch spp.-Wavy hair grass woodland | *<br><br>* | | | | | | | | |
| **Neutral Grassland** | Intermediate *Cynosurus cristatus-Caltha palustris* grassland (MG8)<br><br>*Holcus lanatus-Juncus effusus* rush pasture (MG10) | Crested dog's tail-Marsh marigold grassland<br><br>Yorkshire fog- Soft rush pasture | * | | | | | | | | |
| **Neutral Grassland**<br><br>**Broadleaved, Mixed and Yew Woodland**<br><br>**Acid Grassland** | Outstanding plant assemblage | Including Bermuda grass (*Cynodon dactylon) (RDB3)*<br><br>Italian lords and ladies (*Arum italicum)* (Nb)<br><br>Fenugreek (*Trifolium ornithopodioides) (Nb)* and Upright Chickweed *(Moenchia erecta) (Nb)* | *<br><br>*<br><br>(*) | | | | | | | | |

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2). The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality me

# Table 2a Habitat Features - Extent Objectives

| | |
|---|---|
| Conservation Objective for habitat extent | To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards: |
| Extent - Dynamic balance | On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent. |

| **Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)** | **Estimated extent (ha) and date of data source/estimate** | **Measure** | **Site Specific Targets** | *Comments* |
|---|---|---|---|---|
| **Broad-leaved, mixed and yew woodland** | 26.9ha<br><br>(Total extent of SSSI = 61.7ha)<br><br>Taken from aerial photos (1999) and MapInfo. | Calculated from aerial photographs using MapInfo (aerial photos taken 1999). | No loss of ancient semi-natural stands. At least current area of recent semi-natural stands maintained. No loss of ancient woodland. | Stand loss due to natural processes e.g. in minimum intervention stands acceptable. Stand destruction (i.e. loss) may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. As a guideline, loss can be defined as at least 0.5 ha or 0.5% of the stand area, whichever is the smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. |
| **Neutral Grassland** | 4.7ha<br><br>(Total extent of SSSI = 61.7ha)<br><br>Taken from aerial photos (1999) and MapInfo. | Calculated from aerial photographs using MapInfo (aerial photos taken 1999). | No reduction in area and any consequent fragmentation without prior consent | Recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed. Temporary reductions related to natural variation in hydrological conditions should be noted as such where information allows.<br>Monitoring the condition of this designated habitat will also mean the indirect attributes of some of the individual species within the outstanding vascular plant assemblage are assessed. |
| **Acid Grassland** | 8.5ha<br><br>(Total extent of SSSI = 61.7ha)<br><br>Taken from aerial photos (1999) and MapInfo. | Calculated from aerial photographs using MapInfo and survey data by Bruce Middleton (aerial photos taken 1999). | No reduction in area and any consequent fragmentation without prior consent | Recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed.<br>Excludes bare ground associated with rabbit warrens.<br>This habitat is not designated in its own right. However, it supports species within the notified plant assemblage and so needs to be monitored in order to assess the plants indirect attributes. |

| | | | | |
|---|---|---|---|---|
| **Dwarf Shrub Heath** | 1.4ha<br><br>(Total extent of SSSI = 61.7ha)<br><br>Taken from aerial photos (1999) and MapInfo. | Calculated from aerial photographs using MapInfo (aerial photos taken 1999). | No unconsented decline in the area of the habitat, except where a target has been set to increase the extent of other habitat features on the site at the expense of lowland heathland.<br><br>125 | This habitat is not currently a designated feature. However the landowner is managing this habitat as if it is, so assessment could be beneficial.<br><br>Lowland heathlands are habitats created mostly through human management by grazing, cutting and burning. If they are left to natural processes, then they lose their open character and disappear under thick scrub or secondary forest. However some fluctuations and variations from year to year are normal and acceptable. |

## Table 2b Species population objectives

| | |
|---|---|
| Conservation Objective for species populations | To maintain the designated species in favourable condition, which is defined in part in relation to their population attributes. Favourable condition is defined at this site in terms of the following site-specific standards: |
| Population balance | On this site favourable condition requires the maintenance of the population of each designated species or assemblage. Maintenance implies restoration if evidence from condition assessment suggests a reduction in size of population or assemblage. |

| Species Feature (species or assemblage) | List supporting BAP Broad Habitats | Population Attribute (eg presence/absence, population size or assemblage score) | Site Specific Target range and Measures (specify geographical range over which target applies ie site, BAP broad habitat or more specific) | Comments |
|---|---|---|---|---|
| Species within outstanding plant assemblage:<br><br>Italian lords and ladies (*Arum italicum)*<br><br>Bermuda grass (*Cynodon dactylon)*<br><br>Fenugreek (*Trifolium ornithopodioides)*<br>Upright Chickweed *(Moenchia erecta)* | Broadleaved, Mixed and Yew Woodland<br><br>Neutral grassland<br><br>Acid grassland | Presence/absence - identification of the species | Species should be present | This is the minimum amount of direct monitoring necessary for individual species and species within notified vascular plant assemblages. |
| | | Mapping; Count of functional individuals | Presence of species in a defined number of subpopulations or site sectors (spatial target); At least a minimum viable population size present; No loss in population extent > 10%; No decline in the population size category. | Many annual species undergo significant population fluctuations, and population size estimates may not be helpful in assessing condition. Unless there are fewer than 100 individuals (when an individual count is generally possible) on the site, counts of functional individuals should be made or assessed in the categories (101-300; 301-1 000; 1 001-3 000; 3 001-10 000; more than 10 000). Population extent is useful when it is difficult to define functional individuals. |
| | | Successful regeneration | Presence of range of young and old plants; At least a minimum number/proportion of young plants or seedlings or full seed heads or flowers | This is important for understanding the viability of a population, but may be difficult to assess for some species. See sect. 5.8 for details. |

## Table 3a Site-Specific definitions of Favourable Condition

| | |
|---|---|
| Conservation Objective for this habitat / geological site-type | To maintain the broadleaved, mixed and yew woodland habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards: |
| Site-specific details of any geographical variation or limitations (where the favourable condition standards apply) | |
| Site-specific standards defining favourable condition | |

| Criteria feature | Attribute | Measure | Site-specific Targets | Comments | Use for CA? |
|---|---|---|---|---|---|
| Broadleaved, mixed and yew woodland | Structure and Natural processes | Assess by field survey using structured walk and/or transects. | Understorey (2-5m) present over at least 20% of total stand area (except in parkland). Canopy cover present over 30-90 % of stand area (except in parkland stands). At least three age classes spread across the average life expectancy of the commonest trees. Some areas of relatively undisturbed mature/old growth stands or a scatter of large trees allowed to grow to over-maturity/death on site (e.g. a minimum of 10% of the woodland or 5-10 trees per ha). A minimum of 3 fallen lying trees >20 cm diameter per ha and 4 trees per ha allowed to die standing. | Different woodland types will differ in their expected cover in different layers e.g. in beech or oak woods the shrub layer is often sparse. This should be reflected in the tailoring of these targets to particular sites. In coppiced stands a lower canopy cover (of standards) can be accepted, as will also be the case in parkland. More detailed targets for deadwood may be appropriate where this is an important element of the woodland (see section 5.9). Note however that assessment of dead wood targets may be difficult to carry out and caution should be exercised in judging condition for this element. | Yes |
| | Composition | Assess by field survey using structured walk and/or transects. | At least 95% of cover in any one layer of site-native or acceptable naturalised species. Minimum levels of particular native tree/shrub species (where important and appropriate – see | In sites where there might be uncertainty as to what counts as site-native or as acceptable naturalised species this must be made clear (e.g. the position of sycamore). Where cover in any one layer is less than 100% then the 95% target applies to the area actually covered by that | Yes |

| | | | | | |
|---|---|---|---|---|---|
| | | | text) Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period. | layer. Factors leading to the death or replacement of woodland species could include pollution or new diseases. Damage to species by non-native species that does not lead to their death is not necessarily unacceptable. Excessive browsing/grazing, even by native ungulates, may be undesirable if it causes shifts in the composition/ structure of the stand. | |
| | Indicators of local distinctiveness | Assess by field survey using structured walk and/or transects, or as appropriate to feature. | 80% of ground flora cover referable to relevant NVC community Target(s) also to be set to maintain distinctive elements at current extent/levels and/or in current locations, e.g. to maintain important microhabitats (other than dead wood), patches of associated habitats, transitions between habitats, or existing populations of locally notable species (other than trees/shrubs). | This attribute is intended to cover any site-specific aspects of this habitat feature (forming part of the reason for notification) which are not covered adequately by the previous attributes, or by separate guidance (e.g. notified species features). For notable species it is not intended to set a target for detailed species monitoring, rather to provide a rapid indication of presence/ absence and/or approximate extent, allowing for natural fluctuations in population size. Distinctive elements and patches should be marked on maps for ease of checking in the field where possible. | Yes |
| | Regeneration potential | Assess by field survey using structured walk and/or transects. | Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period (or equivalent regrowth from coppice stumps). No more than 20% of areas regenerated by planting. All planting material of locally native stock. No planting in sites where it has not occurred in the last 15 years. | A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time regenerate to closed canopy. Regeneration may often occur on the edges of woods rather than in gaps within it. The density of regeneration considered sufficient is clearly less in parkland sites than in high forest; in coppice most of the regeneration will be as stump regrowth. The minimum level of regeneration to be acceptable from a nature conservation viewpoint is likely to be much less than that needed where wood production is also an objective. | Yes |

## Table 3b Site-Specific definitions of Favourable Condition

| | |
|---|---|
| CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE | To maintain the neutral grassland habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards: |
| Site-specific details of any geographical variation or limitations (where the favourable condition standards apply) | |
| Site-specific standards defining favourable condition | |

| Criteria feature | Attribute | Measure | Site-specific Targets | Comments | Use for CA? |
|---|---|---|---|---|---|
| Neutral grassland | Sward structure: bare ground | Record extent of bare ground (not rock) distributed through the sward, visible without disturbing the vegetation, e.g. from the seasonal effects of flooding. Record in period May - end of August (before hay cut in meadows). Also record sometimes in aftermath grazing period in hay meadows. | MG8: No more than 15% in May-early June or no more than 5% in mid-June-July | Outside target indicates problems with stock management e.g. poaching, supplementary feeding or excessive flooding. | |
| | Sward structure: litter | Record cover of litter where in a more or less continuous layer, distributed either in patches or in one larger area. Record in period May - end of August (before hay cut in meadows). Also record sometimes in aftermath grazing period in hay meadows. | Total extent no more than 25% of the sward | Outside target indicates biomass removal is insufficient e.g. lack of or insufficient grazing or not cut for hay. | |

| | | | | |
|---|---|---|---|---|
| Sward structure: average height | Record sward height in period May - end of August (before hay cut in meadows). Upper target refers to pastures only. | MG8: 5 - 15 cm | Sward height above upper target shows that habitat is not being managed sufficiently eg lack of or insufficient grazing or if below lower target, is being overgrazed. | |
| Sward composition: positive indicator species | Record the frequency of positive indicator species from the list below to give an overall total of 2 frequent and 4 occasional or locally abundant. Record in period May - end of August (before hay cut in meadows). *Achillea ptarmica, Berula erecta, Caltha palustris, Cardamine pratensis, Cirsium dissectum, Eupatorium cannabinum, Filipendula ulmaria, Galium palustre/G. uliginosum, Geum rivale, Hydrocotyle vulgaris, Lotus pedunculatus, Lychnis flos-cuculi, Mentha aquatica, Orchidaceae spp., Potentilla palustris, Ranunculus flammula*, small blue-green *Carex spp*. (leaves less than 5mm wide) (*C. flacca, C.nigra, C.panicea*), *Succisa pratensis, Thalictrum flavum, Valeriana dioica,Viola palustris.* | Overall total of at least two species/taxa frequent plus at least four species/taxa occasional throughout the sward or locally abundant in more than 10% of the sward | Choice of species related to NVC types, restriction to unimproved grassland and wetness characteristics of habitat, all satisfactory when inside target. Among possible species that could be used, choice further restricted by ease of identification, visibility in recording period. | Yes |
| Sward composition: indicators of waterlogging MG8, | Record % cover of *Juncus spp, Deschampsia cespitosa*, large *Carex spp*. (leaves | No species/taxa together or singly covering more than 10% of the sward | Species chosen to indicate waterlogging problems when outside target e.g. from raised water tables. | Yes |

| | | | | |
|---|---|---|---|---|
| MG8-related only | more than 5mm wide) e.g. *Carex acutiformis*, large grasses (leaves more than 10mm wide, stout stems) i.e. *Glyceria maxima, Phalaris arundinacea, Phragmites australis*. Record in period May - end of August (before hay cut in meadows). | | | |
| Sward composition: negative indicator species. | Record the % cover of negative indicator species. Record in period May - end of August (before hay cut in meadows). *Senecio aquaticus.* | No species more than occasional throughout the sward or more than 5% cover | Outside target can discourage hay/grazing management because the species is toxic to livestock, and is palatable when dry. | |
| Sward composition: negative indicator species | Record the frequency and % cover of negative indicator species. Record in period May- end of August (before hay cut in meadows). *Cirsium arvense, Cirsium vulgare, Rumex crispus, Rumex obtusifolius,Urtica dioica*. | No species more than occasional throughout the sward or singly or together more than 5% cover | Invasive species chosen to indicate problems of eutrophication and disturbance from various sources when outside target e.g. poaching, stock feeding. | Yes |
| Sward composition: negative indicator species | Record the % cover or frequency of negative indicator species in period May - end of August (before hay cut in meadows). All tree and scrub species excluding *Salix repens*, considered together. NB If scrub/tree species in pastures are more than occasional throughout the sward but less than 5% cover, they are soon likely to | No more than 5% cover. | Invasive species outside target shows that habitat is not being managed sufficiently e.g. lack of or insufficient grazing/cutting. | Yes |

| | | | | | |
|---|---|---|---|---|---|
| | | become a problem if grazing levels are not sufficient or if scrub control is not being carried out. | | | |
| | Indicators of local distinctiveness:<br><br>*Carex paniculata* | Presence/absence | Species should be present. | This species can be found in the wetter parts of the MG8 grassland, and it is a good indicator of the condition of the habitat. It can be found in water levels varying from -50 cm to +10cm but prefers water levels from -30cm to 0cm. (Newbold and Mountford, 1997.)<br><br>This is a discretionary target and the site will not be classed as in unfavourable condition should the species disappear from the site. | |

| **Other Notes** |
|---|
| Information regarding *Carex paniculata's* water level preferences: Newbold, C. and Mountford, O. 1997. Water level requirements of selected plants and animals. English Nature, Peterborough.<br><br>This habitat also supports members of the outstanding vascular plant assemblage. Monitoring its condition will also result in the species indirect attributes being assessed. |

## Table 3c Site-Specific definitions of Favourable Condition

| | |
|---|---|
| CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE | To maintain the acid grassland habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards: |
| Site-specific details of any geographical variation or limitations (where the favourable condition standards apply) | |
| Site-specific standards defining favourable condition | |

| Criteria feature | Attribute | Measure | Site-specific Targets | Comments | Use for CA? |
|---|---|---|---|---|---|
| Acid grassland | Sward structure: bare ground | Record extent of bare ground (not rock) distributed through the sward, visible without disturbing the vegetation, in period end April-mid July. | No more than 15%. | Outside target indicates management problems eg over-grazing. | |
| | Sward structure: localized bare ground | Record extent of localized bare ground around rabbit warrens. | No more than 0.25 ha i.e. approximately 50x50 metres | Heavy rabbit grazing usually associated with type but outside target indicates rabbit grazing and disturbance levels are too high. | |
| | Sward structure: litter | Record cover of litter where in a more or less continuous layer, distributed either in patches or in one larger area, in period end April-mid July. | Total extent no more than 25% of the sward | Outside target indicates biomass removal is insufficient e.g. under-grazed. | |
| | Sward structure: average height | Record sward height in period end April-mid July. | Sward 5 cm or less | Outside target indicates insufficient grazing. | |
| | Sward composition: positive indicator species | Record the frequency of positive indicator species in period end April-mid July. *Aira spp., Aphanes spp., Astragalus danicus,* | At least two species/taxa frequent and four species/taxa occasional throughout the sward | Choice of species related to NVC type and restriction to unimproved grassland, considered satisfactory when inside target. Among possible species that could be used, choice further restricted by ease of identification, visibility in | Yes |

| | | | | |
|---|---|---|---|---|
| | *Centaurium erythraea , Cladonia spp , Dianthus deltoides, Erigeron acer, Erodium cicutarium, Fragaria vesca, Galium verum, Helianthemum nummularium, Leontodon hispidus/L. saxatilis, Lotus corniculatus, Ornithopus perpusillus, Pilosella officinarum (Hieracium pilosella), Plantago coronopus , Rumex acetosella, Sedum acre, Teesdalia nudicaulis, Thymus spp.* | | recording period. | |
| Sward composition: negative indicator species | Record % cover of *Deschampsia flexuosa*, in period end April-mid July. | No more than 20% cover | Invasive species chosen to indicate problems of eutrophication and insufficient removal of biomass e.g. under-grazing. | Yes |
| Sward composition: negative indicator species | Record % cover of coarse grasses e.g. *Holcus lanatus, Dactylis glomerata*, in period end April-mid July. | No more than 10% cover | Invasive species chosen to indicate problems of eutrophication and insufficient removal of biomass e.g. under-grazing. | Yes |
| Sward composition: negative indicator species | Record frequency of *Senecio jacobaea*, in period end April-mid July. | No more than occasional throughout the sward | Frequency outside target indicates management problems e.g. over-grazing and trampling. | |
| Sward composition: negative indicator species | Record the frequency and % cover of *Pteridium aquilinum*, in period end June-end September. NB If *Pteridium* is more than occasional throughout the sward but less than 10% cover, it is soon likely to become a problem if no | No more than 10% cover | Invasive species chosen to indicate insufficient management e.g. insufficient removal of biomass e.g. under-grazing and/or lack of cutting or rolling | Yes |

| | | | | |
|---|---|---|---|---|
| | management such as cutting or rolling is being carried out. | | | |
| Sward composition: negative indicator species | Record the frequency and % cover of negative indicator species. Record in period end April-mid July. *Carduus nutans, Chamerion angustifolium, Cirsium arvense, Cirsium vulgare, Plantago major, Urtica dioica*. | No species/taxa more than occasional throughout the sward or singly or together more than 5% cover | Invasive species chosen to indicate problems of eutrophication and disturbance from various sources when outside target e.g. poaching, stock feeding. | Yes |
| Sward composition: negative indicator species | Record the frequency and % cover of all tree and scrub species excluding *Juniperus communis* and *Rhododendron spp*., considered together, in period end April-mid July. NB If scrub/tree species are more than occasional throughout the sward but less than 5% cover, they are soon likely to become a problem if grazing levels are not sufficient or if scrub control is not being carried out. | No more than 5% cover. | Invasive species outside target shows that habitat is not being managed sufficiently e.g. under-grazed. | Yes |
| Sward composition: negative indicator species | Record the % cover of *Rhododendron spp*. | No more than 1% cover. | Invasive species outside target shows that habitat is not being managed sufficiently e.g. lack of effective control programme. | Yes |
| Sward structure: bare ground | Record extent of bare ground (not rock) distributed through the sward, visible without disturbing the | CG7a,b,d,e, U1b,d,f - No more than 15%.<br>U1c - No more than 30% | Outside target indicates management problems e.g. over-grazing. | |

| | | | | | |
|---|---|---|---|---|---|
| | | vegetation, in period end April-mid July. | | | |
| | Indicator of local distinctiveness:<br><br>Chamomile (*Chamaemelum nobile*) | Presence/absence and extent of species | Species should be present and no loss in population extent > 10%. | This plant is not a designated feature in its own right or as part of a plant assemblage. Therefore the site will not be classed as in unfavourable condition should it disappear from the site. However, it is a nationally scarce plant so may be of botanical interest. | |

| **Other Notes** |
|---|
| This habitat is not designated in its own right. However, it supports species within the notified plant assemblage and so needs to be monitored in order to assess the plants indirect attributes. |

## Table 3d Site-Specific definitions of Favourable Condition

| | |
|---|---|
| CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE | To maintain the dwarf shrub heath habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards: |
| Site-specific details of any geographical variation or limitations (where the favourable condition standards apply) | |
| Site-specific standards defining favourable condition | |

| Criteria feature | Attribute | Measure | Site-specific Targets | Comments | Use for CA? |
|---|---|---|---|---|---|
| Dwarf shrub heath | Vegetation structure: growth phase composition of ericaceous cover | Visual assessment of cover, using structured walk or transects | Pioneer phase (including pseudo-pioneer): 10-40%; Building/mature phase: 20-80%; Degenerate phase: <30%; and Dead: <10%, of total ericaceous cover. | Both a young stand of e.g. 40-60-0-0 (P-B/M-Dg-Dd) and a mature stand of e.g. 10-65-20-5 (P-B/M-Dg-Dd) would meet the conservation objectives, though structurally they will be very different. Annual variation and succession should be accounted for within the targets. This attribute should be assessed only where it is possible to differentiate the growth phases. | |
| | Bare ground (%) | Visual assessment of cover, using structured walk or transects | At least 1% but not more than 10% cover of the area of the feature should consist of firm, sunlit, horizontal, sloping or vertical, exposed bare ground, with no more than 1% heavily disturbed (see text above) | Bare ground should form a patchwork with vegetation and be present mainly in south-facing slopes. Exclude rock, stone or litter. Tracks or paths can also be a source or bare ground for nesting invertebrates. A higher percentage of bare ground is acceptable if the site is important for certain bird species, e.g. curlews, woodlarks, nightjars. | Yes |
| | Vegetation composition: bryophytes and lichens | Visual assessment of cover, using structured walk or transects | % cover maintained or increased (when naturally present) | Not applicable on all sites. Refer to existing information and surveys of the site. Does not include dense mats of acrocarpous mosses (e.g. *Campylopus introflexus*) which should not be more than occasional (see negative indicators) | |

| | | | | |
|---|---|---|---|---|
| Vegetation composition: dwarf shrubs | Visual assessment of cover, using structured walk or transects | At least two species of dwarf shrubs present and at least frequent. | In naturally species-poor sites the presence of just one dwarf-shrub species may be enough to meet the target. For species-rich sites a higher target may be appropriate (see text). | Yes |
| Vegetation structure: % cover of dwarf shrubs | Visual assessment of cover, using structured walk or transects and aerial photographs, maps. | Dwarf shrub cover 25-90% (see section 10.4) | Dwarf-shrubs include: *Arctostaphylos uva-ursi, Calluna vulgaris, Empetrum nigrum, Erica ciliaris, E. cinerea, E. tetralix, E. vagans, Genista anglica, G. pilosa, Ulex gallii, U. minor, Vaccinium myrtillus, V. vitis-idaea* (and hybrids). Assess over whole feature. Annual variation and succession should be accounted for within the targets. | Yes |
| Vegetation structure: % cover of Ulex spp. | Visual assessment of cover, using structured walk or transects and aerial photographs, maps. | Total *Ulex* and/or *Genista spp*. cover <50%, with *Ulex europaeus* <25%. | Assess over whole feature. Gorse species support a rich invertebrate and vertebrate fauna. However, the can affect the soil characteristics. See also 'negative indicators'. | Yes |
| Vegetation composition: graminoids | Record presence, using structured walk or transects | At least 1 species at least frequent and 2 species at least occasional throughout the sward; but *Deschampsia flexuosa* and *Nardus stricta* no more than occasional and <25% cover Graminoids include: *Agrostis spp., Ammophila arenaria, Carex spp., Danthonia decumbens, Deschampsia flexuosa, Festuca spp., Molinia caerulea, Nardus stricta, Trichophorum cespitosum.* | In naturally species-poor sites, the presence of just one graminoid species may be enough to meet the target. For species-rich sites a higher target may be appropriate (see text). | Yes |
| Vegetation composition: desirable forbs | Record presence, using structured walk or transects | At least 2 species at least occasional throughout the sward. Desirable forbs include: *Armeria maritima, Galium saxatile, Genista anglica, Hypochaeris radicata, Lotus* | In naturally species-poor sites, the presence of just one forb species may be enough to meet the target. For species-rich sites a higher target may be appropriate (see text). | |

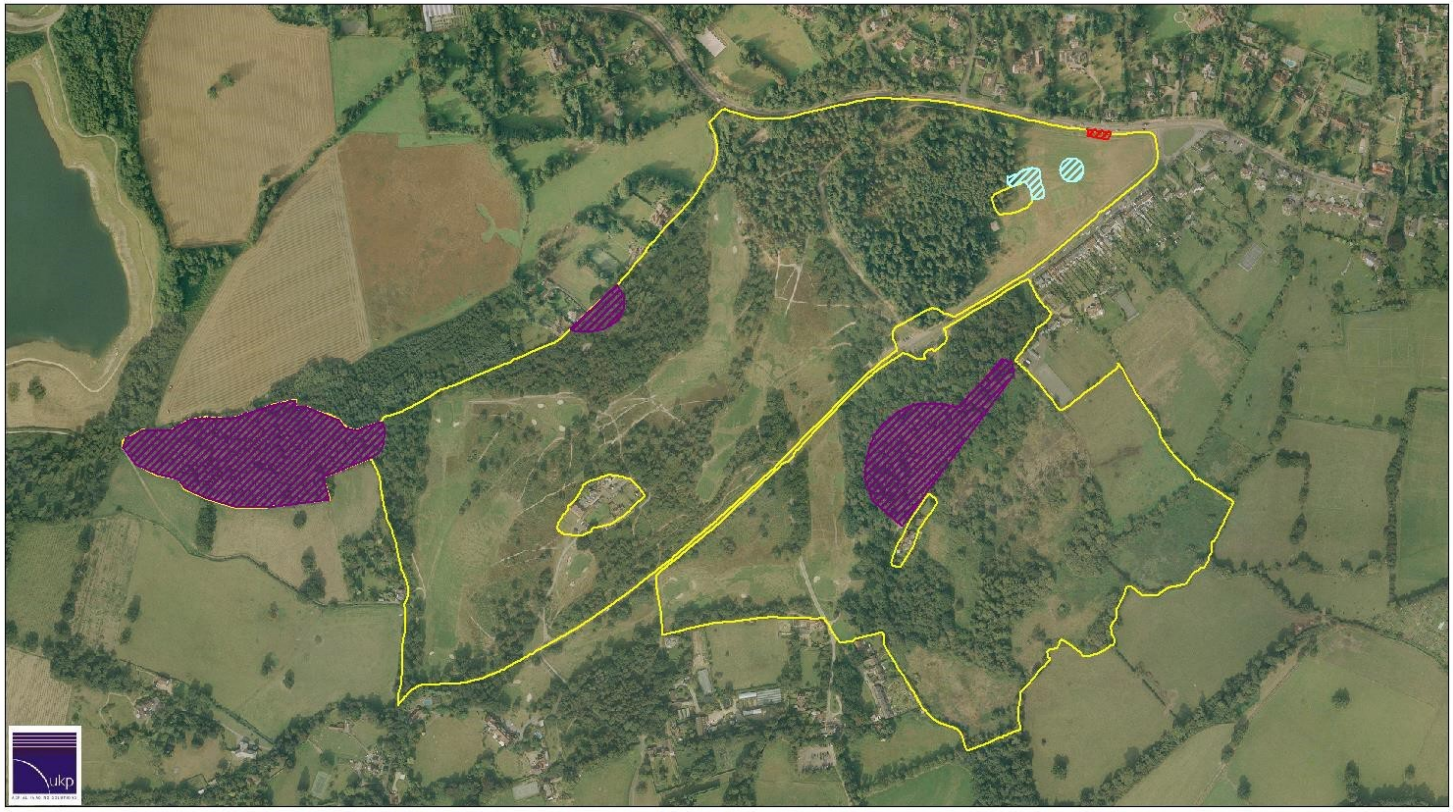
| | | | | |
|---|---|---|---|---|
| | | *corniculatus, Plantago lanceolata, Plantago maritima, Polygala serpyllifolia, Potentilla erecta, Rumex acetosella, Scilla verna, Serratula tinctoria, Thymus praecox, Viola riviniana, and for limestone heath only: Filipendula vulgaris, Galium verum, Helianthemum nummularium, Sanguisorba minor.* | | |
| Negative indicators: Species | Visual assessment of cover, using structured walk or transects | <1% exotic species Negative indicators – exotics include: *Rhododendron ponticum, Gaultheria shallon, Fallopia japonica*. | Exotic species should be eradicated if possible. | Yes |
| Negative indicators: Species | Visual assessment of cover, using structured walk or transects | Acrocarpous mosses <occasional | Species in this list may be beneficial for a range of invertebrates and only become indicators of negative quality if they are over the established limit. | |
| Negative indicators: Species | Visual assessment of cover, using structured walk or transects | <10% bracken (dense canopy) | Species in this list may be beneficial for a range of invertebrates and only become indicators of negative quality if they are over the established limit. | Yes |
| Negative indicators: Species | Visual assessment of cover, using structured walk or transects | < 1 % ragwort, nettle, thistles and other herbaceous spp. Negative indicators – other herbaceous spp include: *Cirsium arvense, Digitalis purpurea, Epilobium spp*. (excluding. *E. palustre*), *Chamerion angustifolium, Juncus effusus, J. squarrosus, Ranunculus spp., Senecio spp., Rumex obtusifolius, Urtica dioica*, 'coarse grasses'. | Species in this list may be beneficial for a range of invertebrates and only become indicators of negative quality if they are over the established limit. | Yes |
| Negative indicators: Species | Visual assessment of cover, using structured walk or transects | <15% (amend down to <5% due to presence of managed scrub areas occurring outside the heath extent) | Up to 25% scrub cover can be accepted if indicated in conservation objectives or management plan. | Yes |

| | | | | | |
|---|---|---|---|---|---|
| | | | trees & scrub. Tree and scrub spp include: *Betula spp., Prunus spinosa, Pinus spp., Rubus spp., Sarothamnus scoparius, Quercus spp., Hippophae rhamnoides.* | | |
| | Negative indicators: signs of disturbance | Visual assessment of cover, using structured walk or transects | <1% of habitat heavily eroded. | Record presence of signs of overgrazing or intensive fires in the activities list on the field form. | Yes |

| **Rationale for site-specific targets (including any variations from generic guidance)** |
|---|
| This habitat is not a designated feature. However the landowner is managing this habitat as if it is, so assessment could be beneficial. Management in order to increase heather cover is currently being implemented by removing mature pines. |
| **Other Notes** |
| |

Reigate Heath SSSI

Location of Bermuda Grass, Chamomile and Alder Carr



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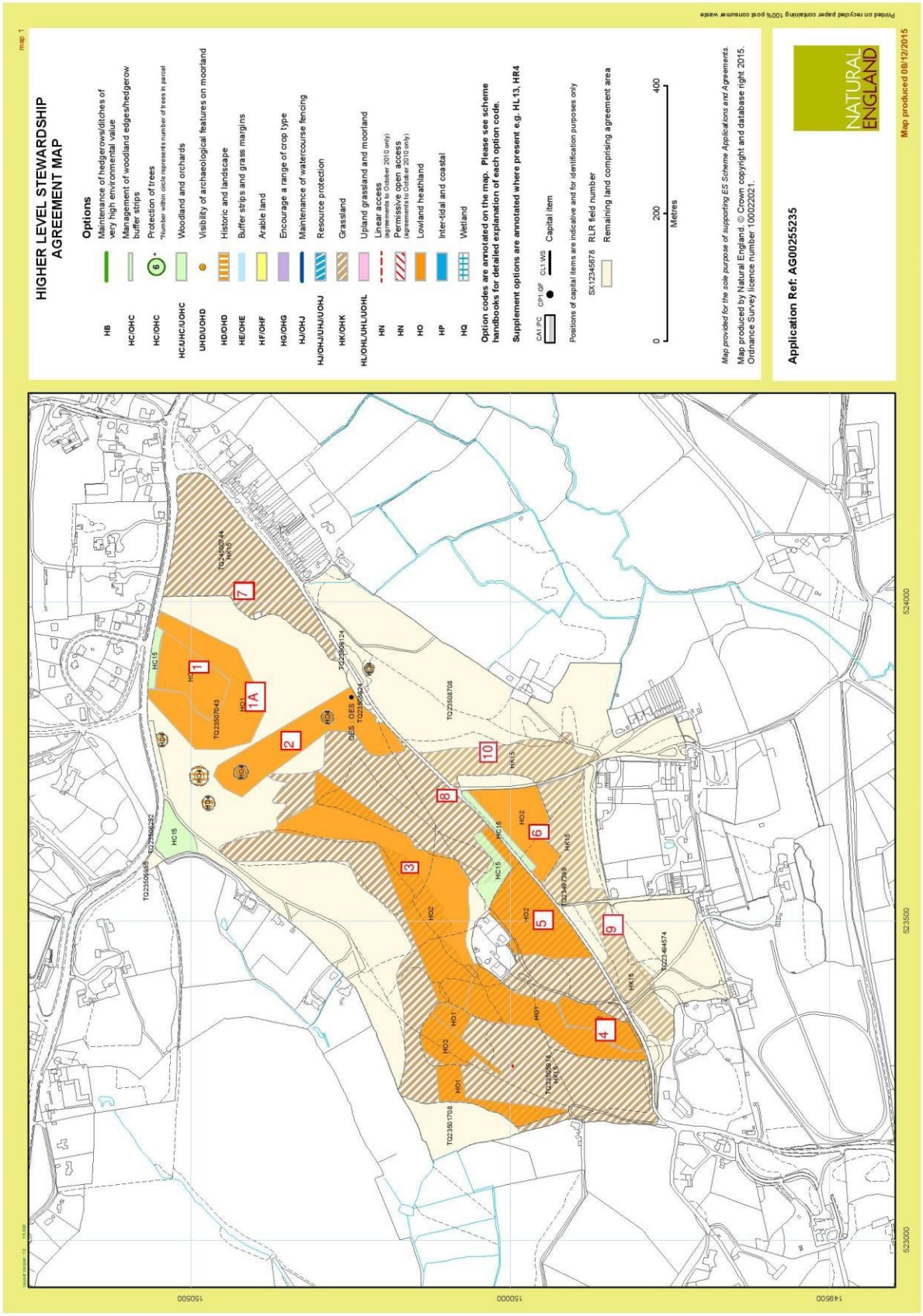
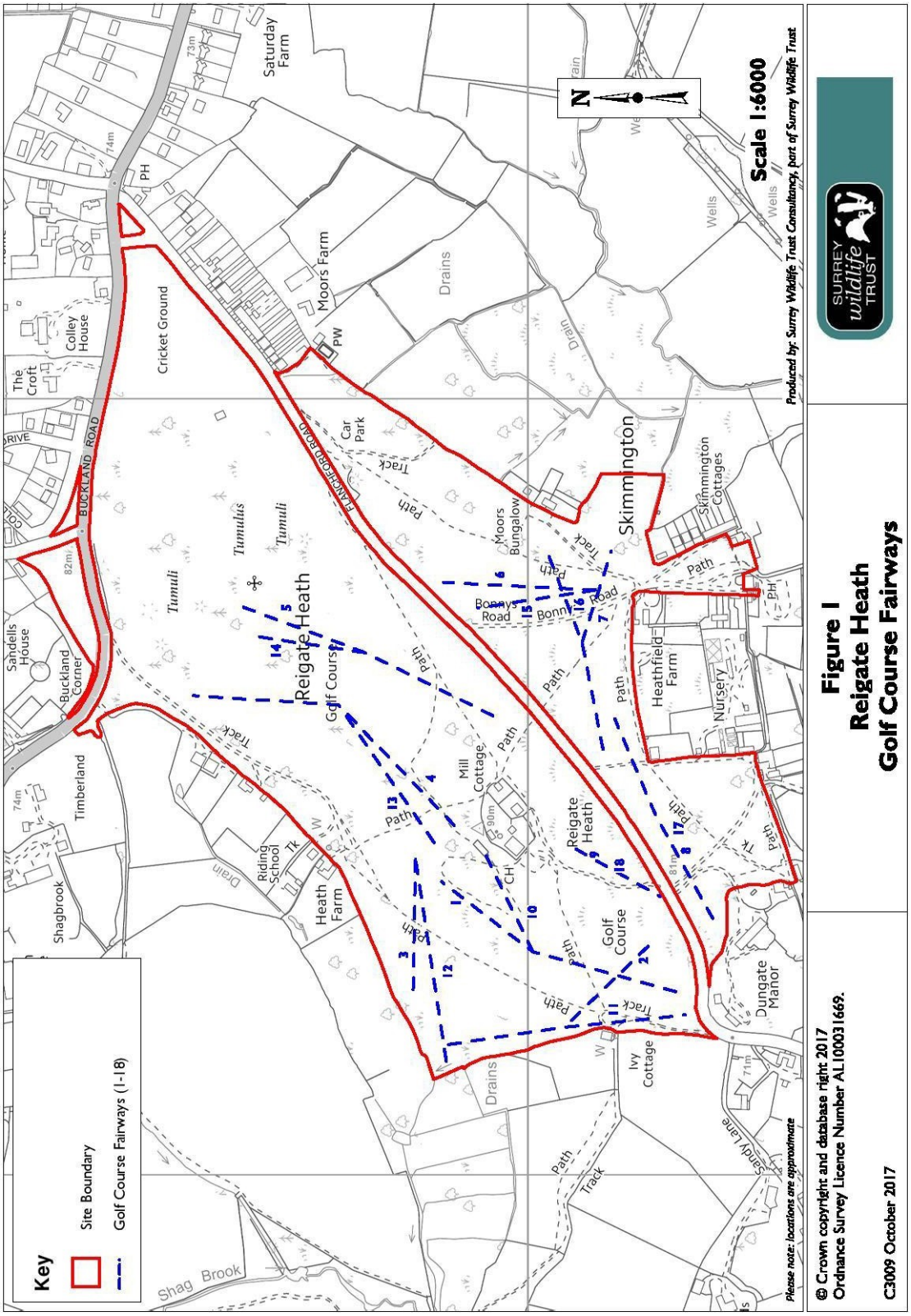
# Appendix 07: Map 10 HLS Options for Reigate Heath SSSI



# Appendix 8: Map 11 Reigate Heath Golf Course Fairways



# Appendix 09: List of Important Species for Reigate Heath LNR

## Table 1: Reigate Heath Notable Plant Species

| Common Name | Scientific Name | General Habitat | Species of Principal Importance (SPI) | GB/England Red List Near Threatened Vulnerable or Endangered | Surrey Notable – VC17 Scarce |
|---|---|---|---|---|---|
| Annual Knawel | *Scleranthus annuus* | **Sports field** | ✓ | **GBRL End** | |
| Bell Heather | *Erica cinerea* | Heathland | | **ERL NT** | ✓ |
| Bird's-foot Clover | *Trifolium ornithopodioides* | Acid grassland | | | ✓ |
| Bur Chervil | *Anthriscus caucalis* | Sports field | | | ✓ |
| Chamomile | *Chamaemelum nobile* | **Sports field** | ✓ | **GBRL Vul** | |
| Cross-leaved Heath | *Erica tetralix* | Heathland | | **ERL NT** | ✓ |
| Devil's-bit Scabious | *Succisa pratensis* | Acid grassland/heathland | | **ERL NT** | ✓ |
| Dodder | *Cuscuta epithymum* | Heathland | | **GBRL Vul** | |
| Field Mouse-ear | *Cerastium arvense* | Acid grassland | | | ✓ |
| Field Pepperwort | *Lepidium campestre* | Acid grassland | | **ERL NT** | ✓ |
| Greater Chickweed | *Stellaria neglecta* | Damp areas | | | ✓ |
| Harebell | *Campanula rotundifolia* | Acid grassland/heathland | | **ERL NT** | ✓ |
| Heather | *Calluna vulgaris* | Heathland | | **ERL NT** | ✓ |
| Lesser Spearwort | *Ranunculus flammula* | Ponds/damps area | | **ERL NT** | ✓ |
| Marsh Pennywort | *Hydrocotyle vulgaris* | Wet flushes/damp areas | | **ERL NT** | ✓ |
| Mat-grass | *Nardus stricta* | Acid grassland/heathland | | **ERL NT** | ✓ |
| Narrow-leaved Everlasting-pea | *Lathyrus sylvestris* | Acid grassland | | | ✓ |
| Petty Whin | *Genista anglica* | Heathland | | **GBRL NT** | |
| Small Cudweed | *Filago minima* | Acid grassland | | **ERL NT** | ✓ |

| Common Name | Scientific Name | General Habitat | Species of Principal Importance (SPI) | GB/England Red List Near Threatened Vulnerable or Endangered | Surrey Notable – VC17 Scarce |
|---|---|---|---|---|---|
| Tormentil | *Potentilla erecta* | Acid grassland | | **ERL NT** | ✓ |
| Upright Chickweed | *Moenchia erecta* | Acid grassland | | | ✓ |
| White Sedge | *Carex canescens* | Damp area | | | ✓ |
| Wood-sorrel | *Oxalis acetosella* | Woodland | | **ERL NT** | ✓ |

## Table 2: List of Reigate Heath Acid grassland indicators

| Common Name | Scientific Name | Common Name | Scientific Name |
|---|---|---|---|
| Annual Knawel | *Scleranthus annuus* | Hare's-foot Clover | *Trifolium arvense* |
| Bird's-foot | *Ornithopus perpusillus* | Heath Pearlwort | *Sagina subulata* |
| Biting Stonecrop | *Sedum acre* | Heath Grass | *Danthonia decumbens* |
| Buck's-horn Plantain | *Plantago coronopus* | Knotted Clover | *Trifolium striatum* |
| Bur Chervil | *Anthriscus caucalis* | Lesser Chickweed | *Stellaria pallida* |
| Chamomile | *Chamaemelum nobile* | Mat-grass | *Nardus stricta* |
| Common Stork's-bill | *Erodium cicutarium* | Rough Clover | *Trofolium scabrum* |
| Common Whitlow-grass | *Erophila verna* | Sand Spurrey | *Spergularia rubra* |
| Corn Spurrey | *Spergula arvensis* | Silver Hair-grass | *Aira caryophyllea* |
| Early Forget-me-not | *Myosotis ramosissima* | Slender Parsley-piert | *Aphanes australis* |
| Early Hair-grass | *Aira praecox* | Subterranean Clover | *Trifolium subterraneum* |
| Field Mouse-ear | *Cerastium arvense* | Upright Brome | *Bromopsis erecta* |
| Fine-leaved Sheep's-fescue | *Festuca filiformis* | Upright Chickweed | *Moenchia erecta* |
| Little Mouse-ear | *Cerastium semidecandrum* | | |

**NB: List needs to be incorporated into main species list by highlighting these important species in main list with an appropriate explanation and the full list should be attached to this document as relevant information.**

# Appendix 10: Reigate Heath Byelaws

**COMMONS ACT 1899 (Updated 1993)**

**REIGATE HEATH BYELAWS**

Byelaws made by the Reigate and Banstead Borough Council
under Section 1 of the Commons Act 1899 (updated 1993) with respect
to the Common known as Reigate Heath

Interpretation

1. In these byelaws:-

"the Common" means the piece of land, with ponds, streams, paths and roads thereon, commonly known as Reigate Heath, situate in Reigate in the County of Surrey, and referred to as "the common" in the Scheme made on 5th November, 1991 under Section 1 of the Commons Act 1899 for the regulation and management of Reigate Heath;

"the Club" means Reigate Heath Golf Club or their successors or assigns;

"the Council" means the Council of the Borough of Reigate and Banstead;

"the golf course" means any part of the Common which is for the time being set out or used as a golf course;

"model aircraft" means an aircraft which either weighs not more than 5 kilograms without its fuel or is for the time being exempted (as a model aircraft) from the provision of the Air Navigation Order;

"power-driven" means driven by the combustion of petrol vapour or other combustible vapour or other combustible substance.

Model Aircraft

2. No person on the Common shall release any power-driven model aircraft for flight or control the flight of such an aircraft.

3. No person shall cause any power-driven model aircraft to take off or land on the Common.

Structures and Trading

4. No person shall on the Common:

(a) without the consent of the Council erect any post, rail, fence, pole, tent, booth, stand, building or other structure; or

(b) sell, or offer or expose for sale, or let to hire, or offer or expose for letting to hire, any commodity or article unless, in pursuance of an agreement with the Council, or otherwise in the exercise of any lawful right or privilege, he is authorised to sell or let to hire on the Common such commodity or article.

Protection of Wildlife

5. No person shall without lawful excuse or authority on the Common kill, molest or intentionally disturb any animal, or engage in hunting or shooting or the setting of traps or the laying of snares.

Animals

6. No person shall, except in pursuance of a lawful agreement with the Council, or otherwise in the exercise of any lawful right or privilege, bring or cause to be brought on to the Common any beast of draught or burden or any cattle, sheep, goats or pigs.

Fires

7. No person shall on the Common light a fire, or place or throw or let fall a lighted match or any other thing so as to be likely to cause a fire.

Provided that this byelaw shall not apply to any event held in pursuance of an agreement with the Council.

Removal of Structures

8. No person shall on the Common without reasonable excuse remove or displace any barrier, railing, post or seat, or any part of any erection or ornament, or any implement provided for use in the laying out of maintenance of the Common.

Vehicles

9. (i) No person shall, without reasonable excuse, ride or drive a cycle, motor cycle, motor vehicle or any other mechanically propelled vehicle on the Common, or bring or cause to be brought on to the Common a motor cycle, motor vehicle, trailer or any other mechanically propelled vehicle (other than an cycle), except on any part of the Common where there is a right of way for that class of vehicle.

(ii) If the Council has set apart a space on the Common for use by vehicles of any class, this byelaw shall not prevent the riding or driving of those vehicles in the space so set apart, or on a route, indicated by signs placed in conspicuous positions, between it and the entrance to the Common.

(iii) This byelaw shall not extend to invalid carriages.

(iv) In this byelaw:

"cycle" means a bicycle, a tricycle, or a cycle having four or more wheels, not being in any case a motor cycle or motor vehicle;

"invalid carriage" means a vehicle, whether mechanically propelled or not, the unladen weight of which does not exceed 0.85 metres and which has been constructed or adapted for use for the carriage of one person, being a person suffering form some physical defect or disability and is used solely by such a person;

"motor cycle" means a mechanically propelled vehicle, not being an invalid carriage, with less than four wheels and the weight of which unladen does not exceed 410 kilograms;

"motor vehicle" means a mechanically propelled vehicle, not being an invalid carriage, intended or adapted for use on roads;

"trailer" means a vehicle drawn by a motor vehicle, and includes a caravan.

Overnight Parking

10. No person shall leave or cause or permit to be left any vehicle on the Common between the hours of 12 midnight and 6 a.m.

Horse Riding

11. (i) Where any part of the Common has, by notices affixed in conspicuous positions on the Common, been set apart by the Council as a place where horse-riding is permitted, no person shall, except in the exercise of any lawful right or privilege, ride a horse on any other part of the Common.

(ii) No person shall on the Common intentionally or negligently ride a horse to the danger of any other person using the Common.

Games

12. (i) A person resorting to the Common and playing or taking part in any game for which the exclusive use of any space on the Common has been set apart shall:-

(a) not play on the space any game other than the game for which it is set apart;

(b) in preparing for playing and in playing, use reasonable care to prevent undue interference with the proper use of the Common by other person;

(c) when the space is already occupied by other players not begin to play thereon without their permission;

(d) where the exclusive use of the space has been granted by the Council for the playing of a match, not play on that space later than a quarter of an hour before the time fixed for the beginning of the match unless he is taking part therein; or

(e) except where exclusive use of the space has been granted by the Council for the playing of a match in which he is taking part, not use the space for a longer time than 2 hours continuously, if any other player or players make known to him a wish to use the space.

(ii) No person shall on the Common drive, chip or pitch a hard golf ball except on land set aside by the Council for use as a golf course, golf driving range, golf practice area or putting course.

(iii) No person shall on the golf course play or take part in any game other than the game of golf.

(iv) No person, except a member of the Club or a person authorise by a member of the Club, shall play or attempt to play golf on the golf course.

Missiles

13. No person shall, to the danger or annoyance of any other person on the Common, throw or discharge any missile.

Clothing,etc.

14. No person shall without the consent of the Council bleach or dry, or hang out to dry, clothes or linen, or beat carpets, mats or like things on the Common.

Obstruction

15. No person shall on the Common:

(a) intentionally obstruct any officer of the Council in the proper execution of his duties;

(b) intentionally obstruct any person carrying out an act which is necessary to the proper execution of any contract with the Council; or

(c) intentionally obstruct any other person in the proper use of the Common, or behave so as to give reasonable grounds for annoyance to other persons on the Common.

Savings

16. (i) An act necessary to the proper execution of his duty on the Common by an officer of the Council, or any act which is necessary to the proper execution of any contract with the Council, shall not ban an offence under these byelaws.

(ii) Nothing in or done under any of the provisions of these byelaws shall in any respect prejudice or injuriously affect any public right of way through the Common, or the right of any person acting legally by virtue of some estate, right or interest in, over or affecting the Common or any part thereof.

Penalty

17. Any person offending against any of these byelaws shall be liable on summary conviction to a fine not exceeding level 2 on the standard scale.

*Reigate and Banstead Borough Council* *5th February 1993*

## Appendix 11: List of Approved Chemicals for Reigate Heath SSSI

### Green Space Department – List of Approved Chemicals

Chemicals approved for use on sites: However chemical use is a last resort method and is subject to approval as below:

| | |
|---|---|
| Glyspophate: | Spot treatment docks etc. (Hand application of Round-up) |
| Garlon: | Stump treatment. (Hand application) |
| Asulox: | Subject to approval for bracken. (Hand/weed wipe application) |
| MCPA: | Thistles & Hogweed. (Hand application) |

# List of Approved Chemicals - Reigate Heath Golf Course

(December 2012)

## Pesticides & Herbicides

| AREA | CHEMICAL | ACTIVE INGREDIENT | APPLICATION | FREQUENCY | PURPOSE & NOTES |
|---|---|---|---|---|---|
| Greens | Propel R | 100% polysorbate polyoxu ethyleneco-polymer-linked surfactants. | Boom spray | Monthly - March - September | Improves water penetration |
| | Chipco Green | Iprodione | Boom spray | As required | Fungicide - disease control eg for fusarium |
| | Headway | Azoxystrobin | Boom spray | As required | Fungicide as above. Used in rotation to prevent resistance |
| Tees & Approaches | Impede | Mewcoprop-P, MCPA & Dicamba | Boom/hand spray | Annually May/June | Broad leaf weed control |
| Bunker faces | Roundup | Glyphosatre | Hand spray | As required | Grass control |
| Bracken | Asulox | Asulam | Hand spray on selected areas | Annually July/August by Millwards | Bracken control |

## Fertilisers

| AREA | FERTILISER | NPK Analysis | Rate | FREQUENCY | PURPOSE & NOTES |
|---|---|---|---|---|---|
| Greens | Sherriff 6 Iron | 6% Fe | 2 litres/500m2 | Monthly: Oct - March | Strengthens plant and aids disease resistance |
| | Seavolution | Seaweed extract | 1 litre/500m2 | Monthly: Oct - March | Strengthens plant and aids disease resistance |
| | Evolution | 3-0-22 | 35g/m2 | Twice a year | Fertiliser |
| | MicroFlow | 14-0-7 | 2 litres/500m2 | 2-3 times per year | Fertiliser |
| Greens, tees and greens collars | Evolution Micro-gran | 12-0-9 + 0.5% Mg + 2% Fe | 35g/m2 | 2-3 times per year | Fertiliser |

# Appendix 12: RHMSG - Terms of Reference

Following the production of the first Reigate Heath Management Plan, Reigate & Banstead Borough Council established the Reigate Heath Steering Group in 1995. Since 2000, the Terms of Reference have been included and updated in subsequent Management Plans.

**1. Purpose**

The Reigate Heath Steering Group is a body which, respecting all national and local designations, laws and bylaws, supports and advises Reigate and Banstead Borough Council in co-ordinating an annual work programme and considering issues relating to the land management and uses of Reigate Heath.

**2. Aims & Objectives**

2.1 To monitor the management, annual work programme and use of Reigate Heath.
2.2 To guide periodic reviews of the Reigate Heath Management Plan.
2.3 To monitor the implementation of the Reigate Heath Management Plan.
2.4 To monitor adherence to the prescriptions of statutory bodies such as Natural England and Historic England.

**3. Steering Group Officers**

Reigate and Banstead Borough Council will appoint a Councillor as Chair of the Steering Group on an annual basis in or after May of each year and assign to the Steering Group one or more Council Managers/Officers who has responsibility for the management of Reigate Heath on a continuous basis. The Steering Group will appoint a Steering Group member as Deputy Chair on an annual basis in or after May of each year.

3.1 Chair: A Councillor.
3.2 Deputy Chair: A Steering Group member.
3.3 Secretary: A Council Manager/Officer

**4. Membership**

Supporting the Steering Group's "Purpose" and "Aims & Objectives" and representing tenants, licence holders, volunteers, special interest groups, residents and users of Reigate Heath, the following list gives examples of bodies that have been historically or are currently invited to appoint one named representative each to the Steering Group:

4.1 Tenant/Licensee: Reigate Heath Golf Club
4.2 Land Management: Reigate Area Conservation Volunteers
4.3 Specialist Interest: Friends of Reigate Heath, Veterinary Adviser
4.4 Residents: Reigate Heath Residents' Association
4.5 Archaeology: Surrey Archaeological Society
4.6 Users: Reigate Heath Horse Riders Group, Reigate Heath Cricket Club, Reigate Heath Football Club

Representatives from statutory bodies such as Natural England, Historic England and the Environment Agency and may attend meetings in an advisory capacity as required.

To ensure that no single-interest group is over-represented and that the "Purpose" and "Aims & Objectives" are met, Reigate and Banstead Borough Council retains the right to accept or decline any recommendations by the Steering Group or requests for a body to become a member of the Steering Group. Reigate and Banstead Borough Council also retains the right to remove any individual or body that fails to meet the Steering Group's "Purpose" and "Aims & Objectives".

**5. Co-options**

When deemed necessary, the Steering Group may submit a recommendation to Reigate & Banstead Borough Council that a named volunteer be co-opted onto the Steering Group for specific reasons, for specific lengths of time. Reigate & Banstead Borough Council retains the right to accept or decline any such recommendation.

**6. Attendance at Steering Group Meetings**

Representatives from non-statutory bodies such as English Heritage and people who are not members of the Steering Group are not entitled to vote at Steering Group meetings but may attend with the express prior permission of the Chair.

**7. Procedural matters**

7.1 Meetings: Organised by the Secretary, the Steering Group will meet a minimum of three times a year. One meeting (normally in May) will include a walk on Reigate Heath which members of the public may join and ask questions but members of the public must not interfere with matters being brought to the attention of participating Steering Group members.

7.2 Minutes: The Secretary will record the minutes of each Steering Group meeting, which will include an action point list, and circulate those minutes by email to all Steering Group members no more than 14 days after each meeting. After email agreement by Steering Group members, the agreed minutes will be posted on the Council website.

7.3 Agenda & Meeting Papers: With the agenda agreed by the Chair, the Secretary will distribute all relevant papers including the agenda by email to all Steering Group members no less than 7 days before any Steering Group meeting.

7.4 Members' Duties: All Steering Group members will report matters arising from the Steering Group to their respective bodies and will report to the Steering Group any matters that their bodies wish to raise. Steering Group members will notify the Chairman of any matters they wish to raise with the Steering Group no less than 14 days before any Steering Group meeting.

7.5 New Members: New and co-opted members of the Steering Group will be briefed by the Chair and/or an RBBC Officer. New and co-opted members will be expected to familiarize themselves with the Reigate Heath Management Plan which is available on and may be downloaded from the Council's website.

7.6 Sub-Groups: The Steering Group may determine the need for any sub-groups and Steering Group membership of those sub-groups. All sub-groups will be chaired by either a member or the Chair of the Steering Group.

7.7 Terms of Reference: The Terms of Reference will be reviewed by Reigate & Banstead Borough Council each time that the Reigate Heath Management Plan is under revision or, should the need arise, during the life of the Reigate Heath Management Plan.

RHA/31.12.2018

# Appendix 13: SWT Ecological Surveys 2018 – Recommendations

**Reptile & Small Mammal Survey 2018**

Structurally diverse habitats, warmth, and good habitat connectivity will be beneficial for reptile species. Reigate Heath does harbour structural diversity with woodland, open heath, and grassland areas scattered around the fairways. However, the transition zones, or ecotones, between some of these areas could be enhanced for biodiversity.

Grass-scrub interfaces, and interfaces within grassland of varying sward heights generally contain a greater diversity of plant species and habitat structure favoured by reptiles, small mammals and many other species.

The transition between the golf club fairways and woodland could be enhanced for reptile species and other wildlife. These transitional zones are quite harsh in some areas with a mature woodland edge located right next to open managed fairways with very little transitional habitat structure between these habitats. Graded areas of vegetation like this can provide nesting habitat for birds, refuge and corridors for reptiles and small mammals, as well as suitable conditions for invertebrates.

This transition should include a zone between the woodland and golf course edge of developing scrub and tall grassland. This can be achieved by pushing the woodland edge back to encourage scrub regrowth while relaxing the grass cutting frequency on the golf course edge. The frequency should be part of a rotation where some areas are cut while other areas are left out of the cutting regime to create a mosaic.

Management of the golf course roughs as grassland are likely to provide suitable conditions for reptiles. Grassland should be cut annually with less frequent cutting, every 2 or 3 years, in some areas to encourage tussock growth. Although less diverse botanically, tussock areas would provide refuge opportunities for reptiles and small mammals, and have the potential to attract Barn Owls and Kestrels.

Where tussock growth does start to develop using the most suitable cutting equipment is important to achieve the desired objective. Raising the height of the cutting machinery and eventually using more sensitive management tool options such as brushcutters will help to avoid destroying these features during grassland management.

Cut grass left in piles in inconspicuous locations can be used to benefit the Grass Snake which use decaying organic material to incubate their eggs. These sites can be a limiting factor for this species and population declines can be linked to their destruction on reduction in quality (Edgar et al, 2010).

Sandy patches within areas of heather cover have already been created across some of the heathland areas. Any future work to create bare ground areas could benefit reptiles further by leaving some of the cut turf on the northern edge of the scrape a create a sunny basking.

It is important to undertake habitat management works when reptiles are least likely to be affected, ideally during the winter period of inactivity, i.e. avoid 1st March to 31st August.

Any targeted work to create bare ground should be carried out outside of winter period. September and early October would be best suited for this activity. A walk over survey for potential ground nesting birds should be conducted prior to any works commencing.

Log piles are habitat features that can provide shelter to a variety of wildlife, including reptiles and small mammals. They can be constructed out of cut pieces of timber and brash left over from any habitat works taking place on the site. If the pile is at least 1 m high, about the same across and around 1.5 m long, it may even be suitable for hedgehogs to hibernate beneath.

Furthermore, pieces of corrugated iron or a large board placed on the ground in undisturbed areas of the site will often attract small mammals to nest underneath, safe from most predators. It can be easily covered with vegetation to avoid creating an unsightly feature. If refugia are left on site as part of on-going reptile monitoring, these will also act as places of refuge for small mammals.

Some of the refugia could remain on site to be included in a long term monitoring programme coordinated by the Surrey Amphibian and Reptile Group using trained voluntary surveyors. Through this process September 2017 C3009 Reigate Heath, Reptile Survey Report 18 land managers are provided access to the SARG website which can be used to view distribution data and site condition reports for reptiles supporting site management plans.

Live trapping of small mammals (including mice, voles and shrews) is recommended as this method is an effective way to monitor a wide range of small mammal species at one time. It also allows the sex of animals to be recorded and how captures are distributed across a site, potentially revealing microhabitat associations of different species.

Small mammal trapping is also extremely popular with volunteers as it allows them to see animals close up and possibly even handle them. However, it is labour and time intensive and requires supervision/coordination by a suitably qualified person with experience of trapping small mammals.

There are other methods that can be used to record larger mammal species. For example, Hedgehog tunnels are easy to use and relatively cheap therefore can be set-up and monitored by volunteers.

Bat activity surveys could also be undertaken on the site between March and September which would indicate how many species of bat are likely to be using the site and highlight where the important areas for foraging and commuting are.

A Badger survey could also be undertaken to find out if there are any setts present on the site and monitor activity levels of sett(s). It is recommended suitably experienced and qualified person(s) are used to coordinate these surveys.

## Bird Survey 2018

The mixed, wet and broad-leaved woodland areas of the site should be retained and protected as these are important areas for birds. The existing woodland glades should be maintained, ideally with a gentle graduation from woodland to scrub to grassland. There is a large woodland glade which is in the north-eastern part of the site. In this glade there are several isolated Pedunculate Oak and Silver Birch trees scattered throughout which are frequently used as singing perches by a number of species including Chiffchaff and Blackcap. These scattered trees should be retained.

Management of the broad-leaved woodland in the south of Reigate Heath ideally should prioritise the encouragement of further the understorey to develop, particularly species such as Hawthorn, Crab Apple and Wild Cherry which will provide food for birds, including Song Thrush, Redwing and many other species.

All standing & fallen decaying wood to be left in situ within reasonable health and safety constraints. This provides habitat for a range of invertebrates which in turn provide food for insectivorous birds. Great Spotted Woodpeckers will also use deadwood to nest in and as the species is present on the site effort should be made to increase the amount of deadwood in the woodland areas.

**Scrub**

Scrub should be maintained across the site, in particular the Gorse patches found across the Golf Course. It is important to manage Gorse in a way that creates a variety of age and structure thus catering for the habitat preferences of a greater number of birds.

Areas of Gorse should be managed in small coups and cut in a rotation across the site, starting with the most mature bushes and stands first. All cutting of 'leggy' stands of Gorse should be to ground level and followed by immediate removal of cut material to avoid a build-up of nutrients (which otherwise could have a negative impact on the heathland). This should be done outside of the bird nesting season (anytime from mid-September to mid-February).

Other areas of Bramble scrub around the edges of woodland areas should be, where possible, maintained to encourage a gradual transition between different habitat types.

Heathland provides habitat for a number of bird species due to its open areas with scattered trees and scrub, its warm and dry nature and an abundance of invertebrates. However there are some specialist heathland species which, although rare, are present across Surrey's heathland habitat.

**Dartford Warbler**

Past populations of this species have crashed in the 1960s, only to recover since, hence it is regarded as an Amber listed species (BoCC4). The future of the Dartford Warbler in Surrey seems assured as long as the heathlands are under a strong protection regime, the only caveat must be the ever changing weather patterns resulting from climate change, with extremes in winter threatening the existence of the bird (Surrey Bird Club, 2017).

Dartford Warblers prefer more mature heathland, usually at a height of 30cm or more and containing scattered Gorse bushes at no more than 5% cover. Whilst the large Gorse patches around the club house should be retained for Linnets and Common Whitethroats, the wider heathland areas across the golf course should be kept open with no more than 5% cover of Gorse to provide habitat suitable for Dartford Warblers.

**Woodlark**

Woodlark is listed under Schedule 1 of the Wildlife and Countryside Act (1981, as amended) and Amber listed (BoCC4) and Species of Principal Important (SPI). The overall picture in Surrey is highly encouraging with an increase in breeding territories of almost 60% during 2007-2012 when compared to 1988-1997. The increases are mainly on the periphery of existing occupied areas, perhaps indicating the effects of improving habitat management on the Thames Basin Heath Special Protection Area (SPA) in the west of the county (Surrey Bird Club, 2017).

In comparison to Dartford Warblers, Woodlarks require sparse, short, grassy heathland with areas of bare ground to forage on. They also require areas of taller heather or tussocky grass to construct

their nests in. It is recommended that a proportion of short turf and bare ground is created and maintained in an area of the site that is relatively free from disturbance. This may be a challenge given the high public pressure on Reigate Heath. However, if a quiet area is located it could perhaps be fenced off from public use to encourage this species and protect any nesting birds in the area.

**Nightjar**

6.1.12 This bird is listed as Red (BoCC4) and Species of Principal Importance (SPI) due to a catastrophic decline in range of more than 50% between the 1960s and 1980s, the 1992 national survey then revealed a welcome increase of 50% in population size since 1981, probably due to the increased availability of young woodland and heathland habitat (BTO, 2018). The future of Nightjar in Surrey currently looks assured for the western heathland providing ideal habitat.

Nightjar are a species that particularly benefit from restoring heathland by clearing trees whilst retaining a scatter of trees as song posts. This should be at a density of no more than 10 trees per hectare. If there are plans to push the tree line back at Reigate Heath in order to reclaim some heathland, creating scallops along the woodland edge 20-100m wide and deep, this will create ideal nesting conditions for Nightjar.

**Bird boxes and feeders**

Lack of suitable nesting areas can be a limiting factor for the presence of certain bird species on a site. However, Reigate Heath has large areas of semi-natural habitats, including woodland and veteran trees, which are likely to provide ample nesting opportunities for the bird populations this site supports. Therefore installing nest boxes around the site primarily to provide additional nesting opportunities does not seem necessary.

However, encouraging birds to use certain areas of the site could be used as a public engagement tool. For example, a bird feeding station could be installed around the main Club House in a position which is easily viewed from inside the building. A variety of feeders and bird food should be used in order to attract the greatest diversity of species. This would provide golfers with the opportunity to view a range of bird species and encourage them to engage with wildlife on the site. Feeders should be regularly cleaned with a warm soapy water or a mild disinfectant.

In the same spirit, it may be worth considering installing a camera nest box near the Club House which would not only provide a nesting site for birds but would be a valuable engagement tool for staff and golfers.

**Sensitive timing of vegetation works.**

Any future tree works or vegetation management of the site is planned, these will need to be timed to avoid critical times in the bird breeding season which will reduce the level of disturbance to potential nesting species. Cutting back of shrubs and trees should be scheduled between mid-September and mid-February.

If emergency works (for health and safety reasons) are required to take place during the breeding bird season, an ecologist should be consulted to check for breeding birds immediately prior to works commencing.

## Bat Survey 2018

**Woodland**

The interior of the woodland has significantly less bat activity, the majority of the activity came from the woodland and grassland edges, therefore any management that helps to enhance this

ecotone, provide a wide variety of plants, will also help bat populations. Therefore it is recommended that rides, glades, open areas and woodland edges are encouraged with regards to management. These areas will be more productive in terms of bats and will provide a warmer, more sheltered habitat, such as that recorded in The Glade.

Grassland/scrub on the woodland edge is a valuable woodland habitat for foraging and commuting as shown in the survey data. By enhancing this habitat, this will encourage a range of plant species and subsequently a diversity of invertebrates which bats can feed on. Furthermore, scrub and young trees along the woodland edge will also provide invertebrate populations on which bats forage, and shelter during commuting. The ridge ride to the west of The Glade should continue to have a width variation accompanied by grassy and heathy edges as they provide the greatest benefit to bats.

**Mature trees**
The mature Pedunculate Oak in The Glade, to the south of Flanchford Road and elsewhere across Reigate Heath provide important foraging and roosting opportunities and are especially important as they often connect with the woodland, rather than being too isolated and therefore less favourable for bats.

The retention of decaying standing and lying wood will attract a number of invertebrate specialists and the standing woodland can provide bat roosting suitability, including small holes, crevices and spaces under bark. Therefore any future tree works either felling of woodland trees, individual trees or lopping branches, advice should be sought from an experienced bat ecologist.

**Bat boxes**
There are plenty of features and habitat available across Reigate Heath to provide ample opportunities for bats as the 2018 survey indicates. The bat activity and range of species within the survey area is high, however much of the activity originated from one species. Therefore bat boxes are not thought necessary at this site.

**Grassland**
Maximising the species-richness of this habitat will enhance the invertebrate populations and therefore will have a knock-on positive benefit for bats. Varying the cutting regime will help by prolonging the flowering period and will enhance the plant species diversity, especially if the arisings are removed.

**Water features**
There is a lack of large water features on the site. The creation or reinstatement of a pond (for example Bonny's Pond) would help to concentrate invertebrate activity such as midges and be a hot-spot for bat feeding activity. Bats also need open water in which to drink.

## SWT Ecological Surveys 2018 – List of Surveyors

The following surveys were commissioned from SWT Ecological Services Team by RBBC prior to writing the draft of this management plan:

**Dodd, Scotty (**2018) *Reigate Heath – Invertebrate Survey*.

**Girvan, Isobel (**2018) *Reigate Heath – Bat Activity Survey*.

**Guenioui, Jamel** (2017) *Reptile & Small Mammals Survey*.

**Learmont, Alex (**2018) *Reigate Heath – Bird Activity Survey*.

# Appendix 14: Reigate Heath User Survey

## REIGATE HEATH MANAGEMENT PLAN

### REIGATE HEATH USERS SURVEY – 2016

**Reigate Heath is a rare example of lowland heath habitat and, since 1993, Reigate and Banstead Borough Council, Reigate Heath Golf Club and volunteers have carefully managed the heath through a series of management plans to protect and enhance this scientifically important and visually valuable area.**

**The management plan, which is committed to restoring the heath's habitat to 27% heathland, 35% grassland and 38% woodland by February 2018, is now due for review and part of that review includes asking current users of Reigate Heath what might improve their experience and former users of Reigate Heath what discouraged them from visiting.**

**Your assistance in providing information and also raising issues which are relevant but may not have been included in this survey will be most welcome.**

**The survey should take between 3 and 10 minutes to complete and will close at midnight on Friday, 22nd April 2016.**

1. If you currently visit Reigate Heath, why? If more than one reason, please mark any or all that apply and then move directly to Question 3.

| | | | |
|---|---|---|---|
| ○ | Exercising (walking, running) | ○ | Artistic pursuits (photography, painting) |
| ○ | Walking dogs | ○ | Meeting with family or friends |
| ○ | Riding horses or ponies | ○ | Picnicking |
| ○ | Riding bicycles | ○ | Visiting local residents |
| ○ | Playing golf | ○ | Visiting historical site (windmill, tumuli) |
| ○ | Using golf clubhouse facilities | ○ | Visiting church (Heath, Windmill) |
| ○ | Participating in an organised walk or tour | ○ | Stopping en route to somewhere else |
| ○ | Participating in team sports (football, etc) | ○ | No charges for using the car parks |
| ○ | Watching team sports (football, cricket) | ○ | Work (paid employment) |
| ○ | Watching wildlife | ○ | Work (unpaid voluntary) |
| ○ | None of these, or | ○ | Other (please specify) |

2. If you formerly but no longer visit Reigate Heath, why not? If more than one reason, please mark any or all that apply.

| | | | |
|---|---|---|---|
| ○ | Can't get a car parking space | ○ | No longer visiting church |
| ○ | Don't need to anymore | ○ | No longer work in the area (employment) |
| ○ | Don't like changes on the Heath | ○ | No longer work in the area (voluntary) |
| ○ | Found somewhere better to go | ○ | No disabled access |
| ○ | Gave up playing sport (golf, football, etc) | ○ | No disabled facilities |
| ○ | Gave up dog walking | ○ | No public facilities |
| ○ | Gave up horse riding | ○ | Too many people |

| | | | |
|---|---|---|---|
| ○ | Moved away | ○ | Too many different activities |
| ○ | No longer fit enough | ○ | Too noisy |
| | | | |
| ○ | None of these, or | ○ | Other (please specify) |

3. When was the last time you visited Reigate Heath?

4. Generally, how often do you visit Reigate Heath?

| | | | |
|---|---|---|---|
| ○ | Every day | ○ | At least once every 2 to 3 months |
| ○ | At least once a week | ○ | At least once every 6 months |
| ○ | At least once a month | ○ | Other (please specify) |

5. Generally, on what days of the week do you visit Reigate Heath?

| | | | |
|---|---|---|---|
| ○ | Weekdays | ○ | Weekends |
| ○ | Both weekdays and weekends | | |

6. Generally, how long do you spend on Reigate Heath?

| | | | |
|---|---|---|---|
| ○ | 1 hour or less | ○ | 4 hours |
| ○ | 2 hours | ○ | 5 hours or more |
| ○ | 3 hours | ○ | Other (please specify) |

7. Generally, how do you travel to Reigate Heath? If more than one, mark all that apply

| | | | |
|---|---|---|---|
| ○ | On foot | ○ | Car |
| ○ | Horse | ○ | Van or Commercial Vehicle |
| ○ | Bicycle | ○ | Public transport |
| ○ | Motorcycle | ○ | Other (please specify) |

8. Using the scale below, how easy or difficult is it for you to find your way around Reigate Heath during a visit?

| Very easy | Fairly easy | Unsure | Difficult | Very difficult |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

9. Using the scale below, how likely or unlikely would you be to use each of the following:

| | Very likely | Likely | Unsure | Unlikely | Very Unlikely |
|---|---|---|---|---|---|
| Route direction signs for specific activities | ○ | ○ | ○ | ○ | ○ |
| A route map application on a mobile phone | ○ | ○ | ○ | ○ | ○ |

10. If you wish to see route direction signs on Reigate Heath for specific activities, please specify the relevant activity and suggest possible locations

11. Using the scale below, how safe or unsafe do you feel when you are on Reigate Heath?

| Very safe | Safe | Neither safe nor unsafe | Unsafe | Very unsafe |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

12. Some people using Reigate Heath fail to dispose of their dogs' waste and/or litter in the appropriate waste bins near the car parks; something which is dealt with by many local volunteers. The separate dog waste and general litter bins on Reigate Heath will shortly be replaced by single integrated waste bins for both dog waste and general litter.

Using the scale below, are the current waste bins in satisfactory locations on Reigate Heath?

| Very satisfactory | Satisfactory | Neutral | Unsatisfactory | Very unsatisfactory |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

If you think they are in unsatisfactory locations, please specify where they could be better placed near vehicular access.

13. If you walk on Reigate Heath, how many dogs do you usually walk?

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ○ | 1 | ○ | 2 | ○ | 3 | ○ | 4 | ○ | More than 4 | ○ | Other (please specify) |

14. If you ride horses on Reigate Heath...

| | Yes | No |
|---|---|---|
| ...are the bridleways and permitted horse rides well maintained and safe? | ○ | ○ |

15. If you ride bicycles on Reigate Heath...

| | Yes | No |
|---|---|---|
| ...did you know that cycling is only permitted on the Bonny's Road bridleway? | ○ | ○ |

16. Before taking part in this survey, were you aware that the following nationally recognised designations apply to some or all parts of Reigate Heath and some earth structures and buildings on the Heath?

| | Was aware | Was not aware | Term is new to me |
|---|---|---|---|
| Common Land | ○ | ○ | ○ |
| Site of Special Scientific Interest (SSSI) | ○ | ○ | ○ |
| Local Nature Reserve | ○ | ○ | ○ |
| Area of Great Landscape Value (AGLV) | ○ | ○ | ○ |

| | | | |
|---|---|---|---|
| Metropolitan Green Belt | ○ | ○ | ○ |
| Conservation Area | ○ | ○ | ○ |
| Scheduled Ancient Monuments | ○ | ○ | ○ |
| Grade II* and Grade II Listed Buildings | ○ | ○ | ○ |

17. It has been proposed that Reigate Heath be included within a boundary extension of the Surrey Hills Area of Outstanding Natural Beauty. The Surrey Hills Area of Outstanding Natural Beauty is a nationally designated landscape and covers an area of the North Downs, north of Reigate Heath.

Using the scale below, to what extent would you agree or disagree with this proposal?

| Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly disagree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

18. Before taking part in this survey, which (if any) of the following were you aware of?

| | Was aware | Was not aware |
|---|---|---|
| Reigate Heath is managed by Reigate & Banstead Borough Council | ○ | ○ |
| Reigate Heath has a management plan | ○ | ○ |
| Part of Reigate Heath is leased to Reigate Heath Golf Club | ○ | ○ |
| There are two or more "guided" walks on Reigate Heath each year | ○ | ○ |
| Motor vehicles are not permitted on Reigate Heath (except in car parks) | ○ | ○ |
| Cycling is not permitted on Reigate Heath (except on Bonny's Road bridleway) | ○ | ○ |
| Bylaws for Reigate Heath are posted on notice boards in the car parks | ○ | ○ |

19. To guide the preparation of future management plans, please identify which of the points are of greatest importance to you as a user of Reigate Heath.

Using the scale below, to mark all those that you consider important and to what extent?

| | Very important | Important | Neither important nor unimportant | Unimportant | Not at all important |
|---|---|---|---|---|---|
| The competing demands of activities sharing the same areas on Reigate Heath | ○ | ○ | ○ | ○ | ○ |
| Over use of car park areas | ○ | ○ | ○ | ○ | ○ |
| Habitat management after 2020, e.g., removal and/or retention of trees, shrubs, plants | ○ | ○ | ○ | ○ | ○ |
| Improved sport facilities | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| More information being available about Reigate Heath on notice boards | ○ | ○ | ○ | ○ | ○ |
| Managing Reigate Heath's diverse landscape | ○ | ○ | ○ | ○ | ○ |
| Maintaining the number of seats | ○ | ○ | ○ | ○ | ○ |
| Putting Wildlife's needs first | ○ | ○ | ○ | ○ | ○ |

20. The management of Reigate Heath places ever increasing financial demands on the borough's budget and it is necessary to consider possible ways to meet those demands. To what extent would you agree or disagree the following statements?

| | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| Trees and plant materials removed in accordance with the management plan should be sold | ○ | ○ | ○ | ○ | ○ |
| Any additional seating/benches should be sponsored | ○ | ○ | ○ | ○ | ○ |

21. Do you work for or are you a member of any of the following organisations? If more than one, mark all that apply.

| | | | |
|---|---|---|---|
| ○ | Surrey County Council | ○ | Reigate Heath Residents Association |
| ○ | Reigate and Banstead Borough Council | ○ | Reigate Heath (Horse) Riders Group |
| ○ | Friends of Reigate Heath | ○ | Reigate Society |
| ○ | Reigate Area Conservation Volunteers | ○ | Surrey Archaeological Society |
| ○ | Reigate Heath Golf Club | | |
| ○ | None of these, or | ○ | Other (please specify) |

22. Are you…?

| | | | | |
|---|---|---|---|---|
| Male | ○ | | Female | ○ |

23. What is your age group?

| | | | |
|---|---|---|---|
| ○ | Under 16 yrs | ○ | 46-59 yrs |
| ○ | 16-25 yrs | ○ | 60-79 yrs |
| ○ | 26-45 yrs | ○ | 80+ yrs |

24. Where do you live?

| | |
|---|---|
| Town | |
| Postcode | |
| Country (if other than the UK) | |

25. Please use this box for any additional comments or suggestions relevant to Reigate Heath.

For more information contact:

**David Watts**
Countryside & Woodland Officer
Greenspaces Department
Reigate & Banstead Borough Council
Earlswood Depot
Horley Road
Redhill
Surrey RH1 6PN

Email: david.watts@reigate-banstead.gov.uk