A303 Amesbury to Berwick Down

TR010025

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8.43 Habitat Regulations Screening Assessment Clarification Note – Stone curlew plot sift

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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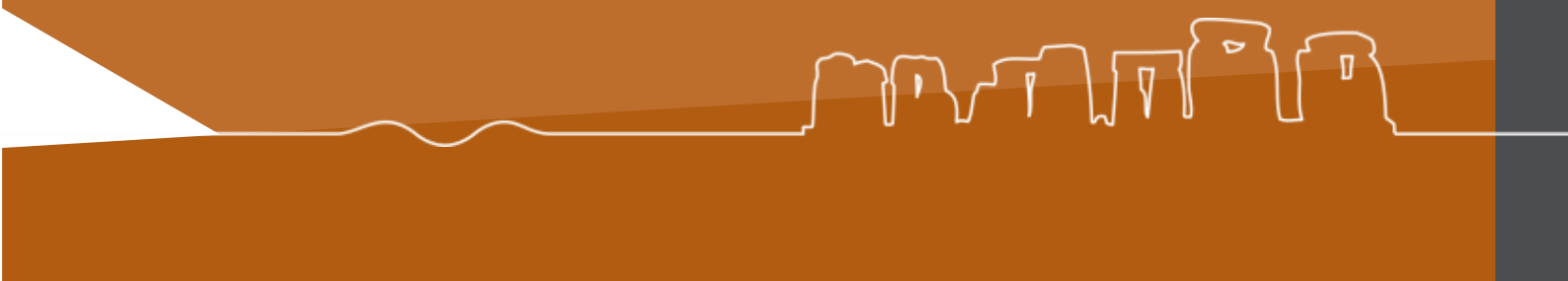

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

A303 Amesbury to Berwick Down

Development Consent Order 20[**]

Habitat Regulations Screening Assessment Clarification Note – Stone curlew plot sift

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Rev 0	26 July 2019	Deadline 6 Issue

Technical Note

A303 Amesbury to Berwick Down

Project:	**A303 Amesbury to Berwick Down Scheme**				
Title:	**HRSA Clarification Note: Stone curlew plot sift**				
Doc ID:					
Date:	**26 July 2019**	Version:	**P02**	Status:	**Final**

1 Introduction

Stone curlew *Burhinus oedicnemus* – supporting population of the Salisbury Plain SPA and the Scheme.

1.1 In 2016, there were between 320 and 380 breeding pairs of stone curlew within the UK. The Salisbury Plain Special Protection Area (SPA) is considered to support approximately 11% of the breeding population of stone curlew within Great Britain. The breeding population present within proximity to the A303 Amesbury to Berwick Down Scheme is within 5 km of the SPA and hence is considered a supporting population of the breeding population in Salisbury Plain SPA.

Disturbance of stone curlew breeding plots at Normanton Down RSPB Reserve during the operational phase

1.2 Stone curlews are highly vulnerable to disturbance by pedestrians and dogs. They respond to disturbance, even at large distances (500 m). Hence, increased human activities within 500 m of any stone curlew breeding site have the potential to disturb breeding pairs. Frequent prolonged disturbance may result in birds leaving their nests for long periods of time, which may result in an unviable brood or increased losses to predation. Furthermore, if there is excessive disturbance within the 500 m zone during the spring when stone curlews are setting up territories and selecting nest sites they may not use an available plot. A reduction of quality of a plot and its reduced utilisation could reduce the likelihood of successful breeding by a pair of stone curlews. Although this is likely to be limited to individual breeding pairs, disturbance impacts on nesting pairs outside the SPA (within 5km) may result in reduced breeding success in the supporting population of the SPA and conceivably increased competition for territories and resources for the population breeding within the SPA.

1.3 Two established and historically active stone curlew plots are located within the Normanton Down RSPB Reserve. Two Public Rights of Way (PRoW) run north-south along the western and eastern edges of the RSPB Reserve. The historically active stone curlew breeding plots are located approximately 170 m from the PRoW (at the closest point) and are partially obscured from the PRoW by the natural landform. It is anticipated that the removal of the A303, which currently acts as a barrier to foot traffic, could result in an increase in recreational use of the PRoWs that run along the RSPB reserve boundary. Although the majority of the recreational users within the World Heritage Site remain on the PRoWs, trespassing has been reported by the RSPB and local landowners. There is no certainty that the expected increase in recreational usage of the PRoWs would lead to any increase in disturbance due to trespass, as the reserve is wholly enclosed by stock fencing at present and there are

signs asking people to keep out to avoid disturbance to nesting birds. Nonetheless, if the number of disturbing events increases above the threshold of tolerance of individual pairs of stone curlew; this could result in a reduction in breeding success of stone curlew within the reserve.

Provision of nesting opportunities for stone curlew

1.4 It has been agreed with Natural England and RSPB that it is desirable to not only address the risk of increased disturbance for the wider Wessex stone curlew population and thus mitigate (and avoid) any indirect effect on the breeding population within the SPA, but also to provide net enhancement for the Wessex stone curlew population. Highways England have therefore agreed to provide three new stone curlew plots. This is in addition to the plot, which will be provided at Parsonage Down to address the direct loss of an existing plot in that area. One of the three additional plots has been agreed in principle with the RSPB on its reserve at Winterbourne Down to further increase nesting opportunities for stone curlew at that site. The other two will be on locations to be identified using the sifting method set out in this note. These two additional plots will be located within the area of the SPA + 5 km zone. The three additional plots would collectively represent enhancement of opportunities for breeding stone curlew. For the reasons set out below, the provision of two plots within the area of the SPA + 5 km zone and preferably within 5km of the Scheme can be considered to fully mitigate the risk of reduction of breeding opportunities if there was any loss of utilisation at Normanton Down due to in-combination disturbance impacts.

1.5 The provision of these three additional plots underlines the robustness of a conclusion of no adverse effect on integrity of the SPA in the Statement to Inform an Appropriate Assessment (Environmental Statement Appendix 8.25).

1.6 As any increase in recreational use of the PRoW would be expected to occur only after traffic was removed from the existing A303, Highways England would provide the three plots within a year of the opening of the Scheme. The timing of the setting up of new plots would be subject to agreement with the landowners but is expected to be during the construction period. The reference to within a year of opening takes into account the need to ensure that any construction activity such as landscaping or re-instatement of land in temporary use has finished prior to setting up a plot, if the plot is to be located where it could be temporarily disturbed by such activity. This would not affect the robustness of the measures. The replacement stone curlew plot at Parsonage Down would be prepared for use prior to the start of the main works, to ensure availability of the plot before loss of the existing plot. Natural England and RSPB consider that it is not necessary to secure plots at a specific location by landowner agreement during the examination period. Natural England considers that securing the commitment of Highways England to sourcing and funding the extra plots would provide sufficient certainty for the Scheme, since Natural England is confident that there is scope to secure plots in future. Nonetheless, Highways England intends to identify suitable locations for the two additional plots as soon as possible.

1.7 At present, the stone curlew plots in the Wessex area (approximately 250 in 2018, demonstrating the suitability of the area for such plots) are in farmland and most are funded by agri-environment schemes. Current agri-environment funding of plots is for periods of five years (although previous schemes and renewals mean some plots have been in place for longer). The plot at Parsonage Down and the new plot at Winterbourne Down RSPB reserve would be provided as 1 ha chalk scrapes. The

two other stone curlew plots are expected to be 2 ha arable fallow plots, managed on rotation under the same regime as the agri-environment plots, but may be 1ha chalk scraped plots depending on the location and landowner agreement. All three plots will be secured by agreement (where necessary) for ten years. The date when individual plots will be put in place will depend on the agreements but will be not later than one year after the opening of the Scheme. The plot at Parsonage Down will be secured by agreement for fifteen years because it will be started prior to the main construction period.

Scope of study

1.8 This note presents the method and results of a desk study, the results of which have been used to inform the list of landowners Highways England is approaching in respect of exploring the possibility of locating one of the two additional plots on their land.

1.9 The SPA + 5 km zone is shown on Figure 1, together with the Scheme, which is in the southern part of the zone. Natural England has agreed that any suitable locations within the SPA+ 5 km zone would maintain or increase the breeding opportunities for the stone curlew population and thus avoid any adverse effect on the Salisbury Plain SPA breeding population and consequently avoid an adverse effect on the integrity of the SPA. It has been agreed with Natural England and RSPB that, where practicable and if suitable plots are available, plots would be considered using a hierarchy of distance from Normanton Down RSPB Reserve and the Scheme. Hence the search for plots to be secured as part of the Scheme has followed the distance hierarchy set out in section 2 below.

1.10 It should be noted that Highways England is including the area within the Order limits within the search zone, to explore whether powers conferred by the DCO (if granted) could be utilised.

2 Plot search method

2.1 This desk study has considered land within the following areas:

- 3 km of Normanton Down RSPB Reserve (considered to be a typical foraging distance for stone curlews) and 5 km of the SPA (inclusive);
- 5 km of Normanton Down RSPB Reserve and 5 km of the SPA;
- 5 km of the Scheme and 5 km of the SPA; and
- 5 km of the SPA as a whole.

RSPB suitability criteria for good quality stone curlew plots in the Wessex area

2.2 RSPB provided suitability criteria for the search for good quality stone curlew plots as follows (meeting with RSPB and Natural England at Parsonage Down, 9th May 2018):

- Minimum 75 m from trees and hedges, preferably >100m;
- Minimum 100 m from overhead lines;
- Minimum disturbance; preferably >100 m from any regularly used farm road/track, >200 m from public roads; >200 m away from public footpaths (ideally >400 m). Closer may be acceptable if out of sight relative to the plot and there is no risk of

access by dogs.

- Open position, preferably close to the brow of a low hill or ridge, not in a valley bottom;
- Moderate to gentle slopes, less than 15º;
- Preferably south-facing, but not essential;
- Preferably within 200 m of grassland, but not essential.

2.3 The reasons for the criteria are as follows. Crows and other birds which prey on eggs use vantage points such as trees, overhead electric lines and buildings to spot nests, or behaviour of ground-nesting birds which would help the predators find the nests. Hedges may also be used as vantage points and they provide cover for mammalian predators. Use of nest sites on high ground and avoidance of steep slopes is likely to maximise visibility for stone curlews and to avoid vantage points of predatory birds. South-facing slopes will be warmer and will dry more quickly after rain, hence they may be better for young chicks, which could become chilled and die in cold, wet conditions. Proximity to grassland is for ease of foraging, although stone curlews will forage over greater distances.

2.4 It should be noted that the items listed above in respect of being 'preferable' or 'not essential' are not required to ensure the plots would contribute to the conclusion of no adverse effects on the integrity of the SPA.

Application of the suitability criteria in the desk study

2.5 A staged approach was used, to progressively exclude unsuitable areas and hence refine the search for remaining areas of the zones which are potentially suitable.

2.6 For the first stage of the desk study the A303 Stonehenge GIS was used to apply buffer distances on Ordnance Survey map features and open source datasets[1], with all areas within those distances excluded from potential plots as follows:

- Woodland, 100 m;
- Individual houses and farms, 200 m;
- PRoWs, roads and tracks, 200 m;
- SSSI, site boundary;
- Archaeological monument, site boundary;
- MOD land;
- Open Access areas (where available); and
- Towns and villages, 400 m.

2.7 MOD land was excluded because during consultation on the Scheme the MOD indicated that, due to training area requirements, it was not willing to increase the existing number of stone curlew plots on the Salisbury Plain Training Area. A 400 m buffer was applied to towns and villages, due to the likelihood of greater recreational

[1] Data for MOD land was digitised from the MOD website, Open access areas were obtained from the CRoW dataset and National Trust accessible land, Scheduled archaeological monuments were obtained from Historic England 2017, woodland was obtained from the Forestry Commission, National Forest Inventory, PRoWs were obtained from Wiltshire Council 2017 and SSSIs were obtained from Natural England 2018 (Landmark Information Group).

pressure around the larger settlements. Open Access areas were presumed to be existing grassland, or have un-restricted recreational access, or both.

2.8 The second stage was to screen the remaining areas that were potentially suitable by inspecting air photography and OS maps to identify other constraints which could not be determined from GIS information (Google and Bing maps and aerial photography, 2019). Initially all areas less than 2 ha in size were excluded from the dataset, then using aerial photography and OS maps, areas were excluded where the following features were a potential constraint:

- Field boundaries with hedges or trees;
- Existing semi-natural grassland;
- Overhead pylons;
- Railway lines;
- Valley bottoms;
- Other unsuitable areas for stone curlew breeding plots, such as outdoor pig-rearing areas and amenity areas.

2.9 Whilst proximity to grassland is beneficial, for the desk study it was assumed that areas currently in arable use would be sought, rather than plots within areas of permanent grassland, such as arable reversion to chalk grassland.

2.10 The third stage was to exclude slopes greater than 15°. This was done by GIS analysis, using LIDAR data, which was available for the zone around the Scheme, but not for the area north of the MOD land on Salisbury Plain.

2.11 Areas within 200 m of a known stone curlew plot were also excluded in the third stage. RSPB had previously provided data on existing stone curlew plots within 10 km of the Scheme. In the GIS a 200 m buffer was applied to existing stone curlew plots. RSPB had advised that 200 m was the closest spacing that would allow stone curlews to have separate territories. At 200 m spacing, nest sites on plots would need to be visually separated (e.g. screened) from each other. Therefore, greater spacing (400m or more) is preferable.

2.12 Those polygons (i.e. individual areas with boundaries denoting the limits of potential suitability in the GIS) with potential suitability for stone curlew plots were then overlaid with landowner information, where this was available for the Scheme.

2.13 The location of any plot within the areas will be subject to review on site and agreement with the relevant landowners. This review step is not considered to pose any risk to deliverability of sufficient plots as many polygons were identified as suitable and local landowners have shown themselves willing to provide stone curlew plots, as is indicated by the distribution of existing stone curlew plots within the SPA+5km and other zones. Where relevant landowners are contacted and express an interest in providing stone curlew plots, specific locations for plots within the identified polygons are being selected for discussion with the landowners.

3 Results of the plot search

3.1 All composite constraints from stage 1 were mapped after stage 1. The largest wholly excluded area was the MOD area of Salisbury Plain. Elsewhere, the study area is criss-crossed with exclusion bands due to the proximity of roads, tracks and public

rights of way.

3.2 After the stage 2 sift remaining polygons were clipped to the SPA + 5 km zone and those remaining after the stage 3 sift were clipped to the Scheme 5 km zone. This left polygon's scattered across the zone, with some clustering of polygons in the west, central and eastern parts of the zone.

3.3 The plot search, by the method outlined above, identified a total of approximately 18.44 km^2 of land with potential for stone curlew plots within 5 km of the Scheme and within 5 km of the SPA inclusive. Not all this land will be suitable for stone curlew plots, as during stage 2 it was only possible to exclude polygons which did not meet the sifting criteria. Hence, some polygons will have some areas which were assessed as unsuitable, but as they also contained some areas with suitability the whole polygon was included at this stage. Conversely, some areas screened out in this desk-study may be suitable. For example, although an area may be within 200m of a PRoW it may be suitable if fenced and visually screened by landform. Nonetheless, the desk study provides priority areas for discussions with landowners. All the polygons remaining are considered to have potential for one or multiple stone curlew plots, although they have not been subdivided in the GIS to refine them to the best areas. This means the total extent of suitable areas after stage 3 will be reduced further at the next stage.

3.4 Table 1 summarises the screening stages and total area in each stage and within each zone.

Table 1 Potential areas for stone curlew plots

	Normanton Down within 3km	**Normanton Down within 5km**	**Scheme within 5km**	**SPA+5km zone**
Total land area	42 km^2	100 km^2	277 km^2	791 km^2
Total area excluded in stage 1 buffering (% total)	30.5 km^2 (72%)	87.7 km^2 (88%)	237.3 km^2 (85%)	724.2 km^2 (91%)
Total area of potentially suitable areas after stage 2	4.42 km^2	7.58 km^2	19.44 km^2	42.09 km^2
Total area of potentially suitable areas after stage 3.	4.09 km^2	7.19 km^2	18.44 km^2	Not fully assessed[1]
Number of existing stone curlew plots	9	18	42	Not assessed (data provided by RSPB is for plots within

				10km of the Scheme)

Note1: LIDAR topographic data was not available for this area, so analysis of gradient could not be carried out and data for existing stone curlew plots were only available for up to 10 km from the Scheme, so although air photography has been inspected, the constraints buffers applied to this wider area are not exactly the same as for the other three zones and hence the total area has not been calculated.

Note 2: $1km^2$=100ha, and each stone curlew plot is 2ha in area, so $1km^2$ total area may involve several polygons and have multiple suitable locations for a stone curlew plot.

3.5 The next stage of this process is to approach individual landowners about the possibility of stone curlew plots, combined with an on-site appraisal of the potential areas. This includes the refinement of locations for potential plots within the areas taking into account all of the conditions on site and the farming operations.

References

- Environmental Statement Chapter 8: Biodiversity - TR010025-000199-6-1_ES_Chapters_08_Biodiversity
- RSPB (undated) Stone-curlew, Population trends. Available from: *https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/stone-curlew/population-trends* [Accessed 21st August 2018].
- Natural England, Forestry Commission, and the European Agricultural Fund for Rural Development (2018), Countryside Stewardship: Higher Tier Manual
- FG7: Anti-predator combination fencing. Available from *https://www.gov.uk/countryside-stewardship-grants/anti-predator-combination-fencing-fg7* [Accessed 8th January 2019].
- Environmental Statement Appendix 8.25 Habitat Regulations Assessment, Appropriate Assessment - TR010025-000419-6-3_ES-Appendix_8.25_HRA_AppropriateAssessment
- Environmental Statement Figure 8.11 – Breeding Bird species (Confidential)
- Environmental Statement Appendix 11.6 Non-Significant Effects - TR010025-000437-6-3_ES-Appendix_11.6_NonSignificantEffects

N

NOTES / LEGEND

- Scheme Wide Alignment - ES 03/10/18
- Scheme Red Line Boundary
- Scheme 5km Buffer
- Salisbury Plain Special Protection Area (SPA)
- SPA 5km Buffer
- RSPB Reserve Normanton Down
- Normanton Down 3km buffer
- Normanton Down 5km buffer
- Parsonage Down Site of Special Scientific Interest (SSSI)

Revision Details	By / Check	Date	Suffix

Purpose of issue: For Information

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: FIGURE 1: Potential Stone Curlew Plot Sift Study Areas

Designed	Drawn	Checked	Approved	Date
	BM	CC	SP	16/07/19

Internal Project No. 60598638

Scale @ A3: 1:140,000 | Zone: SW

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Drawing Number: Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
HE551506	AMW	GEN	SCHEME WIDE	DR	GI	00615	03

0 1.25 2.5 5 7.5 10 Km

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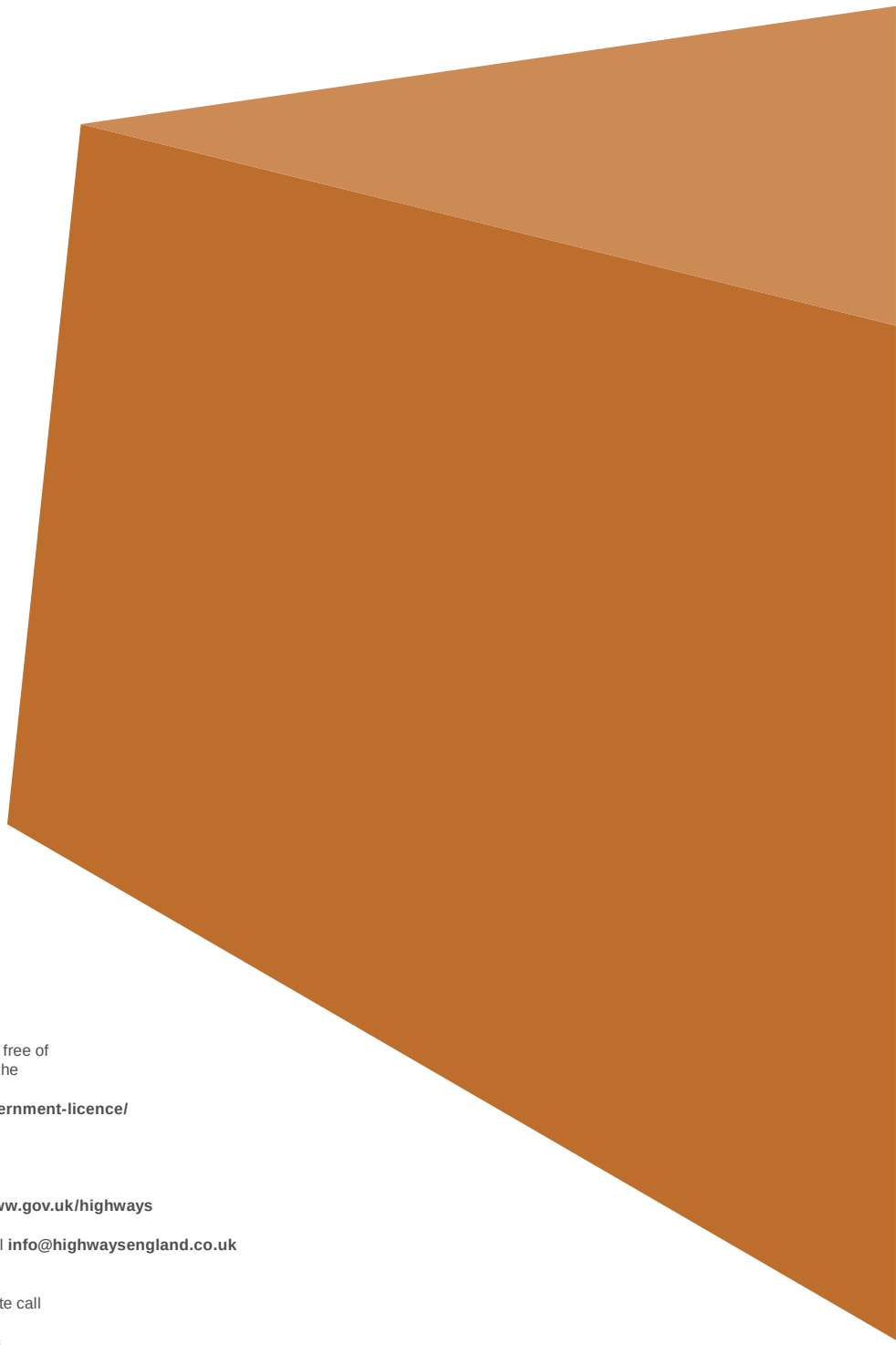

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