

**Response to The Examining Authority's further written questions dated 5 May 2020 – Question 6.2 Please provide a copy of the work undertaken by Sheffield University [cited in REP9-039] on the effect of the scheme on otters.**

**Response from Derby Climate Coalition**

No work has been undertaken that is specific to this road scheme but there are many research papers that show that otters have a very large territory - ranging from 2-5km for females and their young, to 10 – 21km for males.<sup>1 2</sup> One study in Scotland showed a male otter had a territory of about 65km!<sup>3</sup>

We have photographic evidence of otter prints found in the Darley Abbey nature reserve (the first record on the reserve which suggests that otters are establishing new territories in this area) from last April (2019).



As this nature reserve is very close to Little Eaton junction this is a huge concern.

The AECOM 2016 survey also showed evidence of otters around Markeaton Park.

I am currently waiting to see the 2017 and 2018 Water Vole and Otter Survey results deemed by HE as confidential. This suggests evidence of these species was found.

There is much research related to road kill of otters and the following points are worth noting:-

- Trunk and A-roads accounted for 57% of road traffic accident records, even though they comprise only 13% of the road network.

---

<sup>1</sup> Erlinge S (1967) Home Range of the Otter *Lutra lutra* L. in Southern Sweden. *Oikos*, Vol. 18, No. 2 (1967), pp. 186-209

<sup>2</sup> H. Kruuk and A. Moorhouse (1991) The spatial organization of otters (*Lutra lutra*) in Shetland. [Volume224, Issue1](#) Pages 41-57

<sup>3</sup> David Jenkins (1980) Ecology of Otters in Northern Scotland: I. Otter (*Lutra lutra*) Breeding and Dispersion in Mid-Deeside, Aberdeenshire in 1974-79. *Journal of Animal Ecology* Vol. 49, No. 3 (Oct., 1980), pp. 713-735 (23 pages)

- A 100-m wide zone surrounding fresh water and the coast accounted for 67% of all casualty records. Measures to reduce road mortality should target this zone.<sup>4</sup>
- 91% of accidents occurred where a road crossed a watercourse which suggests that substantial reductions in road mortality could be achieved by improving the design of road crossings of watercourses.
- We suggest that the optimal approach to road crossing design is to maintain a continuous, and where possible, natural bank above the level of high flows, using either wide-span bridges, over-sized culverts or artificial ledges.
- The use of otter-proof fencing may be required to reduce mortality where roads pass close to watercourses, but care must be taken that this does not create a barrier to all movements of otters and other wildlife.<sup>5</sup>

A road scheme of this magnitude will adversely affect the local otter population which is obviously establishing itself in this area. The need for protection and mitigation where roads pass over watercourses is key, especially now we have one flood after another due to climate change. The Derwent flowing under the A38 bridge near Ford Lane would be impassable during those times so otters would likely be forced to find alternative routes north / south on an increasingly frequent basis.

---

<sup>4</sup> Grogan, A., Philcox, C. & Macdonald, D. 2001. Nature conservation and roads: Advice in relation to otters. Wildlife Conservation Research Unit, Oxford.

<sup>5</sup> Philcox, C.K., Grogan, A.L. & Macdonald, D.W. 1999. Patterns of otter *Lutra lutra* road mortality in Britain. *Journal of Applied Ecology*, 36, 748-761.