

Newbury *Mycobacterium bovis* Cat Cluster

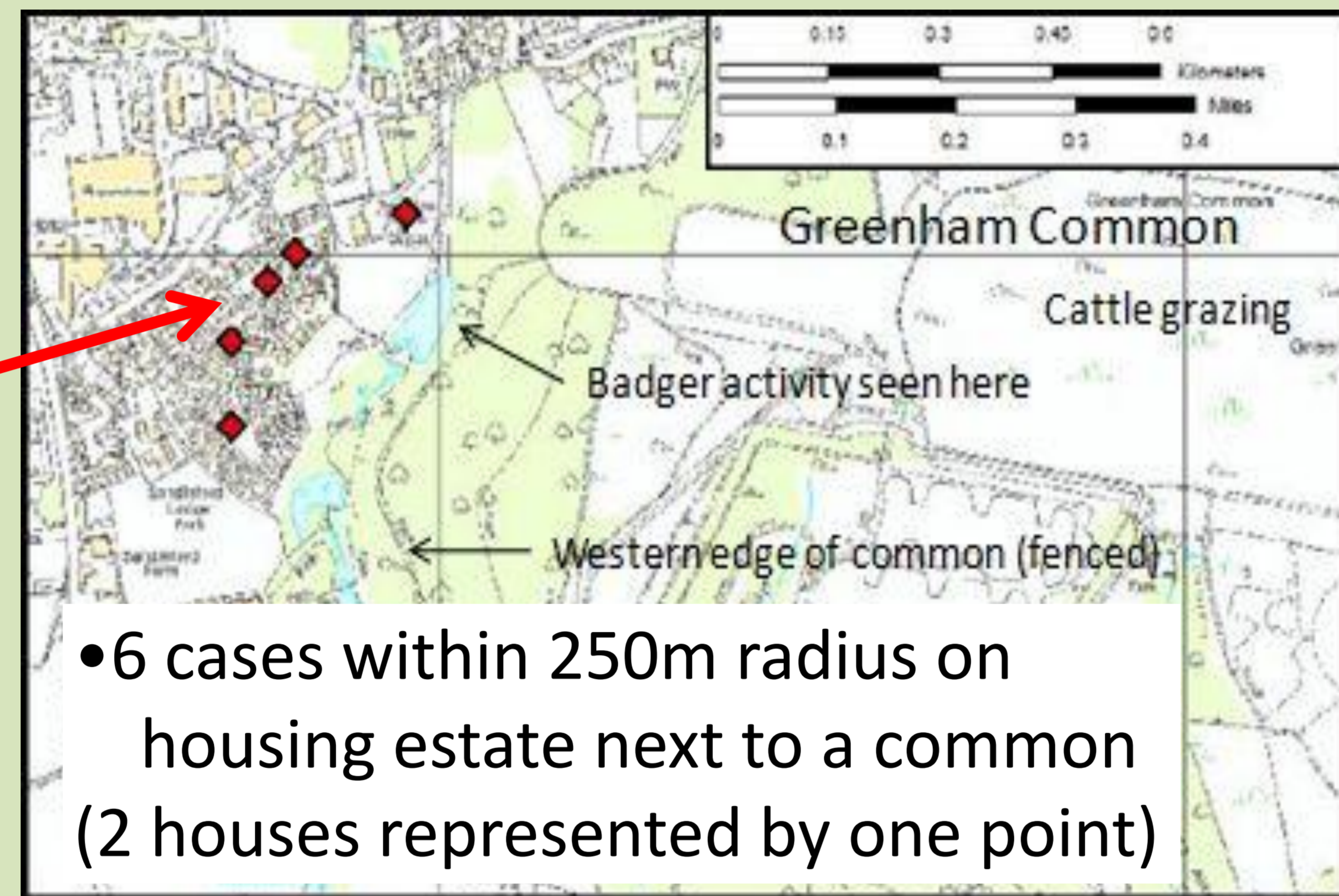
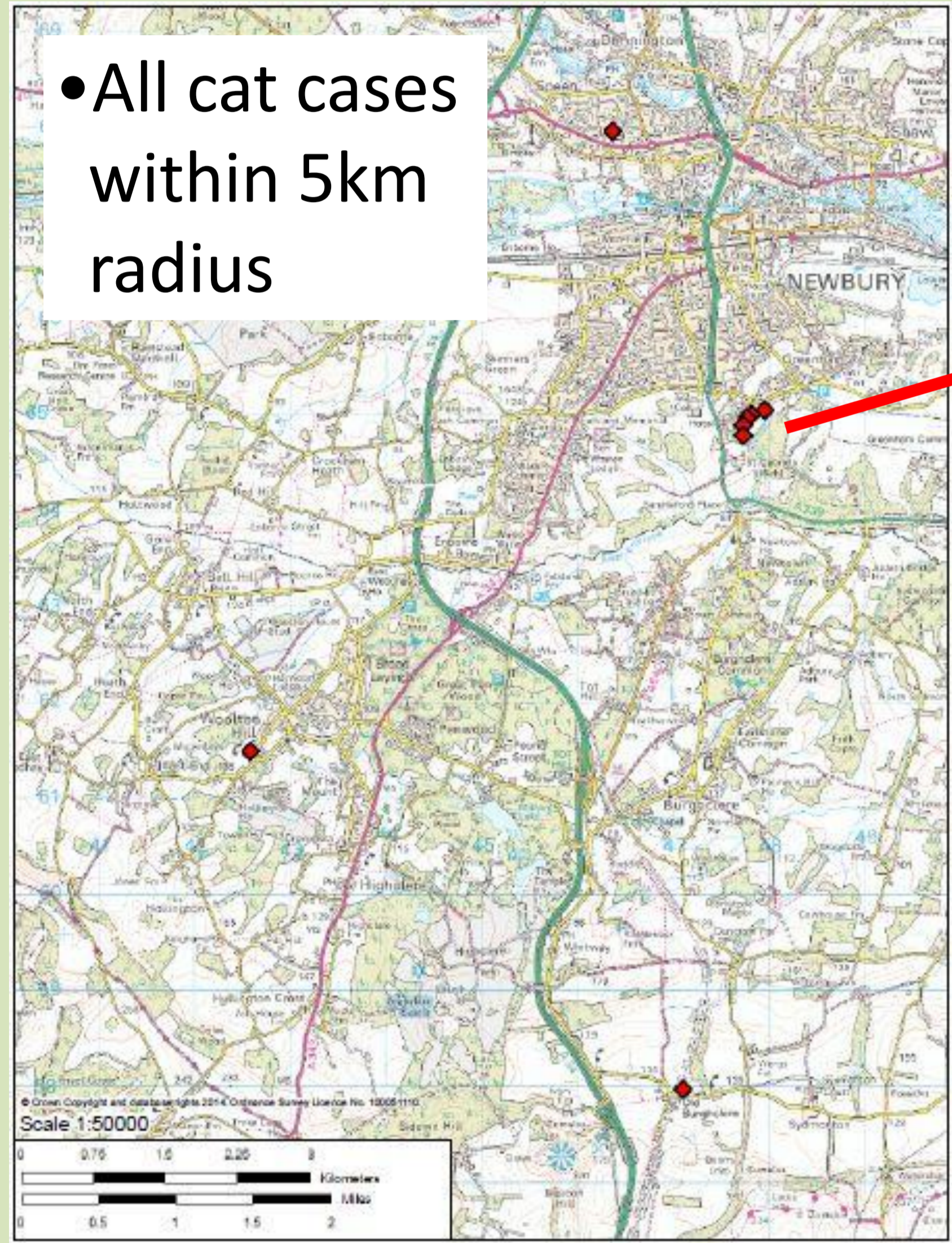
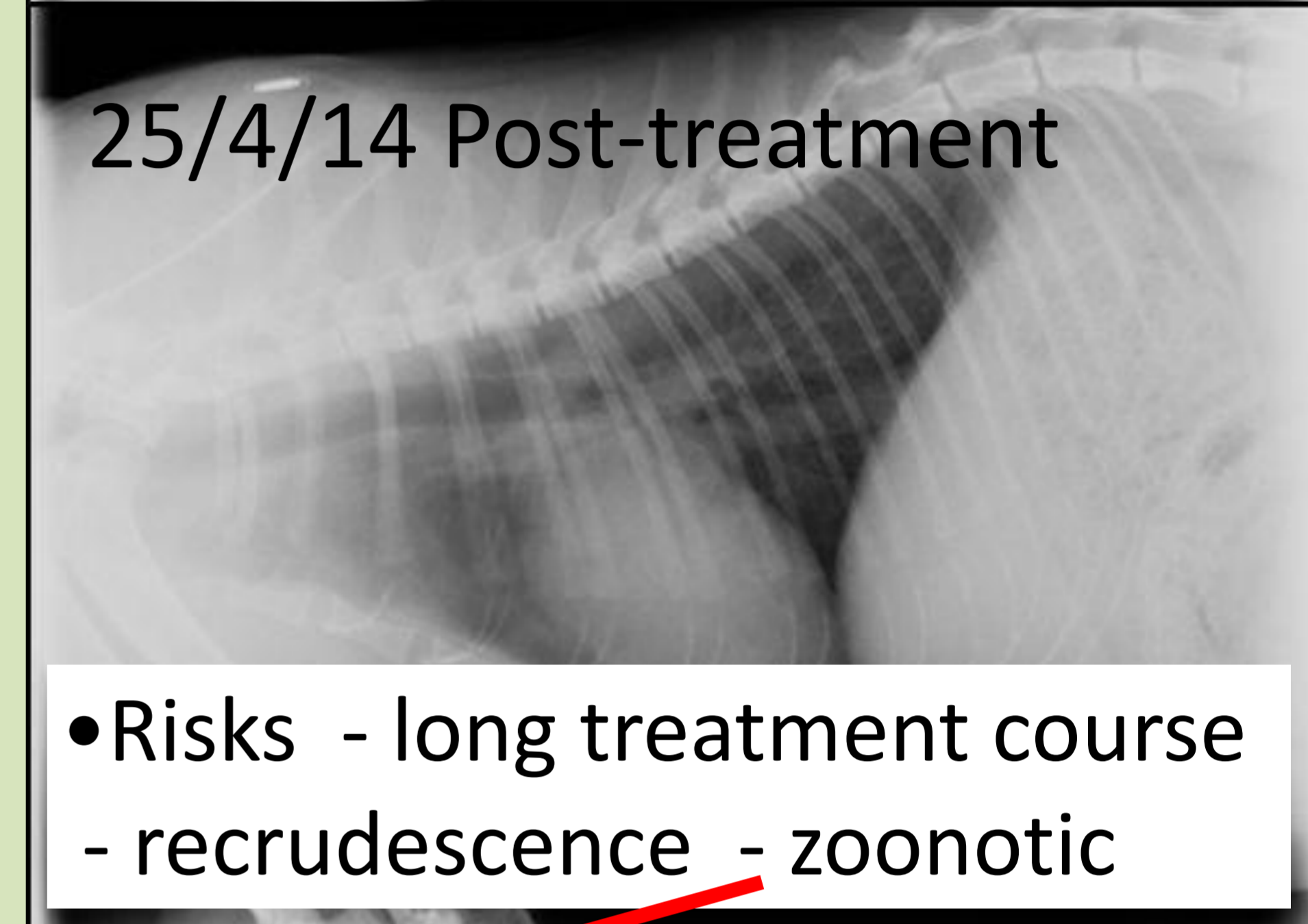
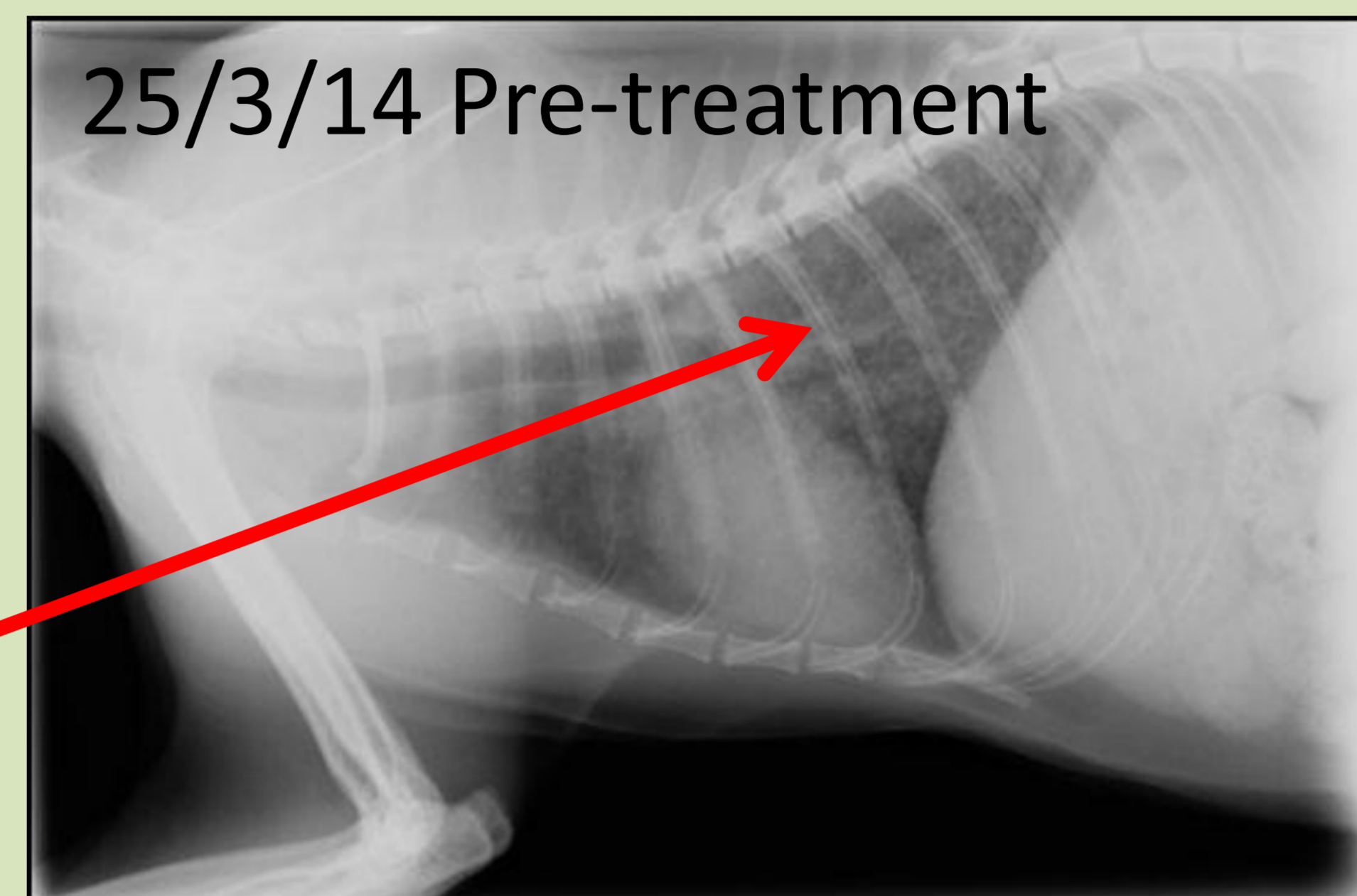


- Nine suspected cases of *M.bovis* infection in cats presented at one veterinary practice between December 2012 to March 2013.
- Largest temporally and spatially linked cluster in UK.

Tony Roberts (Veterinary Officer, Oxford) with contributions from Noel Smith, Weybridge
 Reference: Roberts et al. case report Vet Rec 'submitted for publication'



Clinical Presentation	Enlarged popliteal lymph node	Foot wound (non-healing)	Generalised Lymphadenopathy	Discharging lesion	Anorexia	Cough/abnormal breathing	Interstitial pneumonia (Radiograph)	Abdominal mass	<i>M. bovis</i> Isolated
Cat 1	✓			✓	✓	✓	✓		✓
Cat 2							✓	✓	✓
Cat 3	✓			✓	✓	✓	✓		✓
Cat 4	✓						✓		
Cat 5		✓					✓		✓
Cat 6		✓		✓		✓	✓		
Cat 7				✓	✓	✓	✓		✓
Cat 8		✓		✓		✓	✓		✓
Cat 9			✓				✓		✓



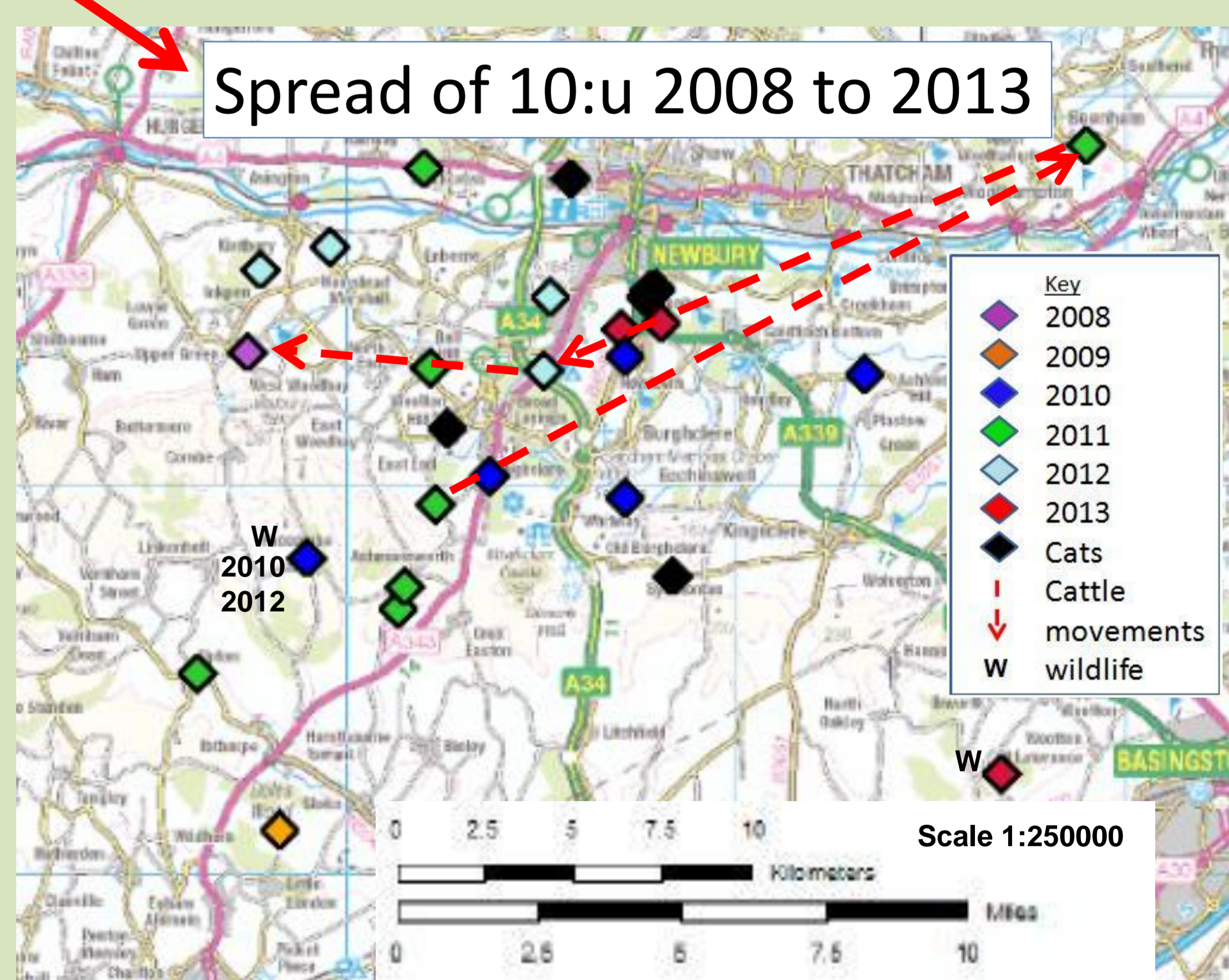
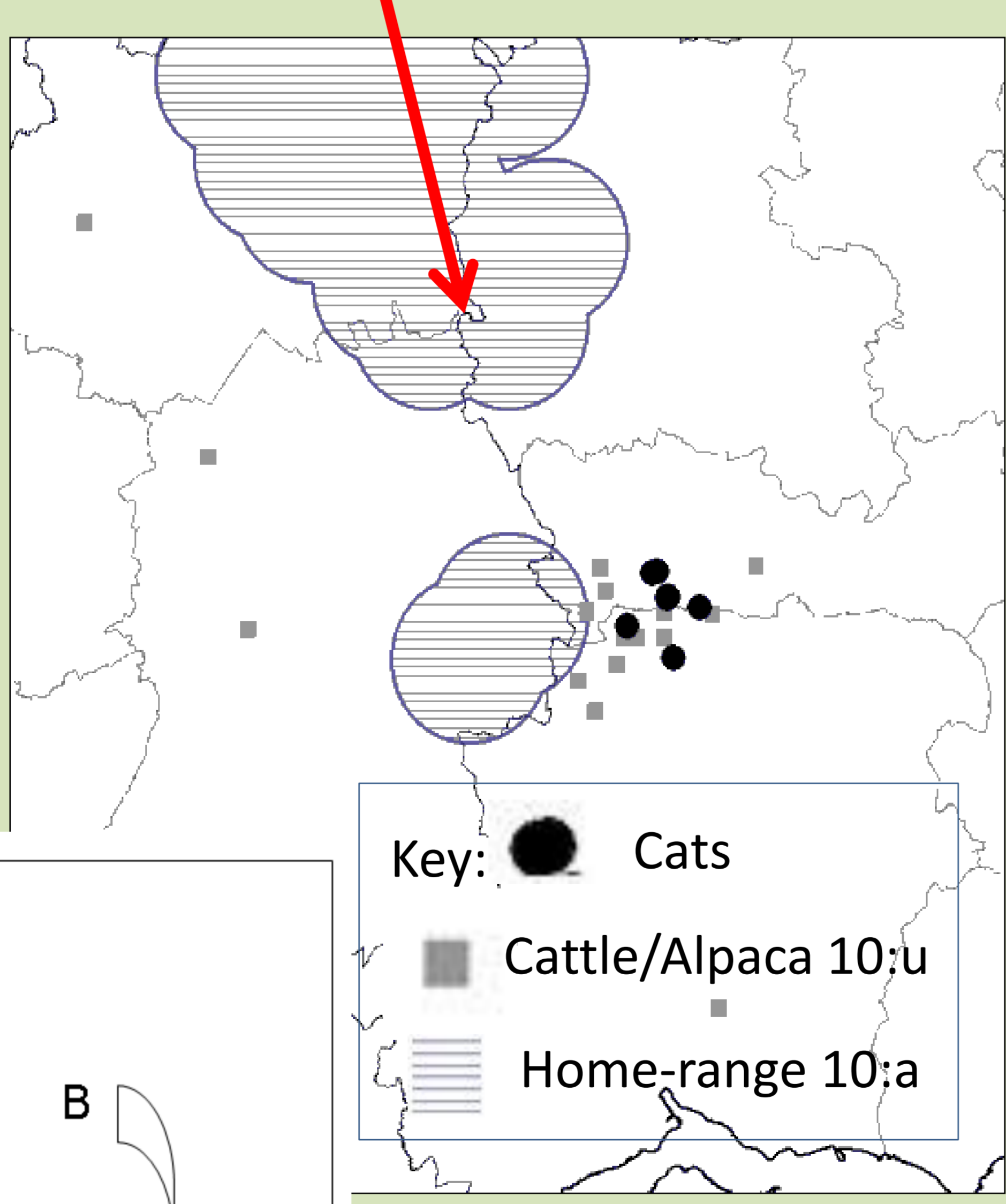
- 6 cases within 250m radius on housing estate next to a common (2 houses represented by one point)
- 7 cases confirmed - all Genotype 10:u
- Genotype 10:u – first isolated 2008 - associated with Newbury area - closely related to 10:a

- Risks - long treatment course
- recrudescence - zoonotic

- Human health Considerations:
- Screening of contacts per risk assessment (aerosol/wounds)
 - Where confirmed - genotyping

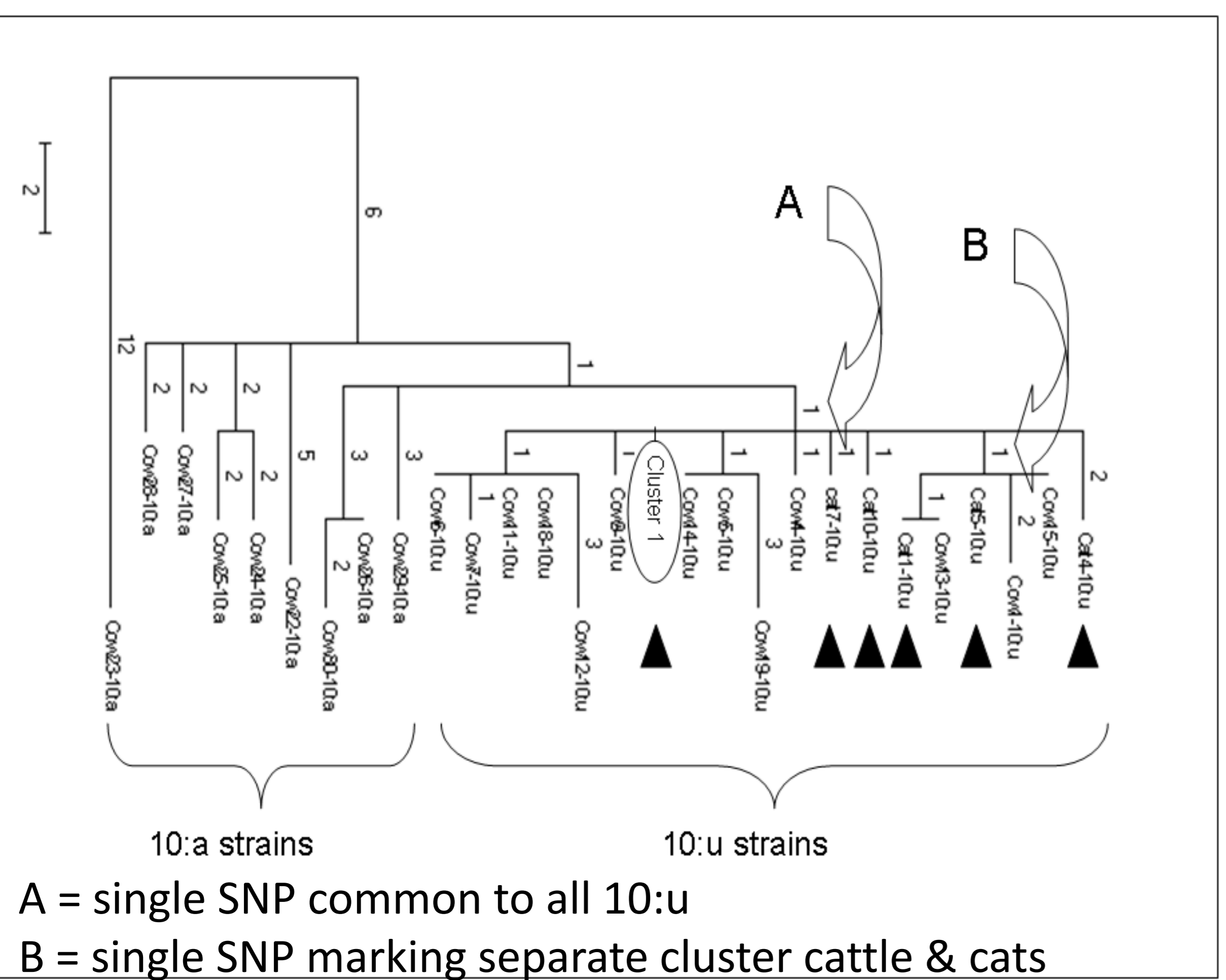
Transmission Model

- 7 cases consistent with bite wound entry (popliteal LN enlargement/wounds - foot/skin) from Cat/Rodents /Badgers (unlikely)
- 1 case nosocomial (castration wound)
- 1 case oral/bite – rodents
- (no raw milk involved)



Whole genome sequencing • three clusters identified within Genotype 10:u:
 - Cluster 1: just cattle.

- Cluster 2: cattle and one cat
- Cluster 3: cattle and cats
- Consistent with two separate ingressions from local bTB population into cats in Newbury area.



Conclusion: increasing prevalence of bTB in the location has spilled over into cats with the possibility of cat-to-cat transmission having magnified the extent of the cluster.