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Hart, Rushmoor and Surrey Heath SPA Mitigation Project: Dog Control Research Study.

Durwyn Liley, Chris Panter & Su Powner

FOOTPRINT ECOLOGY, FOREST OFFICE, BERE ROAD,
WAREHAM, DORSET BH20 7PA
WWW.FOOTPRINT-ECOLOGY.CO.UK
01929 552444

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Summary

The strategic mitigation scheme for the TBH SPA is long-running and has been successful in allowing sustainable housing growth while ensuring protection for the European sites. The scheme has successfully delivered greenspace sites (Suitable Alternative Natural Greenspace – SANGs) that are clearly well used. However, SANGs delivery in the long-term is likely to be increasingly challenging given high land prices and a relative lack of potential sites in some areas. Opportunities for SANG delivery are reducing and there is concern that if the current approach of reliance on SANGs for avoidance and mitigation is not revisited, the challenges to SANG delivery in the future could ultimately result in a moratorium on new residential development in parts of the Hart, Rushmoor and Surrey Heath Housing Market Area. The three Councils have therefore been awarded funding from central government to undertake joint work to investigate and seek to implement alternative and complementary avoidance and mitigation measures.

Dog controls are one of a range of measures the Councils are exploring. This report explores the potential for implementing dog control measures as mitigation for new housing growth. The work considers how effective dog restrictions might be, the scope to implement them, the capacity (i.e. mitigation) they might achieve and how they might be enforced. This report is structured to address the particular questions raised by the client authorities.

The majority of visitors to the SPA are dog walkers. Current dog controls on the SPA predominantly relate to requesting dogs to be kept to main paths over the period March 1st – 15th September. This is promoted through signage and the requests by the Thames Basin Heaths Partnership wardens. There is however no means to enforce this across the SPA.

In general, feedback from the Thames Basin Heaths Partnership staff is that the majority of dog walkers keep their dogs under control, and it is a small minority whose dogs tend to run extensively away from paths. These usually respond positively to requests to put their dogs on leads, indicating that enforcement is likely to influence a relatively small proportion of dog walkers. Visitor survey results indicate that the number of dogs seen off-lead by interviewers during the survey work has decreased over time, indicating a positive trajectory.

The current approach by the Thames Basin Heaths Partnership is positive and influences behaviour through positive messaging, engagement and awareness raising. There is a risk of marked public opposition to any proposals that are not fair, proportionate and clearly justified. Ultimately, there is a risk that the implementation of further controls could be open to challenge, incur considerable opposition and undermine the engagement with visitors and positive relationships established to date.

There are three options whereby dog controls could have some (perhaps limited) mitigation benefit and be workable. They are:

1) Extend the period at which current controls kick in, shifting the current period 1st March-mid Sept. to 1st Feb-mid Sept. This would ensure the period when Woodlarks are settling on territory was included.
2) Dogs on lead when asked, providing the means to enforce (if necessary) the current approach of dogs on paths (i.e. a means to target those few individuals who currently do not comply);
3) Potential for limited areas (e.g. heathland areas with high bird densities) where dogs are excluded or required to be on lead during the breeding season.

We have produced models to show the current distribution of access across the SPA and the numbers of dog walkers on different parts of the SPA. The spatial distribution of visitors and birds are shown alongside each other. The modelling highlights that there are potentially over 2 million dog walker visits per annum on the SPA and any control measures that resulted in displacement to other sites would be impossible to manage (and contrary to the aim of this work, would potentially require much more SANG).

The modelling demonstrates that there are marked areas with higher densities of Annex I birds and that these can be relatively small in area. This highlights that it could be possible to create zones within sites that were relatively small yet provided protection for a relatively high proportion of the birds present. The modelling shows that these could become 'low disturbance' zones where access levels were low, yet given their relatively small size on otherwise big sites, there is still space for dog walkers. Such zones will mean that use is concentrated in other parts of the SPA.

Any of the options discussed would not work in isolation and other measures would be necessary in tandem. We highlight the importance of the Strategic Access Management and Monitoring (SAMM), with the on-site presence of wardens, signage and other communication in particular. SANG is also important, particularly if there were to be any deflection away from the SPA.

Triggers to adopt dog control measures could be temporal (e.g. a particular time of year), ecological (e.g. the presence of Annex I birds) or relate to visitor behaviour such as levels of use (i.e. above a particular threshold) or a lack of compliance to other controls (e.g. if voluntary approaches are not working). Costs are estimated for the different options, these are very approximate but indicate costs of tens of thousands of pounds to implement.

It is complex to equate a particular dog control approach to a level of avoidance/mitigation. We suggest that mitigation that resulted in a reduction of 0.58 person visits to the SPA per day would be adequate to avoid impacts from recreation from a single dwelling. As this report is seeking alternatives to SANGs, we suggest that a reduction of 0.23 person visits per day to the SPA would be equivalent to the SANG requirement for a single dwelling. Were mitigation to result in no dog walking at all on the SPA, we suggest this would be equivalent mitigation to around 16,191 dwellings or equivalent to 784ha of SANG. However, this is clearly hypothetical as this would be impossible to achieve (not least because it would require alternative space for something like 2 million dog walks per year to be found). Predicting the mitigation benefit of more likely and relevant approaches, such as extending the period when dog walkers keep

their dogs on the path (by a month), requiring dogs to be on lead when asked or creating zones within sites where dogs are excluded/required to be on leads during the breeding season is much harder. Any mitigation benefit is likely to be relatively small given that there is already strong messaging to keep dogs to paths and the Thames Basin Heaths Partnership staff already patrol and approach dog walkers whose pets are off the path.

The Thames Basin Heaths Partnership staff already approach dog walkers whose dogs are not under control, but do not actually have any enforcement powers. There are existing signs on the SPA and clear messaging requesting for dogs to stick to paths during the breeding season. As such the current approach is one where there is clear communication as to what is expected and this is supported through engagement and awareness raising. Legislative approaches to enforce do exist and the role of Acceptable Behaviour Contracts, Community Protection Notices and Public Space Protection Orders are considered. Statutory enforcement would be complex to establish, could antagonise visitors and risk undermining the achievements by the Thames Basin Heaths Partnership to date.

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1. Introduction

Overview

1.1 This report explores the potential for implementing dog control measures in the Thames Basin Heaths Special Protection Area (SPA) as mitigation for new housing growth. The work considers how effective dog restrictions might be, the scope to implement them, the capacity (i.e. mitigation) they might achieve and how they might be enforced.

The Thames Basin Heaths SPA ('TBH SPA')

1.2 The TBH SPA (Map 1) is designated for the presence of Nightjar *Caprimulgus europaeus*, Woodlark *Lullula arborea* and Dartford Warbler *Sylvia undulata*. The SPA covers some 8,000 hectares of heathland and forestry, fragmented into separate blocks by roads, urban development and farmland. The SPA comprises 13 component Sites of Special Scientific Interest (SSSIs). The individual heaths are surrounded by an existing high level of housing, and are subject to heavy visitor pressure.

1.3 There is now a considerable body of evidence linking visitor access and urban effects to the abundance, distribution and breeding productivity of Annex 1 heathland birds. Research on the impact of disturbance on Woodlark population size (J. W. Mallord, Dolman, Brown, & Sutherland, 2007) shows birds avoid areas of high visitor pressure and they occur at lower densities in areas with higher densities of surrounding housing (J. W. Mallord, 2005). For Dartford Warblers, studies in Dorset (Giselle Murison et al., 2007) indicate breeding success is related to disturbance, with birds breeding less successfully in heather dominated territories with high levels of access. For Nightjars, there is a clear relationship between nest density and urban development, with lower nest densities on heaths (in both the Thames Basin Heaths and Dorset Heathlands) surrounded by high levels of housing (Liley & Clarke, 2003; Liley, Clarke, Mallord, & Bullock, 2006). Evidence suggests more people visit heaths surrounded by high levels of housing (see Murison 2002; Liley *et al.* 2006b; Clarke, Liley, & Sharp 2008a). In the absence of development/visitors it has been estimated that the Dorset and Thames Basin Heaths could support around 14% more nightjars (Clarke et al., 2008).

1.4 These studies have implications for additional development in the Thames Basin Heaths area, as the sites are protected by strict legislation. There are a number of

ways to mitigate the impacts or avoid the problems associated with urban development and recreation, for example through the careful siting of new housing, through management of access on sites, or through the provision of alternative green space. Such approaches have been established strategically through the Thames Basin Heaths Delivery Framework (Thames Basin Heaths Joint Strategic Partnership Board, 2009) and are documented by relevant local authorities in respective planning documents and mini-plans. Within 400m of the TBH SPA there is a presumption against new development, while within 400m-5km the Delivery Framework recommends the provision of mitigation measures for all new development. Furthermore, large scale development proposals, beyond 5km and out to 7km may also be required to provide appropriate mitigation, considered on a case by case basis. These various buffers are shown in Map 1.

1.5 Pivotal to the measures to mitigate and avoid impacts of new development in the Thames Basin Heaths area is the provision of Suitable Alternative Natural Greenspace (SANGs). SANGs are provided on the basis of at least 8ha per 1,000 population. The creation of such additional greenspace provides opportunities for recreation, such as dog walking, drawing users who might otherwise visit the TBH SPA.

1.6 In 2018 there were 324,445 residential properties within 5km of the TBH SPA. Reviewing the previous 5 years, the data suggest an increase of around 4% (12,141 additional dwellings) since 2013, when there were 312,304 dwellings within 5km. The data suggest in the year 2017-2018 around 3,000 new dwellings were built within the zone. These data reflect the steady increase in housing around the SPA and the year-on-year growth. SANGs provision has kept pace with this growth and has been at least in line with the level of new housing growth (Liley, Panter, & Rawlings, 2015).

The need for this work

1.7 The strategic mitigation scheme for the TBH SPA is long-running and has been successful in allowing sustainable housing growth while ensuring protection for the European sites. The scheme has successfully delivered greenspace sites that are clearly well used (e.g. Liley, 2015; Liley et al., 2015; Panter, 2017). Delivering SANGs is however proving to be a challenge given high land prices and relative lack of potential sites in some areas. Opportunities for SANG delivery are reducing and the Councils are concerned that if the current approach of reliance on SANGs for avoidance and mitigation is not revisited, the challenges to SANG delivery in the future could ultimately result in a moratorium on new residential development in

parts of the Hart, Rushmoor and Surrey Heath Housing Market Area. In recognising this risk and the need to seek solutions that enable continued protection of the TBH SPA whilst delivering the needed housing growth, the three Councils have been awarded funding from central government to undertake joint work to investigate and seek to implement alternative and complementary avoidance and mitigation measures.

Report structure and approach

1.8 This report directly relates to dog control measures as a potential approach to achieving additional mitigation. Other reports – produced in parallel to this one – address other potential mitigation measures, with separate reports covering Access Management, Access Restrictions and Parking Controls.

Definition of 'dog control measures'

1.9 In this report we consider how the implementation of dog control measures would be effective as a mitigation measure, exploring the scope for implementing dog restrictions, estimating the capacity of such measures and how these measures might be enforced.

1.10 Currently the main pieces of legislation in England which may restrict dog access in public spaces are byelaws (under powers granted under the Public Health Act 1875 and the Open Spaces Act 1906) and Public Spaces Protection Orders (PSPOs) (introduced under the Anti-social Behaviour, Crime and Policing Act 2014 to repeal and replace Dog Control Orders). In addition, it is possible to target individual owners (e.g. through a Community Protection Notice, CPN). Other options for control do include simply asking visitors to keep pets to paths, to keep dogs on leads etc. or greater education, awareness raising etc.

1.11 We therefore recognise that 'dog control measures' could involve a range of things, and we take a broad view of what dog control measures could be. Possible examples include:

- Requests that dogs behave in a particular way, for example keeping close to their owners, under close control or on main paths;
- Requests to keep dogs on leads, for example through wardens asking for dogs to be on leads, potentially at certain times of year or in particular areas;
- Requirements that dog owners 'pick-up' after their pet;
- Requirements that dogs are put on a lead when the owner is asked to do so;

- Requirements for dogs to be on leads, perhaps at certain times of year or in particular areas;
- Limits on the numbers of dogs that can be walked by one person;
- Restrictions on where dogs can be exercised.

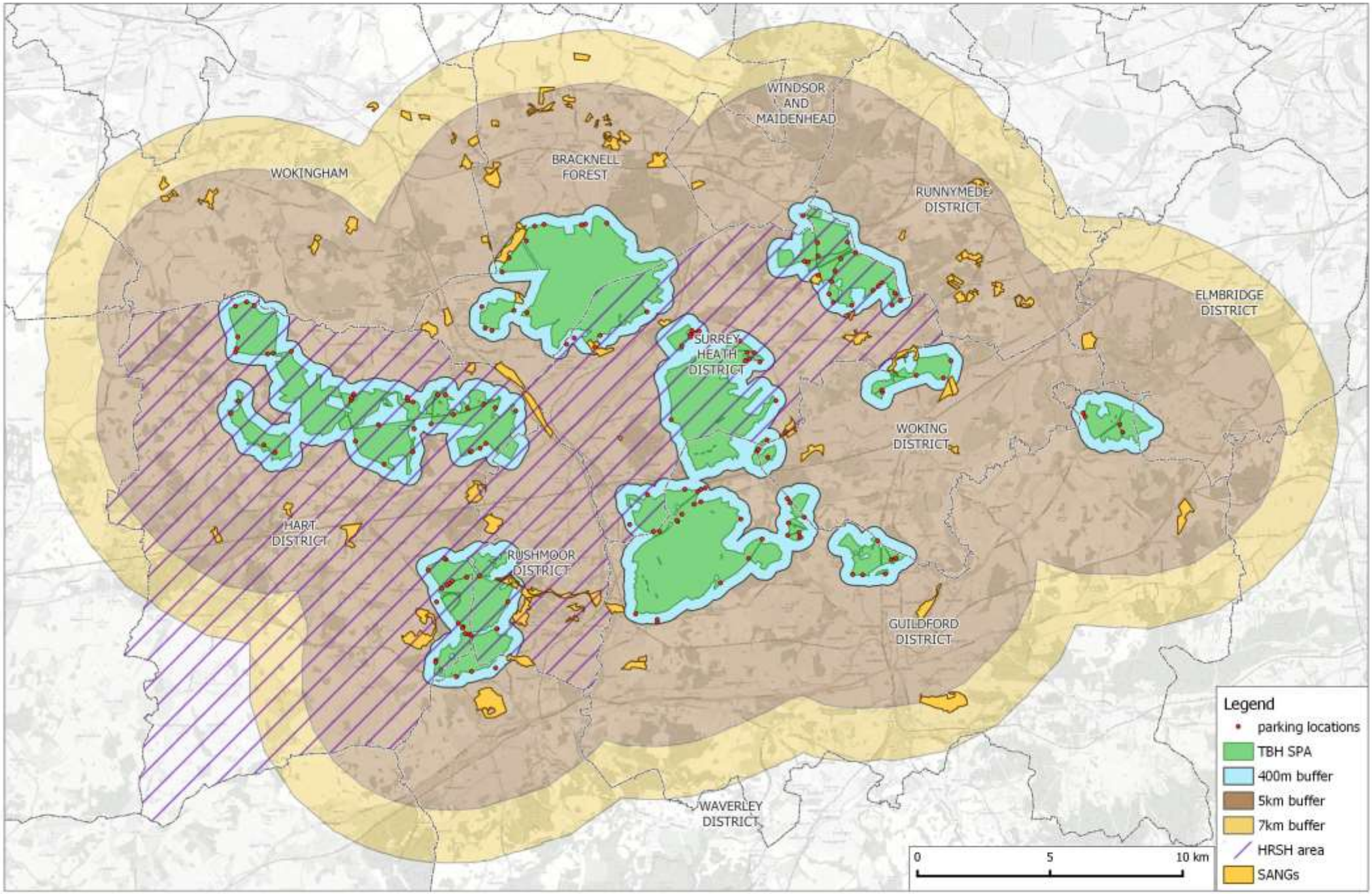
Questions set by the Councils

1.12 The report is structured to address the particular questions set by the three councils, namely:

- Aim 1 - To demonstrate how the implementation of dog controls would be effective as a mitigation measure
  - What are the impacts of existing dog controls on the SPA?
  - How dog walkers might respond to dog controls?
- Aim 2 - To explore scope for implementing dog control measures
  - How controls could be applied in different ways (e.g. seasonal/temporary/permanent; whole SPA/part)?
  - Whether dog control would be best implemented alongside other mitigation options (e.g. seasonal access management)?
  - What could be the triggers for introducing dog controls (e.g. seasonal controls or controls in particular areas)?
  - Are there any areas in which controls could not be implemented?
  - What are the potential costs of delivering these potential measures?
- Aim 3 - To consider the potential capacity of these measures
  - What potential scale of avoidance/mitigation would be provided by implementing dog control?
- Aim 4 - To determine how the measure(s) could be enforced
  - How dog controls could be enforced?

1.13 We address each question in turn and draw on a range of data sources and analysis which are explained in the relevant section.

Map 1: Thames Basin Heaths SPA, buffer zones, the HRSH area and main parking locations.



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2. Aim 1 - To demonstrate how the implementation of dog controls would be effective as a mitigation measure

What are the impacts of existing dog controls on the SPA?

Existing dog controls on the SPA

2.1 Current dog controls on the SPA predominantly relate to requesting dogs to be kept to main paths over the period March 1st – 15th September. This is promoted through signage and the requests by the Thames Basin Heaths Partnership wardens. There are however no means to enforce this across the SPA. With respect to fouling, the Thames Basin Heaths Partnership wardens approach and ask dog walkers to pick-up after their dog if they see fouling occur (with no pick-up).

2.2 The Thames Basin Heaths Partnership sign (widely used across the SPA) regarding dogs on paths is shown in Figure 1.

Figure 1: Thames Basin Heaths ground-nesting bird sign

2.3 The sign shows people, a dog disturbing a Woodlark nest with chicks and text asking for dogs to remain on paths with their owners, explaining that this is to protect the chicks of ground-nesting birds and specifying the period between 1 March-15 September. This conforms to best practice guidance (e.g. Jenkinson, 2010), which suggests that people are most likely to adhere to requests if they are informed of the reasons for it, if location and time period of the request is tied to that reason, and if the request is specific about the action to be taken (i.e. does not say 'keep under control' but specifies 'keep dogs on main paths'). The sign is frequently located not just on information boards but at key crossroads within the sites and at key access points, so is prominent.

2.4 It is notable that the sign only relates to dogs and it may be that some visitors interpret this to indicate it is ok for people to leave main paths. There may also be some ambiguity around what constitutes a 'main path'. Observations during brief visits to various parts of the SPA by one of the authors (SP) in June 2020 indicated that dogs were on the main paths, with some dogs on the lead and some off, suggesting that the messaging is reasonably effective.

2.5 There are few other 'controls' for dogs across the SPA, but there is some variation between sites in the messages and communication. At some sites for example signs request 'dogs under control' which does not have a commonly-accepted meaning, and is therefore open to interpretation.

2.6 Variation at different sites includes:

- Swinley Forest – dogs welcomed, requested to be on lead in picnic area[1]
- Chobham Common, Ash Ranges, Wisley & Ockham Commons – Surrey Wildlife Trust website[2] states "dogs under effective control"
- Hazeley Heath – there is no information regarding dogs on the RSPB website[3] however the Thames Basin Heaths Partnership wardens have in the past asked for dogs to be on leads here, following RSPB advice; Hart District Council website[4] states that dogs must be kept under close control and on paths between

[1] https://www.bracknell-forest.gov.uk/leisure-services/look-out/swinley-forest/go-walking
[2] E.g. https://www.surreywildlifetrust.org/nature-reserves/chobham-common
[3] https://www.rspb.org.uk/reserves-and-events/reserves-a-z/hazeley-heath/
[4] https://www.hart.gov.uk/hazeley-heath

March and mid - September due to ground nesting birds and ideally to heel in the heathland area. There is a Hart District Council Commons sign on the site with legal information on the back. This lists various things that are not permitted under section 193 of The Law of Property Act 1925, punishable by a fine not exceeding £50, including 'Permitting dogs to chase game or other birds or animals or otherwise failing to keep dogs under proper control'.

- MOD areas with public access, no commercial dog walking allowed and leaflet available stating dog should be on a lead or on paths, and in sight, especially March – mid September[5].
- Pirbright Ranges – no public access at all due to live firing/MOD training. No dogs. Surrey Wildlife Trust[6] states no dogs and no access.
- Horsell Common – Horsell Common Preservation Society website[7] indicates that "well-behaved dogs are welcome" with the exception at specific areas at Heather Farm (the fenced wetland area, easy access path around the pond and waterfowl nesting areas). These areas are outside of SPA and current SANG areas. From 2018 the Society required all commercial dog walkers to require a licence when on Horsell Common, Pyrford Common, Heather Farm and other Public Open Spaces under its ownership.
- Lightwater Country Park – dogs are required on leads in certain areas through Surrey Heath's PSPO[8].
- Castle Bottom NNR has signage that asks for dogs to be on leads.

Evidence of effectiveness of current approach

2.7 In general, feedback from the Thames Basin Heaths Partnership staff is that the majority of dog walkers try to keep their dogs under control and it is a small minority whose dogs tend to run extensively away from paths. These usually respond positively to requests to put their dogs on leads.

2.8 The most recent visitor surveys at key access points across the Thames Basin Heaths involved 982 interviews (Southgate, Brookbank, Cammack, & Mitchell, 2018), all undertaken during July - early September. The survey results indicate that 75% interviewees were dog walkers, 76% of interviewees

[5] https://www.tbhpartnership.org.uk/content/uploads/2020/07/Dogs-on-MOD-land.pdf
[6] https://www.surreywildlifetrust.org/nature-reserves/pirbright-ranges
[7] https://www.horsellcommon.org.uk/quick-links/dog-walking/
[8] See https://www.surreyheath.gov.uk/council/public-spaces-protection-orders and https://surreyheath.app.box.com/s/r1crid42wcswcdyhatz04kduox4kppvz

were accompanied by at least one dog and the maximum number of dogs per interviewee was 11.

2.9 The majority (97%) of interviewees were visiting directly from home. Of these, 55% had their dog off-lead during the interview and 63% indicated that their dog left the path during their visit that day. Survey points with high proportions of interviewees with dogs who left the paths were B3011 Opposite Arrow Lane, Salt Box Road, Burdenshott Road and the Car Park of the B3348/A3095 roundabout. At least 90% of interviewees responded that their dog left the path at these locations. Nightingale Road, Cricket Hill Lane, Lightwater Country Park, Queens Road and Springfield Avenue were locations with low proportions (less than a third) of interviewees whose dogs left the path.

2.10 Fewer dogs were observed off the lead in the 2018 survey compared to 2013.

2.11 There are some discrepancies between the Thames Basin Heaths Partnership staff observations and interview results regarding dogs off lead. This could be because of compliance when wardens are present, or visitors who have their dogs off lead at certain points on the walks, such as areas with fewer people.

2.12 Anecdotal evidence is that there has been a noticeable increase in the amount of dog fouling during the Covid pandemic. This could be due to a range of factors that include increased numbers of dog walks on the SPA during lockdown, lack of warden presence and visitors limiting what they touch (e.g. not wanting to use bins). If there has been a marked increase it would imply that before the pandemic at least some level of compliance with picking-up.

How dog walkers might respond to dog controls?

2.13 Dog controls are unlikely to be viewed positively by dog walkers. Edwards & Knight (2006) suggest that how dog walkers behave is influenced by attitudes and beliefs relating to their relationships with their dogs; those with whom they share dog-walking locations and land management officials. They highlight that the relationship between dog walker and dog is of great importance to dog walkers and a major influence on their behaviour. Favourite sites are likely to be those where dogs are perceived as most

happy – where they are permitted to run off lead, where they can socialise with other dogs and so on. Dog walkers are passionate about their pet and can develop strong bonds to places which they and their dog know and where they meet and socialise with other dog walkers.

2.14 Across virtually the whole of the Thames Basin Heaths there is an established consistent approach, with a clear time when dogs are requested to be on the path. It seems that this generally works well and is supported by the Thames Basin Heaths Partnership. Any changes will result in challenges and would be likely to generate some opposition from dog walkers. There are a range of examples around the UK where restrictions on dogs have resulted in considerable opposition and public outcry. These include Burnham Beeches and the New Forest. We review these and other examples and then consider some of the implications.

Burnham Beeches

2.15 Dog control orders ('DCOs') were introduced at Burnham Beeches in December 2014, in line with a Dog Management Strategy produced for the site in that year. The national legislation relating to DCOs was repealed and replaced with Public Space Protection Orders ('PSPOs') and in line with the legislation, the DCOs at Burnham Beeches were converted to PSPOs in 2017. Details and background can be found in the dog management strategy for the site[9]. The various orders included:

1. The Fouling of Land by Dogs (Burnham Beeches) Order 2017. This requires visitors to Burnham Beeches to remove dog faeces deposited by a dog for which they are responsible across the whole site.
2. The Dogs on Leads (Burnham Beeches) Order 2017. This requires visitors to keep a dog for which they are responsible on a lead of not more than five metres in length. The order applies to the south-western part of the site (potentially more 'robust');
3. The Dogs on Leads by Direction (Burnham Beeches) Order 2017. This requires visitors to put and keep a dog for which they are responsible on a lead of not more than five metres in length when directed to do so by an authorised officer and applies to the rest of the site (not covered by 2).

[9] Available on the City of London website

4. The Dogs Exclusion (Burnham Beeches) Order 2017. This excludes dogs from a small café enclosure at Burnham Beeches.
5. The Dogs (Specified Maximum) (Burnham Beeches) Order 2017. This limits visitors to Burnham Beeches to four dogs per person.

2.16 The approach taken by the City of London is not a zero tolerance one, such that the majority of incidents simply result in a dialogue where the person involved is asked to put the matter right and provided with information or guidance from the warden team. Formal investigation and further action are only taken where the person involved repeatedly breaks the rules or refuses to comply.

2.17 Background to the restrictions is available on the City of London website[10]. When they were initially proposed there was marked and coordinated opposition from local dog walkers. When the PSPOs were brought in, there was 100 percent support from all statutory consultees and the large majority of non-statutory consultees that responded to the consultation. There was however strongly worded objection from the Kennel Club[11], and this is of note as their response contested the use of restrictions as mitigation for recreation impacts from new housing, arguing that housing should not be permitted if it generated impacts on the SAC. There was also considerable hostility and backlash towards the Corporation of London who manage the site from the dog walking community. An electronic petition, organised by a local dog walker, generated 340 signatures.

2.18 The introduction of the orders has apparently resulted in a decrease in the numbers of dogs being brought to the site in subsequent years and a shift in the distribution of access within the site (Panter & Liley, 2016). Overall, since the introduction of the legislation, annual visitor numbers have increased whilst vehicle numbers have decreased. Evaluation of the PSPOs by the City of London[12] indicates that the use of PSPOs "*remains a highly effective tool that continues to reduce the number of antisocial behaviour incidents related to irresponsible dog ownership".* Over the 2019/20 period the number of

[10] See http://preview.cityoflondon.contensis.cloud/things-to-do/green-spaces/burnham-beeches-and-stoke-common/public-spaces-protection-orders accessed 12th August 2020
[11] See https://www.thekennelclub.org.uk/media/510546/kennel_club_response_to_burnham_beeches_consultation.pdf accessed 12th August 2020
[12] https://www.cityoflondon.gov.uk/assets/Green-Spaces/Appendix-1-Evaluation-of-PSPOS-2019-2020.pdf

recorded offences in relation to PSPOs declined by 16% compared to the previous 12 months, there were no increases in the number of written warnings, which are low.

New Forest

2.19 In 2008, the New Forest National Park Draft Plan caused controversy with a range of proposals that included dog-free car parks. The National Park Authority received around 9,000 responses to its consultation. These included around 900 letters, based on a template letter from the New Forest Dog Owners Group, and about 7,200 signatures on a petition by the Forest Uprising Group[13]. Campaign groups were formed specifically to oppose the Draft Plan and following the considerable public outcry, the controversial policies were dropped and the plan re-drafted.

Dorset Heaths

2.20 The situation on the Dorset Heaths is in many ways similar to the Thames Basin Heaths in that there is a long-established strategic mitigation approach, which involves a combination of SANG and SAMM, with SAMM elements including on-site wardens and 'Dorset Dogs', a project similar to the Heathland Hounds project on the Thames Basin Heaths.

2.21 On the Dorset Heaths the main control on most sites is that of being asked to keep dogs on paths or on lead on paths during the period 1 March-31 July (in line with access land dates) or on sites that have adopted the standard signage and approach (using "doggy do code" signs) the given period is February-August.

2.22 With many areas having long-standing use by local people, many living within walking distance of their local heath, most land managers have historically chosen to take the line of requiring dogs to be on the path with their owner rather than on-lead, with wardens requesting dogs to be put on lead if they are seen to be roaming off the path.

2.23 Promotion of this control is with a variety of notices on site, varying between managers, although the doggy do code is used to some extent across a number of sites. Wardens and other staff from a variety of organisations

[13] See http://news.bbc.co.uk/1/hi/england/hampshire/7741197.stm accessed 12th August 2020

promote and enforce this control, however there are limited staff resources so that not all people on the heath sites may be aware of the control or the reasons for it.

2.24 Personal communications (by SP) over the past decade from discussions with dog walkers in Dorset as a part of public engagement work at a variety of both heathland and SANG or other alternative sites, suggests that awareness of the impacts of dogs on ground-nesting birds has grown, with few people now being unaware of ground-nesting birds as a feature of heath sites. A decade ago it was not uncommon for people onsite to refer to heaths as 'waste ground' (and cite this as a reason for not picking up after their dog if it fouled off-path in the vegetation). This increase in public understanding may be due in part to the work of a partnership of organisations.

2.25 It is now widely known that if dogs wander off the paths during the spring and summer months they may have negative impacts on ground-nesting birds. This doesn't necessarily translate to people understanding the impacts that their own dog may have, so engagement that enables discussion about what may happen if a passing dog scares a parent off a nest (and that it is not just impacts from dogs who will kill young) is useful to provide the understanding of why a control should apply to their dog.

2.26 Observation and reports from wardens suggest that of the many hundreds of people who access the heaths most do keep their dogs on the paths, however some do not and this minority may be regular visitors who therefore may have a significant impact. The experience of wardens and Dorset Dogs staff engaging with people walking their dogs has been that most are happy to keep their dogs on the path with them if reasons for this are explained and are relevant at that time and place. If they are asked to keep them on lead as well they are more likely to protest if they think their dog tends to stay on the path anyway. If off-lead areas are suggested as alternatives there is a variable response, with some people being happy to try the alternatives, whilst others may point out that the alternative is for example not within walking distance, does not provide a similar environment, is too busy or requires car parking fees.

2.27 Many of the commercial dog walkers have signed up with Dorset Dogs and having understood the reasons for it agreed to keep their dogs on paths or on lead on heathland areas, or to make use of SANG and alternative sites

during the ground-nesting birds period. They are happy to be responsible and professional in their business practices and in return have a listing on the Dorset Dogs website. One commercial dog walker who did not sign up has repeatedly come to the attention of site-based staff for dogs being out of control and has been issued with a Community Protection Notice.

Other examples

2.28 Other examples are set out below. It is a general theme that the introduction of dog restrictions relating to dogs on leads or dog exclusion at countryside sites typically generate considerable local opposition and controversy:

- Proposals to extend the period when dogs were restricted from the beach in Weymouth in 2016 resulted in considerable local opposition and protest[14] and opposition against the beach restrictions have also been strong during the Covid Lockdown[15]. Negative comments have generally related to the extent of the restriction in terms of time period or geographical extent, rather than not accepting that some degree of restriction is reasonable. This illustrates how controls that are perceived to exceed the reason given for them may galvanise people to form strong local opposition.
- 'Dogs in Coventry'[16] were a campaign group who successfully objected to the extent of proposals for controls relating to dogs on lead in some areas such as around sports pitches, whilst supporting controls for dogs on lead in others.
- Waltham Forest for Dogs were founded in 2013, in response to the council's lack of consultation with dog owners over proposed changes to the Borough's dog control orders. In a three-week campaign the group gathered 520 petition signatures. The group now has over 2,000 members and a wide-ranging website and social media content[17].

[14]See https://www.dorsetecho.co.uk/news/14832073.hundreds-of-dog-owners-attend-protest-against-new-weymouth-beach-bylaws/ accessed 12th August 2020

[15] e.g. https://www.dorsetecho.co.uk/news/18362399.dog-walkers-protest-petition-beach-ban/ accessed 12th August 2020

[16] https://www.bbc.co.uk/news/uk-england-coventry-warwickshire-33132135 accessed 12th August 2020

[17] http://www.walthamforest4dogs.co.uk/ accessed 12th August 2020

Understanding what restrictions are likely to be accepted

2.29 Avoiding controversy and opposition to proposals is clearly important. Personal experience from one of the authors (SP) in Dorset, has shown that controls, including legal ones, that target individuals causing negative impacts are likely to be supported by other dog walkers; those individuals are the ones also likely to be causing problems for other dog walkers, for example in terms of not having their dog under effective control or not picking up. Controls, including legal ones, relating to picking up fouling and disposing of it responsibly have almost universal support.

2.30 Controls, including legal ones, that are closely linked spatially and temporally to specific issues and fully explained, are more likely to be accepted. For example, a site might be zoned so that there are on-lead areas where there is good ground-nesting bird territory, smaller well-defined on-lead or even no access zones where birds are actually known to be nesting, areas where dogs must remain on the path in secondary potential habitat during the nesting season, and off-lead zones where dogs can have more free range. Simple 'traffic light' (red/amber/green + simple text) sign systems are used to manage this type of approach in places including Hampshire and Dorset. This type of system will be accepted by far more people than a blanket approach that designates a whole site as on-lead.

2.31 People will respond positively to controls if those controls can be explained in relation to specific reasons (e.g. detailing impacts on wildlife such as ground-nesting or over-wintering birds) or land management reasons (such as ensuring safety whilst practical management is being carried out on site or to protect grazing animals) and that those controls are linked to the actual location and time that is relevant for those reasons and make sense in that the control addresses the issue. So 'dogs on paths' whilst birds are nesting on the ground at a site is likely to be well-received, (with the additional message to keep your dog on a lead there during that time if they will not stay on the path, plus information about off-lead options nearby), whilst 'dogs on lead' for the same reasons will be less well-received by people whose dogs stay on-path with them and not acceptable at times when the reason given does not apply.

2.32 People will not respond positively and are less likely to respect controls if the reasons for controls are (i) not specific (e.g. 'for wildlife reasons' such as 'because it is a nature reserve' is not sufficiently detailed to explain a control)

and/or (ii) are put in place as a 'blanket restriction' i.e. without regard to whether the impacts for which the control is being put in place are applicable during the time period and location where that control is put in place.

2.33 The control should clearly specify the desired behaviour (which must address the reason given) rather than leaving it open to interpretation (eg 'keep dogs on the path, within your sight and responsive to recall' or 'stay on the path with your dog on a lead' not 'keep dogs under control').

2.34 There should be good, clear and prominent on-site and online promotion of controls and people should have the opportunity to consult and discuss before controls are put in place so that people are aware of the reasons for the control; if the reasons are not promoted and understood the control will not be well-received and misinformation may quickly spread including via social media, and therefore leading to protest and potentially a reduction of engagement.

2.35 Guidance from organisations such as Defra and Natural England suggests that to maintain balance between access and conservation the 'least restrictive' option should be applied where appropriate. Other ways to help improve dog behaviour such as educating dog owners or warning offenders can be as effective as legal action.

2.36 Likely responses from dog walkers to different controls are summarised in Table 1. We do not take into account whether any of the options are achievable or realistic at this stage, simply the likely reaction from the dog walking community. Ultimately, there is a risk that the implementation of further controls could be open to challenge, incur considerable opposition and undermine the engagement with visitors and positive relationships established to date and could in extreme circumstances lead to direct noncompliance and hostile repercussions (e.g. vandalism).

Table 1: Summary of likely responses from dog walkers to different controls.

Options	Likely reaction if implemented
Dogs on paths only	Current approach, during 1st March – 15th September. No means to enforce, dog walkers merely requested to do so with signs and by wardens.
Dogs on lead if asked	TBH wardens already request dogs on leads at Hazeley, mid-March to September. Potentially little risk of conflict or opposition if during 1st March – 15th September and if clearly justified (i.e. dogs running off path).
Dogs on leads	Likely to be viewed negatively and as unnecessary restriction by dog walkers, unless clearly communicated, for a clear purpose and in specific areas and/or times of years.
Picking-up required	TBH wardens already approach those seen not to pick-up. Existing legislation in place for some authorities (e.g. District-wide PSPO in Hart). Unlikely to result in opposition or conflict.
Limit on number of dogs per walker	Reaction would depend on the number of dogs and how implemented. Likely to apply to relatively small number of dog walkers (e.g. 2018 survey recorded 2% of dog walkers interviewed with more than 4 dogs).
Exclude dogs entirely	Likely to result in marked opposition and viewed as heavy handed, most acceptable options likely to involve relatively small areas clearly communicated and marked and during 1st March – 15th September only.

Summary: How the implementation of dog controls would be effective as a mitigation measure

Current dog controls on the SPA predominantly relate to requesting dogs to be kept to main paths over the period March 1st – 15th September. This is promoted through signage and the requests by the Thames Basin Heaths Partnership wardens. There is however no means to enforce this across the SPA.

In general, feedback from the Thames Basin Heaths Partnership staff is that the majority of dog walkers keep their dogs under control, and it is a small minority whose dogs tend to run extensively away from paths. These usually respond positively to requests to put their dogs on leads. Visitor survey results indicate that the number of dogs seen off-lead by interviewers during the survey work has decreased over time.

The current approach by the Thames Basin Heaths Partnership is positive and influences behaviour through positive messaging, engagement and awareness raising. There is a risk of marked public opposition to any proposals that are not fair, proportionate and clearly justified.

Ultimately, there is a risk that the implementation of further controls could be open to challenge, incur considerable opposition and undermine the engagement with visitors and positive relationships established to date.

3. Aim 2 - To explore scope for implementing dog control measures

How controls could be applied in different ways (e.g. seasonal/temporary/permanent; whole SPA/part)?

Overview

3.1 There are a range of different ways as to how controls might be applied. These are summarised in Table 2.

Table 2: Different options as to how controls might be applied.

Control options	Seasonal variation?	Temporary variation?	Spatial variation?
Dogs on paths only	Currently applied March 1st – Sept 15th. Potential to change and extend but likely to be relatively little benefit.	As key times already covered, little benefit in further temporary variation	Currently applied to all areas, so no options
Dogs on lead when asked	Could be applied to bird breeding period only or all year. Scope for confusion if applied outside period when dogs on paths only.	Little merit in further temporary variation if seasonal.	Could be applied to areas with concentrations of breeding birds.
Dogs on leads	Could be applied to bird breeding period only or all year.	Little merit in temporary variation as well as seasonal.	Could be applied to areas with concentrations of breeding birds.
Picking-up required	Currently applied all year.	No option to extend further temporally.	Perhaps more relevant in heathland and acid grassland habitat, but little merit in spatial variation as would create confusion.
Limit on number of dogs per walker	Could be applied to bird breeding period only or all year.	Little merit in temporary variation as well as seasonal.	Could be applied to areas with concentrations of breeding birds.
Exclude dogs entirely	Could be applied to bird breeding period only or all year. Potentially difficult to implement/justify, particularly if all year.	Any exclusion necessary for season rather than anything shorter.	Could be targeted to very specific areas (concentrations of breeding birds).

Current timing (March 1st – 15th September)

3.2 The current timing from 1st March to 15th September covers the period when the Annex I birds are likely to be nesting. Woodlarks are the earliest nesting of the 3 Annex I bird species, with nests from mid-March (Eyre & Baldwin, 2014) while Nightjars can be nesting through into September. The current timing therefore covers the time when there are nests present for one of the three species.

3.3 It should be noted however that Woodlarks settle on territory in February and there are risks of birds not settling due to disturbance (Mallord, Dolman, Brown, & Sutherland, 2007), and Dartford Warblers are present all through the year. There is therefore potential for disturbance outside the 1st March to 15th September period and there could be some benefit to reducing dogs running loose in the early part of the year particularly, for example during February. This would fit with the timings on the Dorset Heaths.

Numbers of dog walks and different SPA wide scenarios

3.4 As an initial step to understanding the implications of different options and scale involved, we have generated some very broad estimates of the number of dog walks to the SPA and modelled the spatial distribution of access with and without dog walking,. Full details of our modelling are provided in a technical appendix (Appendix 1).

3.5 Visit totals are given in Table 3, where we estimate the number of car visits (based on the vehicle counts done by the Thames Basin Heaths Partnership) and those arriving on foot (modelled based on the amount of housing near each access point). The models are an extension of previous work (Liley et al., 2006), updated to include more recent visitor data.

3.6 On a typical day (we have not differentiated between weekends and weekdays) we estimate a total of around 681 visits per hour. By visits we mean access events, or groups of people (or people on their own), as opposed to the total people, which would essentially be the footfall. These total visits are shown in Map 2, where the shading reflects the number of groups (essentially number of potential disturbance events) per 50m cell. Visitors are distributed across the SPA using metrics from visitor surveys and spread out from each access point, assuming an even spread (we do not take into account the actual path network, but paths are shown on the map).

3.7 It is totally hypothetical to imagine a complete exclusion of dogs across the whole area, but potentially useful to visualise how that might look in terms of the change in access use. In such a scenario, we might assume that those people who visit with their dogs instead go elsewhere, and the number of visits per hour is reduced by 73% to around 186 visits (see penultimate column in Table 3). This is shown spatially in Map 3.

3.8 A further scenario – again totally hypothetical – is if dogs were required to be on leads and this resulted in dog walkers who currently visit the SPA and let their dogs run off lead no longer visiting. These assumptions are perhaps unlikely but help to view the scale of change that might occur. The final column in Table 3 gives the number of visits per hour that might then be expected at different sites. This is calculated to give the totals for visitors who don't have a dog or those who currently visit and had their dog on a lead when interviewed. It can be seen that the totals estimated under this scenario would be around 414 per hour, a reduction of 39% compared to the current levels. This scenario is shown in Map 4.

3.9 Maps 5 and 6 show the bird data, with territories for the three Annex I birds over the period 2015-2019. These data are collected by 2Js Ecology, commissioned by the Thames Basin Heaths Partnership. Map 5 shows the bird territories for all three species combined across the 5 years. Conifer woodland tends to hold lower densities (potentially used by Woodlark and Nightjar only during felling and in the early years after replanting), and so is highlighted in green on the map. Map 6 summarises the data, highlighting the areas with high densities of Annex I birds over the 5 years. The bird territories were mapped by 2Js Ecology as point data, reflecting the approximate centre of each territory. We have buffered these points by 50m for Dartford Warbler, 100m for Woodlark and 150m for Nightjar to very approximately identify the territory areas. The shading on Map 6 then reflects how many territories overlap with each of our 50m cells used in the visitor model.

3.10 In Table 4 we summarise the model outputs (shown in Maps 2-4) in relation to the bird data. It can be seen that currently cells that are not intersected by any bird territories (from last 5 years) have a mean level of access of 0.70 visits per hour, and this would drop to 0.19 visits per hour if there were no dog walkers visiting at all. If those dog walkers who currently let their dogs off lead no longer visited the SPA, the mean would be 0.42. It is more relevant to focus on the areas used by birds. For example, those cells

intersected by at least 4 bird territories (5 years pooled data) currently have a mean level of access of 0.10 visits, which would drop to 0.03 if there were no dog walkers at all.

3.11 In the lower part of Table 4 we consider the number of cells that have at least 0.158 visits per hour through them. This is perhaps a level of use at which disturbance impacts could be expected (albeit pragmatic and subject to considerable caution). It is useful here as a simple way to summarise the number of cells under different scenarios where a particular level of access is reached. Mallord et al.'s (2007) work on woodlarks in Dorset suggests that 8 disturbance events per hour through a territory is a level at which Woodlark will not settle. For Nightjar, there is some evidence of lower densities within heathland where the predicted visitor rate was above 2.5 people per hour (Figure 28 in Liley et al., 2006). Murison et al.'s (2007) work on Dartford warblers suggests that 13 people per hour passing through a Dartford warbler territory is a level at which breeding success is affected for that species because pairs breed later. These levels may be site specific, and certainly in the case of Murison's work there is evidence that the scale of impact varies with vegetation type. Mallord's figure of 8 events per hour is based on a logistic regression equation, derived from the point at which the probability of settlement dropped to 50%. It could be argued that 10% probability or 25% might be more reasonably applied.

3.12 Each of these 'thresholds' is of course relatively approximate and is unlikely to ever be a precise measurement at which effects start. It is highly improbable that, at a given level of access, no impacts will occur, but with the addition of a single extra person, impacts kick-in. The relationship between access levels and the impact of disturbance will be gradual and furthermore will vary according to weather conditions, population density, habitat type and habitat quality. Mallord suggested confidence limits of 5.81-10.92 for the 8 events per hour threshold, reflecting the variation involved. These 'thresholds' are therefore at best fuzzy boundaries around which considerable precaution is necessary. Converting them to our grid is not straightforward. However, Mallord (2005) gave a figure of around 4.3ha for a Woodlark territory. 8 disturbance events through a territory would therefore be equivalent to around 2 events per ha per hour, or 0.5 per 50m cell. The lower level of the confidence limits would be 0.33 per cell. This would suggest the orange and red shading is the levels at which the probability of Woodlarks settling could drop by half.

3.13 Cross-referencing to Table 4 it can be seen that currently around 3,977 (12%) of cells have a level of access of at least 0.5 people per hour. If there were no dog walkers at all, then this would drop to around 1,343 (4%) of cells. The difference is 2,634 cells – around 659ha.

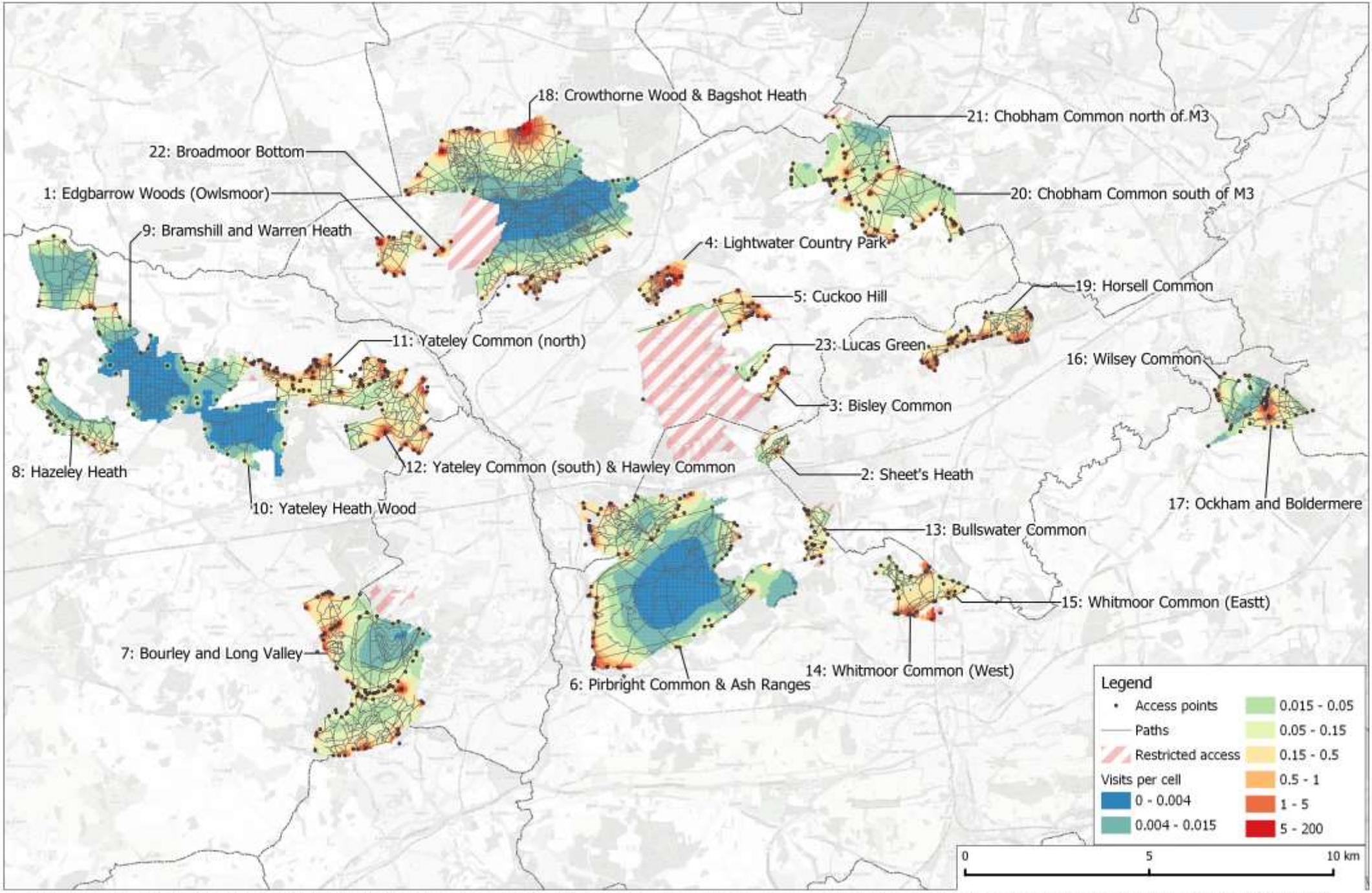
Table 3: Numbers of visits to different parts of the Thames Basin Heaths and the number if no dog walkers. Car visits is the mean from all vehicle count transects during the spring/summer and includes both weekends and weekdays combined. We assume each car relates to a 'visit' and the number of visits are adjusted for dwell time (assuming typical dwell time of 68 minutes). For foot visits the estimate is the number of groups entering, estimated from housing data (see Appendix 1). We have assumed 77.2% of car visitors and 64.3% of foot visitors are dog walkers and that 43.4% of car visitors and 52.1% of foot visitors keep their dog on a lead. Visits per hour, no dog walkers, is the estimate of visits that would be made if there were no dog walkers, and the final column is the number of dog walks based solely on those whose dog was on a lead during the interviews.

Patch ref	Patch name	Car visits per hour	Foot visits per hour	Total visits per hour	Visits per hour, non dog walkers only (%)	Visits per hour, non dog walkers and dog walkers with dogs on leads (%)
1	Edgbarrow Woods (Owlsmoor)	6.1	12.7	18.7	5.9 (32)	12.2 (65)
2	Sheet's Heath	2.0	1.4	3.4	0.9 (28)	2.1 (62)
3	Bisley Common	7.7	3.7	11.4	3.1 (27)	6.9 (60)
4	Lightwater Country Park	51.1	12.6	63.6	16.1 (25)	37.5 (59)
5	Cuckoo Hill	9.6	12.8	22.4	6.7 (30)	14.2 (64)
6	Pirbright Common & Ash Ranges	39.0	24.3	63.3	17.6 (28)	38.8 (61)
7	Bourley and Long Valley	35.5	26.1	61.7	17.4 (28)	38.1 (62)
8	Hazeley Heath	1.3	3.8	5.0	1.6 (32)	3.3 (66)
9	Bramshill and Warren Heath	7.6	3.0	10.6	2.8 (26)	6.3 (60)
10	Yateley Heath Wood	0.5	0.2	0.7	0.2 (27)	0.4 (60)
11	Yateley Common (north)	7.3	34.8	42.1	14.1 (33)	28.2 (67)
12	Yateley Common (s.) & Hawley Common	32.8	20.0	52.8	14.6 (28)	32.3 (61)
13	Bullswater Common	2.4	2.5	4.9	1.4 (29)	3.1 (63)
14	Whitmoor Common (West)	29.6	8.1	37.7	9.6 (26)	22.3 (59)
15	Whitmoor Common (Eastt)	0.9	2.6	3.5	1.1 (33)	2.3 (66)
16	Wilsey Common	2.2	1.1	3.2	0.9 (27)	2 (61)
17	Ockham and Boldermere	24.3	0.7	25.0	5.8 (23)	14.2 (57)
18	Crowthorne Wood & Bagshot Heath	134.2	30.0	164.3	41.3 (25)	96.4 (59)
19	Horsell Common	23.4	22.1	45.6	13.2 (29)	28.5 (63)
20	Chobham Common south of M3	17.8	6.7	24.5	6.5 (26)	14.7 (60)
21	Chobham Common north of M3	8.2	3.1	11.3	3 (26)	6.8 (60)
22	Broadmoor Bottom	0.1	4.5	4.6	1.6 (35)	3.2 (69)
23	Lucas Green	0.0	1.2	1.2	0.4 (36)	0.8 (69)
	Total	**443.5**	**237.9**	**681.4**	**186.1 (27)**	**414.3 (61)**

Table 4: Modelled scenarios and implications in terms of bird territories or particular thresholds

Metric	Current	No dog walkers at all	No dog walkers visiting who let their dog off the lead
Mean visits per hour per 50m cell			
In cells with no Annex I bird territories	0.70	0.19	0.42
In cells intersected by at least one Annex I bird territory of any sp.	0.18	0.05	0.11
In cells intersected by ≥4 SPA bird territories	0.10	0.03	0.06
Percentage (and count) of 50m cells			
Cells with >0.5 visits per hour per cell	12% (3977)	4% (1343)	8% (2725)
Cells with >0.5 visits per hour per cell ≥1 SPA bird territory in the cell	4% (1253)	1% (313)	2% (789)
Cells with >0.5 visits per hour per cell ≥4 SPA bird territory in the cell	1% (294)	0% (46)	0% (149)

Map 2: Predicted number of visitor groups per cell currently.



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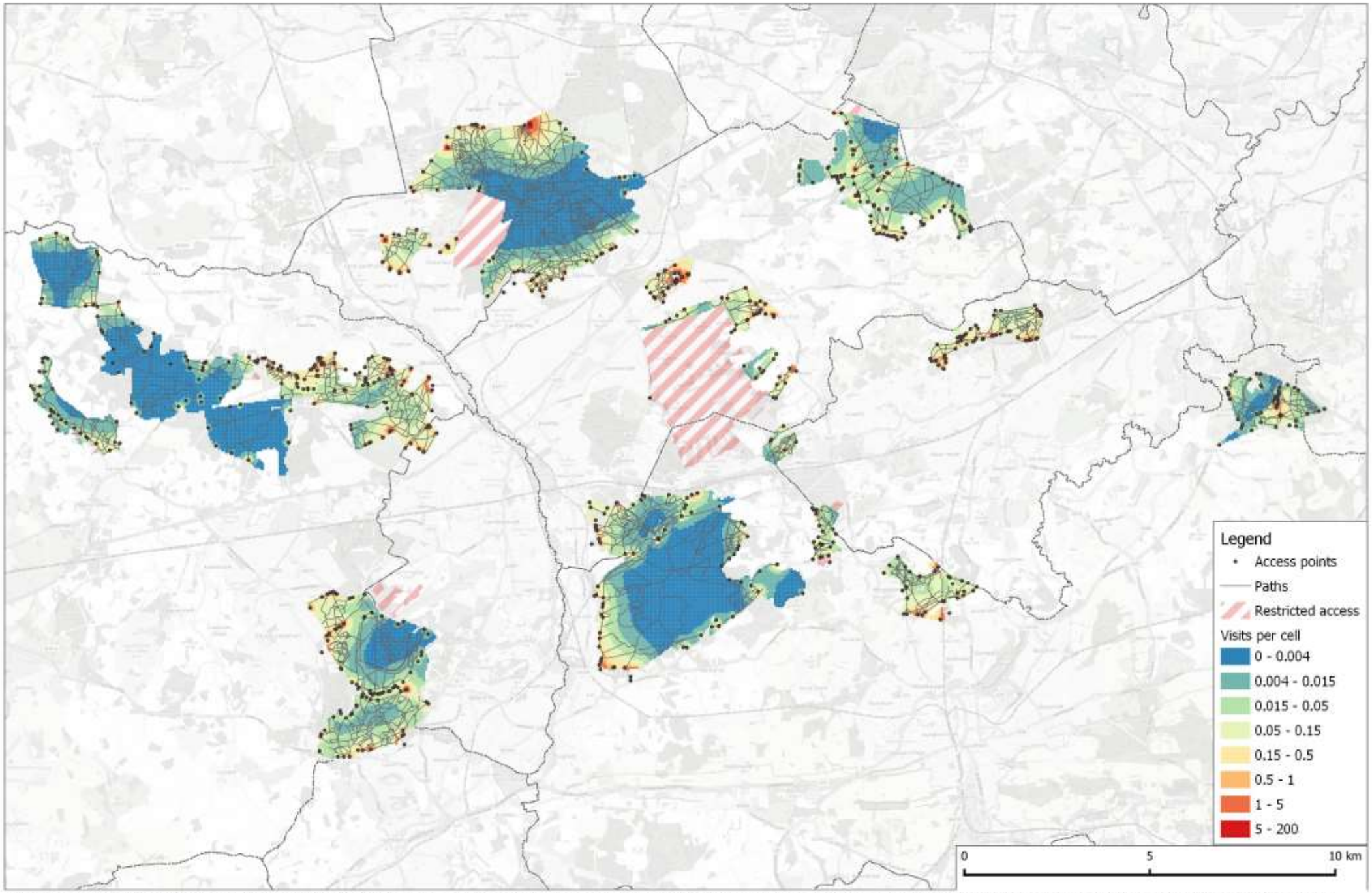
Map 3: Predicted number of visitor groups per cell under a scenario of a no dogs policy (no dog walkers).



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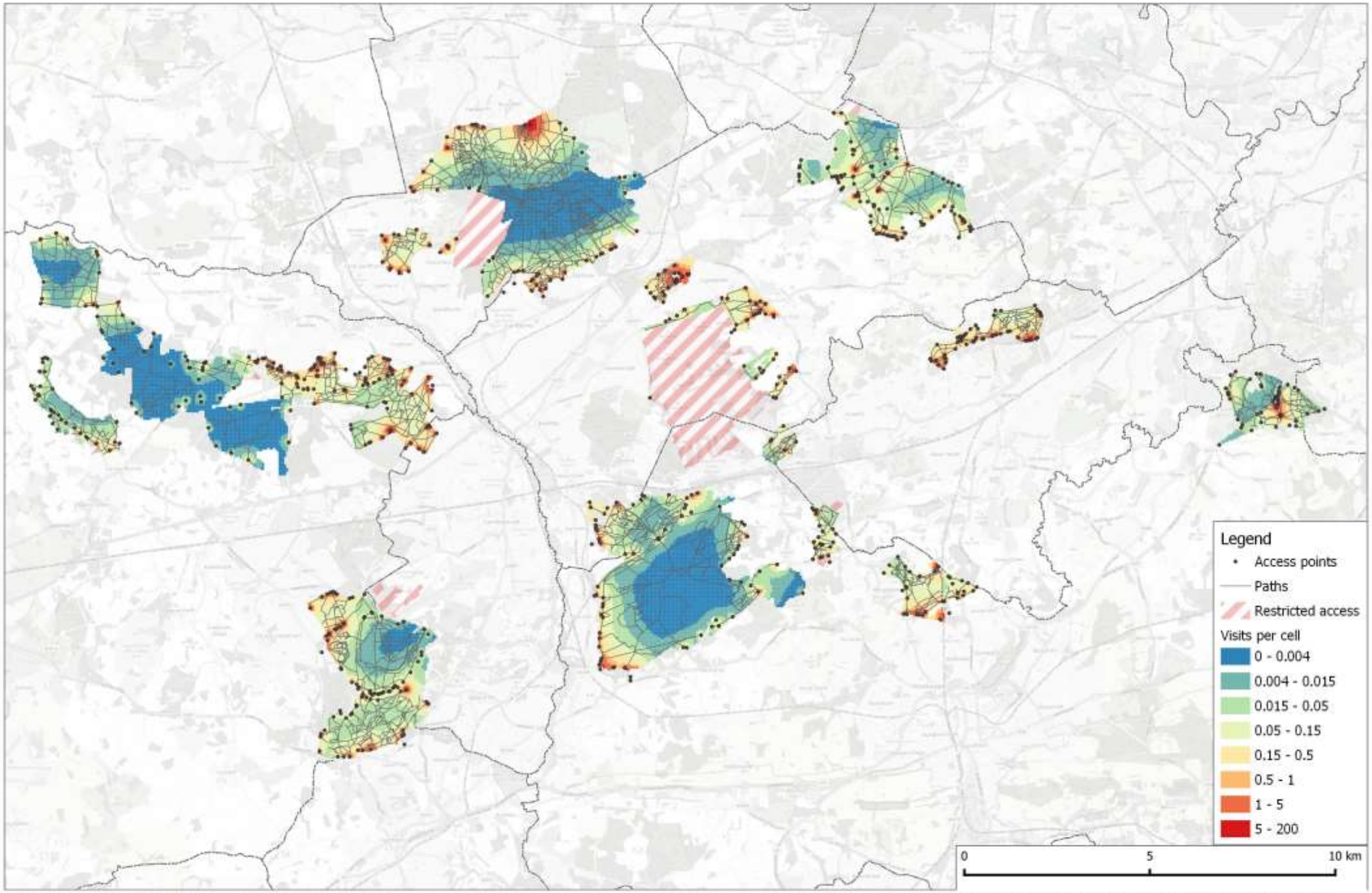
Map 4: Predicted number of visitor groups per cell under a scenario of a dogs on lead policy (no dog walkers who walk any dogs off lead).



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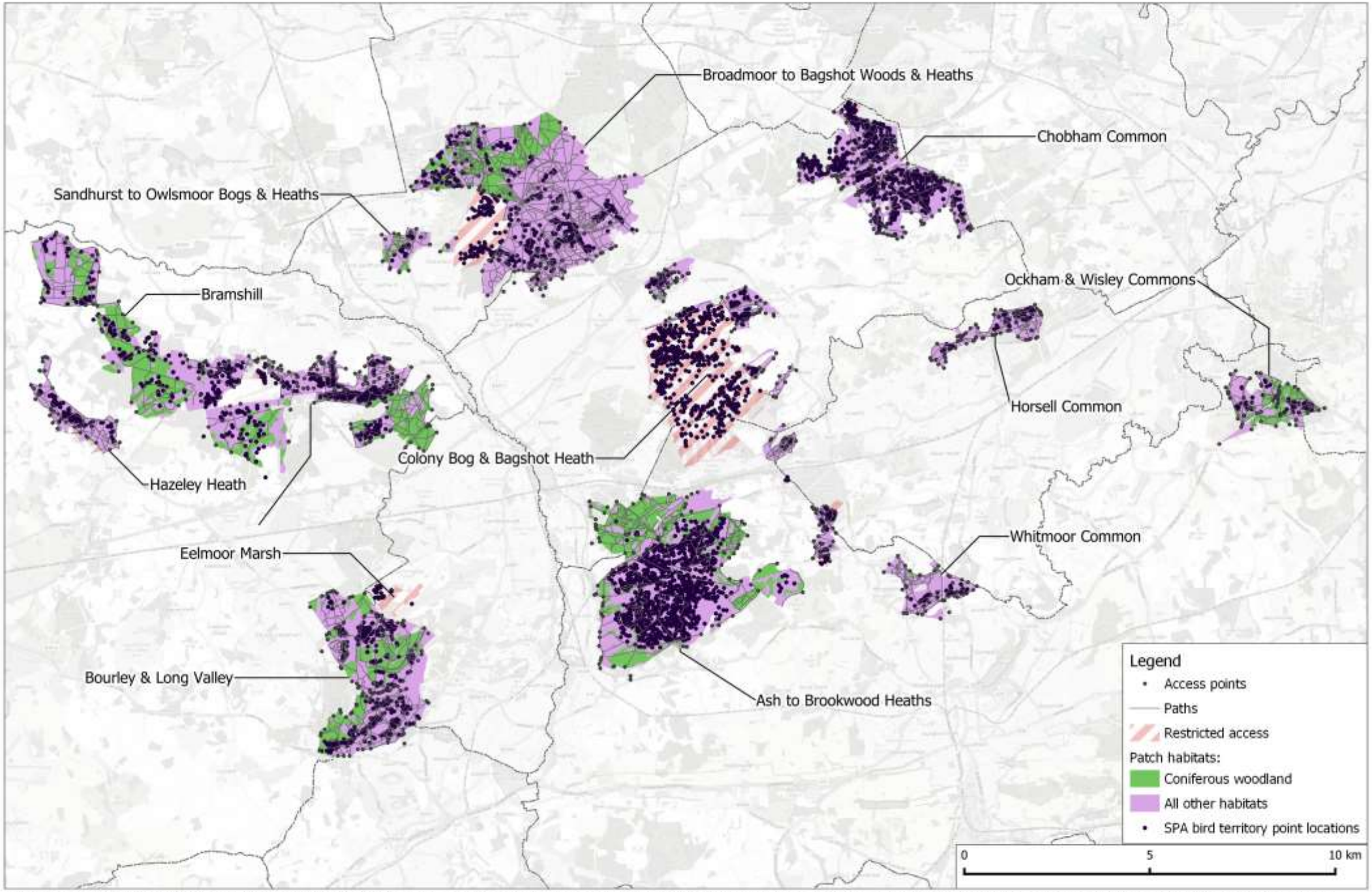
Map 5: SPA bird territories, access features and coniferous woodland.



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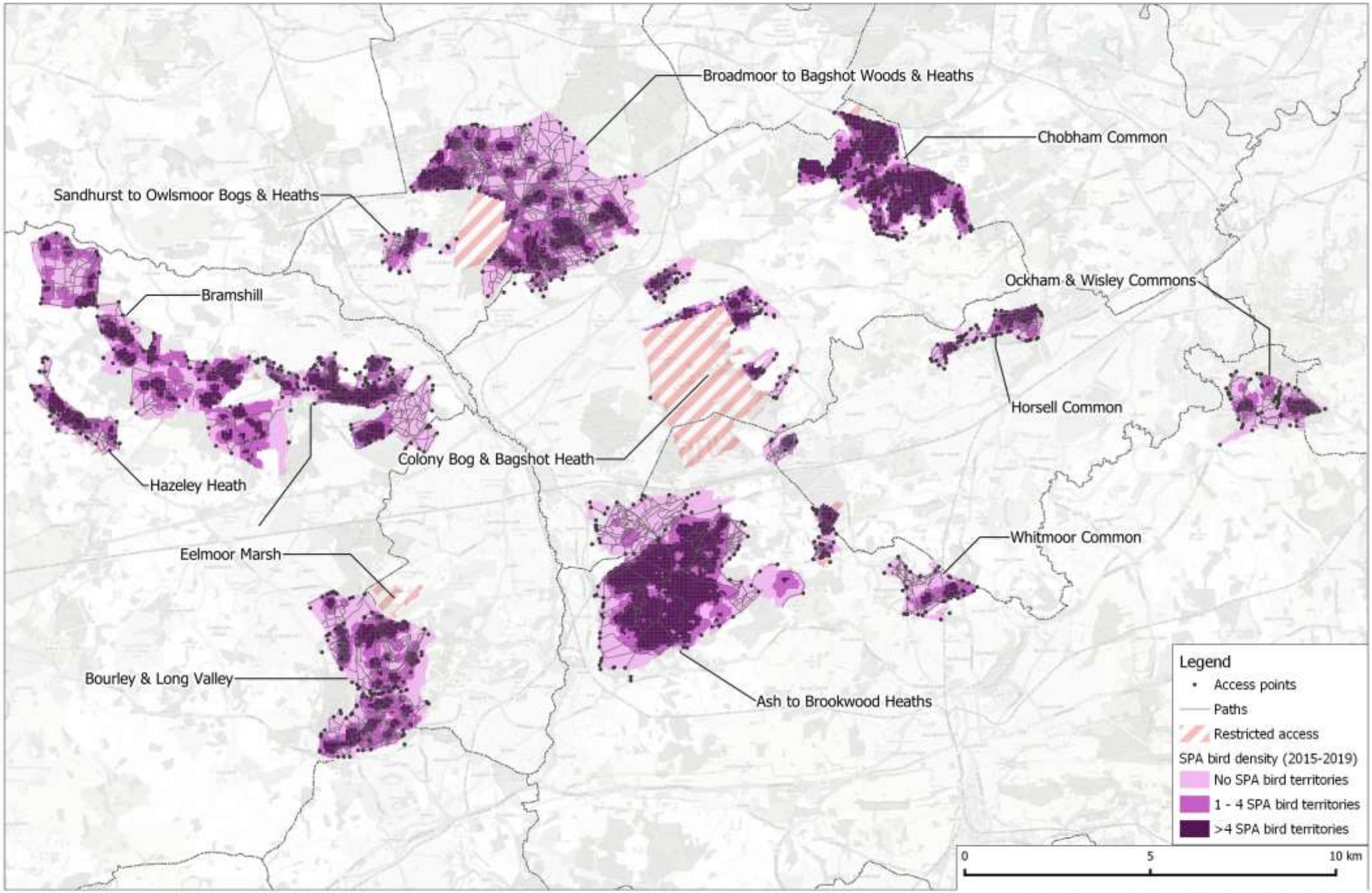
Map 6: Density of SPA bird territories per grid cell (between 2015-2019).



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Effects of changes within site

3.14 Here we explore how access might look within a site, if the site were zoned in some way in relation to dogs. We set up our model to run for Bourley and Long Valley, where there is a relatively large site with both conifer plantation and heathland. We identified three areas within the site where there were high densities of birds (2015-2019) and tested how the access within the site might look if these: a) excluded dogs entirely; or b) were dogs on leads only. Using our model, we could redistribute access within the site, assuming the same current level of access i.e. all visitors continue to visit but simply change where they go within the site. In the scenario with dog exclusion areas, we assume that any dog walkers are displaced to other parts of the site, meaning that access increases in some areas and drops markedly within the exclusion areas. In the dogs on leads only scenario, we assume that only dog walkers with dogs on leads (i.e. 43.4% of car visitors and 52.1% of foot visitors) might enter the exclosures and those that have their dogs off-lead remain outside the exclosures.

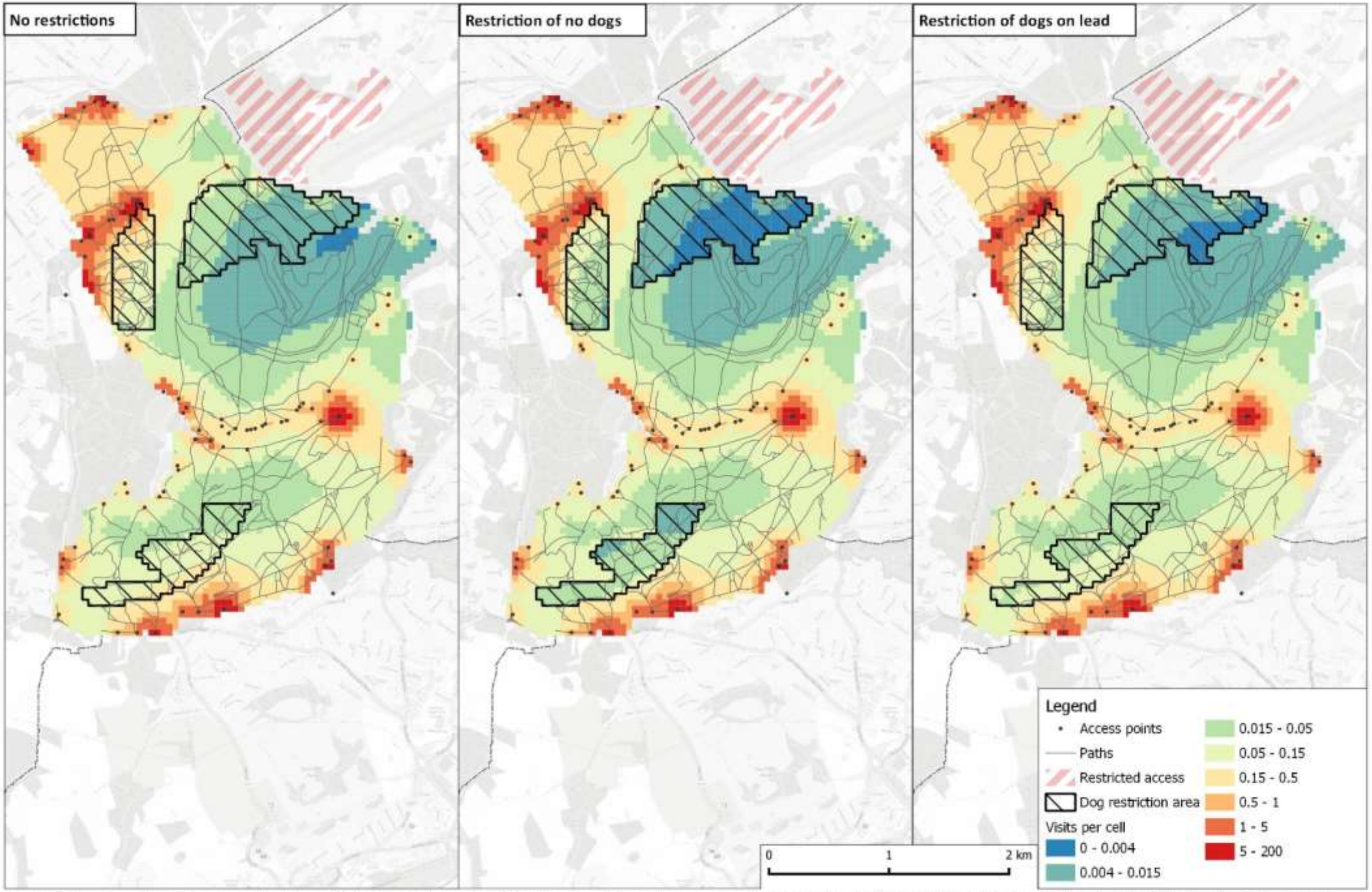
3.15 The resulting maps are shown in Map 7. The black diagonal hatching indicates the hypothetical areas with dog restrictions, and these total 590 grid cells (147.5ha), around 15% of the total cells shown. Over the period 2015-2019 there were 375 Annex I bird territories recorded for the whole of the site shown in Map 7 and 210 of these (i.e. 56%) were within or partly within the black hatched area. In other words, around 15% of the area shown is key breeding areas for over half the birds.

3.16 It can be seen that creating areas where there is no dog walking (the central panel) results in an increase in the green and blue shading, indicating an increase in areas with low levels of access. Notably the areas that are blue (i.e. lowest levels of access) shift in location within the site. The changes are less marked in the right hand panel, where black lines are dogs on leads areas. In this map the visitor distribution still changes, but is less marked. The differences in the maps are summarised in Table 5. It can be seen that with no dog zones, the mean number of people per hour per cell drops from 0.09 to 0.06 in the cells with the most birds (those supporting more than 4 bird territories 2015-2019). For these cells, with more birds, the number with more than 0.5 people per hour drops by nearly half, from 18 to 14, a difference of 6 cells (just 1.5ha).

Table 5: Modelled scenarios at Bourley & Long Valley and implications in terms of bird territories or particular thresholds

Metric	Current	No dogs zones	Zones are dogs on leads only
Mean visits per hour per 50m cell			
In cells with no Annex I bird territories	0.51	0.52	0.51
In cells intersected by at least one Annex I bird territory of any sp.	0.18	0.17	0.17
In cells intersected by ≥4 SPA bird territories	0.09	0.06	0.07
Percentage (and count) of 50m cells			
Cells with >0.5 visits per hour per cell	1% (414)	1% (415)	1% (415)
Cells with >0.5 visits per hour per cell ≥1 SPA bird territory in the cell	0% (130)	0% (125)	0% (126)
Cells with >0.5 visits per hour per cell ≥4 SPA bird territory in the cell	0% (18)	0% (14)	0% (15)

Map 7: Predicted visitor numbers under dog restrictions scenarios at Bourley and Long Valley.



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Key findings

3.17 The modelling highlights that if there was any kind of restriction on dog walking that resulted in dog walkers no longer using the SPA, the reduction in use of the SPA would be substantial. The level of displacement (assuming these people would still require space to walk their pet) would be around 500 dog walks per hour (or nearly 6,000 per day, assuming a 12 hour day, perhaps equivalent to well over 2 million dog walks a year). That would potentially require a huge increase in greenspace provision away from the SPA.

3.18 Even if those dog walkers who let their dog off lead (the % that do so being derived from interview data and the number of interviewees with dogs off lead) were deflected away from the SPA, the displacement would be around 267 dog walks per hour, perhaps roughly equivalent to 3,204 per day or over 1 million per year.

3.19 The mapping shows the bird data to be clumped in space, with some areas clearly holding higher densities of birds and some parts of the SPA holding no territories in recent years. Habitat, access levels and other factors (such as recent fires) will influence the distribution. While restoration of areas that do not support birds is necessary, there are clearly areas where dog related measures could be focussed. Around 29% of the SPA falls into the darker shading used in Map 6, i.e. cells that are intersected by 4 or more bird territories (2015-2019).

3.20 Using our model, we test how access might look in one area (Bourley and Long Valley) if it were zoned with dog controls implemented on around 15% of the site. The models show relatively slight, but clear changes, in particular they show that without any changes to the number of people arriving at the site or how far people go, redistribution can result in the amount of the site that has low levels of access being increased and a shift in location as to which parts of the site have low levels of access.

3.21 Ultimately it seems there are three potential options that have any merit, in terms of having the potential to reduce disturbance to the Annex I birds further and being remotely possible to implement:

- Potential to extend request for dogs to be on paths from February 1st instead of March 1st;

- Dogs on lead when asked, during the bird breeding season only, providing means for enforcement if dogs running out of control;
- Potential for limited areas where dogs excluded, or on lead-only during the breeding season – these would need to be areas with marked concentrations of birds.

Whether dog control would be best implemented alongside other mitigation options (e.g. seasonal access management)?

Introduction

3.22 Following from the previous section we have identified three options which might have any merit. These will not work in isolation and other mitigation options will be necessary alongside.

3.23 An extension of the request for dogs to be on paths from February 1st instead of March 1st would require good communication and engagement with the dog walking community to explain the change, why it is necessary and ensure all dog walkers are aware. It will require changes to printed material, website content etc. and will also need social media promotion to maximise the reach.

3.24 Dogs on leads when asked, during the breeding season only, would also require considerable engagement and communication if ramped up above and beyond the current situation. For this to have any potential for enforcement (e.g. through PSPOs), consultation would be necessary, and this is likely to require careful management to ensure the issues are understood and clearly communicated. There may be some backlash for the Thames Basin Heaths Partnership warden team, and this may mean further staffing required and additional support for the warden team. If the Thames Basin Heaths Partnership staff are involved in enforcement then this may make their role more challenging and harder. It is also important to note that, as the Thames Basin Heaths Partnership staff are employed through Natural England, they would not necessarily have the power to enforce any restrictions, and this may therefore mean a change to how the Thames Basin Heaths Partnership staff are deployed.

3.25 The third option, with the potential for limited areas where dogs are excluded, or on lead-only, would similarly need to be supported with engagement and communication. This option would be a marked change

and would require very clear communication, including signs, maps, on-site warden presence etc. It would require additional staffing. On many UK beaches there are temporary fenced areas where dogs and people are asked not to enter due to the presence of ground-nesting birds (waders and terns). These are signposted and, at key locations, have a warden presence. On the heaths, fencing can sometimes be impractical but key areas could be clearly identifiable onsite including both an overall zonation map and roundels, flags or similar to delineate the zones clearly, implemented seasonally and preferably removed when not applicable if dates aren't given on the markers. It could be possible to provide smartphone apps that inform visitors when they are entering areas where dogs are expected to be on lead (and potentially other information about the site).

3.26 There is clearly potential for marked displacement and shifts within the SPA and this may result in parts of the SPA becoming less suitable for Annex I birds. Legal advice would be necessary as to whether this is compliant with the relevant legislation.

3.27 Paradoxically, the creation of significant parts of the SPA where dogs were excluded could also mean that SANGs become more important, as there needs to be space for people to exercise their pets. The relative importance of SANG provision would depend on the scale of any exclusion areas and the extent to which dog walkers might still visit the SPA and be able to avoid the exclusion areas.

General approaches to engagement with dog walkers

3.28 A clear theme for all three options is the need for high quality engagement and communication. Potential approaches to engage with dog walkers include:

- Seasonal engagement onsite, in the form of face-to-face discussion supported by information resources and potentially giveaways such as pick-up bags with treats and information[18]. Should be conducted at the key times when dog walkers are present, which may include early mornings as well as a range of other times and both weekdays and weekends. Attended static information stands alongside a roaming warden at the same time can work well at some sites with multiple access points.

[18]e.g. https://www.dorsetdogs.org.uk/wagipawdia/pit-stops/ accessed 12th August 2020

- Engagement can continue seasonally or throughout the year to support good community liaison and disseminate key messages. An effective way to engage more deeply can be through events that bring together wardens and walkers, for example for practical management or survey activities, or guided walks specifically for people with dogs (and others who may wish to join them). Guided walks are a good opportunity to discuss issues and to showcase less sensitive routes or identify particularly vulnerable parts of a site, or draw people to use less vulnerable sites. 'Pit stops' or similar drop-in type events will work at sites where there are good numbers of visitors.
- Seasonal wardens on site can give people the necessary information to encourage and produce responsible access. The wardens need to be effective at engaging with people with dogs.
- Online information in the form of website and social media content provides important reach. It is important that this is targeted towards the dog walking audience rather than just from the perspective of the local authority or wildlife organisation. Using social media and online resources can reach people who would otherwise be missed and can also be used to provide further information and to monitor awareness. Facebook is already used by Heathland Hounds and regularly reaches thousands of people, and Dorset Dogs uses it extensively to promote the key messages and engagement events of this project. The use of Instagram by Heathland Hounds is increasing. Social media reaches a wide range of people, as many people will look online for information e.g. when they are first-time dog owners, are thinking about visiting a different area with their dog, or are looking for dog-friendly places to walk; or they may follow weblinks on onsite on posters or signs, which gives them access to further information.
- Printed literature supports key messages. Leaflets are more likely to be picked up if they are offering a positive benefit alongside the key message – for example an invitation to an event, or a map, or an activity such as a craft idea. These can be used not just by wardens or onsite but as a means to engage with local businesses including dog businesses and dog-friendly businesses, as well as other businesses and community groups, visitor centres and libraries for example.
- Ambassador groups consisting of dog walkers on their local sites, set up in a fully consultative manner and with ongoing support. These may for example carry out weekly walks/litter picks and act as an information point and liaise between other site visitors and managing staff. Requires careful management of volunteers that

matches them to their skills, some may have good engagement skills others may have survey or practical skills.
- Provision and promotion of alternative sites (including SANGs) where dog walkers can visit instead. Alternative sites are a positive approach and dog walkers are more likely to comply with restrictions if there are alternatives.
- Clear signage located where it will be seen. To ensure people are well-informed about why, where and when controls are in place, and importantly, also where they are not – for example onsite information about areas where dogs are welcome off-lead or sites nearby where this is the case.

Further mitigation

3.29 Finally, it is important to note that other mitigation approaches will be necessary as dog walkers are not the only type of visitor to the SPA (they accounted for 75% of visitors in the 2018 visitor survey, Southgate et al., 2018) and other activities can also cause disturbance to Annex I birds. Other mitigation measures that are therefore relevant could include:

- Engagement with other recreation users, through SAMM;
- On-site warden presence, through SAMM;
- Provision of SANG;

What could be the triggers for introducing dog controls (e.g. seasonal controls or controls in particular areas)?

3.30 Triggers could be temporal (e.g. a particular time of year), ecological (e.g. the presence of Annex I birds) or relate to visitor behaviour such as levels of use (i.e. above a particular threshold) or a lack of compliance to other controls (e.g. if voluntary approaches are not working).

Temporal

3.31 Timing of the bird breeding season and relevance to mitigation implementation is discussed in paragraphs 3.2-3.3. Currently across most of the SPA dog walkers are asked to keep their pets on the path from March 1st – September 15th. There is some merit in this being extended to February 1st.

Ecological

3.32 An ecological trigger could be the presence of Annex I birds in high densities or suitable habitat. These areas could change over time, for example with forest clearance, but would generally involve areas that could be clearly mapped and identified on the ground. Given the need for these to be clearly identified on signs, interpretation, printed material etc., there would be merit in areas being defined and then reviewed at 5 year intervals to provide some continuity.

3.33 These could be areas holding a particularly high density. Figure 2 shows the frequency distribution for 50m cells in our patches and number of overlapping Annex I bird territories (data from 2015-2019, with point data buffered with circles of different sizes depending on species). Overall:

- 41.7% of cells (13,545 cells) had no bird territories;
- 29.2% of cells (9,478) overlapped with 1 to 3 territories;
- 29.1% of cells (9,450) overlapped with 4 or more territories.

3.34 Checks on the spatial data indicate the 9,450 cells with 4 more territories cover all or part of 84% of the SPA bird territories (2015-2019). These 9,450 cells are equivalent to 2362ha, highlighting the clumped distribution of the bird territories.

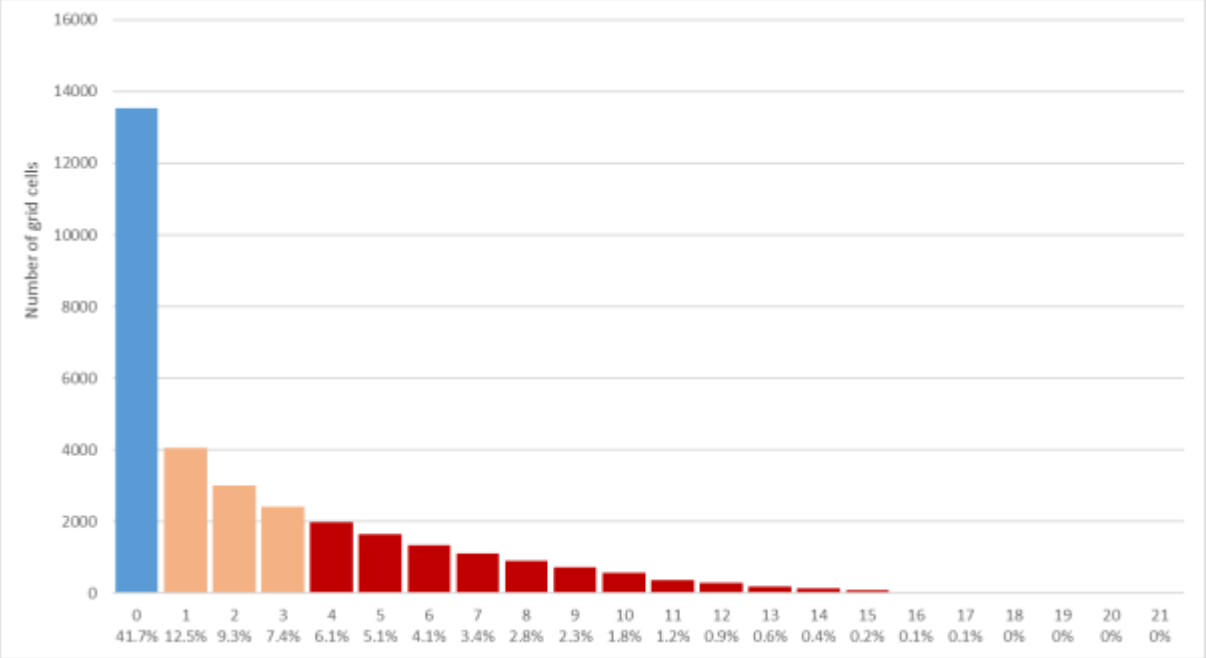

Figure 2: Frequency distribution of values for each count of SPA bird territories per cell from 0 to 21. The percentage of each class as a proportion of all cells is given at the bottom of the axis.

Visitor behaviour

3.35 Thresholds in the numbers of visitors at which disturbance impacts occur are discussed in an earlier section of the report (see para 3.11). These are difficult to apply and are likely to vary according a range of other factors, and as such will be difficult to apply on the ground. Nonetheless, in principle areas that are particularly busy and have the potential to support Annex I birds are areas where controls could be targeted.

3.36 Visitor behaviour is also relevant. The potential for enforcement, for example to require dogs to be on leads when asked, could provide a back-up if other mitigation measures fail. Mitigation at present is a combination of SANG and SAMM, with the approach of SAMM focussed around engagement, awareness raising and promoting particular targeted behaviours. If there was a means of providing greater confidence in SAMM being effective, there may be scope for the emphasis on SANG to be reduced. This is considered in more detail in the SAMM report that sits alongside this one.

Are there any areas in which controls could not be implemented?

3.37 Where there is a complex pattern of access rights it is more often likely that a range of processes would need to be followed to get formal controls. This is one of the reasons why controls that are not formal but rather are linked to specific impacts and that are presented as a request (on signs or through direct or online engagement) and explained may have a better impact.

3.38 Government guidance (Home Office, 2019) provides detail relating to PSPOs and registered commons, town or village greens and Open Access land. On registered common land it is necessary to find out what common land rights exist and the access rights of any users. Consultation on any changes in management is recommended, in line with 'A Common Purpose' (Natural England, 2012). On Open Access Land the general restrictions mean that those using their open access rights must keep their dogs on a short lead of no more than 2 metres between 1 March and 31 July each year and at all times near livestock. If further restriction is required there is again a formal process to undergo.

3.39 The Home Office guidance also highlights that councils will need to consider whether there are suitable alternative public areas where dogs can be exercised without restrictions and this may create further constraints to what is possible in different locations.

What are the potential costs of delivering these potential measures?

3.40 We have identified the following options in previous sections

- Potential to extend request for dogs to be on paths from February 1st instead of March 1st;
- Dogs on lead when asked, during the bird breeding season only, providing means for enforcement if dogs running out of control;
- Potential for limited areas where dogs excluded, or on lead-only, where there are marked concentrations of birds.

3.41 The cost implications for each are summarised in Table 2. Costs are very approximate and indicative only. The second option, dogs on leads when requested, already takes place in some locations and the indicative costings are based on the assumption that a PSPO would provide the option for this to be enforced. The enforcement element is difficult to cost as it may require further wardening by local authority staff or contractors, rather than the Thames Basin Heaths Partnership team.

3.42 Some elements, such as signage, would depend on the number of new signs and the content/design.

Table 6: Very approximate costs for different scenarios relating to dog controls

Item	Cost	Notes
Potential to extend request for dogs to be on paths from February 1st instead of March 1st		
Increased time from Thames Basin Heaths Partnership, e.g. pit stops, warden time	£18,000	Annual cost, assuming £35,000 per warden and 6 seasonal wardens with contract extended by 1 month
Changes to material on web	£2,000	
Changes to signage and interpretation	£12,000	
Changes to printed material, leaflets etc.	£5,000	
Total	**£37,000**	
Dogs on lead when asked, during the bird breeding season only, providing means for enforcement if dogs running out of control		
Increased engagement, through pit stops etc	£8,750	estimated as 3 months warden time (at £35,000 per annum); one off cost
Consultation on PSPO	£15,000	Would depend on the number of local authorities involved, as each would need to undertake separate consultation
Signage and interpretation	£10,000	
Enforcement	?	
Total	**£33,750**	
Limited areas where dogs excluded, or on lead-only, where there are marked concentrations of birds		
Detailed scoping study to identify key areas, liaise with site owners, land managers and other stakeholders	£15,000	
Increased engagement, through pit stops etc	£8,750	estimated as 3 months warden time (at £35,000 per annum); one off cost
Consultation on PSPO	£15,000	Would depend on the number of local authorities involved, as each would need to undertake separate consultation
Signage and interpretation	£15,000	would be entirely dependent on the number of areas, their size, number of sites etc.
Enforcement	?	
Total	**£38,750**	

3.43 Some indicative costs for implementation of PSPOs in different locations are set out below, drawn from local authority papers available on-line. Various examples are listed and reflect a variation in costs:

- Cost of Borough- wide PSPO on the Wirral, indicative capital cost of £50,000 for signage and public information, with additional costs for consultation[19];
- Cost of District-wide PSPO for Huntingdonshire with a range of conditions including requirement to pick-up, dogs to be placed on lead upon request, dogs on leads at all times in specified locations and dogs not allowed in specified locations, estimated at £12,000 for signage, with further costs to cover advertising, media-campaigns and targeted enforcement[20]
- Cost of implementation of dog fouling PSPO at Caerphilly for sports pitches only, estimated at circa £10,000 for signage, with additional costs for officer time in developing proposals and for consultation[21];
- District wide PSPO at Hart relating to fouling on 190 public spaces, with financial implications estimated in the region of £5,000 (to cover the principal costs of signage, awareness raising and education)[22];
- Cost of implementation of PSPO relating to dogs on leads at a cemetery and grounds of a house, estimated at £4,000 for signage, with additional costs for consultation[23].

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19 https://democracy.wirral.gov.uk/documents/s50055015/Dog%20Control%20Public%20Spaces%20Protection%20Order%20Report%20OS%20Committee%20Jan%202019.pdf accessed 10th August 2020

20 https://applications.huntingdonshire.gov.uk/moderngov/documents/s88310/Public%20Space%20Protection%20Order%20-%20Dog%20Control.pdf accessed 10th August 2020

21 https://democracy.caerphilly.gov.uk/documents/s30695/Public%20Space%20Protection%20Order.pdf?LLL=0 accessed 10th August 2020

22 https://www.hart.gov.uk/sites/default/files/4_The_Council/Council_meetings/A_January/20%2001%2021%20Dog%20Fouling%20PSPO.pdf accessed 10th August 2020

23 https://democracy.hyndburnbc.gov.uk/documents/s8735/PSPO%20Report%20Dec%202018.pdf accessed 10th August 2020

3.44 Costs are unlikely to be recouped from fixed penalty notices. For example, figures from Burnham Beeches indicate that during 2019/20, 10 people received formal written warnings and no fixed penalty notices were issued. Overall, since 2015/16, a total of 4 fixed penalty notices have been issued, one of these was unpaid and resulted in a successful prosecution in 2019[24].

3.45 Costs for any control on the Thames Basin Heaths will clearly be dependent on the approach adopted and costs will be location specific.

[24] See https://www.cityoflondon.gov.uk/assets/Green-Spaces/Appendix-1-Evaluation-of-PSPOS-2019-2020.pdf for details

Summary: Scope for implementing dog control measures

There is scope to extend the period at which current controls kick in, shifting the current period 1st March-mid Sept. to 1st Feb-mid Sept. This would ensure the period when Woodlarks are settling on territory was included. Scope for other controls could include dogs on lead when asked, providing the means to enforce (if necessary) the current approach of dogs on paths and potential for limited areas where dogs are excluded or required to be on lead during the breeding season.

We have produced models to show the current distribution of access across the SPA and the numbers of dog walkers on different parts of the SPA. The spatial distribution of visitors and birds are shown alongside each other. The modelling highlights that there are potentially over 2 million dog walkers per annum on the SPA and any control measures that resulted in displacement to other sites would be impossible to manage (and contrary to the aim of this work, would require much more SANG). The modelling demonstrates that there are marked areas with higher densities of Annex I birds and zones within sites could be created where dogs were required to be on leads or excluded entirely. Such zones could mean that there are targeted areas within sites where dog controls are focussed and these would potentially result in a redistribution of people within the site.

Any of the options discussed would not work in isolation and other measures would be necessary in tandem. We highlight the importance of the SAMM, with the on-site presence of rangers, signage and other communication in particular. SANG is also important, particularly if there were to be any deflection away from the SPA.

Triggers could be temporal (e.g. a particular time of year), ecological (e.g. the presence of Annex I birds) or relate to visitor behaviour such as levels of use (i.e. above a particular threshold) or a lack of compliance to other controls (e.g. if voluntary approaches are not working).

Costs are estimated for three different options, these are very approximate but indicate costs of tens of thousands of pounds to implement.

4. Aim 3 - To consider the potential capacity of these measures

What potential scale of avoidance/mitigation would be provided by implementing dog control?

Introduction and approach

4.1 It is complex to equate a dog control approach to a level of avoidance/mitigation. One approach to calculating the amount of mitigation per dwelling (i.e. new house) is to assume that mitigation should absorb all the potential recreational access from that dwelling. This is precautionary (as not all access will be on the SPA by any means). Typical levels of countryside access are 1.7 visits per person per week (this a national average, from O'Neill, 2019); for a household of 2.4 people this equates to 4.08 visits per household per week or 0.58 per day. Therefore, mitigation that resulted in a reduction of 0.58 person visits to the SPA per day would be adequate to avoid impacts from recreation from a single dwelling.

4.2 Another approach would be to compare the introduction of dog controls to the delivery of SANG. Current mitigation delivery (of SANG) is 8ha per 1,000 residents; with a household occupancy rate of 2.4 this means 0.0192ha of SANG per dwelling. 1ha per person per hour is a suitable level of access for a SANG, busier than the Thames Basin Heaths SPA but less busy than an urban park (see Liley et al., 2015 for discussion). A single dwelling SANGs provision of 0.0192ha is therefore equivalent to a visit rate of 0.0192 people per hour or 0.23 visits per day (assuming a 12 hour day).

4.3 We have therefore derived two different figures for per person hourly visit rates to the SPA that relate to mitigation for a single dwelling. The 0.58 figure is precautionary and relates to all mitigation, i.e. if 0.58 visits per hour are deflected from the SPA, this would avoid any impacts from a single dwelling. The 0.23 figure is less and this makes sense as it relates solely to SANG. SANGs are typically part of a mitigation package that also includes SAMM payments, on the assumption that SANGs will not absorb all the mitigation from a particular dwelling that might occur on the SPA.

Application of figures to scenarios in this report

4.4 The above approaches were applied to our estimates of the use of the SPA if there were no dog walkers at all or a reduction in use equivalent to those whose dogs were off-lead (Table 7). If there was a reduction in use of the SPA from the current 1,077 people per hour to 294 people per hour, we estimate this reduction would be equivalent mitigation to around 16,191 dwellings or equivalent to 311 ha of SANG. This gives an indication of the scope of mitigation that might be possible with dog controls. It is important to recognise that such an approach is unfeasible and impractical, as it is based on the assumption that all dog walkers were deflected away from the SPA. Given that these people would still require space to walk their pet, it simply indicates the scale of SANG delivery that such an approach might require.

4.5 The dogs on leads row calculates the effect of dogs being required to be on leads and assumes that a proportion of dog walkers (43.4% of car visitors and 52.1% of foot visitors) would go elsewhere instead to walk their dog. This is again unfeasible and impractical, but illustrates the scale of mitigation, at 423ha of SANG.

Table 7: Equivalent mitigation for different controls

	a) Current people per hour[1]	b) People per hour with control[1]	c) Difference (a-b)	d) People per day (c*12)[2]	e) mitigation (no. of dwellings; d/0.58)	Equivalent SANGs ha (e*.0192)
No dogs at all	1,077	294	783	9,391	16,191	311
Dogs on leads	1,077	655	422	5,064	8,731	168

[1] from Table 3, scaled up by 1.58 to account for group size

[2] assuming a 12 hour day

4.6 Ultimately, if dog control is pursued as an alternative to SANG, the SPA has to continue to provide for dog walkers with no deflection away from the SPA – as this would entail additional greenspace – and no further deterioration of the SPA. The only way this could be achieved is through measures to reduce disturbance caused by dogs, which would relate to:

- Extending the period when dog walkers keep their dogs on the path;
- Requiring dogs to be on lead when asked, as a means to reduce the amount of dogs roaming off path;
- Creating zones within sites where dogs are excluded or required to be on leads during the breeding season.

4.7 It is impossible to calculate the scale of mitigation that these might achieve, but it is likely to be relatively small. The current approach seems to work reasonably well and evidence suggests that it is a relatively small proportion of dog walkers who do not keep their dogs on the path. Wardens already approach such people. Creating zones within sites has the potential to provide some mitigation, as the model shown in Map 7 shows. In this case, creation of a zone covering around 15% of the site results in around 11ha of habitat with high bird densities shifting from being relatively busy to quiet.

4.8 The best way to calculate mitigation capacity for something like the zoned approach would probably be to identify potential areas and collect new data on the level of compliance currently with keeping dogs to paths. The scale of any mitigation could then be perhaps estimated based on expert opinion, involving for example Natural England and others with specialist expertise, such as ornithologists and dog behavioural specialists. The expert opinion could then be based on a specific scenario, where details of communication, warden coverage, enforcement etc were provided alongside the information on current compliance.

Summary: Potential Mitigation Capacity

It is complex to equate a particular dog control approach to a level of avoidance/mitigation. We suggest that mitigation that resulted in a reduction of 0.58 person visits to the SPA per day would be adequate to avoid impacts from recreation from a single dwelling. As this report is seeking alternatives to SANGs, we suggest that a reduction of 0.23 person visits per day to the SPA would be equivalent to the SANG requirement for a single dwelling.

Were mitigation to result in no dog walking at all on the SPA, we suggest this would be equivalent mitigation to around 16,191 dwellings or equivalent to 784ha of SANG. However, this is clearly hypothetical as this would be impossible to achieve (not least because it would require alternative space for something like 2 million dog walks per year to be found).

Predicting the mitigation benefit of more likely and relevant approaches, such as extending the period when dog walkers keep their dogs on the path (by a month), requiring dogs to be on lead when asked or creating zones within sites where dogs are excluded/required to be on leads during the breeding season is much harder. Any mitigation benefit is likely to be relatively small given that there is already strong messaging to keep dogs to paths and the Thames Basin Heaths Partnership staff already patrol and approach dog walkers whose pets are off the path.

5. Aim 4 - To determine how the measure(s) could be enforced

How dog controls could be enforced?

5.1 There are existing signs on the SPA relating to dogs and clear messaging for dogs to stick to paths during the breeding season. The Thames Basin Heaths staff approach dog walkers whose dogs are not under control, but do not actually have any powers to enforce. The communication and engagement approach used by the Thames Basin Heaths Partnership is very much about raising people's awareness about the heaths, their importance and the impacts of particular behaviour. The aim is to encourage people to behave in a particular way and explain why, rather than apply complex enforcement.

5.2 Enforcement clearly relates to the type of control and approach adopted. It is also important to note that where enforcement of controls cannot be adequately carried out some people may ignore the controls, and this can escalate, potentially leading to less respect for reasonable controls elsewhere. The Kennel Club (2016) highlight that controls that are not enforced can be widely ignored.

Legislation

5.3 A range of legislation is relevant.

5.4 **Acceptable Behaviour Contracts (ABC)** are non-statutory measures including warning letters and meetings that can be used to address issues early and reduce the need for more formal measures. ABCs allow authorities to engage with individual owners about their dog's inappropriate behaviour and can set conditions to be met. Whilst a breach of an ABC is not an offence, any breach can be used as evidence for further enforcement.

5.5 **Community Protection Notices (CPN)** are low-level statutory notices that can be used when an owner fails to control their dog. A CPN can be used when an ABC has failed to bring about the required improvement, or when the behaviour is:

- having a detrimental effect on the quality of life of those in the locality
- persistent or continuing in nature

- unreasonable

5.6 A written warning has to be issued before issuing a CPN so the dog owner has an opportunity to address the problems identified. A CPN can be served on the dog owner or the person in charge of the dog or both if, for example, a dog is left with someone who cannot control it.

5.7 Requirements included in a CPN are aimed at preventing or reducing the detrimental effect of the behaviour identified in the notice. They must be reasonable and have specific timescales and can include for example keeping a dog on a lead or prohibiting a dog and owner to access certain areas.

5.8 A breach of a CPN is a criminal offence and could result in a fine of up to £2,500 for an individual dog owner.

5.9 **PSPO**s relate to public spaces and can require:

- Dogs to be on leads
- Dogs to be put on a lead if requested, for example by a police officer, police community support officer or someone from the council
- Exclude dogs from particular places such as farmland or parts of a park
- A limit on the number of dogs per person (this applies to professional dog walkers too)
- Clearing up after your dog
- Dog walkers to carry a poop scoop and disposable bags

5.10 Local councils are responsible for making PSPOs. In addition, section 71 of the Anti-social Behaviour, Crime and Policing Act 2014 allows bodies other than local authorities to make Public Spaces Protection Orders in certain circumstances by order of the Secretary of State, for example the Corporation of London.

5.11 PSPOs restrict what people can do and how they behave in public spaces, and the guidance (Home Office, 2019) is clear that restrictions should focus on specific behaviours and are proportionate to the detrimental effect that the behaviour is causing or can cause, and are necessary to prevent it from continuing, occurring or recurring. There are particular legal tests, that focus on the impact that anti-social behaviour is having on victims and

communities. A PSPO can be made only if there are reasonable grounds that the activity or behaviour concerned:

- Has had, or is likely to have, a detrimental effect on the quality of life of those in the locality;
- Is, or is likely to be, persistent or continuing in nature;
- Is, or is likely to be, unreasonable; and
- Justifies the restrictions imposed.

5.12 It may therefore be difficult for a local authority to justify PSPOs as mitigation for new housing.

5.13 Ignoring a PSPO can result in a £100 fixed penalty notice or a fine of up to £1,000 if the case goes to court. Where PSPOs are in place there must be signs to show where they relate to.

Signage and communication to dog walkers

5.14 There is scope for greater promotion of code of conduct and what is expected from dog walkers. At present there is no particular code of conduct for dog walkers specifically and the only code of conduct on the Thames Basin Heaths Partnership website is the Countryside Code[25], which states that dogs should be under effective control and poo bagged and binned. Examples of dedicated codes of conduct for dog walkers on other heaths include the doggy-do code used in Dorset[26] and the Pebblebed Dog Code[27].

Warden presence

5.15 The presence of a warden or someone with the power to enforce any control measure will clearly be a key step to enforcement. Previous sections of the report (see para 3.24) note that were PSPOs to be introduced, these may not be enforceable by the Thames Basin Heaths Partnership as they are hosted by Natural England rather than a local authority or local authority contractor. This may therefore require an additional body for enforcement or some kind of restructuring of the way warden provision is undertaken.

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[25] See https://www.tbhpartnership.org.uk/content/uploads/2020/07/Countryside-code-poster-2020.pdf accessed 14th August 2020
[26] See https://www.dorsetdogs.org.uk/wagipawdia/doggy-do-code/ accessed 14th August 2020
[27] See https://www.southeastdevonwildlife.org.uk/wp-content/uploads/2019/02/Pebblebed-Heaths-dog-walking-code.pdf accessed 14th August 2020

5.16 The presence of wardens could in itself be sufficient to promote behaviour change and it may be possible for the wardens to collect information and evidence to support further action with individual owners.

Summary: Enforcement

There are existing signs on the SPA relating to dogs and clear messaging for dogs to stick to paths during the breeding season. The Thames Basin Heaths Partnership staff already approach dog walkers whose dogs are not under control, but do not actually have any powers to enforce. As such the current approach is one where there is clear communication as to what is expected and this is supported through engagement and awareness raising.

Legislative approaches to enforce do exist and the role of Acceptable Behaviour Contracts, Community Protection Notices and Public Space Protection Orders are considered. Statutory enforcement would be complex to establish, could antagonise visitors and risk undermining the achievements by the Thames Basin Heaths Partnership to date.

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Appendix 1: Technical details relating to models and how models constructed

6.1 We have used models to map visitor use across the SPA. These provide us with a way of checking the effect of different visitor management scenarios, and a way of checking how these might influence the number of people passing through bird territories.

Modelling datasets used

6.2 The approach taken considers a complex methodology using a wide range of datasets and previous models to consider the likely outcome from possible actions. Existing datasets and previous models used were:

- Existing data produced by Footprint Ecology on access points, restricted access areas and discrete accesible patch areas (Liley et al., 2006).
- Parking information and vehicle count data provided the Thames Basin Heaths Partnership.
- SPA bird data provided by 2Js Ecology.
- Existing model of the penetration distance for visitors into the sites produced by Footprint Ecology (Liley et al., 2006).
- Existing model of the relationship between number of visitors arriving on foot and the numbers of housing in close proximity produced by Footprint Ecology (Liley et al., 2006).
- Interview data of visitors on sites, most recently produced by EPR (Southgate et al., 2018).

SPA accessible area, patches and use of a 50m grid

6.3 The SPA has a large number of access points, which have been previously mapped, including by Footprint Ecology (Liley et al., 2006). These data were checked against the latest path OSM network and aerial images, resulting in a further 13 new foot only access points added -see Map A1.

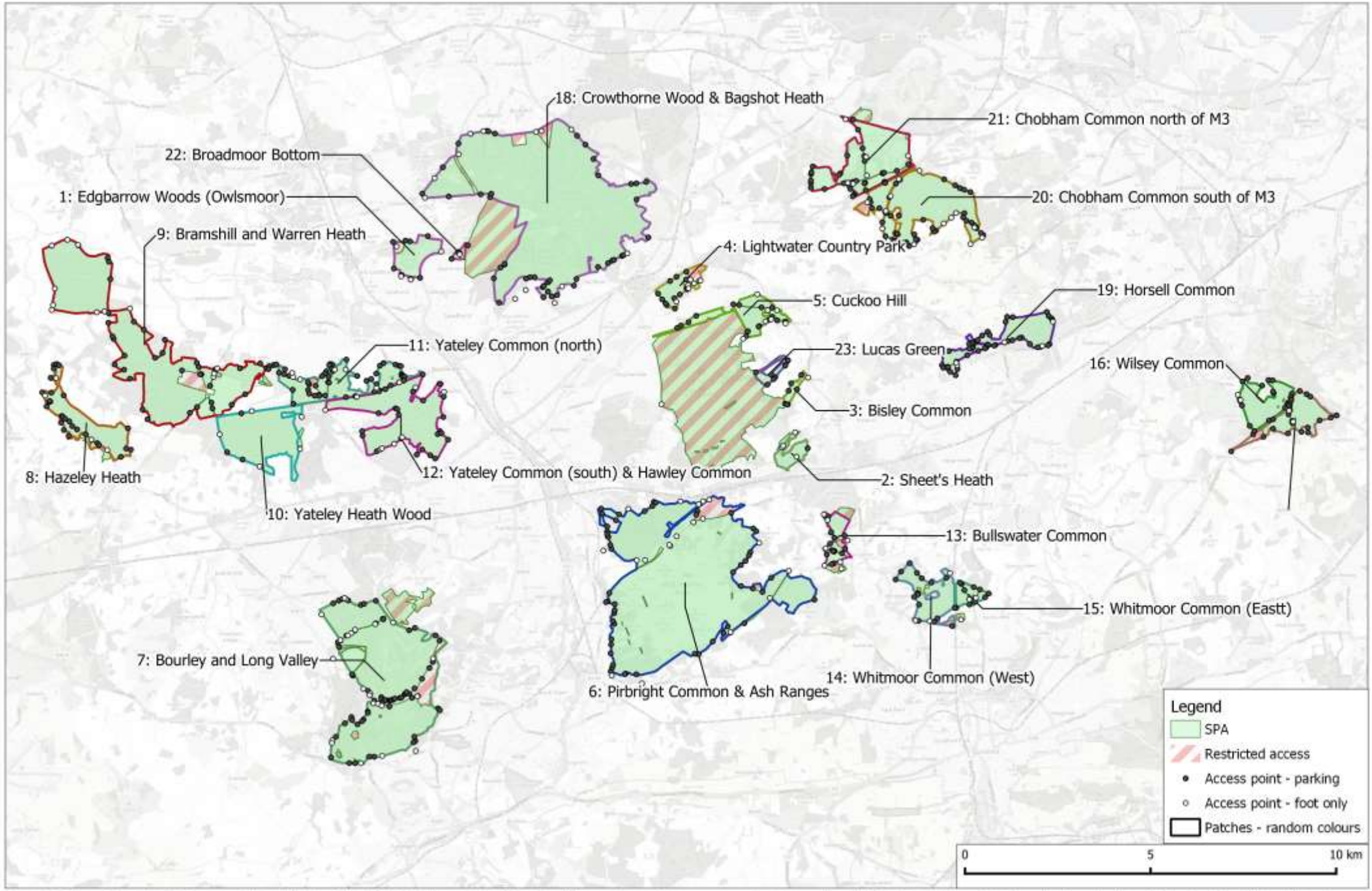
6.4 There are also a number of areas where there is no public access, for example due to military use, and these areas were also mapped previously in 2006 and are shown on Map A1.

6.5 As part of the work in 2006 we split the SPA into discrete patches that represented single discrete areas that are publicly accessible. Some of these

extend beyond the SPA boundary and the boundaries of patches were defined by barriers to access such as private land or major roads (e.g. Chobham Common, considered as two separate patches, north and south of the M3).

6.6 We used a 50m grid overlaid across the accessible patches as the basis for our models. This matches the grid used in previous work (Liley et al., 2006) and totalled 32,473 cells. However, it should be noted that a grid cell was classified as part of a patch based on any sized intersection, so a large number of peripheral grid cells are included based on just a small area of the patch included. Each grid cell was assigned to a patch. Where a grid cell covered more than 1 patch, the patch which formed the largest intersecting area was assigned to the whole cell.

Map A1: Map of the individual discrete access patches across the SPA used in analysis.



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Data on parking locations

6.7 The parking locations around the SPA were previously mapped by Footprint Ecology (see Liley et al., 2006 for details). This dataset is now maintained by the Thames Basin Heaths Partnership who undertake annual vehicle counts. These datasets include 160 main parking locations which provide access to the SPA. The explicit point location of these locations were mapped in GIS and assigned to a patch.

6.8 The capacity of each of these locations, in terms of the number of standard car parking spaces, has been estimated by TBHP staff. However, these estimates were made several years ago, and in recent years especially, in some parking locations the observed vehicles counts have exceeded their estimated capacity. We therefore re-evaluated capacities and for each parking location have used the maximum of either the original estimate, or maximum from the observed vehicle count data.

6.9 Counts of the number of vehicles in parking locations across the SPA were initially conducted by Footprint Ecology (Fearnley, 2013), but in recent years this has become part of the routine monitoring conducted by the Thames Basin Heaths Partnership staff (Panter, 2019). Data were provided for analysis for 2018 to 2019, but supported with additional data from our previous reporting for the TBHP of the 2017 data (Panter, 2019), collected by the TBHP staff.

6.10 Each year's data consisted of several counts spread over the year as summarised in Table 8. Two counts were always conducted in June, July and August. Typically, all 160 parking locations were counted, but this varied over time. For the later modelling approaches of parking distribution, we only used the spring/summer focus months (green rows in Table 8).

Table 8: Summary of the number of transect counts conducted in each month over the three years, with the number of parking locations to be surveyed given in brackets afterwards. Green rows highlight those survey months which are the focus of TBHP for the spring/summer and blue rows those outside this period.

Month	2017	2018	2019
January	1 [151]	1 [155]	1 [149]
February	1 [151]		1 [113]
March	1 [155]	1 [148]	1 [152]
April	1 [155]	1 [149]	1 [152]
May	1 [159]	1 [157]	1 [151]

Month	2017	2018	2019
June	2 [301]	2 [308]	2 [300]
July	2 [309]	2 [307]	2 [303]
August	2 [304]	2 [300]	2 [311]
September	1 [154]		
October	1 [155]		
November	1 [152]		
December	1 [155]		

SPA bird data

6.11 The SPA bird data for the three species (Dartford Warbler, Woodlark and Nightjar) were provided by 2Js Ecology, who conduct the annual bird monitoring. The data were provided as point locations for territory centres and covered the SPA and some peripheral areas for the five years, 2015-2019.

6.12 The point locations of territory centres were buffered to create polygons which could be used to consider a wider area and core part of the territory used by the birds. We used a variable distance buffer for each species; Dartford Warbler 50m buffer, Woodlark 100m, Nightjar 150m for a territory (in line with other similar modelling, e.g. Liley, Panter, & Underhill-Day, 2016).

6.13 Using the 50m grid of the SPA accessible patches, the number of territories intersecting each cell was counted. This provided a figure for the number of SPA bird species per 0.25 ha cell (50m x 50m grid squares). The overall average across all cells was 2.6 SPA birds per cell (see Table 9).

Table 9: Mean number of SPA bird territory areas counted within each 50m cell (cells are 0.25 ha) Bottom three values for each site are highlighted in blue and top three in red.

Patch ID	Patch name	Number of grid cells	Mean number of variable buffered SPA territories intersecting cell
1	Edgbarrow Woods (Owlsmoor)	427	1.5
2	Sheet's Heath	232	1.3
3	Bisley Common	99	**0.0**
4	Lightwater Country Park	314	1.7
5	Cuckoo Hill	571	2.3
6	Pirbright Common & Ash Ranges	6561	**3.4**
7	Bourley and Long Valley	3769	2.1

Patch ID	Patch name	Number of grid cells	Mean number of variable buffered SPA territories intersecting cell
8	Hazeley Heath	805	2.6
9	Bramshill and Warren Heath	3660	2.1
10	Yateley Heath Wood	1227	1.5
11	Yateley Common (north)	864	2.6
12	Yateley Common (south) & Hawley Common	1511	2.6
13	Bullswater Common	309	**3.5**
14	Whitmoor Common (West)	634	**0.5**
15	Whitmoor Common (Eastt)	193	2.6
16	Wilsey Common	525	**1.1**
17	Ockham and Boldermere	585	1.8
18	Crowthorne Wood & Bagshot Heath	6349	2.1
19	Horsell Common	717	2.0
20	Chobham Common south of M3	1623	**4.2**
21	Chobham Common north of M3	1291	**5.7**
22	Broadmoor Bottom	53	**0.0**
23	Lucas Green	154	2.0
			2.6

6.14 It should be noted that only the mapped bird data were used. There were gaps in survey coverage, and coverage differed between years, as summarised in Table 10.

Table 10: Gaps in survey coverage for Annex I birds by year and estimates of likely number of territories missed, information provided by 2Js Ecology.

Year	Note
2015	Ash to Brookwood: an additional two Woodlark territories estimated at Mytchett Place.
	Castle Bottom to Yateley and Hawley Commons: an additional five Nightjar territories estimated, comprising three on Yateley Heath Wood and two on peripheral sites.
	Whitmoor Common: an additional two Nightjar territories estimated.
2016	Whitmoor Common: an additional two Nightjar territories estimated
	Ash to Brookwood: two additional Nightjar and two Woodlark territories estimated to allow for non-coverage of Cobbett Hill.
	Castle Bottom to Yateley and Hawley Commons: two additional Nightjar territories estimated on peripheral sites.

Year	Note
	Colony Bog and Bagshot Heath: two additional Nightjar and six Dartford Warbler territories estimated to allow for non-coverage of Lightwater CP. Also four additional Woodlark and 38 Dartford Warbler territories estimated due to incomplete coverage of Pirbright Ranges.
2017	Colony Bog and Bagshot Heath: due to incomplete coverage of Pirbright Ranges these counts are too low by an estimated four Woodlark and 70 Dartford Warbler territories
	Whitmoor Common: parts of the common were not covered for Nightjars and a further two territories have been estimated.
2018	Ash to Brookwood: two Nightjars and one Woodlark have been estimated for non-coverage of Cobbett Hill.
2019	Ash to Brookwood: coverage of Nightjars was incomplete. A further ten territories were estimated for Ash RDA, two for Cobbett Hill and one for Mytchett Place.
	Colony Bog and Bagshot Heath: ongoing access restrictions resulted in coverage of all three species being incomplete on the RDA. A further five Nightjar territories, four Woodlark territories and 68 Dartford Warbler territories were estimated for the area.

Modelling access within sites

6.15 We generated models to distribute visitor use across our grid cells based on the data from visitor interviews on how far people roam from access points.

6.16 Our starting point was to predict the number of visitors entering our patches at each access point. We used the average number of vehicles from the car parking transect dataset and derived an estimate for the number of visitors on foot at every access point, based on local housing. This estimate was based on the modelled visit rates produced by Liley et al. (2006) which provide a formula based on the number of residential properties in a 2km distance band around the access point to estimate number of visitors accessing on foot.

6.17 To model how visitors may spread from each access point, we used the same approach as Liley *et al.* (2006). This was based on the distances visitors roam from access points as collected from visitor survey data, which provided a 'decay curve' of the percentage of visitors that reach different distances.

6.18 We then calculated the number of cells at each given distance from the access point in order to spread visitor use (as in Liley et al., 2006). This model

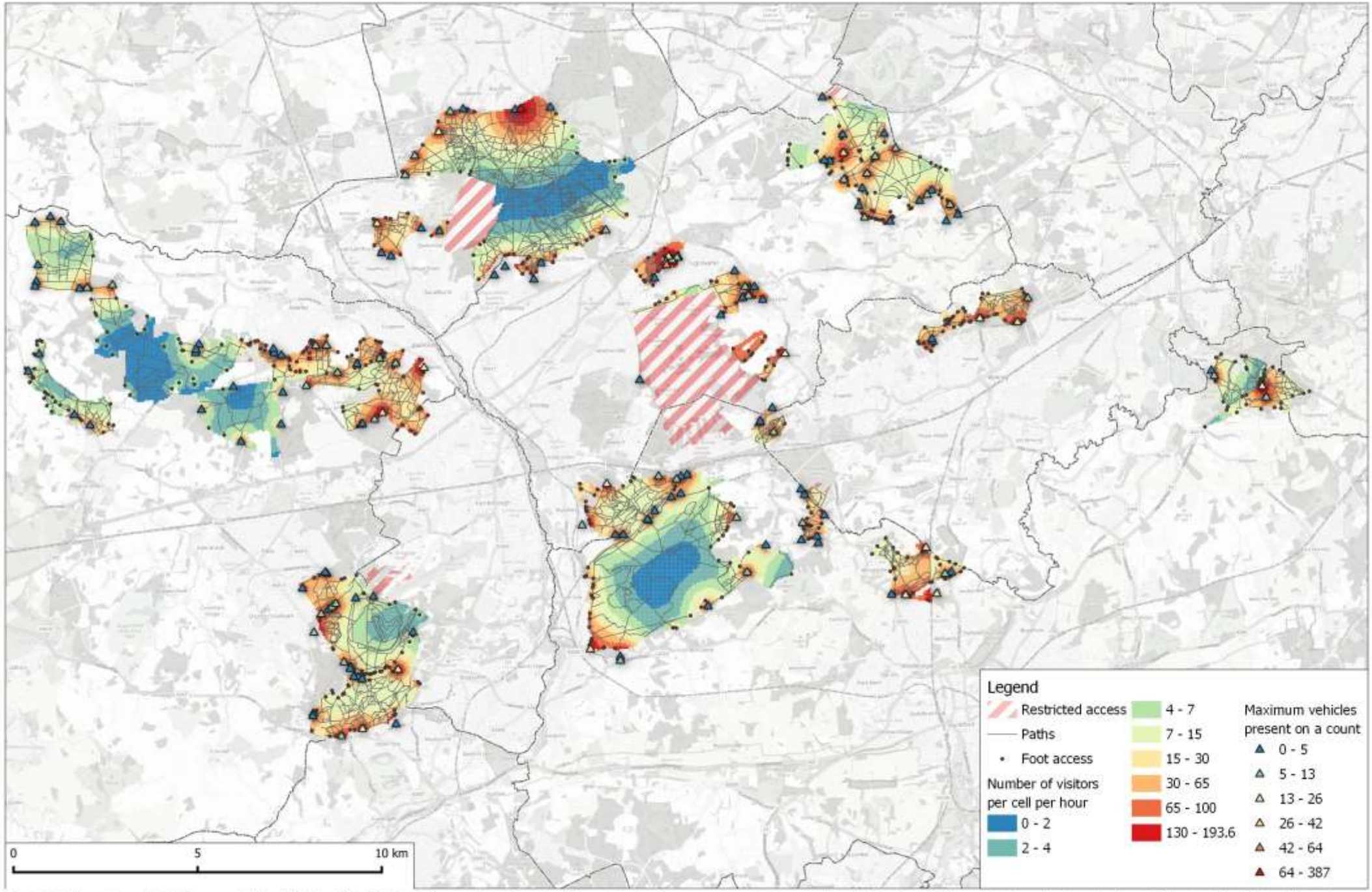
therefore assumes that visitors fan out from each access point in an even distribution, regardless of the path network, topography etc. It assumes all parts of the site are equally accessible.

Model predictions

6.19 The modelling was therefore set up such that changes to visitor numbers, changes to parking (numbers of spaces at different locations), and which parts of the site are accessible to visitors, could be manipulated and the resulting distribution of visitors within the site predicted.

6.20 Three separate reports use these models. The dog control study considers the effect of reduction in visitor use or changes in distribution within sites (e.g. through zoning). In the parking report we consider the effect of changing parking locations and spaces. In the access management report we use our models to check ranger deployment and time.

Map A2: Predicted number of visitors per cell per hour based on maximum levels of access (from max count of vehicles).



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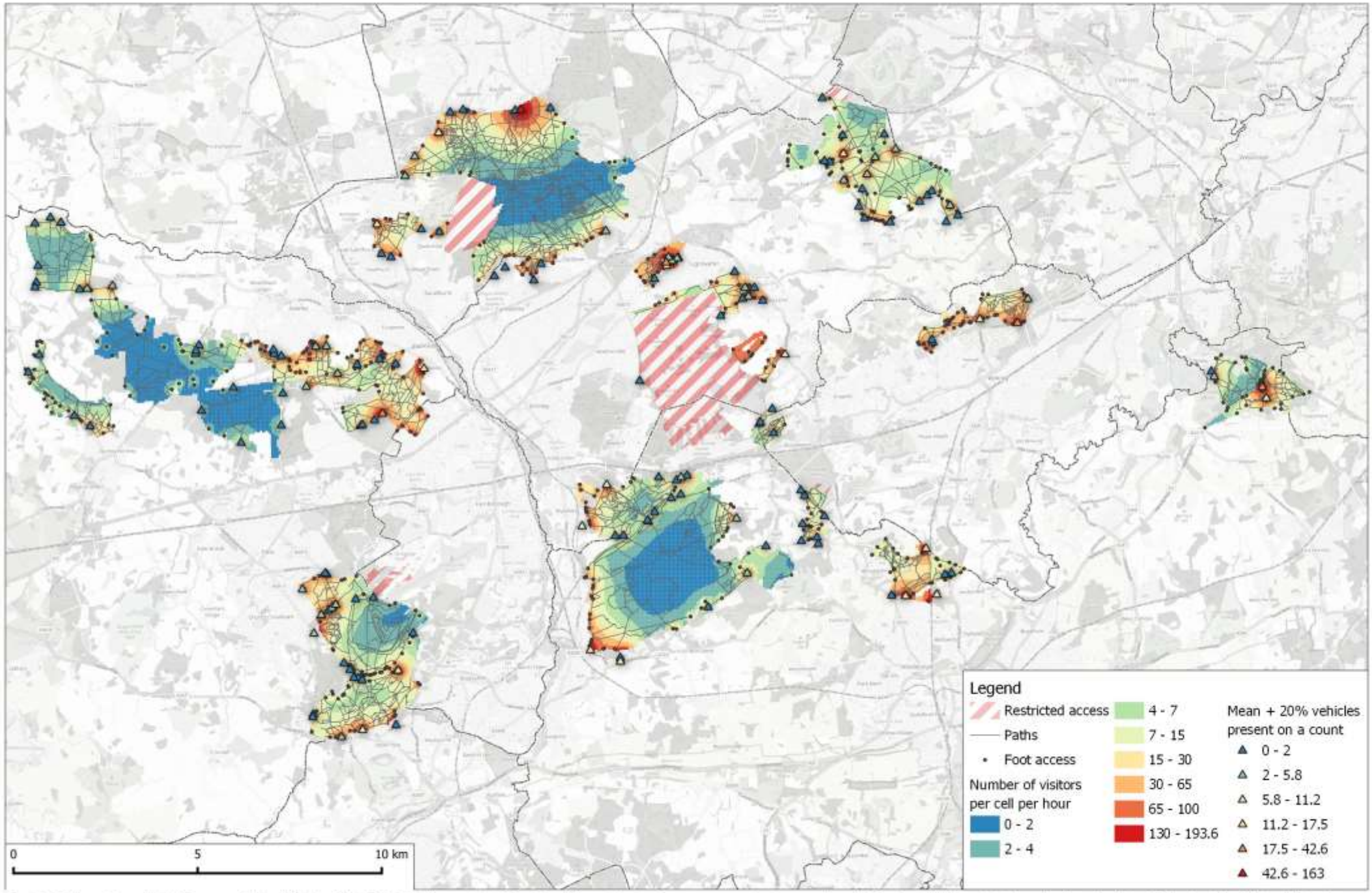
Map A3: Predicted number of visitors per cell per hour based on mean + 20% levels of access (from mean + 20% count of vehicles).



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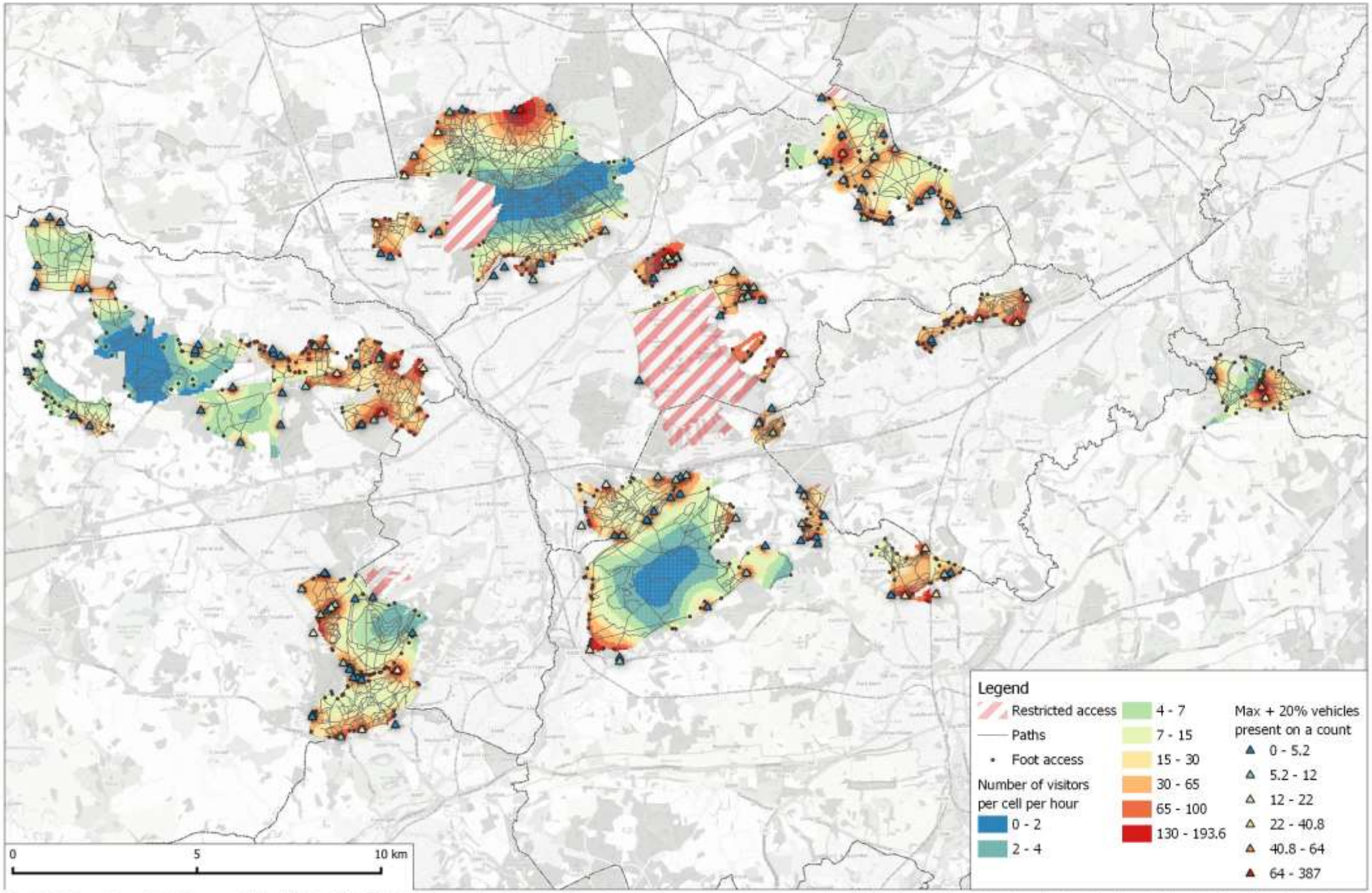
Map A4: Predicted number of visitors per cell per hour based on maximum + 20% levels of access (from max + 20% count of vehicles).



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