

## **Day Seven**

### **Geoff Billington**

#### Evidence in Chief

Mr Billington was asked to read from Para 10 until the end of his summary proof.

Mr Billington was asked to read from s1 and s4 of his response proof.

Mr Billington said that very minor changes could be made to the scheme.

#### Cross Examination

**Full proof (FP)4.39.** Are terms 'minor negative' and 'slight adverse' using same scale of assessment as Dr Jones?

-Affirmative

What is the source of this scale?

-TAG assessment criteria

-Attempted IEA criteria, but did not give level of detail.

Impact will be reduced to minor negative. Overall effect slight adverse. On presumption that all mitigation be successful?

-Would not argue mitigation would be 100% successful

Without mitigation, what would impact and effect of construction be?

-Could be disastrous

-Emphasise that plan is *with* mitigation

Impact and effect without mitigation in Year 1?

-Only considered with mitigation

-Could be major negative without mitigation

Equate to major adverse?

-Agreed

Year 15?

-again major adverse

Number of bats likely to be killed?

-Have not gone as far as estimating numbers

-Likely to be extremely low

-Almost impossible to calculate

-Mitigation expected to have extremely high level of success

Number killed during construction?

-No deaths during construction

Year 1 deaths?

-No data

-Small number of individuals, possibly, at the maximum

Year 15?

-Coming down to zero

Why?

-Bats teach youngsters flight routes that they use

-Bats that got it wrong 'not there anymore'

-15 years represents generation for many species

Are any bat species more susceptible to adverse impacts?

-Big, high flying bats least susceptible

-Light sensitive species – two horseshoe species (Annex II), all myotis species

Presumably, if there were no road in the Wellhead Valley, there would be no impact on bats?

-No impact from road, e.g. Cold winter

Risks that are present anyway?

-Agreed

-Horseshoe popn currently booming due to mild winters

**ES,V4, Part 2.** Appendix 9.14. Bat survey 2004. s3 results. Pg8. Evaluation 4.1.1. Surveys suggested hedgerows important White Scar Hanging. Confirmed?

-Agreed

Some bats travel 15-20km.

-Only some species, applicable to area

Bats recorded along route line that have links to BBSAC?

-Agreed

Appendix 1. Greater Horseshoe Bats. Currently restricted South England and Wales. Priority for conservation. Still the case?

-Extended range – breeding colony in North Pembrokeshire. Non-breeding in N Wales.

Wiltshire not priority area?

-High priority wherever they occur.

Wiltshire particularly important for bectine?

-agreed

Several species listed as vulnerable. What is meant by vulnerable?

-At risk from popn decline.

-Not currently proven to be declining.

Appendix 9.15. 2006 NPA survey. 1.2. 11 species, up to 13. Still the case that there are 11 species?

-13 species now confirmed.

-possibly more

Particularly rich assemblage?

-Agreed

Possibly even richer than BBSAC?

-Cannot comment

Don't know how many are in BBSAC?

-Do not have data.

Of 13 species, how many Annex II?

-Four

-At least 17, up to 21 species, recorded in UK

How rich is the assemblage near Frome?

-Not aware, aware of horseshoes.

Would you disagree with any of the statuses. E.g. Lesser horseshoe endangered?

-No

-In some areas lesser horseshoes common, e.g. SW England

At the time of 2006 survey, various minutes taking place. What is taken from minutes, reflected in report.

-Report

Minutes from 26/07/06 meeting. pg2. 4.2. Activity surveys. JK raised issue that assessment was needed to ensure scheme should not have significant impact on SAC.

-Agreed, though JK later agreed no further assessment needed.

**CD8.9.** ODPM circular 2005. Para 9, consideration of new plans and projects.

Reg48 Habitat reg. Appropriate assessment must be carried out.

-agreed

Para13. Quote from ECJ case. Sets out test for whether appropriate test required.

-Agreed

Para20. Decision taker should not grant permission if project would have significant effect on SAC.

-Agreed

Competant authority must be certain that project would not effect. Reasonable doubt test.

-Agreed

Test should have applied in this instance?

-Data collected throughout year. Concensus of expert opinion that no significant effect on BBSAC.

18/10/06 meeting. Agreed that NPA would include section on SAC and discuss whether scheme would have effect. Left to NPA to consider whether scheme would have adverse effect on site?

-No, lack of detail in minutes

Had it already been decided by October 2006 that no appropriate assessment required?

-Cannot comment

-May have been other meetings

-Would guess that decision taken at this meeting

ES pg38. Para4.2.4. Reiteration that number of Greater Horseshoe Bats had connections to SACs.

-Agreed

ES4.2.5. Slight adverse. Still position now?

-Agreed

Surveys in 2007 and 2008 not changed assessment?

-Would never remove slight adverse, always risk despite mitigation

ES4.3 Discussion of SACs by NPA. Number of recorded linkages between bats along route and SACs.

-Agreed

-Primary bat route to the W of Westbury.

ES4.3.7. 8% of bats from Brown's folly from SAC. Mitigation regarded as adequate.

-Agreed

NPA's opinion?

-Also English Nature's opinion

No record?

-Never found anything in writing from NE.

-Common practice

-If were not happy would have raised objection

NE continue to object in principle?

-No, have changed opinion

-Judged as experts that would not have significant impact

Test is that no reasonable scientific doubt. Very high threshold?

-Agreed

Over what distance is radio tracking possible?

-Keep pursuing it, realistically over a range of several miles

Can only be certain that bats that have been ringed and tagged from BBSAC?

-Agreed

What methods used in survey area to catch bats?

-static hand nets in roost

-in earlier surveys misnetting carried out.

Netting for bats comparable to netting for fish?

-No

-Bats use much smaller nets, very fine.

If one casts one's net in the water and casts it in, similar to how bat netting?

-More difficult to intercept bats, require knowledge of where bats fly.

Satisfied that data from netting surveys, provides good scientific judgement of bats in area?

-Netting surveys not adequate, only catch small proportion.

-Netting on its own ineffective

**Vol3 ES appendices, excluding ecological appendices.** Appendix 3.2.

Comparison of routes. E route has detailed information. FW route thorough, but not as detailed. E route: Moderate adverse impact on bats. FW route: slight adverse impact on bats. Nothing like the surveying of the E route done for FW route?

-Not been involved in FW route surveying.

Do you know whether the FW route was surveyed, and to what level?

-Desk studies covered area.

Far more information on bats for E route than FW route?

-Agreed, incomparably more detailed.

-Desk studies variable in quality, and mostly incomplete.

**FP5.2.** If one component not 100% effective, another component is provided.

Vital that safe flight routes maintained?

-Agreed

Designs based on review of road mitigation around the world. **FP5.3.** No other road scheme has proposed level of mitigation.

-Agreed

Appendix I. Slater. Assessment of discrepancy between deaths and record of deaths. Death rate can be 12-16 times greater than deaths recorded. On average road kill removed within 30 minutes of daylight?

-Agreed

**FP5.6.** Appendix C, Bondartina. Pg1. Use of artificial hedgerows. Maximum proportion of bats following corridor 20%.

-Only after six weeks, 20% a high success rate after that time

-Proportion would increase after a season

Range 12-20%. Maximum mean 12%.

-Agreed

Accept that majority of bats did not use new route?

-Very encouraging after six weeks

-Must be considered that this was a completely new flight route. In scheme, flight route maintained.

Not found figure for proportion of bats who would use new route after existing route severed and replaced.

-20% after six weeks impressive result, as existing routes remain,

No evidence to show what percentage of bats will use new routes as envisioned by scheme.

-Agreed, very little data. Cutting edge approach.

-Using best knowledge that is currently available.

**FP5.15.** Appendix D, pg19. Aware that 67 bats crossed, not aware of proportion?

-Cannot measure proportion

-Maximum of 80 bats crossed route at the beginning of project. 100 bats recorded later.

Clearly figures fluctuate?

-Agreed

Not a great deal of certainty?

-No, problem of studying wildlife.

FP5.17. German study. Satisfied with data?

-Satisfactory data, but would have preferred to have seen data before project.

Relatively low numbers?

-Not per hour, but for one night they yes.

-'How long is piece of string' question

-Must be taken in context of local area

FP5.19. Appendix T. Data does not allow for quantitative analysis. Smaller bats use smaller tunnels, larger bats would only use larger tunnels. 11 species use tunnels, only 5 use bridges. Bridges barely used by bats. Implication that not great deal of research done on effectiveness of tunnels against bridges?

-In the UK no GB's specifically for bats.

-Very little information on UK bridges

Difference in behaviour between UK and German bats?

-Not for the same species, though may be affected by landscape.

FP5.20. Gantry design unproven. Appendix H.

-Very little information on scheme.

No actual data?

-Terrible from a data point of view

FP5.28. Detailed monitoring plan being prepared. Still the case?

-Baseline monitoring should be in supplementary proof.

-'Hiccup' in document compiling.

-Plan provides data from before scheme comes under construction so can be compared, provide information for minor alterations.

**Prof Altringam's proof.** 3.1.8. Primary roads significantly more effective at genetically isolating. This scheme is a primary road?

-Yes, but only two lanes.

Difference between genetic isolation and genetic diversity?

-Refer to gene flows between populations, could refer to either isolation or diversity.

Minute from 26/07/06. Rep from English Nature, Julie Swane. Also rep on 18/10/06. Still with Natural England?

-Now working for MoD as ecologist

When stopped working for English Nature?

-Not aware

Bat monitoring plan. Solely concerned with pre-construction modelling?

-Agreed, updating previous information

Do we yet have a monitoring plan for during construction?

-Ongoing thing.

-Higher intensity of monitoring

Post construction plan?

-Not currently

When will be available?

-Draft plans drawn up, waiting for feedback from Natural England.

Current surveying work require license?

-Not Reg 48 license.

Not great deal of work before 2004?

-Possibly limited field survey

-First detailed study in 2004

By the time the application submitted in 2007, a great deal more information available.

-Agreed

Difference in information pre-2004 and 2007?

-Extra two species discovered.

-More extensive hedgerow studies.

-Capture and radio tag of bats in nest expanded in 2006. Horseshoes and Bechstein's recorded.

-Buildings within 3km radius studied more extensively – possible roosting site in building found NW of Westbury.

-Other horseshow sites found

-Inspection of Bechstein's roost in Wellhead Springs.

-Other information to be processed

Pickett and Clanger Wood particularly important for Bechstein's?

-Agreed

-Bechstein's's bat tagged, found to be moving north.

## Re-examination

WHA116. 26/07/06. 4.2. JK was indicating that an assessment was conditional on survey results. Surveys led to consensus that appropriate assessment not required.

Meetings held around monthly. Two meetings in October.

ES V3 Appendix 3.2. Comparative table. Volume of information in ES indicated slight adverse impact. Continues to be the case. Slight adverse impact reached because impossible to claim that there would be no impact. 'Slight adverse' at the lower end of the impacts, would not damage populations.

FW route likely to have higher impact, especially on Greater Horseshoe Bats. FW route covers more open countryside. Woods closer by. Higher risk that FW route would have greater impact.

Appendix C. Major part of case to ensure fly-over routes not disrupted. Scheme very different to the Bondardina study, as scheme involves existing route being disrupted and re-built. Bondardina scheme involved construction of completely new route, without destruction of existing route. Far greater chance of success than Bondardina.

## Inspectors' Questions

FP4.12.2. Bratton Rd does not require licensing, but the other places do. Should be full stop after 'Bratton Rd.'