

**Summary Proof of Evidence: Otters**

**For the Gwent Wildlife Trust**

**Geoff Liles**

**February 2017**

**In the matter of:**

**Public Local Inquiry into the M4 relief road around Newport: the effects of the proposed M4 extension across the Gwent Levels**

## Biography

- 1.1 My name is Geoff Liles. I hold a BSc in Ecology and have been a leading otter ecologist & conservationist for over 35 years, working first with the Vincent Wildlife Trust and Welsh Wildlife Trusts to set up and develop the otter conservation initiative for Wales, and now as an ecological consultant specialising in otter conservation & research.
- 1.2 I have extensive field experience with otters in the UK and Europe, and have been instrumental in pioneering a number of survey, conservation and mitigation techniques, including river catchment surveys & management plans for otters; the design & use of artificial holts; otter predation at still water fisheries; and otter use of coastal environments. I instigated otter post mortem research in Wales at Cardiff University. I regularly advise and provide training to NRW & Local Authorities on otter ecology, conservation issues and mitigation.
- 1.3 Of particular relevance to this inquiry is my work on otter road deaths in Wales to identify the scale, trends & factors involved in otter road mortalities, the range of effective mitigation measures available to reduce otter road deaths, and a strategy for implementing mitigation. This work identified the use of 'short-cuts' by otters across open land & their role in otter road mortalities. The Roads & Otters Steering Group for Wales (representing WG, Local Authorities, Highways Agencies, NRW, & Wildlife Trusts) was established as a result of this work. My work on 'otter fences' (a study of mesh sizes that will act as barriers to otters), and otter breeding (to establish the habitat requirements for successful breeding and a procedure for identifying potential breeding sites) is also relevant.

## Summary of Evidence

- 2.1 In my evidence for the M4 Public inquiry, I concentrate on an evaluation of the otter surveys undertaken for the road scheme by Arup in 2014 & RPS in 2015. I also evaluate the information used to inform the choice of the preferred route by WG; and conclusions regarding impacts on otters for the Usk SAC and Gwent Levels. Detailed species specific mitigation proposals for otters have not yet been made available by Welsh Government so cannot be assessed.
- 2.2 The Arup and RPS otter surveys fail to provide even the most basic ecological information on otters due to serious failings in each step of the process (desk study, survey methodology, survey results, and conclusions drawn).
- 2.3 The **desk studies** were inadequate because they used only information from the Arup 2007/8 survey (which has not been made available for scrutiny) and SEWBReC. I carried out my own desk study and discovered 7 reports of otter surveys on, or close to, the proposed route (including one carried out by Arup in 2011 and overlooked in their desk study). The 7 reports provide details of potential breeding sites and resting sites that should have been investigated by Arup/RPS. One of these reports – at the Docksway Landfill site immediately adjacent to the River Ebbw river crossing – resulted in the issuing of a WG Otter Licence (ref OTT349) to protect otters, a breeding site and three resting sites. Although the SEWBReC data contains important otter records (otter signs suggesting possible otter distribution within the Levels, sightings of female with cubs indicating proximity to a breeding site, possible resting sites, otter mortality sites including a lactating female) none of this information was used by Arup/RPS. Included in the SEWBReC data are otter records found during the Gwent Wildlife Trust mink raft monitoring around Magor Marsh Nature Reserve between 2011 & 2017. Otter signs were found at almost all mink rafts, and the mapped distribution of signs found demonstrates

widespread use of the area, and suggests that otters travel through the steelworks to watercourses north of the steelworks that would provide a travel route to/from the lower reaches of the River Usk SAC.

2.4 The **survey methodology** used by Arup and RPS was inadequate for several reasons. For example, the two documents cited as providing guidance give information on otter ecology, but do not provide guidance on survey methodology. Good, precise guidance on otter survey methodology for road schemes is found in the Design Manual for Roads & Bridges (DMRB) Volume 10 Section 1 Part 9 HA 81/99, but this was ignored by Arup/RPS. DMRB 81/99 requires that 4 surveys are undertaken throughout a year (because otters use different parts of their home range at different times of the year). Arup/RPS carried out only 1 survey, so were unable to determine how otters use water habitats within the area. Arup/RPS combined surveys for otters and water voles. Survey methodologies for the two species are totally different and should not be combined, especially when the aim of the otter survey is to “*..provide baseline ecological surveys to inform proposals for the M4 Corridor around Newport*” (Arup 2014). Descriptions of otter ‘resting areas’ in the Arup report suggest that the authors / surveyors have little understanding and experience of otter resting and breeding sites. Their methodology used “Habitat Suitability” and surveyors determined it to be high, moderate, low and negligible based on a range of criteria to “*..indicate how likely otters are to use a site given the present habitat condition*”. The use of ‘habitat suitability’ is fallacious. Many litter-strewn water courses through towns & cities, and dry stream beds which are vital travel routes for otters would be of ‘negligible’ value based on these criteria.

2.5 The overriding aims of the surveys should have been to: locate and describe protected sites (breeding and resting sites) and feeding sites; identify actual & potential otter travel routes (including ‘short-cuts’ across open land); provide an

understanding of how otters utilise water habitats throughout the year; identify potential mitigation measures; and present all the above data in a clear, detailed manner using maps, 10 figure grid references and tables. The Arup/RPS surveys failed to achieve any of these aims. Without this crucial information it is not possible to assess the impact of the scheme on otters, or to devise effective protection/mitigation measures for otters & their habitats.

2.6 **Results.** As a result of the inadequate methodology and survey, Arup/RPS failed to provide even the most elementary baseline ecological information on otters. None of the potentially valuable information from previous surveys (on otter distribution, otter breeding, breeding and resting sites, & likely travel routes) was found & used during their desk studies. Of the 1442 water bodies surveyed in their 'one-off' survey, otter signs were found at only 18 sites, a result that tells us nothing about otter use of the watercourses throughout the year. Although there are some places that might be resting sites that are mentioned in the report, reference to them is very vague (terms such as '*good refuges*', '*vegetation in the vicinity which otter could use for cover*') with no attempt to identify the exact location or to provide a description.

2.7 The **conclusion** reached by Arup is utterly bland and could have been written in the early 2000s & in the absence of their surveys. They say: "*Otter signs were recorded across the majority of the study area. In the study area otters are finding a niche amongst the industry, housing and farming, utilising suitable habitat which has good water quality, prey availability and provides cover*". The Arup/RPS surveys have added nothing to an understanding of otter use of the Levels and the potential impacts of the scheme on the species.

2.8 A conclusion that could have been drawn is that, because otter populations appear to be at low density the creation of a new road is likely to pose a significant risk to

otters. DMRB 81/99 states that “*Otter populations with low densities will be most at risk through road casualties.*”, and “*It is also important not to create barriers to the re-colonisation of habitat by otter populations*”.

- 2.9 With the lack of any meaningful data on otters gathered by Arup it is not surprising that their main recommendation is an inane, fatuous statement: “*where otters..are likely to be affected, mitigation and/or compensation, should be incorporated into the design of any scheme*”. This is another statement that could have been written in the early 2000s.
- 2.10 The **choice of preferred route** by WG appears to have been made without any understanding of the likely impact on otters.
- 2.11 The proposed route cuts through, and affects, many water habitats. Otter activity across the length of the route is likely to be complex, with otters travelling between, and using, all types of water habitat at different times of the year. Potential impacts on otters and their habitats are likely to be significant, and can only be fully understood with reference to specialist knowledge of otter ecology and detailed field surveys in each season of the year (as described in DMRB HA81/99).
- 2.12 In the Environmental Statement an attempt is made to **assess likely impacts** of the road on otters. In the absence of any detailed information on how otters use the area throughout the year, which breeding sites, resting sites, feeding sites and travel routes (including ‘short-cuts’) will be affected, it is not possible to assess any of the likely effects for land take, construction phase and operational phase. The assessment of likely effects has no validity.

- 2.13 The inadequate desk study and surveys also have implications beyond the assessment of likely effects, as they have fed in to the Statement to Inform the Appropriate Assessment for the River Usk SAC which includes the Otter as a feature. The failure to assess the otter impacts with any degree of adequacy also impact on the ability of the scheme to meet legislative commitments and requirements including the Conservation of Species and Habitats Regulations 2010 (as amended), the Wildlife and Countryside Act 1981 (as amended) and the Welsh Government commitments in the Environment (Wales) Act 2016.
- 2.14 Detailed **mitigation measures** are yet to be published. However, we do not consider that effective mitigation for otters will/can be established because the Arup & RPS otter surveys do not provide adequate information on otter activity, resting & breeding sites, feeding sites, and otter travel routes. If/when an otter mitigation or conservation plan is submitted we wish to reserve the right to add to, or amend, this submission.