

**Highways England: A303 Amesbury to Berwick Down  
Project, Development Consent Order Application**

**Scheme Reference: TR010025**

**Written Representation on**

**Principal Issue 4**

**Biodiversity, Biological Environment and Ecology**

**for**

**The Stonehenge Alliance (Reference No. 2001870)**

**by Kate Fielden**

**with the advice and input of Tracé Williams of FarmView**

## **Summary**

The A303 Stonehenge Scheme poses threats to the integrity of the River Avon SAC and to the Salisbury Plain SPA and its associated Annex I bird species, the Stone Curlews. The Scheme also threatens Annex I Great Bustards that have been re-introduced and breed within the locality. Contrary to the assertions of Highways England, in its Statement to Inform the Appropriate Assessment, that there would be no significant effects on designated sites and species, we give reasons to indicate that there are likely to be adverse effects on the SAC owing to pollution of groundwater associated with tunnel boring; while construction of the road scheme would cause disturbance of the Annex I birds, adversely affecting the integrity of the SPA. Mitigation proposed appears to be unsatisfactory in respect of the Stone Curlews. Furthermore, there appears to be no convincing evidence to show that the integrity of the SPA would not be affected in the longer term owing to the cumulative effects of the A303 Scheme and agreed new housing.

## **Biographical information**

**Kate Fielden**, BA, D.Phil., is Honorary Secretary to the Stonehenge Alliance and an archaeologist with a lifetime interest in the natural environment. A member of the Avebury and Stonehenge Archaeological and Historical Research Group, Dr Fielden also represents the Avebury Society on the Avebury WHS Steering Committee. She has worked as a volunteer for CPRE Wiltshire for some 30 years and taken the case at Public Inquiries into planning proposals at Avebury and Stonehenge. She has worked on the production and public examination of planning documents, including relevant Local Plans since the late 1980s. She appeared for CPRE and the Avebury Society at the Wiltshire Core Strategy EIP, helping to achieve stronger policies and texts for the natural environment and biodiversity.

**Tracé Williams**, MSc., BSc., conservation biologist, has checked and endorsed the text of this Written Representation and made numerous suggestions for improvements. Tracé Williams is an experienced and dedicated conservation biologist with over 20 years' experience in nature conservation, having been central to several avian projects in the UK and overseas, with avicultural, research and project management experience. Having worked for the RSPB in Wiltshire for 14 years, she has expert knowledge of chalk grassland flora and fauna, had major input into the Stonehenge & Avebury World Heritage Site Management Plan and has considerable knowledge associated with Normanton Down nature reserve and previous A303 proposals. She operates FarmView - an independent agri-conservation consultancy established in 2012 - offering professional advice on species and habitats management, creation and restoration; agricultural grants and regulations; and conservation and enhancement of biodiversity in the farmed environment.

## Introduction

This Written Representation deals with effects of the Scheme on international statutory designated sites: The River Avon SAC and the Salisbury Plain SPA and their qualifying features, including potential disturbance of Stone Curlew. We also raise concern about Great Bustard.

### 1. The River Avon SAC

1.1. The Avon system is an Annex I habitat for five aquatic *Ranunculus* species but stream water-crowfoot *Ranunculus pencillatus* spp. *pseudofluitans* and river water-crowfoot *R. fluitans* are the main dominants.

The following Annex II species occur: Desmoulin's whorl snail *Vertigo moulinsiana*; Sea lamprey *Petromyzon marinus*; Brook lamprey *Lampetra planeri*; Atlantic salmon *Salmo salar* and Bullhead *Cottus gobio*.

1.2. There are current threats to the integrity of the SAC, including over-abstraction and pollution.<sup>1</sup>

1.3. Concern about potential impacts on the SAC of the A303 Stonehenge scheme appear to have been limited by Highways England to the design of the proposed new bridge over the River Till.<sup>2</sup>

1.4. Of particular concern to us, however, and not mentioned by Highways England in its Statement to Inform the Appropriate Assessment, are the impacts on the Chalk Aquifer and consequently the River Avon SAC that could arise from construction of the proposed tunnel. It is understood that a tunnel boring machine (TBM) would be employed for the work, requiring the use of a bentonite shield-based TBM. We have received specialist geotechnical and hydrogeological advice from Dr George M. Reeves, CGeol., CEnv., PhD., MSc., BSc. (Hons), FGS, FIMMM, that:

*“ . . . the impacts of constructing the twin bores of the tunnel using these methods through heavily fractured Chalk (with RQDs [Rock Quality Designations] of 20 or less), will profoundly and adversely affect the Chalk Aquifer, both along the tunnel route, and to the western and eastern areas of the line of the proposed project.*

*This method of tunneling, with associated ground stabilization by grout, will create a “groundwater dam”, or significant barrier to the current movement of groundwater,*

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<sup>1</sup> See Highways England DCO APP-266, Statement to Inform Appropriate Assessment: HIGHWAYS ENGLAND 2018c, para. A.3.3, pp.39–40. Accessible at [https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010025/TR010025-000419-6-3\\_ES-Appendix\\_8.25\\_HRA\\_AppropriateAssessment.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010025/TR010025-000419-6-3_ES-Appendix_8.25_HRA_AppropriateAssessment.pdf)

<sup>2</sup> *Ibid.*, para 3.3.1, p.15.

*which is currently generally southwards, along the direction of Stonehenge Bottom, towards the River Avon.*

*The necessity to use a bentonite shield system (“slurry”) grout to stabilize the ground ahead of and around the tunnel boring is therefore likely to lead to significant groundwater contamination affecting groundwater quality in the area where the current natural groundwater flow and quality conditions will be affected.*

*This will be especially significant in the western section of the proposed tunnel, (and consequently further westwards along the proposed scheme) where, in the published Highways England site investigation data, highly phosphatic-rich Chalk has been identified as extensive, both for the original 2004 project (Mortimore et al., 2017)<sup>3</sup> and in more recent boreholes drilled for the present scheme.*

*Therefore the tunnel itself would profoundly affect the movement of groundwater southwards towards the River Avon to the east and will also affect groundwater movement to the west. Derogation of current groundwater chemistry and hence water quality will undoubtedly result.*

*This will affect both public and private groundwater abstractions in the vicinity of the proposed works, also the River Avon and its associated SAC, which is highly dependent on groundwater inflow from this area of the Chalk Aquifer. (See Joint Report, Wiltshire Council/Natural England/EA 2015)<sup>4</sup>*

*Significant additional information relating to the above concerns, on ground characterisation and groundwater data from boreholes and associated geotechnical work carried out for Highways England during 2018, are still not publicly available at the time of writing.”*

1.5. In view of the circumstances set out above, it cannot be shown, in accordance with the provisions of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“the Habitats Directive”), notably Article 6, that there will be no adverse impacts on the integrity of the SAC arising from the A303 Stonehenge

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<sup>3</sup> Mortimore, R.N., et al., 2017. “Stonehenge-a unique Late Cretaceous phosphatic Chalk geology: Implications for sea-level, climate and tectonics and impact on engineering and archaeology”, *Proceedings of the Geologists Association*, 128 (4), pp. 564-598. Accessible at: <http://nora.nerc.ac.uk/id/eprint/517725/>

<sup>4</sup> Chapman, C., 2015. *River Avon Special Area of Conservation Nutrient Management Plan for Phosphorus*, prepared by David Tyldesley and Associates for Wiltshire Council, Environment Agency & Natural England. Accessible at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/429214/River\\_Avon\\_Nutrient\\_Management\\_Plan\\_FINAL\\_30th\\_April\\_2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/429214/River_Avon_Nutrient_Management_Plan_FINAL_30th_April_2015.pdf)

scheme as suggested by Highways England.<sup>5</sup> Nor can it be shown for certain that there would be no in-combination effects associated with the scheme.<sup>6</sup>

Similarly, since it has not been demonstrated that there would be no adverse effects on the SAC from the road scheme, the scheme proposals are in breach of The UK Conservation of Habitats and Species Regulations 2017 (Habitats Regulations), Articles 9 (1) and (2)(1), 13, 24 (2), 63, possibly 64 (consideration of alternatives); and 68.

## **2. Protected Annex I bird species**

### **(a) Stone Curlew *Burhinus oedicnemus***

2.1. Stone Curlew, listed Annex 1 in the Directive on the Conservation of Wild Birds 79/409/EEC (the 'Birds Directive'), are protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). The bird is also a Section 41 Priority species under the Natural Environment and Rural Communities (NERC) Act 2006. The Habitats Regulations require that assessment of likely significant effects on Stone Curlew must be carried out on the current Stone Curlew population and distribution, and in combination with other plans and/or projects.

2.2. Stone Curlew is established in the area of the WHS and outside it and is a designated feature of the Salisbury Plain SPA. It is a qualifying species for the Salisbury Plain SAC. According to the Royal Society for the Protection of Birds (RSPB), the Stone Curlew population in the vicinity of the A303 Stonehenge scheme is associated with the Stone Curlew meta-population of the Salisbury Plain SPA.<sup>7</sup>

2.3. The RSPB and Wiltshire Council have adopted a 'precautionary' zone of 5km surrounding the SPA known as the Community Infrastructure Levy (CIL) area. Stone Curlew nesting generally within this area are considered to be functionally linked to the SPA and are essential to preservation of its integrity. Stone Curlew using the farmland within this zone include the Normanton Down RSPB nature reserve and a Stone Curlew nesting plot that would be lost to the road scheme at Winterbourne Stoke (RSPB, pers. comm.).

2.4. Useful information concerning threats to Stone Curlews was published in the findings of a conference held in 2017 to commemorate the end of the Stone Curlew LIFE project, where it is recorded that

- *“stone-curlews can be disturbed by dog walkers up to 500m away and repeated disturbance leads to abandonment of nests”;*

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<sup>5</sup> Highways England, *op. cit.*, 'HRA Integrity Matrix 3: River Avon SAC', pp. 52–3. Note that Highways England refers only to the River Till and not the Avon on the east side of the WHS.

<sup>6</sup> *Ibid.*, para. 6.2.1.

<sup>7</sup> RSPB, response to pre-statutory consultation, 24 February 2017. Accessed at [http://stonehengealliance.org.uk/wp-content/uploads/2018/01/A303-Stonehenge-Pub-Cons\\_RSPB\\_24Feb17-1.pdf](http://stonehengealliance.org.uk/wp-content/uploads/2018/01/A303-Stonehenge-Pub-Cons_RSPB_24Feb17-1.pdf)

- the birds “nest at lower densities within 1.5km of housing and major roads, therefore new infrastructure and housing developments in or near to Natura 2000 stone-curlew areas have had to consider and mitigate for their impact on the remaining UK stone-curlew population, ensuring that the stone-curlew population does not further decline as a direct result of increased development pressure and recreation.”
- The UK Stone curlew population is still at the ‘recovery’ stage and not yet stable or increasing.
- “. . . it will take some years for stone-curlews to colonise the new habitat created, and we still need to either increase the amount of safe habitat or occupancy rates to achieve the LIFE project target of three quarters of stone-curlews nesting on safe habitat, and ultimately the 2020 target of 400 pairs nesting on safe habitat to classify stone-curlews as ‘sustainable’.”<sup>8</sup>

2.5. The Stone Curlew LIFE project ended in 2016 and the Stone Curlew population associated with the Salisbury Plain SPA is not yet ‘sustainable’. It therefore follows that any loss or disturbance of Stone Curlew nesting plots would adversely affect not only the species and the viability of the SPA, it would inhibit or (at best) delay achievement of a sustainable population.

2.6. In respect of the A303 Stonehenge Preferred Route (as revised since consultation in 2017), Highways England has stated:

*“For Salisbury Plain SPA the three pathways for which likely significant effects could not be dismissed were:*

- *Direct loss of a successful stone curlew breeding plot immediately south of Parsonage Down which will lie within the scheme boundary in the area for the Winterbourne Stoke bypass and will therefore be lost during construction. Although this plot is outside the SPA it is used by the same population of stone curlew that nest within the SPA and a net reduction in the number of successful stone curlew plots will result in a net reduction in breeding opportunities for the species, which could affect the ability of Salisbury Plain SPA to achieve its conservation objectives.*
- *Construction activity/personnel disturbance of breeding stone curlew using the breeding plot at Parsonage Down prior to its removal.*

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<sup>8</sup> *Achieving sustainable species recovery*. Conference report: A recipe for success. Lessons from the Stone-curlew LIFE project, RSPB EU LIFE+ end of project international conference 28 February - 1 March 2017”, RSPB, 2017, pp.4, 5 and 14. Accessed at <https://www.rspb.org.uk/globalassets/downloads/documents/conservation-projects/stone-curlew-project-conference-report.pdf>

- *The operation of the A303 may facilitate recreational disturbance of stone curlew at Normanton Down. The placement of the A303 in tunnel at this location will open up the area to recreational activity, potentially resulting in recreational users on the footpath through Normanton Down crossing the fence-line and disturbing the stone curlew plots.*<sup>9</sup>

2.7. Following re-alignment of the proposed A303 Stonehenge scheme at the statutory consultation stage, the RSPB agreed mitigation for the loss of the single Stone Curlew breeding plot at Winterbourne Stoke but remained concerned about the impact of increased public access to its Normanton Down reserve, south of the A303 (within the WHS) during scheme operation.<sup>10</sup>

2.8. Concerning the loss of one Stone Curlew plot at Winterbourne Stoke, Highways England states:

*“With regard to the magnitude and significance criteria for net loss of stone curlew plots or construction disturbance of stone curlew plots during the breeding season, account has been taken of the relatively small breeding population associated with the Salisbury Plain SPA (and thus the high importance of any given plot to the population), the extent to which the population within the SPA is linked to the breeding population outside the SPA, the regularity with which plots have been successfully used for nesting and the number of pairs each relevant plot is known to support. This has resulted in the development of an assessment threshold which defines a significant adverse effect as the permanent loss of one stone curlew plot that is regularly-used by at least one pair.”*<sup>11</sup>

This plot is estimated to support c.0.5% of the British breeding population of the species.<sup>12</sup>

2.9. Highways England concludes:

*“The loss of a known effective nesting plot for stone curlew due to the footprint of the Winterbourne Stoke bypass would have an adverse effect on the integrity of the SPA (even though it is outside the SPA boundary) as it would reduce nesting opportunities for the SPA population. Discussions with Natural England and RSPB in preparing this appropriate assessment have identified that the mitigation objective should be to ensure no net loss of breeding plots in the Salisbury Plain area by delivering a replacement plot before the existing plot is lost to the Winterbourne Stoke bypass.”*<sup>13</sup>

2.10. The Stonehenge Alliance suggests that this mitigation objective does not ensure no adverse effect on the integrity of the SPA in respect of its Stone Curlew breeding population,

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<sup>9</sup> Highways England, *op. cit.*, para. 3.3.3, pp. 15–16

<sup>10</sup> RSPB, Response to statutory consultation, 9.4.18. <http://stonehengealliance.org.uk/wp-content/uploads/2019/03/RSPB-response-to-statutory-consultation-9.4.18.pdf>

<sup>11</sup> Highways England, *op. cit.*, p.17, para. 3.6.3.

<sup>12</sup> *Ibid.*, para. 5.1.2, p. 21.

<sup>13</sup> *Ibid.*, p.51, c.

under the requirements of the Habitats Directive 92/43/EC, Article 6 and the Birds Directive 2009/147/EC, Articles 1, 2, 3 and 4.

2.11. Concerning the Normanton Down Stone Curlew reserve, Highways England says:

*“ . . . since it is not possible to accurately predict the scale of increased use of those PRow or the frequency of resulting disturbance events a precautionary assumption has been made that any increase in use of those PRow could result in an increased incidence of disturbance which would be significant and thus result on an adverse effect on the integrity of the SPA ”.*<sup>14</sup>

And:

*“Recreational disturbance of Normanton Down RSPB reserve and its nesting stone curlew could increase once the old A303 is removed in combination with population and tourism growth in the local area. To address this it has been agreed with RSPB that the most appropriate measure will be to create a new stone curlew plot on the RSPB reserve at Winterbourne Down, thus ensuring no net loss of stone curlew nesting opportunities in the Salisbury Plain area even if disturbance incidents at Normanton Down do increase.”*<sup>15</sup>

2.12. Although Highways England states that the RSPB has agreed to ‘mitigation’ in the form of an extension of its Winterbourne Downs nature reserve, some 11km east of the Normanton Down reserve, it is understood that this extended plot is, in fact, offered not in mitigation but as a net gain in the form of a ‘scheme legacy’ (RSPB, pers. comm.). On completion of the road scheme, concerns would remain about the potential impact on the birds of increased public access to the Normanton Down reserve which abuts Public Rights of Way along both its western and eastern boundaries.

2.13. The significance of two breeding pairs of Stone Curlew at Normanton Down reserve should not be overlooked. Breeding for at least six years and significantly contributing to the Salisbury Plain population, they successfully exceed the annual target of 0.61 chicks per pair set by the RSPB, producing 1.2 chicks per pair on average over the last 7 years (Rachel Hosier, pers. comm).

2.14. Even if Winterbourne Downs, some 11 km away, helps to sustain Stone Curlew in the longer term, there is no assurance that Stone Curlews displaced from Normanton Down during the breeding season would eventually relocate to Winterbourne Downs: although male Stone Curlews may return to within 9 miles of their hatch site, monogamous Stone Curlew pairs will usually return annually to the same place to breed. It is more likely, therefore, that a disturbed or displaced breeding pair would attempt to breed in a less than suitable spring crop in the vicinity of its usual breeding site, putting the nest in danger from farming operations. Nesting plots, such as those on Normanton Down, are prepared annually by farmers and

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<sup>14</sup> *Ibid.*, para.3.6.4, p.18.

<sup>15</sup> Highways England, *op.cit.*, HRA Integrity Matrix 2: Salisbury Plain SPA, ‘e’, p. 52.



maintained specifically to avoid such dangers and to allow breeding pairs to complete the breeding cycle fully. In comparison, nests in arable crops, selected by the birds due to the bare ground available, will often result in failure either due to accidental destruction or abandonment once crops have quickly grown too tall. The success of the RSPB's Stone Curlew project has been due to farmers providing safe nesting plots. (Tracé Williams, pers. comm.)

Nor could it be certain that the Stone Curlew population would not suffer adverse impacts arising from the A303 Stonehenge scheme in the meantime. It appears that no mitigation is currently offered in the form of new plots within the vicinity of Normanton Down.

### **Construction impacts**

2.15. A report on potential impacts on Stone Curlew of new Expressway construction near Sandboden und Praterterasse SPA, Austria, records that Stone Curlew in the UK avoid fast and busy roads and that

*“While there has been considerable research undertaken in the UK, we do not understand why the avoidance occurs (i.e. it may relate to the presence of people, structures in the landscape, noise, light etc. or some other factor). Given this lack of understanding, it is not possible to have confidence that mitigation measures (e.g. relating to noise screening or screening of lighting) would be effective. As such a precautionary approach is required and, in line with European legislation, the development should only proceed if exceptional circumstances are met.”<sup>16</sup>*

2.16. The Stonehenge Alliance suggests that it cannot be considered certain that Stone Curlew would not be disturbed in or deterred from nesting at the Normanton Down reserve not only by a faster and busier road and increased public access in future but also as a result of the noise, lights and activity of five years of road and tunnel construction work, c.0.5km away at nearest. Nor can it be certain that five years' construction activity over a wide stretch between Normanton Down and other areas south of the A303 and the SPA would not lead to considerable disturbance of the Stone Curlew population in this general area, as is admitted by Highways England:

*“Stone curlews breed outside the SPA in proximity to the scheme at Normanton Down RSPB reserve and at other locations known to historically support breeding stone curlew. These populations of stone curlew would have the potential to be disturbed by increased vehicular movements and human disturbance during construction. Disturbance impacts would have the potential to cause stress, which may result in a*

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<sup>16</sup> Liley, D. & R. Hoskin, “Overview of the impacts of roads and Stone Curlews and consideration of the implications in terms of the proposed S8 Marchfield Expressway and the Sandboden und Praeterterasse SPA in Austria”, unpublished report by Footprint Ecology, 2017, Summary.

*reduction in their resilience and breeding success. In extreme cases disturbance impacts may result in the abandonment of breeding plots.*<sup>17</sup>

2.17. No convincing mitigation has been proposed to address such potential adverse impacts within or close to the area of construction works. Highways England points out that

*“Following the preliminary works (vegetation clearance), the working area may provide suitable nesting habitat for stone curlews (open expanses of land lacking vegetation). Due to the sensitivity of stone curlews to human disturbance (they can be disturbed by human activities within 450m of a nest site), it may be necessary (where practical) to deter stone curlew from nesting within, or in proximity of the Scheme, prior to the commencement of works.”*<sup>18</sup>

2.18. Highways England’s Outline Environmental Management Plan (OEMP) suggests for Schedule I breeding birds:

- *“If works are carried out at a time or location that has the potential to disturb Schedule 1 breeding birds, works should only commence within these areas on receipt of suitable licenses. . . . Specialist supervision may be required.*
- *. . . any Schedule 1 species or its dependent young must not be disturbed while at or building a nest. A suitable exclusion zone and the inclusion of suitable protective measures (such as visual or noise screens) may be used. Suitable requirements will be determined on a case by case basis.*
- *Deterrent measures include (but are not limited to) the following:*
  - a) the use of visual screening to block line of sight and, to avoid disturbance to stone curlew outside of the Scheme boundaries; and*
  - b) planting areas of temporary bare ground with a quick growing crop or quick growing wild flower or game cover seed mix.*
- *These measures should be employed prior to the breeding season (March to August) to deter prospecting pairs.*
- *Even with the use of these deterrent measures, there may still be a risk of stone curlews nesting within the construction works area (or within 450m).*

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<sup>17</sup> Highways England, *op. cit.*, p.23, para 5.2.1

<sup>18</sup> Highways England, DCO APP-187. 6.3 Environmental Statement Appendix 2.2 - Outline Environmental Management Plan, p.49. [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000340-6-3\\_ES-Appendix\\_2.2\\_OEMP.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000340-6-3_ES-Appendix_2.2_OEMP.pdf)

- *An appropriate specialist shall undertake monitoring of stone curlews at the retained breeding plots within 450m of the Scheme and at the newly created compensation nesting plots, associated with the mitigation defined in the ES (Chapter 8).*
- *In the event that nesting stone curlews are found located within the construction works area or within 450m, then liaison with the Natural England and RSPB will be undertaken. This will aim to identify and agree the specific and appropriate measures and monitoring activities to be undertaken in order to avoid disturbance of the nesting pair. It may be necessary to install an exclusion area of up to 450m from the nest, depending on nesting location. This will be confirmed following confirmation from the ECoW [Ecological Clerk of Works].<sup>19</sup>*

2.19. We can find no further reference to “newly created compensation nesting plots, associated with the mitigation defined in Chapter 8”, apart from mention of a second new stone curlew plot

*“intended to be delivered on RSPB land within 4km of the SPA, such that the project would result in a net gain in stone curlew plots. . . However, this second plot is not yet confirmed and was therefore not taken into account in forming the conclusion of no adverse effects on the integrity of the SPA.”<sup>20</sup>*

We wonder whether this is, in fact, the ‘net gain’ (rather than ‘mitigation’) plot proposed as an extension to the existing plot at Winterbourne Downs referred to in our para. 2.12, above.

2.20. In practical terms, it is hard, if not impossible, to imagine that the above measures suggested in the OEMP would be effective in a) ensuring no adverse effect on breeding Stone Curlew arising from scheme construction and b) at the same time ensuring sensible progress of scheme construction. Furthermore, should birds nest on the edge of the scheme construction zone, a 450m exclusion area could extend across the zone, making movement of machinery along the route impossible and effectively holding work up for an indeterminate length of time. It is also difficult to imagine what effect monitoring could have in preventing disturbance, or that the imposition of an exclusion zone around a nest would be successful. Stone Curlew nesting close to the scheme corridor zone in which archaeological evaluation work took place, south of the A303 in 2018, led to imposition of an exclusion zone but still resulted in the loss of two Stone Curlew chicks – for whatever reason (RSPB, pers. comm.). Furthermore, the choice of a 450m exclusion area conflicts with the findings of the Stone-curlew LIFE Project conference referred to under our para.2.4, above, where it is said that disturbance can occur up to 500m or more, as is indeed recognized by the RSPB.

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<sup>19</sup> *Ibid.*, pp.23-24 and 49

<sup>20</sup> Highways England, APP-046. 6.1 Environmental statement Chapter 8 – Biodiversity, para.8.9.30, p. 8-57. [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000199-6-1\\_ES\\_Chapters\\_08\\_Biodiversity.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000199-6-1_ES_Chapters_08_Biodiversity.pdf).

## **In combination effects**

### 2.21. Highways England states:

*“Other than the plot to be lost under the bypass, there are records of stone curlew nesting at fourteen other locations within 2km of the A303 between Yarnbury Castle and Countess Junction since 2006. All but four of these historic records are more than 1km distant from the road. All four records within 1km of the A303 are in locations where the A303 will either become more distant due to the bypass, or (in the vicinity of Normanton Down) will be removed entirely by the A303 being placed in tunnel. Normanton Down is a focus of stone curlew nesting activity outside the SPA. The scheme would be beneficial to the stone curlew population of the SPA by removing the influence of the A303 from these locations. However, it would not represent a net positive impact when the in combination effects of recreational disturbance are considered.”<sup>21</sup>*

### 2.22. Under ‘In combination effect: recreational disturbance’, Highways England states:

*“The scheme would not provide unrestricted access to farmland south of the A303 and public access is expected to continue to be on the existing byways. However, this increased tourism could operate in combination with an increase in the local population due to housing growth (such as that set out in the Wiltshire Core Strategy) and its associated increase in local recreational use of PRoW to increase the risk of disturbance of some stone curlew plots in the area. Visitors with dogs are likely to be the most disturbing to stone curlew. If the number of disturbing events increases above the threshold of tolerance of individual pairs of stone curlews, then in combination, this may result in greater long-term disturbance on breeding stone curlew and an indirect adverse permanent effect on nesting success locally.”<sup>22</sup>*

2.23. Both Highways England and RSPB have commented on the possibility of increased recreational use of the byways that form the eastern and western boundaries of Normanton Down reserve. We are unaware of any baseline surveys having been undertaken of the current level of recreational use. RSPB research has confirmed that people on foot and especially with dogs, within 500m of a Stone Curlew nest will cause disturbance.<sup>23</sup> Without supporting baseline data any increase in visitor-numbers cannot be sensibly monitored or assessed. The current low levels of recreational use of the byways needs to be fully understood; especially

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<sup>21</sup> Highways England DCO APP-266, 6.3 Environmental Statement Appendix 8.25 - Habitat Regulations Assessment (HRA) Statement to inform Appropriate Assessment, para.5.1.4, p.21–22. [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000419-6-3\\_ES-Appendix\\_8.25\\_HRA\\_AppropriateAssessment.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000419-6-3_ES-Appendix_8.25_HRA_AppropriateAssessment.pdf)

<sup>22</sup> *Ibid.*, para.5.3.2, p.24–25

<sup>23</sup> Taylor, E. C., R. E. Green & J. Perrins, “Stone-curlews *Burhinus oedicnemus* and recreational disturbance: developing a management tool for access”, *Ibis* 149 (2007), Suppl.1, pp. 37–44.

as the type of activity and user may change dramatically if the barrier of the A303 road is removed.

2.24. To date, the southern part of the WHS containing Normanton Down reserve has been successful in attracting Stone Curlew, for the most part owing to the tranquil nature of this part of the WHS. The effect on the Normanton Down curlew population by increased recreational pressure is clearly an “in combination” effect and, given the various points raised above, the conclusion of no adverse effect cannot be established to the requisite scientific standard.

2.25. Integral to the breeding cycle of Stone Curlew is the pre-migration gathering of adults and fledged young from that year. The importance of this gathering to the species, possibly of learned behaviour to the young, or of learned location, may not be fully understood. Normanton Down reserve in 2017 held the highest maximum count of birds in an autumn roost in Southern England recorded to date. Stone Curlew start to form small gatherings towards the end of the breeding season, gradually building in intensity of number as the autumn progresses, until all birds leave the UK to spend the winter in Europe and Africa. The proposed scheme may require construction traffic to be operational day and night for some 5 years, possibly with noise and lights through the night. It is not therefore unreasonable to suggest that night-time construction traffic may have a significant adverse effect upon the formation of the Stone Curlew autumn roost at Normanton Down: birds flying in from the surrounding area and Salisbury Plain SPA may well be deterred from gathering, having unknown effects upon the pre-migratory ecology of the young birds. (Tracé Williams, pers. comm.)

2.26. There are, in addition, potential and at present unknown impacts on Stone Curlews as a result of new Service Family Accommodation comprising 917 units, planned close to the SPA and largely now under construction. This substantial increase in housing is not specifically referred to by Highways England in considering in combination effects, although it is included by Highways England among “Future Baseline Schemes”.<sup>24</sup>

2.27. The *HRA and Mitigation Strategy for Salisbury Plain SPA* suggests

*“The ABP [Army Basing Plan] has also only recently begun delivery, therefore the effects of that project and its bespoke mitigation strategy also remain to be seen. In order to overcome this uncertainty, there is an ongoing need for an effective mitigation strategy for Salisbury Plain SPA to avoid any adverse effects of planned growth on the integrity of the site. Added to this, the accumulating database gathered as part of the strategy provides the best opportunity to detect and account for unexpected long term changes and plan for any necessary mitigation as appropriate. Based on the best available evidence, the Strategy is considered to provide an effective means of*

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<sup>24</sup> Highways England, APP-229. 6.3 Environmental Statement Appendix 7.9 - Future Baseline Schemes. [https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010025/TR010025-000382-6-3\\_ES-Appendix\\_7.9\\_FutureBaselineSchemes.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010025/TR010025-000382-6-3_ES-Appendix_7.9_FutureBaselineSchemes.pdf)

*mitigating the effects of increasing recreational pressure on the SPA, and the Council will continue to implement it with its partners (subject to periodic review) while also continuing to deliver housing growth within the visitor catchment.”<sup>25</sup>*

2.28. The Introduction to the document (p.2) explains that the mitigation strategy comprises the monitoring of birds and recreational visitors, along with advice to landowners and tenants. On this clearly uncertain basis and with unknown effects tackled with unproven mitigation proposals, it is assumed that

*“The WCS [Wiltshire Core Strategy], draft WHSAP [Wiltshire Housing Strategic Allocations Plan] and ABP [Army Basing Plan] will all continue to have likely significant effects on the Salisbury Plain SPA through increasing recreational pressure as a result of the delivery of residential development within the visitor catchment. Over the plan period. The Strategy provides an effective, timely and reliable means of mitigating these effects, and as a result it is concluded that planned growth as a result of the WCS, WHSAP and ABP, will not have an adverse effect on the integrity of the Salisbury Plain SPA, either alone or in-combination with other plans and projects.”<sup>26</sup>*

We find this conclusion wholly unconvincing in demonstrating that the Strategy’s proposals of monitoring and advice to landowners and tenants would lead to no adverse effects on the SPA.

## **Conclusions**

2.29. Proposed mitigation for disturbance of Stone Curlews at Normanton Down in the form of another reserve some 11 km away is in doubt, since it appears that this proposal is not, in fact, one of mitigation but of net gain as a scheme legacy benefit. There is no assurance that Stone curlews using Normanton Down would relocate to Winterbourne Downs. Nor is it known whether their population would not suffer adverse impacts arising from the A303 Stonehenge scheme in the meantime. At present there appear to be no arrangements for replacement plots nearer to Normanton Down that might provide alternatives should there be disturbance of birds owing to additional visitors when the scheme is in operation. It cannot be certain that there would be no adverse effects on the integrity of the SPA and the birds themselves as a result of in combination effects of the A303 scheme with the extensive new housing planned in the area.

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<sup>25</sup> Wiltshire Council, *HRA and Mitigation Strategy for Salisbury Plain SPA* (in relation to recreational pressure from residential development) Reviewed in May 2018, p.20.

[https://drive.google.com/open?id=1M03fLDzGsO8K\\_3UhW4Fc-APmzUJGDCnw](https://drive.google.com/open?id=1M03fLDzGsO8K_3UhW4Fc-APmzUJGDCnw)

<sup>26</sup> *Idem*, p.20

2.30. Thus, contrary to Highways England's assertions,<sup>27</sup> there can be no certainty that the A303 Stonehenge Scheme would have no adverse effects on the integrity of European sites either alone or in combination with other plans or projects.

2.31. We therefore submit that Highways England's proposals are inadequate and would breach provisions of the *Habitats Directive* 92/43/EEC, Article 6(3) and (4), and the *Birds Directive* 2009/147/EC, proviso (8), Articles 4.1, 4.4, 5(d) and 13. The A303 Stonehenge scheme would also be in breach of The UK Conservation of Habitats and Species Regulations 2017 (Habitats Regulations), Articles 10, 15, 24(2), 63, 64 (consideration of alternatives), 68 and 105.

2.32. We also submit that Highways England has failed fully to take into account Consideration (11) of EU Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU; as well as provisions of the Bern Convention:<sup>28</sup> Preamble, Articles 1.2, 2, 3.2, 4.1 (Appendix 2, Strictly protected fauna species: *Burhinus oedicephalus* and *Salmo salar*), 3, 6b and c, 10.1, 11a.

2.33. In support of our view, we believe the Judgement in the ECJ Case C-461/17 of 7.11.17 to be relevant.<sup>29</sup> The judgement follows a request for a preliminary ruling on the interpretation of the Habitats Directive in connection with the extension of the northern ring road at Kilkenny, Ireland. The Judgement stated that Article 6(3) of the Habitats Directive must be interpreted as meaning that an appropriate assessment must identify and examine the implications of the project for a species for which the site is protected and is found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site. The Article must also be interpreted as meaning that the competent authority is permitted to grant consent for a project only if that authority is certain that conditions concerning certain parameters to be decided by the developer, such as the location of construction compounds and haul routes, are strict enough to ensure that those parameters will not adversely affect the integrity of the site. Should the competent authority reject the findings of a scientific expert opinion recommending that additional information be obtained, the 'appropriate assessment' must include an explicit and detailed statement of reasons

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<sup>27</sup> Highways England, DCO APP-002. 1.2. Covering letter and schedule of compliance with s55, p.5, para.6.1, and p.39: Section 55 Application Checklist, Item 31.

[https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000153-1-2-Covering\\_letter-s55-checklist.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000153-1-2-Covering_letter-s55-checklist.pdf)

<sup>28</sup> Convention on the Conservation of European Wildlife and Natural Habitats, Bern, 1979 (Bern Convention) <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/1040>

<sup>29</sup> Request for a preliminary ruling under Article 267 TFEU from the High Court (Ireland), made by decision of 5 May 2017, received at the Court on 28 July 2017, in the proceedings Brian Holohan, Richard Guilfoyle, Noric Guilfoyle, Liam Donegan v An Bord Pleanála, intervening parties: National Parks and Wildlife Service (NPWS), 7.11.17. [http://curia.europa.eu/juris/document/document\\_print.jsf?docid=207428&text=&dir=&doclang=EN&part=1&occ=first&mode=lst&pageIndex=0&cid=4892557](http://curia.europa.eu/juris/document/document_print.jsf?docid=207428&text=&dir=&doclang=EN&part=1&occ=first&mode=lst&pageIndex=0&cid=4892557)

capable of dispelling all reasonable scientific doubt concerning the effects on the site concerned.

**(b) Great Bustard *Otis tarda***

2.34. Great Bustards became extinct in Britain around 1840 owing to collectors and changes in agriculture. They have suffered similar dramatic declines in numbers across their range in the last 200 years and their global population is now estimated to be just 35,000 individuals. They are currently listed as Vulnerable in the IUCN Red List of Globally Threatened Species. The UK is obliged under EU legislation (Habitats Directive 1992) to reintroduce species where it is considered feasible. Based on a feasibility study, in 2003, the Department for the Environment, Food and Rural Affairs issued a 10-year trial-license to release Great Bustards in the UK [from 2010–14, the LIFE+ project]. Releases have taken place annually since 2004.<sup>30</sup>

2.35. Progress of the LIFE+ project to 2014 (when it ended) is detailed by the RSPB.<sup>31</sup> Since then, with changes to the donor population and changes in management and husbandry, breeding in the wild is now taking place every year in the Salisbury Plain area, and it is estimated that there are around 70 naturalised birds.

2.36. Great Bustards are now usually present to each side of the A303 Trunk road, notably breeding in the areas of Normanton and Lake Downs and around Longbarrow Roundabout and towards Winterbourne Stoke. It is estimated that 20+ Great Bustard females are now of breeding age, a proportion of which have bred in these areas of the WHS and to its west in 2018. They engender enormous interest from the general public and supervised visits to observe them are arranged by the Great Bustard Group (GBG).

2.37. Despite the successful reintroduction of this Annex I species bird, it has received scant attention from Highways England in respect of the A303 Stonehenge scheme. There is no doubt that their breeding season was interrupted in 2018 by contractors working ahead of the scheme (borehole and other surveys, archaeological evaluation, etc.). Nor can there be any doubt that there would be permanent disturbance of the birds during and after road construction work. (GBG, pers. comm.)

2.38. Despite minimal recognition of the existence of Great Bustard across the length of the A303 Stonehenge scheme corridor, Highways England has admitted that

*“A total of 20 records of great bustard were identified within the 2km study area. Great bustard has been recorded throughout the Salisbury Plain area from Yarnbury Castle to*

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<sup>30</sup> Information from Great Bustard Group website: <http://greatbustard.org/the-project/>

<sup>31</sup> “Reintroducing the great bustard to southern England”, RSPB website. <https://www.rspb.org.uk/our-work/conservation/projects/reintroducing-the-great-bustard-to-southern-england>



*west Amesbury. Nesting sites of this species have been observed as being largely limited to the south of the existing A303 (Figure 8.11)”.<sup>32</sup>*

Sight of Figure 8.11 referred to above has been refused us by Highways England; Great Bustard does not appear on Table 8-3 in the same document: “Summary results of the breeding bird surveys” (pp.14–15), whereas both Barn Owl and Stone Curlew do appear.

2.39. Under “Valuation”, Highways England notes that:

*“Great bustard is listed under Annex 1. Annex 1 birds are given additional protection under European law, and are a species for which an SPA can be designated. However, as species on a trial reintroduction to the UK, the species is currently not a qualifying species for any SPAs in the UK. The great bustard is also listed as Vulnerable on the IUCN Red List of Threatened Species (Ref 8.51, and a Biodiversity Action Plan (BAP) species for Wiltshire (Ref 8.52). The population of great bustard within Salisbury Plain is however the only population present within the UK; as such, the population has been assessed on a precautionary basis as being of National Importance / High Value.”<sup>33</sup>*

At the time of writing it is unclear as to what authority or guidance Highways England relies on for this assertion. Highways England correctly notes that the Great Bustard is an Annex 1 species, and, as such, it should be given the full protection afforded to it pursuant to the Birds Directive, irrespective of whether it has been reintroduced or not.

### **Conclusions**

2.40. We understand that the Great Bustard may not have been registered as a re-introduced species in the UK. The birds are, however, recorded with the Convention on Migratory Species, meetings of which the GBG attends (GBG, pers. comm.). In view of its rarity and well-established reintroduction in this single location in Britain, there appears to us to be a strong case for consideration here of the Great Bustard under the provisions of the *EU Birds Directive*, notably Articles 1, 2, 4.1 and 5.

2.41. It does appear perverse to us that the considerable cost involved in the support for and licensing by Natural England to aid the species reintroduction back into southern England, should result in disregard for unknown levels of disturbance to these rare breeding birds.

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<sup>32</sup> Highways England, DCO APP-233. 6.3 Environmental Statement Appendix 8.1B - Baseline valuation, para. 8.1.35, pp.17–18.

[https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000386-6-3\\_ES-Appendix\\_8.1B\\_BaselineValuation.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000386-6-3_ES-Appendix_8.1B_BaselineValuation.pdf)

<sup>33</sup> *Ibid*, para. 8.1.36, p.18