



**FOOTPRINT  
ECOLOGY**

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Designing,  
implementing and  
monitoring strategic,  
local plan led mitigation  
schemes for European wildlife sites

Rachel Hoskin, Senior Planning Ecologist, Footprint Ecology



# Definition

*“A **strategic solution** is a positive response to a regularly occurring issue, where research and evidence enables the development of a robust solution that can be consistently and fairly applied through its inclusion in relevant plans and strategies that shape project level delivery. A strategic solution is one which results in better outcomes for the natural environment than would occur through a case by case approach, and one which should also deliver wider benefits and efficiencies as a result of its application.”*

**Rachel Hoskin, Footprint Ecology, 2017**

# Presentation Overview

- The evolution of the strategic approach: the scale of housing growth in England
- The development of early strategic approaches – TBH and Dorset Heathlands
- Growing resource of good practice examples
- Strategic mitigation schemes presenting opportunities for cross LPA boundary working at a landscape scale
- Strategic mitigation scheme development
- Strategic mitigation scheme implementation
- Strategic mitigation scheme monitoring
- Strategic mitigation scheme refinement over time

The presentation uses a range of examples from **Footprint Ecology's** work with local planning authorities, Natural England and other stakeholders to develop strategic solutions that protect European sites into the long term whilst allowing sustainable housing growth.

BLOOR HOMES  
SOLUTIONS

# Pressure for housing growth

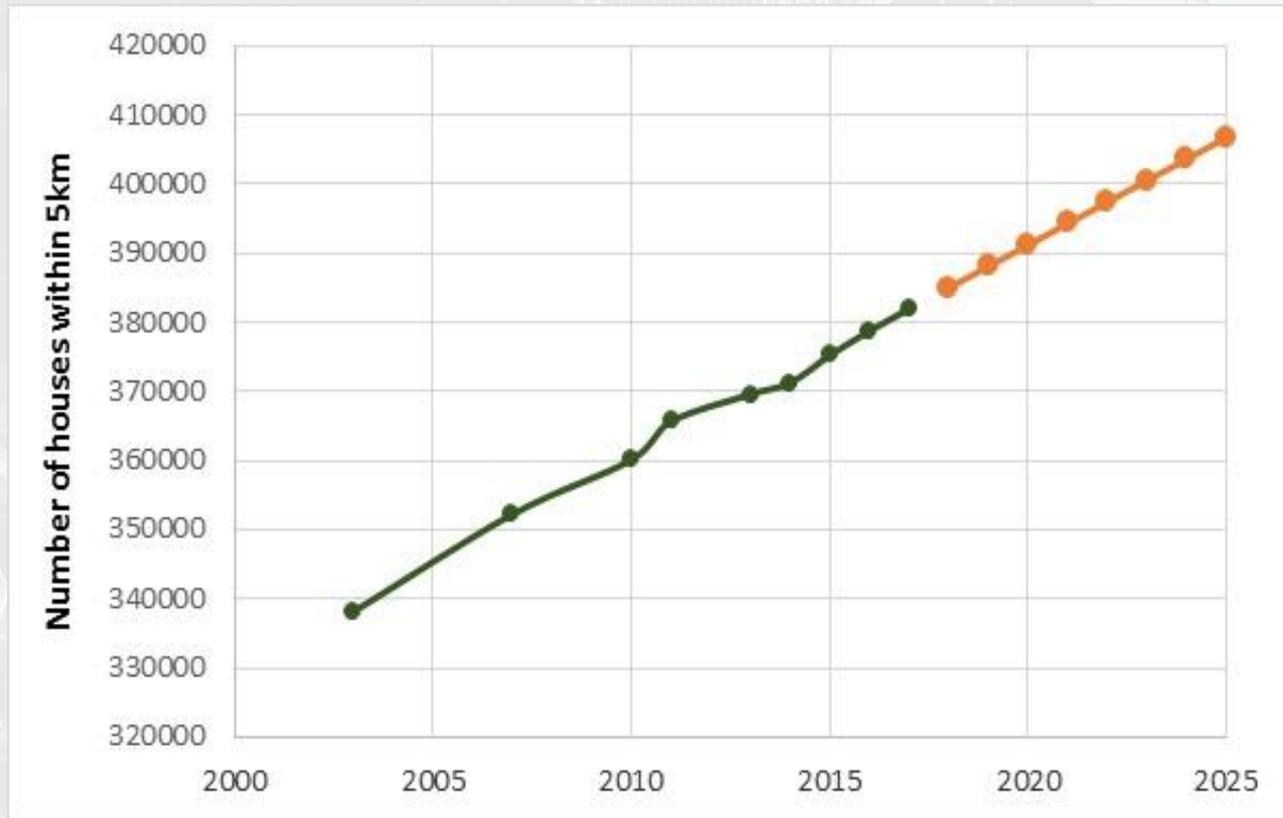
The Government's Housing White Paper was published in February 2017. Some of the headlines from the paper are:

- Since the 1970s on average 160,000 new homes per annum have been built
- 225,000-275,000 is the current estimate of annual housing necessary for our population
- The Government is supporting LPAs and developers to simplify and streamline planning and accelerate house building.



# Epping Forest example

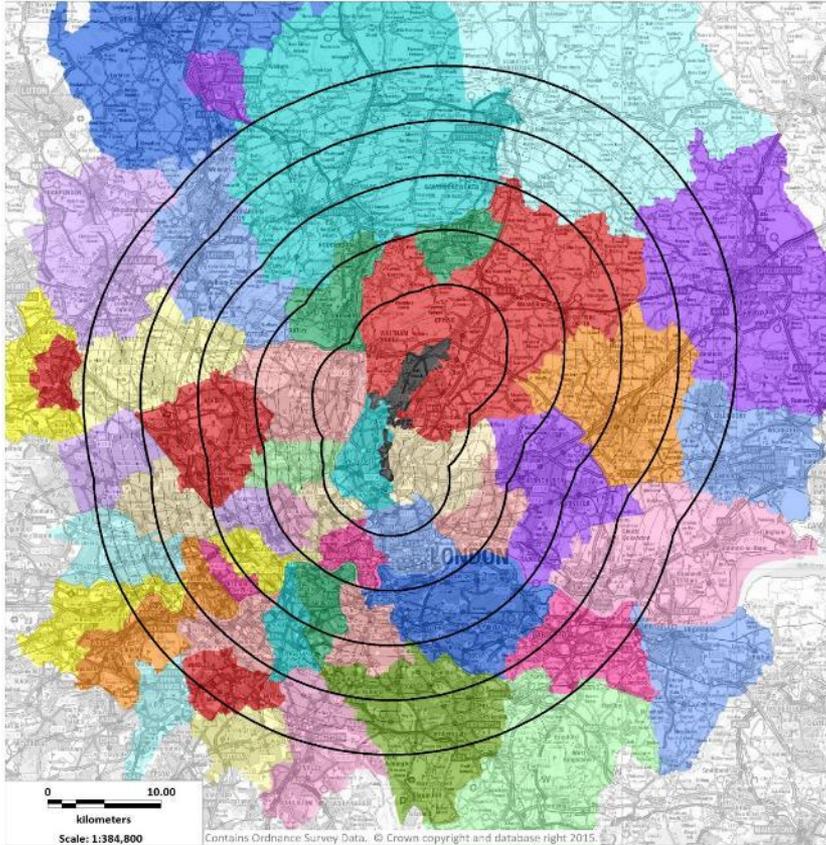
- 11% change in the no. of houses within 5km between 2003-2017



- By 2030 25% increase is predicted from 2003

# Epping Forest example

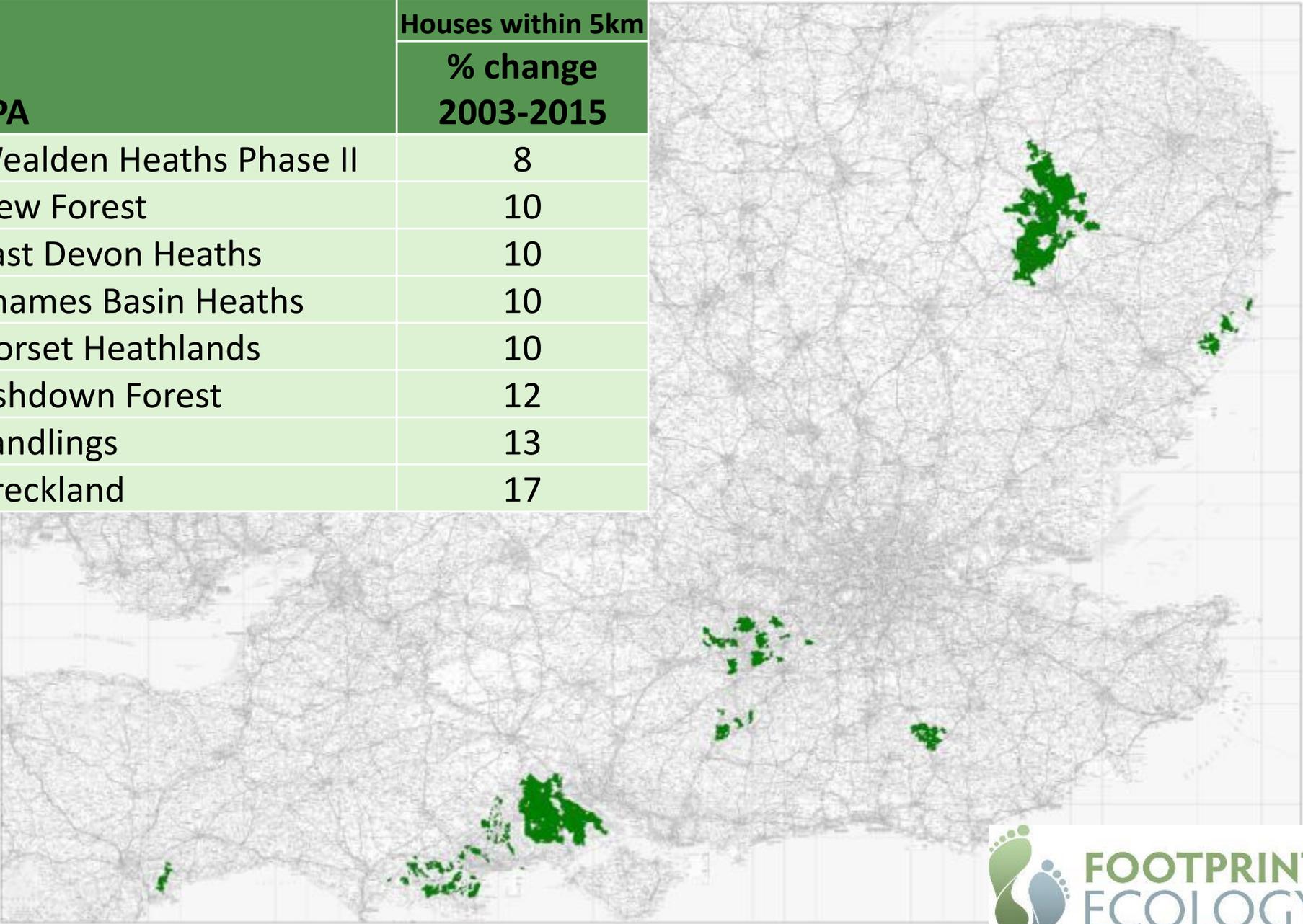
Map 1: Overview



Epping Forest SAC	Barking and Dagenham	Epping Forest	Newham
1km buffers	Barnet	Gravesham	North Herts
5km intervals in bold (to 25km)	Basildon	Greenwich	Redbridge
	Bexley	Hackney	Richmond upon Thames
	Brent	Hammersmith & Fulham	Sevenoaks
	Brentwood	Haringey	Southwark
	Bromley	Harlow	St. Albans
	Broxbourne	Harrow	Stevenage
	Camden	Havering	Sutton
	Chelmsford	Hertsmere	Three Rivers
	City of London	Hounslow	Thurrock
	Westminster	Islington	Tower Hamlets
	Croydon	Kensington & Chelsea	Uttlesford
	Dartford	Kingston upon Thames	Waltham Forest
	Ealing	Lambeth	Wandsworth
	East Herts	Lewisham	Watford
	Enfield	Merton	Welwyn Hatfield

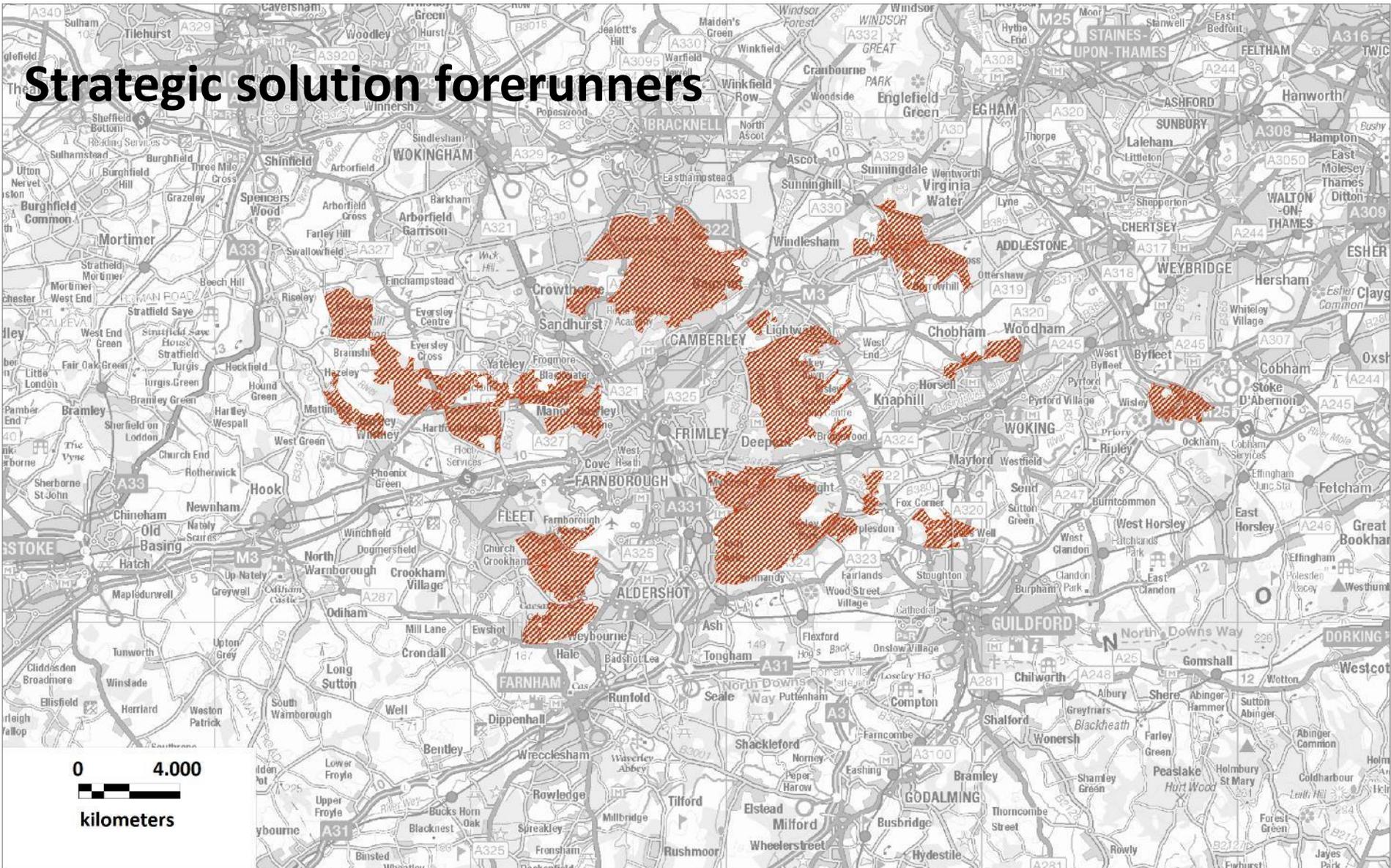
- Housing growth across wide areas, difficult to gain an overview or predict risks for designated sites

SPA	Houses within 5km
	% change 2003-2015
Wealden Heaths Phase II	8
New Forest	10
East Devon Heaths	10
Thames Basin Heaths	10
Dorset Heathlands	10
Ashdown Forest	12
Sandlings	13
Breckland	17



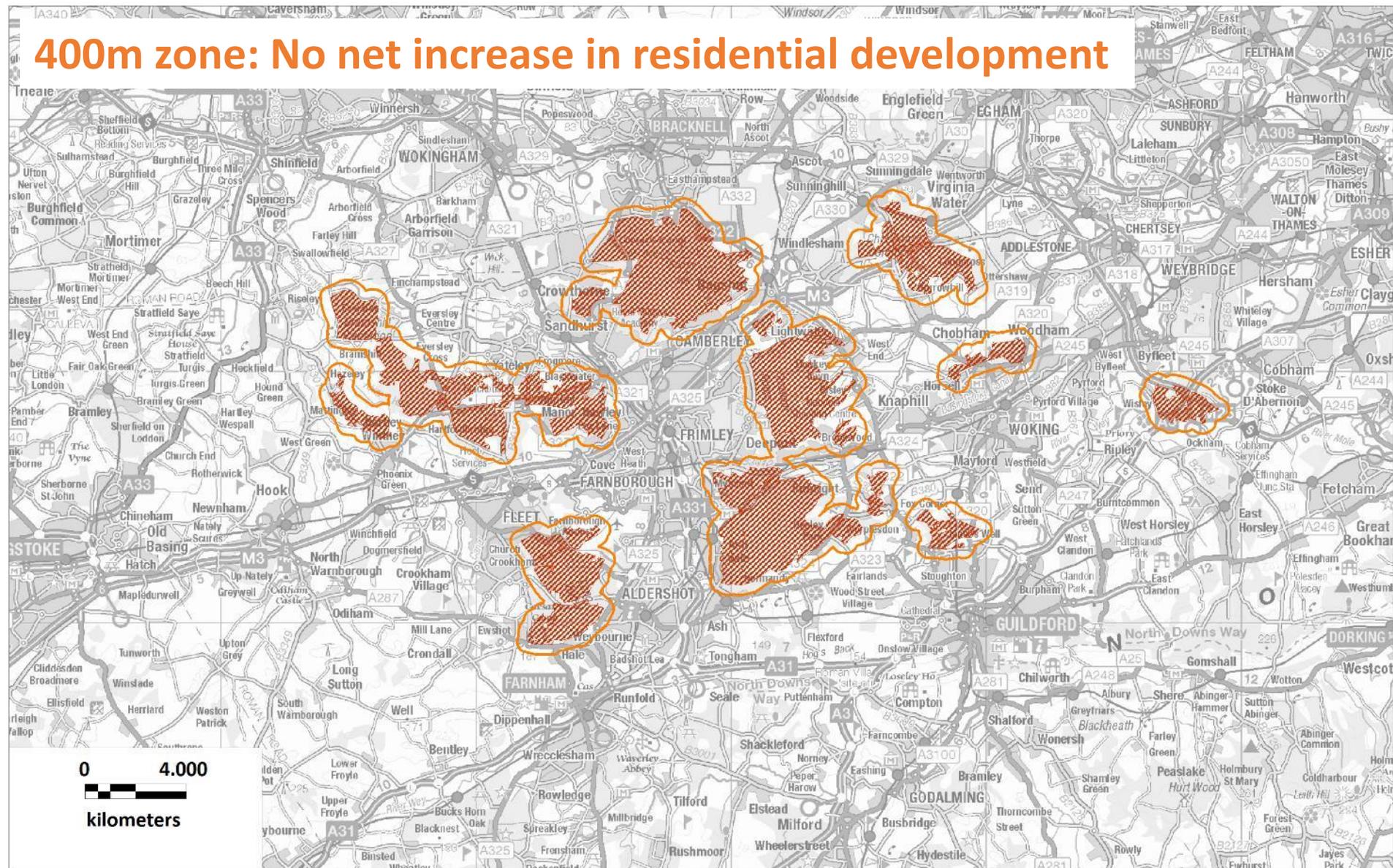
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# Strategic solution forerunners



Thames Basin Heaths SPA

# 400m zone: No net increase in residential development

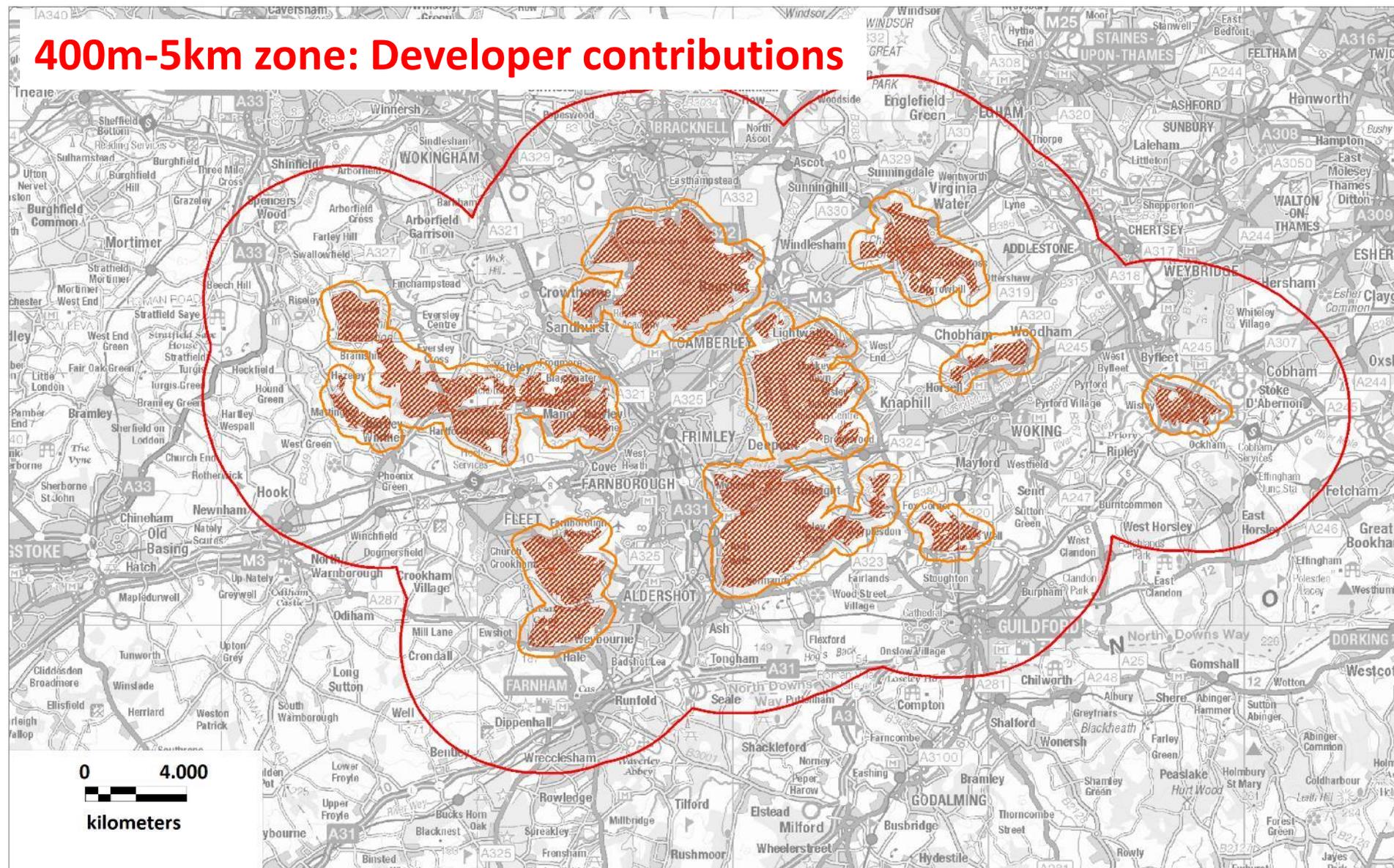


Thames Basin Heaths SPA



400m buffer

# 400m-5km zone: Developer contributions



-  Thames Basin Heaths SPA
-  400m buffer
-  5km buffer

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Designated site boundaries downloaded from the Natural England website. © Natural England.

# More housing brings more people and a range of pressures



# Disturbance



Avoidance  
of  
Suitable  
habitat



Direct  
mortality



**Pop  
Impact?**

Stress

Behavioural  
response





# Importance of Access

- Health & well being
- Inspiration and spiritual
- Engagement/support for nature conservation





# The legal framework & European sites

- European sites afforded strict protection in the planning process (Habitats Regulations, NPPF)
- Local authority plans are therefore the subject of Habitats Regulations Assessment
- Development can only proceed if adverse effects on integrity can be ruled out (or exceptional overriding circumstances)
- Local planning authorities therefore find solutions to ensure impacts can be avoided, or effects minimised to prevent any adverse effect

# Designated sites are a fundamental part of our natural capital

## Lawton Principles – Making Space for Nature 2010

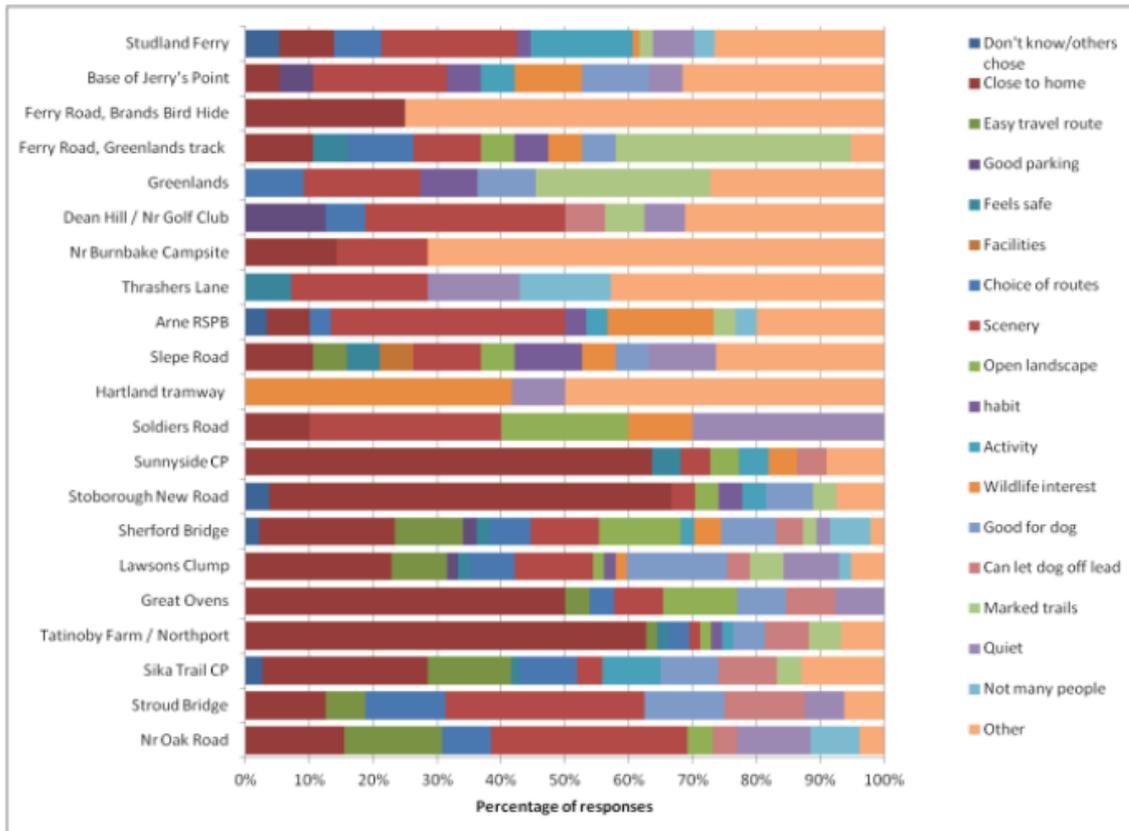
- Better management of existing sites
- Bigger sites
- More sites
- Enhance connectivity
- Create new corridors

*Local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three' [NPPF para 152]*



# A need for data and evidence....

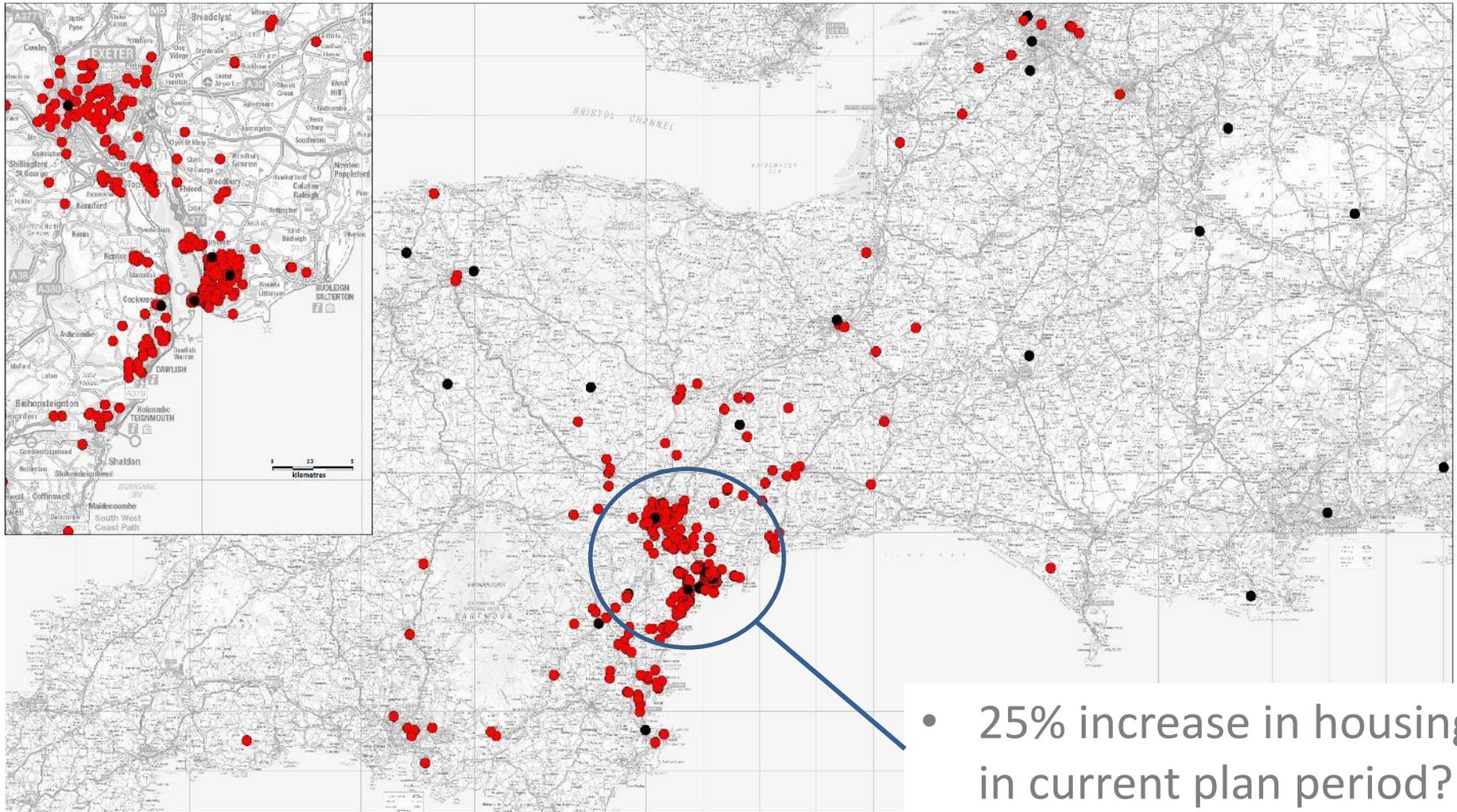
- Change is gradual
- Impacts can require long term perspective to understand
- Solutions are potentially difficult to get right

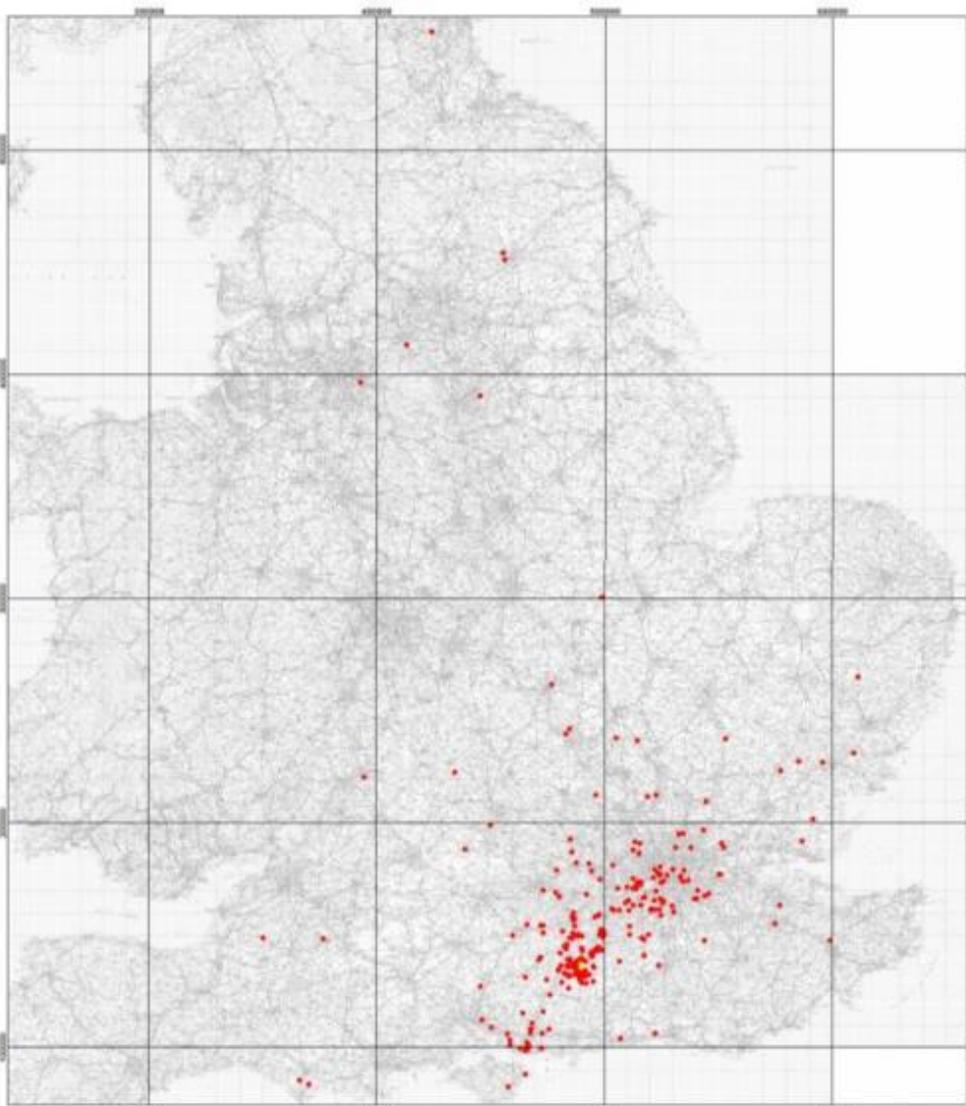


Key factors for recreation on sites tend to be:

- Close to home
- Scenery
- Good for dog
- Easy parking

## Home postcodes from visitor surveys undertaken in February and March 2010 (from Liley, Fearnley & Cruickshanks 2010)





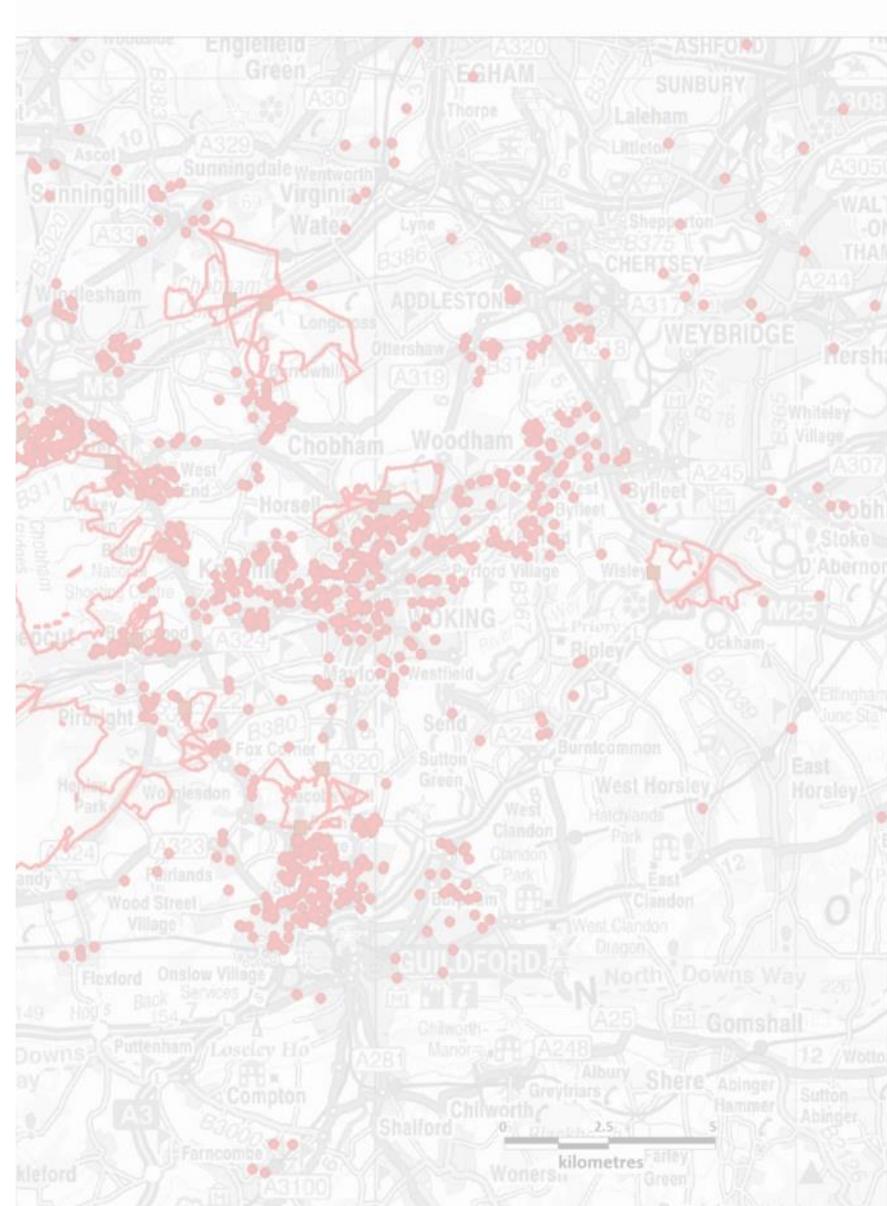
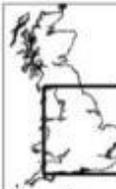
**Map 2a: Home postcode of all interviewees**

Visitor flow monitoring and analysis at Hindhead Common and the Devil's Punchbowl

  Hindhead Common & Devil's Punchbowl  
 Interviewee home postcode

4 January 2010  
 Scale 1:2200000

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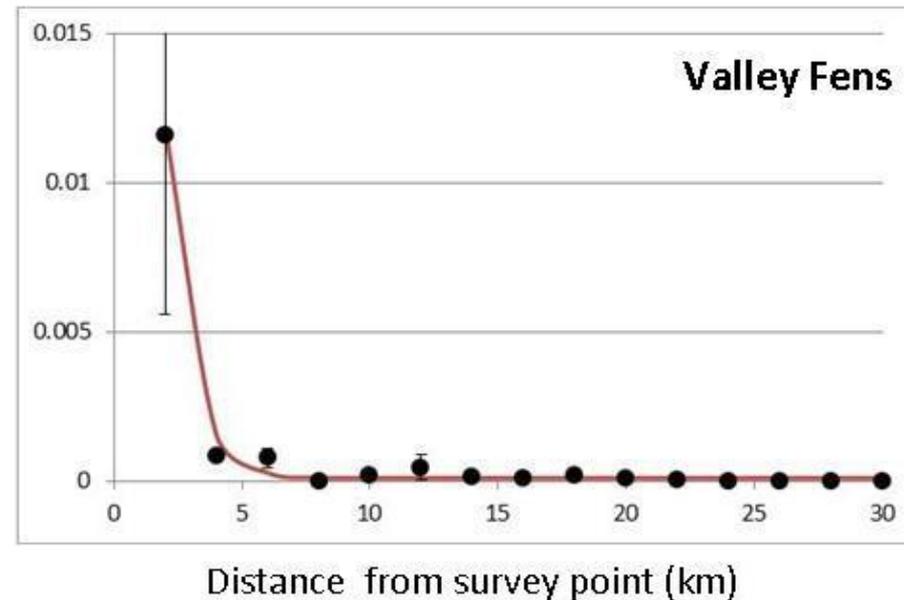
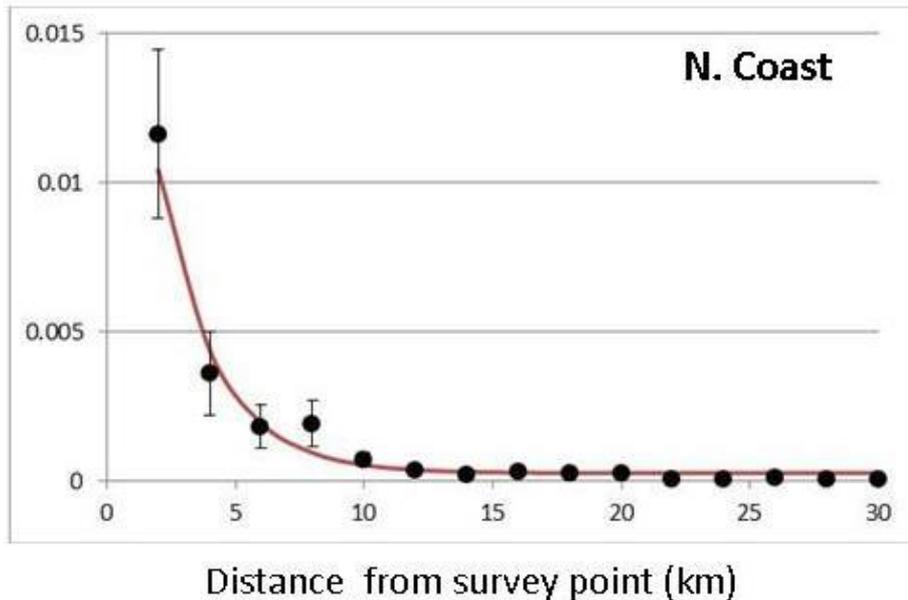
 Thames Basin Heaths SPA  
 SPA survey points  
 Postcodes from SPA survey 2012

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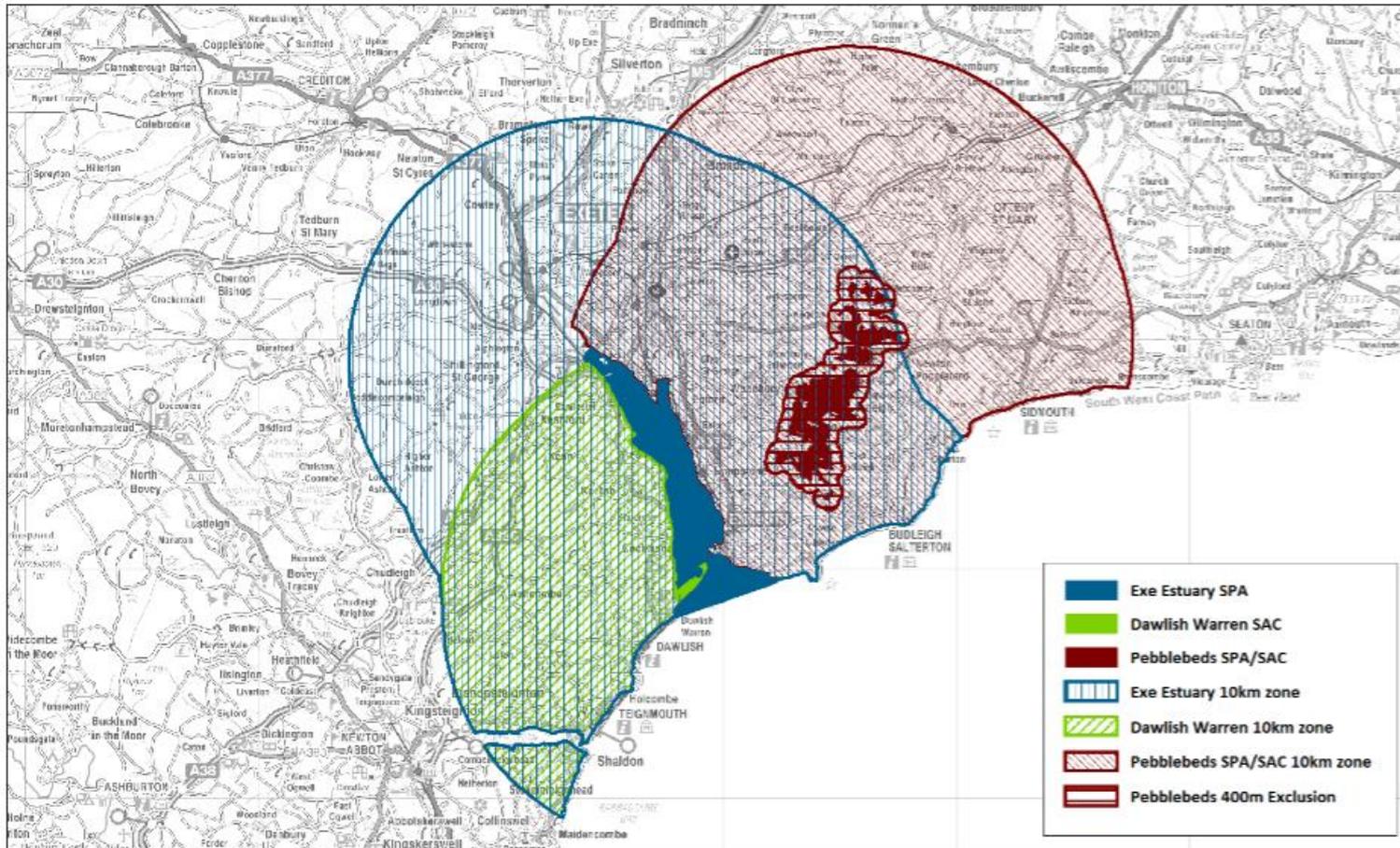
# Understanding catchments

- However, the 'catchment' or 'draw' of sites can be different.
- Visitor curves → likelihood of visiting decreasing with increase distance away from site.

Mean proportion of postcodes generated per survey point



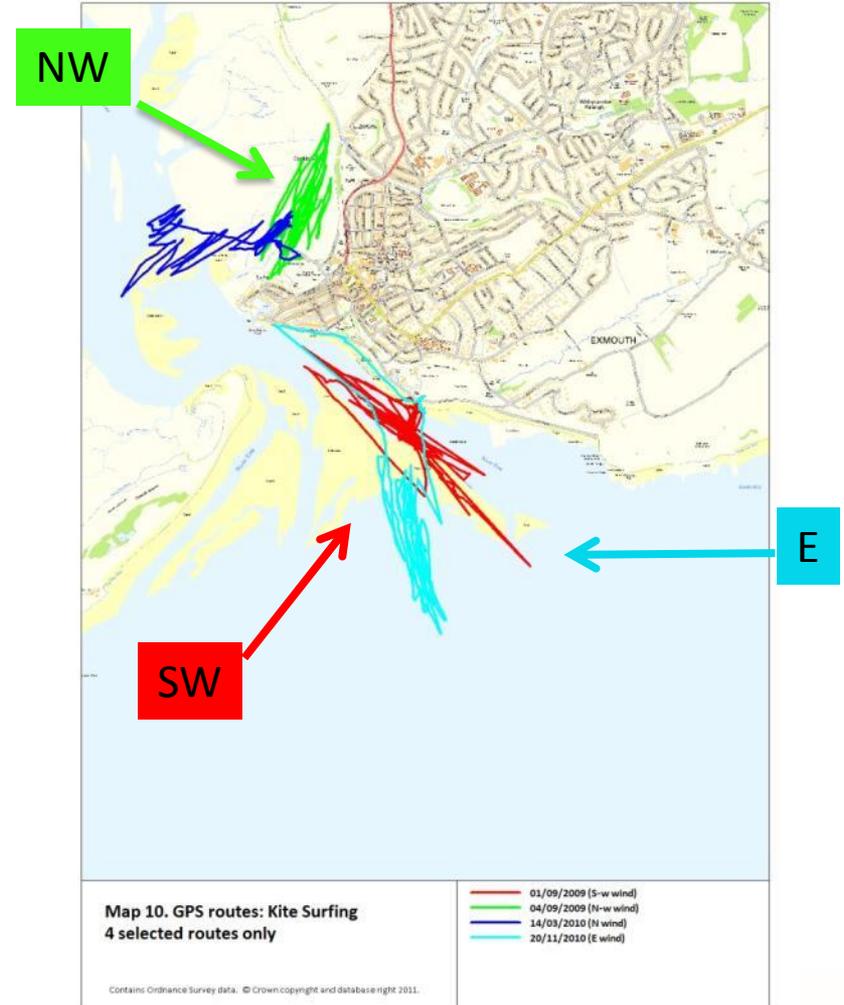
# Zones of Influence



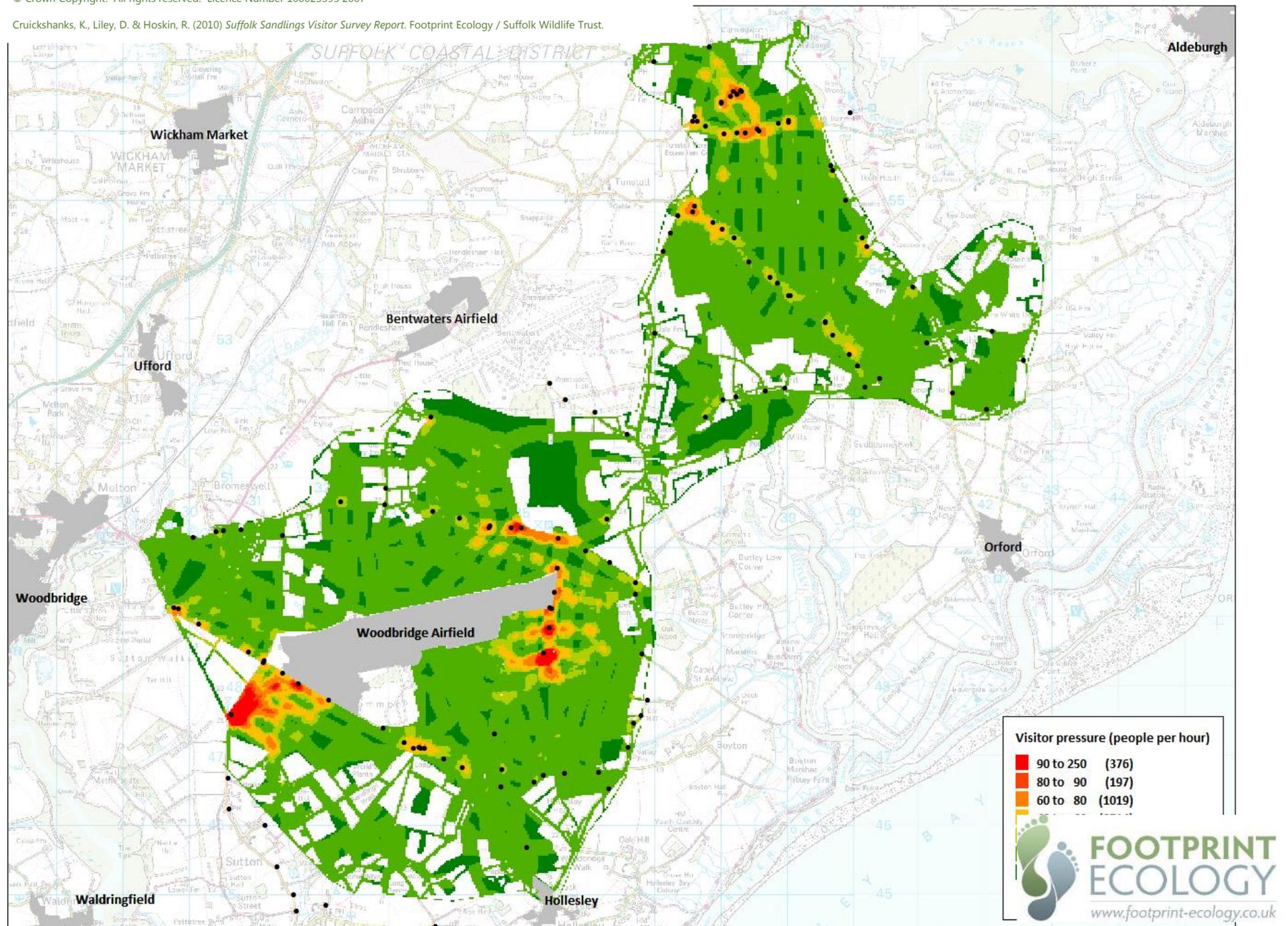
**Map 19: Suggested Zoning for Developer Contributions**

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# GPS Tracks: Kite Surfing

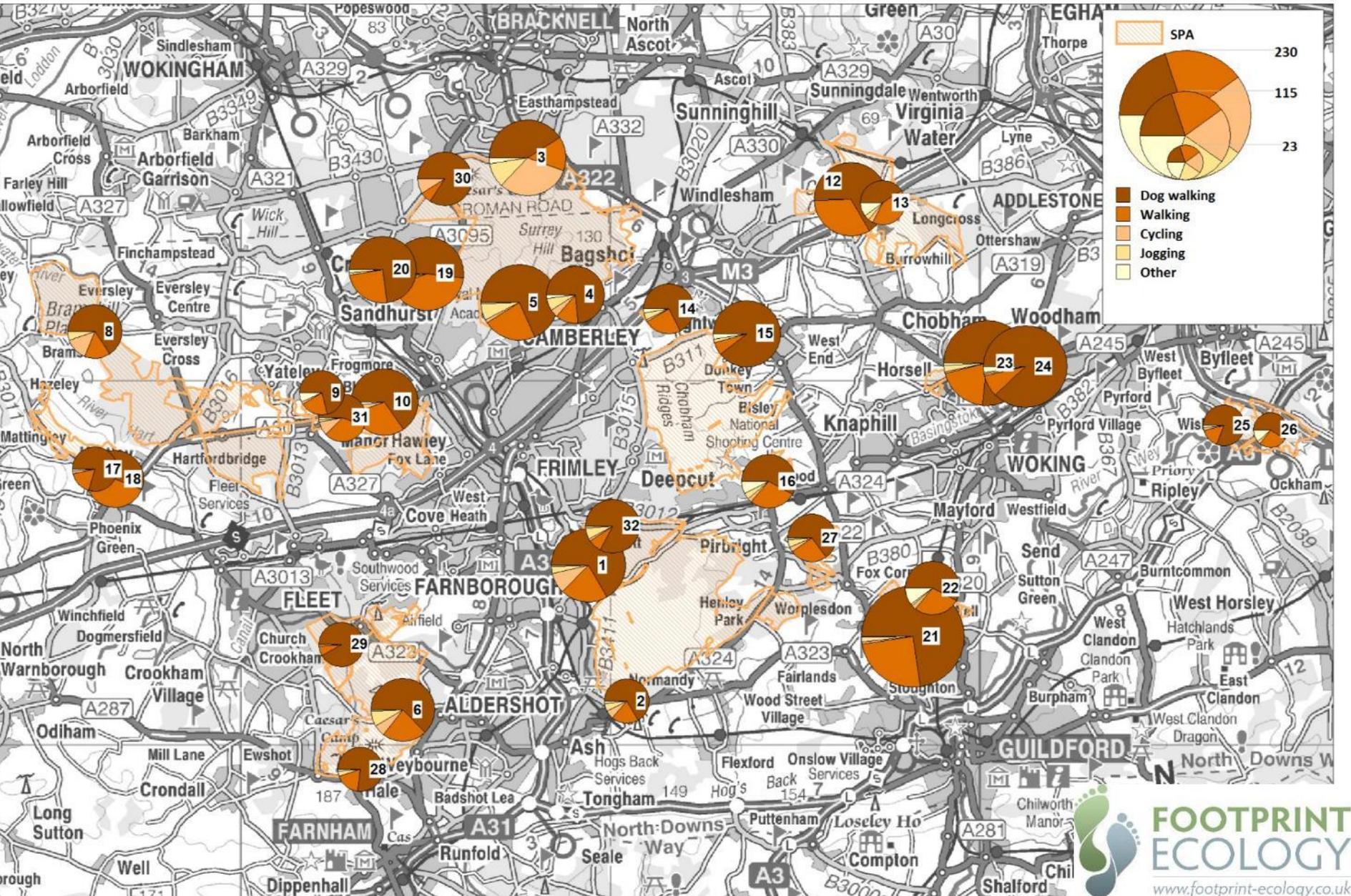


Wind speeds of at least 12-15 mph needed



# Map 6: Activities of visitor groups

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# 'Strategic Solutions'

Designed to have regard for:

- The extent of the potential impact
- The way in which people use the designated sites
- The sensitivity of the habitats and species for each particular site
  - Thames Basin Heaths
  - Dorset Heaths
  - Cannock Chase
  - Solent
  - Poole Harbour
  - South Devon

# Strategic solutions can include....

- Per house tariff collected by local authority for every net increase in one or more dwellings within the zone
- Other delivery mechanisms (LPA, other partners)
- On-site measures – Site Access Management Measures (SAMM)
- Off-site Measures – Provision of alternative recreation sites Suitable Alternative Natural Greenspaces (SANGs) and Heathland Infrastructure Projects (HIPs)\*

\*Dorset specific





# Pitstop

Dorset Dogs

Free Member  
Dorset Dogs



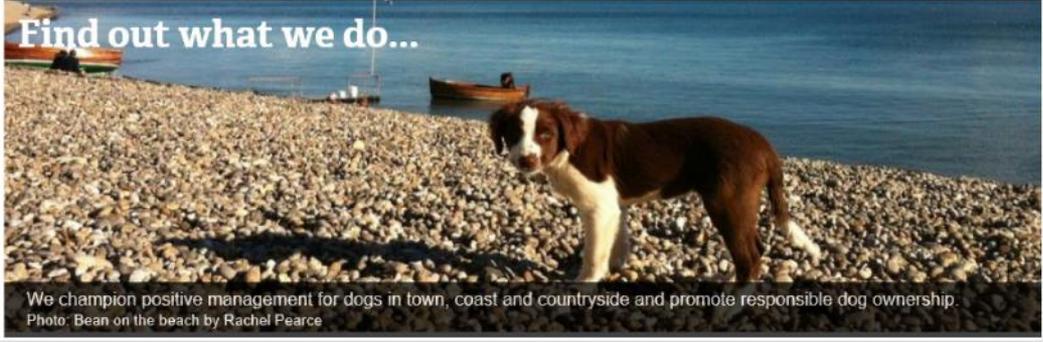
www.dorsetdogs.org.uk



# Love Dogs... Love Nature

Home | About Dorset Dogs | Join Us | Contact

Home | Out & About | Dog Friendly | Doggy Do Code | Lost Dogs | Events | News | Members | Wagipawdia | Contacts



## Find out what we do...

We champion positive management for dogs in town, coast and countryside and promote responsible dog ownership.  
Photo: Bean on the beach by Rachel Pearce



Out & A

Join

Love D  
Love N

Home

Out & A

Dog Fr

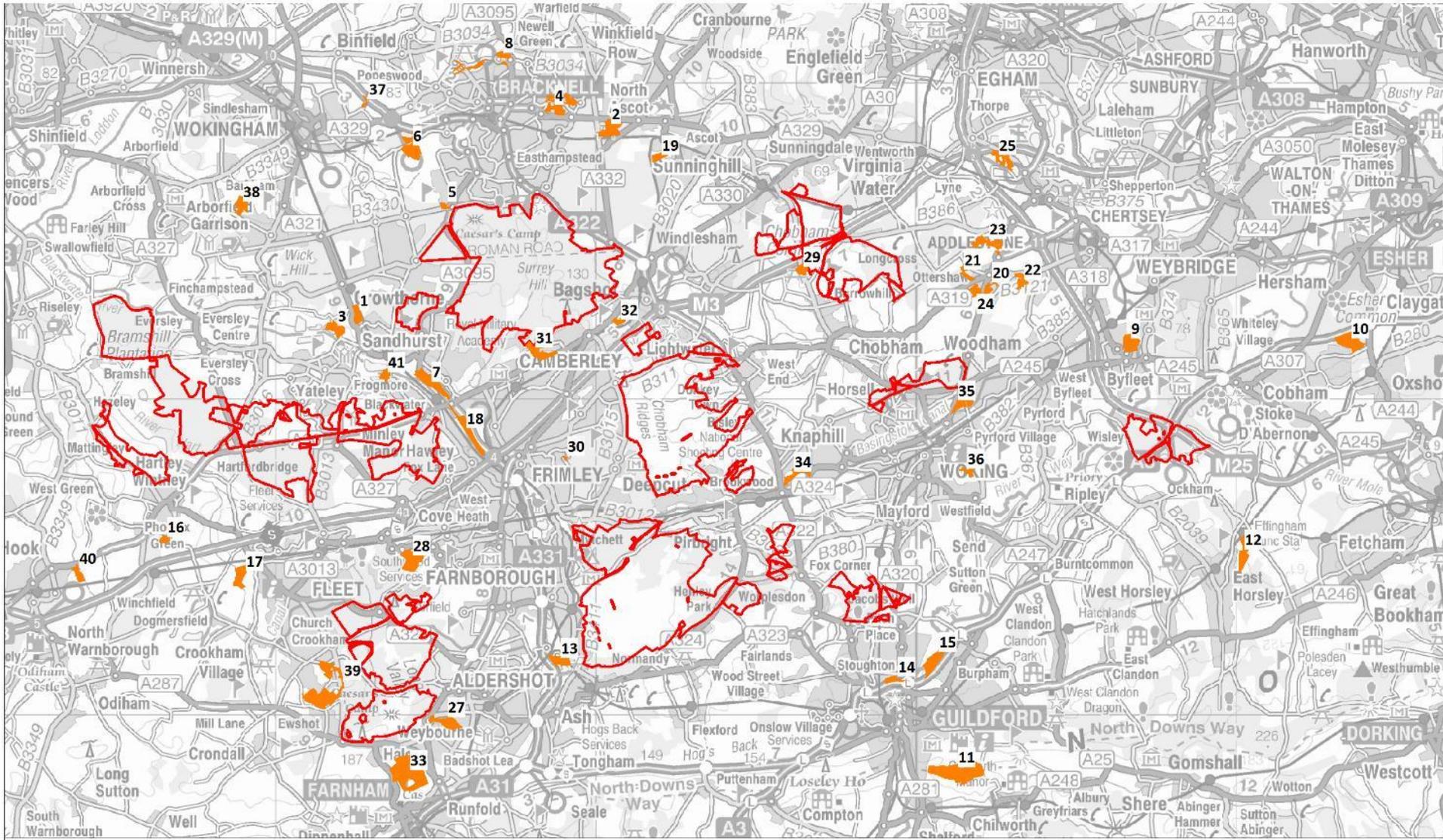
Doggy

Lost D



Image © Dorset Dogs / M. Wallgren

# 8ha of new greenspace equivalent for every 1000 new residents



Map 1: Thames Basin Heaths SPA and SANGs network

- Thames Basin Heaths SPA
- SANGs

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# How to design new greenspace?

Natural Greenspace  
Circular Walk

Typical dog walk on a heath around 2.5km  
People typically reach around 700m+ from  
access point  
50ha (area of circle with 2.5km  
circumference)

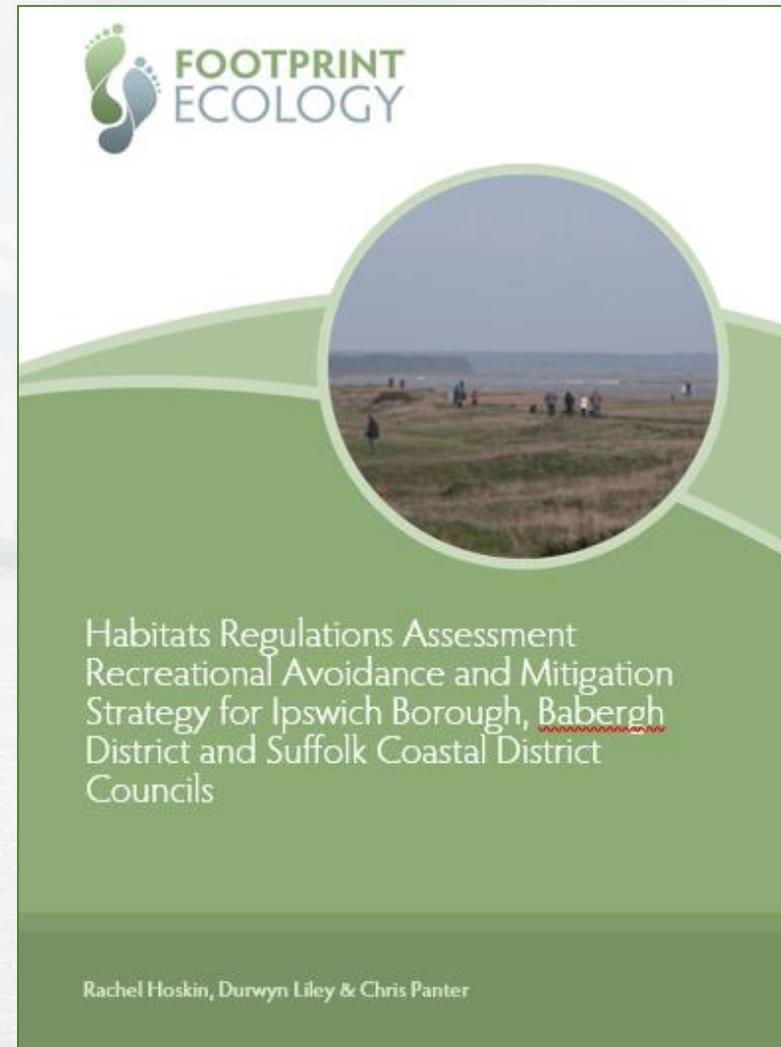
# Mitigation measures need to be carefully tailored to the sites

- Mobile wardens
- Dogs project
- Patrol boat
- Revised zones
- Codes of conduct
- Screening
- Changes to slipways
- New interpretation
- Dog Control Orders
- SANGs



# Implementation

- Embedding in policy
- Costing the mitigation package
- Developer contributions
- (CIL or s106)
- Administration
- Governance
- Delivery staff
- Phasing
- Monitoring and review

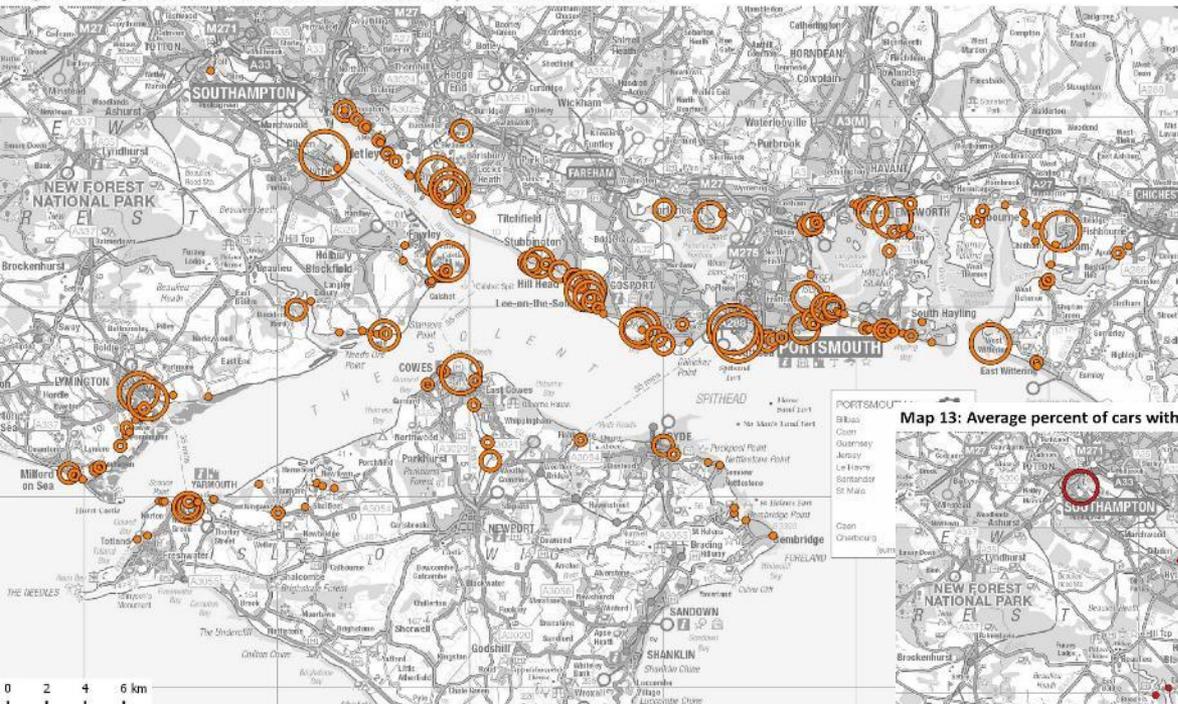


# Common monitoring approaches

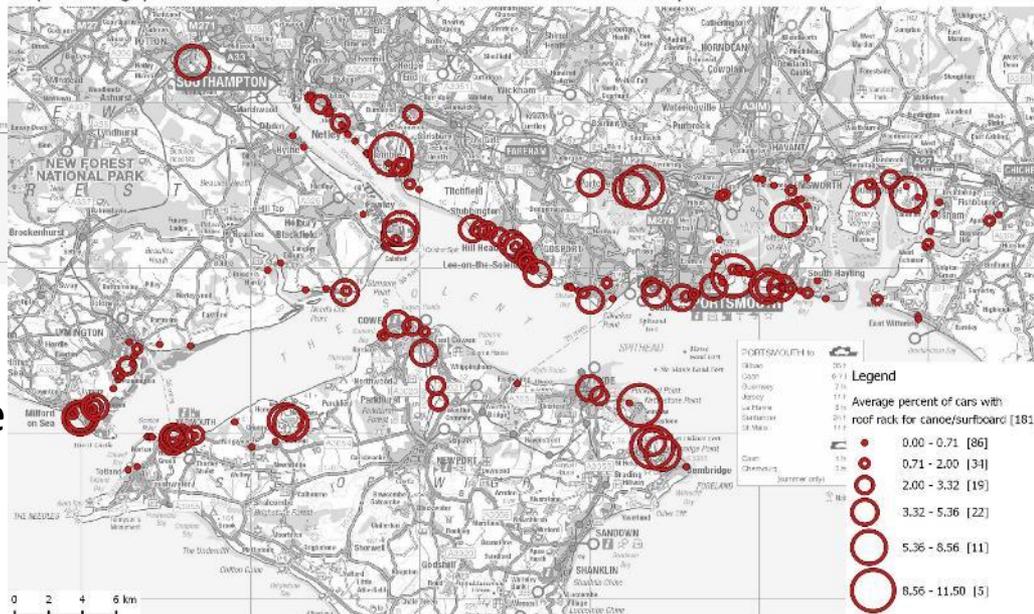
- Car park transects
- Driving transects
- Visitor surveys
- People observations
- Automated counters
- Ecological monitoring - birds, habitat condition
- Housing growth/distribution
- Revenue collected/spent
- Implementation of interventions
- Specific monitoring of interventions



Map 7: Average number of cars recorded in each car park across all transects.



Map 13: Average percent of cars with roof rack for canoe/surfboard recorded in each car park across all transects.



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Visitor surveys, driving transects  
 Direct observations of birds and people  
 People behaviour with and without rangers present

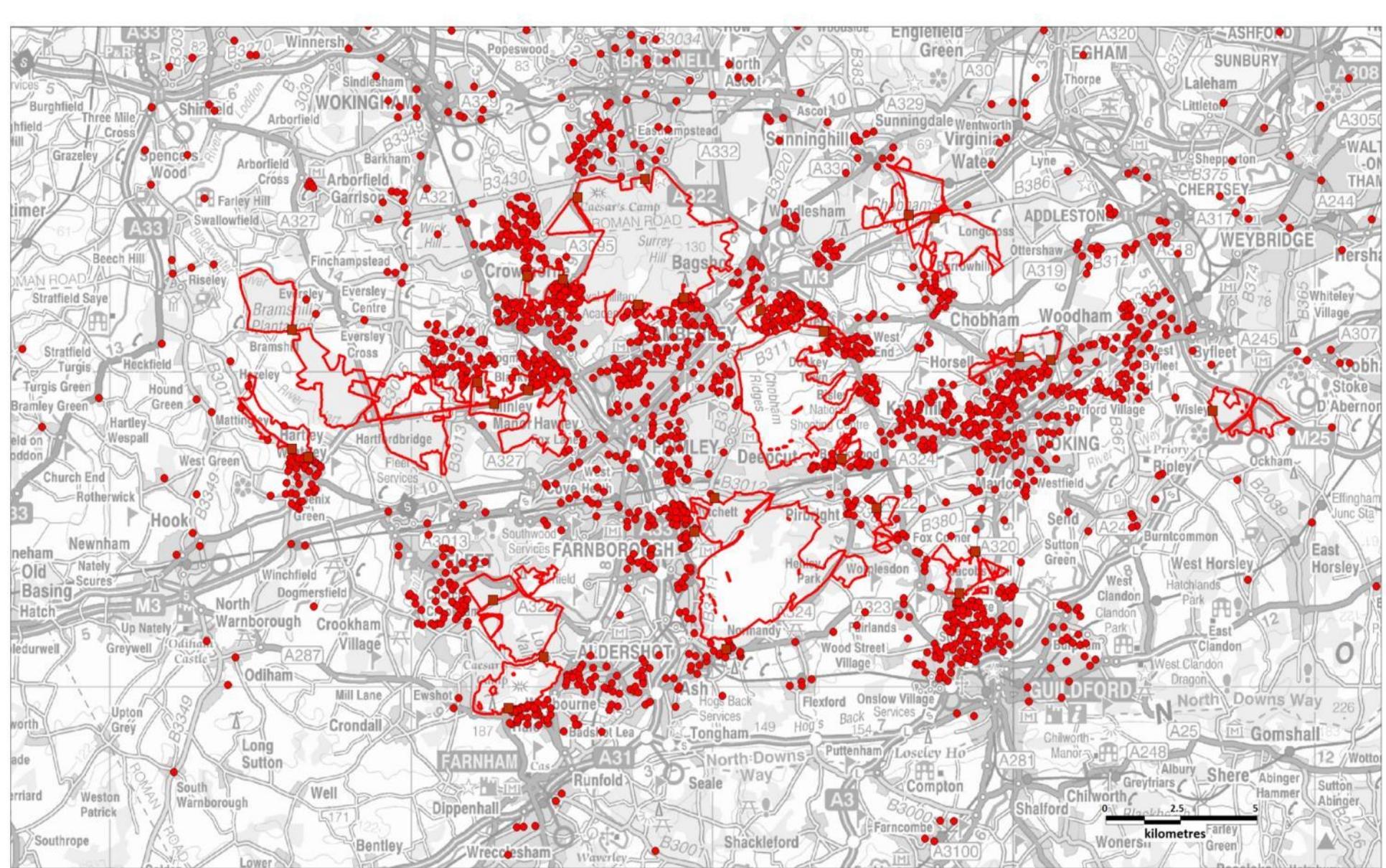
Recording long term changes in access patterns along the coast.  
 Recording types of vehicles too, allows inference of activities undertaken at each sites (e.g. water sports).



## *Thames Basin Heaths -*

- A range of monitoring threads, brought together to give a picture of how the mitigation is functioning
- Car park counts, visitor surveys, automated counters
- Monitoring at the SANGs (51 in place, and more forthcoming) as well as the European site
- Visitor survey questions asked on activities, visit frequency etc.
- Is visitor use changing over time? Which can be a feedback loop to the TBH partnership and strategy refinement.



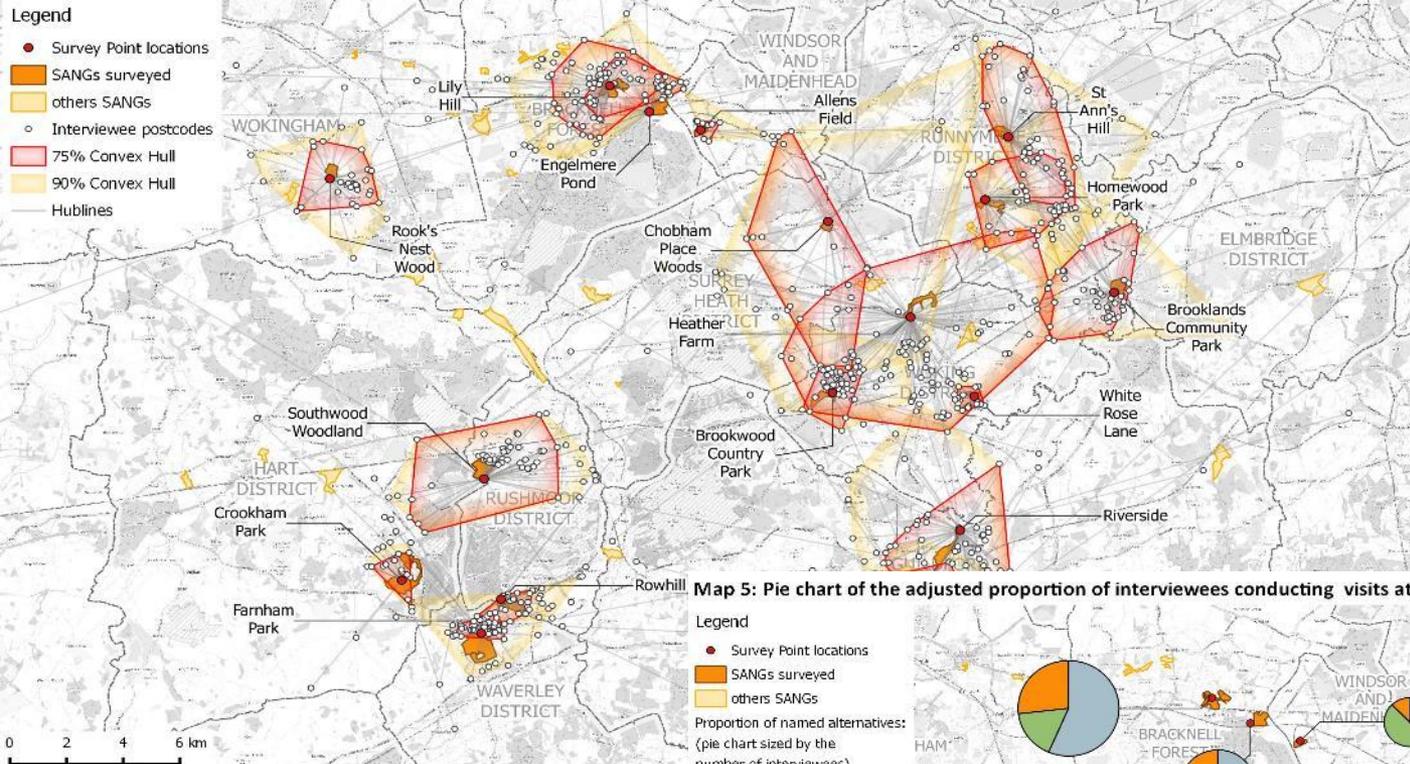


**SPA postcodes (2012 survey)**

- Thames Basin Heaths SPA
- SPA survey points
- Postcodes from SPA survey 2012

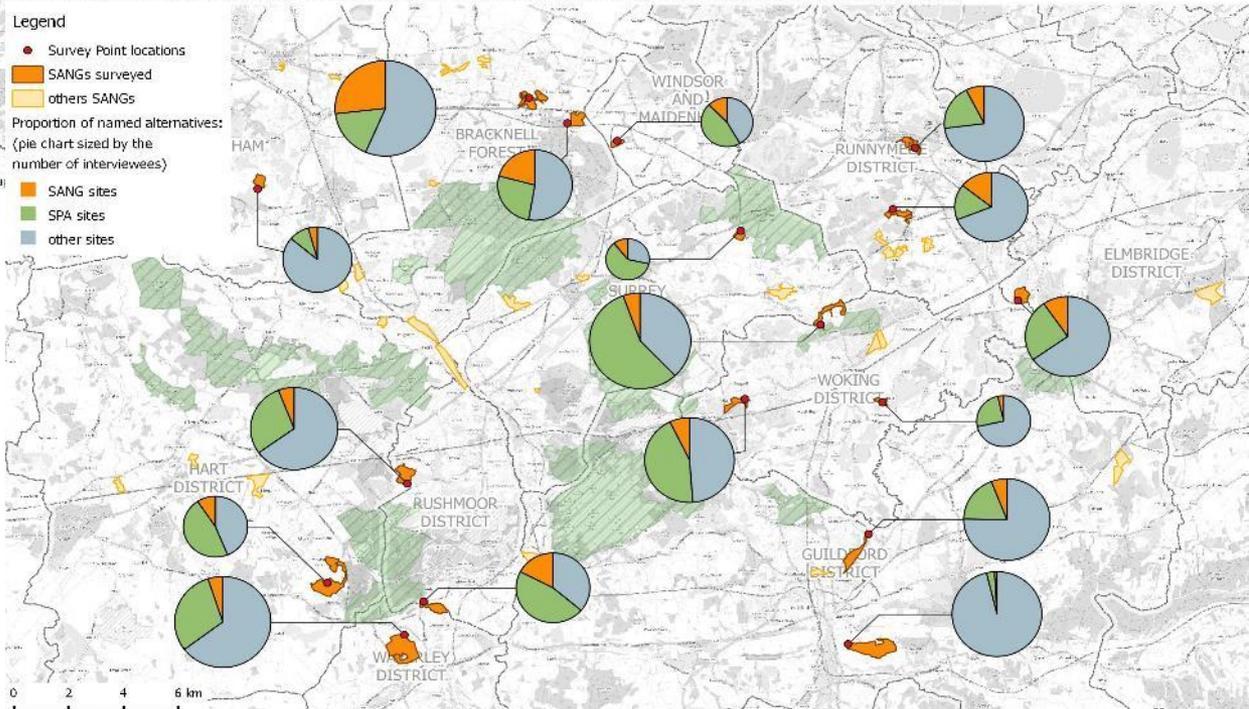


**Map 6: Distribution of interviewee postcodes in the area around TBH. Convex hulls are used to indicate the area covered by the 75% and 95% nearest postcodes at each site.**



*Thames  
Basin  
Heaths  
SANG  
surveys -*

**Map 5: Pie chart of the adjusted proportion of interviewees conducting visits at SPA, SANG or other sites.**

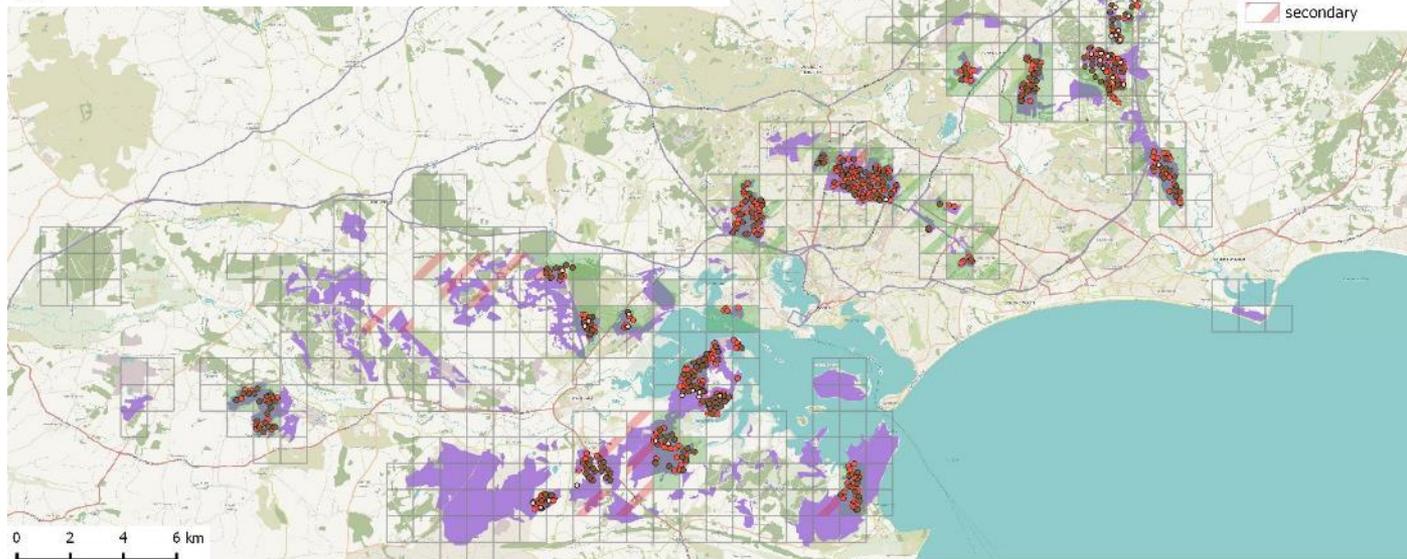
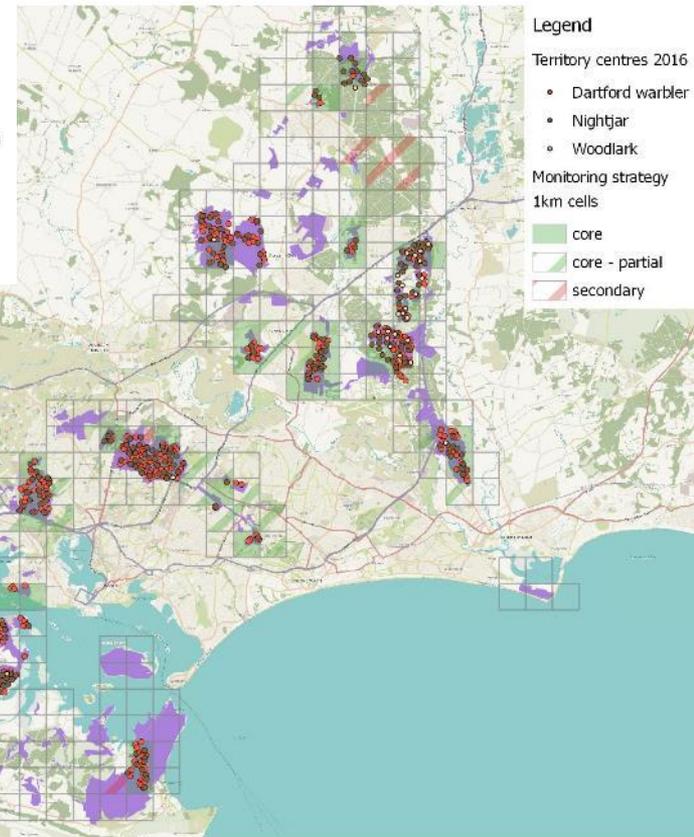
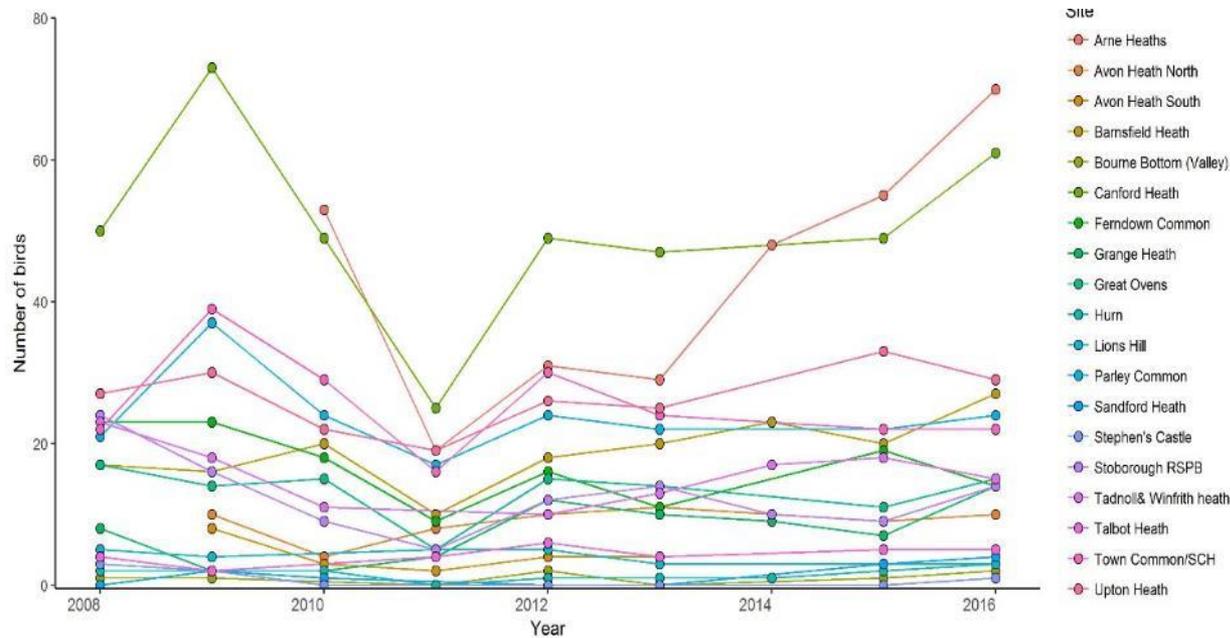


# *Dorset Heathlands Monitoring*



## Urban Heaths Partnership (UHP)

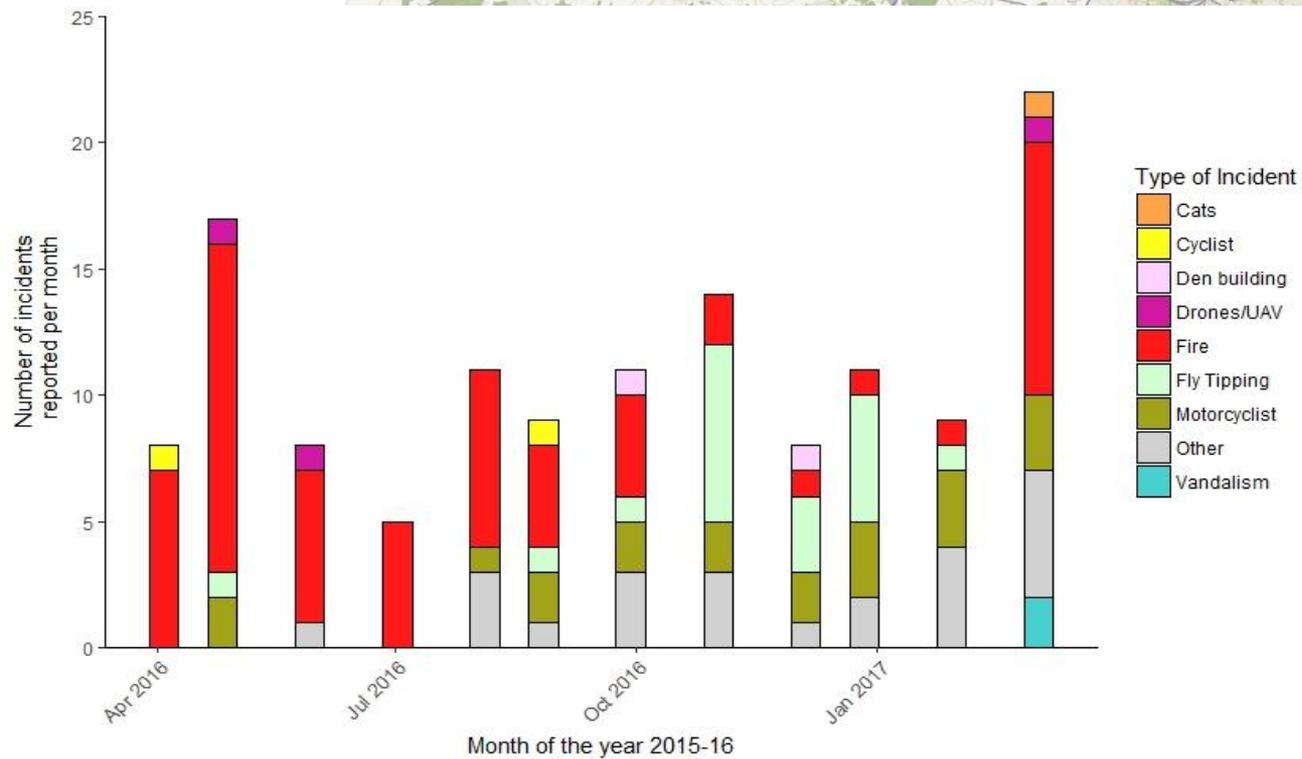
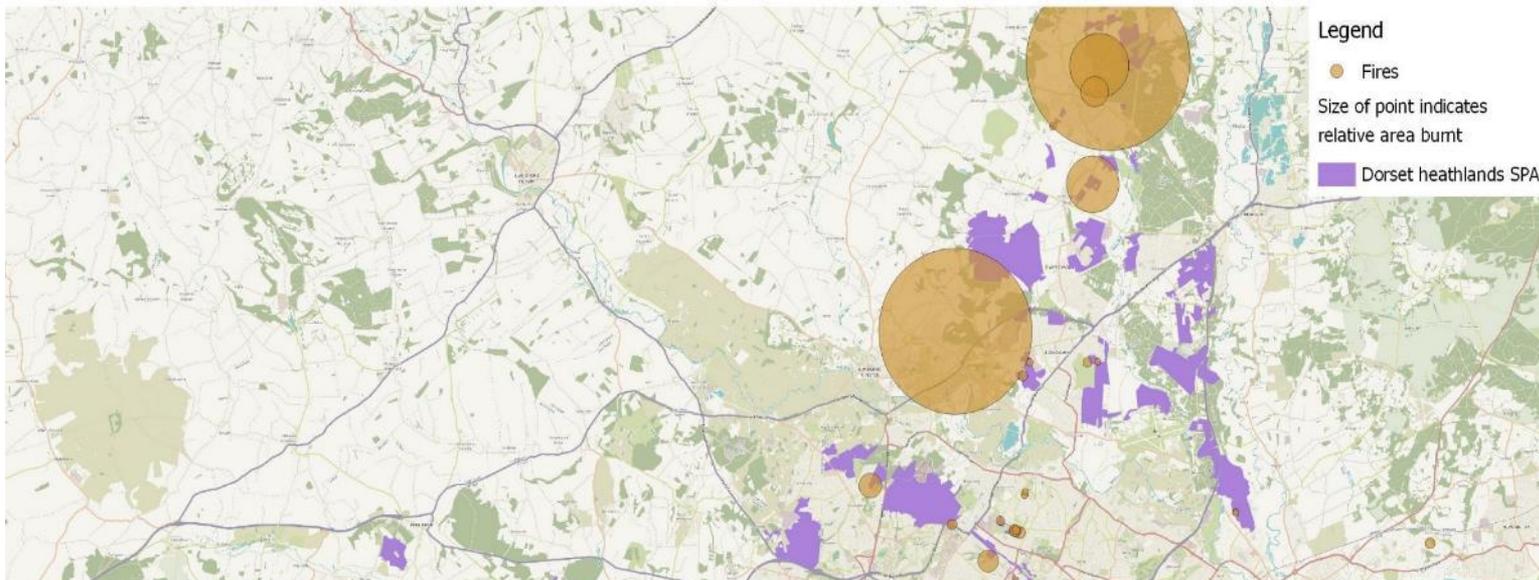
- Has a comprehensive monitoring scheme in place.
- One partnership, made up of 14 organisations (Local and County Councils, FC, NE, NT, RSPB, ARC, Police & Fire services)
- Annual monitoring for: 3 SPA breeding birds, incidents of Fires, other potentially damaging incidents, car parks counts, automated people counters
- Add-hoc visitor surveying and attempting other approaches, e.g. direct observation of visitor attitudes and behaviours (dog fouling etc).

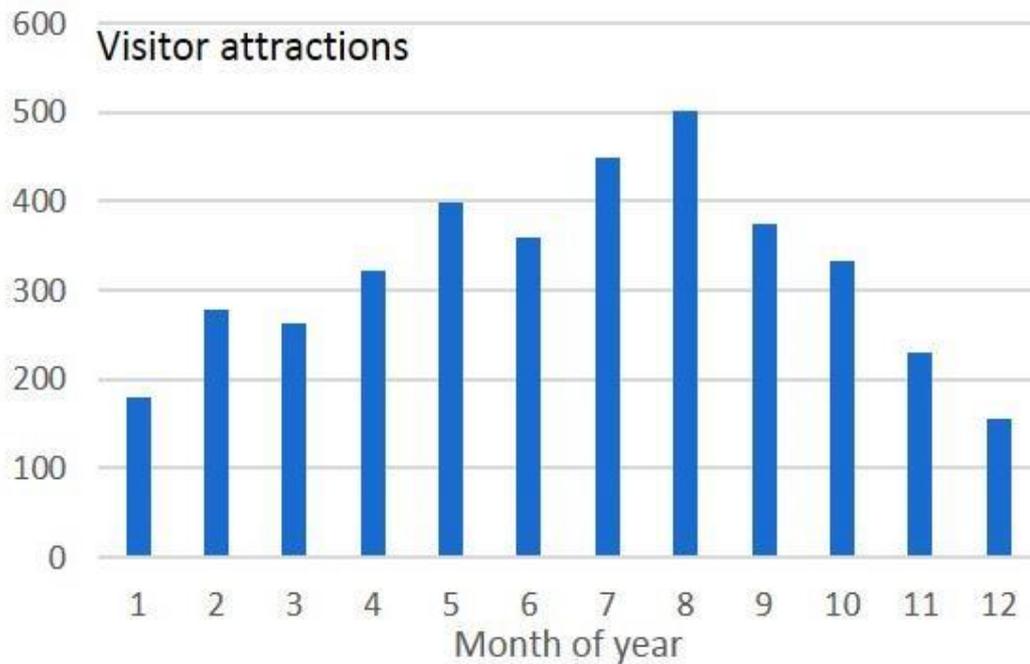
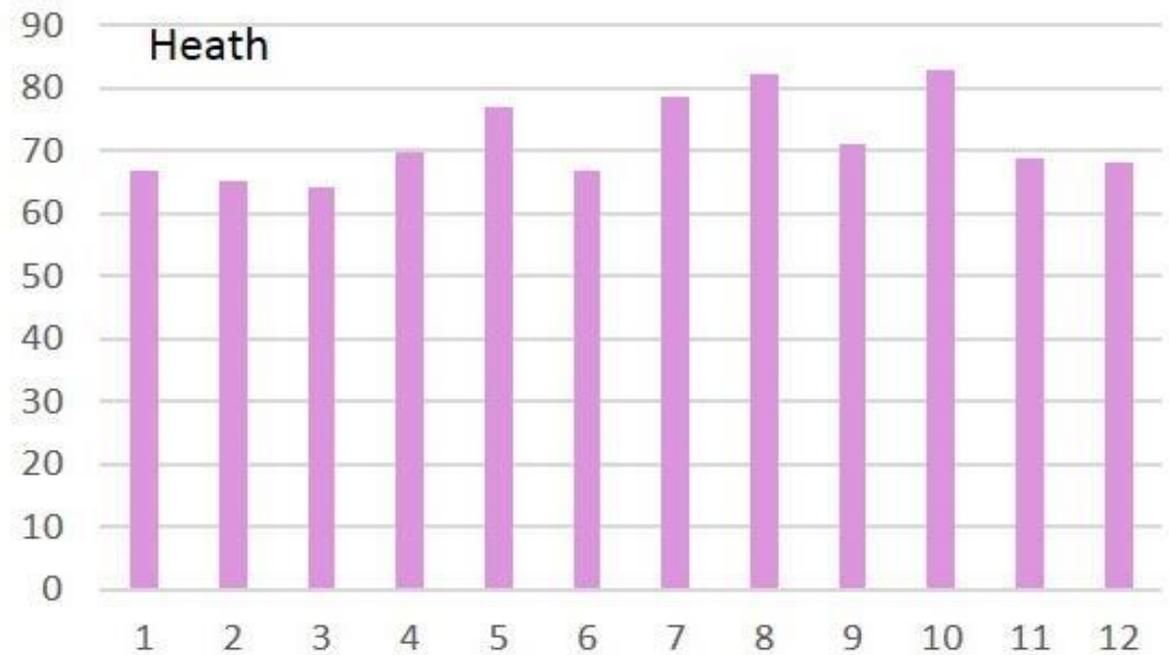


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Dartford Warbler monitoring: Very cold winter 2010/11, caused population crash

Map 6: Distribution of fires (> 1m<sup>2</sup>) recorded in 2016-17. Size of point indicates size of area burnt.





# Monitoring.....

- Has to be robust and consistent (standardised methodology) so repeatable.
- Appropriate (good geographic spread and types of locations covered)
- Relevant to the strategy!
- Able to act as a feedback loop for partnerships and their rangers/site managers for access management
- Examine access patterns with ecological information together

# Long term success

- Visitor and ecological data is imperative
- A strategic approach has to be flexible and adaptable over time, but that requires robust monitoring data
- Need to keep looking ahead
- Potential to enhance sites for access and wildlife and absorb more visitors, but plenty of challenges!

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# Acknowledgements

Footprint Ecology thanks our local planning authority clients, stakeholders and Natural England for their positive engagement in the development of strategic solutions. The data and information presented here is that which has been used in commissions undertaken for our clients and we are therefore grateful for the use of that information.

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