FOOTPRINT ECOLOGY

Wootton Ridge Management Plan

2024 - 2034

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1. Introduction

Wootton Ridge

1.1 Wootton Ridge is located near Minehead, within the Exmoor National Park and includes Wootton Common, Hopcott Common, Alcombe Common, parts of Grabbist Hill and the Giant's Chair. The Ridge is characterised by hilltops containing heathland, scrub and bracken, and lower slopes that have been planted with coniferous woodland.

1.2 A public consultation into the future management of the open habitats of Wootton Ridge has been undertaken on behalf of the landowners by Butterfly Conservation in order to inform the joined up, long-term, management of the area. The site contains an area of registered common land and is also of importance for its heritage features and recreational value. It is considered to be in unfavourable condition for the wildlife features for which it is of particular importance.

1.3 Management is already taking place on large areas of the site, but some changes will be required to the current management to address issues with the declining condition. The area under consultation, and therefore the target for management, includes only the open habitat on the hilltops and upper slopes of the Ridge, and a small area of forestry to the south. This report therefore outlines the management plan for the open areas of grassland and heathland habitat falling within the consultation area on Wootton Ridge.

Management planning

1.4 Sites, habitats, and species are constantly changing, as is knowledge and expertise (Alexander, 2020). Management should therefore be adaptive and be able to respond to natural dynamic processes, the changing political and socio-economic climate, and the legitimate interests of others. Therefore, this 10-year management plan should be updated as and when required to ensure that any learning gained during management, and any changes that have taken place, is considered to allow actions on the ground to be consequently adjusted.

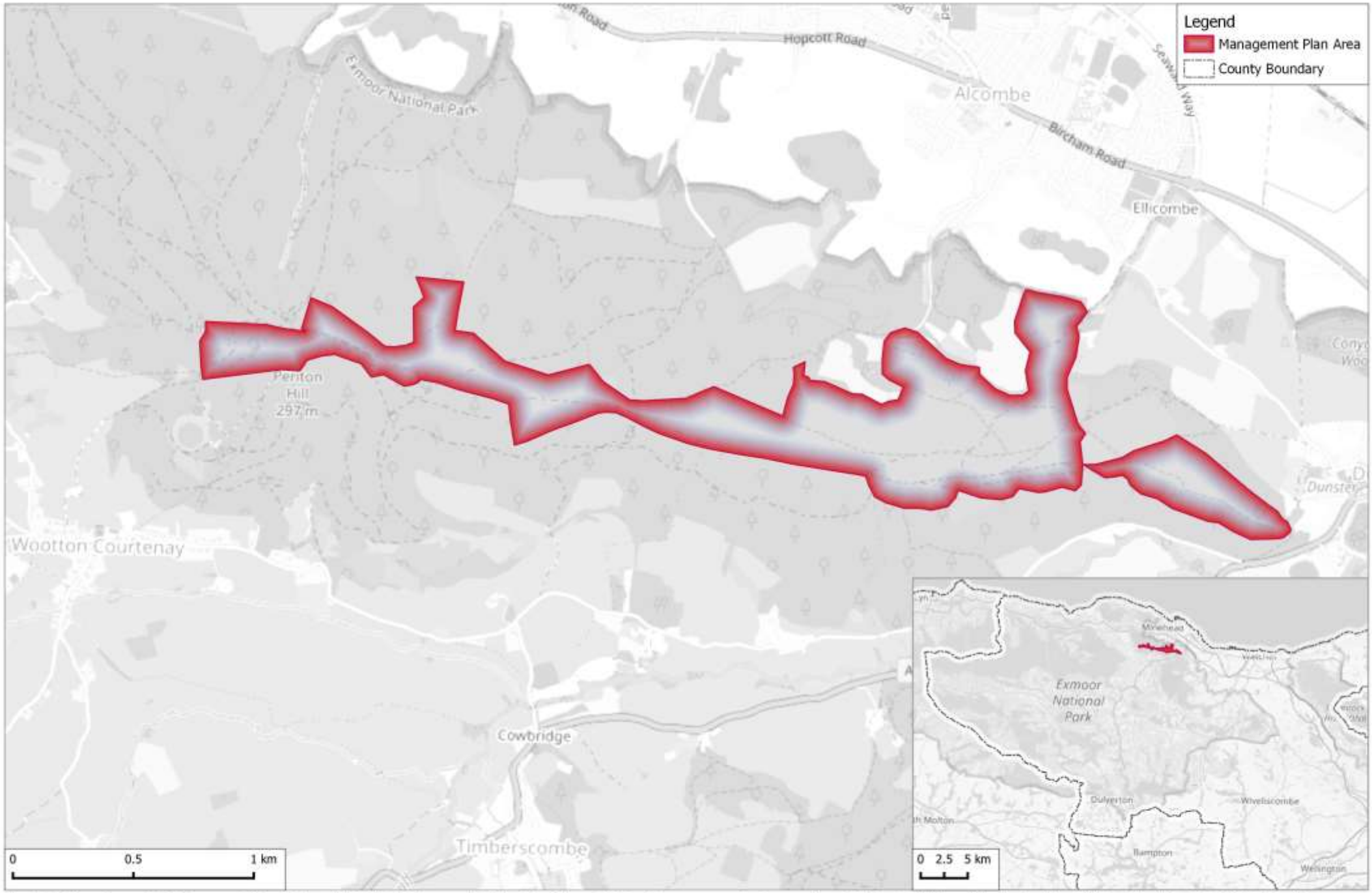
2. Site description

General information

Location and boundaries

2.1 Wootton Ridge is located within the extreme north-eastern corner of Exmoor National Park, just south of Minehead, in Somerset. This management plan covers the open areas of the hilltops and upper slopes (80m - 290m above sea level) of the Ridge, which runs east-west between Tivington and Dunster. Map 1 shows the plan area and the location of Wootton Ridge within Somerset.

Map 1: Wootton Ridge Management Plan Area. Inset map shows the location of Wootton Ridge within Somerset.



Tenure

2.2 The management plan area at Wootton Ridge is owned by five different landholders (see Map 2):

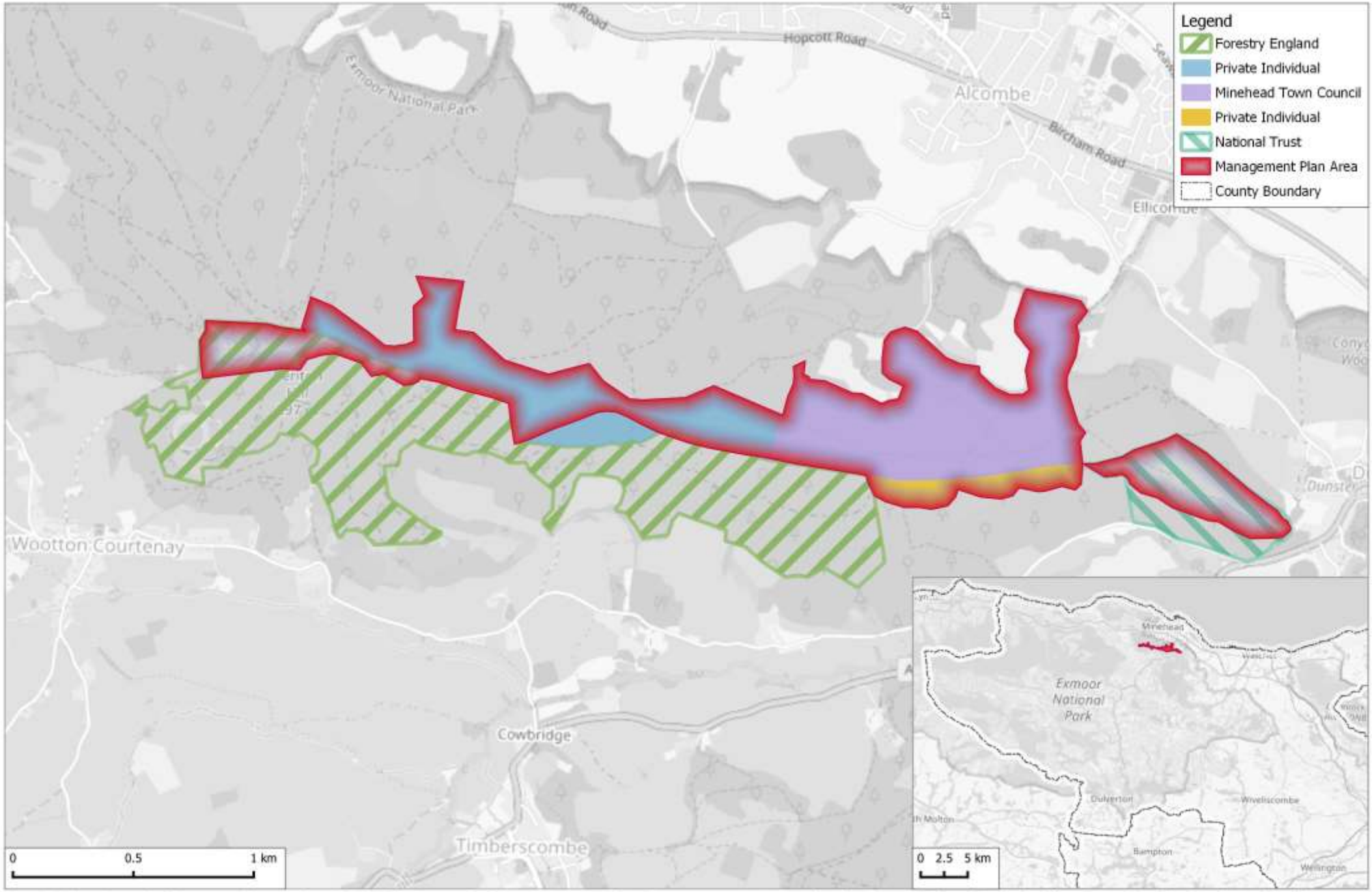
- Forestry England
- The National Trust
- Minehead Town Council
- Two private landowners[1].

2.3 Under the CROW Act, members of the public have right of access to the common and the other Open Access areas for walking, running, watching wildlife and climbing. There are also numerous public rights of way crossing the management plan area. In 2019, the network was improved by Minehead Town Council dedicating an existing track across Alcombe Common as a public bridleway under Section 25 of the Highways Act (1980)[2]. On Open Access land, dogs must be on a short lead (fixed length and not more than 2 metres) between 1 March and 31st July, and at any time of year in the vicinity of livestock.

2.4 The Law of Property Act 1925, Section 193 grants statutory rights of access to local people for "air and exercise" on foot and on horseback to commons in urban/metropolitan commons (i.e. Alcombe Common). In addition, the Scheme of Regulation for Alcombe Common allows "free access for the inhabitants of the district and neighbourhood and a privilege of playing games and of enjoying other species of recreation thereon, subject to any byelaws". These pre-existing rights are retained through Section 15 of the CROW Act. Note that on commons subject to a management scheme, the CROW Act extends the rights of local people to the public in general.

[1] The landowner of a further component – Ellicombe Common - has also been contacted and this area may be included in the landowners is interested and able to participate in the process.
[2] https://www.exmoor-nationalpark.gov.uk/__data/assets/pdf_file/0031/345766/199_Signed-Creation-Agreement-WL31-59-Minehead-28.10.2019.pdf

Map 2: Land ownership boundaries on the Wootton Ridge



Legislation and designations

Common Land

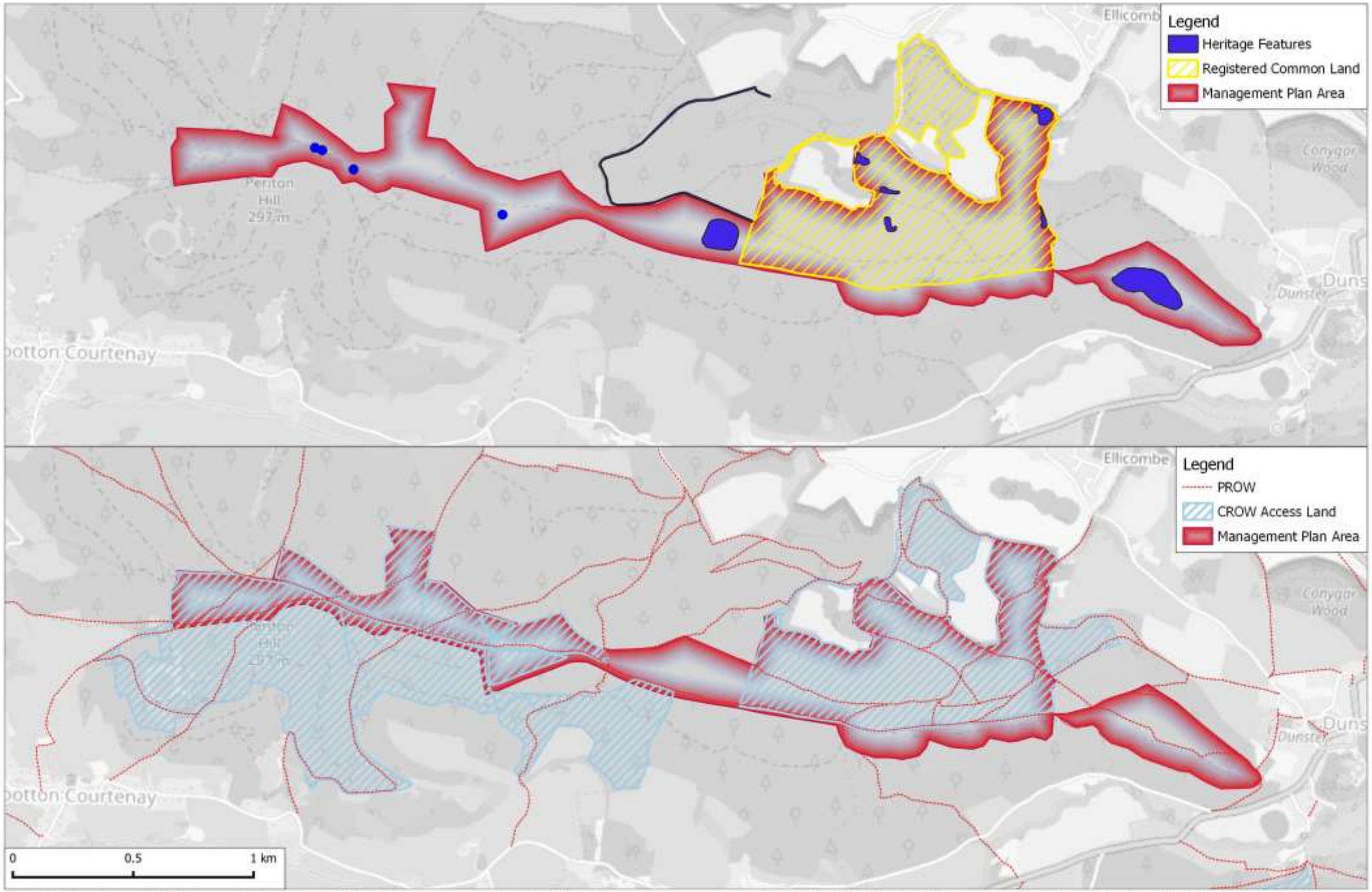
2.5 Alcombe Common is registered as common land and covers approximately one third of the management plan area (see Map 3). Historically, a string of commons existed along the top of Wootton Ridge. Some parts of these old commons remain as unenclosed land supporting semi-natural habitats and with open access under the Countryside and Rights of Way Act (2000). Despite this, only Alcombe Common was registered as common land (as Alcombe Hill Common) under the Commons Registration Act (1965). There are no common rights registered for this common.

2.6 Alcombe Common falls within an urban area[3] (see implications under Tenure above) and there is a Scheme of Regulation for the land under the 1899 Commons Act. This makes provision for Minehead Council to manage and improve the condition of the common in the public interest and to make, revoke and alter byelaws for listed purposes. There are 18 byelaws dating from 1926, which mainly address anti-social behaviour or unlawful grazing or removal of timber etc.

2.7 On registered common land, there are restrictions on the kind of works that can be carried out, for example it is not permitted to erect fencing or to resurface the commons (for more information, see Natural England's Works and consents commons information sheet[4]). However, it is generally permissible to install temporary fencing to enclose up to 10 hectares, or 10% of the site, whichever is the lesser, for up to 6 months for the purpose of containing livestock. For more permanent or extensive fencing, permission must be obtained from the Planning Inspectorate.

[3] See Section 15 land on https://magic.defra.gov.uk/MagicMap
[4] https://www.footprint-ecology.co.uk/reports/Footprint%20Ecology%20-%202010%20-%20Works%20and%20Consents%20Commons%20Factsheet%20No.%2013.pdf

Map 3: Heritage features, common land, open access land and public rights of way



Designations

2.8 Much of the heathland on Wootton Ridge is incorporated within the Dunster Park and Heathlands Site of Special Scientific Interest (SSSI)[5], which also includes four other discrete sites nearby. However, a small area in the centre, just south of Staunton Plantation, is not included within the SSSI. In addition to its heathland, the SSSI is designated for lowland dry acid grassland and ancient oak woods (including wood pasture with ancient trees) together with the wide range of rare and specialised species that use these habitats.

2.9 Species include specialist heathland breeding birds, such as the Dartford Warbler *Curruca undata* and Nightjar *Caprimulgus europaeus*, the nationally rare and range-restricted Heath Fritillary butterfly *Melitaea athalia*, and the localised Pink Meadowcap *Porpolomopsis calyptriformis* toadstool, plus a nationally important assemblage of beetles associated with veteran trees. However, it should be noted that areas supporting oak woods and wood pasture are largely outside of the management plan area.

2.10 Five SSSI units are included within the management plan area (see Map 4). Three of these (units 10-12) are monitored by Natural England for the condition of the heathland and, at the last assessment in 2011, all were considered to be *unfavourable - recovering*. In brief, they exceeded the maximum targets set for the cover of scrub and were ungrazed but other management (burning and vegetation cutting) was being implemented. A fourth unit (8) also monitored for heathland was assessed in 2021 as *unfavourable - no change*, due to prevalence of scrub and lack of remedial action. The last unit (15) was assessed in 2021 for woodland targets and was considered *unfavourable - recovering* (the failed targets are not listed but were considered to be being addressed through an agri-environment agreement).

2.11 The Wootton Ridge falls within Exmoor National Park.

2.12 Wootton Ridge falls within the North Devon and Exmoor Important Invertebrate Area. Finescale mapping is not currently available for this area.

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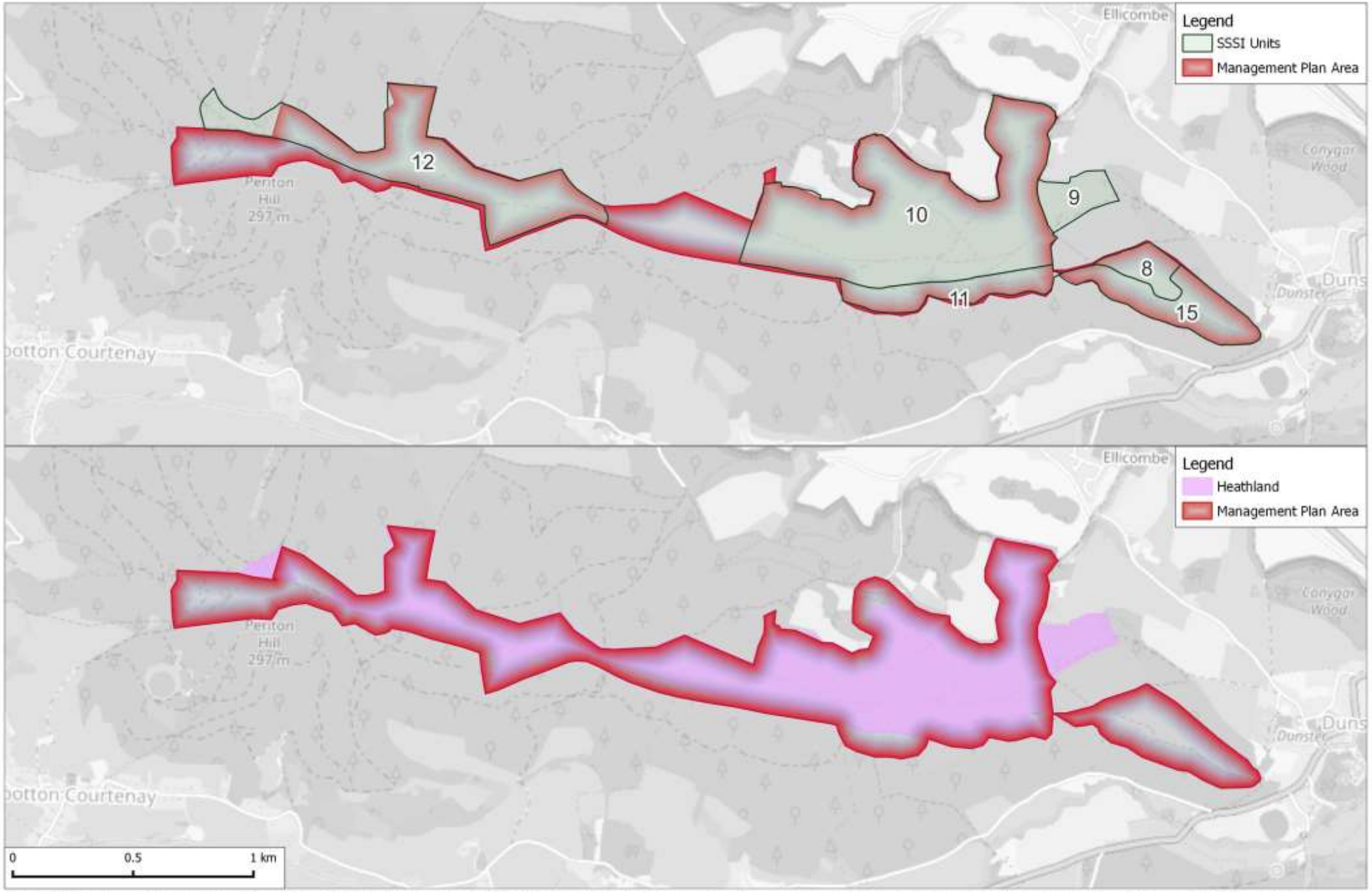
5 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S2000415&SiteName=dunster&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

Map 4: SSSI Units and heathland within the Wootton Ridge management plan area



General legislation

2.13 The following general legislation is likely to be relevant (after Alexander, 2020):

- **Health and Safety at Work Act 1974**: the main principle is that those who create risk as a result of a work activity are responsible for the protection of workers and members of the public from any consequences. The Act places specific duties on employers, the self-employed, employees, designers, manufacturers, importers and suppliers.
- **The Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH) -** requires employers to control exposure to hazardous substances to prevent ill health. They have to protect both employees and others who may be exposed.
- **The Equality Act 2010** - protects against discrimination on grounds of religion or belief, sexual orientation and age.
- **Occupiers' Liability Acts of 1957 and 1984 -** under occupiers' liability the person who occupies the land (the person who is in control of the land, premises, building, etc) can be held liable when injury or some kind of harm has occurred to another person on that land.

Relationship with other plans/strategies

2.14 The Wootton Ridge falls within the area covered by the Exmoor National Park Partnership Plan[6] (2018-2023), which lays out the ambitions and strategies required to maintain the special qualities of the area. Among other uses, the plan is intended to bring together a wide range of people and organisations around a set of common goals and co-ordinate action.

2.15 Forestry England manage their holdings according to the Exmoor Forest Plan 2020-2030[7]. Large-scale felling operations therefore take place at intervals. The plan also seeks to create areas of wooded heath in close proximity to the SSSI to improve the condition of neighbouring SSSI units which have deteriorated due to the effects of under-grazing and scrub encroachment.

2.16 A Landscape Recovery Scheme was being developed for an area surrounding Holnicote directly west of the Wootton Ridge. Wootton Ridge landowners were invited to join this scheme. It is not clear at the time of writing whether this opportunity will be taken up. There are existing agri-environment

[6] https://www.exmoor-nationalpark.gov.uk/__data/assets/pdf_file/0017/251162/Partnership-Plan-2018-2023-spreads.pdf
[7] https://www.forestryengland.uk/forest-planning/exmoor-forest-plan

schemes in place. The area owned by Minehead Town Council is in a Higher Level Environmental Stewardship Agreement, while the areas owned by the private landowners are both under Higher Tier Countryside Stewardship (CS) agreements, with one part managed under a Woodland Management Plan under CS

Management infrastructure

2.17 There is no specific infrastructure in place to support the management of the open areas of the Wootton Ridge. The area is supported by the Exmoor Park National Park ranger service, the Operations Manager at Minehead Council and staff members from the National Trust and Forestry England. At the time of writing, a single contractor is employed to undertake most of the habitat management work carried out across much of the area (excluding the Forestry England areas).

Physical features

Landscape

2.18 Wootton Ridge falls within the Exmoor National Character Area (NCA). This a diverse landscape containing uplands, lowlands, treeless moorlands and steep wooded valleys and combes with scattered grass and arable fields. The Wootton Ridge itself is a significant landscape feature, comprising a long ridge with open habitat at the top, allowing views out across Minehead to Wales, east along the coast and inland over gently rolling, wooded hills.

Geology and topography

2.19 The underlying bedrock geology of Wootton Ridge is resistant Devonian sandstone, which has created hills across the Exmoor National Park, such as the Wootton Ridge. The Hangman Sandstone formation is a thick sequence of sandstones with subordinate mudstones. Surrounding the Ridge are the low-lying basins of Porlock and Minehead, of which the underlying geology is New Red Sandstone supergroup.

2.20 Wootton Ridge lies approximately 250m above sea level at its highest point. This elevation allows for long-ranging views across Minehead and as far as south Wales. It has steep flanks on either side, one of which makes up the boundary of an Iron Age Hillfort.

Soils

2.21 Wootton Ridge is mainly characterised by freely draining, slightly acid, loamy soils which give rise to the acidic vegetation communities (heathland with bracken and gorse). Fertility is very low in the soil across the site, which allows for nutrient-poor species to develop such as Common Cow-wheat *Melampyrum pratense*.

Hydrology/drainage

2.22 The Wootton Ridge lies within the catchment of the River Avill, which flows through the low-lying areas to the south of the Ridge. The freely draining steep slopes mean that there are no significant standing water bodies on the Ridge, although there are a number of small watercourses originating from it. The OS surface water lines dataset shows two watercourses flowing north of the ridge above Aldersmead, one of which flows down into Minehead. There can also be a significant flow of water at the eastern end of the site associated with St Leonard's Well (just outside of the management plan area).

Biological features

2.23 The management plan area of Wootton Ridge mostly comprises large areas of lowland heathland, with scrub and bracken on the hilltops and upper slopes. The adjacent lower slopes, which are not included within this plan, are largely characterised by planted coniferous woodland. There are also areas of Birch *Betula sp*. woodland.

Habitats and communities

2.24 Wootton Ridge incorporates large areas of lowland heathland. This habitat type occurs on low fertility soils which have been subject to historic tree clearance and subsequent grazing and other land uses, preventing the development of woodland. It is characterised by dwarf shrub vegetation that, in the west of the UK, mainly consists of Western Gorse *Ulex gallii* and Bell Heather *Erica cinerea*. However, higher parts of the Wootton Ridge support heathland that is more upland in character, with Bilberry *Vaccinium myrtle* and Purple Moor-grass *Molinia caerulea*.

2.25 80% of UK heathlands have been lost over the last two centuries as a result of land-use change, changing agricultural practices and urbanisation (e.g., Lake et al., 2020). Nevertheless, the UK still supports an internationally important area of Europe's remaining heathland habitat.

Rare species and wildlife under threat

2.26 The Heath Fritillary butterfly is one of the rarest and most threatened species found on Wootton Ridge. Within the UK, it is only found within a few small areas of Kent, Essex, Cornwall, Devon and Exmoor. On Exmoor the caterpillars require patches of young Bilberry within which to find their favoured foodplant – Common Cow-wheat, which is partially parasitic on Bilberry. In addition, the butterfly prefers to breed within sunny, warm, and sheltered locations.

2.27 Due to these very specific habitat requirements and changes in the structure of vegetation on site that have made much of the area unsuitable for them, the Heath Fritillary population within the management plan area has experienced extreme historic declines. However, recent work to create glades and broaden path edges combined with favourable weather has resulted in an increase in the population size and recolonisation of areas of the ridge where the butterfly has not been seen for 10 years (J. Plackett, pers. Comm).

2.28 The open areas also support the ground-nesting bird species: Dartford Warbler and Nightjar. Dartford Warblers are a resident insectivore and require areas of mature Gorse and Heather within which to shelter, forage, and nest. Nightjars are a migrant species which spends the winter months in Africa. They are also insectivorous, foraging on the wing nocturnally for airborne prey, and require open patches, typically within mature Heather, to nest. Nightjars will also use nearby trees and scrub as song posts during nocturnal periods of territoriality. There are no recent data on the population sizes of the two species within the management plan area.

Alien invasive species

2.29 Rhododendron *Rhododendron ponticum* is present on the lower slopes of Alcombe Common within the management plan area and is abundant in neighbouring woodland.

Cultural features

Land use history

2.30 The lowland heathland has been subject to historic tree clearance and subsequent grazing, alongside other management techniques, to prevent progression to woodland.

Archaeology

2.31 Wootton Ridge has a number of heritage features (see Map 3), the most notable of which is the hillfort on Grabbist Hill, which is considered to date from the Iron Age. The steep flank of the hillfort forms one of the boundaries of Grabbist Hill itself, and its western end also incorporates the remains of a medieval to post-Medieval ridge and furrow systems. The hillfort is a Scheduled Ancient Monument (SAM), scheduled as a nationally important archaeological site under the Ancient Monuments and Archaeological Areas Act of 1979.

2.32 Other features of interest include three Bronze Age barrows (two on Periton Hill, one on Wootton Common), several medieval and post-medieval quarries and pits on Alcombe Common and Arms Hill, an undated subcircular enclosure on Knowle Hill, a 16th-19th-century horse pond on Ellicombe Common and an undated standing stone on Hopcott Common. A 19th-century to modern day wood bank with boundary ditch follows the management plan area boundary around Staunton Plantation.

Current land use

2.33 In the recent past, in the absence of grazing, a variety of management activities have been carried out on Wootton Ridge. Within the heathland and scrub, extensive Bracken and Bramble stands have been cut and removed and invading Gorse has been cut back. Prescribed burns (often known as “swaling”) have also been used to allow Heather and Gorse to regenerate and to promote Bilberry growth. Areas of encroaching Birch have been cut back and expansive areas of Bracken have been cut or “bruised” to facilitate Bilberry growth.

2.34 Currently, management varies across the site but includes scrub control on heathland, Bracken control (including some chemical control, mainly in areas where mechanical control is very difficult) and targeted habitat management for the Heath Fritillary, including the creation of glades and cutting along track edge. Some areas (such as Grabbist Hill) are mown on a rotational basis.

People

Visitor appeal

2.35 Wootton Ridge is used and valued by local people and a wide range of user groups. The latter includes walkers (with and without dogs), cyclists and horse riders who are able to access the area via the many Public Rights of

Way which cross it. The top of the Ridge offers far-reaching views across the Bristol Channel as far as South Wales.

Access

2.36 There are approximately 24 access points along the perimeter of Wootton Ridge: 23 Bridleways, 2 footpaths, and 2 restricted byways. There is no formal car park for the Ridge, but informal/off-road parking is possible on Manor Road, providing access to the Ridge via a Bridleway. There is also parking for Dunster Woods, which lies outside the northern boundary of the management plan area. Both parking areas contain information boards.

2.37 The results from a visitor questionnaire, completed by stakeholders who use and/or value Wootton Ridge during the first stage of the public consultation, show that the Ridge is predominantly accessed by dog walkers. A quarter of respondents were walkers (without a dog), a fifth were cyclists and a tenth were wildlife watchers or runners. Visitors mostly travelled from the surrounding area to visit Wootton Ridge (including from Minehead, Alcombe and Dunster), although some visitors travelled from further afield.

2.38 The most frequent visitors largely comprised local residents, with dog walkers in particular visiting extremely frequently. Visitors predominantly accessed the site on foot, although a number also accessed by car or van, which suggests there is use of nearby parking areas. The landscape and views are a key reason as to why visitors chose to visit Wootton Ridge, alongside the peace and quiet the Ridge offers, and the presence of wildlife.

Partnerships and stakeholders

2.39 A comprehensive list of stakeholders was identified following the guidance given in A Common Purpose (Natural England, 2012), as part of the first stage of the consultation that was undertaken as part of the preparation of this management plan. In addition to the landowners, stakeholders include the people of the neighbourhood, other site users and representatives of areas of public interest (including nature conservation, the conservation of the landscape, public rights of access and the protection of archaeological or historic features). See Appendix for a full list.

Site evaluation

Features

2.40 The open areas of the Wootton Ridge are important for:

- Lowland heathland (a priority habitat[8]).
- Rare/threatened species including the Endangered priority species Heath Fritillary[9] and Annex I ground nesting birds Dartford Warbler and Nightjar[10].
- Heritage features include an Iron Age hillfort plus round barrows, pits, quarries and other features.
- An attractive wild-feeling landscape with impressive views.
- Extensive areas with open access and a network of bridleways used by walkers, dog walkers, cyclists and horse-riders.

Factors

2.41 There are a number of factors influencing the open areas of Wootton Ridge. Land-use change is a site-specific factor that has resulted in the loss of open heathland, as management practices such as livestock grazing and cutting gorse for fuel and fodder no longer take place. There are also systemic factors that are interacting with land use change. These include climate change, fragmentation, atmospheric nitrogen deposition and the biodiversity crisis.

2.42 The consequences of climate change are likely to be hotter and drier summers and warmer, wetter, winters. Lowland heathland is sensitive to hydrological changes and the frequency of fires that may result from higher temperatures and summer droughts (Natural England & RSPB, 2014). The ability to undertake winter restoration and maintenance work (such as scrub or tree clearance) may be compromised, as birds nest earlier and the window of opportunity for when weather conditions area suitable for controlled burning (swaling) may narrow.

2.43 Increasing temperatures have caused warmer winters with the near disappearance of prolonged periods of snow and frost, which has resulted in a shift in the community composition. Species such as Birch, Purple Moor-

[8] listed within the Butterfly Red List for Great Britain, 2010 and a habitat of principle concern listed in Section 41 of the NERC Act (2006)
[9] i.e. a habitat of principle concern listed in Section 41 of the NERC Act (2006)
[10] Listed on Annex I of the Birds Directive (European Council Directive 2009/147/EC on the conservation of wild birds)

Grass, Gorse and Bracken have increased dominance as more nutrients become available. Bracken is particularly dominant in the community, as it has a competitive advantage over slower growing species. Any alteration in the presence of characteristic plant species ultimately has an impact on other species (i.e. invertebrates, birds) that exist within that habitat[11].

2.44 APIS[12] indicates that levels of atmospheric pollutant deposition are declining at the site. In 2022, values still exceeded the minimum critical value for nitrogen, with 11.756 kgN/ha/yr on short vegetation - the critical range beyond which adverse impacts can be expected for dry heathland communities is 5-15 kgN/ha/yr. Evidence suggests that N effects exacerbate sensitivities to climate extremes, including drought and that Heather appears to be particularly sensitive (see APIS website). It also increases sensitivity to biotic stress, for example Heather Beetle *Lochmaea suturalis*. Atmospheric N deposition could cause grass species to become more dominant, particularly in combination with climate change,

2.45 In summary, a variety of factors are likely to be increasing the growth of grasses and Bracken at the expense of Heather and facilitating succession towards secondary woodland. These factors may also make active management of the site more difficult.

Options

2.46 Encroachment by Birch saplings and other tree species is resulting in the conversion of areas of open heathland to young secondary woodland, with the resultant loss of the heathland and grassland. Much of the remaining heathland has reached a stage in its development where dense, mature Heather and Western Gorse is dominant. This has led to a decline in structural variation within the sward, including the loss of bare and open areas that are favoured by many specialist heathland species. In addition, stands of Bracken have become extremely extensive in places, shading out the Billberry/Common Cow Wheat ground flora favoured by the Heath Fritillary.

2.47 Given the status of the site as an SSSI, non-intervention is not an option, as this will lead to the loss of the designated features. Active management is therefore required to remove Birch, manage Gorse on rotation, control Bracken and retain open areas supporting heathland species, including

[11] https://publications.naturalengland.org.uk/file/5850982349012992
[12] https://www.apis.ac.uk/app

Bilberry and Common Cow Wheat. More detailed guidance on techniques can be found in the Practical Guide to the Restoration and Maintenance of Lowland Heathland (Symes & Day, 2003).

2.48 Management options for the Wootton Ridge include:

- **Mulching, cut and collect or manual clearance to remove areas of Birch**. Mulching leaves a layer of organic material that may hinder the re-establishment of heathland communities, but is efficient and recovery has been good in areas where this has been used to date. Birch regrowth is rapid and follow up treatment will be required 2 years later (with the machinery set higher to leave Heather but remove Birch). Cut and collect can be used for young stands. Manual removal is needed for more mature trees.
- **Mulching, cut and collect or manual clearance to manage areas of Gorse.** Carried out on a rotational basis, this can be used to ensure that areas of mature Gorse are always present across the site while preventing the overall spread of Gorse to the detriment of more open habitat. To achieve this, areas of Gorse that are intended to be retained can be cut on a roughly 10 year cycle. If areas of degenerate Heather need rejuvenating, some areas can be cut more frequently to create an uneven age structure.
- **Bracken control through cutting, rolling or treatment with herbicide**. In general, the use of mechanical control is better to avoid damage to the environment and human health and Minehead Town Council have a policy eliminating the use of pesticides on their land. Crushing (using a Bracken bruiser or roller) can be used where the terrain would damage cutting equipment. Cutting and crushing should be carried out in late June or July, to maximise efficiency. Two cuts a season is optimum to reduce the density of a stand; annual cutting will still result in a stunted stand. If management ceases, Bracken will recolonise in 5-7 years. Asulox, the chemical generally used for Bracken control, will not be authorised for use in 2024[13]. Therefore, mechanical means should be the primary approach, although landowners may choose to use herbicide such as glyphosate (e.g. Roundup) where there is steep terrain or presence of archaeological interest prohibits the use of machinery. If glyphosate is used, correct timing is essential, and the chemical should be applied as fronds approach full size and are fully unfurled in July/August, but before

[13] For the past 10 years Asulox has been approved annually as part of an emergency authorisation process on behalf of the UK administrations by the Health and Safety Executive (HSE) (Scotland and Wales did not authorise use in 2023 and the manufacturers have stated their intent not to apply for emergency authorisation in 2024.

they start to die back (usually the end of September, but this depends on the local environment). It should be noted that glyphosate is systemic and will damage and kill other plants. The use of glyphosate therefore requires the consent of Natural England and will generally only be consented in areas where there are 100% bracken stands. It is also the subject of much legislative activity with regards to its safety for human health. Glyphosate is currently authorised for use in the UK until December 2025, following a three-year extension as the UK's post-Brexit pesticides regulatory regime is developed. Manual scything can be carried out, but it is labour intensive.

- **Grazing to improve the structure of Heather swards, prevent over-dominance by Purple Moor-grass, help control Bracken and prevent re-growth of cut Birch**. Livestock grazing would be very beneficial to follow up mechanical restoration management and reduce the amount of maintenance management required. Any grazing plan should take into account the need to maintain access arrangements on the site. A docile, hardy breed should be used. Virtual fencing[14] such as No Fence[15] should be used to contain a small number of livestock within restoration areas to reduce regrowth or within open areas to help diversify the sward structure and prevent dominance by grasses. Some water may be available on site, but in other areas, a 1500 litre bowser with integrated trough should be used (and could provide water for around 2 weeks for 6 cattle, depending on weather conditions). Grazed areas should be clearly publicised and designed in such a way that visitors wishing to avoid livestock can do so easily. The site is most suitable for cattle. Ponies cannot be contained using virtual fencing, cattle will cope better with the tussocky vegetation than sheep, which are less suitable for sites used by dog walkers. No Fence was designed for use with goats, and if available, a small number of goats could be trialled to help control scrub. A grazing plan, animal health plan and livestock risk assessment would be needed, together with suitable lay-back land to train the livestock for use with virtual fencing and for when they are not needed on site.
- **Swaling (prescribed burning)** is traditionally used to rejuvenate the sward, to remove the build up of litter preventing regeneration from the seedbank and to reduce the fuel load. Burns of 0.25-1 ha are a fast and are also effective on rough terrain where mechanical

[14] Virtual fencing is invisible and contains and/or excludes animals within boundaries that are set, managed and monitored remotely and in real time by technology. The animals respond to a stimulus administered via a GSP collar.

[15] https://www.nofence.no/en-gb/

management may be harder. It is suitable for small stands where there is no advantage to multipe age structure within the stand (with variation instead created between stands). It is potentially hazardous and requires careful preparation, including cutting fire-breaks, and should not be used in close proximity to housing and roads. It can be used for both Gorse and Heather management.

Opportunities

2.49 There is a clear opportunity to improve the condition of the heathland by removing encroaching Birch to enhance the area of open heathland, controlling Bracken to allow key species to flourish, and managing Gorse on rotation to ensure there is adequate mature gorse for Dartford Warblers while expanding areas of open habitat. Management should be co-ordinated between the different landholdings to enhance overall connectivity and structural diversity.

3. Vision and objectives

Vision

3.1 The box below outlines a 10-year vision for the open areas of the Wootton Ridge. It has been informed by the outputs of a face-to-face workshop and subsequent conversations with the site's landowners. It describes the typical experience of a visitor to the Ridge in early June 2033.

Cresting the Wootton Ridge after climbing one of the many well-maintained bridleways that provide access, an inspiring vista opens out. Clear views of the sea, and the hills further inland, are framed by extensive areas of lowland heathland. Along the ridge, Heath Fritillary butterflies dance amongst abundant Cow Wheat and Bilberry, Dartford Warblers sing scratchily from the yellow-flowered Gorse, and Snipe hunker in damper hollows. After dark, Nightjars hawk the slopes for a myriad of insects before returning to the furze as dawn approaches.

A small number of docile, hardy-breed, cattle graze the heathland, helping maintain a diverse open sward with small patches of bare ground and isolated trees amongst the Heather. Blocks of taller, mature, Heather and Gorse are scattered across a mosaic of variously aged heathland stands. Away to the east the ramparts of the ancient Hillfort stand clearly against the horizon. Any risk of wildfire has been reduced through effective fuel load control and invasive Rhododendron is no longer a feature of the site.

Ongoing communication and knowledge-sharing between the different landowners means that management of the site is joined up and, although landowners may have different specific objectives for their landholdings, it is clear that they share a vision for a wildlife-rich site respected and loved by those who use it.

Walking along the Ridge, a handful of other people are encountered – mostly local people walking and dog walking, but also horse-riders using their right of access on Alcombe Common, and some cyclists using one of the parallel paths. There is good understanding among them of the special features of the site and the sustainable techniques used to look after them, all adding to people's appreciation of the character and beauty of the Wootton Ridge.

Management rationale

3.2 The open areas of Wootton Ridge support examples of habitats and species that are rare or scarce within lowland Britain. These habitats are all semi-natural, resulting from the interaction between humans and their environment over many centuries. Ongoing management of some form is therefore needed to ensure that the plant and animal communities that are

rare or no longer commonplace, and are dependent on these habitats, can be maintained and, where possible, enhanced. This will allow the site to act as a reservoir and refuge from which species can spread to the wider countryside.

Management objectives

3.3 The following section identifies a range of management objectives for the open areas of Wootton Ridge and associated actions and indicators. Two overarching threads/objectives run through all, or most, of the individually identified objectives. These comprise:

- The promotion of climate resilience in light of the climate emergency; and,
- Improvement to the condition of the Dunster Park and Heathlands SSSI components located within the management plan area.

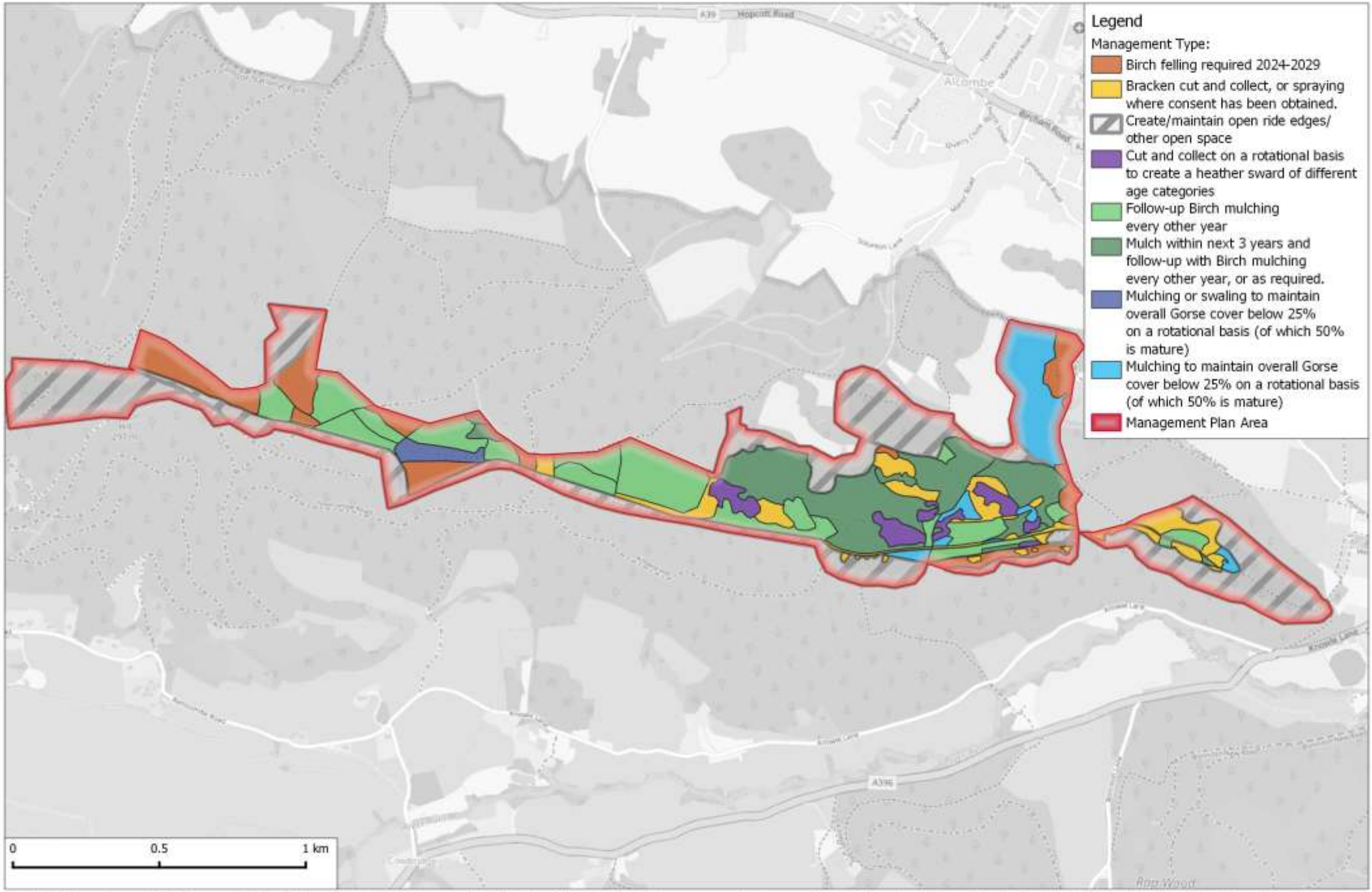
3.4 Climate resilience will be promoted through the creation of larger areas of better-connected open habitat that will benefit threatened species, and the reduction of the on-site fuel load during a period of increased wildfire risk. Management identified within the plan, including the creation of improved/extended areas of Heath Fritillary habitat, will also contribute to the improvement of the SSSI's conservation status.

3.5 Map 5 indicates the likely locations where different management techniques will be carried out. This will be refined when a work plan is created to ensure that, for example, Gorse management results in a varied structure throughout the site. It may also be adapted following monitoring of management carried out. Possible grazing compartments have not yet been identified, as this will be done as part of a more detailed grazing plan but are likely to include areas where scrub has been cleared to help reduce regeneration and maintain open, heathy, conditions.

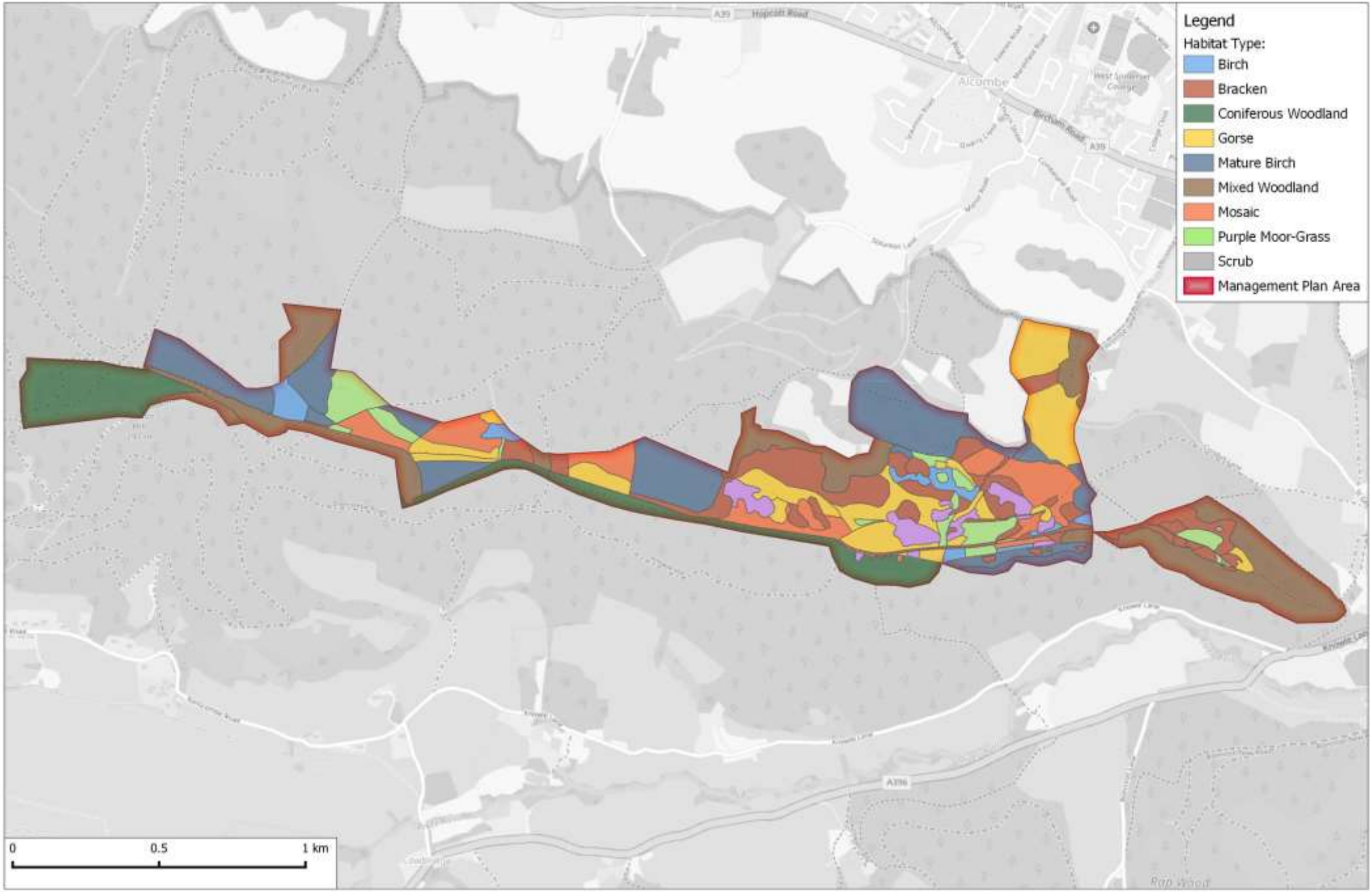
Objective 1: Wildlife

3.6 Heathland supports the greatest diversity of plants and animals where it is open with a varied structure of uneven-aged stands of heather and appropriate management prevents the dominance of Bracken, European Gorse, scrub, and trees. The heathland on Wootton Ridge is currently in unfavourable condition and ongoing management is needed to reduce scrub and bracken cover (see Map 6 for an indicative map of current habitat types) in order to increase structural diversity and retain open areas for characteristic species.

Map 5: Wootton Ridge management plan 2024-2034.



Map 6: Habitats at Wootton Ridge



3.7 The Heath Fritillary population on the Wootton Ridge is recovering but remains disconnected and its future is far from secure. The creation of areas of suitable habitat across the ridge, including larger populations of its foodplant, will allow the population to both increase and provide greater connectivity between smaller-scale breeding sites. The species exhibits interannual variation in the location of such sites, so increased habitat connectivity and extent will provide the Heath Fritillary with a greater area for selection.

3.8 Area of mature heathland and European Gorse should be retained within any the habitat matrix so that specialist species, such as the Dartford Warbler, remain in the landscape.

Target 1: Expand the extent of open heathland, ensuring an uneven age-structure within Heather and Gorse stands, while decreasing the fuel load.

Target 2: Expand the distribution of Common Cow-wheat and Bilberry and increase the connectivity of existing patches.

Actions:

- Create a grazing plan and instigate a grazing regime using a small number of docile, hardy breed, cattle within temporary compartments using virtual fencing (invisible fencing that contains livestock using GPS collars and remotely controlled virtual boundaries), focussing on areas where scrub removal has taken place and within Bracken-dominated swards and ensuring livestock-free areas are always available.
- Mulch or cut and collect Gorse annually on a rotational basis (12-15 years), ensuring that around 50% of Gorse stands are mature at any time. Initial management should focus on degenerate stands, parts of which may be cut again after 4-5 years to increase structural diversity.
- Clear Birch scrub using a mulcher.
- Return to previously mulched areas to prevent regrowth of Birch.
- Fell larger Birch stands manually with chain saws (around 10 per hectare can be left as song posts/landscape features).
- Carry out Bracken control, focussing on mechanical means.
- Carry out a small amount of swaling in limited areas away from housing (see Map 6).

Indicators:

- Bare ground (include mild erosion on paths and tracks) should cover 1-10% of the plan area. Les than 1% of habitat should be heavily eroded.
- Dwarf shrubs should cover 25-90% of the plan area, spread between pioneer (10-40%), building/mature (20-80%) and degenerate (<30%) heather with no more than 10% dead heather. At least two species of dwarf shrub should be frequent (excluding Western Gorse).
- European Gorse and Bracken cover should not exceed 25%.
- Scrub should be sparse with a structurally complex edge and a heathland ground cover. It should not exceed 15% of the plan area.
- Purple Moor-grass cover should be no more than 30% in dry swards and 66% in wet swards.
- The area of Bilberry and Common Cow-wheat within open areas of Wootton Ridge should increase over the plan period (indicator to be quantified after initial survey)
- The Heath Fritillary population (expressed as total counts for the ridge) should increase over the plan period.
- Heath Fritillary are recorded breeding along the entire length of the Ridge within 5 years.
- Dartford Warbler remains present as a breeding species within the Ridge's heathland areas throughout the management plan period.

Objective 2: Landscape

3.9 Local people and other site users value the extensive views over rolling countryside and coastal areas seen from the top of the Wootton Ridge. It is therefore important to maintain an unobstructed vista across the open areas of the Wootton Ridge. This will include controlling taller Birch growth that may block sightlines and detract from the site's inherent landscape value.

Target: Maintain unobstructed views across the existing open areas of Wootton Ridge, and over the surrounding countryside and coast.

Actions:

- Map existing viewpoints along the ridge and identify locations where Birch and/or Gorse are impinging upon the view from them (or threaten to do so in the future).
- Remove the identified areas of vegetation, with the exception of stands identified as being specifically beneficial to biodiversity (e.g. within Dartford Warbler territories).

Indicators:

- Views remain unimpeded.
- Informal feedback from site users indicates that they are happy with the views.

Objective 3: Cultural heritage

3.10 Grabbist Hillfort is an important Scheduled Ancient Monument located within the eastern extent of the management plan area. A large number of other heritage features are distributed across the site (see Map 3). Sensitive management of these features, and the vegetation growing upon them, is necessary to ensure that they are retained in good condition and remain visible to site users. Changes in management could negatively impact upon the features and careful consideration should be given to any risks posed by specific conservation or access interventions.

Target: Improve the visibility and safeguard the integrity of the heritage features located within the Wootton Ridge management plan area.

Actions:

- Produce separate heritage asset management plans for any heritage feature that may be subject to changes in management and/or access as a result of the Objectives identified within the management plan.
- Maintain a low vegetation sward across accessible on-site heritage features to ensure their visibility. The method used should reflect the contents of the relevant heritage asset management plan.
- Refer to the heritage feature map provided within this plan and the relevant heritage asset management plan before undertaking any capital works to avoid causing damage.
- Promote access within the management plan area at locations removed from heritage features, wherever possible, so that the risk of damage from recreational (e.g. erosion from bicycle tires) is minimised.

Indicators:

- Heritage asset management plans are in place for all relevant heritage features prior to any potentially damaging actions being undertaken.
- The integrity and visibility of on-site heritage features are maintained in the long-term.

Objective 4: Public enjoyment, access, and engagement

3.11 Public access across, and enjoyment of, the Wootton Ridge has occurred for generations and is supported by the presence of Open Access land and PROW within the management plan area. The maintenance of appropriate public access along the Wootton Ridge is therefore a key consideration. However, certain types of unauthorised access, such as joy riding or the creation of off-road bicycle tracks, are problematic and impact upon both the biodiversity value of the management plan area and the enjoyment of other user groups. Any changes to site access arising as a result of on-site habitat management should be effectively communicated with site users in advance, using a range of media.

Target: Ensure that access is maintained within Open Access areas and along Public Rights of Way located along the Wootton Ridge for the continued enjoyment of a wide range of site users, and that any changes to management and/or access are communicated in a timely and effective way.

Actions:

- Clearly identify Public Rights of Way through sympathetic vegetation management as required (i.e. mowing or strimming) and wayposting.
- Use signage to indicate which routes are suitable for which activities and identify behaviours that are not applicable to the Ridge (e.g. the creation of off-road bicycle paths).
- Inform site users about any proposed changes to site management or access well in advance (minimum of 1 months' notice) using a range of communication methods, including online/social media and site-based/temporary signage as appropriate.

Indicators:

- The number of newly created off-path desire lines and paths is reduced.
- A range of site users are actively engaged with in the lead-up to any management change.
- Public goodwill is maintained throughout the management plan period.

Objective 5: Landowner communication

3.12 Frequent communication between the landowners of Wootton Ridge will encourage knowledge sharing and allow the joint exploration of potential funding streams. It will also ensure that critical management activities (such as the identification and application of fire risk protocols) are discussed and agreed upon. Ultimately, frequent communication will assist in promoting both collegiate working practices across landowners and joined up management of the management plan area.

Target: Ensure that continued and regular communication occurs between the landowners of Wootton Ridge to promote knowledge sharing, explore joint funding opportunities, and discuss ongoing site management (including fire risk).

Actions:

- Face-to-face meetings of all landowners within the Management Plan area are held on an annual basis, with remote meetings organised on an *ad hoc* basis as required.
- Important information concerning any proposed changes to site management and/or access, as well as potential funding opportunities of relevance to the management plan area, is swiftly shared between the landowners.

Indicators:

- The landowners are happy with the level and frequency of communication and feel fully informed about the management being undertaken across the management plan area.
- Lessons learned from interventions undertaken by specific landowners are applied to relevant areas located within other landholdings within the management plan area.

4. Monitoring

4.1 Monitoring should be carried out to assess progress against the targets and adapt the work plan as required. Monitoring should include:

- Monitor the extent of Bilberry and Common Cow-wheat to show whether habitat management is successful in increasing the frequency of both species (e.g. site walkover mapping presence with an abundance estimate such as DAFOR);
- Carry out an annual count of Heath Fritillary along the Wootton Ridge following Butterfly Conservation's protocol to show whether the population is increasing and spreading and how this relates to management;
- Monitor the number of Dartford Warbler pairs present within Wootton Ridge's heathland areas to ensure that the population benefits from gorse and heather management undertaken and ensure that territories are not impacted by summer Bracken management;
- Undertake fixed-point photography every three years from no more than 15 points, ensuring that the location and direction of view are recorded. Images should be labelled and presented (e.g. in a document/powerpoint presentation) to allow easy comparison with previous years.

References

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Natural England, & RSPB. (2014). *Climate Change Adaptation Manual. Evidence to support nature conservation in a changing climate*. Natural England. http://publications.naturalengland.org.uk/publication/5629923804839936

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Appendix: list of stakeholders

The table below lists those stakeholders that were contacted via email/formal letter for their views on the future management of Wootton Ridge. Neighbouring properties were contacted via a direct letter drop. Note that a response was not received from all of the stakeholders that were contacted.

Contacted stakeholders in alphabetical order
British Horse Society
Buglife
Butterfly Conservation
Countryside Landowners Association
Campaign to Protect Rural England
County Ecologist (Taunton Deane and Somerset West)
Dog's Trust
Exmoor Local Access Forum
Exmoor National Park
Exmoor Natural History Society
Fairfield Estate
Forestry England
Historic England
Kennel Club
Landowners
Minehead Cycling Club
Minehead Town Council
Member of Parliament for Bridgewater and West Somerset
National Trust
Natural England
National Farmers Union
Open Spaces Society
Plantlife
Public Rights of Way Officer – Somerset County Council
RSPB
Somerset Archaeological and Natural History Society
Somerset County Council Rights of Way Officer
Somerset County Ecologist
Somerset Highways
Somerset Ornithological Society
West Somerset Ramblers