

[*British Deer Society Conference , Linnean Society - London 2008*]

Deer Vehicle Collisions in peri-urban areas: **A risky Life for Deer**



Dr Jochen Langbein
LangbeinWildlifeAssociates working with



DI National Deer-Vehicle Collisions Project

Main objectives 2003 tocontinuing:

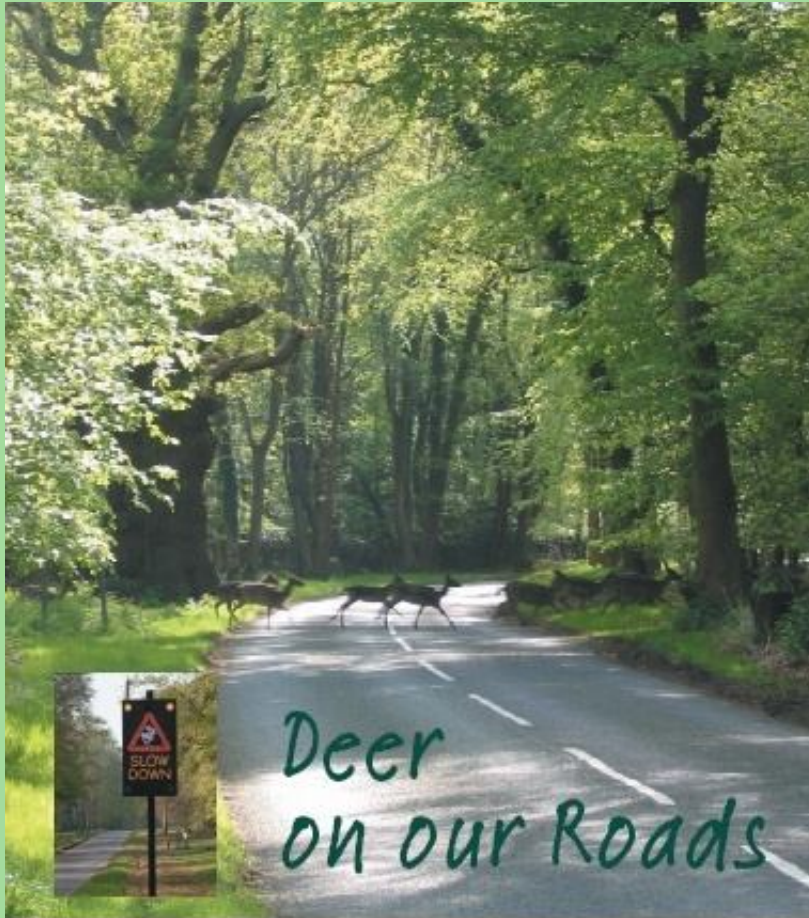
- **Assess nationwide scale of problem**
- **Build database of DVCs & identify hot-spots**
- **Monitor local and national trends**
- **Research effectiveness of DVC prevention methods**
- **Raise public awareness**



Summary GB estimates of annual DVC “Costs”

- **Animal Welfare –**
Best available estimate = 46,000 (+/- 9000) deer hit each year, of which c. 15,000 live casualties need dispatch at roadside. (actual toll may well exceed 75,000 incl. as animal type in collisions often not known)
- **Vehicle damage**
> £ 17 Million in UK
- **Human Losses**
> 500 human casualties per annum – including c. 10 Fatalities
- **Economic Costs**
> £ 30 – 40 M p.a.
- **Other costs include** : Injured deer dispatch / rescue / Carcass collection / disposal / Traffic delays

Leaflet / reports are accessible via project web-site
www.deercollisions.co.uk/pages/latest

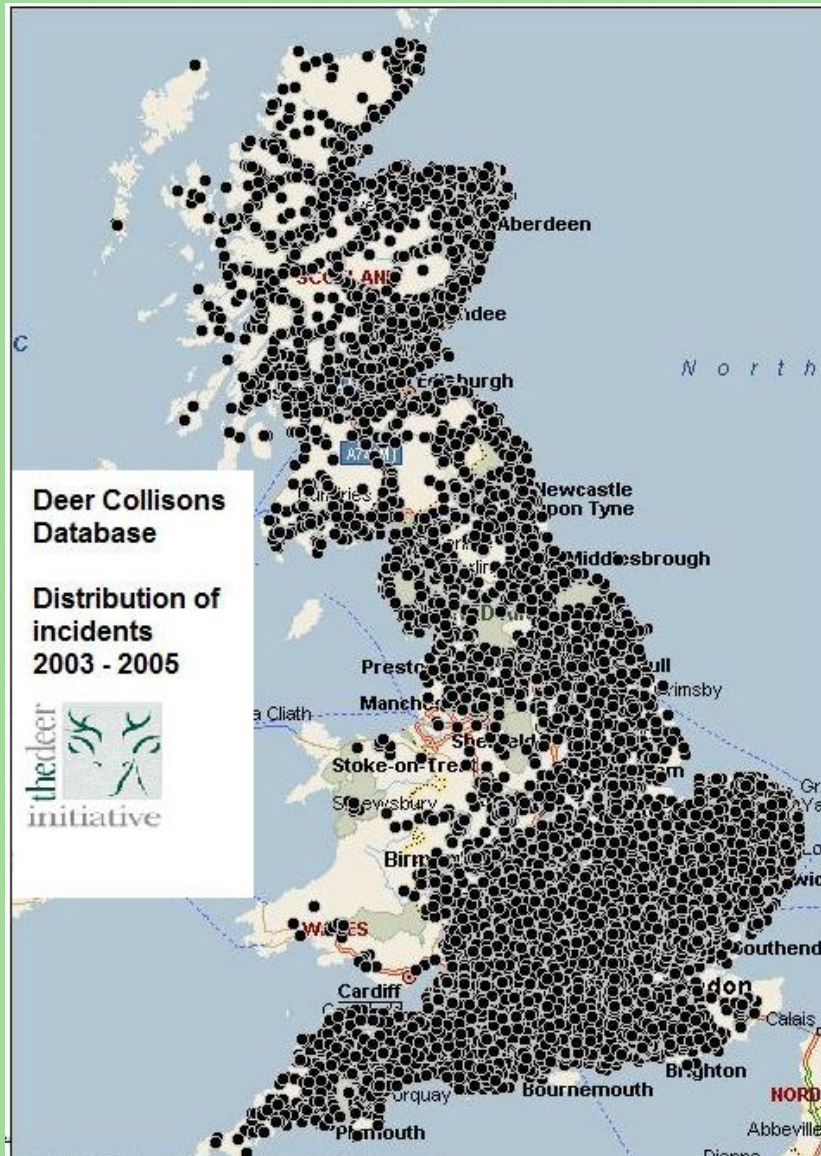


thedeer
initiative

Counting the Cost

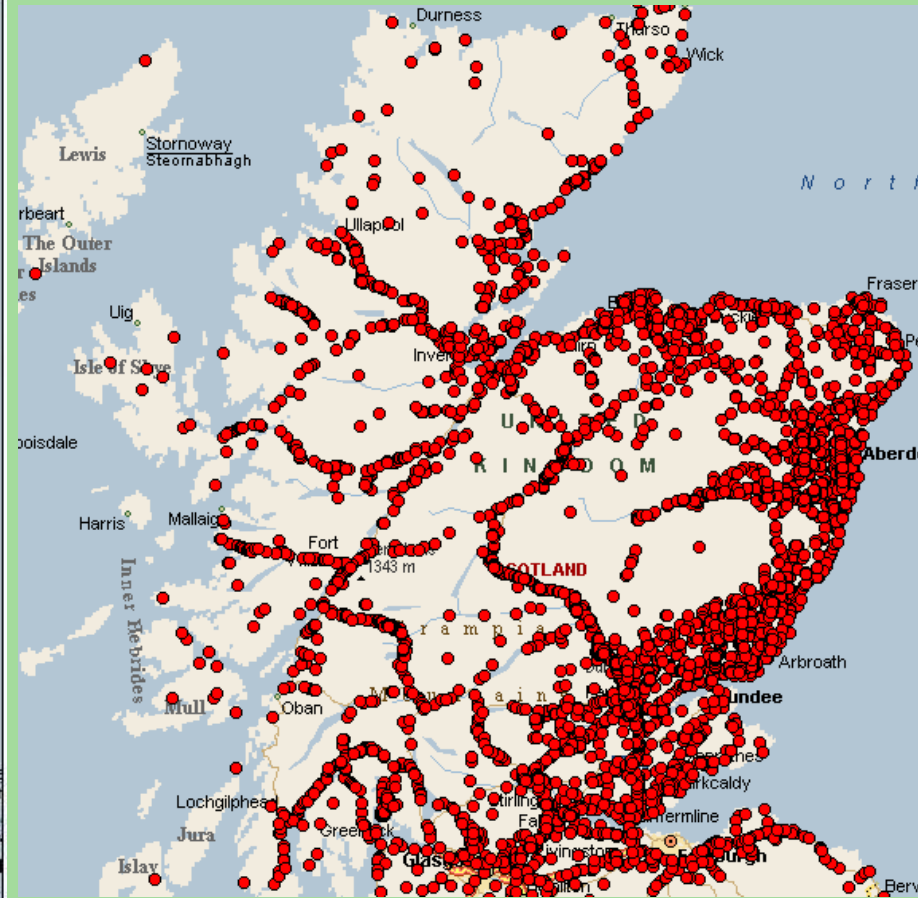
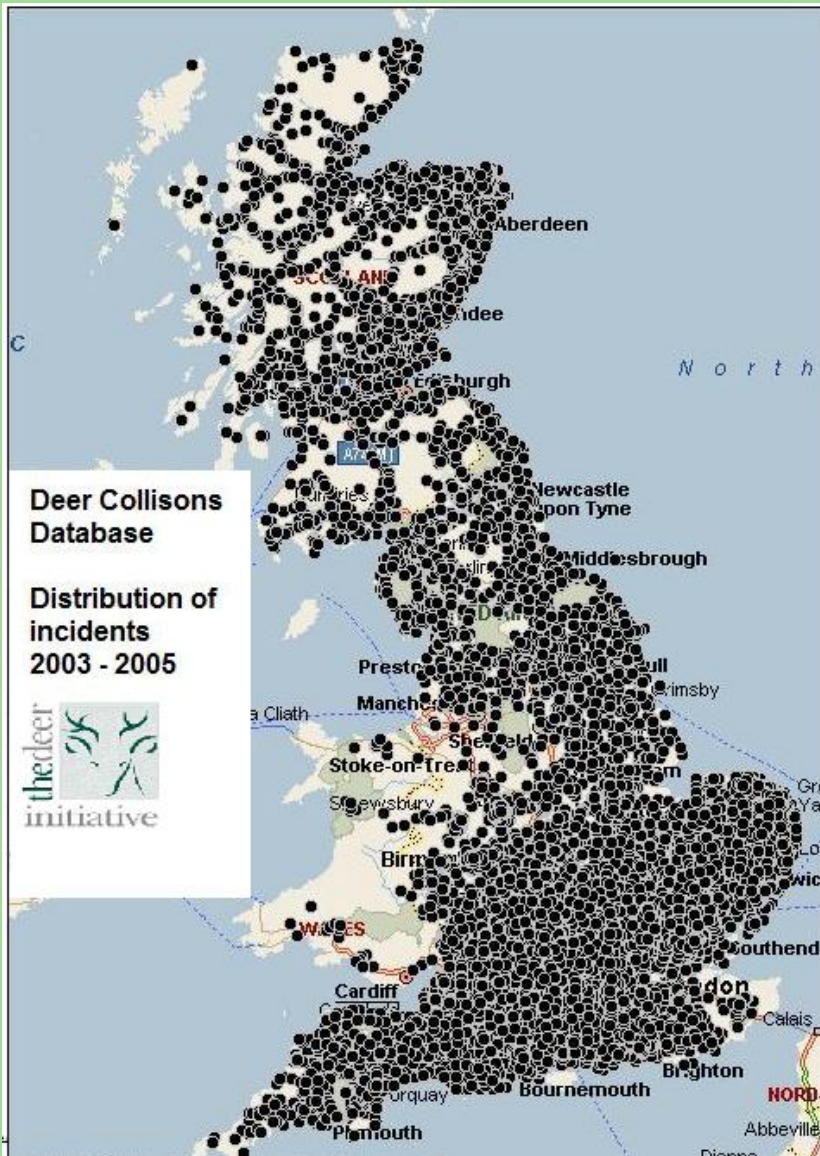
- Deer on our Roads – Counting the Cost (Deer Initiative, 2007)
- DVC England 2003-05 (Langbein, 2007)
- DVC Scotland 2003-05 (Langbein & Putman, 2006)
- ...plus others

Urban and Peri-Urban Deer Vehicle Collisions



- What proportion of all DVCs occur near Urban areas?
- How common are urban DVCs compared to e.g urban *Fox* & *Badger* collisions ?
- Which towns & *deer* species are affected most ?
- Do recent records indicate a greater rise in urban than rural areas ?
- What can be done ?

Urban and Peri-Urban Deer Vehicle Collisions



Traffic by Country & Region: 2004
(Billion Vehicle Kilometers driven)

Scotland 42.5

Wales 27.3

England 428.8

of which:

South East 86.6

London 32.7

North West 56.6

East of England 55.1

West Midlands 48.6

South West 47.1

Yorks&Humbers. 41.6

East Midlands 40.7

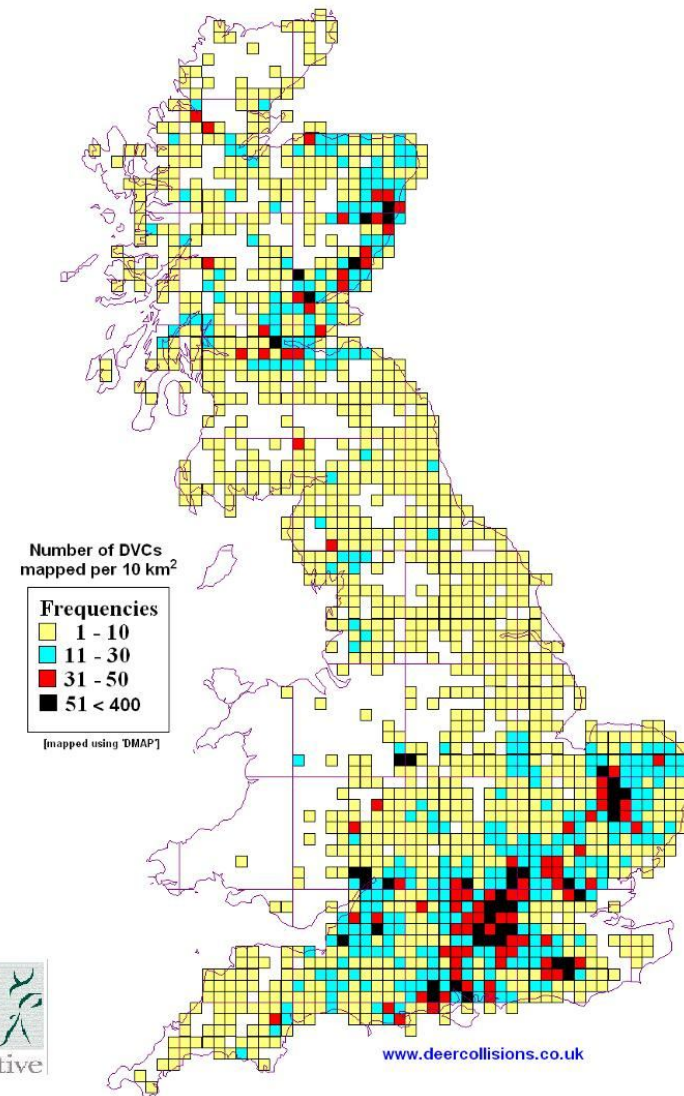
North East 19.9

Source: National Road
Traffic Survey, DfT.

Only 18% of all Deer Collisions reported are in Scotland ...

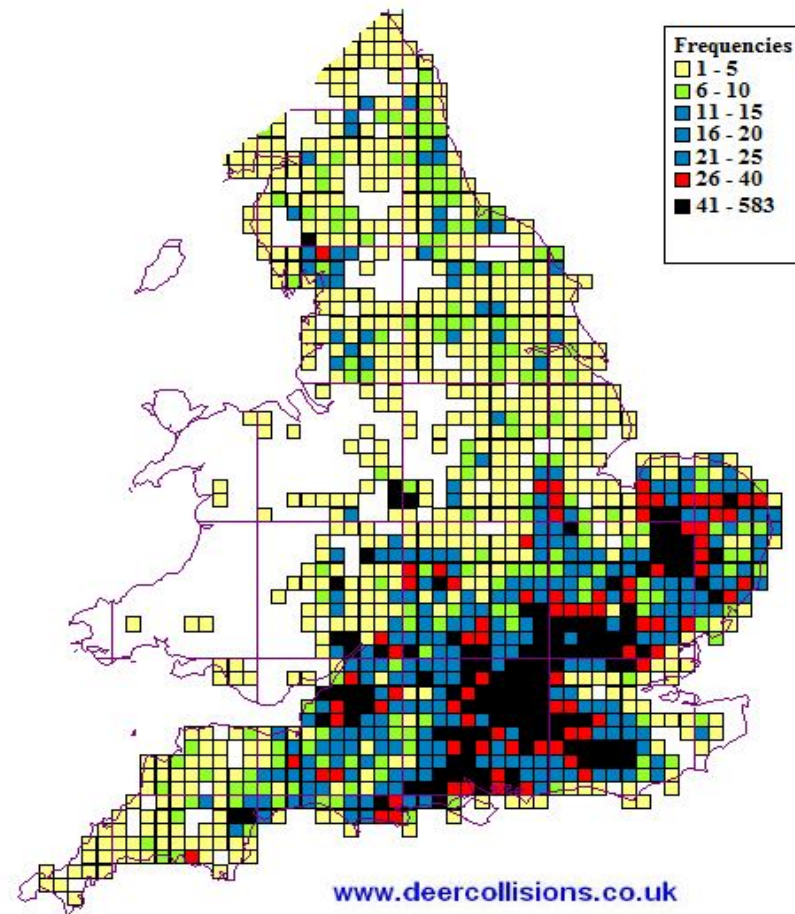
BUT occur within <10% of all GB traffic; therefore 'risk' of being involved in a DVC twice as high per mile driven in Scotland !

Preliminary overview showing relative distribution of Deer-Vehicle Collisions reported to the project between January 2003 to December 2005.
(based on 16,519 reports with adequate location details)

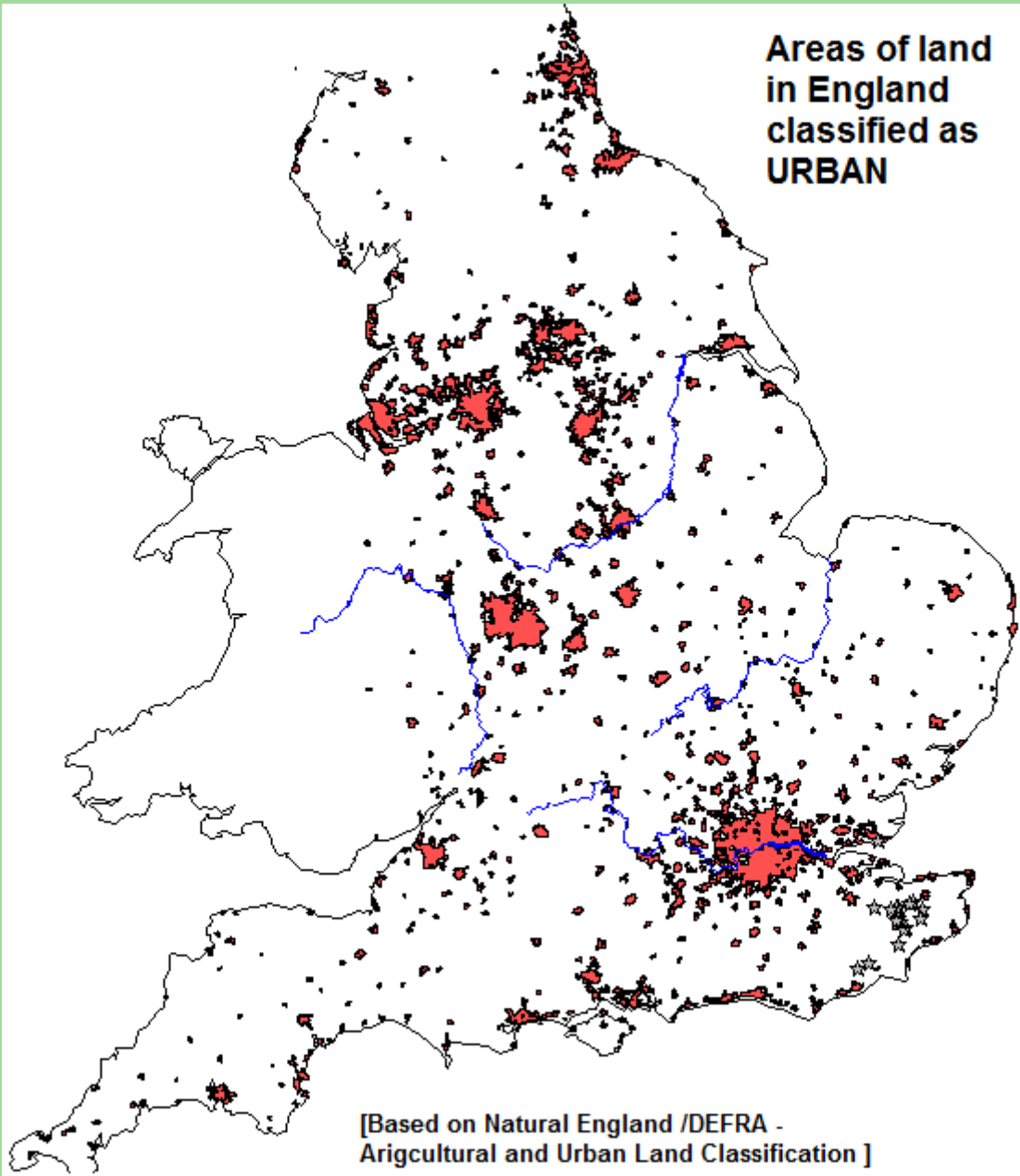


Total 16,519 DVC records mapped for 2003-2005 plotted

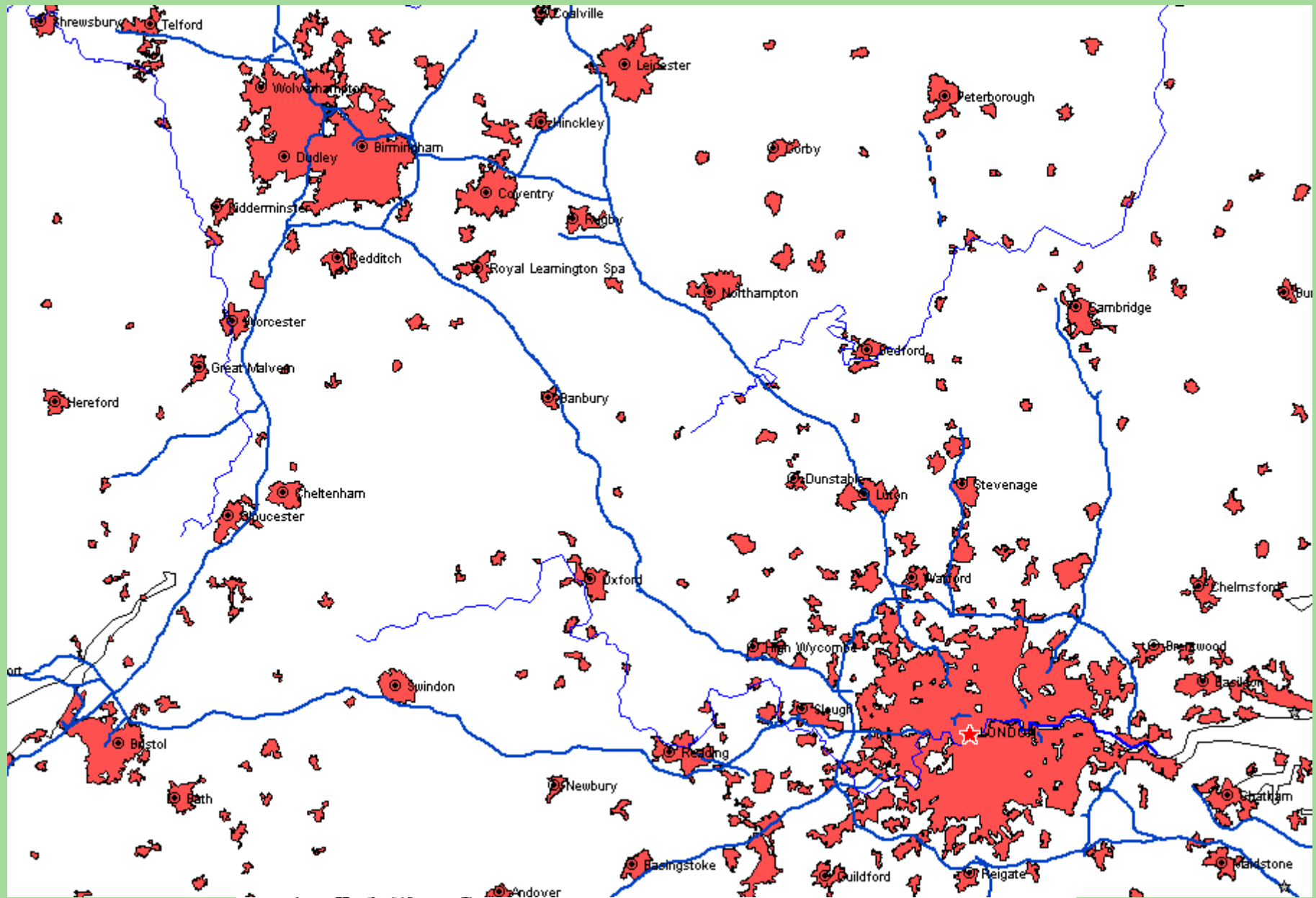
Relative frequency of Deer-Vehicle Collisions for England & Wales
reported to the project between January 2003 to December 2007
(based on 24,312 reports with adequate location details)



**Areas of land
in England
classified as
URBAN**

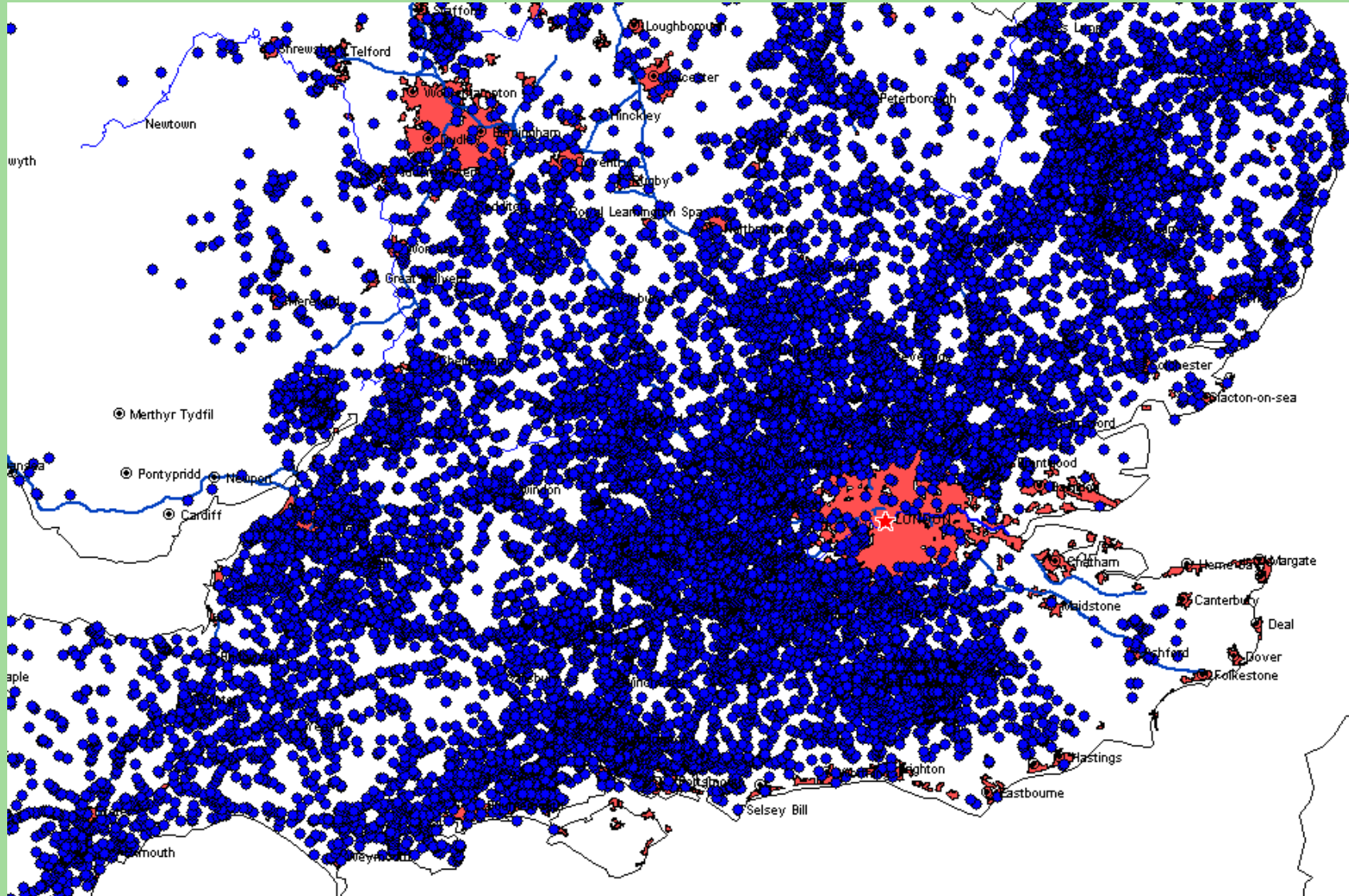


[Based on Natural England /DEFRA -
Agricultural and Urban Land Classification]

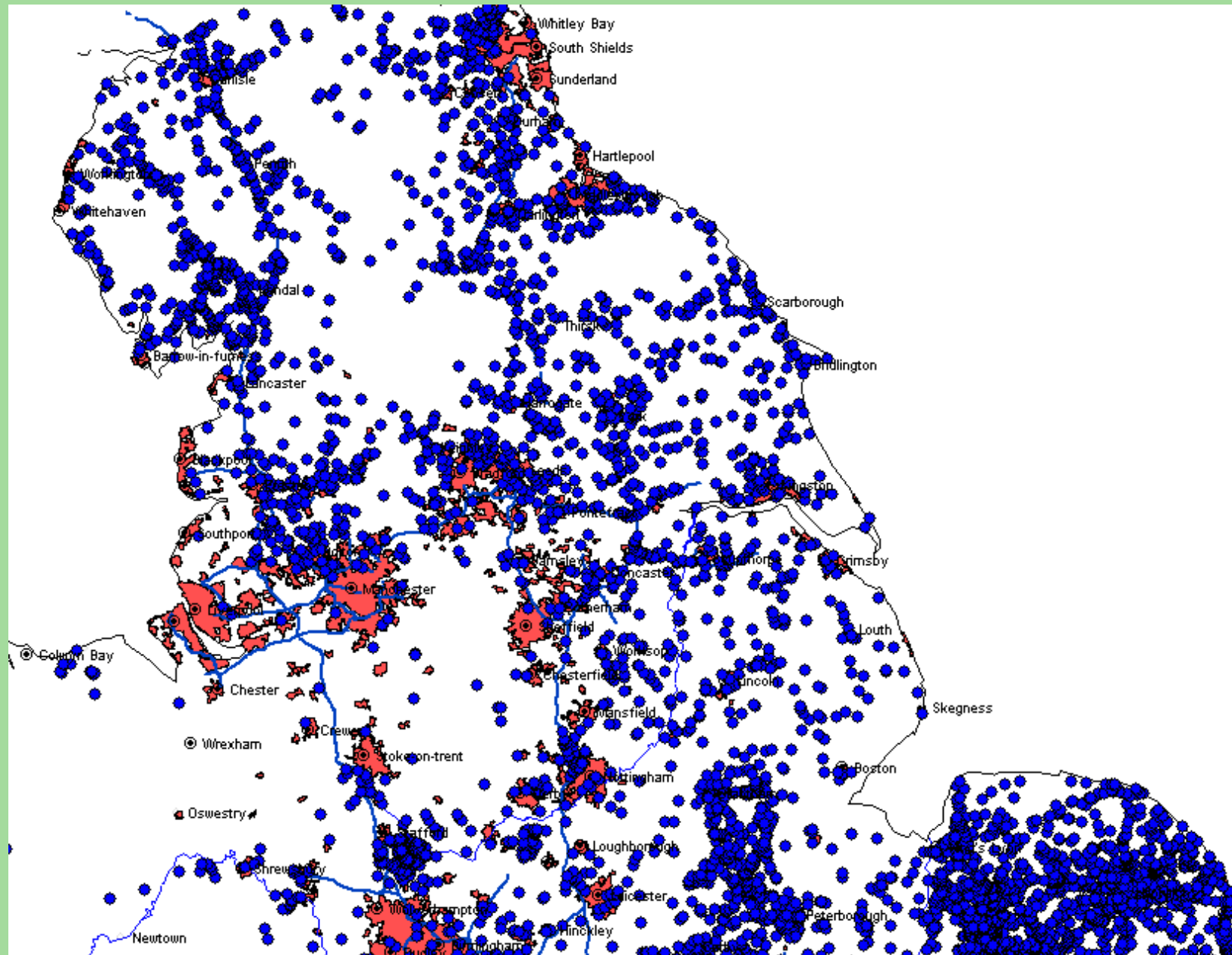


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DVC distribution in relation to major conurbations



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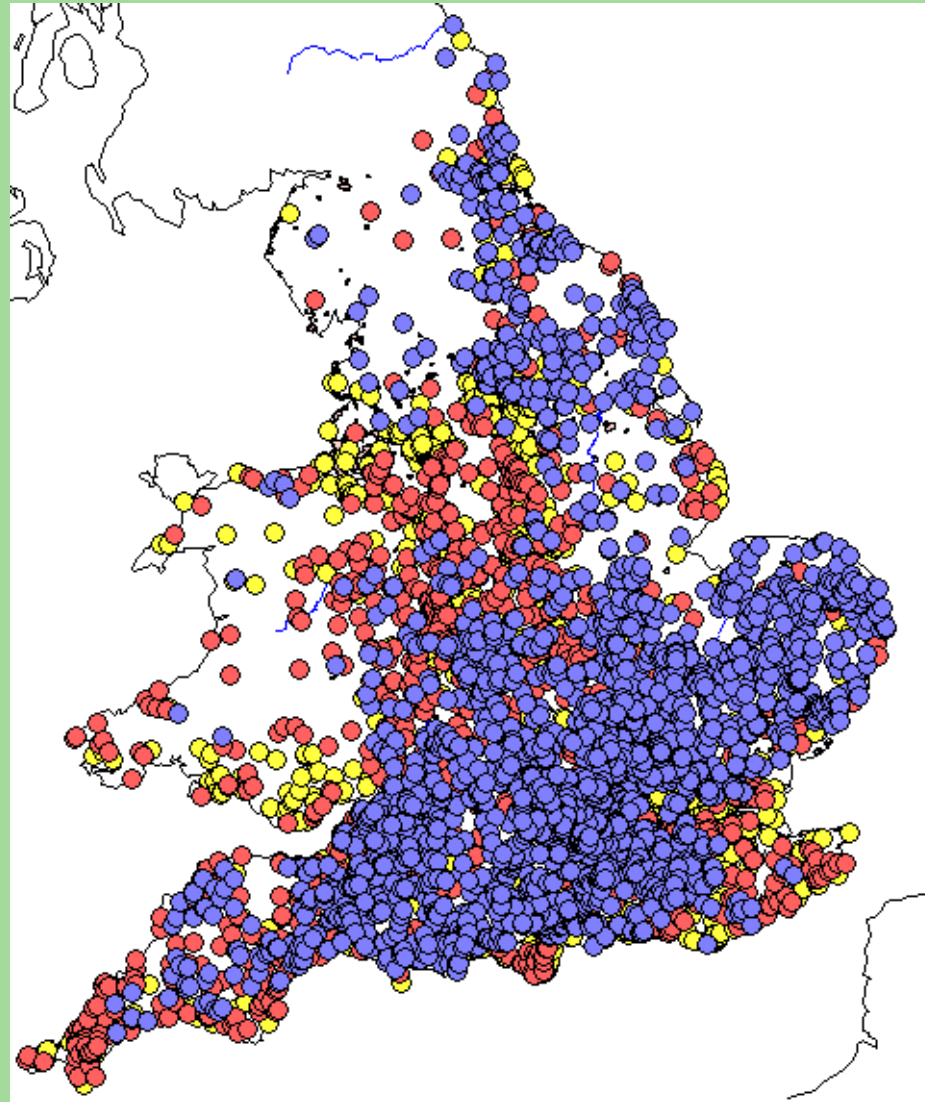


DVC distribution in relation to 'urban' land class [England only]

'Urban' Classification in England contributes c. 8% of land area

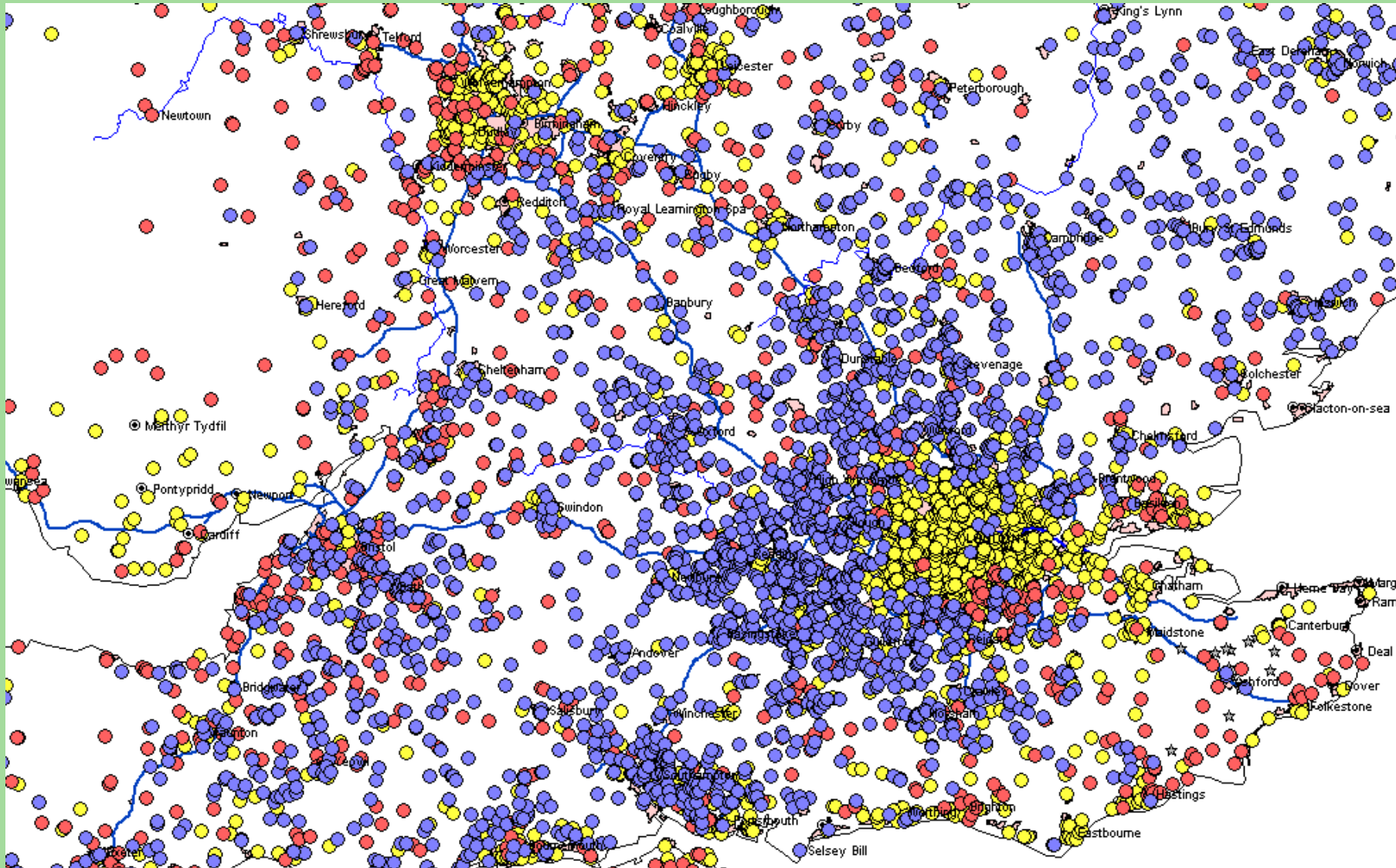
Type	Source	Years	Number mapped	Urban	
Deer	All sources	2000-07	30706	6410	21%
	RSPCA	2000-07	14703	4013	27%
	non-RSPCA	2000-07	16003	2644	17%
Fox	RSPCA	2002+3	3054	2124	70%
Badger	RSPCA	2002+3	1476	410	28%
Deer	RSPCA	2002+3	3271	1084	33%

Fox / Badger / Deer RTA call-outs to RSPCA 2002+2003



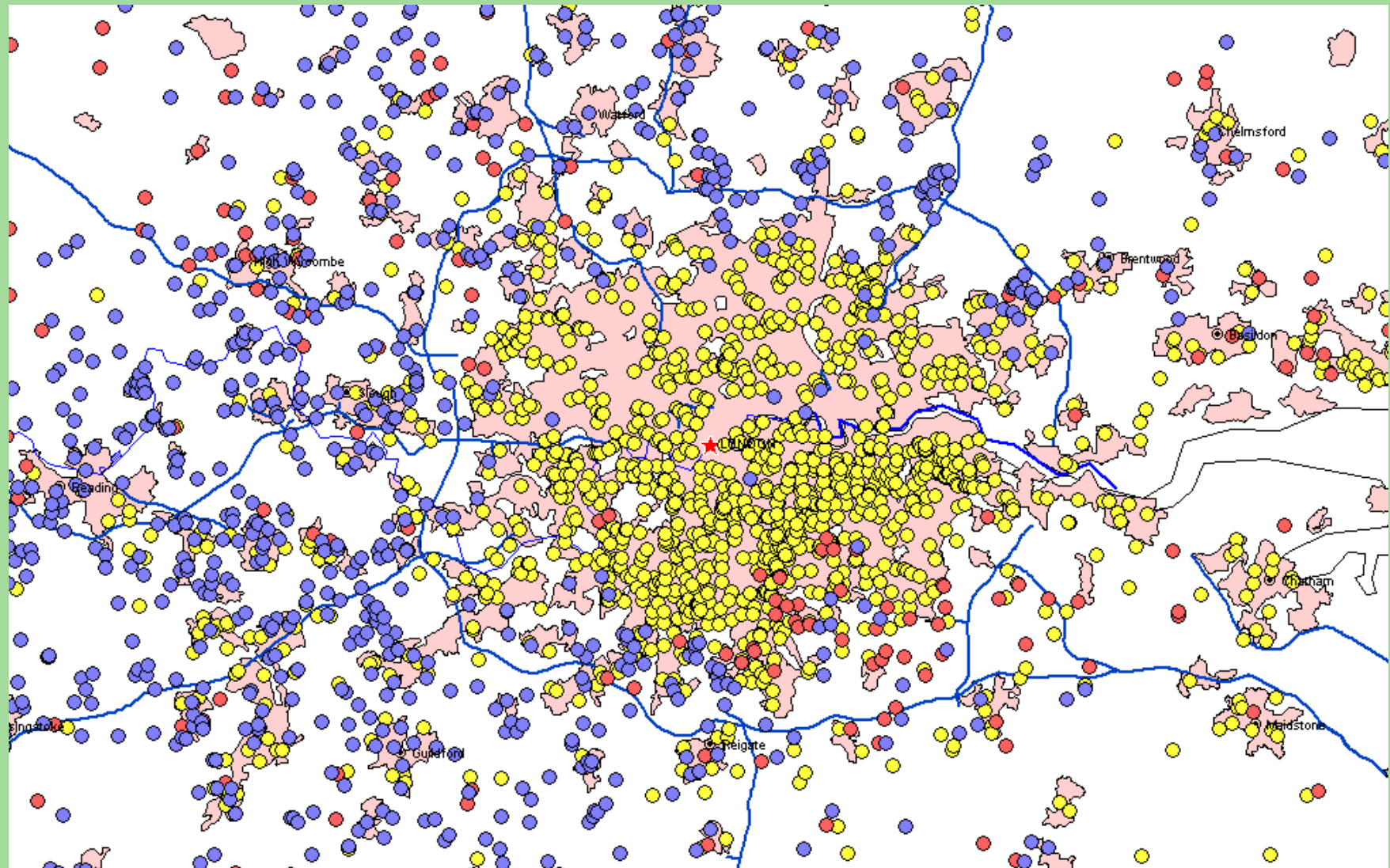
Fox / Badger / Deer

Fox / Badger / Deer RTA call-outs to RSPCA 2002+2003



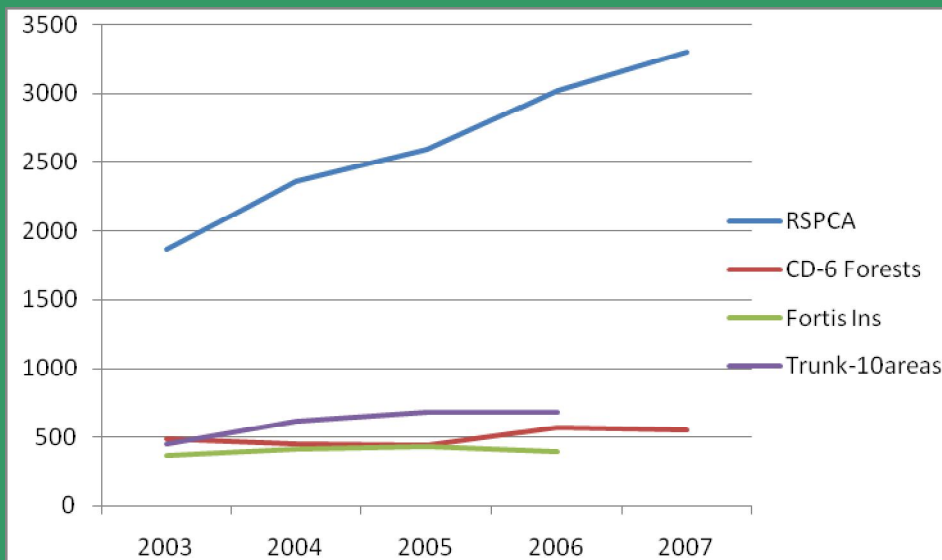
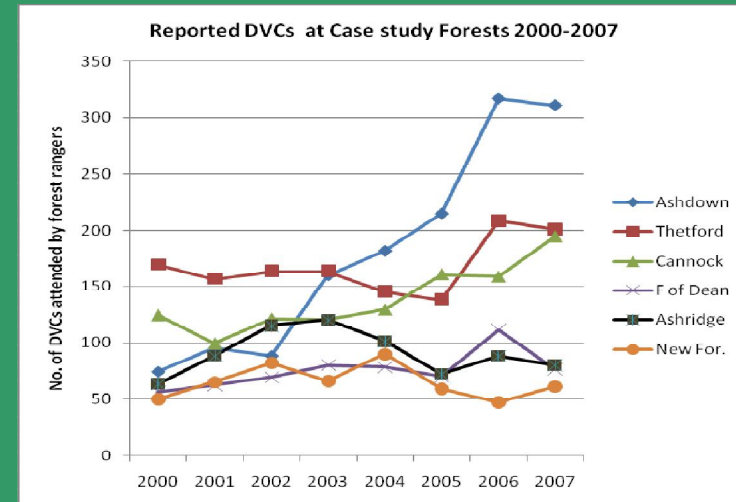
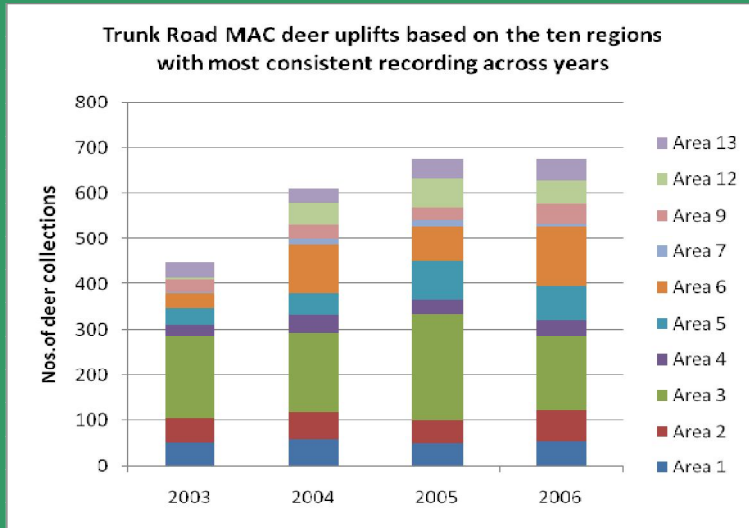
Fox / Badger / Deer

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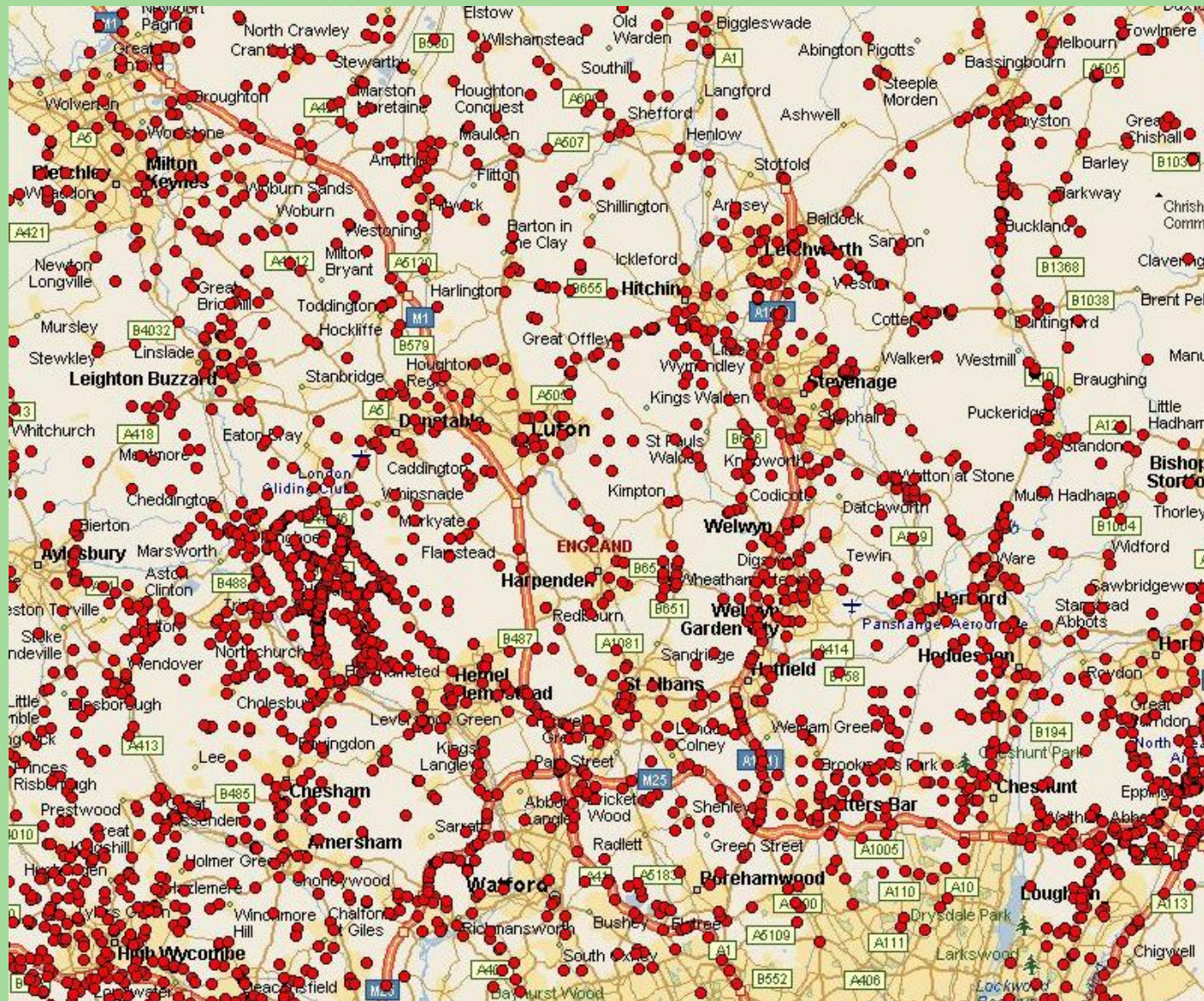
Fox / Badger / Deer

Since 2006 collation of DVC records has focused down more on best sources offering consistent coverage [esp. RSPCA / Trunk Road agents / PIAs / Case study Forests / Insurance]



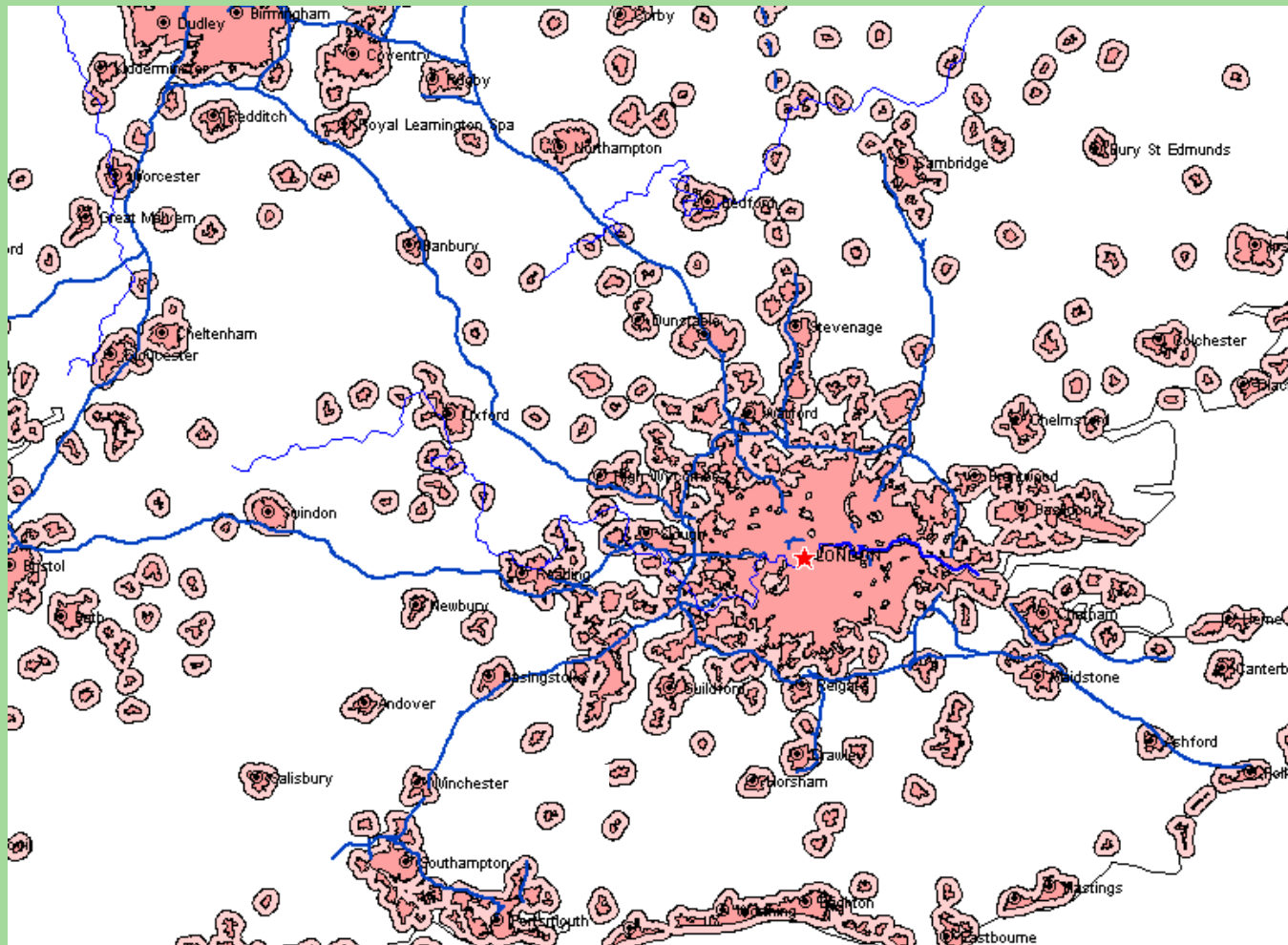
RSPCA Deer RTA Call-outs	
Years	%Urban
2000+2001 :	26%
2002+2003 :	33%
2004+2005 :	24%
2006+2007 :	25%

Deer Incidents highest in Peri-urban commuter belt

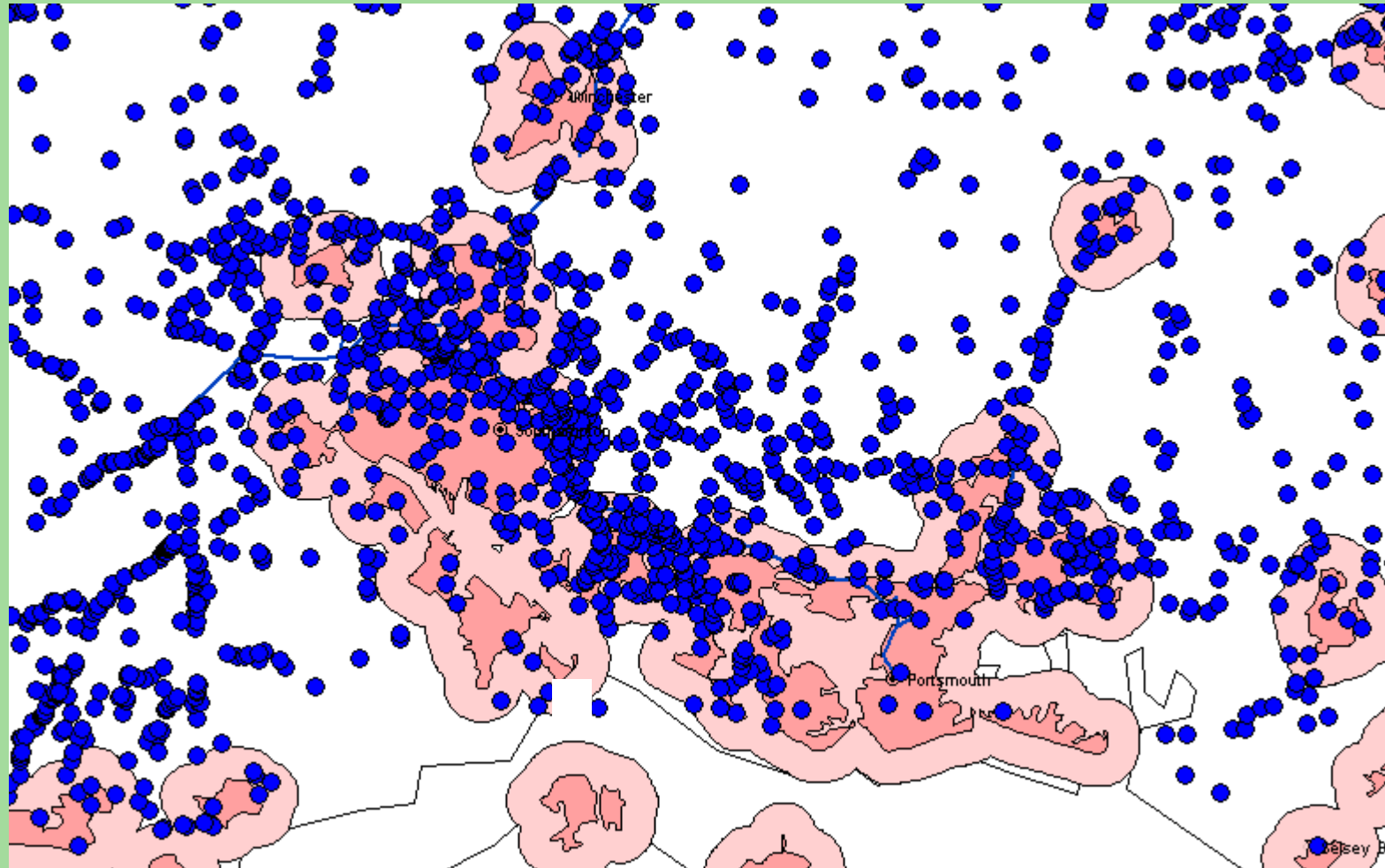


DI DVC database (all sources)

1 mile 'peri-urban buffers' created around all urban areas



1 mile 'peri-urban buffers' created around all urban areas



DVC distribution in relation to 'urban' land class
 [based on 30,706 mapped reports - England only]

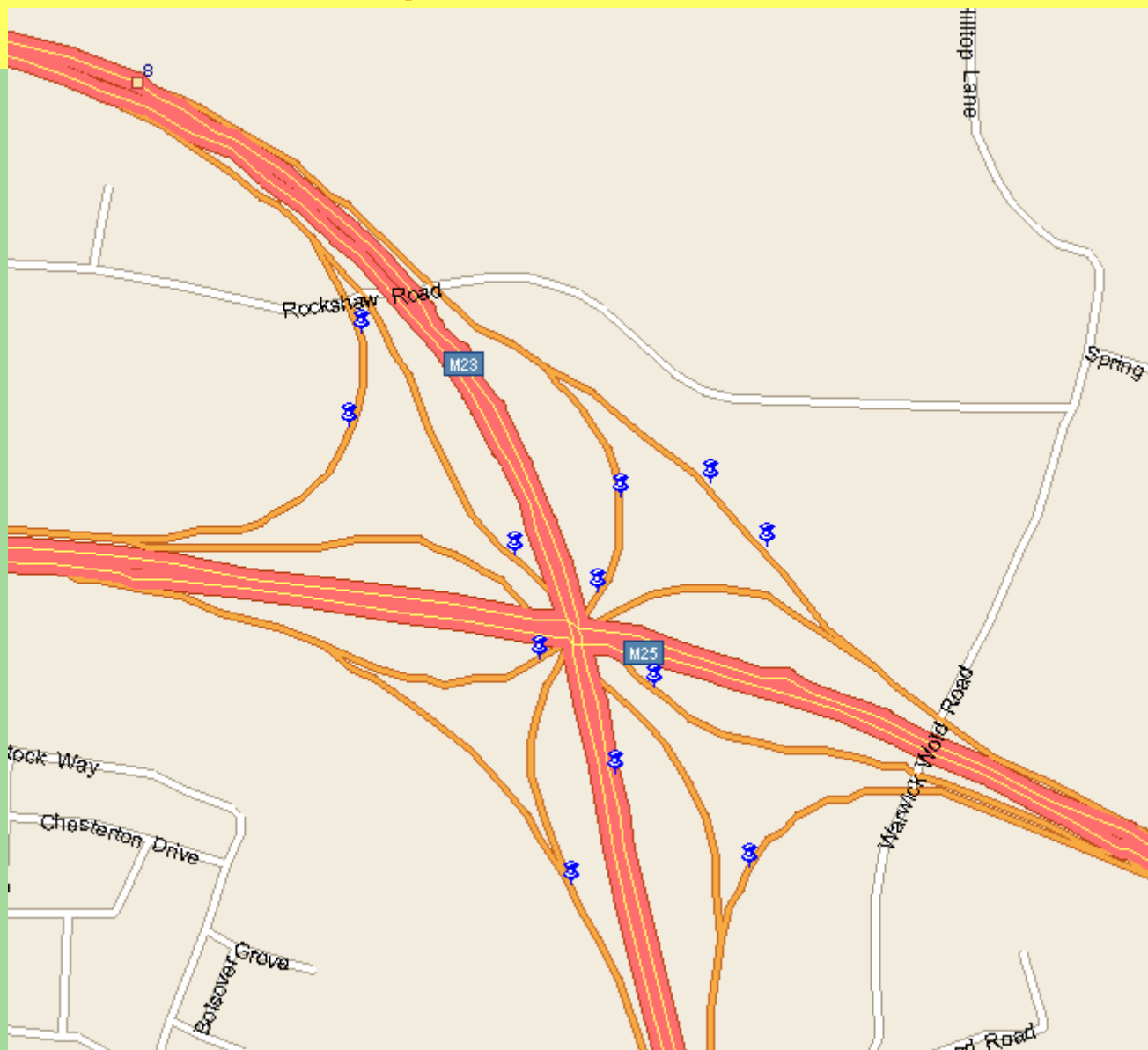
Source	Region	Records mapped	
All England	Urban	6410	21%
	Urban+1mile buffer	13451	44%
	=Urban fringe	7041	23%
Gt.London	within 15 miles of centre	574	2%
	within 30 miles of centre	6546	21%
	within 50 miles of centre	11054	36%

Based on estimated 50,000 DVCs per annum
c. 22,000 likely to occur in urban or peri-urban areas

**Highways Agency Area 5 - M25 Sphere trunk road
Deer Carcass up-lifts 2003 -2007
N = 335 (c. 65 per year)**



**Highways Agency Area 5 - M25 Sphere trunk road
Partic. high nos. deer casualties noted
at slip roads / roundabouts**



**Research video footage filmed by JL of deer crossing roads
(all examples shown filmed within 30 miles of London)**

[to view footage go to:

www.deercollisions.co.uk/pages/avoid.html]



What can / should be done ?



Individual measures rarely effective on their own



Fencing



'Green' bridge



**Dynamic, animal
activated Signage**



**Acoustic/optical
wildlife deterrents(?)**

Examples of joint use accommodation structures across M25

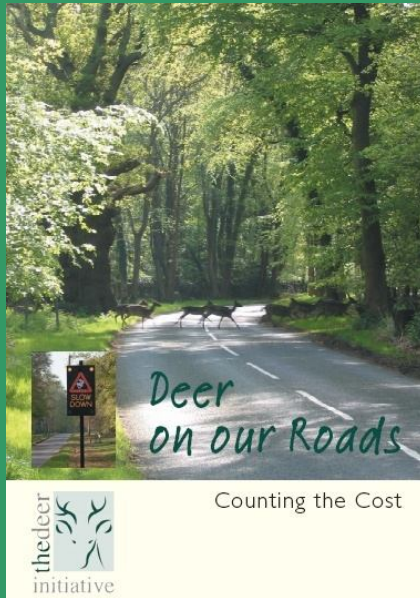


M25 Bridge & tunnel used by fallow and muntjac



Effectiveness:
Promising / HIGH

Raising Driver / Public Awareness



Individual measures rarely effective on their own

<u>Measures</u>	<u>Effectiveness</u>	<u>Disadvantages</u>
Fencing	Well proven	Maintenance cost; Barrier effect
Brigdes / Underpass	Good	High cost; Feasibility
Deer Control	Good / Variable	can move problem / destabilise
Speed Restriction	Good	Less feasible for trunk roads
Interactive Signage	Promising	Driver habituation?
Verge Clearance	Promising / unproven	Attractiveness
Public Awareness	Promising	Effect unclear
Deterrents	NONE well proven in UK situation	Inadequate signals; habituation

**Integration of several measures required
matched to local situation :**

- **Driver awareness e.g. Interactive signs**
- **Public awareness / posters / media**
- **Enforced speed limits, traffic calming**
- **Co-ordinated deer control**
- **Dog walker / visitor control**
- **Verge management**
- **Fencing – leading to safer crossing points**
- **Wildlife Deterrents (??)**
- **Driver Education (via Instructors & Road Safety teams)**

For Peri-urban areas in particular :

- **Raise awareness among Local Authorities**
 - re DVCs
 - need for population management
 - Plus other mitigation
- **Roadside (incl. roundabout) vegetation management**
- **Ring roads - enhance existing / create under/overpasses**
- **Improve / coordinate call-out systems to attend to injured deer**



Thank you ! Slow Down For Deer

Further information on DVCs see:

National Deer-Vehicle Collisions Project

www.deercollisions.co.uk

&

www.thedeerinitiative.co.uk

