

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
ADMINISTRATIVE COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 15 August 2018

Before:

SIR ROSS CRANSTON

Between:

R (on the application of LANGTON)

Claimant

- and -

**SECRETARY OF STATE FOR ENVIRONMENT,
FOOD AND RURAL AFFAIRS**

First Defendant

-and -

NATURAL ENGLAND

Second Defendant

Richard Turney & Ben Fullbrook (instructed by Richard Buxton) for the **Claimant**
Sir James Eadie QC & Hanif Mussa (instructed by GLD) for the **First Defendant**
Paul Luckhurst (instructed by Natural England) for the **Second Defendant**

Hearing dates: 9-12 July 2018

JUDGMENT

Sir Ross Cranston:

I INTRODUCTION

1. Badger culling is a controversial means of preventing the spread of bovine tuberculosis (“bTB”). The disease is a serious animal health problem in England and requires that infected cattle be destroyed at great cost. Badgers (along with other wild and domesticated animals) can act as a wildlife reservoir for bTB, which they transmit to cattle. Historically badgers have been subject to widespread persecution in

England, leading to the Badgers Act 1973 and now the Protection of Badgers Act 1992. The awareness of the role played by badgers in the spread of bTB led to a provision in both Acts for the grant of licences for the killing of badgers for the purpose of preventing the spread of disease.

2. In 2011 the Secretary of State adopted a policy to permit the licensed culling of badgers as part of its strategy for achieving an officially bovine tuberculosis free status for England. In this case the claimant does not challenge this policy of the intensive culling of badgers to reduce the spread of bTB under what in the judgment are called standard licences. The policy which arises in this judicial review is that introduced in 2017 of the supplementary culling of badgers in areas where there has already been an intensive cull.
3. The claimant, Thomas Langton, is a scientist and ecological consultant experienced in wild animal and rural land management, including wildlife disease studies. He is a member of the Badger Trust and a Fellow of the Royal Society of Biology. The first defendant, the Secretary of State for Environment, Food and Rural Affairs (“the Secretary of State”), who is responsible for the Department for Environment, Food and Rural Affairs (“Defra”), may issue guidance to the second defendant, Natural England, relevant to the exercise of its function of granting licences pursuant to his policy to permit the licensed culling of badgers.
4. Natural England, a statutory corporation, is the government’s adviser for the natural environment in England. It must have regard to that guidance, although it is not obliged to follow it. Natural England must specify the minimum and maximum number of badgers to be culled each year in each cull area. In some cases it imposes conditions on licences to protect wildlife, for example, to prohibit shooting in specific areas during the bird breeding season.

5. In these judicial reviews the claimant seeks firstly to quash the decisions of the Secretary of State to issue guidance in 2017 relating to the licensing of supplementary badger culling. (The claimant also challenges the repetition of that part of the 2017 guidance in identical terms in new guidance issued on 24 May 2018.) The claimant contends that the 2017 guidance was issued following an unlawful consultation, and is contrary to the requirements of the Protection of Badgers Act 1992.
6. Secondly, the claimant challenges decisions of Natural England on 25 August and 8 September 2017 respectively to grant (i) two licences for supplementary culling of badgers in Somerset and Gloucestershire; and (ii) six standard badger culling licences in respect of Cheshire, Devon, Dorset, Somerset and Wiltshire. The claimant contends that these August 2017 supplementary licences, and the September 2017 standard licences, are unlawful and should be quashed because they were granted in breach of the assessment requirements of the Conservation of Habitats and Species Regulations 2010, 2010 SI No 490 (“the Habitats Regulations”). Since the supplementary culling licences were issued in reliance on the 2017 Guidance, the claimant also contends that they should be quashed along with the guidance.
7. Thus this judicial review is not concerned with the merits of badger culling as a policy. The arguments before the court were much narrower, legal arguments, firstly about the legal adequacy of the consultation on supplementary culling and whether the policy had a sound legal basis; and secondly, whether in granting licences in particular areas Natural England had conducted adequate assessments under the Habitats Regulations.
8. The two judicial reviews involved in this case were heard together and they are treated as one in the course of the judgment. The evidence in both claims was voluminous, especially so with that relevant to the licensing decisions of Natural England. That would not have been a major problem if it had been better digested for

the hearing. As I acknowledged at the hearing, the claimant may have faced funding issues and the failure of Natural England to disclose relevant information such as the cull boundaries in a timely fashion. The problem was compounded when the claimant raised new issues and adduced new evidence in so-called reply witness statements relating to the grant by Natural England of cull licences. In response Natural England applied to admit late evidence to deal with the points raised. The claimant also advanced various un-pleaded complaints at the hearing, without any application to amend.

9. The situation was unsatisfactory and imposed an additional burden for writing the judgment. (I should record that I was assisted by the analysis and annex produced by counsel for Natural England, which identified the issues the claimant raised on licensing.) At the hearing the parties dealt with the new matters as best they could, and they are addressed in the judgment. The difficulties posed underline the need for parties to comply with the rules and the Administrative Court Guide when taking judicial review proceedings.

II BACKGROUND: BOVINE TB POLICY

The RBCT and its subsequent consideration

10. The government's policy on badger culling adopted in 2011 was based on the results of the Randomised Badger Culling Trials ("RBCT"), a government-funded, scientific study carried out between 1998 and 2007, into the link between badgers and bTB. The results of the RBCT were published in June 2007 in a report of the Independent Scientific Group on Cattle, *Bovine TB: The Scientific Evidence* ("the ISG report"). The Report concluded that although badgers contributed significantly to bTB in some parts of the country, no practicable method of badger culling could reduce its incidence to any meaningful extent, and several culling approaches might make matters worse. Thirty areas were examined. Some were subject to proactive culling, in

other words annual culling across all accessible land; others to reactive culling, culling locally on and near farmland with recent outbreaks of TB; yet others to no culling at all.

11. The RBCT found that inside proactive cull areas there was an estimated 23% reduction in cattle TB incidence during the lifetime of the trial. However, in the 2km ring outside proactive areas there was a 25% increase: badger numbers were only slightly depleted yet ranging behaviour – and hence potentially infectious contacts with other badgers and with cattle – increased. The report hypothesised that the increase in bTB incidence in the 2km ring may have been caused by badgers reacting to culling by ranging more widely beyond cull boundaries, thereby coming into contact with other animals (both cattle and badgers) more frequently. This is known as a perturbation effect.
12. As for reactive culling, there was a roughly 20% increase in cattle TB incidence as culling prompted changes in the ecology and behaviour of badgers which were similar to those observed just outside proactive cull areas. At paragraphs 10.34 and 10.36, the ISG report stated that if licences were granted to individual farmers to cull badgers on their own land, culling would be localised and would be likely to elevate, rather than reduce, the overall incidence of cattle TB.
13. In an academic paper published in 2010, scientists from Imperial College, London and the Institute of Zoology, London, monitored cattle TB incidence in and around RBCT areas after culling ended (H. Jenkins, R. Woodroffe, C. Donnelly, “The Duration of the Effects of Repeated Widespread Badger Culling on Cattle Tuberculosis Following the Cessation of Culling”, 2010, *PLoS ONE* 5(2)) (“Jenkins 2010”). The authors noted that the RBCT had found that once culling was halted, beneficial effects inside culling areas increased for a time.

“The results presented here show the duration of reductions in cattle TB incidence associated with widespread badger culling. Beneficial effects inside culled areas were greatest shortly after culling ended, but then declined over time and were no longer detectable four years after the last annual cull (i.e. three years into the post-trial period). On adjoining lands, the effects of culling were estimated to be beneficial only for the first 18 months of the post-trial period but never significantly so.”

14. The study also noted that “culling which is small-scale, patchy, short-term or asynchronous is very unlikely to provide comparable reductions in the incidence of cattle TB and could well prompt increases.”
15. On 4 April 2011 there was a meeting involving the then chief scientific adviser to Defra, Defra’s chief veterinary officer, Mr Nigel Gibbens, and various professors of science (“the 2011 Expert Group”). The note of the meeting records among the key conclusions that the RBCT provided the best scientific evidence from which to predict the effects of future culling policy. The more future culling deviated from the conditions of the RBCT the more likely it was that the effects of the policy would differ. If culling was not conducted in a coordinated, sustained and simultaneous manner according to the minimum criteria (e.g., for a minimum of four years and within a six week period each year), this would result in a smaller benefit or even a detrimental effect on confirmed cattle bTB incidence. The report also noted that the confirmed incidence of bTB in cattle within the culled area would be reduced by between 20%-34% after 9.5 years (4 years culling plus 5.5 years post-culling.) The benefit would accrue over time and would be relatively small, if any, in earlier years.
16. There was also a joint Science Advisory Council/TB Science Advisory Body Joint Group meeting convened to comment on the 2010 badger control policy consultation.

Its minutes were published in 2011. In their cover letter to Defra's then chief scientific adviser, the group state that:

“On the science alone there is evidence that culling of badgers can reduce bTB in cattle, if certain criteria are met over a sustained period. However, evidence from the RBCT suggests that the gains in terms of numbers of cattle breakdowns prevented, will vary from area to area, and will gradually return to zero once culling ceases.”

In the published minutes the Group stated that “another possible implementation would be an intensive cull followed by a low level ‘gamekeeper’ approach thereafter, as long as the majority of animals were removed by the intensive cull. The Group felt that this approach would be appropriate and logical if the aim was to reduce badger numbers as low as possible.”

The Badger culling policy

17. The new government published its policy, *Bovine TB Eradication Programme for England*, in July 2011. Cattle measures and good biosecurity alone would not be enough, it said, and unless the transmission of TB from badgers to cattle was reduced bTB would never be eradicated. The government was therefore committed to introducing a carefully managed and science-led policy of badger control. The RBCT was clear that culling badgers could reduce the incidence of TB in cattle, although if not done properly culling could make matters worse. The document proposed a package of measures, including a proposal to pilot the controlled shooting of badgers in areas with a high incidence of bTB.
18. There then followed in December 2011 publication of *The Government's policy on Bovine TB and badger control in England*. That document reviewed the findings of the RBCT and analysis of what had happened at its end. The RBCT demonstrated, it

said, that the benefits of culling in the RBCT persisted far beyond the culling period, with the negative effects disappearing within 12-18 months after culling stopped. Thus among the measures proposed was the licensing of annual pilot culls over a six week period for four years to test the effectiveness of culling in respect of animal welfare (humaneness of killing methods) while reducing bTB. Culling would need to remove 70% of the badger population in the first of the four years of a licence.

19. To implement the policy, the Secretary of State issued guidance to Natural England in 2011 as to licences to take and kill badgers in identified areas, using controlled shooting, cage trapping and shooting in an annual cull in each year over a four-year period (or for such period as it might specify).
20. In 2012 licences were granted to cull badgers by shooting in two pilot areas, Gloucestershire and Somerset. Culling commenced the following year.
21. Professor Donnelly of Imperial College produced a report funded by Defra in July 2013 covering results from the post-RBCT period to March 2013 (“*Report SE3279*”). The results were consistent, she concluded, with the ongoing, but diminishing, post-trial benefit of proactive culling on confirmed breakdowns inside proactive trial areas, continuing up to 7.5 years after the final proactive culls, gradually reducing over that time.
22. In April 2014 the government published *The Strategy for achieving Officially Bovine Tuberculosis Free status for England*, which included badger culling as one aspect (“the 2014 Strategy”). Pilot culls would be continued for the remainder of the four year licence period, it said, and the Secretary of State would consider the possibility of extending culling to additional areas in the future. The 2014 Strategy noted that small-scale or short term culling may exacerbate the disease situation through perturbation. The strategy would be regularly reviewed.

23. The government's policy on badger culling was subjected to two unsuccessful judicial reviews: *R (Badger Trust) v SSEFRA* [2014] EWHC 2909 (Admin); [2015] Env LR 12; *Humane Society International UK v Secretary of State for Environment, Food and Rural Affairs* [2014] EWHC 4579 (Admin).
24. On 17 December 2015 the Secretary of State announced the government's intention to enable culling to take place in other parts of the heavily bTB infected region of south-west England.
25. There has been an assessment of the first two years of the intensive badger culls in Gloucestershire and Somerset between August 2013 and November 2015: L. Brunton, "Assessing the effects of the first 2 years of industry-led badger culling in England on the incidence of bovine tuberculosis in cattle in 2013–2015" *Ecol Evol.* 2017 Sep; 7(18): 721 ("the Brunton study"). Using multivariable analysis, and adjusting for confounding factors, the study found that reductions in TB incidence were associated with culling in the first two years in both the Somerset and Gloucestershire areas when compared to areas with no culling, and an increase in incidence associated with culling in the 2 km buffer surrounding the Somerset area, but not in Gloucestershire.

III POLICY OF SUPPLEMENTARY CULLING

Background to supplementary culling, 2015-2016

26. Defra conducted a review of its approach to licensing the culling of badgers from May 2015 in light of the first two intensive cull areas (Gloucestershire and Somerset) coming to the end of their four year licences. In his witness statement Mr Gavin Ross, head of Defra's bovine tuberculosis programme from March 2013 to October 2017, explains that the overlapping stages of the review involved assessing information on those culls; identifying and evaluating options for future culling; engaging with stakeholders to test policy options and deliverability; developing a proposal to be

considered by ministers, which would include publishing a consultation document; and implementing policy, subject to the Secretary of State's final decision, after taking into account the consultation responses and the available scientific evidence and veterinary advice.

27. During the course of the review, the head of veterinary advice at the Animal and Plant Health Agency ("APHA") prepared a document, *Exit Strategy from badger culling: an initial outline*, 29 September 2015, noting supplementary culling as a part of the exit strategy associated with intensive culling. Its object was to ensure that the benefits of culling were not lost over time as happened in the RBCT, and to reduce TB prevalence in the badger population to prepare for vaccination. The document stated: "Evidence base non-existent apart from RoI [Republic of Ireland] evidence under very different circumstances and from NZ regarding possum lethal control in Vector Risk Areas; so subject to challenge; monitoring both at cattle and badger level important..."
28. Commenting on the APHA document on 29 September 2015 Professor Ian Boyd, Defra's chief scientific adviser, stated that until there were substantial, contiguous areas in which badgers were demonstrably free of TB there would always be a need to keep badger population density low in the cull zones. "[T]his means sustained, maintenance culling." The strategy needed more data. Finally, Professor Boyd said, there was a philosophical point, a need to resist the temptation to say that more evidence was necessary as the protection against challenge. The culls themselves needed to be seen as the generators of evidence and the next steps as a rational, proportionate and incremental approach to build the TB control method, based on the data gathered along the way. "[T]he idea that we need to do experiments in advance of stepping forward needs to be avoided."

29. Mr Nigel Gibbens, the chief veterinary officer 2008-March 2018, also commented on the APHA document. He remarked that supplementary culling was the best option. Achieving population densities amongst badgers comparable to the Republic of Ireland was an option, he added, because there was evidence that this had an impact on reducing disease in cattle.
30. In March 2016 Defra sought Natural England's advice on supplementary culling at a workshop. There was discussion about what might be the Defra guidance and the licensing and monitoring requirements. Natural England agreed on the licence requirements which would be dispensed with by comparison with those for intensive culling.
31. On 21 April 2016 Defra officials met with experts from APHA. The minutes of the meeting record that an outline of options for supplementary (or maintenance) culling was presented. There was a discussion as to whether "Is something better than nothing' or is a 'do nothing' option acceptable? What is the evidence base for this?" There was little scientific evidence, it was said, on the effect in the badger population of supplementary culling after a proactive cull. Reference was made to experience in three areas. The draft minutes continued:

"There is evidence to support the 'do nothing' option from the RBCT (from Jenkins 2010 and subsequent updated analysis) as there was an extended but waning benefit for at least 6.5 years after culling stopped. Therefore any further intervention need to build on and therefore be better than this.

Culling in the RBCT reduced badger density but led to increased movement of the remaining badgers (perturbation). With sufficient population reduction from proactive culling, it is hypothesised that the increased opportunities for transmission thought to arise from perturbation were balanced out, resulting in a net disease benefit. Adding maintenance culling where the population has been

substantially lowered, one would expect to maintain or prolong the disease control benefit (although there is no direct evidence for this). If the previous proactive cull had been less effective, resulting in more moderate population decrease, it is possible that maintenance culling will not prolong the disease control benefits, and could even shorten them if it acts to further disrupt the remaining badgers.

We don't know what the population density threshold is where the reduced population level outweighs the increased risks from perturbed badgers...

It is possible that after a proactive cull the situation in culled areas becomes more similar to the situation in the Republic of Ireland, but there are other ecological differences other than just population density that make this a difficult comparison to make.”

32. In early June 2016 a number of questions were put to the chief veterinary officer, Mr Gibbens, about post-intensive culling in a paper which referred, inter alia, to the comments of the Science Advisory Council/TB Science Advisory Body Joint Group in 2011. Mr Gibbens was asked about three goals for supplementary culling, slowing the recovery rate, maintaining the post-cull population and reducing the population yet further. He favoured the second. As to whether it should begin in the next year following a successfully completed intensive cull, Mr Gibbens agreed since a gap of one or more years would allow the badger population to start recovering.
33. Defra's TB Strategy Implementation Group was provided with an update on supplementary culling in June 2016. The chief veterinary officer, Mr Gibbens, and the chief executive officer of APHA attended. It was agreed that “culling was required as long as it takes to eradicate the disease”. The Group also “agreed with the proposed approach to maintenance [supplementary] culling.”

34. A document entitled “Veterinary and Science Advice”, July 2016, prepared by a Defra official, canvassed the international evidence on supplementary culling “that supports longer term wildlife culling to control a TB wildlife reservoir.” It referred to the Republic of Ireland, New Zealand and United States evidence. The document reported that early analysis of the incidence of TB in cull areas did not show a perturbation effect. The document was submitted to Professor Boyd and Mr Gibbens.
35. On 31 October 2016 a policy adviser emailed an update paper to Mr Gibbens, copying in Professor Boyd. The official informed Mr Gibbens that the update set out some potential options for the proposed consultation on maintenance culling. The email concluded: “At this point we’re keen to confirm the key policy principles...” Amongst other things the update referred to the need for safeguards, and for Natural England to be able to withdraw a licence if maintenance culling was demonstrably ineffective (which in turn required a means of estimating effectiveness). The update annexed Mr Gibbens’ initial advice on supplementary culling.
36. On 1 November 2016 Professor Boyd responded that it was
- “essential that IC [intensive cull] areas sustain a maintenance cull. Otherwise badger population could return to pre-cull levels within 3-5 years based on immigration and reproduction...We have to move away from a numbers-based approach to licensing and control...[W]e cannot estimate badger population sizes.”
37. Mr Gibbens responded later that day and agreed with Professor Boyd about the need to move away from numbers. Mr Gibbens also asked: “Who are the science experts that we’ve consulted? – I think we need this to be a very credible set of people with expertise in badger behaviour that we can defend. Hopefully we have that between [Natural England] and APHA.” In response officials forwarded the notes from the APHA workshop in April 2016.

Ministerial submissions December 2016

38. In December 2016 submissions were made to ministers, along with a draft consultation paper and other documents. Included in the submissions were summaries of advice from Mr Gibbens, the chief veterinary officer, and Professor Boyd, Defra's chief scientific adviser, which had been approved by them.
39. The submission to the Secretary of State and Minister of State on 5 December 2016 recommended licensing for supplementary badger culling to preserve the benefits of the intensive culls. The benefit of intensive culls declined over time, it said, and gradually returned to pre-cull levels. The submission stated that both the chief veterinary officer and Defra's chief scientific adviser had advised that there was a clear disease control rationale in keeping the badger population at the level achieved at the end of an effective, intensive cull, and that an appropriate form of ongoing, licensed population control would be beneficial in those areas.
40. The Secretary of State was told that supplementary culling was preferable to taking no further badger control measures until a badger vaccine was ready, since that was a number of years away, during which time ground would be lost. The submission also drew attention to the perturbation effects which might arise, particularly if a badger population was allowed to recover after an intensive cull and before commencing supplementary culling. Supplementary culling was untested, the submission stated, and Natural England would need to take individual licensing decisions on the basis of good evidence. It was a rational disease control approach, but it would need to be licensed only on the basis "of good evidence that it is well planned, will deploy appropriate effort and so be likely to be successful. It must also build in the capability to evaluate effectiveness over a season..."
41. Annex A to the 5 December submission stated that the conclusion of a successful intensive cull lasting at least four years, which significantly reduced the badger

population, was predicted to realise a reduction in cattle TB incidence within the cull area, and that this would persist for at least 7.5 years after the last cull. There was international evidence supporting long-term wildlife culling to control a TB wildlife reservoir. Bovine TB control in the Republic of Ireland, New Zealand and the USA had indicated through modelling and experience that long-term culling of wildlife hosts would be necessary to control and eradicate TB.

42. Annex A continued that there was limited direct evidence from England about the effect of ongoing badger removal after several annual intensive culls, since this approach had not been used previously. Despite the lack of direct data from England, Annex A continued, maintaining the badger population at the level achieved by an intensive control operation was considered to be a defensible, logical disease control approach, since it would maintain the reduced weight of infection achieved in the badger population, and would reduce the potential for infectious contacts between badgers and cattle.
43. The Secretary of State approved the recommendation, subject to consultation. He wrote to the Prime Minister, stating: “The CVO [Chief Veterinary Officer] and my Chief Scientific Adviser’s clear advice is that enabling this form of supplementary badger control is rooted in essential disease control” and that “continued action to control the infection in the badger population is vital”.

The December 2016 consultation

44. In December 2016 Defra published its consultation entitled *Guidance to Natural England on licensed badger control to prevent the spread of bovine tuberculosis* (“the December 2016 consultation”). After information on the government’s strategy, part A, section 1, of the document - entitled “Purpose of this consultation” - stated that to prolong the disease control benefits of intensive culls

“it is necessary to maintain a steady badger population at the level achieved at the end of the licensed culls” (para. 1.3).

45. Natural England would need to license supplementary culling. Continuing with badger control in this way was consistent with the bTB strategy’s adaptive, evidence-based, long-term approach to disease control and would complement the other measures within the strategy (para. 1.4). The consultation was on the guidance to Natural England which the Secretary of State would publish to set out the licensing criteria which it, as the delegated licensing authority, would have to have regard to when considering such licence applications (para. 1.5).
46. Section 2 of the consultation, also in part A, made brief reference to licensed badger control to date. Paragraph 2.2 stated that the UK chief veterinary officer advised that preserving over the long term the benefits achieved through these operations was important to sustain the good progress being made on the strategy.
47. Part B of the consultation document contained sections 3-5, with the heading “Proposal for a supplementary form of badger control, to be licensed by Natural England”. Section 3 was entitled “Rationale, evidence and current disease control measures”. After a reference in paragraph 3.1 to the government’s bTB strategy, paragraphs 3.2-3.3 read, in part, and omitting footnotes:

“3.2 We know from the Randomised Badger Culling Trial (RBCT) that disease control benefits persisted for at least 7.5 years after the last cull operation. As no further badger control measures were put in place, over this time the reduced incidence of confirmed TB breakdowns in cattle within cull areas gradually returned to a level comparable to that within control areas where culling had not taken place.

3.3 This is likely to be explained by a recovering badger population with continued TB infection. The badger population will have recovered through breeding and immigration and some of this recovered population will be infected with TB...”

48. As in other parts of the report, there were footnote references to reports (including Professor Donnelly’s 2013 *SE3279 report*), and scientific papers, with their relevant internet links.

49. Paragraph 3.3 went on to refer to Defra’s consultation in August 2016 regarding enhanced cattle measures, making the point that “the maximum disease control benefits from badger culling will only be realised if comprehensive cattle controls are also applied rigorously within each cull area.”

50. Paragraphs 3.4 and 3.5 dealt with biosecurity (it “remained an important part of the TB strategy”) and vaccines respectively. Paragraphs 3.5 read in part:

“3.5. Licensed badger vaccination has a role to play...Deployment of the injectable vaccine continues to be hampered by supply issues. Potential new vaccine deployment methods such as an oral bait BCG vaccine remain at the experimental stage, are not guaranteed to be successful, and are at least 8 years away. However, if and when more efficient and cheaper deployment options for badger vaccine are available, they may offer an effective and time efficient means of replacing culling.”

51. There then followed section 3a, “International evidence”. It stated that international evidence supported longer-term control of a TB wildlife reservoir, and then gave some details of how bovine TB control in the Republic of Ireland, New Zealand and the United States of America indicated through modelling and experience that long-term culling of wildlife hosts would be necessary to control and eradicate TB

(paragraphs 3.6-3.9). Paragraph 3.10 acknowledged the absence of UK evidence, and paragraph 3.11 dealt with perturbation effects:

“3.10. There is no evidence on the effects of longer-term control of badgers in areas that have completed a four-year culling period. From the RBCT we know that the benefits of reduced disease in cattle erode over time from the end of culling operations. Maintaining the badger population at the level achieved by a minimum 4-year culling operation is the only available means of maintaining the reduced potential for infectious contacts between badgers and cattle.

3.11. The risk of potential perturbation effects as a result of disturbed badger social groups and increased disease transmission to cattle are expected to have been manifested primarily in the first year of a 4-year badger population control operation. This risk should be much lower during supplementary badger control as the badger population in that area will be much smaller and territorial social groups are not expected to reform for several years after cessation of culling.”

52. With paragraph 3.11 there was a reference to the ISG report and a study by C. L. Cheeseman et al, 1993, “Recolonisation by badgers in Gloucestershire” in Hayden, T.J. (Ed), *The Badger*, 78-93, Dublin, Royal Irish Academy. Section 3 of the consultation document concluded with a statement of the government’s proposal to amend its Guidance to Natural England to indicate its view that

“licences could appropriately be granted to permit a supplementary form of badger population control that can only be undertaken after a successfully completed culling operation”: para. 3.12.

53. The proposal for a supplementary form of licensed badger control was addressed in section 4 of the consultation. The following points were made:

- (i) The Secretary of State would decide to amend the guidance in the way proposed, as informed by the scientific and veterinary evidence available, experience from the badger control operations to date, and responses to the consultation (para. 4.1);
- (ii) The aim of a supplementary cull “is to prolong the disease control benefits from a completed licensed cull”, which “would be achieved by keeping the badger population at, or below, a level consistent with that achieved by the end of that cull” (para. 4.2);
- (iii) If the badger control company which had completed the initial cull did not want to continue, a voluntary farmer or landowner-led operation could continue it (para. 4.3);
- (iv) Applications for a supplementary culling licence would only be considered if the prior cull was judged effective in achieving a population reduction likely to reduce disease transmission to cattle (para. 4.4);
- (v) Since the statutory purpose of a licence was to prevent the spread of disease, Natural England would take appropriate steps to evaluate the effectiveness of the licensed activity in terms of such things as numbers achieved and effort deployed (para. 4.5);
- (vi) The onus would be on applicants to demonstrate to Natural England how they would plan and deliver effective supplementary badger control (para. 4.8);
- (vii) A licence would be granted for five years, if Natural England was satisfied that the annual operation was effective in maintaining a reduced level of badger population, but there would be ongoing

monitoring of the badger population for this purpose and to prevent local extinction, and a licence could be revoked at the annual evaluation or at any other time on reasonable grounds (para. 4.9);

- (viii) Supplementary badger control had to start in the year following the conclusion of a prior cull, since allowing the badger population to recover and then undertaking control risked causing a perturbation effect and undermining the disease control benefits achieved (para. 4.12).

54. Section 5 was a summary of the economic impacts. Supplementary culling had the benefit, it said, that it “preserves the disease control benefits of a net reduction in cattle TB breakdowns from the prior culls” (para. 5.2).

55. Part C of the consultation document was captioned “Tell us what you think”. Part 6, “Your comments invited”, contained the following:

“6.1 Our proposal is designed to enable farmer-led licensed supplementary badger control in order to maintain disease control benefits in areas where successful culls have been completed over at least 4 years. We invite views on how this proposal can be made as effective as possible. We would particularly welcome views on the following specific issues:

A: The proposed approach to licensing – including the conditions of licensing, the discretion in Natural England’s decision-taking and the licence period.

B: The proposed plans to ensure badger welfare is maintained, including views on the most appropriate time limit for badger control within the open season.

C: How Natural England should evaluate the effectiveness of supplementary badger control over the five-year licence period to ensure that it meets the aim of

keeping the population at the level required to ensure effective disease control benefits are prolonged.

6.2 Please provide any additional comments which you feel are relevant but not captured by the questions above.”

56. The consultation document then set out the proposed draft guidance for Natural England.

Consultation responses

57. In his response to the December 2016 consultation, the claimant stated that he was opposed in principle to supplementary culling for reasons including that it would not result in disease control benefits. He expressed concern at the misleading way data was presented in the consultation document. Moreover, the document did not explain the significant departure from the guiding methodology in the RBCT. There was a breach of section 10(2)(a) of the Protection of Badgers Act 1992. Culling badgers after a 4-5 year period of intensive culling was effectively creating an indiscriminate general licence to cull for such areas, based on un-evidenced disease control benefit. It unpicked forty years of effort and legislation. It would lead to more wasteful expenditure, uncertainty and badger and wildlife protection problems. There was no evidence to support it.

58. The Zoological Society of London (“ZSL”) also submitted a response. It stated:

“Defra’s plan to license further culls moves away from the empirical evidence that it used to justify its culling policy. In the Randomised Badger Culling Trial, the greatest reductions in cattle TB were observed after culling ended. At the time, scientists tentatively linked these improvements to the cessation of culling, and how this was likely to have affected the behaviour of the remaining badger population. In considering whether prolonged culling might have achieved the

same reductions, they emphasised that “It is... not possible to predict how culling over different periods of time, or at different intervals, would have influenced the results”. On the basis of the available evidence, prolonging culling might deliver prolonged benefits, or it might prevent the benefits of stopping culling observed in the RBCT. Moreover, as licensed culls have not yet delivered any measurable benefits, the possibility remains that prolonged culling might deliver no benefits at all, or even prolonged harm. There is thus no evidence to support Defra’s claim that “To prolong the disease control benefits it is necessary to maintain a steady badger population at the level achieved at the end of the licensed culls” (para 1.3).

59. The ZSL submission also remarked that Defra’s plan to abandon restrictions on the proportion of accessible land risked patchy culls. This was a cause for concern because there was strong evidence that patchy culls risked worsening cattle TB rather than reducing it. Defra, the submission added, misunderstood perturbation. In the first year, RBCT proactive culls increased cattle TB on land outside trial areas.

“However, inside the trial areas, disruption of badger behaviour, and increased disease prevalence among badgers, persisted for the entire culling period, probably undermining the benefits of large-scale culling. Likewise, inside RBCT reactive areas, patchy culls increased cattle TB throughout the culling period. Defra’s optimism that patchy culling will not increase cattle TB inside licensed culling areas is thus inconsistent with the available evidence.”

60. ZSL added that it was deeply concerned by the way that evidence was presented in the consultation document.

“[I]t misrepresents the level of certainty associated with the action proposed.... there is thus far no evidence of any disease control benefits from industry-led culling, and no evidence as to whether continued culling would prolong such anticipated benefits.”

61. There was a response to the consultation from the Badger Trust along similar lines to that of the claimant and ZSL, that there was no evidence to support supplementary culling, that a supplementary culling licence was in effect an indiscriminate licence to cull, and that the measure of success was the number of badgers killed, not the reduction of TB in cattle.

62. In his witness statement for the court Mr Gavin Ross, then head of Defra's bovine tuberculosis programme, explains that all of the responses to the consultation document were collated into a spreadsheet to enable their analysis. Individual responses often contained several alternative options, including deploying badger vaccination, improving biosecurity and cattle testing regimes, and tightening cattle movement controls. Mr Ross continues:

“69. Those who addressed the principle of supplementary culling, whether supporting or opposing it, included several individuals or organisations who would be considered experts or knowledgeable about the subject by virtue of their membership of professional bodies, research interests or employment or practical experience. Many respondents who supported or opposed the proposal offered well-informed opinions, as demonstrated by their responses, which referenced ecological, biological, epidemiological and other badger-related or bTB-related studies, and offered reasoned arguments. Their responses showed an understanding of the complex, scientific background to this policy area, and many felt able to address the alternatives to the proposal being consulted on. All consultation responses were taken into account prior to a final decision being reached.

70. The responses were considered by the TB policy team and, where necessary, the TB evidence team was asked to examine those responses which included

scientific or other evidence-based material. No new or compelling evidence was put forward by consultees which persuaded Defra to change its views.”

Secretary of State’s decision and publication of the summary of responses

63. On 26 June 2017 Defra officials made a submission to ministers. The issue was stated as follows: “These supplementary culls maintain disease control benefits in an area after completion of the four-year ‘intensive’ culls.” Based on evidence-led advice from the chief veterinary officer and chief scientific adviser, a consultation had been conducted. The submission stated that in the absence of deployable non-lethal methods of badger control, and without supplementary culling, the benefits of intensive culling would cease after about seven years. It explained that the majority of consultation responses opposed culling in principle, and that those that addressed the specific consultation questions did not provide evidence to change the proposal on which consultation had been undertaken.
64. On 3 July 2017, the Secretary of State agreed to the recommendation that supplementary badger culling be introduced.
65. Later that month Defra published, *Summary of responses to the consultation on Guidance to Natural England on licensed badger control to prevent the spread of bovine tuberculosis, July 2017* (“the Summary of responses”). It set out the background, how the consultation was conducted (including at para. 1.7 that all responses were considered), and summarised the statistics of those who had responded. It then referred to the main points raised and the themes which could be drawn from the consultation. As an overview it stated:

“2.3. Many respondents made general comments about badger control and disagreed with the proposal because they are opposed in principle to culling

badgers to reduce the incidence of TB in cattle, without commenting on the specifics of the proposed policy.

Comments that expressed opposition to the policy of supplementary culling itself centred around two main themes:

1) Some questioned the scientific rationale behind supplementary culling and the general applicability of the Randomised Badger Culling Trial (RBCT).

2) Some suggested that there is insufficient evidence of the benefits of culling on the incidence of bovine TB in cattle to merit supplementary culling.

Some of these responses suggested that:

- Other disease control methods should be explored further, such as vaccination, biosecurity and improved cattle testing regimes and stricter cattle movement controls.
- The approach to wildlife control in other countries should not be used to support badger culling in England due to the differences in the species involved.

Many respondents, including those who disagreed with culling policy, acknowledged the impact that dealing with bovine TB has on farmers, their businesses and the beef and dairy industries overall.”

66. As regards responses to question 6 on the licensing of supplementary culling, of the 161 responses which directly answered this question 100 expressed broad opposition, 51 expressed broad support, and 10 made comments which neither supported nor opposed it (para. 2.5). Of those who expressed opposition, they were broadly objecting to the wider badger control policy (para. 2.6). As regards the question of evaluating the effectiveness of supplementary badger control, the document noted that several respondents outlined what they saw as shortfalls in the current methods of

evaluation, particularly that estimations of badger populations were not accurate enough to give a clear idea of badger populations before and after culling operations. The document noted that “ZSL had argued that estimating a pre-cull population was vital in assessing culling impacts and that the methods currently used are ‘unreliable’. Moreover, they argued that the proposed changes to culling ‘cannot inform future policy decisions because their effectiveness cannot be monitored’” (para. 2.20)

67. The document then set out the government’s response to the consultation. It said that Defra was grateful to all those who took the time to respond. The responses received, as well as the experience from the badger control operations to date and the scientific evidence and veterinary advice available, had helped inform the Secretary of State’s decision. That was to implement the proposal (para 3.1). The Secretary of State had noted the range of responses, but the government's view remained

“that introducing supplementary badger control will prolong the expected disease control benefits. The consultation responses have not provided new or compelling evidence to change that view. The rationale and evidence for making the proposed policy change was set out in the consultation paper, and additional information is set out below to address specific points raised by respondents” (para. 3.2).

The 2017 guidance

68. On 19 July 2017 the Secretary of State published guidance to Natural England, entitled *Guidance to Natural England. Licences to kill or take badgers for the purpose of preventing the spread of bovine TB under section 10(2)(a) of the Protection of Badgers Act 1992* (the “2017 guidance”). In the section on “Supplementary Badger Disease Control requirements”, the guidance set out the criteria which applications for such licences had to meet. In addition, it stated that applicants had to satisfy Natural

England that they were able to deliver an effective cull and detailed the criteria for assessing this.

Secretary of State's witness evidence

69. Defra's chief scientific adviser, Professor Ian Boyd, states in his witness statement for the judicial review that the supplementary culling of badgers represented a coherent and logical progression of the current badger control policy. Referring to the *SE3279 report*, he states that Defra wanted to avoid the pattern observed in the RBCT where the benefits from culling in terms of the occurrence of disease in cattle were maximised in the years immediately after culling ended, but then began to decline, eventually returning close to pre-culled levels of disease in the 6.5 years after the RBCT ended. That effect almost certainly happened because of the recovery of the badger population. The statement continues:

“12. The most scientifically parsimonious method which can be used to avoid this negative effect is to continue to keep badger populations at a reduced level, requiring that badgers continue to be culled in future in order to prevent the badger population from returning to its pre-cull levels...

14. I emphasised that our approach needs to be driven by data, as there is uncertainty about the effect of intensive culling. Therefore, my advice was that data should be collected on the disease in both badgers and cattle in cull areas, and the ongoing analysis of the epidemiology in the cull zones relative to uncultured areas would inform the development of policy. It was, however, also important for Defra to avoid being in a position where it could not move forward with a new, or modified, policy unless it had carried out an experiment beforehand. I considered that Defra needed to adopt different approaches based on what it knew at the time, and then to modify those approaches based on outcomes.”

70. As to the conclusion in the ISG report that badger culling could make no meaningful contribution to TB control in Britain, Professor Boyd responds that the evolutionary approach to adaptive learning and management adopted by Defra has rendered it obsolete because it did not include knowledge gained since the ISG reported. Analysis in the *SE3279 report* of the effect of culling carried out after the ISG report showed that the benefits of culling persisted for several years, while the adverse effects had dissipated. Much had happened since then and Defra and those carrying out the culls were much more experienced than at the time of the RBCT.
71. As to the latter point it can be noted in passing that in his witness statement Mr Ross, former head of Defra's bovine tuberculosis programme, states that the incidence of bTB in cattle herds in cull areas is collected from the monitoring project SE3131, which reports annually in order to support refinement of the policy and adaptation of local control measures.
72. In his witness statement for the hearing, the UK's chief veterinary officer 2008-2018, Mr Gibbens, accepts that in the RBCT there was no net benefit of culling when the results in the culling area and perturbation ring were taken together. Jenkins 2010 and the *SE 3279 report* showed that the overall net benefit of culling only emerged after culling had finished. He states that when his initial views on supplementary culling were sought in September 2015, there was no reason not to rely on the long-term results from the RBCT in the *SE3279 report*, which also showed a gradual reduction in the benefits of culling. In that discussion, his view was that once the badger population reduction target was achieved, there were theoretical options. At that point the imperative to address the risk of the perturbation effect was reduced or removed since the potential for transmission was significantly reduced. That opened up the option of maintenance culling, combined with monitoring of the badger population to show that it remained low.

73. Mr Gibbens states that he also considered vaccination as an option, as well as a “do nothing” approach. It was suboptimal: while the disease control benefits of intensive culling were expected to last for a period, eventually the benefits would evaporate, so that another intensive cull would be necessary, the start of a cycle of intensive culls. There was no data on supplementary culling, but it “is a logical option which is biologically plausible and which will, in my opinion, maintain the benefits from the first four-year cull.”

IV NATURAL ENGLAND’S GRANT OF LICENCES

The licences

74. As explained earlier in the judgment, Natural England granted two licences for intensive culling Area 1 (Gloucestershire) and Area 2 (Somerset) in 2012. Then in 2015 it granted a standard licence along the same lines for Area 3 (Dorset). Almost a year to the day later, on 26 August 2016, it issued standard licences for Area 4 (Cornwall), Area 5 (Cornwall), Area 6 (Devon), Area 7 (Devon), Area 8 (Dorset), Area 9 (Gloucestershire), and Area 10 (Herefordshire).
75. In these judicial reviews the licences challenged came later, first, the two licences for supplementary culling in respect of Gloucestershire and Somerset granted on 25 August 2017. Supplementary culling commenced pursuant to these licences in Autumn 2017. These licences have to be re-authorised each year. There is an annual assessment of the effectiveness of the supplementary culling undertaken.
76. On 8 September 2017 Natural England granted standard licences for intense culling in eleven areas. The licences permit the trapping and shooting of badgers within designated areas, subject to certain conditions. Culling is to take place within specified periods until the minimum number of badgers set by Natural England has been killed or the period has elapsed. In these judicial reviews the challenge relates to

the standard licences granted for six of these eleven areas: Area 11 (Cheshire); Area 14 (Devon); Area 15 (Devon); Area 16 (Dorset); Area 17 (Somerset); and Area 19 (Wiltshire).

77. As a matter of policy Natural England does not reveal the boundaries of cull areas, even to its local staff in an area. It fears that this may give rise to problems from those opposed to badger culling. For the purpose of this litigation it eventually disclosed relevant boundaries of the six areas where licences are under challenge and accepts that they either encompass, or are in the vicinity of, sites protected under the Habitats Regulations as a Special Protection Area (“SPA”) for birds, or a Ramsar site under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. SPAs are known as European sites.

HRA assessments for Areas 16 and 17

78. Natural England conducted a number of assessments under the Habitats Regulations (“HRAs”) in relation to the licence applications for Areas 16 (Dorset) and 17 (Somerset). The assessments under challenge are for three sites within (at least in part) the cull areas:

- (i) Dorset Heathlands SPA, Area 16 (Dorset), with qualifying SPA features (Dartford warbler, hen harrier, little egret, merlin, nightjar and woodlark);
- (ii) Poole Harbour SPA/Ramsar Site, Area 16 (Dorset), with qualifying SPA features (avocet, black-tailed godwit, common tern, Mediterranean gull, shelduck and waterbird assemblage) and Ramsar features (including important numbers of waterfowl, in particular the common tern and Mediterranean gull);
- (iii) Severn Estuary SPA/SAC/Ramsar, Area 17 (Somerset), with qualifying SPA features (internationally important wintering population of Bewick’s swan, dunlin, gadwall, greater white-fronted goose, redshank, shelduck, and

an internationally important waterbird assemblage) and Ramsar features (aspects of the estuary).

79. The HRAs challenged are in standard form and were undertaken in May 2017. Matrices prepared for Sites of Special Scientific Interest (“SSSI”) were used as input for the assessment. (SSSIs are designated under section 28 of the Wildlife and Countryside Act 1981 because of valuable flora, fauna, physiographical or geological features.) In each case the conclusion to these screening assessments was that the licensed culling of badgers was unlikely to have a significant effect on the qualifying features of the relevant site. In none of the areas was an in-combination assessment considered applicable.
80. The assessments were prepared and completed by a lead adviser in the bTB team at Natural England and peer reviewed by a lead adviser from the relevant area. In his first witness statement, the principal specialist for species protection and regulation in Natural England’s chief scientist’s directorate, Dr Matthew Heydon states that peer review takes into account local circumstances and conditions “and that the local area team is also content with the overall conclusions. In my experience, the dialogue with the local teams is not a ‘rubber stamping’ exercise.”
81. The assessments used a framework from the Food and Environment Research Agency, *Evaluation of the Potential Consequences for Wildlife of a Badger Control Policy in England*, January 2011 (“FERA, 2011”), considered further below, to identify the possible disturbance effects of badger culling: disturbance to the species (firearm report, lamping, vehicles, humans), physical damage to habitats/species (vehicles, trampling, digging-in of traps), physical damage to non-target species, and “indirect damage to species from an increased abundance of other mammalian predators (in particular foxes) due to reduced badger population density.”

82. The possibility of these effects occurring in the case of each of the relevant sites was assessed as follows:
- i. Dorset Heathlands SPA, Area 16 (Dorset): moderate risk of disturbance (night-time shooting, lamping, off-road vehicles, human footfall) to Dartford warbler, hen harrier, little egret, merlin, nightjar, and woodlark; low risk of such disturbance to avocet, black-tailed godwit, and shelduck; no risk of physical damage to any of the qualifying species; and “no possible risk of an effect on any of the qualifying SPA species from an increase in mammalian predators”;
 - ii. Poole Harbour SPA/RAMSAR Site, Area 16 (Dorset): moderate risk of disturbance (from firearm report, lamping, vehicles, human participants) to breeding Common Tern; low risk of such disturbance to aggregations of non-breeding birds; no risk of physical damage to the latter; moderate risk of disturbance from off-road driving to all Ramsar qualifying habitats; low risk of disturbance to Ramsar habitats from night-time shooting, lamping, and human presence; moderate risk to all Ramsar habitats from physical damage from vehicles and humans; no/low risk to all Ramsar habitats from physical damage from digging in traps; possible risk to all Ramsar habitats from physical damage from traps; and “no possible risk of an effect on any of the qualifying SPA species from an increase in mammalian predators”;
 - iii. Severn Estuary SPA/SAC/Ramsar, Area 17 (Somerset): moderate risk of disturbance firearm report and lamping to aggregations of non-breeding birds; low risk of disturbance by off-road vehicles and human presence to such birds; no risk of direct damage to such birds; no risk of disturbance or indirect damage to habitat features; low risk of direct damage by vehicles/human presence and digging in of traps to such features; and “no possible risk of an

effect on any of the qualifying SPA species from an increase in mammalian predators.”

83. Each of the assessments stated that following informal advice from Natural England, and in view of the site’s conservation objectives, applicants “had accepted and incorporated the following mitigation measures into the proposal”, and that “[c]omplying with the mitigation measures will ensure there is no significant likely effect alone”. The measures were as follows:

- (i) Dorset Heathlands SPA, Area 16 (Dorset): restrict shooting activities to outside the bird breeding season i.e. no activities until 1st September; avoid shooting between 1st September and 30 April in areas of intertidal, fen, reedbed and grazing marsh habitats; (not in template) prohibition on shooting between 1 September and 30 April in Stoborough & Creech Heaths SSSI, an area within the SPA
- (ii) Poole Harbour SPA/RAMSAR Site, Area 16 (Dorset): restrict vehicles to existing tracks; restrict shooting activities to outside the bird breeding season i.e. no activities until 1st September; and avoid shooting between 1st September and 30 April in areas of intertidal, fen, reedbed and grazing marsh habitats; limit locations of traps; exclude island within Poole Harbour; exclude littoral sediment and supra-littoral sediment and shingle zones; and no digging in of traps within the salt marsh.
- (iii) Severn Estuary SPA/SAC/Ramsar, Area 17 (Somerset): restrict activities to further than 200m outside of high tide roost areas or only allow activities outside of the period 2 hours before, during and 2 hours after high tide; and restrict vehicles to existing vehicular tracks.

Existing evidence regarding wider environmental effects of culling

84. Later in the judgment the evidence for both the claimant and Natural England is canvassed. In the course of the argument the following papers regarding the wider environmental effects of culling, which were published prior to the hearing, were cited. Their focus is on disturbance to breeding, roosting or feeding birds from the activities associated with badger shooting and trapping activity, and the disruptions from reducing the population of badgers in the cull areas with the opportunities for competitor predators, particularly foxes, to increase, with a damaging effect upon birds and ecosystems. It is convenient to summarise the evidence here:

(i) "...badger culling, undertaken at least at the temporal and spatial scales applied in the RBCT, is likely to result in markedly higher fox densities. This raises issues relating to the costs of predation on livestock and game, the ecological impact of foxes in conservation terms as predators of ground-nesting birds and hares, and risks to public health as potential vectors of rabies. Therefore, this finding also demonstrates the practical importance of assessing the wider ecological consequences of manipulating wildlife populations": Trewby et al, "Experimental evidence of competitive release in sympatric carnivores" *Biol Lett.* 2008 Apr 23; 4(2): 170–172 ("Trewby 2007").

(ii) a study for the Welsh Assembly government in December 2009 by ecological consultants ("the Welsh Assembly report"), which stated that potential impacts of an intensive cull in relation to ground nesting bird assemblage as follows:

"Badgers are known to predate birds... However, other predators such as foxes, hedgehogs, small mustelids and some species of bird also predate the nests of ground nesting birds, and such species may benefit from a reduction in competition following a [cull]. If following the removal of badgers it is only the surplus that are taken by other predators, then the

overall level of predation on ground nesting birds could be expected to remain constant. However, as a result of mechanisms such as meso-predator release...there is a possibility that predators that compete with the badger, particularly foxes and hedgehogs, could increase in abundance substantially, thereby exerting a greater overall predation pressure on ground nesting birds.”

(iii) the FERA report of January 2011, which under the heading “Characterisation of potential impacts of badger control on the ecosystem” considered direct and indirect effects. The direct effects included disturbance through shooting and the associated vehicle movements and footfall. As to indirect effects regarding ground nesting birds, the report noted (a) the RBCT finding that meadow pipit and skylark populations remained constant in culled areas but cautioned that there might be unmeasured environmental factors at work; (b) an RSPB study into curlew breeding success in Northern Ireland, which found that 90% of nest failures were due to predation, with foxes identified as the main species involved; and (c) a study conducted on the South Downs in which grey partridge populations were found to be 2.6 times higher after three consecutive years of predator control. In this regard it concluded:

“Removal of badgers during the RBCT precipitated change in the abundance of species that may have a greater and more direct role in the predation of ground nesting birds than badgers.”

85. However, the research conducted by FERA only identified an increase in fox numbers, but did not identify any evidence of an effect extending to the next trophic level, i.e. to birds, and in fact the research found that the birds studied did better in cull areas than non-cull areas. Table 4 states: “Possible negative impact from an

increase in fox predation of eggs and chicks in nests on ground. However, reduction in predation pressure from badgers.”

SPA/Ramsar sites within 10km or so from the cull areas

86. In the judicial review, the claimant identified a number of SPA and Ramsar sites which are 10km or less from areas for which standard licences have been issued, and which have features vulnerable to fox predation. The relevant licensed areas, the sites, their distances from each other, and the particular features are said to be as follows:

- (i) Area 11 (Cheshire): South Pennine Moors SPA, 6.07km, ground nesting vulnerable birds, e.g. golden plover and dunlin; Rostherne Mere Ramsar Site, 1.06 km, bittern, cormorant, water rail;
- (ii) Area 14 (Devon): Exe Estuary SPA/Ramsar, 3.65km, waterfowl assemblage, including lapwing and brent goose, said to use functionally linked habitats outside the SPA (Exe Estuary SPA/Ramsar is also 7.06km from Area 15 (Devon));
- (iii) Area 16 (Dorset): Chesil Beach and the Fleet SPA/Ramsar Site, 5.58km, breeding little tern, overwintering dark-bellied brent goose, said to use functionally linked habitats outside the SPA;
- (iv) Area 17 (Somerset): Somerset Levels and Moors SPA/Ramsar, 2.44km from Area 17 (Somerset), Bewick’s swans, dunlin, gadwall, golden plover, lapwing, snipe, teal, widgeon;
- (v) Area 19 (Wiltshire): Porton Down SPA, 13.5km, Stone curlew; Salisbury Plain SPA, adjacent to cull area, stone curlew.

87. In addition there are two relevant sites within 10km of supplementary licences: Area 1 (Gloucestershire), Walmore Common SPA, 3.16km from Area 1 (Gloucestershire), Bewick’s swan; and Severn Estuary SPA/Ramsar, 9.86km from Area 1

(Gloucestershire) and 9.13km from Area 2 (Somerset), described at paragraph 78(iii) above.

88. No records are available about Natural England’s consideration of these eight sites in the grant of licences. Dr Heydon states that he and his colleagues did not close their eyes to the possibility of effects on these sites, but that because of their professional judgment significant effects on such sites could be excluded without needing to gather or consider any further information. Given the volume of different applications Natural England considers each year, and resource constraints, it was more important to create templates for the sites within the culling areas.

V LEGISLATIVE FRAMEWORK

Protection of Badgers Act 1992

89. The Protection of Badgers Act 1992 (“the 1992 Act”) creates offences in relation to various forms of an unauthorised interference with badgers. A person is guilty of an offence pursuant to sections 1(1), 3, and 4 respectively if, except as permitted by the Act, he “wilfully kills, injures or takes, or attempts to kill, injure or take a badger”, “interferes with a badger sett” by committing one or more of a list of specified acts, or “has a live badger in his possession or under his control”. Section 5 provides for an offence if, except as authorised by a licence under section 10, he “marks or attaches any ring, tag or other marking device to a badger other than one which is lawfully in his possession by virtue of such a licence”. Sections 6 to 9 provide for exceptions to these offences.
90. Section 10 provides for the grant of licences authorising relevant conduct which might otherwise give rise to an offence. Section 10(2)(a) reads as follows:

“10...(2) A licence may be granted to any person by the appropriate Minister authorising him, notwithstanding anything in the foregoing provisions of this Act,

but subject to compliance with any conditions specified in the licence –

- (a) for the purpose of preventing the spread of disease, to kill or take badgers, or to interfere with a badger sett within an area specified in the licence by any means so specified...”

91. Under this section the power to grant licences in England is vested in the Secretary of State, but he has authorized Natural England to perform the function as he can do under section 78 of the Natural Environment and Rural Communities Act 2006.

Natural Environment and Rural Communities Act 2006

92. Under section 15 of the Natural Environment and Rural Communities Act 2006, the Secretary of State may give guidance to Natural England. Section 15 provides:

“15 (1) The Secretary of State must give Natural England guidance as to the exercise of any functions of Natural England that relate to or affect regional planning and associated matters.

(2) The Secretary of State may give Natural England guidance as to the exercise of its other functions.

(3) Before giving guidance under this section the Secretary of State must consult

–

(a) Natural England,

(b) the Environment Agency, and

(c) such other persons as the Secretary of State thinks appropriate.

(4) The Secretary of State must publish any guidance given under this section as soon as is reasonably practicable after giving the guidance.

(5) The power to give guidance under this section includes power to vary or revoke it.

(6) In discharging its functions, Natural England must have regard to guidance given under this section.”

93. The power to give guidance under section 15(2) includes the function of granting licences pursuant to section 10(2)(a) of the Protection of Badgers Act 1992: see *R (Badger Trust) v Secretary of State for the Environment, Food and Rural Affairs* [2012] EWHC 1904 (Admin), [77]-[80]. Natural England must have regard to such guidance in the exercise of the relevant function but is not obliged to follow it: see *R (Badger Trust) v Secretary of State for the Environment, Food and Rural Affairs* [2014] EWCA Civ 1405; [2015] Env LR 12, [3].

Habitats regulations assessment (HRAs)

94. The Habitats Regulations implement the European Union’s Directive 92/43/EEC, which requires the designation of Special Areas of Conservation (“SACs”), and the Wild Birds Directive (2009/147/EC), which requires the designation of Special Protection Areas (“SPAs”). SACs and SPAs are “European sites” for the purposes of the regulations. Regulation 61 of the Habitats Regulations 2010 (now regulation 63 of Conservation of Habitats and Species Regulations 2017) provided for assessments under the regulations (“HRAs”):

“61. (1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of that site,

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives....

(5) In the light of the conclusions of the assessment, and subject to regulation 62 (considerations of overriding public interest), the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).”

95. The prerequisites for a lawful HRA have been canvassed in a number of European and domestic authorities. Peter Jackson LJ (with whose judgment Floyd and Lewison LJ agreed) drew them together earlier this year in *R (Mynydd y Gwynt Ltd) v Secretary of State for Business, Energy and Industrial Strategy* [2018] EWCACiv 231; [2018] Env LR 22:

“(1) The environmental protection mechanism in article 6(3) is triggered where the plan or project is likely to have a significant effect on the site's conservation objectives: see *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij* (Case C-127/02) [2005] All ER (EC) 353, 1279 para 42 (*Waddenzee*).

(2) In the light of the precautionary principle, a project is likely to have a significant effect so as to require an appropriate assessment if the risk cannot be excluded on the basis of objective information: see *Waddenzee*, at para 39.

(3) As to the appropriate assessment, appropriate indicates no more than that the assessment should be appropriate to the task in hand, that task being to satisfy the responsible authority that the project will not adversely affect the integrity of the

site concerned. It requires a high standard of investigation, but the issue ultimately rests on the judgment of the authority: *R (Champion) v North Norfolk District Council* [2015] 1 WLR 3710, para 41 per Lord Carnwath JSC.

(4) The question for the authority carrying out the assessment is: what will happen to the site if this plan or project goes ahead; and is that consistent with maintaining or restoring the favourable conservation status of the habitat or species concerned?: see the opinion of Advocate General Sharpston in *Sweetman v An Bord Pleanála (Galway County Council intervening)* (Case C-258/11) [2014] PTSR 1092, point 50.

(5) Following assessment, the project in question may only be approved if the authority is convinced that it will not adversely affect the integrity of the site concerned. Where doubt remains, authorisation will have to be refused: see *Waddenzee*, at paras 56-57.

(6) Absolute certainty is not required. If no certainty can be established, having exhausted all scientific means and sources it will be necessary to work with probabilities and estimates, which must be identified and reasoned: see *Waddenzee*, points 107 and 97 of the Advocate General's opinion, endorsed in Champion's case, at para 41, and by Sales LJ in *Smyth v Secretary of State for Communities and Local Government* [2015] PTSR 1417, para 78.

(7) The decision-maker must consider secured mitigation and evidence about its effectiveness: *European Commission v Federal Republic of Germany* (Case C-142/16) EU:C:2017:301, para 38.

(8) It would require some cogent explanation if the decision-maker had chosen not to give considerable weight to the views of the appropriate nature

conservation body: *R (Hart District Council) v Secretary of State for Communities and Local Government* [2008] 2 P & CR 16, para 49.

(9) The relevant standard of review by the court is the Wednesbury rationality standard (*Associated Provincial Picture Houses Ltd v Wednesbury Corpn* [1948] 1 KB 223) and not a more intensive standard of review: see *Smyth's case*, at para 80.”

96. Natural England has adopted a standard, *Habitats Regulations Assessment (HRA) Standard*, for its conduct of assessments undertaken under regulation 61. It states that it will adopt the highest possible standards when it comes to discharging its duty to undertake HRAs. Specifically, the standard provides (omitting a footnote):

“Where Natural England is the competent authority under the Habitats Regulations when either undertaking or permitting plans or projects which may affect European Sites, it will be *mandatory* for a HRA to be undertaken by its staff and for this to be fully recorded and readily accessible [emphasis in original].

Its HRAs will be clear, transparent, fully-reasoned and evidence-based with a comprehensible and logical narrative throughout.

Each HRA will firstly include an initial assessment of risk and the careful screening of the plan or project for likely significant effects if it is not wholly connected with or necessary to the management of the site for its European qualifying features. Secondly, if significant effects cannot be ruled out, the HRA will also include a detailed and evidence-led appropriate assessment in order to reach clear conclusions about the effects of the proposals on site integrity. The HRA will clearly record the process and the justification for the judgements and decisions it makes.”

VI CHALLENGE TO CONSULTATION AND THE GUIDANCE FOR SUPPLEMENTARY CULLING

97. The claimant's challenge to the supplementary culling of badgers was advanced on two grounds. First, his case was that the consultation process regarding supplementary culling was unlawful and that consequently the Guidance following it, and the licences granted under it, should be quashed. The second ground of challenge was that the Secretary of State's decision to adopt a policy of supplementary culling fell to be quashed since, in the absence of credible evidence that it prevents the spread of bTB, it is not one he could take under section 10 of the Protection of Badgers Act 1992.

Challenge to supplementary culling consultation

98. The claimant's attack on the December 2016 consultation on supplementary culling was advanced on the basis that it had breached the "Sedley" requirements for a lawful consultation, requirements recognised in a number of authorities such as *R v North and East Devon Health Authority, Ex p Coughlan* [2001] QB 213, [108]; *R (on the application of Save our Surgery Limited) v Joint Committee of Primary Care Trusts* [2013] EWHC 439 (Admin), [27], per Nicola Davies LJ; and *R (Moseley) v Haringey London Borough Council* [2014] UKSC 56; [2014] 1 W.L.R. 3947, [25]. His case was that the Secretary of State had failed to consult when the proposal was at a formative stage; in conducting the consultation, he had provided information misleading as to the policy's rationale and insufficient to enable consultees to provide intelligent and informed responses; and having received the responses, he unlawfully failed to take them into account.
99. As to the first requirement, that it must be at the formative stage, Mr Turney submitted on the claimant's behalf that the 2016 consultation document was premised on supplementary culling being an appropriate measure for preventing the spread of bTB, and in paragraph 6.2 was expressly said to be about "how this proposal can be

made as effective as possible”. There was no consultation on the principle of supplementary culling, whether it was a good or bad thing, or whether an alternative approach such as a “do nothing” policy, discussed at the 21 April 2016 meeting between Defra officials and APHA, could be adopted.

100. Mr Turney then submitted that the requirement that a consultation must contain sufficient reasons was not satisfied. Supplementary culling was a fundamental departure from existing policy, which might make matters worse. Yet the Secretary of State had failed to provide data on the impact of the two intensive culls in Gloucestershire and Somerset on the spread of disease. There was no support for the proposition that supplementary culling was necessary to prolong their benefit. The Jenkins 2010 analysis of the RBCT data demonstrated that the benefits inside culled areas were greatest shortly after culling ended and persisted beyond the culling period. Supplementary culling after the cessation of intensive culling might interfere with them. This analysis might properly support the “do nothing” option, which had support in the APHA meeting in April 2016.
101. That led to Mr Turney’s submissions that consultees were misled, first in paragraph 1.3 that supplementary culling was “necessary” for the prolongation of the disease control benefits. Supplementary culling was not used in the RBCT and was quite different from the intensive culling involved there. It was like the small scale, patchy culling which the Jenkins 2010 study concluded was unlikely to produce comparable reductions in disease. To suggest that it was necessary was to exclude other approaches, such as the “do nothing” option.
102. Mr Turney continued that the consultation document was also misleading because of paragraph 3.2, that there is a causal link between the lack of supplementary culling in the RBCT and the gradual loss of disease control benefits. As ZSL underlined in its submission to the consultation, this misrepresented the level of certainty associated

with supplementary culling. The relationship was Defra's opinion, and not one which found any scientific support. In particular the perturbation effects were misstated, in that outside the cull zone these peaked in the first year of culling, while within the cull zone they likely continued throughout. Moreover, the disbenefits of patchy culls were omitted.

103. Finally, Mr Turney submitted that there had been a failure to take into account consultation responses, the last of the Sedley criteria for a lawful consultation. There was no evidence that the Secretary of State had considered the substantial doubt cast by consultees like the claimant, ZSL and the Badger Trust on whether supplementary culling could, in principle, prevent the spread of disease. That was evident in both the ministerial submission of 26 June 2017 and the Summary of Responses. In particular these did not mention that it is not possible to use the evidence from the RBCT to assess the disease control benefits of supplementary culling, that on the available evidence the true position is that supplementary culling may prevent disease control benefits from materialising, that it risked worsening bTB in cattle, and that there was a misunderstanding of perturbation effects, since outside the cull zone these peaked in the first year of culling, but within the cull zone likely continued throughout.
104. In my view this was in some respects an unimpressive consultation document. However, it does not meet the high threshold of being so clearly and radically wrong as to render it procedurally unfair and thus unlawful: *R (Greenpeace Limited) v Secretary of State for Trade and Industry* [2007] EWHC 311 (Admin), [62]-[63], per Sullivan J; approved in *R (on the Application of Royal Brompton and Harefield NHS Foundation Trust) v Joint Committee Of Primary Care Trusts* [2012] EWCA Civ 472, [13], per Arden LJ, giving the judgment of the court.
105. Moreover, a consultation has to be considered in its statutory context, since statutory duties to consult vary depending on the provision in question, the particular context,

and the purpose for which the consultation is carried out: *R (Moseley) v Haringey London Borough Council* [2014] UKSC 56; [2014] 1 WLR 3947, [36], per Lord Reed with whom Baroness Hale and Lord Clarke agreed. In this case under section 15(3) of the Natural Environment and Rural Communities Act 2006 the Secretary of State has a duty to consult in relation to guidance to be given to Natural England, in other words when matters are at a fairly advanced stage, and not on wider issues of policy. The scope of the statutory duty is also limited because, beyond Natural England and the Environment Agency, it is up to the Secretary of State to decide who to consult. (The claimant's earlier allegation, that Natural England had not been consulted, was not supported by the evidence.)

106. Once the Secretary of State launched the consultation he was bound of course to conduct it fairly (*R v North and East Devon HA Ex p. Coughlan* [2001] QB 213, [108], per Lord Woolf). However, the statutory context is not irrelevant when considering the performance of his consultation duty. I accept the Secretary of State's submission that he was entitled to decide upon the specific matters on which he wished to consult in relation to this proposed guidance on supplementary culling, and that he could decide that the consultation should proceed on the basis that he was already satisfied about the principles of supplementary culling.
107. When read as a whole, the consultation was in my view such as to enable consultees to make representations on the issue of whether supplementary culling was an appropriate measure for preventing the spread of bovine TB, as well as on the specifics of the guidance to be given to Natural England on licensing. Section 3 of the document, in particular paragraph 3.2, made clear that the Secretary of State's view was that "licences could appropriately be granted to permit a supplementary form of badger population control", and section 6 ("Tell us what you think") was framed sufficiently broadly to enable those who opposed the principle to make representations setting out their position. In particular, paragraph 6.2 invited

responses on additional matters not covered by the specific questions. The reference in paragraph 6.1 to making the proposal “as effective as possible” must be read in that wider context.

108. In other words, those who believed that supplementary culling would not be effective to maintain disease-control benefits in areas where intensive culls had been completed, those who considered that no action was equally plausible as a policy, and those who supported alternative courses such as vaccination or biosecurity could reasonably be expected to make their position known. Although not determinative (see *Eisai Ltd v National Institute for Health and Clinical Excellence* [2008] EWCA Civ 438, [49], per Richards LJ), the fact is that this is what happened: the claimant and others stated their opposition to supplementary culling in reasoned responses. As Mr Ross remarks at paragraph 69 of his statement, quoted earlier, all responses were considered, even those which did not accept the principle of supplementary culling.
109. This was not one of those exceptional cases like *R (Moseley) v Haringey London Borough Council* [2014] UKSC 56; [2014] 1 WLR 3947 requiring reference to discarded alternatives (if the “do nothing” approach can be so described). I accept the Secretary of State’s submission that the duty to make reference to discarded alternatives only arose in the *Moseley* case because of special circumstances, including the nature of the consultees and the likely impact of the preferred proposal on their vital financial interests, the fact that the consultees could not be expected to identify the discarded alternatives themselves, and the particularly wide terms of the statutory duty of consultation under consideration in that case.
110. While as I have said the consultation document was not ideal, there was in my judgment sufficient information overall, which was not misleading, to satisfy the Secretary of State’s consultation duty. As well as the text itself, readers could click onto and then access through the internet a variety of reports referred to in the

footnotes. Paragraph 1.3 fell short in suggesting that supplementary culling was necessary, but it must be read in the context of the document as a whole. The document set out in section 3, especially paragraphs 3.2-3.3, the rationale for supplementary culling, namely, that based on the RBCT the disease control benefits achieved by a period of intensive culling were expected to decline to nothing over time (what has been described as the tapering effect). As noted earlier there was a reference at paragraph 3.2 to the *SE3279 report*, which consultees could access, confirming this tapering effect.

111. The purpose of supplementary culling was to try to preserve or extend the disease control benefit. It was not inappropriate to refer to the chief veterinary officer's view on this at paragraph 2.2, when we have seen that both he and Defra's chief scientific adviser supported supplementary culling. Any overstatement in paragraphs 3.2 is counteracted by the more qualified language of paragraph 3.3, and the warning in paragraph 3.10 that there was no evidence yet available on the effects of the longer-term control of badgers in Gloucestershire and Somerset.
112. It is not surprising that there was an absence of information from the intensive culls, given that they were only coming to an end. In fact it was not until 2017 that the Brunton study of their first two years (2013-2015) of intensive culling was published. Moreover, it is not immediately clear to me what difference the provision of information on the disease control benefits achieved by these two culls could have made to a consultation on a different policy of supplementary culling.
113. The consultation document explained the essential role of cattle control measures and bio-security (at paragraphs 3.3 and 3.4), and how vaccination at this stage was not sufficiently well-developed (at paragraph 3.5). The international material was introduced with the hardly extravagant claim that it supported the longer-term control of a TB wildlife reservoir.

114. Paragraph 3.11 did not rule out the perturbation effects of supplementary culling. However, these were expected to be much lower in respect of supplementary culling carried on in an area which had already undergone an intensive cull. Consideration of perturbation effects in that paragraph must be coupled with how these are dealt with in the ISG report, which could be accessed by clicking onto the footnote reference. As to the omission of any reference to patchy culls, I accept the Secretary of State's submission that supplementary culls did not fall within that description, given the criteria set out in section 4 as to how they were to be effected.
115. As to how the Secretary of State addressed the consultation responses, for unlawfulness the claimant must establish that a matter was such that no reasonable decision-maker would have failed in the circumstances to take it into account as a relevant consideration: *R (National Association of Health Stores) v Department of Health* [2005] EWCA Civ 154, [60]-[63], per Sedley LJ; *R (Khatib) v Secretary of State for Justice* [2015] EWHC 606 (Admin), [49]-[53], per Elias LJ. In my view none of the matters the claimant raises fall into that category.
116. The starting point is paragraph 2.3 of the Summary of responses, which albeit broadly deals with the points the claimant now raises. Then there is the evidence of the senior Defra official, Mr Ross, quoted earlier, that the responses received to the consultation, including ZSL's and those like the claimant's opposed to supplementary culling, were considered by officials within Defra and factored in prior to the final decision, even when not mentioned in the summary of responses. Mr Ross also explains that responses were referred to the TB experts within Defra if they canvassed scientific points.
117. Further, as outlined earlier in the judgment, the points raised by those such as the claimant and ZSL had been considered over the years prior to the consultation and in some cases rejected in favour of supplementary culling, which was seen as a logical

extension of the existing policy. As the decision-maker in June 2017, the Secretary of State had already been provided with the draft consultation document and guidance at the time of the December 2016 submission. With the June 2017 submission was the draft summary of responses as well. The fact was that the Secretary of State knew that supplementary culling was untested - the main thrust of ZSL's response and a point made in paragraph 3.10 of the consultation document. None of the other matters raised by the claimant were mandatory factors which a rational decision-maker was bound to take into account.

Protection of Badgers Act, section 10

118. Under this head Mr Turney submitted that the licence-granting power under section 10(2)(a) of the Protection of Badgers Act had to be read in its statutory context, which was an Act whose goal was to stop the widespread persecution of badgers. It was a derogation from the general protection afforded. Moreover, the section did not confer a broad discretion on the licensing authority, since licences had to be “for the purpose of preventing the spread of disease”. That meant that there had to be an evidence base for granting a licence to demonstrate that it would serve the statutory purpose of preventing the spread of disease. Mr Turney cited authorities such as *Begum v Tower Hamlets London Borough Council* [2003] UKHL 5; [2003] 2 AC 430, [7], per Lord Bingham, [99], per Lord Millett; *IBA Health Ltd v Office of Fair Trading* [2004] EWCA Civ 142; [2004] ICR 1364, [93], per Carnwath LJ; and *R (on the application of Badger Trust) v Welsh Ministers* [2010] EWCA Civ 807, [57]-[58], per Pill LJ, [77], [87], Smith LJ (“[h]unch and anecdote would obviously not be sufficient; nor would impermissible extrapolation”).
119. In this regard Mr Turney also relied on the *Tameside* line of cases, that the Secretary of State as the decision maker was required to take reasonable steps to acquaint

himself with the relevant information to enable him to make his decision correctly (*Secretary of State for Education and Science v Tameside MBC* [1977] AC 1014).

120. In Mr Turney's submission, the Secretary of State's case that supplementary culling followed logically or rationally from what had gone before it was not enough to engage the section. There needed to be some objective evidence capable of sustaining the Secretary of State's decision. The Secretary of State had lost sight of the point from the RBCT that the greatest reduction in bTB occurred immediately after culling ceased. Albeit that the benefits of culling would diminish over time, Mr Turney continued, that did not support, either as a matter of epidemiology or logic that prolonging culling at a lower intensity would lengthen the benefits of intensive culling. In April 2015 APHA made clear that supplementary culling was not supported by the evidence, that the international evidence was unreliable, and that there was support in the evidence for a "do nothing" policy following intensive culling. Quite apart from such matters being left out of account, Mr Turney submitted, there was no proper evidential basis for concluding, as required by section 10, that supplementary culling would prevent the spread of disease. As the ZSL had observed in its submission to the consultation, supplementary culling might undermine the benefit derived from stopping culling and make matters worse.

121. In *R (on the application of Badger Trust) v Secretary of State for the Environment, Food and Rural Affairs* [2012] EWHC 1904 (Admin), Ouseley J held that the words of section 10(2)(a) did not have a technical or specialist scientific character, and that the Secretary of State had acted lawfully when her purpose subjectively, and judged by its intended effect, was to prevent the spread of disease [35], [43]. Mr Turney attempted to distinguish the case: Ouseley J's consideration of section 10(2)(a) had been in the context of an argument that the power could only be exercised for the purpose of preventing the spread of disease and, it was said, the Secretary of State intended to act for a different purpose of preventing the transmission of disease and

reducing its incidence. Despite the particular context in which Ouseley J had to construe the section, I am bound by his interpretation unless I think it wrong. There is no basis to think that it is; there is nothing in the legislation to suggest that Parliament's words have other than their natural meaning.

122. In this case the purpose of the Secretary of State's policy of supplementary culling, stated in his Summary of responses to the consultation at paragraph 3.2, quoted earlier, was that it would "prolong the expected disease control benefits" of the intensive culling. That disease control purpose was expressly stated in the December 2016 consultation document (see in particular paragraph 4.2), is evident in the internal discussions within government before its publication, and is confirmed in the witness statements before the court of Professor Boyd, Defra's chief scientific adviser, and Mr Gibbens, the government's chief veterinary officer. Whatever APHA might have thought of supplementary culling in April 2015, by the time of the June 2016 meeting of Defra's TB Strategy Implementation Group, APHA's chief executive officer was in support.
123. Thus the Secretary of State acted for the proper purpose for which the legislative power in section 10(2)(a) was conferred. In the words of Ouseley J in approving the policy on supplementary culling, and guidance to Natural England, his actions subjectively, and judged by their intended effect, were to prevent the spread of bTB. Despite the views its officials had expressed the previous year, APHA was formally in support. Importantly, both Defra's chief scientific adviser and the government's chief veterinary officer considered that supplementary culling had a logical and defensible rationale, which was to maintain the reduced weight of infection achieved in the badger population at the end of an intensive cull. There was evidence that it was immediately following intensive culling that its benefits were greatest, but there was also evidence that its disease control benefits declined over time.

124. The issue thus becomes whether in acting in this way under his statutory power the Secretary of State's actions were otherwise flawed in public law terms. In my view it cannot be said that he acted irrationally in a public law sense, that he failed to take relevant factors into account, or that he took into account irrelevant factors. The scarcity of evidence about supplementary culling was acknowledged in the December 2016 ministerial submission and made clear in the consultation document. When the international evidence was put to the Secretary of State, it was that it supported the longer term control of a TB wildlife reservoir, not that it was evidence supporting supplementary culling. The same applied to its summary in the 2016 Consultation document. As I have said, both the Secretary of State's chief scientific adviser and the government's chief veterinary officer were in support. Against this background a policy of maintaining a reduced badger population through supplementary culling cannot be said to be irrational when coupled with the commitment to change tack as evidence became available.
125. As to the so-called *Tameside* duty, that takes its colour from the statutory context. If the logic of the statute does not compel certain considerations to be taken into account, it is for the Secretary of State to make the primary judgment as to what should be considered in the particular circumstances, with the court exercising a secondary judgment where a matter is so obviously material that it would be irrational to ignore it: *R (on the application of DSD, NBV, Mayor of London, News Group Newspapers Ltd) v Parole Board of England and Wales* [2018] EWHC 694 (Admin), [141], per Sir Brian Leveson PQBD, Jay and Garnham JJ. Even if the point about benefits being greater after the end of an intensive cull was not put to the Secretary of State, I am not persuaded that this was a relevant consideration against the background of the other matters or that, for the reasons given in the previous paragraph, it was irrational for it not to be taken into account.

VI CHALLENGE REGARDING NATURAL ENGLAND'S LICENCE DECISIONS

126. The claimant challenges Natural England's decisions to grant licences (i) on 25 August 2017, for supplementary culling in Area 1 (Gloucestershire) and Area 2 (Somerset); and (ii) on 8 September 2017, for standard culling in Areas 11 (Cheshire), 14 (Devon), 15 (Devon), 16 (Dorset), 17 (Somerset) and 19 (Wiltshire). Natural England was said to have issued the licences in breach of the Habitats Regulations by failing to carry out appropriate assessments (HRAs), either through not carrying out a screening exercise at all, or through concluding that the proposals would not be likely to have significant effects on the relevant features of the sites in question. As indicated earlier, the focus of the claimant's case was on two effects: the risk that a decrease in the badger population could cause an increase in the fox population, which might in turn impact on bird populations, and the risk of disturbance to bird populations from the culling operations themselves.
127. Natural England contended that it had adopted a precautionary approach and that its judgments about significant effects under the Habitats Regulations were lawful. These were that the risk of a significant effect on protected bird populations within the cull areas from foxes could be excluded; that outside of culled areas it was even less a possibility because there was unlikely to be any significant increase in the fox population; and that for sites outside supplementary cull areas it was a logical impossibility because the licence was for the maintenance culling of the badger population, not its reduction. As to disturbance risk, its case was that occasional disturbance of individual birds by culling operations would not have a tangible effect on protected populations.

The parties' evidence

128. Detailed reasons for the views on both sides were set out in a number of witness statements and the exhibits attached to them. As well as the claimant's own evidence as a wildlife expert, there were four witness statements from Mr Dominic Woodfield, the managing director of the ecological consultancy, Bioscan (UK) Ltd, who has long experience in conducting HRAs. From Natural England there were two witness statements from Dr Heydon, who as explained previously is the principal specialist for species protection and regulation in its chief scientist's directorate. He has special expertise in fox behaviour and has published on the matter. Late in the day support for Dr Heydon's approach was provided through the ornithological expertise of Mr Allan Drewitt, senior specialist in ornithology at Natural England.
129. As indicated earlier I admitted all this evidence, albeit that some was late and despite other objections raised.

Risk from foxes

130. At the risk of over-simplification, the claimant's evidence from himself and Mr Woodfield on the general issue of risks to bird populations from foxes was as follows (discounting relatively minor points which were in my view adequately rebutted by Natural England's evidence): (i) what the claimant calls the carnivore release effect (I use the simpler term, fox predation risk) may affect bird species through direct predation or through sub-lethal effects arising from disturbance or behavioural changes triggered by a perception of an increased predation risk; (ii) Trewby 2008 showed that numbers and densities of foxes double when badgers are removed, and the fox as an apex predator poses an increased threat; (iii) Natural England's HRA template accepts it as a risk; (iv) the behaviour of birds such as waterfowl may be significantly affected by the mere presence of increased predators, particularly foxes, which they view as a direct threat, and which can in turn impact on their ability to survive (e.g., increased energy expenditure due to more flight, greater limitations on

sites and feeding areas, and increased stress); (v) whether fox increases balance out the loss of badgers as regards predator-prey effects will depend on the characteristics of each area; and (vi) Natural England's assessments did not meet the standard it sets for itself in its policy referred to earlier in the judgment.

131. In summary the main points in Natural England's general evidence were: (i) the relevant risk is restricted to ground-nesting birds (FERA 2011; Welsh Assembly report; Roos et al, "A review of predation as a limiting factor for bird populations in mesopredator-rich landscapes: a case study of the UK" *Biological Reviews*, May 2018) ("Roos 2018"); (ii) fox populations have been in substantial decline in south-west and west England, and recent advances in night vision and thermal imaging equipment have increased the efficiency of gamekeepers and others involved in fox control – thus increases in the fox population following badger culling may restore fox levels existing in the recent past, to which bird species would have been exposed; (iii) as to the impact on ground-nesting birds (a) there seems to be no net effect on nest predation when a reduction in one group of predators like badgers is met with a compensatory increase in predation by other predators like foxes (Roos 2018), (b) the RBCT finding, reported in FERA 2011, was that meadow pipit and skylark populations remained constant in culled areas (but there may have been unmeasured environmental factors at work); (iv) its area teams have not noted any decline in protected bird populations associated with the onset of intensive badger culling in 2013.

132. In each of the assessment templates for Dorset Heathlands SPA, Area 16 (Dorset), Poole Harbour SPA/Ramsar Site, Area 16 (Dorset), and Severn Estuary SPA/SAC/Ramsar, Area 17 (Somerset) – sites falling within cull areas - Natural England reached the conclusion in the relevant HRAs (as set out above) that there was "no possible risk of an effect on any of the qualifying SPA species from an increase in mammalian predators". In effect the claimant attacks these as formulaic responses,

which do not account for the evidence it advanced on the risk posed by a potential increase in the fox population, and which were not geared to the special conditions of each site.

133. The precautionary principle in this context is fundamental, but “[i]t is for a third party who asserts that there is a risk which cannot be excluded on the basis of objective information to produce credible evidence to the court that the risk is a real one...”: *R (on the application of DLA Delivery Ltd.) v Lewes District Council* [2017] EWCA Civ 58, [30], Lindblom LJ (with whom Lewison LJ agreed), *Boggis v Natural England* [2009] EWCA Civ 1061, [37], per Sullivan LJ (with whom Longmore and Mummery L.JJ agreed).
134. In light of the evidence Natural England adduced on foxes, my view is that the claimant has not established as irrational or otherwise unlawful Natural England’s assessment of fox predation risk in these three areas, namely, that the possibility from it of significant effect on protected bird populations could be excluded as a real risk. The claimant and Mr Woodfield were at the disadvantage that they did not have direct, empirical evidence about the risk by contrast with Natural England’s feedback from its area teams, that there had not been any decline in protected bird populations since badger culling had begun over five years ago. Mr Woodfield said correctly that an absence of evidence cannot be an evidence of absence, but it was a relevant consideration Natural England could properly take into account in its assessment, along with the other evidence outlined.
135. I am comforted in this conclusion on fox predation risk by what might be regarded as undertakings in Dr Heydon’s evidence, (a) that Natural England’s area teams routinely monitor protected sites as regards the issue, and that it is undertaking a further review of available evidence later this year; and (b) that if, contrary to expectations, evidence were to emerge of a legally relevant adverse effect on bird

populations, Natural England would introduce anti-predator fencing and/or arrange for gamekeepers and site managers to shoot more foxes.

136. The claimant also raised fox predation risk in the sites identified earlier in the judgment within 10km or so of standard licence cull areas, namely South Pennine Moors SPA, Rostherne Mere Ramsar, Exe Estuary SPA/Ramsar, Chesil Beach & The Fleet SPA/Ramsar, Salisbury Plain SPA, and Somerset Levels & Moors SPA/Ramsar. There were also the areas near supplementary cull areas, Walmore Common SPA/Ramsar and Severn Estuary SPA. Natural England did not complete HRA templates for these sites, except for Chesil Beach & The Fleet SPA/Ramsar, where one was completed in May 2016 and no risk of a significant effect found.
137. In his witness statements, Dr Heydon stated that Natural England did not close its eyes to the possibility of indirect effects on SPAs or Ramsar sites outside cull areas, but that its small team of experts formed the view that the risk of a significant effect on such sites could be excluded. The difficulty facing Natural England in this regard is that there are no records of any consideration of these sites. Nor is there is a written policy reflecting whether an assessment is necessary depending on the distance from the cull area, the protected features and the views of local staff.
138. In his witness statements Dr Heydon also explained the practical difficulties that, in 2017, Natural England was dealing with thirteen applications for cull areas that contained, or were close to, over 200 sites designated as SPAs, Ramsar sites, SACs, or SSSIs. However, resource constraints do not provide an answer to the need to consider whether an HRA screening is necessary not least because, as the claimant correctly observed, because badger culling is a significant intervention in the natural ecology.
139. It seems to me that Natural England's failures, even if only to record that no consideration of the risk was necessary with these close-by sites to cull areas, was a

breach of its duty under the Habitats Regulations.

“No difference”: fox predation risk

140. At the hearing Natural England submitted that relief should be refused under section 31(2A) of the Senior Courts Act 1981. That contains a mandatory rule that the court must refuse to grant relief for judicial review if it appears to be highly likely that the outcome for the applicant would not have been substantially different if the conduct complained of had not occurred. Natural England’s submission was that, even if I were to conclude that it should have given specific attention to assessment with respect to these sites, it was highly likely that the outcome would have been the same if it had.
141. ‘Conduct’ in section 31(2A) has a broad import and includes both the making of substantive decisions and procedural steps taken in the course of decision-making: *R (Goring-on-Thames Parish Council) v South Oxfordshire DC* [2018] EWCA Civ 860, [47]. It can include a failure to consider a matter: *R (Haworth) v HMRC* [2018] EWHC 1271 (Admin), [101].
142. In my view Natural England has established through its evidence that it is highly likely that the outcome would not have been substantially different if it had considered whether fox predation risk arising from granting culling licences would have an adverse effect on the integrity of the sites at issue. The same analysis would have been applied as with the three sites described earlier where screening templates were completed. Despite the absence of local peer assessment, the sites in question would have been treated as *a fortiori* cases. In particular I accept that Natural England would have taken the view that it was unlikely that significant numbers of foxes would disperse out of cull areas into areas where badger densities remained higher and there were existing resident foxes.

143. As to the two areas near supplementary cull areas - Walmore Common SPA and Severn Estuary SPA – quite apart from anything else there is the logical and powerful point which Natural England makes, that because the badger population is being maintained in these areas there should be no increase in the fox population according to the claimant’s reasoning. This point applies to Mr Woodfield’s evidence concerning the fox threat to Bewick’s swans from the licencing of supplementary culling in Gloucestershire.
144. During winter months Walmore Common SPA hosts a non-breeding population of Bewick’s swans, and these swans are also a qualifying feature of Severn Estuary SPA. Mr Woodfield argued that there could be increased losses of individual birds by predation directly, or by influencing site availability, site choice, feeding efficiency and physiological stress. In response Natural England’s position was (i) that the significant migration of foxes across 3.16 km to Walmore Common SPA and 9.86 km to Severn Estuary SPA was highly unlikely; (ii) that the swans were over-wintering rather than breeding, were birds of a substantial size and could generally retreat to open water, so that foxes were unlikely to predate them frequently; and (iii) that supplementary culling was not aimed to reduce the badger population (its “logical point”). In my judgment Natural England established the no difference principle in relation to this particular issue.

Disturbance risk

145. The claimant’s case is that disturbance from culling operations can have a significant consequence for bird survival, alone or in combination with other factors. Disturbance risk was raised with Dorset Heathlands SPA, Severn Estuary SPA/Ramsar site, Poole Harbour SPA/Ramsar Site and, very late in the day, Salisbury Plain SPA. The claimant highlighted that Natural England accepted the risk, even on non-breeding birds, given the conditions contained in the licences. But, in his submission, Natural

England seemed to ignore that birds range over wide areas, not just the protected sites. It had omitted to consider disturbance effects in adjacent areas.

146. In general terms Natural England's response to disturbance risk was (i) that culling is carried out stealthily at night, using night vision, thermal imaging and muffled rifles; (ii) that disturbance of wildlife is actively avoided because it will interfere with the attempt to track badgers; (iii) that the discharge of rifles is infrequent and on some nights a shooter may not discharge his rifle at all. (DEFRA's published figures for the first year of the 2017 licence areas indicate that there is roughly a 1 in 24 chance of a shot being taken in any 1km square on any night of the cull.); and (iv) that culling is far less disturbing than the activities which routinely occur in and around protected sites, including heavy recreational use, shooting of pest species with unmoderated shotguns, and military training with live firing almost all year on Salisbury Plain.
147. As with the risk of fox predation the claimant bears the burden of producing credible evidence that disturbance is a real risk. Quite apart from Natural England's evidence, just outlined, the claimant fails to surmount this hurdle since he has produced no evidence that disturbance from badger culling has had a significant negative impact on bird population survival rates since it was introduced six years ago in Gloucestershire and Somerset.
148. Moreover, in each of the assessment templates for Dorset Heathlands SPA, Area 16 (Dorset), Poole Harbour SPA/Ramsar Site, Area 16 (Dorset), and Severn Estuary SPA/SAC/Ramsar, Area 17 (Somerset) disturbance risk was addressed but discounted in light of the limitations on the timing and areas of proposed culling. Natural England considered it unrealistic for the claimant to contend that occasional disturbance outside of these times and areas would have a significant adverse effect on the survival prospects of protected bird populations.

149. Given the legal test to be applied on the court's review, and notwithstanding the precautionary principle, my conclusion is that Natural England was rationally entitled to conclude that it could exclude the possibility of a significant disturbance effect in these areas.
150. The claimant advanced further points as regards disturbance risk: (i) in relation to Severn Estuary SPA/Ramsar, Natural England failed to have regard to the risk of Bewick's swans outside the SPA/SAC/Ramsar sites; (ii) as regards Dorset Heathlands SPA, Natural England did not take into account the risk of a significant effect on birds using heathland habitats outside of the breeding season; (iii) with Severn Estuary SPA/SAC/Ramsar and/or Walmore Common SPA, there was a risk of a significant effect on Bewick's swans using Ashleworth Ham SSSI; and (iv) there was no assessment of Salisbury Plain SPA, which is on the opposite side of the B390 road to culling Area 19.
151. In response to this Natural England contended:
- (i) in relation to Severn Estuary SPA/Ramsar, (a) there was no evidence that neighbouring farmland regularly supported dense aggregations of birds at night, (b) the discrete and infrequent nature of culling reduced the likelihood of significant disturbance, and (c) there was unmuffled shooting in the farmland surrounding this site throughout much of the year;
 - (ii) as regards Dorset Heathlands SPA, as well as the general points above (infrequent nature of culling; heavy recreation use of heathlands), (a) populations on the heathlands were generally widely dispersed and the occasional disturbance of an individual bird was unlikely to have population-level effects, and (b) the prohibition on shooting at Stoborough & Creech Heaths SSSI (within the area and a site particularly important for wintering hen harriers and merlin) offered an additional layer of assurance;

(iii) with Severn Estuary SPA/SAC/Ramsar and/or Walmore Common SPA, as well as general points (e.g., the limitations in the licences) (a) this was a supplementary culling licence, (b) swans using Ashleworth Ham do so when it is flooded, roost on open water, and are therefore less vulnerable to disturbance from nocturnal culling on land, and (c) shooting of game takes place near Ashleworth Ham so the swans are likely to be accustomed to a level of disturbance;

(iv) with Salisbury Plain SPA, apart from its military use through most of the year (a) the species associated with the SPA are predominantly daytime foragers (save for stone-curlew), whereas culling is primarily a night-time activity, and (b) shooting and its associated disturbance had been deployed as a conservation measure to assist the stone-curlew.

152. In light of Natural England's evidence, in as much as the claimant challenges its failure to take the matters identified into account in its HRAs for these areas, he has not in my view produced credible evidence that a significant effect is a real risk. In any event, Natural England invoked the no difference principle under section 31(2A) of the Senior Courts Act 1981. To my mind its evidence demonstrated that even if Natural England had conducted the assessments required, it would in any event have concluded that the grant of the licences would not have an adverse effect on the integrity of the sites.

153. For sake of completeness I note that with respect to the claimant's assertion that Natural England did not adequately consider in-combination effects, the case foundered on a lack of particulars on the claimant's part.

Disturbance risk and recent CJEU case law on screening

154. In *R (Hart District Council) v Secretary of State for Communities and Local Government* [2008] EWHC 1204 (Admin); [2008] 2 P & CR 302 Sullivan J held that if features had been incorporated into a project, there was no sensible reason why they should be ignored at the initial, screening, stage merely because they had been done to avoid, or mitigate, any likely effect on a European site: [55]. The Court of Appeal in *Smyth v Secretary of State for Communities and Local Government* [2015] EWCA Civ 174; [2015] P.T.S.R. 1417 approved that approach as clearly correct, to the acte claire standard. Sales LJ (with whom Richards and Kitchin LJ agreed) said:

“76. If the competent authority can be sure from the information available at the preliminary screening stage (including information about preventive safeguarding measures) that there will be no significant harmful effects on the relevant protected site, there would be no point in proceeding to carry out an “appropriate assessment” to check the same thing. It would be disproportionate and unduly burdensome in such a case to require the national competent authority and the proposer of a project to undergo the delay, effort and expense of going through an entirely unnecessary additional stage”

155. The claimant contended that this approach is no longer lawful in light of the ruling in *Case C-323/17, People Over Wind v Teoranta*, CJEU (Seventh Chamber), 12 April 2018. That case involved silt and sediment run-off into a river with protected pearl mussels resulting from the installation of a cable connecting a wind turbine. The court said that the measures which the referring court described as mitigating measures and the consultants referred to as protective measures – which seem to have involved reducing run-off - should be understood as denoting measures intended to avoid or reduce the harmful effects of the envisaged project on the site concerned. The court then held that Article 6(3) of the Habitats Directive must be interpreted as meaning

“40...that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.”

156. The claimant submitted that the conditions which Natural England had attached to the cull licences, following advice to applicants, fell within the *People Over Wind* ruling and should not have been taken into account at the screening stage. These were that no culling activity would take place in certain locations (e.g., Severn Estuary SPA) or at certain times of the year (e.g., bird-breeding season with Dorset Heathlands SPA and Poole Harbour SPA).
157. In my view the licence conditions which Natural England attached to the licences in Areas 16 and 17 are not the mitigating or protective measures which featured in the *People Over Wind* ruling. They are properly characterised as integral features of the project which Natural England needed to assess under the Habitats Regulations. I accept Natural England’s submission that it would be contrary to common sense for Natural England to have to assume that culling was going to take place at times and places where the applicants did not propose to do so.

VII CONCLUSION

158. For the reasons set out above, I dismiss these claims for judicial review.