M AND R HOSIER – Ref: 20020373

AT DEADLINE 9, RESPONSE TO DOCUMENT 8.49 COMMENTS ON ANY FURTHER INFORMATION RECEIVED AT DEADLINE 8.

11.1.1

18.1.1 Appropriate management measures would depend on the condition of the soil. The contractor is responsible for the protection of geology and soil resources during construction, including in relation to the removal, handling, and storage, as well as reinstatement, will be delivered through measures contained in the Outline Environmental Management Plan (OEMP) [APP- 187] (a revised version of which is submitted at Deadline 3). The primary mechanism for this protection will

be the Soils Management Strategy (SMS) (MW-GEO3), which will identify the nature and types of soil that will be affected and the methods that will be employed for stripping and storing soil (with topsoil and subsoil being stored separately (where present)) and the restoration of agricultural land. Compliance with the OEMP is secured through paragraph 4 of schedule 2 of the draft development consent order [REP2-003]. Stone curlew deterrent measures will be included in the CEMP (PW-BIO5 and MW-BIO8) as specified within the Outline Environmental Management Plan (OEMP) [APP-187].

40.3.47 refers to soil and protection to soil, with a short sentence directing to PW-BIO5 and MW-BIO8. We believe both responses to be lacking in the necessary detail to provide adequate deterrents to nesting Stone Curlews within the boundaries of the Scheme. We continue to raise this point yet PW-BIO5 and MW-BIO8 remain unchanged. We have previously asked what these bird deterrent measures may be, but have had no answers. In areas where work is not expected to commence immediately, we would expect the Scheme to retain ground cover between the months of March to July to minimise the risks of a Stone curlew breeding attempt.

The Applicants response

Please see response to item 5.1.2 in the Comments on any Further Information received at Deadline 5 and 6 [REP7-021]. It is not considered to be suitable to specify deterrent or screening measures to be incorporated at this stage, as the measures will be determined on a site by site basis. Stone curlews nest in open bare ground habitats, away from habitat that impedes line of site, such as hedgerows and trees as these features can be used as perching locations for predators.

As stated within PW-BIO5 measures to deter stone curlew include (but are not limited to), maintaining areas of dense crops, or, visual deterrents such as lines with flapping attached in areas to be affected by construction (although these would need to be confirmed on a site by site basis). The RSPB will be consulted on suitable mitigation measures to be incorporated on a site by site basis.

It should be noted that once the Scheme is under construction, the combination of deterrence measures and human activity would mean it is likely that birds would be deterred from nesting within the active working areas or in close proximity.

M & R Hosier response to 8.49

Contrary to the Applicant's response, we believe it is important they detail measures of deterrents at this stage, as it is obvious by their response that they have not learned from the Stone curlew

breeding attempt that occurred during the 2018 Archaeological surveys. It is apparent that during that time the Applicant did not:

Have ECoW with the necessary experience with Stone curlews, which meant that the RSPB had to be drafted in a number of times to locate the birds and chicks.

We doubt the Applicant's contractors prepared a document of measures to be put in place in the event of Stone curlews nesting within the survey area. We have asked for a copy of this document a number of times and nothing has been provided. We suggest, that no document was produced, as they mistakenly believed that the survey work activity taking place in the area of bare ground would, in itself, be enough to deter the Stone curlews from breeding in the survey area.

The Applicant is failing to learn from past mistakes. It is therefore important that they demonstrate to the Inspectors as well as to the general public, that they are taking their responsibilities under the Habitats Regulations seriously. By constantly refusing to provide more detail we are left wondering if they really have a proper understanding of the Stone curlew species.

We stand by our comments that PW-BIO5 does not provide suitable protection to Stone curlews nesting within the Scheme. Wording does not contain any provision for Stone Curlew chicks within the Scheme to be monitored daily until they are fledged to ensure that construction traffic does not disturb or harm them.

11.1.2

18.1.2 The Applicant continues to show a lack of understanding for the Stone curlew species and their behaviour. Firstly refer to our comments in item 18.1.1 above, the Applicant's mitigation to prevent Stone curlews from nesting within the Scheme area is exactly the same as the measures intended for "creating" the new Stone curlew mitigation plot at Parsonage Down. As such, this is inadequate. Item 9.7.17 of the Comments received to Deadline 3 [REP4-036], is in breach of Habitats Regulations. It is not only the nest that is in need of protection. The chicks are dependent upon their parents for food for up to 10 weeks. During this time, they are vulnerable to being run over by construction traffic. See our comments in response to Comments received to Deadline 3 [REP4-036]. There are no references within the OEMP in respect of the autumn Stone curlew roost, so we do not agree that the Applicant has taken suitable and proportionate measures.

The Applicants response

Please see response to item 5.1.1 in the Comments on any Further Information received at Deadline 5 and 6 [REP7-021] and responses to 18.1.2, 18.1.3 and 18.2.40 in the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003]. Clearance of vegetation and soil (a scrape) are proposed for the creation of the plot at Parsonage Down [please refer to response to 18.1.2 within REP5-003]. PWBIO5 and MW-BIO8 of the OEMP [AS-085] require measures to be implemented to protect stone curlews during construction.

As set out in the OEMP, a deterrent measure that could be employed is topsoil only being stripped where works are planned to occur, prior to this, crops will be retained (where necessary and appropriate) to deter stone curlew from nesting. Depending on topography and crop, it could also help to impede line of sight for birds on the ground. Where high intensity of human activity commences in areas for construction prior to the breeding season for stone curlew, this activity would provide deterrence when the birds arrive in the spring. If works are required to start during

the breeding season in some areas, deterrence measures could be applied in advance, for example silent bird deterrents could be used, such as lines of moving tape, or bird predator kites (all measures are to be confirmed following consultation with the RSPB and on a case by case (and site by site) basis).

Once topsoil stripping is carried out during the main construction period it is expected that there would be high levels of human activity within the construction site because excavations would be expected to commence concurrent with or soon after removal of soil in sections of the Scheme. Whilst bare chalk is a favourable substrate for nesting sites for stone curlew, it would be unlikely to attract stone curlew to areas adjacent to daily activity of construction vehicles which would be excavating, moving or placing material in the vicinity. The bunds around the construction compounds would have vegetation established to soften their appearance in the landscape so they would not be likely to provide suitable conditions, or not for long and certainly not given the high level of human activity that would be carried out within the compounds during setting up and subsequently.

It should be noted that all wild bird species, their eggs and nests are protected by law, the response to 19.7.17 was specifically about the legal protection of the nest, and the nest considered to be active. Should any chicks be present within the construction site suitably experienced specialists would check daily for activity and ensure measures were in place to protect them from harm during construction (as set out in the OEMP).

The measures that have been previously stated within the OEMP [AS-085] and the response to 9.5.1 of the Comments on any further information requested by the ExA and received to Deadline 3 [REP4-036], are considered sufficient to avoid an adverse effect on the integrity of the local population of stone curlew from disturbance associated with the construction phase of the Scheme.

M & R Hosier response to 8.49

The point we were making is that the methods proposed for creating the Stone curlew plot at Parsonage down are exactly the same as those the Applicant intends to use for one of their mitigation methods to prevent stone curlews nesting within the Scheme. Therefore, this is both providing nesting and deterring nesting at the same time. This has the potential to be confusing.

Once again we remind the Applicant that the daily archaeological activity taking place during the 2018 breeding season did not deter Stone curlews from nesting within the survey area. Therefore, this cannot be relied on as a reason not to have a suite of measures that could be incorporated into the method statement to deter birds from nesting.

The Applicant comments there is wording within the OEMP that states that any Stone curlew chicks present within the Scheme area will be monitored daily to protect them from the harm during construction. However, this is not the case.

PW-BIO5 *"..Scheduled 1/Annex 1 species or its dependent young must not be disturbed while at or building a nest."*

We have asked for this wording to included "monitoring and protection of the chicks until they have fledged", but as yet, this has not been updated.

For clarity and confidence to both ourselves, contractors and the Inspectors, we would suggest that OEMP wording is changed to include provision of monitoring and protection of any chicks within the Scheme footprint.

11.1.3 18.1.3 We dispute the fact that the Applicant has used specialists with Stone Curlew experience; if this had been the case, they would have been able to detect the Stone curlews they were already monitoring on the archaeological site without the need to call in the RSPB Stone curlew team. As such, we have no confidence that the Applicant has taken on board the Annex 1 status of the bird, giving no reassurance as to the protection of the birds during the 6 years of construction of the Scheme.

We stand by all our comments within our reply to Comments received to Deadline 3 [REP4-036].

The Applicants response

Highways England has noted your comments. Please refer to the response of 18.1.3 of Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003]. It should be noted that it was within the method of works that the RSPB should be consulted if stone curlew activity was detected in the vicinity of works, the RSPB had agreed to the methods and provided support where necessary when the project staff identified the presence of stone curlew during archaeological investigations in 2018. This was an example of collaborative working to achieve a common goal.

M & R Hosier response to 8.49

We understand that the RSPB had agreed to be contacted if Stone curlews were seen within the survey area. However, we would have expected the Applicant to have a ECoW team with sufficient previous Stone curlew experience, as they have known all along that this species regularly breeds within this area. On a number of occasions, the RSPB were called in to spot the birds when the ECoW were unable to. This gives us no confidence. If the ECoW cannot see the birds when they are present, how can they protect them from harm during the construction? We believe there needs to be more commitment to having sufficient staffing on the ECoW team with field experience of Stone curlew.

11.1.4 18.1.4 Comments received to Deadline 3 [REP4-036] item 30.1.9. We are unable to locate this reference as the report only goes up to item 27.1.9!

The Applicant states that they stand behind the contents of the SIAA, yet the Scheme as presented would fail to meet Habitats Regulations as it fails to "dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation"

Therefore, in order to avoid triggering Habitats Regulations, the Applicant HAS TO provide the additional two Stone curlew plots to mitigate any potential negative effects due to potential recreational pressures upon the two Normanton Down Stone Curlew breeding plots. Parsonage Down, being in the path of the proposed Scheme, had to be mitigated. Winterbourne Downs plot was a net gain in respect of the biodiversity legacy of the Scheme (as stated within Chapter 8

Biodiversity [APP-046]), and would therefore not be counted as mitigation for Normanton Down plots. This is also noted within RSPB Written Representation [REP3-013]

Mitigation for the two Normanton Down plots would need to follow the same criteria used to locate the new Parsonage Down plot, ie to be in as close a proximity as possible, for the displaced breeding pair to use. This is reference Chapter 8 Biodiversity [APP-046] paragraph 8.9.28

8.9.28

"As part of the embedded mitigation of the Scheme a new 1.2ha stone curlew breeding plot would be created within Parsonage Down SSSI and NNR. The new breeding plot would be created, under agreement with Natural England, approximately 500m from the stone curlew breeding plot to be lost, in what is very likely to be the foraging area for the breeding pair on the plot to be lost; as such, it is very likely to be easily discoverable by the birds that breed on the plot to be lost"

Similarly, The Statement to Inform Appropriate Assessment paragraph 5.1.7 refers to:

5.1.7

"There is a high degree of confidence that this stone curlew plot will be utilised as it is to be provided in a suitable area on suitable soil close to an existing plot that has been regularly used by stone curlew, and the plot is being designed and delivered in conjunction with RSPB and Natural England in an manner that has been successful with the other plots around the Salisbury Plain area." This also highlights the need for replacement plots to be placed as close as possible to an existing plot that has been regularly used by Stone curlews.

Issue Specific Hearing 7, Biodiversity and ecology [REP-035] under item 3 Effects on Stone curlew and adequacy of proposed mitigation measures, page 2-3

"Dr Peaye confirmed the intention that the replacement plot be as close as practicable to the lost plot"

With this in mind, and taking into account that Normanton Down Reserve is part of our farm and our main ecological focus, we believe that mitigation plots should also be established on our farm. This will act in part for compensation for the potential damage that increased recreational pressures may bring onto our Reserve on which a considerable amount of Government and private money has been invested.

The Great Bustards have indeed bred on and continue to frequent Normanton Down. There have been no surveys carried out by the Applicant to establish this, however, data to support our claim can be gained from the GBG direct.

The Applicants response

As stated in HRSA Clarification Note (Appendix A of the Statement of Common Ground with Natural England [REP7-011] submitted at deadline 7), the additional plots are considered to provide confidence beyond reasonable scientific doubt that there would be no loss of nesting opportunities for stone curlew in the event of any in-combination impacts from increased recreational usage of the existing byways adjacent to Normanton Down RSPB Reserve following the landowners refusal to the offer of improved fencing. Highways England has already identified a selection of suitable locations for additional stone curlew plots (all of which have been confirmed by RSPB as suitable) and is in discussion with landowners who are interested in providing the plots. For the additional plots, which mitigate the risk of an in-combination impact, the commitment by Highways England to provide additional plots provides the surety required for the Habitats Regulation Assessment.

The stone curlew plot provision will provide a net gain of optimal stone curlew nesting opportunities. For the purpose of Habitat Regulations Assessment is it not necessary to provide mitigation against the possibility of future disturbance of individual pairs of stone curlew as such, but rather that the population of stone curlew within the SPA and the supporting area around it should be maintained by ensuring no reduction in the opportunities for nesting. The selection of locations for the stone curlew plots is being based on the parameters agreed with the RSPB and set out in the sift appraisal of the HRSA Clarification Technical Note (Appendix A (Appendix 1) of the Statement of Common Ground between Highways England and Natural England submitted at Deadline 7 [REP7-011]). This highlights the conditions suitable to provide an optimal stone curlew nest plot. Several suitable locations have been identified in the vicinity of the Scheme and Westfield Farm is one of several landholdings with suitable locations where the landowners have expressed an interest in additional stone curlew plots. Discussions are on-going with the landowners.

With regards to great bustard, this species is not relevant to the HRA as it is not one of the features for which the Salisbury Plain SPA is designated. Notwithstanding, the mitigation measures incorporated within PW-BIO5 and MW-BIO8 of the OEMP [REP6-011] will be consulted upon with the Great Bustard Group and are considered suitable to avoid adverse effects on the local population.

M & R Hosier response to 8.49

As the Applicant is already aware, fencing around the Reserve does not offer protection from people accessing the area. Further to this and following conversations with RSPB, new fencing around Normanton Down Reserve on its own would not be sufficient to satisfy Habitat Regulations. There was always a need to scope for locations for Stone Curlew plots, should it be demonstrated that the Scheme did have a negative impact on the SPA population that uses Normanton Down. As such, it would have been a waste of tax payer's money to renew all the fencing around Normanton Reserve for little benefit, unless the fencing was taller, more robust and therefore not in keeping with the WHS.

The Applicant states that for the purpose of Habitat Regulation Assessment it is not necessary to provide mitigation against the possibility of future disturbance of individual pairs, but rather the population of Stone curlew within the SPA. However, we believe that the Applicant has a moral responsibility to the tax payer to ensure that Government funding that has already been spent in protecting the SPA Stone curlew population on Normanton Down is not wasted. Therefore, an additional plot as close to Normanton Down as possible will secure confidence that the Applicant has taken into account the best interests of the Reserve.

The Scheme is billed for biodiversity, therefore there should not be a negative impact on the existing rich biodiversity within the area. This would be counterproductive and shows the Applicant is cherry picking the areas to suit their own ends.

11.1.5 18.1.5 We acknowledge the Applicants response that "grazing management measures to be incorporated into the Scheme will be confirmed through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) [REP4-020]". However, we remain of the opinion that this needs to be agreed now to prevent problems developing in the future and avoid unnecessary expenditure.

We respect the comments from the Butterfly Conservation, but there are a whole host of other invertebrate species other than butterflies that are already present in the area, some of which are on the endangered list. This was identified by the invertebrate studies carried out for the Scheme.

6.3 Environmental Statement Appendices Appendix 8.11 Invertebrate survey report.

Page 35, under item 5, conclusions notes "all 8 sites included in the 2017 survey have been shown to have a significant invertebrate fauna."

The report goes on to say "However, the Countess Cutting CWS and Arable 1 (Normanton Gorse Wood on its southern and western wide conservation margins) sample sites also have an exceptionally rich invertebrate fauna found in association with early-to midsuccessional chalk grassland habitats and wide arable margins respectively;"

The report continues to say "these are also of at least county importance for invertebrates. That found on the wide arable margins at the Arable 1 site (Normanton Gorse) demonstrates that the adoption of conservation headlands here is certainly having benefits for invertebrates."

Second paragraph notes "Diamond Wood and the Arable 2 and Arable 3 sample sites are somewhat less diverse, but still have important invertebrate assemblages of local and county importance."

6.3 Environmental Statement Appendices Appendix 8.11 Invertebrate survey report.

<u>Page 28 item 4.5 Arable 1</u>

"The focus of invertebrate study effort here was on the side conservation headlands the owner has retained around the edge of the field, with these running along the entire southern and western edges of Normanton Gorse. The headlands have a two-tiered structure, with a more frequently ploughed strip adjacent to the crop and a less disturbed zone running up to Normanton Gorse. This structure creates an excellent range of vegetation structures, from sparse vegetated soil at the crop edge, through taller and more closed growth of forbs through to rank grassland and scrub. Such graduations in structure are known to allow the development of diverse assemblages of invertebrates."

The above passage notes the excellent range of vegetation structures that have been created for invertebrates. This area is created by mowing no more than half the area once a year, and mowing the whole area only once every 3 years.

We would suggest that the Applicant has chosen to concentrate on only the colourful invertebrates within its management strategies, neglecting other Red Data Book species and others of National Scarcity that would require a range of habitat structures as noted within the survey document report above. Just because these invertebrates are small, not often seen and drab in colour, does not mean that they are of any less importance than the butterflies. Therefore, there is a duty to provide a habitat for these species as much as for the butterflies alone. As previously stated, we are concerned that the management of the chalk grassland around the western portal and cutting will act as a sink, drawing in the important species already present within the area, only to be destroyed by mowing more than once a year.

The Scheme is billed for enhanced biodiversity, not for destroying the biodiversity that is already present within the area.

The Applicants response

As previously discussed in the response to 18.1.7 of [REP5-003] any grazing units will be incorporated into the LEMP and Landscape Scheme under Requirement 8 of the DCO where practicable, where this is not the case a mowing regime will be incorporated into the management activities, the design of which (including the management regime) will fall within the detailed design phase. Where grazing is to be incorporated suitable water infrastructure and fencing will be installed.

It is acknowledged that as shown in the invertebrate survey report [APP-250] the less-intensively managed areas of Westfield Farm include some diverse assemblages of invertebrate species, although none of those areas would be lost to the Scheme.

Butterflies are certainly not the only group of species that contribute to biodiversity in local grassland habitats, although some butterfly species do have particular importance for nature conservation, for example Marsh fritillary butterfly is an Annex II species which is one of the primary reasons for the selection of Salisbury Plain as a Special Area of Conservation. Butterflies are regarded as useful indicator species owing to their sensitivity to environmental factors and their dependence on habitats of good quality. For these reasons, butterflies are used by the government as the indicators for assessing changes which affect broad assemblages of insect species of the countryside [1]. As such, it is generally considered that should the habitat be considered suitable to support a range of butterfly species of chalk grassland habitat, it would ultimately provide optimal habitat for all chalk grassland invertebrate species present within the study area for the Scheme.

It is agreed that the habitat creation needs more than just uniform seeding with a seed mix containing the food plants of some key butterflies. Hence, in developing the LEMP and the landscaping scheme the aim will be to create diversity of locally appropriate habitat at a range of scales within the Scheme as a whole, by a combination of initial treatments and subsequent management. This will have the potential to develop habitats suitable for a wide range of invertebrate species, including, but not limited to indicator species of butterflies of chalk grassland.

With regard to the management regime, it will be designed to achieve, amongst other things, favourable conditions of target habitat by managing it at suitable frequency and time of the year. The confirmation of the grazing / mowing regime adopted will be confirmed within the detailed design phase.

Reference [1] – JNCC website (Accessed 20/082019) https://jncc.gov.uk/ourwork/ukbi2018-c6-insects-of-the-countryside/

M & R Hosier response to 8.49

The government argues that butterflies are used as indicators for assessing habitat because of their sensitivity to environmental factors, In practice, butterflies are chosen as they are easy to monitor and there is plenty of relevant data available. There are many other invertebrates that are equally as sensitive as butterflies, but there are fewer people who have the knowledge to identify them. In addition, these other species are less pretty to look at. The Applicant states that none of our areas which currently support a diverse assemblages of invertebrate species will be lost as a result of the Scheme. However, we still remain concerned that the Applicant's proposed "favourable" conditions of target habitat have the potential to draw in these important populations, only to be destroyed by inappropriate management, ie: frequent mowing. Throughout the Scheme, there frequently seems to be a clash between heritage and biodiversity. Therefore, there is the distinct possibility that the area will not be managed in the best interests of the invertebrate population, but to heritage aesthetics instead

We are still of the opinion that the grassland management regime, to be effective, should be set out at this stage rather than being left to the detailed design phase. We note management at the design phase only has to be "favourable" for targeting habitat and not "optimal". When the management plan for the areas is being formulated, it is doubtful that anyone will contact farmers on the ground for their "practical" input on the Applicant's suggestions.

11.1.6 18.1.6 We now understand that the Scheme is targeting butterflies within this area with a short sward incorporating bare areas.

Species requirements

Adonis Blue feeds on Horseshoe vetch Chalkhill Blue feeds on Horseshoe vetch

Small Blue feeds on Kidney vetch Marsh Fritillary feeds on Devils-bit scabious

These wildflower species take a while to establish, so there is potential to require plant plugs to help them establish.

As outlined in our response to Comments received to Deadline 3 [REP4- 036], this will not provide hunting habitat for Barn owls and may even lead to the unfortunate situation where Stone curlews will attempt to breed within sub optimal locations resulting in an unsuccessful breeding attempt.

We therefore, urge the Applicant to consider these facts when finalising the grassland management of this area.

We look forward to seeing the proliferation of butterflies within the area as their plant food establishes over the years, but hope it is not to the detriment of those species that are already present.

The Applicants response

As stated within the paragraph 11.1.5, butterflies are a useful and recognised indicator species due to their sensitivity to environmental factors. Providing suitable habitat for butterflies of calcareous grassland is considered likely to enhance the area for a range of invertebrates of the area.

The Landscape Scheme that will be produced, alongside the LEMP, will include details of seeding. To aid establishment of some species in the calcareous grassland planting of wildflower plugs may be used to enhance the composition, or other means to aid the establishment and development of the target habitat, although this will be determined on a site by site basis as part of the detailed design stage. As described in the OLEMP [APP-267] and in response to 18.1.6 of the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003], the objective will be to promote heterogeneity within the habitat through the creation of a mosaic of early stages of successional calcareous grassland communities, ranging from sparsely vegetated bare ground and rock through to closed, species-rich swards, such as the more open calcareous grasslands traditionally present in areas of Salisbury Plain and Parsonage Down. It is agreed that the early stages of chalk grassland habitat will not have the closed sward and slightly tussocky structure favourable for small mammals and hence for barn owl, kestrel and other predators to hunt them and areas which are kept relatively short by grazing will not be as favourable for small mammals and their predators. However, this will be beneficial for species such as barn owl, as it would not encourage barn owls to hunt along the roadside verge (paragraph 8.9.216 of Chapter 8 of the Environmental Statement [APP-046]). Nonetheless, given the scale of the Scheme overall and the

planned diversity of management within it, it is likely there would be scope for conditions highly favourable for small mammals as habitats develop and are managed over time.

M & R Hosier response to 8.49

As previously stated, early stages of successional calcareous grassland are not a destination. Instead, they represent a stage in chalk grassland creation. Unless the area is to be periodically broken up by ploughing this management approach is unrealistic. We would also suggest that sparsely vegetated bare ground and rock is not in keeping with the existing grassland of the central part of the Scheme, and would not fulfil the Applicant's vision, for the deep cutting to blend into the surrounding landscape.

By waiting until the detailed design phase to confirm the management regime it suggests that the management will be an afterthought of the Scheme rather than something that is built in and accommodated from the outset. As such, we remain concerned that the area has the potential to draw in red listed invertebrates into the area, only for them to be destroyed by an intensive mowing regime.

If the top 2.5m of the deep cutting are unable to be mowed due to Health and Safety safe working practice issues, this slope will have to be strimmed, or it will develop the tussocky structure favourable to small mammals.

11.1.7 18.1.7 We stand by our comments that with a forward-thinking design, areas could, where possible, be managed by grazing rather than the more high maintenance option of mowing. Grazing requires fencing and water provision but does not need an area to dump mowing materiel. Livestock have been successfully managing grassland pastures for biodiversity for thousands of years.

Presumably, the design will incorporate areas for mowing arisings to be composted, so this really is an area that needs to be sorted sooner rather than later, to avoid management issues.

Can the Applicant tell us how the top 2.5m of the chalk grassland of the deep cutting will be safely mowed?

The Applicants response

Please see paragraph 11.1.6 above, in addition, the appropriate management details would be determined as part of the framework secured by the detailed Landscaping Scheme and LEMP, along with the provision of stock-proof fencing and water infrastructure in areas to be grazed, as appropriate. It would not be suitable to confirm the management of the top 2.5m of the chalk grassland at this stage of the Scheme, however it would be managed either under a mowing regime or grazed

M & R Hosier response to 8.49

We stand by all our comments.

As the chalk grassland and biodiversity is an important part of this Scheme, we believe that the management regime and its practicalities of management, needs to be determined at this stage. There is the distinct possibility, that in not addressing this now, it will become an afterthought rather than a significant part of the Scheme.

How practical will it be to mow the top 2.5m of the deep cutting? Will this area be used for composting mowing material?

11.1.8 18.1.8 Items Referenced –

9.5.2 See response to item 40.3.7 and 40.3.9 in the Comments on Written Representations [REP3-013]. The Scheme would not change Byways 11 and 12. Visitor usage of the PRoWs adjacent to Normanton Down has been surveyed and this is ongoing. The results will provide a baseline for any subsequent monitoring of visitor usage of the PRoWs.

9.7.1 The scope of the cumulative and in-combination assessments undertaken for the Scheme, as well as the assessments contained in the Applicant's Habitats Regulation Assessment documentation generally, are considered to be robust. Mitigation and enhancement measures are currently under discussion with the RSPB and Natural England and agreements will ensure that the measures provided will avoid any adverse impacts on the integrity of the SPA

Please refer to our reply to 9.5.2 Comments received to Deadline 3 [REP4-036]. There have been no surveys undertaken of visitor monitoring along byways 11 and 12 in the location of Normanton Down Reserve. The Applicant has always courteously informed us when surveys will taking place within this area even, if they are carried out from the byways themselves. We have received no such emails relating to visitor monitoring surveys taking place along the byways. In addition, RSPB are unaware of any surveys that have taken place (Pers. Comm), which we would suggest they would know about, as they have been strong advocates of such a survey, as noted in their representations and SoCG.

Please will the Applicant provide us with the alleged report relating to surveys taking place along byways 11 and 12 in the location of Normanton Down Reserve.

The Applicants response

Highways England commissioned surveys of the use of Byways 11 and 12. These were initially undertaken 30th March 2018 to 19th April 2018, then 1st – 20th June 2018. The surveys were reinstated on 25th March 2019. These surveys are ongoing and continue to record user numbers and type.

Fixed cameras are used to record movements along the byways from a point on the public highway. Data abstracted was provided at Issue Specific Hearing 6 and again at Hearing 9. See Agenda item 4.9 – 4.12 in the Written summaries of oral submissions made at the Traffic and transport hearing held on 13th June 2019 [REP4-034] and on 22 August 2019 (to be submitted at deadline 8).

M & R Hosier response to 8.49

At Issue Specific Hearing 6 the Applicant stated that static cameras had been used to monitor byways 11 and 12 for motorbike use. We were also told that on a number of occasions, the cameras had been removed or pointed in different directions away from the byway. If the exercise had been

about the disturbance of Stone curlews due to increased recreational use, RSPB would have been informed about the surveys so they could give guidance on where the cameras need to be placed. RSPB have no knowledge of surveys along the byway in relation to recreational use and disturbance to Normanton Down Reserve. As well as the information recorded by the cameras , ground surveys also need to be carried out: Users of the byways should be asked about the reason for their visit, how long it would last for, and whether or not they would be accompanied by dogs. This suggests that the Applicant is trying to do surveys on the cheap and use one simplistic survey to cover a number of separate issues ie: byway use by 4x4's, motorcycles, bicycles and pedestrians.

We have located one of the two cameras on byway 12 in the southern section of the WHS. However, there are only two cameras on a long stretch of byway. We would further suggest, that from their positioning, the cameras would not be capturing data that would be appropriate for monitoring any disturbance on Normanton Down Reserve. For this to be possible, additional cameras would need to be located within the area.

Why has the Applicant not put the findings of the survey on the Inspectors website for everyone to see? Will they be added at a later date? If Wiltshire Council has carried out these surveys why has the footage of the cameras not been used to help tackle the antisocial behaviours on the byways? Information would be helpful to give Wiltshire Rural Crime Team information in relation to hare coursing and also to catch the persistent fly-tippers that use the byway.

11.1.9 18.2.1 We understand the need for a consistency of land use in line with that used at the top of the cutting. This is why we are questioning the land management within this area. We take on board that it is common practice to cut grass along roadside verges and land adjacent to roads, but have health and safety concerns if the top of the cutting is proposed for mowing. If the grass tops of the deep cutting are to be long grass, and the grassland all around the remaining essential mitigation area is to be short early successional grassland, then there will be a distinct and unnatural difference in appearance of the area due to the grassland management regimes.

The Applicants response

Please see response to item 34.1.1 in the Comments on any Further Information received at deadline 5 and 6 [REP7-021] – through the provisions of Requirement 8 of the DCO and the OEMP, grassland management will be able to be undertaken to minimise the risk of unnatural differences appearing.

M & R Hosier response to 8.49

The Applicant states that they will only "minimise" the unnatural differences appearing in the grassland. In practice the differing soil depths, the new landscaping as a result of the Scheme construction and the topography and drainage, will mean that uniformity will not be possible and striping will be evident within the landscape. However, if the area is managed as a whole this is can be slightly mitigated.

Added to this, the intention for "early stages of successional calcareous grassland" will not fit within the grassland already within the area. National Trust grassland is farmed by their tenants under environmental schemes with different criteria, using local native brush harvested seed from

Salisbury Plain. This will be in sharp contrast to the bare open areas of early successional grassland with rocks.

11.1.10 18.2.2 We acknowledge the Applicant's decision to explore alternative options to Compulsorily purchase in relation to the area around the western portal and green bridge 4 and look forward to a meeting to further these discussions. We are of the opinion that an alternative option would have benefits to both parties and could be agreed within a legal document.

The Applicants response

See Agenda item 8 in the Written summaries of oral submissions made at the Compulsory Acquisition hearing held on 9th and 10th July 2019 [REP5-002]. The Applicant would welcome the opportunity to have a meeting to discuss an alternative agreement.

M & R Hosier response to 8.49

We would welcome the chance of meaningful discussion to bring about an agreement where the land could remain within the ownership of M & R Hosier but be managed in accordance to the Applicant's vision.

11.1.11 18.2.3 As stated within our 8.31 response, we do not believe the Applicant is fully appreciating the water risks to our farming business. In the event that our water supply or quality is compromised during construction, or once the tunnel scheme is in operation, our farm reservoir only has capacity for 24 hours. Therefore, we would need an alternative source of water to be provided within one day or an emergency slaughter programme would have to be initiated. With this in mind, we believe that it is the Applicant's duty to undertake a feasibility study for the provision of temporary and permanent water supplies. This is not a "standard scheme" as referred to; "standard schemes" do not involve tunnelling yet alone tunnelling through a very complex geological area. Therefore, a "scheme of this nature" would carry a responsibility for the Applicant to carry out water feasibility studies so that prospective contractors are fully aware of all potential issues. The updating of OEMP Table 2.1 to include clause for the Agricultural Liaison Officer (ALO) to "establish measures to be implemented to maintain livestock water supplies" gives us no confidence. We have already provided a feasibility study of laying on water supplies to our business should this be needed, which highlights that it would not be possible to implement emergency measures within 24 hours. Added to this, there is no mention of what the ALO will do with the water network information he will have collected, so this is merely a box ticking exercise. We do not believe OEMP {REP4-020} MW WAT11 is adequate to mitigate potential problems with our farm supply. See our response to Examining Authorities Second Written Questions at Deadline 6, Ag.2.10.

The Applicants response

As stated in Submission – 8.18 Comments on Written Representations [REP3-013], the risk to the Hosier boreholes has been fully assessed. The sensitivity of the borehole receptors is considered to be high which is in acknowledgement of the reliance on and quality of the abstracted water. No impact is anticipated, nevertheless, work is ongoing to access the Hosier boreholes so that

monitoring of water levels and water quality can be undertaken before construction commences. The boreholes will form part of the ongoing programme of monitoring.

Highways England considers that the protections within the OEMP are sufficient and appropriate, including the provision of a Water Supply Statement as set out at item MW-COM6, which provides for liaison and engagement with landowners in respect of their water supplies, including in respect of temporary re-provision.

With regard to the comment on 'standard schemes' please see response in deadline 7 Submission - 8.44 - Comments on any further information requested by the Examining Authority and received at Deadline 5 and 6 [REP7-21] paragraph 5.3.3. It states that the approach is standard for such a scheme, i.e. a tunnelling scheme. It has not taken the approach to and does not refer to a generic "standard scheme" and we hope this point is now completely clear in this response.

M & R Hosier response to 8.49

We disagree that provisions within the OEMP are sufficient and appropriate.

The Applicant has not said how, within a 24 hour period, they will get a tanker of 60m3 of water over an arable field to reach our farm reservoir if our water supply is compromised. How will a liaison officer manage to do this without a further commitment for assessment and infrastructure being included within the OEMP.

Conclusions of our independent research of the hydrogeology of the surrounding area disagrees with the Applicant's assessment that this is a "standard tunnelling scheme". We believe the geology is far more complex than the Applicant is wishing us to believe. For this reason, we believe the OEMP measures need to be far more robust, to provide us with confidence and adequate protection.

11.1.12 18.2.5 We stand by our reply to Comments received to Deadline 3 [REP4-036] item 9.4.6 "We have concerns over the accuracy of the Conceptual site models used to assess the water movement within the geology of the Scheme landscape. See M & R Hosier Written Representation, Appendix 2 Groundwater Concerns – Report by Sweetwater Resources 2] Pages 2 to 6, Paragraphs 6.1 to 6.13 Paragraph 6.12 The model does not predict water levels to an accuracy which guarantees that there will not be a reduction of yield from boreholes during periods of low groundwater in summer, or that there will be no contamination. Therefore, HE is wrong to say there is zero risk to the water supply of Boreland and Westfield Farm. Mortimore et al Proc. Geol Assoc 2017 Figure 26 notes presence of many high permeability sub-horizontal fissures (dipping to the south) in the location of Stonehenge Bottom. As the tunnel is below the water table in this location and the exact location of the fissures will never be known unless the whole of the area is surveyed by core samples every few meters, it is not possible to assess the full damming effects that a tunnel will cause. Claims that the water will flow round cannot be accurately known until the tunnel is in place. There is a massive potential for the tunnel to alter groundwater flows far beyond the survey area."

The Applicants response

Please see response to item 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003] which explains that a conservative approach to modelling has been undertaken to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors.

The model has been refined in the area of the tunnel with data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data. It is therefore considered that the approach to modelling is robust and sound.

The Groundwater Risk Assessment [APP-282] considered the worst case for effects on water levels at receptors, the lowest groundwater levels on record, from the 1976 drought. Baseline surveys to date [AS-019] support the conceptual model and numerical modelling approach.

The environmental assessment approach has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council's peer reviewers. This includes the interpretation of the significance of geological horizons for groundwater flow.

M & R Hosier response to 8.49

The Applicant has chosen to base all their groundwater assessments on the groundwater modelling rather than to undertake a 3D fracture assessment of the Scheme footprint. We believe this to be a risky approach for reasons stated in our previous responses.

If the Applicant had backed up the water model by using a 3D fracture model, we would have more confidence in the ability of the model to accurately assess the hydrogeology of the area. Perhaps the Applicant does not want to carry out a 3D Fracman model, as it may show the true complexity of the Scheme which will in turn, dramatically increase the cost of constructing the tunnel.

11.1.13 18.2.7 We remain concerned that suitable fencing is noted as being a matter in consultation with HMAG,. With this in mind, there is every chance that it will be aesthetically pleasing to heritage organisations rather than fit for purpose, ie to keep trespassers out. We would also respectfully point out that any fencing intended to be located adjacent to our land will require consultation and agreement from ourselves as well.

The Applicants response

Please refer to the Applicant's response to the Examining Authority's Second Written Question De.2.3 [REP6-023] which outlines the process for consultation with stakeholders on fencing and safety measures at the cutting. In addition to the measures discussed in that response, the Applicant notes that measure MW-COM3 of the OEMP requires liaison with landowners, occupiers and agents, as appropriate, to establish fencing requirements both during and after construction.

MW-COM3 "Liaison with landowners: The main works contractor, through the Agricultural Liaison officer (ALO), shall liaise with landowners, occupiers and agents, as appropriate, to establish: a) measures to be implemented to maintain livestock water supplies which may be affected due to construction works; b) fencing requirements both during and post-construction; c) locations of potential carcass burial sites" At deadline 8, the OEMP has been updated to provide for the ALO to liaise with the SDCG, which will enable agricultural requirements to be taken into account in respect of fencing.

In addition, it should be noted that principle P-PRoW2 of the OEMP [AS-085] explains that "Timber posts and strained wire fences to be used to separate PRoWs from adjacent private land in accordance with Highway Construction Details in the Manual of Contract Documents for Highway Works (MCHW) and Design Manual for Road and Bridges (DMRB). Where necessary for adjacent land use, appropriate stock-proof netting to be added to strained wire fences."

Where appropriate, fencing requirements of landowners are being recorded as part of the Position Statements.

These references and commitments demonstrate that there is appropriate provision for engagement with adjacent land owners for all purposes.

M & R Hosier response to 8.49

To be fit for purpose, fencing has to be able to keep livestock in, keep dogs out and prevent illegal trespass onto private land. We do not believe that the fencing proposed for the area of the cutting is adequate to prevent access, especially as the cutting is in relatively close proximity to a PRoW. We have concerns that the area could be used as a new suicide jumping point as byways and secluded places are favoured by those wishing to take their lives.

11.1.14 18.2.9 The Applicant notes that the agricultural land at Parsonage Down will never be restored to agricultural status following the deposition of chalk from the tunnel boring machine, although it is deemed suitable for chalk grassland. We acknowledging that chalk grassland does not require a nutrient rich topsoil, but it does require a good structure to allow drainage and root penetration or grass will not grow. There is also the risk that compacted areas will act like dew ponds, collecting water that is unable to penetrate through the geology in its post Scheme structural status. We have concerns that once the ground is remodelled the whole of the ground structure will be altered beyond all foreseen knowledge with implications to groundwater recharge. The existing fissures within the area will be compromised over a large area with devastating consequences to abstractors in the surrounding area.

The Applicants response

The restoration of land will be as set out in the Soils Management Strategy which will be prepared by the Contractor. This will be based on the Outline Soils Management Strategy included in Annex A.3 of the OEMP issued at deadline 8. The land forms part of the scheme landscape mitigation provision, therefore, material deposited will not be subject to structural compaction. The fill placed will be the product of the Slurry Treatment Works, which will be 'cakes' of, predominantly, silt-sized chalk material. The material will be placed by dump trucks, and the only proposed compaction will be by the plant employed to place and spread the fill, i.e. the dump trucks and the dozers. It is expected that low ground pressure plant will be employed for this purpose to prevent over-compaction of the fill and to ensure that an open, permeable fill structure is maintained.

Through the Water Management Plan, Groundwater Management Plan and the Soils Management Strategy measures in the OEMP, the risks suggested by Mrs Hosier will be able to be avoided - noting in particular the Outline SMS submitted at deadline 8 has now been updated to reflect the need for drainage characteristics to be taken into account in developing detailed soils restoration strategies.

The placement of the material and very limited extent of compaction will produce a more open permeable structure. Even if there are some localised areas of compaction these will not affect groundwater recharge, as the runoff generated from surface compaction will recharge locally beyond the compacted works area. Recharge is on a catchment scale; groundwater levels are not dependent on recharge on a scale such as a construction site.

M & R Hosier response to 8.49

The Applicant informs us that the "cakes" from the Slurry Treatment Works will be wet and not dry materiel. This is " *to be placed by dump trucks, so the only proposed compaction will be by the plant employed to place and spread the fill ie dump trucks and the dozers. It is expected that low ground pressure plant will be employed for this purpose to prevent over-compaction"*. This comment raises the concern for landslides, as a result of lack of compaction of materiel. The Applicant comments that "material deposited will not be subject to structural compaction". Aberfan disaster in 1953 was as a result of compacted materiel deposited over an area of highly porous sandstone with underwater streams. To what depth will the "cakes" be spread over Parsonage Down? What measures are being taken to prevent the materiel slipping from where it meets the natural ground level of Parsonage Down.

11.1.15 18.2.9 The Applicant refers to construction traffic keeping within the footprint of the Scheme, yet when Parsonage Down is to be modelled with the tunnel spoil, there will be traffic movements from vehicles heavier in weight than agricultural machines that will be running over the ground compacting each successive layer of tunnel spoil. The consequences of this remodelling work, with heavy industrial plant on the structure of this area and groundwater recharge, are completely unknown.

We challenge the Applicant's statement that the particle size of the chalk fines are no smaller than that of topsoil and subsoil. Chalk, clay and silt are the building blocks of soil particles, which combine with organic matter to form soil particles. It is a known fact that heavy rains from summer thunderstorms, when falling on cracked sun baked ground, carry a risk of washing fine silt particles combined with organic matter down into fast flowing fissures, which have the potential to pollute the water courses.

Similarly, modern agricultural machinery is designed with low ground pressure tyres to prevent damage to the soils structure which we rely on to maximise our cropping potential. Construction traffic is of greater weights than agricultural machinery.

The Applicants response

Please see paragraph 11.1.14 above with regard to soils, restoration and groundwater recharge.

Highways England confirms that by adopting industry good practice measures, the risk of particulate pollution of watercourses would be reduced to an acceptably low level. The OEMP [AS-085] includes a requirement to control particulates in surface water run-off (MW-WAT6), as follows:

"The main works contractor shall adopt measures to prevent the deposition of silt or other material in any existing watercourse, lake, borehole, aquifer or catchment area, arising from work operations.

The measures will accord with the principles set out in industry guidelines, including CIRIA's report C532: Control of water pollution from construction sites, and GPP 5: Works and maintenance on and near water."

With respect to the concerns expressed regarding silt washing into fissures and, potentially disrupting or polluting groundwater flow, we would comment as follows.

"Chalk, clay and silt" are not the "building blocks of soil particles". Soil is built up from a variety of particles of assorted sizes. Those particles are derived from a variety of sources; some are the product of weathering of the parent rock present in the region, others from material that has been transported to the location by diverse natural processes over many thousands of years (wind, glaciation, river transport, pre-historical ocean currents, etc). The terms 'clay', 'silt' and 'sand', which refer to the size of the individual particles, are defined in Table 7 of BS5930:2015.

The weathered chalk (Classes Dm and Dc), which is found below the topsoil and subsoil in many of the boreholes excavated in the Winterbourne Stoke area, is composed of particles of clay, silt and sand. The site-wide data presented in the Preliminary GIR, which is included in the ES, demonstrate the wide range of particle sizes within this grade of chalk, ranging from clay (<0.002mm) to gravel (<60mm). A similar range of particle sizes is reported for all the superficial materials present across the site above the structured chalk rock at depth. What this means is that the smallest particles that will be present in the chalk fill are no smaller than those that are already present in the materials that are currently present at shallow depth across the site.

For silt sized material to be washed into fast flowing fissures via "cracked baked ground", requires the "fast flowing" fissures to be within the depth of tension crack from the surface. No such fissures have been found.

M & R Hosier response to 8.49

The Applicant has not carried out any 3D fracture modelling, so they are unable to say with confidence that they have not found any "fast flowing" fissures within the Scheme.

As a private water abstractor we have a Safe Water Pack. Wiltshire Council, along with all councils, is responsible under The Private Water Supplies Regulations 2009 to carry out a Supply Risk Assessment of all private water supplies. Our water pack discusses scenarios where water run off, following periods of heavy rainfall, can lead to outbreaks of E Coli and Campylobacter resulting in a large number of people being hospitalised.

11.1.16 18.2.10 We thank the Applicant for informing us about the Agricultural Land Classification situation. We would ask for a copy of this report as well as the survey carried out in 2018 on areas that were not included in the 2003 survey. From this we understand that there have been no surveys carried out in respect of soil nutrient status. As it is the "good heart" of the soil that is as important as its classification and structure, we do not believe that the Applicant will take this into account when discussions with the District Valuer finally take place. We would like to know what the Preconstruction Soil Statement will include and would wish to have a copy of this report when it is completed as well as a copy of the Record of Condition Surveys. With no surveys to take place on soil fertility, how can the Applicant say that soil restoration will be to the pre Scheme status?

The Applicants response

As noted in Table 2.1 of the Outline Environmental Management Plan (OEMP), the Agricultural Liaison Officer (ALO) will coordinate the provision of the detailed pre-construction condition soil surveys to agricultural landowners and occupiers.

The agricultural land classification was undertaken in accordance with the recognised guidance produced by MAFF in 1988 (Agricultural Land Classification of England and Wales, Revised guidelines and criteria for grading the quality of agricultural land, HMSO, 1988). The methodology provides "a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use".

The nutrient status of the soil does not "affect ALC grading where nutrient levels can be maintained or corrected by normal applications of fertiliser or lime. Chemical factors will only affect grading where they have, or are likely to have, a detrimental long-term effect on the physical condition of the soil, the crop yield, the range of crops that may be safely grown, stocking rates or grazing management".

No nutrient analysis is therefore necessary to establish the ALC of a site. However, samples will be taken, in advance of works taking place, for nutrient analysis of topsoils and upper subsoils in areas to be affected by temporary works that will be returned to agricultural use in order to establish the baseline nutrient conditions and provide a specification for the nutrient status of the topsoil once returned to the landowner.

The Outline Soils Management Strategy (OSMS) (Annex A.3 to the OEMP) identifies that the Contractor shall prepare a detailed Soil Resource Plan for all land parcels within the Scheme where the soil resource will be disturbed for either temporary or permanent works. For land affected by temporary works, the purpose of the Soil Resource Plan is to accurately record the existing soil resources within each land parcel that is to be used temporarily in the construction of the Scheme. This will then be used to inform Preconstruction Soil Statements (refer to items PW-COM2 and MW-COM4 of the OEMP) to provide a specification for its restoration following the construction period.

Paragraph 2.1.3 of the OSMS indicates that the Soil Resource Plan shall identify:

a) the texture of each soil horizon present;

b) the depth of each soil horizon;

c) the colour of each soil horizon;

d) the stone content of each soil horizon;

e) the pH, organic matter and major nutrients of the topsoil horizon;

f) the pH, organic matter and major nutrients of the upper subsoil horizon; and

g) the Agricultural Land Classification (ALC) grade.

The Contractor shall be responsible for ensuring adequate data is available for the Soil Resource Plan including collecting data on organic matter content and major nutrients.

The data on the physical attributes (texture, depth and stone content) shall be collected at an observation density of one observation per hectare (ha). The data on organic matter content and

major nutrients shall be collected at a density of one sample per 3ha or, if the land parcel is smaller than 3ha, one sample per land parcel.

M & R Hosier response to 8.49

We thank the Applicant for their further information.

11.1.17 18.2.11 We thank the Applicant for providing more information and directing us to the Soil Management Strategy to enable better understanding. We note that there is also to be a Pre-construction Soil Statement. Please can you direct us to where we would find out more information as to what this Statement will entail? We would ask to have a copy of the Pre-construction Soil Statement when it is completed.

The Applicants response to 8.49

Please see response to item 8.2.1 in the Comments on any Further Information received at deadline 5 and 6 [REP7-021].

PW-COM2 and MW-COM4 of Table 3.2a of the OEMP indicates that:

The preliminary works and main works contractors shall produce Preconstruction Soils Statements for areas of agricultural land within individual land holdings that will be temporarily occupied during the construction of the Scheme. These shall provide a baseline schedule of soil condition against which the restoration of the soil will be assessed. The statements shall identify soils resource topsoil and subsoil unit plans and shall include, as a minimum, all pre-construction soil survey information obtained to inform the ES, the development of the Soils Management Strategy (refer to PW-GEO3 and MW-GEO3) and the information gathered from the record of condition surveys (refer to item PW-COM3 and MWCOM8).

Paragraph 2.1.3 of the OSMS indicates that the Soil Resource Plan shall identify:

a) the texture of each soil horizon present;

b) the depth of each soil horizon;

c) the colour of each soil horizon;

d) the stone content of each soil horizon;

e) the pH, organic matter and major nutrients of the topsoil horizon;

f) the pH, organic matter and major nutrients of the upper subsoil horizon; and

g) the Agricultural Land Classification (ALC) grade.

Data on the physical attributes (texture, depth and stone content) shall be collected at an observation density of one observation per hectare (ha). The data on organic matter content and major nutrients shall be collected at a density of one sample per 3ha or, if the land parcel is smaller than 3ha, one sample per land parcel.

The Pre-Construction Soil Statements will be made available to landowners once completed and prior to the commencement of construction.

M & R Hosier response to 8.49

We thank the Applicant for this additional information.

11.1.18 18.2.14 We are concerned that a lot of responsibility is being placed onto the main works contractor to complete numerous reports:

Soil Resources Plan, Preconstruction Soil Statement, Record of Condition survey, Soils Management Strategy, Soils Management Plan.

As the main works contractor has not been part of the Scheme, feeding in for necessary survey work, they will only be using the information provided for them by the Applicant. We do not believe that it is right that the Main Works Contractor shoulders all this responsibility, when it is the Applicant that is proposing the Scheme, having carried out all the survey work prior to Scheme construction. There is the risk that not only will the Scheme will be delayed due to unforeseen problems, but also construction costs will spiral out of control.

The Applicants response

This approach is entirely appropriate for a Scheme of this nature. The aforementioned plans are to be reviewed and approved by the Authority (and the Secretary of State for the Soils Management Strategy) following consultation with relevant stakeholders. These will therefore have the appropriate level of scrutiny required to ensure the contractor is undertaking the works in accordance with the provisions of the DCO. The risk that Scheme will be delayed or that construction costs will spiral out of control is no more than that of any other significant infrastructure project.

M & R Hosier response to 8.49

We thank the Applicant for these comments. However, although the Secretary of State will sign off this report, along with all the other mentioned reports, he will only be doing so on the advice of the other stakeholders, as he will have no in depth knowledge of all the potential challenges and issues.

11.1.19 18.2.16 The approach to the gates must be wide enough to negotiate gates when turning with long trailers to avoid vehicles getting wedged between the gateposts or eroding the surface edge of the byway in an attempt to get adequate space for turning. Erosion at the edge of the byway will lead to the byway surface being ripped up or developing deep potholes to the sides.

The Applicants response

As stated within P-PRoW4 of the OEMP [AS-085], “No gates on byways open to all traffic. On restricted byways full width gates with Kent Carriage Gaps to be used based on details in the Manual of Contract Documents for Highway Works - Highway Construction Details, and in accordance with the Design Manual for Roads and Bridges and the relevant elements of the ‘Advice on Gate installation’ and ‘Advice on Vehicle Barriers’ published by the British Horse Society.

Gates to be sufficiently wide and appropriately placed to accommodate authorised users as necessary, including agricultural vehicles and other agricultural machinery and appropriate locking measures to be employed to ensure that those entitled to exercise rights of vehicular access over restricted byways would be capable of doing so freely. Equestrian gates to be provided on bridleways, while on footpaths, pedestrian gates would be installed.”

All the new Public Rights of Way (PRoW) proposed along the length of the Scheme would be constructed in a way that will make them fit for all the uses permitted by their designated status, as stated in principle P-PRoW1.

M & R Hosier response to 8.49

We hope that the accommodation works will fully take into account the turning circles and approach of agricultural machinery at these gate junctures.

11.1.20 18.2.17 UNESCO Convention Concerning the Protection of The World Cultural and Natural Heritage World Heritage Committee 43rd session 30 June-10 July 2019 adopted unchanged its Draft Decision on the proposals for the A303 Stonehenge tunnel scheme (24th June -4 th July 2018 in Manama).

WHC/19/43.COM/7B Page 205 under Draft Decision: 43 COM 7B.95 item 4:

Notes with concern, that although the current scheme, which is now subject to the Development Consent Order (DCO) examination process, shows improvement compared with previous plans, it retains substantial exposed dual carriageway sections, particularly those at the western end of the property, which would impact adversely on the Outstanding Universal Value (OUV) of the property, especially its integrity, and therefore encourages the State Party to not proceed with the A303 route upgrade for the section Amesbury to Berwick Down project in its current form;

The above passage is contrary to the Applicants statement that “Integrity” of the WHS has been fully considered, and notes the adverse impact that the Scheme would have on the OUV. The document continues under point 5.

Urges the State Party to continue to peruse design solutions which reduce further the impact on the cultural landscape and OUV of the property through longer tunnel sections, so that the western portal is located outside the property.

This highlights the significant negative impact the proposed Scheme will have on both the cultural landscape and the OUV which is contrary to the Applicants statements.

The Government is responsible for the final decision for the Scheme to proceed, but under the Governments obligations to the World Heritage Conventions (Article 4), constructing the Scheme as proposed would be in breach of its international obligations.

For all the above reasons we cannot agree with the Scheme in the current proposal. Covering the exposed deep cutting would comply with OUV criteria, but removing the scheme to a surface route outside of the WHS would both comply with OUV criteria and remove issues with groundwater impacts.

The Applicants response

Regarding the recommendations of UNESCO / ICOMOS and the World Heritage Committee, Highways England has fully considered these in relation to the Scheme which includes features and controls that have been put in place in response to those recommendations. See the Applicant's Comments on any further information requested by the Examining Authority and received at deadline 4 [REP5-003, para. 10.1.3; para. 11.2.28].

See also the Applicant's written summary of oral submissions made at the Issue Specific Hearing on Cultural Heritage on 5th and 6th June 2019, with respect to Agenda item 3(v) in the written summary of oral submissions from the hearing [REP4-030] at which Mr Nichol of the Department of Culture, Media and Sport (DCMS) reported that the view of DCMS was that the then draft decision amplifies the perceived negative impacts of the Scheme and does not adequately reflect the extent to which the World Heritage Committee's 2018 decision had been taken into account by DCMS as the State Party and Highways England.

The Applicant also refers to its written summary of oral submissions made at the most recent issue specific hearings on 21 August 2019, where the July 2019 decision of the World Heritage Committee was discussed at Agenda Item 3.2. The Applicant's written summary of oral submissions made at that hearing (submitted at Deadline 8) records the Applicant's (and DCMS's) response to the decision, including the points referred to in this written submission. Submissions at the hearing related to the test that the World Heritage Committee appeared to apply and the evidence available to the World Heritage Committee, compared with the far more detailed evidence before the Examining Authority and Secretary of State, including with respect to the consideration of longer tunnel alternatives.

With regard to the integrity of landscape and cultural heritage see Highways England's response to Second Written Questions on Landscape and Visual, specifically LV.2.1 [REP6-030]. See also the Applicant's written summary of oral submissions made at the issue specific hearing on 21 August 2019 (submitted at deadline 8) with respect to Agenda Item 3.1(i).

With regard to a longer tunnel, see Highways England's response to Written Questions AL.1.29 – 32 inclusive [REP2-024] which explain the longer tunnel options that were considered in response to UNESCO/ ICOMOS comments and explain why they were determined to be less preferable than the Scheme option by reference to a full appraisal on a range of grounds. Highways England (and DCMS in its State of Conservation Report submitted to the World Heritage Centre in February 2019) has explained why the proposed Scheme offers an optimal solution both to the transport problems on the A303 and to delivering benefits for the WHS, and has set out why a longer tunnel is not a feasible alternative and cannot therefore be justified (see [REP1-015] (which is a 1 page letter from the DCMS, attaching a report entitled, "Stonehenge, Avebury and Associated Sites (United Kingdom) C373 bis"). The relevant section is part 2 of the said report, in the fifth paragraph) and also see [REP5-003], paragraph 11.2.28). With regard to a surface route outside of the WHS, the basis of the decision not to select route F10 is summarised in Highways England's responses to Written Questions Al.1.11, 12 and 13 [REP2-024], See also Comments on Written Representations at

Deadline 3 [REP3-013, response to questions 3.1.17, 16.2.26, 21.2.32 and paras 24.1.26 – 35] The Applicant notes that whilst ICOMOS and the World Heritage Committee have previously referred to an alternate surface route, this option is no longer pursued by ICOMOS or the World Heritage Committee and is not referred to in the recent decision.

Regarding compliance with international obligations, please see response to item 11.2.25 in the Comments on any Further Information at deadline 4 [REP5-003], the Applicant's response to Written Question G.1.1 [REP2-021], the Applicant's Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document), and the Applicant's written summary of oral submissions made at the issue specific hearing on 21 August 2019 (submitted at Deadline 8) with respect to Agenda Item 3.1(i) and 3.2(ii). The Applicant does not agree with the assertion that consenting the Scheme as proposed would put the UK in breach of its international obligations.

M & R Hosier response to 8.49

We do not share the Applicant's views on the above. The Applicant has made minor changes to the Scheme ie: extending the tunnel for a further 2 miles and adding a 200m canopy. Nevertheless, they have not taken on board UNESCO/ICOMOS comments relating to the portal and surface road still carved into the fabric of the WHS, which will drastically impact on the OUV of the Site. Indeed at the Issue Specific Hearing on 21st August, it was plainly evident that the delegate from ICOMOS UK did not share the Applicant's opinion that full consideration had been given to their responses and guidance.

We are saddened that our heritage organisations who are charged with the protection of our historic assets, are seeming to support the Scheme, rather than fulfil their roles as protectors of our WHS. In stead they choose to cherry pick one monument over the remaining WHS landscape in its entirety. No doubt ICOMOS are equally frustrated by their actions.

We do not share Mr Nichol (DCMS) view that the negatives of the Scheme have been given more prominence than the benefits. His statement shows a lack of understanding of the concept of OUV for which the WHS criteria was agreed.

We do not understand how the Applicant can put a price on our heritage. It is not our place to evaluate heritage for the generations that will follow us. We do not agree with the Applicant's and the DCMS assessment that a longer tunnel is not a feasible alternative. Indeed, only a few years ago it was decided that a tunnel option was not feasible. Now it is now the only option promoted. Whilst the Applicant believes the current proposal delivers benefits to the WHS, it does not protect the WHS from damage. This can only be achieved by a longer tunnel or by taking a surface route outside the WHS. In addition, we were never given the consultation option for a tunnel through the WHS or a surface route outside the WHS. This decision was made by the Applicant and therefore we have not had a proper public consultation. It is irrelevant that ICOMOS and the World Heritage Committee did not refer to a longer tunnel or a surface route within their recent decision. From their comments, it is clear that the Scheme proposed will damage the OUV of the WHS. Therefore, an alternative must be found.

We will wait to see whether the WHSC puts the Stonehenge and Avebury WHS on the "at risk register" when/if the Secretary of States grants the DCO at the beginning of next year. If the Scheme

does go ahead, we believe that the WHS status should be removed, which will remove all the astringent OUV criteria from the Scheme.

11.1.21 18.2.18 The Applicant has chosen to misinterpret the question. The footprint of the land where the western portal and the deep cutting of the approach carriageways are proposed, is on arable farmland. Therefore, it is not disturbing the archaeological remains of our cultural heritage and the impact on the OUV of the property. We would also like to draw attention to the fact that the current A303 infrastructure can be removed from the WHS whereas the deep cutting will not only destroy the integrity of the WHS, it can also not be removed. We therefore we deem it to be more damaging to the Property.

Whilst recognising the measures that the Applicant has put in place at the western portal and deep cutting, there is still 800m of exposed dual carriageway and the western portal still remains within the WHS. UNESCO have already urged the Applicant not to proceed with this current design, and the Government would be in breach of its international obligations if it chose to disregard UNESCO's advice and proceed.

We would prefer to see the upgraded A303 to be located outside the WHS, rather than choose a longer tunnel or cut and cover of the exposed carriageway, as this will solve our issues with groundwater impacts on our farm borehole supply. However, removing the road from the WHS will not prevent potential negative impact on the Stone curlews at Normanton Down Reserve from any increase in recreational pressures as a result of the Scheme.

The Applicants response

See Highways England's response to Second Written Questions on Landscape and Visual, specifically LV.2.1 [REP6-030].

The existing A303 is assessed as having a negative impact on OUV [see APP-195, Section 9.1, Impacts and effects of existing A303 on Attributes of OUV]. The Applicant acknowledges that the cutting itself will retain an adverse impact to the landform within the Stonehenge, Avebury and Associated Sites World Heritage Site, as set out in paragraph 7.9.44 and 7.9.45 of APP-045. However, the Applicant remains of the view that the proposed Scheme is the optimal solution both to the transport problems on the A303 and delivering benefits to the WHS.

With regard to reversibility, please see Comments on Written Representations at deadline 3 [REP3-013, paragraphs 21.3.21 - 24]. In summary, it is highly unlikely that the Scheme would be demolished after its design working life (not less than 120 years) as the road would have become an integral part of nationally important infrastructure. However, the Heritage Impact Assessment (HIA) [APP-195], section 9.2 explains how the tunnel and associated road infrastructure may, theoretically be decommissioned at some point in the future.

Regarding the decision of the UNESCO World Heritage Committee, international obligations, a longer tunnel, and a surface route outside the WHS, please see paragraph 11.1.20 above.

Regarding Stone Curlews, please refer to paragraph 11.1.4 above, which states that the stone curlew plot provisions will provide a net gain of optimal stone curlew nesting opportunities.

With respect to the positioning of the western portal outside the WHS - this has been considered in Highways England's previous submission to the Examining Authority in our response to Written Question AL.1.29 [REP2-024]. In summary, there is no evidence that the additional investment required to extend the tunnel length would deliver meaningful additional benefits to the WHS that would justify the additional cost and other land and consequential effects.

With respect to groundwater, please see response to item 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003] which explains that a conservative approach to modelling has been undertaken to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors. The model has been refined in the area of the tunnel with data from pumping tests and preferential flow horizons considered using geological, geotechnical and geophysical data. Baseline surveys to date [AS019] support the conceptual model and numerical modelling approach. It is therefore considered that the approach to modelling is robust and sound.

The Groundwater Risk Assessment [APP-282] considered the worst case for effects on water levels at receptors, the lowest groundwater levels on record, from the 1976 drought, and no significant impacts are predicted at private supply boreholes.

M & R Hosier response to 8.49

We remain unconvinced by the Applicant's justification of the Scheme as presented and stand by all our comments above.

The Applicant's statement acknowledges that the cutting itself will retain an adverse impact on the landform of the WHS. In truth, the Scheme does not protect the OUV of the WHS. It is not possible to enhance one part of the WHS, to the detriment of another. Therefore, the only solution to maintaining the OUV of the WHS is to place the portals outside of it. It is disappointing that the Applicant is choosing to put a value on our heritage, but it is truly shocking that they intend to proceed with a substandard scheme that will damage the WHS. A predicted working life of the Scheme of 120 years, represents only a tiny period of the lifetime of the WHS landscape. This calls its appropriateness into question.

Therefore we ask, who has the right to decide what constitutes meaningful additional benefits? As quoted "Every generation has the Stonehenge it deserves". The fact that our generation places transport and the economy over the protection of the WHS for future generations, speaks volumes.

11.1.22 18.2.18 The Applicant has an unrealistic approach to the archaeological remains along the line of the western approach and western portal. The "detailed archaeological excavation and recording prior to construction" will, due to the Applicants inflexible time table, be reduced to a level that only permits a basic investigation. This is akin to excavations that would take place for a car park in an area of little known archaeology. The quality of the excavations prior to Scheme construction need to be of WHS standards and agreed in advance with UNESCO.

The Applicant concludes that there will be an improvement to the setting of the AG12 Winterbourne Stoke Crossroads barrows by removing the A360, but the A303 is still within the WHS all be it 150 m south of its current alignment. Therefore, it will still be seen and heard, creating a negative impact of modern infrastructure on the OUV and integrity of the WHS property.

The Applicant is now saying that the "limited archaeological remains" are instead within the footprint of the western approach road, cutting and portal rather than in the alignment of the tunnel. Perhaps this is linked to the statements put out by the Applicant stating that "they had not found anything unexpected" during the archaeological excavations within this area. In fact, burials and large quantities of worked flint, along with other artefacts were removed and recorded from the site. All of these things would have been "expected" to have been found by the very nature of carrying out archaeological excavations among barrow cemeteries.

In respect of the percentage area of the Scheme footprint that was surveyed in 2018, the stated low level of burial activity will be significantly higher once the whole area is excavated prior to the Scheme commencing. Cremations are also human burials although this fact seems to have been omitted when stating the low levels of burials within the area. If the Applicant says the archaeological remains found are limited then they can return them to our care, including the exhumed skeletons and cremations.

The Applicants response

Highways England disagrees that it 'has an unrealistic approach to the archaeological remains along the line of the western approach and western portal'. Highways England has engaged regularly with key heritage stakeholders, throughout the Scheme's development, including through the Heritage Monitoring and Advisory Group (HMAG), which includes Wiltshire Council, Historic England, National Trust, and English Heritage, and the Scientific Committee of eminent archaeological experts. Their involvement will continue up to and through construction and is secured as part of a Detailed Archaeology Mitigation Strategy (DAMS) [REP7-019, a revised version of which is submitted at deadline 8], which has been developed in consultation with Wiltshire Council and HMAG and which is secured by paragraph 5 of Schedule 2 of the draft Development Consent Order [REP6- 005]. The draft DAMS notes,

"*The Main Contractor will allow sufficient time for the archaeological monitoring, recording and excavation of the archaeological remains. The TPA [Technical Partner's Archaeologist] and the AcoW [Archaeological Clerk of Works] in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG, will determine the scope of work and timetable for the completion of the investigation at each site."* [REP7-019, para. 6.5.3].

"*Modification of the works specification may be required during the investigations to enable detailed recording to take place, and to allow adequate time within the construction programme in the event of important discoveries. In this situation a revised SSWSI will be prepared by the Archaeological Contractor in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG and approved by Wiltshire Council (in consultation with Historic England,), prior to works commencing in the area to which the SSWSI applied*" [REP7-019, para. 6.5.4].

The Applicant disagrees that it has an 'inflexible timetable' or that investigation will be at a 'basic' level. With regard to timescales, at the ISH2 as recorded in relation to agenda item 7(i) & (ii) of the written summary of oral submissions [REP4-030], "Mr Taylor QC explained that the focus is on the identification of an approach to mitigation that is appropriate given the international status of the WHS and delivering the public benefits of the A303 scheme." Appendix A.10 of the draft DAMS presents an indicative timeline for implementation of Preliminary Works and Main Works stage archaeological works. [REP7-019, Appendix A.10]. The draft DAMS submitted at Deadline 7 records that "*The Main Contractor will allow sufficient time for the archaeological monitoring, recording and excavation of the archaeological remains."* [REP7-019, para. 6.5.3] (as already noted above), and

"*The Archaeological Contractor will meet the set time frames in order that the post-excavation assessment, analysis and publication phases can be programmed and resourced properly, and so that the completion date for all construction and post-excavation works can be met*." [REP7-019, para. 9.2.3]. The Scheme aims to deliver the majority of the archaeological works during the PW stage, and as a result it is expected that archaeology would be removed before the MW stage commences. Highways England is therefore content that the risk in terms of programme delay to construction from unexpected archaeological discoveries is inbuilt into the Scheme programme and will be managed through the way the works are being contracted.

The DAMS is secured by paragraph 5 of Schedule 2 of the draft development consent order [REP6-005]. Please see also the Applicant's response to Question CH.1.52 regarding unforeseen finds [REP2-025, pp. 5-83 to 5-84]

The Detailed Archaeological Mitigation Strategy (DAMS) [REP7-019] will be implemented as part of the Outline Environment Management Plan (OEMP) [August 2019 Revision 4 version of the OEMP [AS-085] submitted as part of the DCO application. The OEMP is updated at deadline 8.

All archaeological work has conformed to, and will continue to conform to, the Chartered Institute for Archaeologists' (CIfA) Standards and Guidance and has been undertaken in accordance with the relevant guidance, including DMRB Volume 11, Section 3 Part 2 (http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha 20807.pdf).

The quality of investigations will follow the methodologies as set out in the DAMS submitted at Deadline 8. As stated in paragraph 1.2.2 of the DAMS, '*the intention of the Strategy is to apply the highest practicable standards of mitigation, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of decision-making*'. As noted in the OEMP, "The preliminary works contractors (all) shall undertake the archaeological works, at all times, in accordance with the DAMS and DCO Requirement 5" [REP6-011, MWCH2]. UNESCO, the World Heritage Committee, ICOMOS and ICOMOS-UK have no role in setting standards or monitoring fieldwork in England. As noted in the draft DAMS, "Wiltshire Council has a statutory role in relation to the archaeological works for the entire Scheme for the local planning authority as does Historic England in relation to designated heritage assets." [REP7-019, para. 1.3.3]. The DAMS has been prepared in full consideration of the Research Framework for the Stonehenge, Avebury and Associated Sites WHS (2016) (http://www.stonehengeandaveburywhs.org/assets/StonehengeUpdate.pdf),

relevant earlier WHS research agendas, and applicable national and regional period-, materials- and theme-specific research agendas.

Visual and aural impacts have been assessed in ES chapter Chapter 7 - Landscape and Visual Effects [APP-045] and Chapter 9 - Noise and Vibration [APP-047] and are considered in the HIA [APP-195, paras. 5.2.10 & 5.3.24].

The footprint of the western approach road, cutting and portal is the area within which archaeological remains would be subject to direct physical impacts from construction, and therefore will be subject to archaeological mitigation. The significance of the evidence from the archaeological evaluation of the Western portal approach is addressed in Highways England's Comments on any further information requested by the Examining Authority and received at deadline 4 [REP5-003, items 34.1.2, 34.1.3, & 34.1.5] and Comments on any further information requested by the Examining Authority and received to Deadline 5 and 6 [REP7-021, para. 40.1.4]. With regard to the question of the anticipated number of burials, please see the Applicant's Comments on any further

information requested by the Examining Authority and received to Deadline 5 and 6 [REP7-021, item 40.1.2 and 6.3.3 (2.2)].

The application is supported by a comprehensive archaeological evaluation. The Applicant has utilised the most relevant research themes and questions based on the results of the archaeological evaluations and has tailored these to be Scheme-specific; the Applicant has taken a precautionary approach and considered what potential archaeology may be uncovered by the Scheme, what research questions that archaeology could address and what investigative methods need to be applied and where in consultation with Wiltshire Council, Historic England and HMAG. The draft DAMS, as submitted at deadline 7 [REP7-019; paras. 6.3.36 – 6.3.52] is iterative in terms of the levels of sampling and the significance of the archaeological remains uncovered – it is a proportionate and reasonable strategy that has been developed in consultation with Wiltshire Council, Historic England and HMAG, and takes into account the potential for finding human remains and concentrations of finds.

According to the Forum on Information Standards in Heritage Monument Type Thesaurus, the term 'burial' includes both cremations and inhumations

[http://www.heritage-standards.org.uk/wpcontent/uploads/2019/03/Mon_alpha.pdf](accessed 05.09.2019). The term 'burial' has been used in this sense in all cultural heritage reporting associated with the Scheme.

With regard to the curation of archaeological remains, the draft DAMS states that "The dissemination strategy will include the transfer of the complete project archive (site archive and research archive) to Salisbury Museum for long-term storage and curation. This will preserve the archive for use in future research projects and allow continued presentation of material to the public by the Museum." [the DAMS as submitted at Deadline 8, para. 5.3.41].

With regard to human remains, the DAMS submitted at deadline 8 states at paragraph 6.3.74 that "At the end of the project the intention is that human remains that are not required to be re-interred under the provisions of the DCO (and which have therefore been subject to a direction from the Secretary of State), will be integrated into the project archive and deposited at Salisbury Museum with the rest of the project archive."

M & R Hosier response to 8.49

"*Mr Taylor QC explained that the focus is on the identification of an approach to mitigation that is appropriate given the international status of the WHS and delivering the public benefits of the A303 Scheme*". However, all the evidence points to an organisation which places construction of a road ahead of the importance of the WHS and our cultural heritage. The Scheme would sterilise the archaeology of the entire length of the Western portal approach, so the Applicant has a duty of care to ensure that archaeological evaluation of this area is carried out to the highest standard. It is apparent that rather than carry out a 100% evaluation of all the topsoil (as backed up by the consortium of archaeologists) a "question based" research strategy is proposed, which is a much quicker and less expensive strategy. Whilst this will save time on construction, it is not, as the Applicant states *"placing the archaeological resource at the centre of the decision making process".* This will be the last opportunity for discovering the artefacts that make up the OUV and our cultural heritage, so at the very least there is a responsibility to the generations that follow us to carry out surveys to this highest level, ie: 100% sampling of all topsoil. It is not possible to reduce the WHS to

a question based research survey, cherry picking questions to answer, rather than allowing the whole of the area to unfold the wider story. Indeed, this approach narrows our understanding of the area to within our current parameters of knowledge rather than letting the archaeology itself reveal a true picture.

Such a strategy may be appropriate if one was excavating an area for a supermarket, but not within the WHS.

11.1.23 18.2.18 In relation to impact of vibration on Wilsford G1 and longbarrow NHLE 1008953 we note from the ISH5 the implementation of a bored tunnel is to preserve surface archaeology, so below surface archaeology was assumed to be collateral damage. The Scheme seems to always concentrate on what can be seen rather than considering the WHS as a whole including the below ground features. As Mr Macnab will be aware, G1 was not completely archaeologically excavated in 1960. The area was revisited for the 2002 Scheme where a further 20 satellite cremations were discovered in a small area to the side of the barrow. For this reason, we did not grant permission for the burial area to be disturbed by yet more archaeological surveys in 2018. ISH5 item 6 (iii) notes the TBM will be 18.5m below the surface in the location of the long barrow NHLE 1008953 yet there is no mention of how near it will be to the surface of G1 which is a mere 25 m from the western portal where the TBM is rising to the surface. We understand that the buried archaeology is held within a consolidated soil matrix but as the TBM rises to the surface the intensity of the shockwaves will increase as there will be less matrix to absorb the vibrations.

We can see no reference as to what actions will be taken, should the vibration monitoring show that threashold levels have been exceeded at the various monitored heritage assets. What sort of "head interventions" would be employed on the TBM to reduce vibrations?

The Applicants response

The Applicant restates that the design has been specifically chosen to limit the landtake for the construction of the Scheme both within and outside of the WHS in order to minimise the potential loss of archaeological remains.

The western approach has been designed specifically to avoid physical impacts on these assets: the Western Portal position has been optimised at the head of the dry valley, avoiding impact upon the scheduled barrow (UID 2018/NHLE 1010832 (Wilsford G1)) and the long barrow 250m north of Normanton Gorse (NHLE 1008953). The Heritage Impact Assessment [(HIA) [APP-195, para. 9.2.8] notes that "*Significant impacts due to construction vibration are not anticipated, however, in the absence of specific criteria regarding construction vibration impacts on barrows and as a precautionary approach, monitoring at this feature is proposed during nearby tunnelling works*."

The Applicant disagrees that "the Scheme seems to always concentrate on what can be seen rather than considering the WHS as a whole including the below ground features". The Scheme has been subject to a comprehensive archaeological evaluation programme which provides a robust evidential baseline against which the Scheme impacts on heritage assets have been assessed. Below ground features have been considered extensively in the ES [APP-044, paras. 6.9.24 – 25 & 6.9.30], the HIA [APP-195, para. 5.6.2(d)], and fully taken into account throughout the draft Detailed Archaeological Mitigation Strategy (DAMS) [REP7-019] and updated for submission at deadline 8.

As noted in Environmental Statement Appendix 6.2 Archaeology Baseline Report [APP-211],

"*The Wilsford G1 barrow (UID 2018) is of particular note, not just for being one of the few monuments of its type within the WHS to have been fully excavated in modern times, but also for the fact that it formed the nucleus around which an unusually large and important Early Bronze Age cemetery of the Beaker tradition developed.*

William Cunnington and Sir Richard Colt Hoare targeted the Wilsford G1 barrow in 1805, uncovering a central grave containing an inhumation burial, a Beaker and stag antlers. The barrow was revisited in 1960, when rescue excavations were undertaken by Edwina Proudfoot, née Field, on behalf of the Ministry of Works (Anon. 1961). The barrow was fully excavated, revealing that the central grave had contained at least two inhumations and a cremation. A further seven burials of infants and one young adult were found on the north side of the barrow, several of which were accompanied by Beakers. The excavations demonstrated that the central grave had initially been surrounded by a small ditch and covered by a mound. A second ditch was later added outside the first, and the mound may also have been enlarged (Lawson 2007, 153–4). Works undertaken between 1998 and 2003 as part of the proposed A303 Stonehenge improvement uncovered two further inhumation burials immediately north of the area investigated in 1960, bringing the total number of individuals buried at the site to at least 13 (Leivers and Moore 2008, 25–30)." [APP-211, paras. 3.5.76 – 77]. M&R Hosier are therefore incorrect to state that 'The area was revisited for the 2002 Scheme where a further 20 satellite cremations were discovered in a small area to the side of the barrow'.

The current Scheme did not pursue Scheduled Monument Consent for further intrusive evaluation of Wilsford G1 due to potential impacts on OUV: the application for Scheduled Monument Consent was withdrawn after it was agreed in consultation with HMAG that Wlsford G1 was located in an area to be preserved in situ. The withdrawal of the application was not due to Mr & Mrs Hosier refusing land access.

The Applicant's Response to Written Question Ns.2.6 [REP6-031] identifies that an assessment of vibration impacts on archaeology is set out in Appendix 6.1 Heritage Impact Assessment [APP-195], with supplementary detail provided at the Issue Specific Hearing as reported in the written summary [REP4-003] Agenda Item 6.iii. In summary:

• the identified barrows along the route of the tunnel that could be subject to vibration effects (where the tunnel is close to the surface) have already been excavated, either completely or in part, and backfilled removing potentially sensitive burials and artefacts;

• the identified barrows are unlikely to contain voids and have settled to their current position over approx. 5000 years;

• disturbance from previous/current activities including World War One airfield operations, agricultural ploughing and/or animal burrowing has occurred; and

• individual artefacts in the soil are usually fragmented. They are supported by the soil matrix, not surrounded by voids and therefore are much less sensitive to vibration than artefacts in the open air, display cases or with voids around them.

Specifically, in relation to Wilsford G1 barrow (NHLE 1010832), the Applicant understands that this barrow was fully and completely excavated in a rescue excavation in the 1960s; the burials within the enclosing barrow ditches and seven peripheral burials to the north were removed and the barrow ditches and the grave holes dug for the burials were backfilled [APP-211, paras. 3.5.76 – 77]. Two further satellite burials on the northern side of the barrow were excavated and removed during

archaeological evaluations in 2003-4, which targeted two geophysical anomalies in this area. No other geophysical anomalies are noted in proximity to Wilsford G1 in the recent geophysical surveys. Furthermore, the completely excavated barrow is not directly above the tunnel, it is offset from the tunnel alignment slightly. The barrow lies outside the 1mm settlement contour and therefore the level of anticipated ground movement and settlement is minimal (less than 1mm).

As set out in the Applicant's response to Written Questions Ns.2.7 and Ns.2.8 [REP6-031] there is no standard threshold for construction vibration and settlement levels significantly affecting archaeological earthworks, such as burial mounds, due to the unique and varying sensitivity of such assets. This point is in agreement with Stonehenge Alliance (response to Ns.2.8, i) p. 11 [REP6-065]), ICOMOS (response to Ns.2.7 and Ns.2.8 p. 8 [REP6-054]) and the Council of British Archology (response to Ns.2.7 and Ns.2.8, p. 69 [REP6- 84]). Therefore, heritage assets including archaeology will be considered on a case by case basis, based on the final detailed design, tunnelling methodology and asset sensitivity. The Outline Environmental Management Plan (OEMP) in the latest version of the OEMP issued at deadline 8, MWNOI5 requires the identification of potentially sensitive assets, actions to control or mitigate impacts (including monitoring) to be undertaken in consultation with members of HMAG. Vibration from tunnelling is also covered by the Ground Movement Monitoring Strategy required by items MWG7 and MW-CH8 of the OEMP. As part of this strategy, the contractor is required to develop contingencies using a suite of tool box items that include: further investigation, assessment and monitoring during tunnelling, to identify measures to ensure the protection of assets. The term 'head intervention' applies to the provision to gain access to the cutting head for maintenance during the tunnel drive; on modern TBMs this can now be facilitated from within the tunnel horizon. Therefore, should any part of the cutting head require maintenance as mitigation for vibration this can be accommodated from within the tunnel.

Monitoring of vibration and ground movement was further discussed at Issue Specific Hearing 8 on 21 August 2019, as reported in the Applicant's written summary (submitted at Deadline 8) in relation to Agenda Item 4.3 (iv).

M & R Hosier response to 8.49

We stand by our comments that the Applicant is putting emphasis on how much of the Scheme can be seen within the WHS, rather than concentrating on the OUV of the WHS. The Applicant keeps producing drawings to illustrate how little of the Scheme will be visible, or perhaps "invisible" within the WHS. Yet the deep cutting will still be placed within archaeology of the WHS. As such, it is still damaging the OUV and the WHS. As previously stated, it is not possible to offset perceived improvement of the setting of one area within the WHS at the expense of another location also within the WHS.

We take on board the Applicant's correction of our understanding of the number of burials in the location of G1. However, they have demonstrated our point that there is a need for full excavation including 100% sampling of the topsoil within the Scheme area. Unless the mitigation is to this high level, items will be missed and on this occasion, there will be no returning to re-excacate as the material will be deposited over Parsonage Down. When Bush Barrow (part off the Normanton Group) was excavated by Colt Hoare, a dagger containing hundreds of tiny gold pins was discovered. The wooden section of the dagger had crumbled away, leaving only the minute gold pins. Evidence such as this will be lost unless a 100% topsoil analysis is carried out.

We note that G1 and the Normanton Gorse long barrow have been spared destruction, but the remainder of the WHS in the deep cutting and landscaping area, has not. We are surprised that the Applicant believed there was a need to carry out additional work on G1, as they have clearly stated that the area has been excavated and revisited on a number of occasions: in the 1960's and 2003-4. OUV has been cited as the reason for the Applicant withdrawing its request for Scheduled Monument Consent to carry out intrusive surveys on barrow G1. However, there is also a requirement for landowner's consent for work to take place. We now understand that at the moment, the tunnel will not be directly under G1, but slightly to the side. However, due to the limits of deviation, there is the possibility that this will be changed at a later date, thereby putting extra pressure onto the barrow. In addition to this, we also note that the tunnel boring machine will only be 7m below ground level at this location, as the tunnel will be rising up towards the portal. With no standard threshold levels for construction vibration, the Applicant cannot be completely sure that there will be no significant effect on the Scheduled Monument. Indeed there is no knowing whether grouting ahead of the tunnel boring will offer any stability to monuments above the TBM as this has not been carried out before.

From Issue Specific Hearing 8, 21st August, it was stated there was a "suite of measures" to assist ground movement due to tunnel boring. However, the only items mentioned were grouting from the main tunnel prior to construction and the use of spiles to support the ground while it is being excavated. As acknowledged by the Applicant, there is no standard threshold for construction vibrations and settlement levels in relation to the effects on archaeological earthworks. This is, in fact, tunnelling into the unknown using the WHS as a "guinea pig".

11.1.24 18.2.19 Irrespective of Wiltshire Council and National Trust comments that not every archaeological intervention within the WHS has 100% sampling, we stand by our initial statement that the Preliminary works phase archaeological excavations would require 100% evaluation of the topsoil. This will be the last time this precious area of the WHS will ever be excavated, to discover the hidden secrets of our cultural heritage. As already proven, a large proportion of important archaeological evidence are found within the topsoil, and as this is the WHS, evaluation needs to be of the highest level.

Following the previous archaeological surveys carried out on our farm, which were overseen by Historic England, Wiltshire Council and HMAG, we have no confidence that the surveys will be carried out in a manner befitting the WHS. Bags of archaeological finds were left on site, along with archaeological equipment and no care was taken in reinstating the ground afterwards.

The Applicants response

Please see response to item 40.1.5 in the Comments on any Further Information Received at Deadline 5 and 6 [REP7-021] and the revised Ploughzone Artefact Collection strategy (fieldwalking and topsoil artefact sampling) in the draft DAMS [REP7-019, paras. 5.3.29 – 5.3.31; paras. 6.3.11 – 6.3.18; para. 6.3.30].

With regard to the concept of 100% sampling, please see Highways England's previous response to Mark Bush for Consortium of Archaeologists in Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003, para. 34.1.17 & 34.1.32] and Highways England's response as recorded in its written summary of oral submissions made at ISH2 in relation to agenda

items 7 (i) and (ii) [REP4-030] regarding the developing sampling strategy for the ploughzone artefact scatters as set-out in the draft DAMS submitted at Deadline 4 [REP4-024]. This was also discussed at the issue specific hearing on 21 August 2019, as recorded in the Applicant's written summary of oral submissions in relation to Agenda Item 5.4 (submitted at deadline 8), where the Applicant's iterative and reflexive approach to sampling in the DAMS was explained. The Applicant has consulted extensively with HMAG members to identify a reasonable and proportionate approach to archaeological mitigation which is as set out in the deadline 8 submission of the DAMS.

With regard to sampling, please see the Applicant's deadline 7 Comments on any further information requested by the ExA and received to Deadline 5 and 6 [REP7-021, para. 13.2.14, p. 161]. Highways England acknowledges that, in some areas, a sample of up to 100% of the artefact content of the ploughsoil may be required, combined with a systematic sample to capture background distributions and transitional areas. Please see the Applicant's Deadline 5 Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, p. 11-96, item 11.2.26, pp. 11-79 to 11-81 & item 11.2.32, pp. 11-90 to 11.91].

With regard to reinstatement and 'bags of archaeological finds left on site', see the Applicant's Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, para 5.2.6], 'All other matters, from the Applicant's perspective, were dealt with in a respectful and open manner during on-site discussions with the land owner at the time of the surveys and resolved as far as possible, including suitable compensation paid where required'.

Regarding the comment that M&R Hosier make with regards to having 'no confidence that the surveys will be carried out in a manner befitting the WHS', the Applicant disagrees with this comment. As set out at paragraph 1.2.2 of the DAMS submitted at deadline 8 'The Scheme passes through a landscape of high archaeological significance, both inside and outside the WHS. Accordingly, the intention of the Strategy is to apply the highest practicable standards of mitigation, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of decision-making both at design and implementation phases.' It is therefore the Applicant's intention to apply the highest possible standards to the archaeological mitigation works, which are as set out in the DAMS submitted at deadline 8, and that the archaeological mitigation will reflect the landscape of high significance through which the Scheme passes.

M & R Hosier response to 8.49

We stand by our statement that due to the large area of the WHS that will be sterilised by the construction of the western portal approach road, no less than 100% sampling of the topsoil is required.

The Applicant states within paragraph 1.2.2 of the DAMS that the Scheme passes through a landscape of high archaeological significance. However, they caveat this statement by using the loose wording that the " *intention*" of the Strategy is to apply the highest practical standards of mitigation. They also state the additional caveat that the standards will be "practical". We take this to mean that the Applicant will not carry out Strategies to the highest WHS standards, but to a standard that they deem to be within the budget, to enable the tunnel Scheme to go ahead. This is backed up by the Applicant's intention to not follow a 100% sampling of topsoil, in favour of cherry picking areas as well as basing sampling on an "*iterative and reflexive approach*" strategy. This is all in sharp contrast to the Applicant's statements of "*highest possible standards to the archaeological*

mitigation works, which reflect the landscape of high significance through which the Scheme passes". The Applicant has only adopted their position as it is both quicker and a less expensive approach.

11.1.25 18.2.20 We thank the Applicant for their explanation, but are alarmed to discover that, in the event that trigger levels are encountered, ground stabilisation in the form of grouting in the ground ahead of the TBM could be used. Once again, we note that the main works contractor is responsible for yet more surveys in the form of a Ground Movement Monitoring Strategy. We feel this is yet another example of where a 3D Fracman ground model would provide information ahead of the TBM, enabling the structural geology and fissure layout to be known in advance. Failing to carry out such a 3D model is hindering the main works contractor in the deliverance of the Scheme.

The Applicants response

Please see Highways England's previous responses as follows referring to ground stabilisation and the use of 3D ground modelling:

- Written Summary, Issue Specific Hearing (ISH) Cultural Heritage, item 7iii [REP4-030]

- Written Summary, ISH Flood risk, Groundwater Protection, Geology and Land Contamination, item 5.1 [REP4-032]

- Second Written Questions (SWQ), Noise and vibration effects, specifically Ns.2.8 [REP6-031].

- SWQ, Flood risk, Groundwater Protection, Geology and Land Contamination specifically Fg.2.38, Fg.2.40, Fg.2.51 [REP6-028].

Ground stabilisation by grouting from the tunnel horizon in advance of the TBM was explained at the ISHs [REP4-030, REP4-032] and is one of the standard suite of 'toolbox' measures that the contractor may elect to use to deal with ground movement. The preliminary design has been prepared in accordance with the 'Joint Code of Practice for the Risk Management of Tunnel Works' and taking full cognisance of the Construction (Design & Management) Regulations and BS6164 Code of Practice for Safety in Tunnelling. The Applicant considers that it is neither unusual nor is it unacceptable to require the expert Contractor to plan and take responsibility for the continuation of investigations as part of the detailed design and their further risk management and procurement of the works. This includes the completion of the Ground Movement Monitoring Strategy required by items MW-G7 and MW-CH8 of the OEMP.

The matter of 3D geology modelling was explained at the ISH [REP4-032] and dealt with comprehensively in the response to SWQs Fg.2.38, Fg.2.40 & Fg.2.51 [REP6-028], which confirm the Applicant's view that the information presented in the Environmental Statement is more than sufficient at this stage of the consents process and that a 3D model is not required. A proportionate approach has been taken to characterise the variable nature of the geology employing experts in this field including Professor Rory Mortimore. 3D geology modelling is not standard practice at this stage of the preliminary design as evidenced by cross-reference to recent major tunnelling projects including Crossrail, Thames Tideway and Silvertown Tunnel.

In summary, whilst the Applicant recognises the risks associated with the geology and hydrogeology at Stonehenge and the unique nature of the archaeology within the WHS, a 3D ground model is not considered necessary at this stage as it will not change the choice of a closed-face Tunnel Boring Machine as part of the risk management of the project. Furthermore, the high density of additional boreholes required to construct a competent 3D Geology model will not make a significant

difference to the alignment which is constrained by the Scheme's location within the historic environment, existing topography and road layout. We therefore maintain our view expressed at ISH4 that a 3D geology model would be an academic 'nice to have' but is not necessary to inform the preliminary design as assessed in the Environmental Statement in support of the DCO and has not been considered necessary at the pre-consents stage of comparable major tunnelling infrastructure projects, including in locations with chalk.

M & R Hosier response to 8.49

The suite of measures referred to by the Applicant consists of only two procedures. One of these is grouting from the tunnel horizon in advance of the TBM. The other, is the use of Spiles to support the ground being excavated. This clearly is not a "suite of measures". Added to this, the tunnel is within the WHS and there are no predetermined limits for vibration on archaeology to use for comparison.

Perhaps in its attempt to ensure that the Scheme is granted the DCO, the Applicant is passing all the costs of 3D modelling onto the contractor, rather than being responsible for these significant surveys ahead of the tendering process? In this way, the Applicant reduces costs and ensures the true hydrogeological profile of the Scheme is unknown at the time of tendering and agreement by the Secretary of State at the DCO.

The Applicant states that Professor Rory Mortimore is employed to characterise the variable nature of the geology, yet he was not present at any of the Issue Specific Hearings to enlighten us on the findings of the geology so far. We were therefore not able to ask him in person for his assessment of the tunnelling process.

The Applicant also says that in their opinion, 3D geology modelling is not standard practice at this stage of the preliminary design. However, this is not a standard tunnelling project: It is a project within a WHS through landscape that contains numerous scheduled monuments, as well as complex geology. The Applicant cross references tunnelling projects such as Crossrail for delaying 3 D modelling to a later stage. As the construction costs of Crossrail have spiralled out of all proportion, it is obvious that early 3D modelling would have been a great benefit in that scheme. By identifying the true nature of the structural geology up front, contractors would have been able to plan for some of the problems in advance. Therefore 3 D modelling would have saved money on the Scheme. In fact, 70% of project overspends are as a result of insufficient survey work prior to construction.

11.1.26 18.2.21 We stand by all our comments made in 18.2.21. The Applicant has throughout consultation, wilfully promoted private land on the southern part of the WHS for roaming and exploring, omitting to state that there will be no access to monuments, only viewing via the network of existing byways. At no time have they sought to clarify that although the northern part of the WHS, being owned by the NT is open access, the southern part is privately owned and therefore not accessible on completion of the Scheme. In so doing, the Applicant has knowingly put the Normanton Down breeding Stone curlew pairs under threat due to potential increased recreational disturbance. This is contrary to Habitat Regulations.

The Applicant is already fully aware that fencing along byways 11 and 12 does not prevent the public accessing private land or those wishing to deliberately trespass. The Applicant has documented this within the Habitats Regulations documents in respect of negative impact on breeding Stone curlews.

Consultation materials were inaccurate and misleading to the general public, as well as putting our private farm business and the Stone curlews at risk.

The Applicants response

With regards to the stone curlew impact, please refer to the paragraph 11.1.4 above which states the measures offered to avoid impacts on stone curlews.

M & R Hosier response to 8.49

We note that the Applicant has decided to provide additional Stone curlew plots within the landscape. However, we are shocked that the Applicant has proposed a Scheme that has knowingly promoted access to a sensitive Annex 1 breeding reserve, putting it under pressure of increased recreational disturbance. This, in our opinion, is not the action of a Scheme promotor who has increasing biodiversity as one of its main aims. Even if the Applicant is taking measures to ensure the SPA population of Stone curlews are provided for, it does not mitigate for the potential damage that the recreational disturbance may cause on the individual pairs that are breeding on the Normanton Down Reserve. Will the Applicant compensate us for the loss of breeding pairs on our Normanton Down? A breeding reserve with no breeding birds is a loss of asset and a waste of public money.

11.1.27 18.2.22 We stand by our comment above, by increasing the numbers of people into the landscape this will have a negative effect on the wildlife already present within these areas.

Potential for recreational disturbance from use of byways 11 and 12 has been noted in the environmental assessment with its negative effects on the nesting Stone curlew pairs on Normanton Down.

Green bridge 4 may provide public access, but as previously stated, the views from Green bridge 4 will be of the traffic in the deep cutting and looking into the western portal, which the Applicant has failed to produce photomontages for. Green bridge 4 will be short grass alone with no hedge planting, so will be of limited biodiversity. The chalk grassland around the cutting will be long on the top of the cutting (as this will likely be too steep to mow) but the remaining chalk grassland area will be mowed short, providing inappropriate nesting opportunities for Stone curlew and inappropriate hunting areas for Barn owls.

The Applicants response

Please see response to item 6.2.24 in the Comments on any Further Information received at Deadline 5 and 6 [REP7-021].

With regards to the stone curlew impact, please refer to paragraph 11.1.4 above which states the measures offered to avoid impacts on stone curlews. With regards to the management of the chalk grassland, please refer to paragraph 11.1.7 above.

It should be noted that the chalk grassland creation along the soft estate is not intended to provide suitable stone curlew nesting opportunities or barn owl hunting habitat, and therefore the management of these areas will reflect that. Barn owls should not be encouraged to hunt along the soft estate close to traffic (please refer to response F above). The management principles will be set out within the LEMP

M & R Hosier response to 8.49

We look forward to seeing the management proposed within the LEMP, as from the Applicant's comments, we are not of the opinion they fully understand the situation. Short early successional grassland is Stone curlew breeding habitat and longer tussocky grassland is a barn owl feeding habitat.

11.1.28 18.2.23 Referenced Document - Comments received to Deadline 3 [REP4- 036] item 30.1.9: There is no item 30.1.9 within this document. Point 18.1.4 referenced above within this report: "As a result of these discussions, the Applicant is willing to commit to procure and provide two additional new stone curlew breeding plots. These would be in addition to the previously proposed new stone curlew breeding plots at Parsonage Down and Winterbourne Down (as reported in the Statement to Inform Appropriate Assessment [APP-267]). This means the Applicant will be providing a total of four new stone curlew breeding plots, forming an overall package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed scheme."

18.2.23 The Applicants seems to confuse the documents; as Winterbourne Downs is referred to as "net gain" within the ES Chapter 8 Biodiversity [APP-046] but as "mitigation" for construction within the Statement to Inform Appropriate Assessment [APP-267]. We welcome the news that there will be another two Stone Curlew plots to be established within the vicinity of the Scheme, to adequately provide for any displacement of the SPA Stone curlews at Normanton Down (should they be adversely affected by increased recreational disturbance). It is disappointing that the Applicant has taken this long to acknowledge the requirements made by the RSPB within the SoCG; in respect of an Annex 1 species. We would have expected this to have been considered within the Habitats Regulations from the beginning.

The Applicant states they stand behind the contents of the SIAA, yet the Scheme as presented would fail to meet Habitats Regulations as it fails to "dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation" The Applicant would have been aware of this for the past two years, so we are surprised by their reluctance to follow the guidance from Natural England and RSPB. As a result of this, the Applicant, to avoid triggering Habitats Regulations, HAS TO provide the additional two Stone curlew plots to mitigate any potential negative effects upon the two Normanton Down Stone Curlew breeding plots. Parsonage Down being in the footprint of the proposed Scheme had to be mitigated, but as already noted within Chapter 8 Biodiversity [APP- 046] Winterbourne Downs plot was a net gain (RSPB Written Representation [REP3-013]) within the

biodiversity legacy of the Scheme, and therefore would not be counted as mitigation for Normanton Down plots.

Mitigation for the two Normanton Down plots would need to follow the same criteria used to locate the new Parsonage Down plot, ie to be in as close a proximity as possible to be used by the displaced breeding pair. See our response in item 18.1.4 of this document above with regard to placement.

The Applicants response

The provision of the additional plots is considered to provide confidence beyond reasonable scientific doubt that there would be no loss of nesting opportunities for the stone curlew population in the event of any possible incombination impacts from increased recreational usage of the existing byways adjacent to Normanton Down RSPB Reserve. Thus, there would be no adverse effect on the integrity of the SPA breeding population through increased competition. For the purpose of Habitat Regulations Assessment, it is not necessary to provide mitigation against the possibility of future disturbance of individual pairs of stone curlew as such, but rather that the population of stone curlew within the SPA and the supporting area around it should be maintained by ensuring no reduction in the opportunities for nesting.

It is considered that this commitment, together with the provision of the stone curlew plot at Winterbourne Down, underlines the robustness of a conclusion of no adverse effect on integrity of the SPA in the Agreed A303 Statement to Inform an Appropriate Assessment (Environmental Statement Appendix 8.25) [APP-257].

The identification of the additional plots has been undertaken in close consultation with the RSPB, and proximity to Normanton Downs RSPB reserve has been taken into consideration (please refer to Appendix 1 of the SoCG with Natural England [REP7-011].

M & R Hosier response to 8.49

We agree that the Applicant does not have to provide mitigation against the "possibility" of future disturbance of individual pairs of Stone curlew "at this point". However, the Applicant has not carried out adequate base line monitoring of the byways running alongside the Normanton Down breeding reserve. The Normanton Down birds, being part of the SPA population, are noted to be at risk of disturbance due to increased recreational pressures. Due to a lack of baseline data, the impact of any increased recreational disturbance from the byway use on the breeding pairs cannot be assessed. Therefore, in this scenario, to show beyond all reasonable doubt, that there will be no adverse effects on the SPA breeding population, the Applicant does have to commit to providing two additional breeding plots at this stage.

Under Habitat Regulations Assessment, there is still a legal requirement to monitor pairs of existing Stone curlews breeding close to the Scheme, ie: Normanton Down, as well as all additional plots to be created. This is to ensure that NO negative impacts are placed upon the pairs as a result of construction and to assess the breeding success once the Scheme is in operation. We do note that the Habitat Regulations Screening Assessment – Clarification Technical note, refers to Normanton Down as being beyond the disturbance distance from the construction area. However, there is a requirement for this to be demonstrated through monitoring during construction. The Habitat

Regulations Screening Assessment – Clarification Technical note does not state where this monitoring will be secured within the DCO documents.

We are pleased to note that the Applicant is applying the same criteria to Normanton Down Stone curlew plots as it applied to Parsonage Down, ie that additional plots should be placed as close as possible to potentially displaced birds. This is basic ecological practice, as a displaced bird will not fly off to a plot at Winterbourne Down to nest, it will identify the nearest appropriate area in the close vicinity as this will already be within its established territory. As previously stated, we are continually surprised that a Scheme that is promoting biodiversity and ecology is designed to inflict damage to existing species rich ecology within the area.

11.1.29 18.2.23 Construction effects (paragraph 2) Document referenced, Biodiversity Chapter of Environmental Statement [APP-046] paragraph 8.9.38: 8.9.38 "The inclusion of the mitigation outlined above would result in effects that are considered to be neutral and not significant to the conservation objectives and biodiversity integrity of the SPA" We disagree with the Applicant that the effects of construction phase would be neutral and not significant to the conservation objectives and biodiversity integrity of the SPA and stand by our previous statements within this point. The only mitigation noted for Normanton Down Reserve plots within the Biodiversity Chapter of Environmental Statement [APP-04] is within the OEMP which we believe is lacking, as it fails to take into account the full life cycle of the Stone curlew species. See our comments in response to comments made at deadline 3 [REP4-036] items 9.7.15 and 9.7.16 (Stripping topsoil from construction areas and moving it to the perimeter of the works compound areas, then planting it with quick growing crops is not mitigation for on-site construction.)

Removing vegetation within the breeding season will always create a nesting habitat. We have still not been told what visual screening of the construction area will be.

As the construction of the Scheme will take six years, any impact on the local breeding population within this period will naturally have a knock on effect on the SPA population.

Statement to Inform Appropriate Assessment paragraph 5.2.1, notes the impact of the construction disturbance on Normanton Down, yet mitigation provided in point 5.2.4 is for Parsonage Down and not for Normanton Down.

The Applicants response

Please see response to item 5.1.1 in the Comments on any Further Information received at Deadline 5 and 6 [REP7-021] and responses to 18.1.2, 18.1.3 and 18.2.40 in the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003]. Clearance of vegetation and soil (a scrape) are proposed for the creation of the plot at Parsonage Down (please refer to response to 18.1.2 within REP5-003). PWBIO5 and MW-BIO8 of the OEMP [AS-085] require measures to be implemented to protect stone curlews during construction.

With regards to topsoil stripping, vegetation removal and deterrents, please refer to paragraph 11.1.2

The closest of the Normanton Down stone curlew breeding plots is located over 500m from the DCO boundaries (more than the distance where disturbance impacts are considered possible), as such, specific avoidance mitigation measures are not likely to be required, Should stone curlew be

identified within proximity to the working area (as stated within PW-BIO5 and MW-BIO8) a series of suitable avoidance (and where necessary anti-disturbance) mitigation measures will be implemented. This may include the erection of visual screens such as screened herras fencing, buffer areas, or placement of other objects that may impede line of sight.

M & R Hosier response to 8.49

The Applicant is not understanding that the measures they propose for creating a Stone curlew breeding habitat are exactly the same as those included within the OEMP for preventing Stone curlew from nesting in the area. For those people who are inexperienced with Stone curlew behaviour this could become confusing.

The Applicant notes that as Normanton Down stone curlew plots are located over 500m from the DCO boundaries they are not likely to require mitigation measures for construction. However, under the Habitat Regulations, this assumption has to be proven and backed up by monitoring Normanton Down breeding pairs, to ensure no disturbance is experienced. Potential reduction in feeding opportunities due to disturbance from the Scheme will have a negative effect on breeding success. The local Stone curlew roost, being an integral part of juvenile Stone curlew survival, is also based in the vicinity of Normanton Down. Whilst this can be moved to other locations with no detriment to the SPA population as a whole, it will create a disturbance within the local population in this area. This is not within the ethos of the Scheme billed as providing biodiversity opportunities as its legacy and is just another example of how the proposals will have a negative impact on existing species rich ecology.

We are pleased that finally, the Applicant has provided us with a few examples of anti-disturbance measures, but there is still no explanation of what the "buffer area" will be.

11.1.30 18.2.23 <u>The in combination effects associated with recreational disturbance</u> Referenced Environmental Statement [APP-046] paragraphs 8.9.186 to 8.9.187:

8.9.186 Disturbance: The provision of the tunnel as part of the Scheme would facilitate future access by visitors and local residents into areas south of the existing A303 in the vicinity of the Normanton Down RSPB reserve and the surrounding areas which are known to support breeding stone curlew. The Scheme would provide easier access to byways 11 and 12 south of the A303. If there is an increase in use of the existing byways 11 and 12, this may result in greater disturbance of breeding stone curlew and an indirect adverse permanent effect on nesting success locally.

8.9.187 The disturbance effects are influenced by a range of factors, including type of human activity, timing, frequency of occurrence, topography (which influences line-of-sight distance to nests), habitat, period in the breeding season and the experience of individual birds. Disturbance effects have been found to be greatest from dog walkers, less from other pedestrians and least from vehicles (Ref 8.67). The existing byways are fenced for purpose of livestock management at the Normanton Down RSPB reserve, which is likely to discourage, unauthorised public access to sensitive areas on adjacent farmland. As such, the residual effects are likely to be neutral and not significant.

With regard to the in-combination effects as per the above paragraph, the provision of two new plots in close proximity to Normanton Down will mitigate for the breeding attempts of SPA Stone curlew at Normanton down. However, there is still a need to mitigate for the construction activity in respect of foraging areas and the autumn Stone curlew roost.

Foraging disturbance to stone curlews Referenced Document - Comments received to Deadline 3 [REP4- 036] item 9.5.1:

"A large roost of stone curlews was recorded congregating on the RSPB Normanton Down nature reserve in autumn 2017, located over 500m south-east of the western portal. Measures to avoid disturbance of sensitive ecological receptors outside the limits of the scheme are considered suitable and proportionate to avoid disturbing the autumn roost of stone curlews.

PW-G4 and MW-G12 of the OEMP [REP3-006] set out the core working hours. Works that will occur outside of the core working hours include the use of the tunnel boring machine, which will be out of sight underground. Some lighting would be required at the western portal during construction of the tunnel, but the works would be in a deep cutting which would form a visual barrier, limiting light spillage as detailed within 8.9.35 of the Environmental Statement [APP-046]

The Applicants response

Please refer to paragraph 11.1.2 and paragraph 11.1.29 above with regard to disturbance effects on stone curlew. It is unlikely that disturbance impacts during construction would be greater than that of the existing A303, as the majority of the works will be undertaken in a deep cutting. Under the OEMP, method statements will be produced by the contractor, with the RSPB being consulted during construction (where necessary).

M & R Hosier response to 8.49

Our question was primarily in relation to in combination effects associated with recreational disturbance to Normanton Down, the impact on the Stone curlew roost and Stone curlews displaced from their existing foraging areas which stretch up to the DCO boundary.

The Applicant's response within paragraph 11.1.2 is in relation to OEMP measures to protect birds during the construction process, which we believe require updating. Paragraph 11.1.29 also relates to protection during construction and measures to mitigate effects of construction disturbance, which we also believe requires additions.

We take on board the Applicant's comments that the impact of construction will likely be similar to the disturbance caused by the existing A303. However, there will be a considerable amount of preliminary works in the form of archaeological surveys and creating the cutting prior to boring taking place. These activities will be more of a disturbance than the existing A303 baseline. Construction traffic is larger and noisier than conventional road traffic and is accompanied with HSE flashing warning lights and sirens and personnel in high viz workwear. Therefore, there is the need to fully assess the impact of this on the Normanton Down breeding plots as well.

11.1.31 18.2.23 MW-G29 of the OEMP requires the CEMP to include measures to minimise light spillage, particularly around the portals. As noted, stone curlews forage at night within the pig enterprise and the construction works would not prevent this foraging activity. It is to be noted that existing lighting from A303 traffic and Longbarrow roundabout would remain until the traffic was routed into the new tunnel. MW-NOI1 of the OEMP requires the use of best practicable means for

minimising noise. In addition, PW-BIO5 of the OEMP includes specific mitigation measures in relation to stone curlew.

The Statement to Inform Appropriate Assessment [APP-266] is considered robust in terms of its assessment of construction impacts on the stone curlew population in the vicinity of the Scheme."

See our response to Comments received to Deadline 3 [REP-036] item 9.5.1. Our reply highights that within the Statement to Inform Appropriate Assessment paragraph 5.2.1, the impact of the construction disturbance on Normanton Down, yet mitigation provided in point 5.2.4 is for Parsonage Down and not for Normanton Down.

Referenced OEMP [REP4-020] for working methods suitable to avoid disturbances on foraging stone curlews. See our response to Comments received to Deadline 3 [REP-036] item 9.5.1. The birds are most active between dawn and dusk, but will also forage during the day.

The construction activites would not prevent Stone curlews from foraging in the vicinity, but they would present a considerable deterrent from their regular foraging grounds, especially if the Scheme is using their "visual deterrents" to prevent nesting activity. This will push the Stone curlews into competition for food with other birds. We agree that there are other areas of arable and grassland within the wider Salisbury Plain, but not all of these are suitable, as a large area is open access and would therefore not be acceptable Stone curlews.

Referenced OEMP [REP4-020] PW-BIO5 and MW-BIO8 for measures that could be employed in mitigation measures at construction phase. See our response to Comments received to Deadline 3 [REP-036] item 9.5.1 in relation to PW-BIO5 and MWBIO8. The Applicant has still not said what the "visual deterrents" will be.

The Applicants response

As stated within 1.60 of Appendix A of the SoCG with the Natural England, during the late summer to autumn, the birds have the option of congregating on the Normanton Down plots, or any other stone curlew plots within the SPA and surrounding zone. As the birds congregate in late summer, there is also fallow land available after harvest. Hence, whether there is an increase in recreational disturbance at Normanton Down or not, there would be no likely significant effect on the supporting population of the SPA even if the birds chose to vary the current autumn roost. This would also apply to the construction phase of the Scheme, whereby if stone curlew chose not to forage close to the proximity of the Scheme, there are extensive foraging areas within the local surrounds, such that it would not result in increased competition with other birds.

With regards to topsoil stripping, vegetation removal and deterrents, please refer to paragraph 11.1.2 above.

M & R Hosier response to 8.49

The Applicant does not seem to realise that Stone curlews are not an arable bird species. They will use the bare arable ground for nesting during the breeding season if suitable short grassland is not available. However, being a grassland species (naturally breeding in short grassland) they will congregate in grassland areas which are used by livestock, to ensure a good food source. As such, it is the autumn grassland with livestock that attracts Stone curlew roosts, rather than simply bare arable fields. In all probability, there would be no significant effect on the supporting SPA population if the birds choose to vary the current autumn roost. In our opinion however, it is not

good practice for a Scheme which prides itself on biodiversity and ecology, to impose such measures on existing species rich ecology, to the extent that they vacate the area.

We disagree with the Applicant. Birds deterred from their usual foraging ground in the proximity of the Scheme, will move into the territory of other Stone curlew pairs and will therefore be in competition for food.

11.1.32 18.2.23 Measures to avoid disturbance on the Stone curlew roost

Comments received to Deadline 3 [REP4-036] item 9.5.1, the Applicants response is

"Measures to avoid disturbance of sensitive ecological receptors outside the limits of the scheme are considered suitable and proportionate to avoid disturbing the autumn roost of stone curlews".

There are no direct references to the Stone curlew roost within the OEMP. PW-BIO5 and MW-BIO8 only referencing nesting and not the impact of construction works on the Stone curlew autumn roost.

The Applicant has not undertaken any surveys on the Stone curlew roost that occurs within the location of Normanton Down Reserve, so we do not believe that they are in a position to comment on what effect the impact of construction activity within the location will bring. For the Stone curlews within this local area Normanton Down has become a significant gathering point as shown by the numbers of birds that RSPB have counted on county wide roost surveys.

We find it shocking that the Applicant can promote a scheme as enhancing biodiversity and ecology when it has a detrimental effect on the SPA population of breeding Stone curlews within the locality. It places tourism and recreation above protecting wildlife.

The Applicants response

In order to avoid duplication of surveys and additional disturbance of any breeding stone curlew within Normanton Down RSPB Reserve, survey data was obtained from the RSPB, this approach was agreed with both the RSPB and Natural England (Table 8.7 and 8.8 of Chapter 8 of the Environmental Statement [APP-046]).

The stone curlew plots present within Normanton Down RSPB Reserve are located over 500m from the DCO limits (as stated within paragraph 8.9.35 of Chapter 8 of the Environmental Statement [APP-046]), as such are unlikely to be disturbed by construction activities. However, continued consultation will be undertaken with the RSPB (which will monitor these plots), as set out in the August 2019 Revision 4 version of the OEMP [AS-085, PW-BIO5 and MW-BIO8]. The autumn roost was taken into account, as described in the HRSA Clarification Note submitted at deadline 7 as Appendix A [REP7-011].

M &R Hosier response to 8.49

As stated in our response to point 11.1.29 above. MW-BIO8 notes the sensitivity of Stone curlews to disturbance at distances up to 500m. Thus, there is a possibility of disturbance from construction to the Normanton Down birds that are located just over 500m from the Scheme. We note that the Applicant mentions that RSPB will monitor the Normanton Down plots. Can the Applicant clarify whether they will be providing RSPB with the funding to monitor the plots as the Stone curlew project has ended and there is no EU funding for monitoring. Will there be a commitment within the

DCO for the Applicant to provide RSPB with funding to monitor the existing Normanton Down Stone curlew plots as well as all the other mitigation plots that will be secured as a result of the Scheme?

OEMP PW-BIO5, under the heading Replacement Plot, and referring to the replacement plot near Parsonage Down.

***Monitoring**: An appropriate specialist shall undertake monitoring of Stone curlew at the retained breeding plots within 500m of the Scheme boundary (where public access is available/can be arranged) and at the newly created nesting plot, associated with the mitigation defined in the ES (Chapter 8). Where monitoring is undertaken for other purposes appropriate data will be used without duplication of survey.*

Contrary to the Applicant's comments, from the wording of this item, there is no commitment that the RSPB will be monitoring the Stone curlews, and there is no mention of Normanton Down being monitored. We would seek a commitment from the Applicant that the wording within this item also relates to Normanton Down and would seek to have it mentioned along with Parsonage Down. This is especially true as ES (Chapter8) was in respect of Parsonage Down and not to Normanton Down plots.

OEMP MW-BIO8, under heading Stone curlew monitoring

***Stone curlew monitoring:** An appropriate specialist shall undertake monitoring of Stone curlew at the retained breeding plots within 500m of the Scheme (where public access is available/can be arranged) and at the newly created nesting plot, associated with the mitigation defined in the ES (Chapter 8).*

Contrary to the Applicant's comments, the wording does not commit to RSPB monitoring the Stone curlews and there is no mention of Normanton Down plots or even the 2 new mitigation plots that have been agreed (in order for Habitat Regulations to be finalised). Furthermore, the wording only refers to "plot" in the singular and not the plural. With the OEMP as it stands, we would require a commitment from the Applicant that this wording will also take into consideration Normanton Down existing plots as well the mitigation plots that will be established. This is particularly important as ES (Chapter 8) was in respect of Parsonage Down and not Normanton Down.

In essence, in contrast to the Applicant's statement, there has been no updating of the OEMP measures PW-BIO5 and MW-BIO8 to reflect any of the recent changes at Deadlines 7 and 8, so there is a requirement for this to be rectified.

11.1.33 18.2.24 Improving resilience of the Stone curlew population as a whole is a completely different thing to providing mitigation for impact upon specific individual breeding pairs of birds. The proposed new plot at Parsonage Down is intended as direct mitigation for the displaced breeding pair; yet the two breeding pairs that may be displaced from their plots on Normanton Down due to the potential of promoted and increased recreational use of the byways have no direct mitigation. These are only noted by the provision of "plots to improve resilience of the SPA population". How can this be meeting the Habitat Regulations?

The Applicants response

The additional two stone curlew plots (i.e. entirely additional to the replacement plot at Parsonage Down and the enhancement plot at Winterbourne Down) are not intended as mitigation measures for individual pairs at a specific location. As stated in HRSA Clarification Note (Appendix A of the

Statement of Common Ground with Natural England [REP7-011] submitted at Deadline 7), the commitment to provide the additional plots is considered to provide confidence beyond reasonable scientific doubt that there would be no loss of nesting opportunities for stone curlew population in the event of any in-combination impacts from increased recreational usage of the existing byways adjacent to Normanton Down RSPB Reserve and thus no adverse effect on the SPA breeding population through increased competition. Highways England has already identified a selection of suitable locations for additional stone curlew plots (all of which have been confirmed by RSPB as suitable) and is in discussion with landowners who are interested in providing the plots. For the additional plots, the commitment by Highways England to provide additional plots provides the surety required for the Habitats Regulation Assessment.

M & R Hosier response to 8.49

We now understand from reading Natural England's SoCG 8.6 (1) at Deadline 7, page 13 item 3.16, that:

"Originally it was perceived that a visitor monitoring strategy would be required in order to correlate any disturbance to breeding stone curlew within the Normanton Down RSPB Reserve to visitor levels.

As stated in the Natural England response to the Examining Authority's Second Written Questions, discussions regarding any monitoring strategy have been superseded by the commitment from Highways England to provide two additional Stone curlew plots, irrespective of visitor monitoring data."

Therefore, in all but name, the Applicant has already committed to the additional plots that may have been required to mitigate disturbance of Normanton Down SPA breeding pairs, have been already been committed to by the Applicant, rather than just identifying areas that would be suitable further down the line (in the event that monitoring did show that Normanton Down SPA breeding pairs were negatively impacted by recreational disturbance).

As previously stated, the proposed Winterbourne Down Stone curlew plot was always a "net gain" as a result of the Scheme, and would never have been as a mitigation for Normanton Down Stone curlew plots.

11.1.34 18.2.25 The second consultation document placed the map legend over the top of Normanton Down Reserve thus obscuring it from the map. If Normanton Down had truly been taken into account, the Reserve would not have been obscured, especially as within the literature, there was reference to adverse effects as a result of construction and operational activities.

The Scheme has not changed the location of the adjacent byways 11 and 12, but it has promoted the southern part of the WHS for roaming and exploring which through combination effects has put the SPA Stone curlew population at Normanton Down at risk.

We are unable to see where the design of the scheme has taken into account the breeding Stone curlew population at Normanton Down.

The Applicants response

The presentation labelling of a figure in a public consultation document was unrelated to the environmental assessment. Normanton Down Reserve has been taken into account throughout the

ecological assessment as reported in chapter 8 of the Environmental Statement [APP-086] and shown on ES Figure 8.3 [APP-149].

As stated within the response of 18.2.25 of the Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003], the Scheme would not change the location of the adjacent Byways. The original proposal was to provide enhanced fencing at Normanton Down RSPB Reserve, to provide increased security against illegal trespass and therefore avoiding potential adverse effects on the breeding population from the possible in-combination disturbance effects associated with the removal of the A303 as a barrier to human access along the Byways. Following confirmation that the landowner has refused the offer of enhanced fencing (as stated in HRSA Clarification Note (Appendix A of the Statement of Common Ground with Natural England [REP7-011] submitted at Deadline 7), the additional plots are considered to provide confidence beyond reasonable scientific doubt that there would be no loss of nesting opportunities for stone curlew population in the event of any in-combination impacts from increased recreational usage of the existing byways adjacent to Normanton Down RSPB Reserve and thus no adverse effect on the SPA breeding population through increased competition.

The design of the Scheme has taken into account the breeding stone curlew population at Normanton Down. One of the benefits of the selection of the northern route for the Winterbourne Stoke bypass as the Preferred Route for the Scheme was to move the alignment beyond the disturbance distance from Normanton Down Reserve and as close as practicable to the existing A303, an area which is unfavourable for stone curlew to nest due to the proximity of existing traffic. The design of the Scheme in a deep cutting leading to the western portal will also ensure that there will be no visible traffic from Normanton Down Reserve, a reduction of visual disturbance compared to the existing situation.

M & R Hosier response to 8.49

We stand by our comments that the Applicant obscured Normanton Down Reserve from the second consultation booklet, by placing the map legend over the top of it. Respectfully, the majority of people would only have read the consultation booklet and would not have read a fraction of the numerous other reports produced. Therefore, the consultation booklets play a key role in the public's understanding of the Scheme.

The Scheme has promoted the southern part of the WHS for roaming and exploring within the consultation booklet. Therefore, it was the Applicant themselves that have added to the in-combination effects on the Normanton Down Stone curlew breeding Reserve. We refused the Applicant's offer of enhanced fencing, as it would not have prevented trespassers from accessing the Reserve (having already been promoted by the Applicant's consultation booklet). The Applicant is already aware that fencing does not deter trespassers from entering the area, as noted within their reports. Fencing robust enough to prevent trespass would not be permitted within the WHS and would be costly to maintain. Under the Habitat Regulations, new fencing on its own would never have been sufficient to provide confidence beyond all reasonable doubt that there would be no loss of nesting opportunities for the SPA Stone curlew population.

The two extra mitigation plots will ensure no in-combination impacts from increased recreational use of the byways on the SPA population as a whole. However, they do not mitigate the impact on the breeding Stone curlews on Normanton Down. The Applicant's Scheme is billed for biodiversity and ecology, yet they damage as much in their construction as they create in their legacy.

11.1.35 18.2.26 As previously stated we are unable to reference item 30.1.9 in the Comments received to Deadline 3 [REP4-036] as the item does not exist.

The Applicant's oral submission for ISH7 related to biodiversity [REP4-035] omitted comments made by M & R Hosier which were also submitted at Deadline 4.

We stand by our comments that the Applicant did not "dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation" as required within the SIAA.

We are pleased to note that under the wording of "..a package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed Scheme." But will reserve judgement until we can assess what is proposed for the Normanton Down pairs of breeding Stone curlews.

The Applicants response

Please see response to item 6.2.20 in the Comments on any Further Information received at Deadline 5 and 6 [REP7-021]. Please refer to the response to paragraph 11.1.33 above with regards to disturbance impacts.

M & R Hosier response to 8.49

As previously stated, we do not have confidence that OEMP measures PW-BIO5 and MW-BIO8 will provide adequate protection of Stone curlews during the period of tunnel construction. We acknowledge that the Applicant has considered the in-combination recreational effects, see our comments relating to paragraph 11.1.33 above).

OEMP measures remain unaltered following our comments made at [REP4-036] items 9.5.1, 9.5.3 and 9.7.17.

There is a need to clarify:

Monitoring of existing Stone curlew plots for disturbance to breeding pairs on Normanton Down during construction, as well as Parsonage Down.

Requirement for monitoring any impact on Normanton Down breeding success as a result of any recreational disturbance to breeding pairs once the Scheme is in operation.

Requirement to ensure monitoring of all new enhancement plots by RSPB is secured.

Requirement for any Stone curlew chicks within the area to be monitored and protected from construction traffic.

11.1.36 19.2.27 We note the Applicant's comment that "the Great Bustard Group contacted and were responded to during the 2018 archaeological surveys and ground investigation works (GBG personal communication)." However, we would be interested to see what information the Applicant supplied to the GBG as a result of this communication in respect of mitigation for the impact of the ecological surveys that were to take place during the 2018 breeding season.

Please can we have a copy of the mitigation measures that they had prepared prior to the surveys taking place?

We are pleased that the Applicant is finally in discussions with the GBG. We hope that discussions will result in improved changes to the OEMP [REP4-020] in relation to avoiding impacts on the Great Bustards during construction, as well as removing the impact on the Great Bustard breeding grounds within the scheme.

The Applicants response

See Highways England's response to Second Written Questions on Biodiversity, ecology and biodiversity, specifically Ec.2.4 [REP6-024]. Surveys for the presence of breeding birds were carried out by Ecology Clerks of Works prior to the commencement of the works, however great bustards were not recorded nesting within the 500m (radius of the survey). As such, no further mitigation / consultation was required. Items PW-BIO5 and MW-BIO8 of the OEMP [AS-085] have been updated to confirm that consultation will be undertaken with the Great Bustard Group with regards to suitable mitigation measures to be installed in order to avoid disturbance impacts on any nesting great bustards identified in proximity of the Scheme.

M & R Hosier response to 8.49

Referenced [REP6-024] Ec.2.4. We welcome the fact that the Applicant is taking on board the Great Bustard species. However, under 1) "…*must be undertaken under a method statement, where specialist supervision may be required."* We would like to point out that the only specialists in the GB species are members of the GBG, as this is the GB reintroduction project. To clarify, the GBG need to be working closely alongside the ECoW during the breeding season, rather than just being brought in at a later date. With this in mind and to avoid the issues that happened during the 2018 surveys, the GBG should accompany the ECoW at their regular visits to assess the Scheme, so the stated liaison with the GBG on a case by case basis can begin promptly. Great Bustards, despite their size, can be difficult to locate when they are on their nests.

Under item 5), the Applicant states that precise anti-disturbance measures to be implemented, will be on a case by case basis and they do not consider it appropriate to mandate particular measures in the OEMP at this stage. Our concern is that if such measures are not discussed with the GBG at this stage, these provisions will be overlooked until they are needed, resulting in reactionary behaviour. The problem with this is that it may take some time to put suitable measures in place, instead of having specific scenarios with the necessary deterrents close to hand.

The Applicant remarks that surveys were carried out for the presence of breeding birds, but did not discover any GB nesting within the 500m radius of the survey. However, the survey was carried out by ECoW who did not have any knowledge of the GB species and had not spoken to any member of the GB group to gain understanding of the birds' breeding habits. Therefore, it is highly unlikely that they would have spotted any GB, as even the trained GBG members can struggle to find birds when they know they are at the nest. The 2018 GB breeding season will have suffered as a result of surveys carried out in the location of their breeding sites.

We did ask for a copy of the mitigation measures that the Applicant had prepared ahead of surveys taking place (should it be needed). As the Applicant has not provided this, we would suggest that no such preparation work had been carried out. Did the GBG approve the mitigation measures, as they are not aware of any such documents being provided.

We are pleased that PW-BIO5 and MW-BIO8 have been updated and consultation will be undertaken with the GBG. As the species is new and few individuals have GB experience, we would suggest that any breeding bird surveys carried out by the ECoW should also include a member of the GBG.

11.1.37 18.2.29 We are pleased to note that the Applicant is discussing the habitat requirements, behaviour and requirements of the Great Bustards so that there will be no impact on the species during construction and once the Scheme is in operation.

18.2.30 The Applicant has never provided anyone with Great Bustard nesting locations [APP-157] despite requests. The Great Bustard species was not included in the breeding bird survey to inform the Scheme [APP-255]. As such, we do not agree with the Applicant's statement that this information, together with the two referenced points within the Environmental Statement, is considered suitable to determine the baseline and the impact of the Scheme. We suggest it highlights that more dialogue needed to have taken place with the Great Bustard Group when these reports were being compiled.

Paragraph 3 relating to PRoW shows a lack of understanding of the behaviour and requirements of the Great Bustard species.

Whilst the fencing along the PRoW's may separate users of the paths, provided it is fenced with barbed wire and stock netting, it will not form any visual barrier for the Great Bustards unless hedging is also proposed. The Applicant has already stated in point 18.2.28 above "…that although the disturbance distance for great bustard has not been as well studied as that for stone curlew, the species is considered to be similarly sensitive to disturbance from human activity" It is both the sight and sound of general public and dogs that will be using the PRoW's that is the issue. It is relevant to note that the Great Bustard Group have secured funding and support by Wessex Water and have planted hedging around one of their release sites. This has been needed to reduce the visual disturbance caused by users of the PRoW (Pers Comm).

It is not the nesting sites of the Great Bustards that are the problem, it is the location of the new PRoW's and new Longbarrow Roundabout embedded within the Scheme that is the issue. There are no measures embedded into the Scheme design to mitigate for the increase in numbers of both PRoW and PRoW users bringing more people and dogs into direct conflict with nesting and feeding Great Bustards.

The Applicants response

See Highways England's response to Second Written Questions on Biodiversity, ecology and biodiversity, specifically Ec.2.4 [REP6-024].

Any reference to great bustard has been redacted from the breeding bird survey as the information is confidential [APP-255]. Due to their rarity nest sites have been treated with the same confidentiality applied to Schedule 1 birds such as stone curlew. Should great bustards have been recorded during the breeding bird surveys or other surveys, these would have been recorded and mapped accordingly. At the time the Environmental Statement was produced, the survey data and data provided by the Great Bustard Group was used to inform the Schedule 1 and Annex 1 Bird Species Figure [APP157]. As stated within the response to 9.7.20 of the Comments on the DAMS and on any further information requested by the ExA and received to Deadline 3 [REP4-036], it is only necessary to carry out site-specific surveys for species and habitats where there is a lack of suitable

data to inform an environmental assessment. With rare bird species that are easily disturbed and for which there is ongoing monitoring in place, it is not appropriate to duplicate survey effort. When the Great Bustard Group was first approached in October 2017, there was no request to carry out surveys in addition to the data the group provided. Natural England and RSPB were satisfied with the scope of the bird surveys carried out to inform the environmental assessment.

With regards to PRoW, please refer to the response to 9.7.21 of the Comments on the DAMS and on any further information requested by the ExA and received to Deadline 3 [REP4-036], where it was stated that the potential increase in recreational disturbance is unlikely to have a detrimental impact on the local population of great bustards. However, they are less likely to nest within the close proximity to the PRoW. This would not reduce the availability of foraging and nesting opportunities within the Wessex area, especially as the new PRoW are all close to the highway and as such are in areas which would be unfavourable for great bustard to nest. The new PRoW would be fenced to prevent people and dogs from entering adjacent private land and to separate PRoW from livestock in grazed areas of the Scheme. The nature of fencing to be implemented on the new PRoW is set out in the OEMP. The measures would avoid disturbance of nesting or foraging great bustards. Dialogue with the Great Bustard Group will continue during preliminary works and construction, as set out in the OEMP [AS-085] PWBIO5 and MW-BIO8.

M & R Hosier response to 8.49

As previously stated and recorded during ISH on Ecology, neither Natural England nor RSPB have an understanding of the behaviours of the GB species. They were therefore, not in a position to be able to accurately comment on the suitability of the environmental assessment of the GB species. Added to this, the Applicant had not discussed scoping with the GBG, to establish whether their surveys would overlap any of those that the GBG may have already undertaken. As previously stated, the GBG have struggled to get the Applicant's ecologists to discuss issues with them.

We disagree with the Applicant that there will be no detrimental impact on the GB population due to the potential increase of recreational use on newly established PRoW. As the Applicant has noted in PW-BIO5 and MW-BIO8, Great Bustards are prone to disturbance up to a distance of 500m. Where proposed new byways are within this radius of known GB breeding areas, this will have a negative impact on the species. Similar to Stone curlew, GB are also "site specific" in their nesting areas and the Scheme is encroaching on these areas. The Applicant states that the PRoW will be fenced to prevent public access to private farmland. However, the Applicant is already aware that byways alongside farmland are not secure from trespass. At the very least, fencing posts would need to be taller than regular fencing heights, with stock netting and 3 strands of barbed wire to keep out both people and dogs. Added to this, the Applicant has not read our question carefully and taken on board that it is the sight and sound of PRoW users with dogs that is also a major issue. For adequate mitigation for the GB species, there would need to be a commitment for hedging along the PRoW to provide GB with adequate screening and mitigate disturbance. Discussions are needed to establish the location of proposed PRoW in relation to GB nesting areas and their distance from the PRoW.

There is a need for the Applicant to discuss not only PW-BIO5 and MW-BIO8 with the GBG, but also the provision of suitable mitigation for the species once the Scheme is in operation. We can see no locations within the OEMP that ensure screening along PRoW's will be provided to mitigate impact on Great Bustard disturbance.

11.1.38 18.2.32 All the species mentioned as potential users of the green bridge 4 are those that are already within the area. We therefore challenge the net gain within this location, other than for chalk grassland invertebrates that are suited to short early stage calcareous grassland. This is backed up by the lack of hedge planting and intention to manage the area for a range of grassland heights.

We still believe that in addition to the chalk grassland proposed that for the Scheme, provision is also made for farmland birds (as per Porton to Plain project) to deliver a number of biodiversity benefits as per WHS Management Plan 8.5 Nature Conservation 8.5.4 (Policy 3h/Action 59).

The Applicants response

Please refer to the response to 9.7.9 of the Comments on the DAMS and on any further information requested by the ExA and received to Deadline 3 [REP4-036] which highlights that hedgerows, shrubs or trees would only be planted within the WHS for specific mitigation measures, as planting of hedgerows may have an adverse effect on heritage within the WHS. As detailed in the OEMP, item MW-LAN4, planting in the WHS will not be carried out except where required for ecological or visual mitigation and providing the planting does not adversely impact on visual relationships between monuments conveying the attributes of OUV of the WHS.

It should be noted that extensive hedgerows have been considered for inclusion as part of the Scheme outside of the WHS, as illustrated in the indicative Environmental Masterplan [APP-059].

M & R Hosier response to 8.49

We understand the inclusion of OEMP MW-LAN4. However, as the Scheme itself will be such a visual intrusion within the western part of the WHS, we would suggest that low hedge planting will be ecologically beneficial and help to mitigate the harsh impact of the infrastructure within the WHS.

Respectfully, users of the PRoW will naturally be drawn to the Scheme within this area rather than the monuments that are either below ground or not easily noted due to their distance away in the landscape. As with the other hedges planned for areas outside the WHS, there could be a commitment within the OEMP for any mitigation hedges in the western half of the WHS to be managed to prevent them becoming too tall and interfering with the visual relationships between monuments.

11.1.39 18.2.33 Early stage successional calcareous grass would always overtime develop into a closed sward. Therefore, it would be the sward and flora heights that would be managed. Bare ground and rocks (?) other than mole hills and farm livestock activity, would only be sustained by frequently breaking up areas of the sward.

In respect of brush harvested seed, please see our response to item 9.7.14 within our Comments received to Deadline 3 [REP4-036]. With early planting as per OEMP [APP-267] MW-LAN4 and the use of reputable seed merchants as used at Normanton Down, this would be possible and would reduce the carbon footprint by sourcing local seed suited to the area.

The Applicants response

Please refer to the response to 9.7.13 on Comments on the DAMS and on any further information requested by the ExA and received to Deadline 3 [REP4-036] which states that selective use of some

wild-harvested seed could be included in the detailed landscaping scheme at some locations – this would be finalised during detailed design and would be set out within the Landscape Scheme.

M & R Hosier response to 8.49

We would suggest that for the Scheme to blend into the surrounding landscape of the WHS, (as the Applicant intends), SPA brush harvested seed is used within the area of the western portal and green bridge 4. Existing grassland in the surrounding area has been created by local farmers under government ecological schemes which have a requirement for locally sourced native seed, as it is in keeping with the area. As the detailed design phase will not be carried out with input from local farmers who have an understanding of the area we would hope the Applicant takes on board some of our comments on the chalk grassland.

11.1.40 18.2.33 The Applicant has not replied as to what the "other objectives" were, referred to under point 5 in relation to mowing. We would like to know how the Applicant proposes to mow and collect the cuttings from the 2.5 m tops of the deep cutting embankments. With regard to the A354 Weymouth Relief Road, we note that it was managed by mowing, but wonder how often this was carried out and if it is still being mowed currently. As stated previously, the A303 tunnel project within the WHS can do better by building on the lessons learned from Weymouth.

The Applicants response

The mention of "other objectives" was in relation to management of scrub encroachment as stated within response 5 to Ec.1.7[REP2-027]. In this regard it might be necessary to clear scrub from grassland areas for the following reasons:

• Water Quality - ensuring that areas of chalk grassland that have been designed as infiltration areas as part of the drainage system to enhance water quality are maintained to be free from scrub, as illustrated within the indicative Environmental Masterplan [APP-059] (specifically highlighted as EHF – Water quality);

• Landscape and visual - ensure that scrub does not encroach into suitable grassland areas from adjacent scrub planting;

With regards to the mowing of the 2.5m tops of the deep cutting embankments, it would not be suitable to confirm the management of the top 2.5m of the chalk grassland at this stage of the Scheme, however it would be managed either under a mowing regime or grazed.

Grassland on the A354 Weymouth Relief Road continues to be managed by both mowing and by grazing since it opened in 2011 although the method and frequency of management differs between areas (Mr P Sterling, formerly Dorset County Council, now Butterfly Conservation, personal communication).

M & R Hosier response 8.49

We thank the Applicant for clarifying the "other objectives" of the Scheme and we now have a better understanding.

The Applicant comments that the management of the top 2.5m of the deep cutting embankments will be confirmed at a later stage. However, we would hope that they have noted our remarks concerning the safety aspects of mowing.

We thank the Applicant for providing us with more information on the management of the Weymouth Relief Road. It would be interesting to know how they manage the steep embankments in relation to mowing and find out how steep their embankments are.

Where possible, with imaginative design, the Applicant can run the design process of the Scheme alongside the grassland management measures, thereby ensuring that no "awkward to manage" areas with a need for scrub management are created (as noted above under "other objectives"). As it stands, the lack of commitment from the Applicant to detail areas for grazing, may pose future problems in terms of appropriate infrastructure. We believe that Natural England have also raised this point.

11.1.41 18.2.34 As previously mentioned, it is difficult to deduce whether the bare ground referred to within the early successional habitat will be maintained by mole action and farm livestock, or whether the Applicant intends to build in the creation of bare ground as part of the habitat.

We note that as with many other criteria within the Scheme, the main works contractor is responsible for preparing the detailed landscaping scheme prepared under OEMP (MW-LAN1).

However, we would suggest that if the Applicant is unclear as to how the landscaping and management should be proposed, the main works contractor will be given free rein to create whatever they decide is easiest, as the guidance is minimal.

From our experience we agree that it is easy to establish calcareous grassland from seed in autumn. The skill comes in managing the various "ugly duckling" stages that the process goes through. As previously stated, calcareous grassland habitat is a lengthy procession to species rich status. Many flora species lay dormant in the soil for years before they show and this is the benefit of arable reversion over the quicker fix of minimal topsoil with a lower seedbank.

We would be interested to read about the chalk grassland creation methods and management for the Weymouth Relief Road. Please can the Applicant provide me with a link to this so we may better understand their references?

The Applicants response

As stated within MW-LAN1 of the OEMP [AS-085], the contractor will be responsible for producing the LEMP, however this will be subject to approval by the Secretary of State under Requirement 4 of the DCO. In addition, the required detailed Landscaping Scheme is also subject to approval by the Secretary of State under Requirement 8 of the DCO.

With regards to the Weymouth Relief Road, Highways England has been in consultation with Butterfly Conservation (Mr P Sterling, personal communication) with regards to the creation of the chalk grassland to be created as part of the Scheme. The relevant principles can be viewed on the Butterfly Conservation website, at the below location:-
https://butterflyconservation.org/sites/default/files/2019-06/building_sites_for_butterflies.pdf

Butterfly Conservation has a butterfly monitoring transect within that scheme and has shown that 30 species of butterflies have been recorded up to 2019.

https://butterfly-conservation.org/our-work/conservation-projects/buildingsites-for-butterflies/counting-the-butterflies-on-the-a354

Different species of plants differ in their persistence in the soil seedbank, so the number of species of characteristic of chalk grassland which appear in arable reversion depends on the length of time the land has been in arable cultivation and the proximity of unploughed chalk grassland which may disperse seeds onto arable land. The high nitrogen and especially the high phosphorus content found in arable soils are unfavourable for chalk grassland although nutrient leaching reduces this over time. The approach used at the A354 Weymouth relief road was to apply a very thin layer of soil, with associated seeds and other organisms onto a chalk substrate in the cuttings. Within the Scheme there are expected to be a few areas where topsoil will be retained in situ and arable reversion could be used there if considered practicable, feasible and appropriate. This would be confirmed during detailed design.

M & R Hosier response to 8.49

We thank the Applicant for the information relating to the chalk grassland creation at the Weymouth Relief Road. We are pleased to read the comments relating to persistence of species within the seedbank for arable reversion areas and we would concur. We also concur with nitrogen and phosphate levels during the early stages of establishment. We also note that the Applicant has recognised that there will be some areas where topsoil would be retained in situ, and would suggest that the area between the western portal and green bridge 4 would be one of these locations due to its position within the WHS. This area would lend itself to arable reversion using SPA brush harvested seed, which would then blend into the existing chalk grassland reversion that surrounds the area. There is an existing floral enhanced grass margin that already runs alongside the A303 verge in this location which could form part of the arable reversion area.

11.1.42 18.2.35 We are still curious as to how botanical monitoring of the chalk grassland created during construction, will bear any relation to the chalk grassland to be created over the minimum topsoil following the landscaping. Will the screening bunds around the working compound be predominantly chalk subsoil with minimal topsoil? From the reports we were lead to believe that the chalk subsoil and the topsoil were to be stored separately. Please can you provide us with additional information?

Perhaps botanical monitoring is no more than controlling the vegetative growth on the screening bunds, after identifying the species that are present? As with all agricultural land management, you can do the same thing a hundred times, and on each occasion you will get a different result.

Therefore, although monitoring would be an interesting exercise, we do not understand how this will ultimately help with the management of the individual chalk grassland areas. Each of the landscaped areas within the Scheme will be a different mix of chalk, topsoil and seed bank, so they will all behave individually in respect of vegetative growth. What will the chalk grassland mix planted on the bunds be, as this will ultimately add to the seed reservoir held within the topsoil?

The Applicants response

The botanical monitoring will inform the management regime which will lead to the progressive development of species-rich chalk grassland over time. It will be produced by the Main Works contractor in consultation with Natural England as stated within MW-BIO13 of the OEMP (an updated version of which is submitted at deadline 8). Parameters that may trigger further management could include the following:

• percentage cover of scrub or injurious weeds within certain habitat types;

• percentage cover of bare ground;

• the establishment of sown species; and

• the frequency of indicator species.

This would indicate, for example, whether increased frequency of mowing or grazing was required in particular areas, or whether weed control was needed in areas of arable reversion or other areas. On screening bunds and topsoil storage areas monitoring would be mainly to identify the need for management of injurious weeds or other species that would potentially cause nuisance.

The composition of the seed mix for the permanent grasslands has not been determined at this point. It will be confirmed along with the target conditions of the specific plots within the Landscape and Ecology Mitigation Plan, which will be produced by the Main Works contractor. As described in the OLEMP [APP-267] and in response to 18.1.6 of the Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003], the objective will be to promote heterogeneity within the habitat through the creation of a mosaic of early stages of successional calcareous grassland communities, ranging from sparsely vegetated bare ground and rock through to closed, species-rich swards, such as the calcareous grasslands traditionally present in areas of Salisbury Plain and Parsonage Down. Establishment of vegetation on temporary areas may be carried out by seeding. Where it does not conflict with other requirements, opportunities would be sought to seed or allow regeneration of vegetation of benefit for insect pollinators, farmland birds and scarce arable flora.

M & R Hosier response 8.49

We find it hard to comprehend the Applicant's response. We understand that the main works contractor will be carrying out vegetation monitoring during the construction phase, to establish the management regime of the chalk grassland.

We believed this vegetation monitoring is to be carried out on the bunds of excavated materiel, both topsoil and chalk subsoil. However, on reading the Applicant's response, there is mention of the screening bunds and topsoil storage areas being monitored for injurious and nuisance weeds alone. We therefore, deduce, that the vegetation monitoring will be on the Scheme areas prior to the commencement of construction works, before topsoil has been stripped and stockpiled. Alternatively, does the Applicant intending to monitor the established temporary areas of vegetation (that do not conflict with other requirements). Presumably, these are the mitigation areas the Applicant refers to in relation to the quick growing crops, to deter Stone curlews from nesting.

Vegetation growth is determined by many factors. We do not see how monitoring the vegetation on either the heaps or the land prior to the stripping of topsoil, will provide valuable information regarding the landscape management once the Scheme is completed. The landscaping of the Scheme will be thin layers of soil over chalk, but this is not represented by monitoring the vegetation

during the construction phase, where the soil depth will be considerably greater in stockpiles. In addition, how can this monitoring determine grazing frequency when the construction area will not be grazed to see how the vegetation responds?

As previously stated, we believe that brush harvested seed should be used for the Scheme as it is representative of the area. The areas chosen for brush harvesting would reflect the specific sites of the Scheme. It is possible with planning, to obtain enough brush harvested seed, especially as the intention is to landscape areas as and when they become available.

We still struggle with the Applicant's notion of early stages of successional calcareous grassland. This is not a final destination in the establishment of chalk grassland, but only a stage to closed species rich swards. Will the Applicant require areas to be re-ploughed frequently to provide the bare ground with rock?

11.1.43 18.2.35 We now understand that it is the Applicant, and not the main works contractor that has to provide the detailed landscaping scheme which will be submitted for approval under Requirement 8 to include an 'implementation timetable for the landscaping works' It is the LEMP that is required to be produced by the main works contractor, although it will be Highways England acting on behalf of the Authority that will have the final decision on what is agreed. This seems a very long winded approach, when the Applicant could just complete the whole body of work themselves, especially as they will have done the survey work ahead of the Scheme.

The Applicants response

The detailed landscaping scheme, prepared by or on behalf of the Applicant, is required to be approved by the Secretary of State, in consultation with Wiltshire Council and Historic England (where required) in accordance with Requirement 8 of the draft DCO. The main works contractor will need to submit a Landscape and Ecology Management Plan (LEMP), and the OEMP, revised at deadline 8, reflects that the LEMP will now also require the approval of the Secretary of State, rather than the Authority (Highways England).

Furthermore, the Applicant has committed to a detailed list of design commitments, design principles and established a procedure for stakeholder consultation on the detailed design of the Scheme, all under an overarching design vision of the Scheme in the updated draft Outline Environmental Management Plan [REP6-012, a further revised version of which is submitted at deadline 8].

M & R Hosier response to 8.49

We thank the Applicant for clarifying the situation.

When the Applicant refers to stakeholder consultation, we understand that this will involve the statutory stakeholders ie: Natural England, RSPB and Butterfly conservation, but will not have any input from local farmers who could offer practical and local knowledge to the mix.

11.1.44 18.2.36 By leaving the decision for areas to be grazed until the detailed design process, there will be no feedback from farmers/landowners, as to where would be the most appropriate locations to site water troughs and gates. The locations decided by the Applicant may not be practical or provide the best land management within the areas.

We still believe that for the Scheme to deliver the biodiversity benefits, decisions on mowing/grazing infrastructure and locations of scrub for composting mowings need to be built in at this stage and not left main works contractors. If Highways England, as the Authority, has the ultimate oversight of the documents produced, then why do they not produce the body of work, especially as they have carried out the survey work leading up to the Scheme?

The Applicants response

The contractor will be responsible for designing the scheme and, as such, it is not appropriate for Highways England to design this element. It will be a contractual requirement for the contractor to identify those areas where grazing is suitable for calcareous grassland management and to provide infrastructure on those plots which allows for grazing, including:

- stock-proof fencing,
- water supply,
- water troughs,
- access points and
- corralling areas.

These will be defined within the LEMP to be produced during the detailed design phase. At this point, the Agricultural Liaison Officer (ALO), identified within table 2.1 of the OEMP (refer to the deadline 8 submission) will be in place. As stated in Table 2.1 in the updated OEMP, the ALO shall liaise with affected landowners regarding the location of accesses and grazing infrastructure where calcareous grassland management is required. As the Authority, Highways England has overall responsibility for the review of the contactors design proposals and recognises that the successful delivery of biodiversity benefits is essential for the success of the Scheme.

M & R Hosier response to 8.49

The contractor is responsible for designing the Scheme, including chalk grass management with necessary infrastructure. The contractor will be carrying out the design, following the brief within the parameters of the OEMP and LEMP. This will be backed up by discussions with the statutory organisations. However, this will not include consultation with local farmers who know the landscape with its associated management traits. With respect, it will be the local farmers who will be ultimately managing the Scheme that the contractors will be delivering, so it follows that we should help to enhance the vision.

11.1.45 18.2.37 The Applicant is merely removing the views of the traffic and replacing them with additional views of the modern infrastructure in the form of the entrances of the green bridge 4, the sides of the cutting and the western portal and the new Longbarrow junction. The visual links between the monuments are already evident so do not need to be maintained. Added to this, there

is the presence of the four lanes of carriageway in a previously undisturbed agricultural part of the WHS as well as the reworking of the landscape at the top of the deep cutting. Figure 4, CH03, Winterbourne Stoke Crossroads Long barrow. This shows the new Longbarow junction, which we believe to be more obtrusive in the landscape than the Applicant has depicted. The Winterbourne Stoke Long barrow does not look out onto any other monuments within this area. Figure 5, CH04, Winterbourne Stoke Crossroads round barrows. The views are confusing with no separation between the baseline and the new proposed views. The photomontage just indicating views south and east. Figure 7, CH06, The Diamond Group. This is taken from a viewpoint that will not be accessible to the general public because it is on our farm and not from a PRoW. In addition, all of the Diamond Group except for the Longbarrow, are is below ground, as is Wilsford G1 the location of which is not shown in the photomontage. G1 would have the new visual intrusion of the western portal in its sight line which it currently does not have.

The Applicants response

The Applicant respectfully does not agree with the suggestion that the Scheme is merely replacing views of traffic with modern infrastructure. The removal of vehicles from the existing A303 and their placement either in tunnel or cutting is a significant beneficial change to the visual context of the landscape. This is because from across the surrounding landscape, the traffic and portals will not be visible because of their siting in cutting, beneath people's line of sight and that Green Bridge no.4 will be sited to replicate existing ground levels (OEMP D-CH23) [AS-086].

The Applicant respectfully does not agree that the visual links between monuments are already evident. This is not supported by the assessment and evidence and is not the case, such that Green Bridge no4 will reconnect the landscape containing the Diamond Group and Winterbourne Stoke Crossroads barrows, as set out in paragraph 6.8.5 d) of APP-044.

Similarly, to state that the Scheme will be located in a previously undisturbed landscape is not supported by the evidence and is not the case. The Scheme is located in proximity to the existing A303 which already defines the highways corridor across the landscape. APP- 077 Historic Landscape Character Areas identifies the western approach cutting and Longbarrow roundabout as being across "re-organised fields", which are described in APP -215 as modern fields which represent a re-arrangement of the original downland (ref HWI2889 and HWI2963).

The re-working of the landscape at the top of the cutting will be undertaken in line with the OEMP which requires earthworks to be rounded and to provide a natural appearance and reflect the surrounding topography (MW-LAN5) and therefore the landform will be integrated. In combination with the proposed chalk grassland, this will be a beneficial change to the land cover from the existing agricultural land uses, through re-introducing a valued land cover type.

There are no formal entrances to Green Bridge 4, it is part of the western approach cutting, with the Green Bridge reducing the visibility of the road and vehicles along with establishing improved inter-visibility across this part of the WHS and existing monuments. The OEMP sets out a number of key commitments (D-CH4; D-CH10; D-CH11; D-CH23; D-CH24; D-CH25 and DNOI1) to integrate the structure within the landscape and provide a restrained and elegant crossing.

Similarly, there are commitments and key principles for the western approach cutting, western portal and Longbarrow junction within the OEMP, all with the purpose of achieving the OEMP design vision (OEMP AS-085, key principles P-PWS04 and P-PWS02 and key commitments D-CH5, D-CH9, C-

CH13, DCH16, D-CH8, D-CH28 and D-CH21) and in respect of Longbarrow junction (OEMP AS-086 section 4.2.9 and P-PWS06).

Figure 4, CH03 [APP-218] is accurately depicting Longbarrow junction because it has been created via the methodology provided in APP-231, which relies on surveyed data and the use of the Scheme model. The image has been based upon the Scheme design indicated on the Environmental Masterplan [APP-059] which is designed to integrate the Scheme within the landscape, such that it would not be obtrusive. This is because the A303 would be in cutting which is why it is not visible. The slip road between the A303 and green bridge 3, and vehicles crossing the green bridge would be visible, but at over 600 metres, in comparison to immediate and close- range views of vehicles on the existing A360 and at Longbarrow roundabout. Therefore, there would be an improvement to the view from the Winterbourne Stoke Crossroad barrows.

Figure 5, CH04 [APP-218] - are computer generated images which have been undertaken to illustrate the Scheme and are not presented in the same format as the photomontages. Please refer to photomontages APP-137 and APP-138 for a comparison between the existing and proposed views.

Figure 7, CH06 [APP-218] - the photomontage clearly shows the beneficial change resulting from the removal of vehicles on the existing A303 and has been produced as per the method set out in APP-231.

In respect of Wilsford G1, The HIA [APP-195, page 457-8], acknowledges there would be long-distance views of the cutting. But the removal of the traffic from the immediate north of W1 (the existing A303) would improve the asset's setting. It is assessed that overall, the Scheme would have a Neutral effect (derived from a Negligible Negative Change and a Minor Positive Change to a Very High Value asset, resulting in both Slight Adverse and Moderate Beneficial effects).

M & R Hosier response to 8.49

The Applicant chooses to concentrate on how much of the Scheme can be seen within the WHS and plays down the fact that there are still surface carriageways in this same area of the WHS. The road may not be visible from a distance, in both north and south directions, but it will still be seen at both close and far perspectives from the east and west. The Applicant notes that because the road will pass beneath the green bridge, it will not be an intrusion. We disagree with this assumption as the eye is drawn to moving objects rather than static objects. Added to this, there will be the noise from the carriageway, which reports note to be slightly increased in this location.

Respectfully, we disagree that the small area of the green bridge 4 adds to the visual connection between the Diamond Group and the Winterbourne Stoke Crossroads barrows. From the location of the green bridge, it is not possible to see the Winterbourne Stoke Crossroads barrows as they are obscured by Winterbourne Stoke Clump (wood). The Diamond Group has only one monument that is above the ground, and from the green bridge, this longbarrow is not readily evident unless you know what you are looking for. In addition to this, the Applicant has produced a series of views taken from green bridge 4 [AS-081], [AS-083] and [AS-084] which clearly show the negative visual impact of the Scheme to users of the PRoW. In our opinion, the Applicant's views also show the negative impact of Scheme on the intervisibility of the monuments within this location.

We take on board the Applicant's comment that the location of the proposed Scheme is on "re-organised fields" ie: modern fields which represent a re-arrangement of the original downland. However, as demonstrated by the finds collected during the various archaeological surveys, the "re-

organised fields" are currently preserving the archaeological remains that form part of the WHS. Once construction work begins, the whole of the area of the deep cutting will have all its archaeological remains removed. If we are lucky, some of it will be recorded. However, the remainder will be spread over Parsonage Down and this will nullify any future archaeological investigations and understanding in that area. Hence, two areas will be "sterilised" of their archaeology with only a fraction being recorded.

The reworking of the top of the cutting has the potential to integrate into a small section of the landscape if it is seeded, with a similar mix as the surrounding chalk grassland. We are of the opinion that early stage successional chalk grassland with rocks and bare ground is not in keeping with the adjacent grassland and is more likely to show up in stark contrast to the landscape, rather than blend in. (See previous comments on striping in the chalk grassland due to previous land management practices).

Figure 4, CH03 [APP-218]. There is no intervisibility between monuments from this location. The longbarrow does not look out on visible monuments in this location.

Figure 5, CH04 [APP-218], comparison with [APP-137] figure 7.59 and [APP-138] figure 7.60. These views are all taken some distance away from the existing A303, with minimal intrusion of the road at these distances. Vehicles depicted in APP-138 can be seen, but they are not really that intrusive. From this location, if one turns ones back on the A303, there is a much larger intrusion within the WHS, namely the Stonehenge Visitors Centre. However, this is not being removed from the intervisibility of the landscape and monuments. During summer months the glare of vehicle windscreens in the visitor centre car park is significant, yet this does not seem to have been taken into account within the Scheme.

Please refer to our response. Figure 7, Photomontage CH06 [AOO-218] has been taken from a location on our farm which is not available for viewing by the general public, as it is private property. The location therefore shows the green bridge 4 with the new PRoW as a brown diagonal line. We agree that from this distance, the deep cutting will only be partially visible. However, there will still be a number of vehicles along the A303 PRoW, as there will be a requirement for maintenance, as well as farmer access. Undoubtedly, NT will want to ensure that Winterbourne Stoke Clump does not become a dumping ground for rubbish and will want to periodically carry out barrow maintenance. As stated in our initial response, only the longbarrow in the Diamond Group is above ground, and as clearly shown, there is minimal intervisibility between the monuments. The Applicant is again promoting the project by trying to show how little the Scheme visually impacts on the landscape, rather than acknowledging the damage that it causes by carving a road deep within the archaeology of the WHS.

With regard to Wilsford G1 barrow, the Applicant also notes that there would be extensive views of the deep cutting approach road from the western portal down to green bridge 4. We are not of the opinion that the removal of the existing A303 would markedly improve the asset's setting from its baseline. The Applicant notes negligible negative change, but we struggle with the comment "*slight adverse and moderate beneficial effects".*

Since our first response, the Applicant has at Deadline 8, produced [REP7-024] OEMP, Annex 4A, Illustrated Examples of Key Design Elements. Please see our comments at Deadline 8 response to 8.44. The western portal and western portal approach road show the true extent of the modern infrastructure within the WHS. We believe that users of the A303 PRoW, in the location of the western portal, will be looking directly into the tunnel. In addition, they will not only see the top

2.5m of the grass cutting, but will also have a view of the retaining walls and carriageway. The Applicant has chosen not to produce any photomontages from this location despite our request.

11.1.46 18.2.38 Thank you for answering our question. We will look forward to seeing the numbers of barn owls, badgers, bats, polecats and hedgehogs using the green bridge 4, although we doubt many of the species mentioned will use the bridge due to the lack of cover provided ie it will be all grass, and the general public and dogs using the new PRoW will also share the space with the wildlife.

When the Scheme is in operation, will there be surveys to assess the biodiversity benefits of the green bridge 4 for the above species once the Scheme is in operation? As far as I am aware, there have been no base line assessments for polecat and hedgehogs, and the bat surveys that are being carried out during August are not within the location of Green bridge 4.

The Applicants response

As stated within the response to 18.2.32 of the Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003], the position and width of Green Bridge No. 4 was determined primarily for heritage inter-visibility reasons, however the width would provide safe crossing for other species, including bats, barn owls, reptiles, and other mammal species. Future usage by individual species would depend on the development of the habitat and the local occurrence of the species. The chalk grassland would facilitate the spread of grassland species as well as chalk grassland invertebrates. It would contribute towards the biodiversity net gain within the area. Further species-specific surveys of Green Bridge No. 4 are not a specific requirement as it is considered a biodiversity enhancement rather than essential mitigation. However, it is anticipated that further condition assessments of the habitats will be undertaken and specified within the LEMP and Landscaping scheme.

M & R Hosier response to 8.49

As we have previously stated, the width of the bridge on its own will not provide safe crossing for other species. For wildlife to "choose" to use the area there would be a need for further enhancement of the area, rather than just chalk grassland. No animal puts itself in a vulnerable position crossing in open areas where there could be a risk of predation. The green bridge 4 has no hedging to provide cover for animals attempting to use it. Hedging would also provide a biodiversity benefit. In addition, the green bridge will have a PRoW running down it. No wild animal puts itself in close proximity to humans, especially if they are accompanied by dogs. Screening of the PRoW with hedging would encourage more wildlife to use the bridge as per the Applicant's vision. It would also have the added benefit of screening the views of the western approach road that is very evident within this area as shown on [AS-084], [AS-083], [AS-081] and [AS-080]. The Applicant notes that the future usage by individual species would be dependent on the development of the habitat. We agree with this if hedging is planned in this area. Otherwise the future species attracted to the area would be limited to invertebrate and chalk grassland species alone.

We note the Applicant states that further surveys are not a specific requirement, as green bridge 4 is a biodiversity enhancement, rather than essential mitigation. However, the Applicant is carrying out bat surveys in other locations of the Scheme, namely where byway 12 crosses the A303 and a distance down byway 12. We find this strange, as the bat surveys carried out during the baseline evaluation showed that the locations of Winterbourne Stoke Clump/Diamonds Wood were the sites

where both the highest and lowest numbers were recorded in surveys. This clearly demonstrates that more work is needed to understand how the bats are using this section of landscape rather than focusing on byway 12. It is surprising that the Applicant states that the green bridge will facilitate bat crossing, when it doesn't have a unclear understanding of the baseline.

11.1.47 18.2.39 Would the stockpile be sprayed with herbicide, in order to remove natural regeneration growth that will occur over time? This is not covered in OEMP MW-GEO3 [REP4-020]

Would all the stockpiles of chalk and topsoil be planted with chalk grassland by the main works contractor, or would some be left unplanted?

The Applicants response

The management of the stockpiled soil would be carried out in line with the Soils Management Strategy and the guidance set out in Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) - secured through OEMP MW-GEO3 [AS-085]. As stated within item 12 of the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) management of weeds would be undertaken during the summer months either by spraying to kill them or by mowing or strimming to prevent their seeds being shed. The methods will be set out within the Soil Management Strategy which will be produced by the main works contractor and approved by the Secretary of State under Requirement 4 of the DCO. The need for weed control within the works would be monitored by the Environmental Clerk of Works during the construction period.

M & R Hosier response to 8.49

From this, we understand that the stockpiles of topsoil and chalk will not be planted up with quick growing crops. Instead, any resulting vegetation will be mowed, sprayed or strimmed. I would suggest that this will need to be done several times between April and September, as weeds will continue to grow throughout this period.

11.1.48 18.2.40 So we may better understand, we have asked the Applicant a number of times to provide more information on what visual deterrents and visual screens may be, other than the planting of quick growing crops to reduce line of sight. As it stands within the OEMP [REP4-020], these are the only other measures to mitigate the expanse of bare ground created by the preliminary contractor to prevent Stone curlews nesting within the area.

We agree that quick growing crops would be effective in relation to the Parsonage Down plot (that will be lost), but fail to see where this would apply to other areas. It would be more suitable to maintain the existing vegetation within the Scheme areas, to deter Stone curlews, until work is imminent to start.

The Applicant must already appreciate, that the mitigation measures within the OEMP will not prevent Stone curlews from entering the Scheme area. We would suggest that there will be at least one nesting attempt every year during the construction process. With this in mind, we urge the Applicant to revisit the measures laid out in OEMP [REP4-020] as this will both ensure they are not in

breach of Habitat Regulations, and will also avoid delays during construction due to nesting Stone Curlews.

As stated in our response to Comments received to Deadline 3 [REP4-036], our written summary of oral representation from ISH7 Biodiversity, and our comments on 8.30.7 response to the Applicant's written summary of oral submissions to ISH7, the OEMP [REP4-020] does not contain any assurances that the "appropriate specialist" referred to within PW-BIO5 and MW-BIO8 will actually have a depth of understanding of the Stone curlew species, and experience working with the species. It is highly likely, as has already been proven, that without adequate experience of the ecology of the species, the breeding Stone curlew may go unnoticed by the ECoW and nesting attempts would therefore fail. This situation would not happen if the Habitats Regulations were addressed properly.

See our response to Comments received to Deadline 3 [REP4-036], paragraph 9.7.17. We strongly suggest that the Applicant amends their point PW-BIO4 of the OEMP [REP-020] to include monitoring the Stone curlew chicks until such time as they are fledged. The chicks will be at risk of being run over by construction traffic as they are unable to fly and will just squat motionless on the ground until they have fully developed their flight feathers. If the chicks are not being monitored, then the contractors will not know if there are vulnerable Stone curlew chicks within the area to avoid.

We suggest that to comply with Habitat Regulations monitoring of Stone curlew chicks within the Scheme area is included within the OEMP PW-BIO4.

The Applicants response

This It is not considered necessary to prescribe visual deterrents at this point within the Scheme, as the deterrents used would be site-specific. However, it is anticipated, that if works are required to start during the breeding season in some areas, deterrence measures could be applied in advance, for example silent bird deterrents could be used, such as lines of moving tape, or bird predator kites (RSPB and Natural England will be consulted on suitable mitigation measures should stone curlew be found in the Order limits or within 500m (PW-BIO5 and MW-BIO8 of the OEMP). It is agreed, as stated within paragraph 11.1.2 above and within PW-BIO5 and MW-BIO8 of the OEMP [AS-085], that measures that could be employed include the stripping of topsoil only where works are planned to occur, with crops being retained (where necessary and appropriate) to deter stone curlew from nesting.

M & R Hosier response to 8.49

The Applicant must provide some information regarding deterrent measures. When we asked for sight of such a report regarding the Stone curlew at the beginning of the 2018 archaeological survey, nothing was provided. Therefore, we deduce that no such report was ever compiled. This is probably due to the fact that the Applicant mistakenly believed the presence of people working in the area would be enough to prevent birds from entering the survey site. We fully understand that deterrents will be site-specific, but there is a need to ensure there is a suite of toolbox measures that is readily available at the start of preliminary works, as well as at construction. We hope that the Applicant realises that they cannot rely on the fact that construction work alone will prevent birds from entering into the area, as this has already been demonstrated to not be the case.

We thank the Applicant for providing us with more information on silent bird deterrents.

We hope that the Applicant will ensure that the contractor will only strip off topsoil at the point when construction begins. As shown by the 2018 Stone curlew breeding attempt, even a delay of few days is enough for a prospecting pair of birds to set down a nest site.

11.1.49 18.2.41 The Applicant insists that there has been consultation with the GBG prior to the commencement of the 2018 archaeological surveys. Would they therefore be kind enough to give us with a copy of the method statement for mitigation they would have provided to the GBG following their consultation? It would appear that the GBG are not in agreement with the way the Applicant had considered disturbance during the breeding season.

OEMP [REP4-020] PW-BIO5 notes the production of a method statement, if works are to be carried out at a time and location that has the potential to disturb Schedule 1 breeding birds, ie construction works. We would hope that during the current discussions between the Applicant and the GBG that the birds behaviour, including response to disturbance, habitat and breeding requirements are all being built into the following updates of the OEMP.

The Applicants response

With regards to the archaeological and GI works, please refer to the response to the response to paragraph 11.1.36 above.

Highways England notes your comments. As previously stated within Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003], Highways England will undertake further consultation with the Great Bustard Group during both the preliminary and main works. At this point it is not necessary (or appropriate) to confirm detailed avoidance and mitigation measures.

M & R Hosier response to 8.49

From the Applicant's response, we deduce that there was no consultation with the Great Bustard Group to produce a method statement of mitigation measures for this species prior to the start of the 2018 archaeological surveys. As a result of this, we believe that it is necessary and appropriate, for the Applicant to demonstrate that they are in dialogue with the GBG and beginning to understand the requirements of the GB species. This will provide confidence to both the GBG and to those individuals who have invested so much in terms of both time and money to support the GB reintroduction project.

11.1.50 18.2.41 The Applicant has previously informed us of the construction of bunds around the perimeter of the compounds (MW-G28) to avoid visual intrusion and help to screen activity. We responded to this in our reply to [REP3-013] point 40.3.22. asking which of the compound areas the Great Bustards will see, but we have had no reply. However, it is not only the visual impact of the compounds on the landscape. It is also the visual impact of the construction works that will be taking place throughout the Scheme footprint, within close proximity of the Great Bustard nesting sites and feeding areas that is of concern. There is no detail of screening for the construction works itself.

OEMP [REP4-020] has only been updated to include provision of nesting Great Bustards within the Scheme footprint. There are no specific measures to mitigate the impact of construction on the Great Bustards that are currently under a reintroduction project. There is nothing stating that Preliminary and Main works contractors will have gained satisfactory experience, through consultation with the GBG to ensure the necessary skills to detect and monitor the species are also included.

In addition, no measures have been included to screen the Great Bustards from the general public with dogs using the new PRoW's. We look forward to reading the next updated version of the OEMP.

The Applicants response

As stated within MW-G28, the bunds are to be incorporated around all of the construction areas. It would not be suitable to suggest specific locations from which great bustards may view the compounds as they are mobile within the landscape. With regards to further screening during the construction phase, please refer to MW-BIO8 of the OEMP [AS-085], which states that in the event that a nesting great bustard is found within 500m of the Scheme then liaison with the Great Bustard Group would 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. Measures could include an exclusion area from the nest, screened Herras fencing, placement of other objects that may impede line of sight, or other measures, depending on nesting location and will be confirmed and overseen by the ECoW, ECoW and other specialists will be required to have suitable skill and experience for their roles and would undertake any local familiarisation necessary regarding great bustards.

M & R Hosier response to 8.49

In an earlier response, the Applicant commented that some of the construction compounds would be visible in certain areas and would therefore be surrounded by bunds to provide visual screening for the GB. The Applicant now says that it would not be suitable to suggest specific locations from which GB may view the compounds. From the Applicant's Environmental Statement and following conversations with the GBG, we would have hoped that they would have a better understanding of the GB species, but perhaps this is not the case.

As few people have knowledge of the GB behaviours and habitat requirements, we would stress that rather than an "appropriate specialist" or ECoW, a member of the GBG attends all site visits with the ECoW.

We note MW-BIO8 has now included Great Bustards directly by name. It notes the need to identify and agree specific and appropriate measures to be put in place if they are found to be breeding within 500m of the Scheme.

However, there are no mitigation measures within the OEMP to ensure that the new PRoW's placed in areas where the GB are known to nest, are screened by hedge planting. Great Bustards are sensitive to noise and sight of people and dogs in particular. Due to such disturbance, the GBG has been allocated funding by Wessex Water to plant hedging around some of their nesting areas. We would hope that the Applicant is in consultation with the GBG to ensure that the requirements of the species have been taken into account within the design of the Scheme.

11.1.51 18.2.42 Our main point, is that the errors the Applicant has made within the various DCO reports remain unchanged. As such, there is the real possibility that the main works contractor and other people looking to reference from these documents, will continue to use erroneous material. Those of us that know the correct grassland areas within the Scheme and the wording on Normanton Down Reserve signs, can interpret the reports. All others will be at a disadvantage.

Perhaps this is why within item 18.2.32 above the Scheme is noted as providing improved east west connectivity within the footprint? Fields that are already grassland have been recorded in reports as arable, so without the Applicant doing any additional habitat creation the east west connectivity is improved just by amending this error! This will go on to be recorded as improvement rather than erroneous baseline data.

The Applicants response

Highways England notes the comments, and it should be noted that the baseline data was correct at the time of survey (2016-2017). Further consideration of habitat creation will be undertaken during the detailed design stage.

As stated within response to 18.2.42 of Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003], Highways England notes this comment however confirms that the Normanton Downs RSPB reserve has signs on the fence line that prohibit members of the public from entering the Reserve. There are various signs restricting access due to livestock and an information sign about the Reserve.

M & R Hosier response to 8.49

The grassland in question had been reverted prior to the time of survey in 2016.

Signage around the Reserve states that there is no public access. However, the Applicant believed that wording suggested access was possible during certain times of the year. Although noted in this response, the various reports remain unchanged and continue to promote inaccurate information on which others will base their Scheme designs and legacy benefits. This is of great concern to us.

11.1.52 18.2.43 The Applicant has misinterpreted our point in relation to meetings and engagement. We agree that there have been a number of meetings which have followed the Applicant's various stages of Scheme development. However, when we have asked for meetings to understand areas that are of key concern to our business, we have had to wait years for our requests to be accommodated –eg: a meeting to discuss water issues. So whilst there have been meetings, they have been to address the Applicants requirements, rather than to take on board the implications on our farming business. We agree that there have been provisional land values issued, but this was just before the Issue Specific Hearing in relation to Compulsory Acquisition. We are informed by our agent, that it is very unusual for the Applicant to have only initiated discussions at such a late stage in the Scheme development. Damage to barrow cemetery NHLE 1009618 There was damage to Scheduled Monument SM10317/NHLE 1009618. The gate used by the archaeological

survey team, has not been use for agricultural machinery for many years, due to the topography (with the monument banks). Therefore, any change in this area through use were obvious. We photographed the area gouged by the tracked vehicle used by the Applicant, showing fresh chalk scars evident on the flank of the barrow.

The Applicants response

At the various meetings that have taken place there have been discussions around the landowner's key concerns and information has been provided at each of these meetings and following these meetings if it is not available at the time. In relation to the water issues meeting, Highways England has had to allow time for the water team to gather information from monitoring of boreholes, create models based on this information and draw conclusions. Following on from this, Highways England met with the landowner when it was possible to do so and provided accurate information. This liaison will continue pursuant to item MW-COM6 of the OEMP. In terms of land valuations discussions, these are something that will continue throughout and beyond the examination period. Regarding damage to barrow cemetery NHLE 1009618, to the Applicant's knowledge there was no damage caused to any scheduled monuments by its surveys. The scheduled monument NHLE 1009618 was inspected by Historic England and no further action was taken by them. All other matters, from the Applicant's perspective, were dealt with in a respectful and open manner during on-site discussions with the land owner at the time of the surveys and resolved as far as possible, including suitable compensation paid where required.

M & R Hosier response to 8.49

There has only been one meeting with the Applicant retarding the impact of the Scheme on the hydrogeology of the area. The purpose of this meeting was simply to explain the water model. A second meeting was in relation to a proposed geotechnical borehole survey whilst the aim of a third meeting was to look at our private boreholes with a view to monitoring them. Therefore, there have been very few meetings to address our water concerns and typically, they have been arranged at such short notice that our independent hydrogeologist has been unable to attend.

Our agent looks forward to meeting with the District Valuer to discuss land values and we sincerely hope that future discussions are both more constructive and productive than those regarding our water concerns.

The Applicant has never discussed the damage to Scheduled Monument SM10317/NHLE 1009618 with us, instead choosing to allegedly carry out further assessments behind closed doors. We hope that they are more open and transparent once the Scheme is under construction, and any issues are dealt with appropriately for all to see. At the very least, we hope that this incident has made the Applicant identify all scheduled areas, as many of these are below ground and therefore not obvious to those carrying out surveys.

11.1.53 18.2.44 The information we requested was pertaining to our holding and to better understand the survey requests. As is the case with other organisations that carry out surveys on our farm, that we maintain that the Applicant should provide us with copies of their data. The Applicant has provided us with information from time to time, but often the information is completely

different from what we have asked for. The Applicant asks us to meetings to provide them with feedback, but if they do not provide us with the information we require to give informed feedback, this makes a mockery of the whole process. This is knowledge management rather than meaningful consultation with stakeholders.

At the first meeting with the Applicant we outlined our cropping, livestock and farming calendar.

This has proved a waste of time, as surveys have clashed with critical farming timetables. Surely the Applicant plans survey work far enough ahead to give us adequate notice if there is a need to carry out work at awkward times, then we can plan accordingly? Surveys have caused major disruptions to our farming business resulting in thousands of pounds of crop losses because the Applicant could not wait until after harvest. Often we have been threatened with a Section 172 notice, when we are in discussion over access or survey infrastructure. These discussions are paramount because our property was damaged during previous surveys. We are therefore trying to make sure that these scenarios do not happen again. I am sure that the Applicant would do the same if they were in our place.

A number of the pre and post condition surveys provided have not been fit for purpose, being taken into the sun with shadows, or missing areas of the survey so rendering them inadequate. We have resorted to taking our own recordings of surveys in case we need to refer to them in any survey disputes. Nevertheless, some surveys reports have been very thorough.

The Applicants response

Please see Highways England's response to Second Written Questions on Agriculture, specifically Ag.2.11 [REP6-019].

Survey reports and data have been provided as soon as they have been available. However, this can take some time after carrying out the survey as the data has to be collated and interpreted, a report written up which then has to go through many internal checks before it can be made publicly available.

Highways England aims to provide all landowners with as much notice as possible to consider access for surveys. Unfortunately, due to the programme it is not always possible to carry out these surveys when there are no crops on the ground. However, Highways England has paid reasonable compensation for crop loss and note that none of these are currently outstanding with Mrs Hosier.

In respect of the use of S172 powers please make reference to page 13-11 of the Relevant Representations responses [AS-026]. We note that our preference for gaining access to land is through agreement with landowners, however where that has not been possible or project time constraints have been pressing, the use of s172 powers has been required.

The issues raised in relation to the pre and post condition report is the first time we have been made aware of this and the pre and post condition surveys have been used to make payment for compensation up until now. However, if you wish to provide us with your own validated records this can be used alongside our own reports to support and inform future works.

M & R Hosier response to 8.49

As previously stated, on many occasions the information provided is not what we have asked for and has been made available after a notable period of time. Therefore, we are not always in a position to answer the Applicant's questions as we have not been provided with data to make informed decisions. We appreciate the Applicant has their programme to adhere to, but respectfully, that is their problem and not ours. Most organisations plan well in advance to ensure there is adequate notice ahead of projects, so we expected the Applicant to have a more professional approach to surveys. Using Section 172 powers as a replacement of proper negotiation, especially when aspects such as access routes and survey infrastructure are being discussed, is totally unacceptable.

We will continue to take our own pre and post condition survey photographs which we will use to validate our position when required.

11.1.54 18.2.45 The Applicant has not carried out tracer tests to assess the possibility of fissure connections to our private water supply.

The Applicant has not produced a 3D model for the Scheme to show the structural geology and locate fissures and fractures. This would either back up or disprove the water model accuracy and its interpretations and provide more information to tendering contractors. 3D models such as Golders Fracman are recognised by mining companies to highlight potential problems so they can be solved ahead of the construction, thus saving time and money.

If the Scheme is to proceed, the Applicant has a duty of care to ensure that there is an alternative water supply in place for our farm prior to construction. This will remove the risk of the Scheme to our farming business.

We have just 24 hours' worth of water supply if we experience any problems.

The Applicants response

Regarding 18.2.45 please see the response to this paragraph in Deadline 5 Submission - 8.36 - Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003] which set out why a detailed assessment and tracer testing of the operation of the private water supply boreholes is not necessary.

The Applicant's view is that the information presented in the Environmental Statement is more than sufficient at this stage of the consents process and that a 3D model is not required. Please see Written Summary of the Oral Submission from Issue Specific Hearing number 4 (ISH4) regarding Flood risk, Groundwater, Geology and Water under item 5.1 [REP4-032]. Additional details are also provided in Deadline 6 Submission - 8.37.10 - Responses to the Examining Authority's Written Questions - Flood risk, groundwater protection, geology and land contamination [REP6-028] in response to items Fg.2.38, Fg.2.40 and Fg.2.51.

Please see response to paragraph 11.1.11 regarding water supply.

M & R Hosier response to 8.49

The Applicant may believe that the tracer tests are not necessary. However, they have not carried out any 3D fracture modelling to back up this assertion. The Applicant is also using incorrect

information, as Blick Mead spring is not dry for most of the year and can be readily seen. The Applicant is relying on their own assessment of data in their conclusions for the Groundwater Risk Assessment. Respectfully, our independent hydrogeologist does not share these conclusions and believes there will be a significant risk to our borehole supplies. Stonehenge Alliance have also engaged a hydrogeologist to look over the reports and he also backs up our independent hydrogeological concerns.

We disagree with the Applicant's comment that the information presented in the ES is more than sufficient at this stage of the consents process and therefore a 3 D Fracman model is not required. Infrastructure projects such as Crossrail are cited as examples where 3D modelling was not carried out at this stage. However, the Crossrail project has gone dramatically over budget as the recent TV documentary showed. If 3D modelling had been carried out for Crossrail at an earlier stage, the problems that were encountered during tunnelling would have been part way solved prior to being encountered on the ground. 70% of project cost overspends are due to inadequate surveys prior to construction. We would suggest that whilst holding back on 3D modelling at the DCO application process may keep the Applicant's costs down, the implications of not fully assessing the geology of the area are far greater in terms of the overall project construction costs. For this reason, we are surprised that the Applicant has not learned from the lessons at Crossrail and is not leading on a new recognised strategy of fully assessing all ground conditions up front.

With regard to protecting our water supply, we do not agree that measures laid out within the OEMP are adequate. Please see our response to the Inspectors request at Issue Specific Hearing 10 on Groundwater, to clarify where we believe the OEMP measures fail to provide adequate cover.

How will the Applicant get a tanker of water over an arable field to our farm reservoir within a 24 hour time frame, if we experience a problem with supply or contamination?

11.1.55 18.2.46 Comments received to Deadline 3 [REP-036] reference items 9.6.1 and 9.6.4 notes MW-WAT11

We agree that the Applicant has compared the samples taken from groundwater monitoring boreholes of the Scheme with the limits of Drinking Water Standards for hazardous substances guidelines. However, their samples were not taken to DWI standards so had differing sampling and storage methods. Therefore, it is unreliable to compare results to those of DWI. DWI requires samples to be delivered to the approved sampling lab within four hours of collection as the chemical components of the sample will begin to change after this time period. DWS tests for a suite of other chemicals as well as pathogens. The Applicant's sampling is sent to the lab and tested the following day.

We have never suggested that sampling carried out by the Applicant should replace DWI analysis. This would not be legally acceptable.

The Applicant has not taken quality samples of our private borehole water either under the Scheme sampling or DWS sampling criteria.

The Applicants response

The Groundwater Management Plan aims to ensure that groundwater resources, including the supply and quality of groundwater, are protected during the construction and operation of the Scheme. Please also see the response in paragraph 11.1.62 below.

M & R Hosier response to 8.49

The Applicant cannot categorically state that there will be no significant changes to our private water supply, this is only their assessment of the groundwater at this particular stage. As the Applicant has already stated, 3D modelling has not been carried out, so there is no practical evidence to back up their assessment of no significant changes to private water supplies. The Applicant may believe there is no requirement to monitor the quality of private water quality samples, but in the interests of transparency and confidence it would be in everyone's interests for them to do so. Samples to assess water quality have not been taken from our boreholes.

In our opinion, the Groundwater Management Plan will only be as good as the understanding of the hydrogeology within the area. If the plan is built on inaccurate information, it will not be able to deliver the security that the Applicant assures. We urge the Applicant to carry out a 3D fracture model to back up their statements in relation to the Groundwater Risk Assessment and provide the greater understanding of the hydrogeology of the area.

11.1.56 18.2.47 As previously stated, the Applicant is passing most of the Scheme responsibilities onto the main works contractor. Yet it is the Applicant and not the main works contractor that has determined the necessary survey works and has then been responsible for interpreting the results. As such, there will be potential areas not assessed by the Applicant that will need to be addressed by the main works contractor.

MW-WAT1 Notes the main works contractor responsible for all water and pollution elements of the Scheme construction.

MW-WAT2 Notes the main works contractor is responsible for compiling a Water Management Plan.

The Applicants response

Please see response item 5.3.3 in Comments on any further information requested by the Examining Authority and received at Deadline 5 and 6 [REP7-21.

Although the contractor is responsible for the protection of the water environment during construction, the plans which contain the measures defined to do this are to be developed in consultation with the relevant statutory bodies and approved by the Secretary of State (Water Management Plan, Groundwater Management Plan and Emergency Preparedness and Response Plan (to include a Pollution Incident Control Plan). As such, the contractor's proposals will undergo the necessary level of independent scrutiny to ensure they are adequate to protect the water environment. During the development of such plans, should gaps in survey data be identified, the contractor will be obliged to complete these to the required standard as identified by The Authority or the relevant body e.g. the Environment Agency, to secure approval for the plans.

M & R Hosier response to 8.49

We understand that the Water Management Plan will be overseen by various authorities, but as has become apparent over the DCO period, much information is still pending and this is putting time limits on organisations for full appraisal. The Environment Agency needs to be given adequate time to fully assess the consequences of all the data the Applicant provides.

From the Applicant's response, we would urge the contractor (if not the Applicant) to carry out 3 D fracture modelling, fissure tracer tests and monitoring of our private water supplies, in order to back up the Applicant's Groundwater Risk Assessment and provide protection to our private water supplies.

11.1.57 18.2.47 MW-WAT3 Site drainage. This includes references to dewatering discharge. We would like to see a reference to the prior assessment of the sites proposed for surface dewatering discharge. The suitability for water discharge areas needs to be assessed in relation to land management history to prevent pathogens being washed in to the groundwater.

We are pleased to note that all samples of discharge will be analysed by the Environment Agency prior water discharge taking place, as well as measures for flood risk and effluent being taken into account.

The Applicants response

The main works contractor shall adopt construction techniques which minimise, so far as reasonably practicable, the need for and extent of dewatering and groundwater abstraction. In the event that dewatering is required, the main works contractor shall be responsible for obtaining the necessary approvals and permits to enable abstraction and discharge of pumped water in an approved manner (see MW-WAT8 of the OEMP submitted at deadline 8).

Under MWAT-3 it is the main works contractor who has responsibility to ensure that site drainage meets the effluent and flood risk standards required by the sewerage undertaker and the Environment Agency, as appropriate, in accordance with the relevant permit, and will provide and maintain holding or settling tanks, separators and other measures as may be required to meet those standards. The main works contractor shall ensure that access is provided to the undertaker and Environment Agency so that samples of discharge can be obtained and analysed, and the flows verified as required.

With these controls in place, consideration of the existing and previous land management and assessments will be able to be taken into account.

M & R Hosier response to 8.49

As no mention is specifically made within the OEMP MW-WAT3 of taking into account prior use of the land intended for water discharge, we will have to rely on the main works contractor being mindful of this. Our concern is, that present surveys do not seem to take into account the prior land management. From our observations, the OEMP can be interpreted in many different ways, and is therefore not the failsafe that it is intended to be.

11.1.58 18.2.47 MW-WAT4 Spill response. The main works contractor is responsible for preparing an Emergency Preparedness and Recourse Plan as well as Pollution Incident Control Plan. What responsibilities are the Applicant taking? Will liabilities be shared between the Applicant and main works contractor? If the Applicant has not brought all the potential issues to the main works contractor's attention prior to them accepting the contract this is failing under NEC3 and 4.

The Applicants response

Development of mitigation/action plans for accidents/incidents will be developed by the Main works contractor in consultation with the Environment Agency and Wiltshire Council (as appropriate) in developing the Emergency Preparedness and Response Plan (MW-WAT4 of the OEMP [REP4-020]) which will be approved by the Secretary of State. As such, the contractor's proposals will undergo the necessary level of independent scrutiny to ensure they are adequate to protect the water environment. During the development of such plans, should gaps in information be identified which affects the robustness of the plan, the contractor will be obliged to complete these to the required standard as identified by The Authority or the relevant body e.g. the Environment Agency, to secure approval for the plans. In employing the contractor, Highways England will share the appropriate amount of information.

M & R Hosier response to 8.49

We take on board the intention of the Applicant to ensure that all the contactor's proposals will undergo the necessary level of independent scrutiny, to ensure the groundwater is protected. However, we are aware that during the course of this DCO process, information is slow to come forward and therefore the independent assessors may have less time to fully interpret the data. We will just have to trust that their assessments are correct given the tight response times.

Who decides what information from the Applicant is "*appropriate*" to share with the main works contractor? If this is a joint venture between the Applicant and the contractor, we hope that all information and survey works would be shared with the contractor. Surely all information is relevant.

11.1.59 18.2.47 MW-WAT5 Pollution incident monitoring. There is no mention that any "actual significant pollution incidents" will be reported to private water abstractors so they can monitor their water supplies and seek to take remedial action.

The Applicants response

An update to the OEMP has been made at deadline 8 in relation to liaison with abstractors in respect of pollution incidents.

M & R Hosier response to 8.49

We thank the Applicant for taking on board one of our comments and welcome the addition of the extra wording in point e) to inform affected landowners of any significant pollution incidents. However "significant" needs to be quantified for clarity purposes. Following on from this item, there is a strong possibility that it will be the private water abstractor who will be informing the main works contractor of any pollution in their water supply, rather than the other way round.

11.1.60 18.2.47 MW-WAT9 Ground treatment. Grouting to be agreed with Environment Agency. However, there is no noting that the main works contractor has to carry out surveys to assess the distance that the grout will travel along the rock fissures. We are told the pressures used for grouting will be monitored by the TBM head. We believe there is a need for surveys to establish the distance of grout travel in relation to various pressures and fissure width. Grout may block fissures so groundwater monitoring is not possible in some areas.

The Applicants response

As explained in the response to Stonehenge Alliance [REP7-021], item 6.4.7, the properties and characteristics of the grout will be carefully selected to limit grout migration, dilution and other effects from groundwater and fissures in the chalk. This would be undertaken in accordance with best practice and as part of the risk management of the tunnelling works and will be controlled pursuant to item MW-WAT9 of the OEMP [AS-085] which requires EA approval of the materials used for ground treatment when more details of the construction methodology will be known.

MW-WAT9 of the OEMP [AS-085] also requires the main works contractor to agree with the Environment Agency (in consultation with relevant parties) site-specific monitoring proposals for those sites where ground treatment will be used.

MW-WAT10 of the OEMP [AS-085] requires the production of the Groundwater Management Plan where the contractor is required to outline how the groundwater resources are to be protected in a consistent and integrated manner.

M & R Hosier response to 8.49

We would hope, that surveys will be carried out to check the grout migration along the fissures, otherwise there is no knowing how the various grouts will respond in the heterogeneous geology within the Scheme.

OEMP MW-WAT9- requires the contractor to agree "*site specific monitoring proposals for those sites where grout treatment will be used. This could include groundwater quality monitoring around areas subject to ground treatment..*" Unless 3D fracture modelling is carried out, how can the areas to be monitored be assessed. As it stands, the fissures within the geology are unlocated.

OEMP MW-WAT10 - The Groundwater Management Plan will only be as good as the information the Applicant provides to the contractor, as well as the time available for the additional surveys the contractor may require. Added to this, will be the time required for independent assessment of the plan. There are a lot of stages in the process and we hope that the contractor is given an adequate timeframe to carry out all of this work. This will be reflected in the construction time and ultimately in any budget overspend.

11.1.61 18.2.47 MW-WAT10 Groundwater Management Plan. See our response The Examining Authorities Second Written Questions at Deadline 6, question Ag.2.10

In addition section d) "Development of baseline groundwater conditions and derivation of trigger levels and action levels/mitigation/action plans for exceedances and accidents/incidents." This statement puts a massive responsibility onto the main works contractor, who will be undertaking these tasks using the Applicant's reports.

The Applicants response

Section d) refers to the Groundwater Management Plan proposed at item MW-WAT10 of the OEMP [REP6-011]. This requires the contractor to consult with Wiltshire Council and the Environment Agency in the development of the plan and obtain Secretary of State approval - the plan will therefore need to be robust, and this will be recognised by contractors who will be bidding for this large-scale tunnelled infrastructure project.

M & R Hosier response to 8.49

How long will the contractor be given to produce the Groundwater Management Plan? When will the plan have to be in place? Will they have enough time to carry out their own additional surveys? The Applicant has been carrying out various geotechnical surveys in relation to this recent Scheme since 2016 and surveys are still ongoing.

11.1.62 18.2.47 The Applicant has not carried out any baseline monitoring of our private boreholes, or of some of those already installed in the landscape, so how can the contractor agree to these clauses? MW-WAT14 Relates to Surface water drainage.

The Applicants response

Paragraph 18.2.47 [REP5-003] states that, as set out in the Environmental Statement, Chapter 11, Road Drainage and the Water Environment [APP049], section 11.9, the assessment shows no significant changes to hydrology, private water supply, surface water quality or groundwater quality (water supply) during either the construction or operational phases of the Scheme.

There is therefore no requirement for monitoring at users' boreholes or elsewhere other than to demonstrate that the Scheme is not having a significant effect on groundwater flow or quality.

The Groundwater Management Plan aims to ensure that groundwater resources, including the supply and quality of groundwater, are protected during the construction and operation of the Scheme. The scope of the Plan will cover representative boreholes and not necessarily user boreholes.

Highways England has agreed to monitor water levels and water quality at users' boreholes at the request of the users. If needed there is a long term record of water quality at the boreholes through the DWI testing which users could refer to if they wish to demonstrate changes in water quality as a

result of the Scheme. In the same vein, an update has been made to the OEMP at Deadline 8 to provide for the Groundwater Management Plan to have specific regard to private water supplies.

Although no significant effects are predicted Highways England has been working with and will continue to work with Wessex Water and other statutory utility providers as required to ensure that water supplies are protected during the construction and operation of the Scheme.

M & R Hosier response to 8.49

We hear the Applicant's familiar responses as to why they do not have a requirement to monitor our private water supply, so they will be familiar with our usual reply.

Under OEMP at Deadline 8, reference item MW-WAT10. We thank the Applicant for the inclusion of item f) within the Groundwater Management Plan, to ensure private borehole supplies will be fully taken into account.

We also thank the Applicant for clarity that the Water Management Plan will cover not only the construction of the Scheme, but also the operational phase once the tunnel is in situ. However, we do not understand the Applicant's comment that "*the scope of the Plan will cover representative boreholes and not necessarily user boreholes"*. This is in sharp contrast to item f) *"in respect of all the above matters, the Plan must specifically indicate how Blick Mead and private water supplies are to be considered*". Will the Applicant please confirm whether they are scoping in our private borehole supplies and how they propose to identify the representative boreholes?

The Applicant has agreed to monitor private borehole supplies at request, yet they have not commented on how these will be monitored. In addition, we do not know when will be supplied with a copy of the relevant data. Will telemetry monitoring be carried out on private boreholes, or will it merely consist of dip tape measures taken quarterly as is currently the case with Scheme boreholes? Will the quality monitoring just be to drinking water standards? The Applicant has not provided us with any of this information.

We note that the Applicant is working with Wessex Water, but they do not state who the "other statutory utility providers" are, so we have no way of knowing how relevant this is to our water requirements. As we have a private borehole, Wessex Water has no responsibilities for our water supply, so this suggests that discussions are in relation to the water requirement of the tunnel rather than those of our farm business water requirements. The Applicant has had no discussions with us concerning Wessex Water and our water supply. Therefore, it does not even know our baseline for farm requirements.

11.1.63 18.2.47 WM-WAT15 Monitoring of Water Resources. See our response The Examining Authorities

Second Written Questions at Deadline 6, question Ag.2.10.

In addition to this the item notes " The main works contractor shall, where changes in groundwater levels are predicted to occur as a result of construction activity, which would be considered significant using the methodology defined in the groundwater management plan, undertake additional site investigations." Statements such as this would set alarm bells ringing if I was a potential tendering contractor. This just underlines the complexity of the geology within this landscape and the reluctance of the Applicant to carry out tracer tests and 3 D modelling. The Applicant should not be relying on the contractors to carry out additional survey works, they should

have done sufficient surveys up front to be aware of all potential problems. The following references are also in respect of mitigation for water supplies although they have been omitted from the Applicants list.

The Applicants response

Contractors are familiar with site investigations and there is no reason why this would be alarming. The requirement to assess the effects of construction activity once the detail of the design and construction methodology is known is as expected and allowed for through the OEMP.

M & R Hosier response to 8.49

We trust that the contractor is given adequate time to carry out all additional surveys works and process all the data, in order to have a better understanding of the Scheme. However, the Applicant has been struggling with the time table so we remain cautions.

11.1.64 18.2.47 MW-WAT8 Dewatering and abstraction. "the main works contractor shall adopt construction techniques which minimise, so far as reasonably practicable, the need for and extent of dewatering and groundwater abstraction."

What will happen if the Scheme shows a need for dewatering and the Environment Agency do not agree to this due to the level of dewatering being significantly more than has been identified within the groundwater risk assessment? Would dewatering just go ahead under these situations, with all private water abstractors being provided with alternative supplies?

The Applicants response

Please see response to item 5.3.3 in Comments on any further information requested by the Examining Authority and received at Deadline 5 and 6 [REP7-021].

The Applicant considers that the approval/permitting procedures set out in the OEMP and secured by requirement 4 of the draft DCO [REP6-005] are sufficient to ensure any required dewatering is adequately planned for, managed and controlled.

M & R Hosier response to 8.49

With respect to the Applicants comments in [REP7-021] Comments received at Deadline 5 and 6, item 5.3.3.

Under heading OEMP MW-WAT10, "*The detail of monitoring and mitigation will be discussed with Wiltshire Council and Environment Agency"*. Respectfully, neither of these organisations will potentially be drinking contaminated water, or be left without water.

Liaising with ALO does not provide us with water in our reservoir, unless prior infrastructure is in place. Feasibility studies and a timetable of works would also be needed. See our response to Issue Specific Hearing 10, Groundwater at the Inspectors request.

As already stated within our response to 8.44 at Deadline 8, it is not possible to compare the water samples taken by the Applicant from their monitoring, with Drinking Water Inspectorate (DWI) standards. Both samples have not been treated and analysed to the same criteria and as such, their comparisons are void. We have already stated that we do not want the Applicant to take on the role of the Local Authority or the DWI. However, as the water from our borehole is currently safe to drink, the Applicant needs to ensure that during construction and on completion, the water we are drinking is still fit for human consumption.

Under OEMP MW-WAT11, we disagree with the Applicant's insistence that it is not considered necessary to undertake a feasibility study to provide water. There is no certainty that our water will not be compromised, so the Applicant has to assess the extent of this scenario as it will need to be costed within the Scheme mitigation. We cannot be left without safe drinking water and as it stands, there is even a need for infrastructure work for temporary water supplies to be delivered to our farm reservoir.

Under OEMP MW-WAT15, we hope that Wiltshire Council and the Environment Agency will have more commitment to private water abstractors than the Applicant has.

Under OEMP MW-COM6 the Applicant has not clarified whether this item relates to impacts on our borehole water supply both during construction and once the Scheme is in operation ie: the scenario whereby the tunnel has blocked the fissures that feed into our borehole. Furthermore, there is no commitment that any alternative water supply would be on a like for like basis.

We note the Applicant's response in relation to dewatering. However, the Environment Agency has already stated that it has not assessed this Scheme in relation to dewatering, as the Applicant has repeatedly maintained that they do not consider there will be a need to carry out this process. Once under construction, the tunnelling would not stop (because of a lack of fracture 3 D modelling) if there was suddenly a significant water table that compromised boring activity. The Environment Agency would then be forced to agree to de-watering to a certain extent, even if it was beyond their limits. In our opinion, this scenario is not adequately planned for. Should it occur, will private abstractors be told of the situation so they can monitor their borehole supplies? Would we be provided with temporary water tankers in case they were needed?

11.1.65 18.2.47 MW-WAT11 Management of impact on abstraction boreholes. Please see our response to The Examining Authorities Second Written Questions Deadline 6, question Ag.2.10.

In addition, under point a) how will the contractor establish where any intermediate monitoring boreholes should be placed if the Applicant has not carried out any 3D models of the Scheme to note the fissure and fracture locations?

The Applicants response

Please see response to item 5.3.3 in Comments on any further information requested by the Examining Authority and received at Deadline 5 and 6 [REP7-021].

As set out in the Environmental Statement, Chapter 11, Road Drainage and the Water Environment [APP-049], section 11.9, the assessment shows no significant changes to hydrology, private water supply, surface water quality or groundwater quality (water supply) during either the construction or operational phases of the Scheme. Highways England has been working with and will continue to

work with Wessex Water and other statutory utility providers as required to ensure that water supplies are protected during the construction and operation of the Scheme. 3D models are not a pre-requisite for locating boreholes. Boreholes are used to develop 3D models. Provisions for the protection of private water supply are included in item MW-COM6 of the OEMP.

M & R Hosier response to 8.49

In relation to item 5.3.3 [REP7-021] see our response in 11.1.64 above. The Applicant's response lacks clarity and we remain unconvinced that it will provide adequate protection of our private water supply.

Wessex Water will be working with the Applicant to secure a water supply for the tunnel. However, we have had no discussions with the Applicant or with Wessex Water regarding the provision of an alternative water supply, be it temporary or permanent. Therefore, we would suggest the conversations with WW are irrelevant to our private water supply.

The Applicant seems to have misinterpreted our response in relation to Scheme monitoring boreholes.

11.1.66 18.2.47 MW-WAT13. Flood Risk – general provisions. We note with concern "At the end of construction…pile walls where required will be removed, cut down or piped through routes provided to prevent the potential build-up of groundwater."

Do statements like this not ring alarm bells in potential tendering contractors? This just highlights the complexity of the geology within this landscape and the reluctance of the Applicant to carry out tracer tests and 3 D modelling shows a lack of responsibility.

The Applicants response

The OEMP items, such as MW-WAT13, include measures to ensure potential impacts are mitigated. The statement quoted in italics relates to Temporary Works which are installed by the Contractor to assist in construction of the Main Works. As the term implies, such works are not 'permanent' and the statement simply re-iterates the Contractor's obligation, on completion of the Main Works, to remove the Temporary Works or, if this is not technically possible, to modify them in such a way that the ground and groundwater conditions are not affected.

M & R Hosier response to 8.49

We thank the Applicant for clarifying this matter for us.

11.1.67 18.2.47 The Applicant's response also states that they have been working with Wessex Water to ensure water supplies are protected during construction and operation of the Scheme. Surely the Applicant means working with the Environment Agency as this is the authority responsible for the groundwater protection?

We stand by our comments, that the Applicant has not fully assessed the complex structural geology and hydrogeology in relation to this Scheme.

They are relying on water modelling which we maintain has too great a margin of error to pick up any potential problems. No tracer tests or 3 D modelling have been carried out to show up fissures and fractures. This, in combination with the Applicant's omission to commit to installing alternative water supplies to those who are groundwater reliant, gives us no confidence that the risks to our businesses have been fully considered.

The Applicants response

We have been working with Wessex Water regarding contingency measures to avoid / minimise the loss of interruption of supplies should unexpected problems occur. This work is being undertaken in advance of the obligations on the main contractor required by MW-WAT3, MW-WAT11 and MW-COM6 of the OEMP issued at deadline 8.

In addition to the work with Wessex water, we also continue to work with the Environment Agency regarding the protection of groundwater resources and requirements for the Groundwater Management Plan (MW-WAT10 of the OEMP issued at deadline 8).

For the points relating to adequacy of the assessment, tracers and 3D models please see response in paragraph 11.1.54. For water supply please see response in paragraph 11.1.11 above.

M & R Hosier response to 8.49

We read that the Applicant has been discussing contingency measures with Wessex Water (WW) "to avoid/minimise the loss of interruption of supplies should unexpected problems occur". We are not sure how WW can minimise problems as they are not carrying out tunnelling works that would have a potential impact on our water supplies. We would suggest, that as WW has not asked us for any details to assess our current water requirements, these contingency measures do not relate to our business, but to another farmer or even to Winterbourne Stoke residents, who are their customers.

11.1.68 18.2.48 Our private boreholes have yet to have monitoring equipment installed. During May the Applicant assessed our boreholes for work required to accommodate water monitoring apparatus.

Preliminary works have not been carried out, so there can be no monitoring until after this time.

From recent survey requests by the Applicant, we are aware that Wessex Water has being approached for rerouting mains water supplies in relation to the realignment of Rollestone Crossroads. However, this exercise is not for providing water to our farm. Wessex Water would need to know our water supply and pressure requirements prior to making any preliminary assessments for a mains connection.

OEMP [REP-006] MW-COM6 requires rewording and additions for it to provide security for our farm water supply. See our response to the Examining Authorities Second Written Questions at Deadline 6 question Ag.2.10.

The Applicants response

In relation to the private borehole monitoring, the initial visit carried out in May 2019 was to assess the boreholes and understand what work would be required to install the monitoring equipment. This has now been assessed and a request was sent on the 14/08/19 to arrange a suitable time for this monitoring equipment to be installed.

An updated version of the OEMP [AS-085] was submitted to PINS on 19 August 2019 (with item MW-COM6) now requiring the contractor to produce Water Supply Statements for landowners / occupiers who rely on private water supplies which could be affected by the Scheme. These shall identify how water supply is to be maintained in the unlikely event that existing supplies are adversely affected as a consequence of the works. Highways England maintains that it is not obliged to provide a mains water connection to landowners / occupiers as a precautionary measure given the low chance of adversely affecting groundwater as a consequence of the Scheme.

M & R Hosier response to 8.49

We thank the Applicant for their email in relation to the works required to be carried out prior to monitoring equipment being installed. The email also commented that due to the condition of our borehole "head", they could not guarantee that it would not be damaged! We are surprised at this statement as the head of our borehole is in good condition and passed a safe water inspection a few years ago. From our perspective, this has cast doubt on the abilities of the Applicant's water engineers, especially as our water engineers do not have a problem carrying out the work, if it is done in an appropriate manner. We have asked our water engineers to quote for the work required on our borehole head.

We note the updated OEMP additional submission in August, did include a Water Supply Statement (WSS), see our comments on the updated MW-COM6 and the WSS attached to our Summary of written comments made by M & R Hosier at Issue Specific Hearing 10, Groundwater. For confidence there are areas within MW-COM6 that need further clarification. The WSS is only intended to show "how" the water supply will be maintained. There is a need for this to be backed up with a practical assessment to show that what is proposed will actually be practical and possible.

The Applicant has reminded us that they are not obliged to provide a mains water connection as a precautionary measure. However, from both a moral and a Scheme costing perspective, the Applicant would be sensible to do so. We would prefer to remain with a borehole water supply option as our water network has been designed around this starting point. Any mains connection would need to be on a like for like basis in relation to costing and water pressure. (See our comments at the Inspectors request attached to our written summary of comments made at ISH 10).

11.1.69 18.2.49 We do not know how fencing will prevent wind whipping of stockpiles. Will all stockpiles be covered to prevent silt being blown, or will it only be the stockpiles in location of public locations? There are references to bunds being seeded around the works compound, but will seeding be carried out in other areas as well?

The Applicants response

PW-AIR1 and MW-AIR1 of the OEMP [AS-085] require contractors to use best practicable means to manage dust. Specific measures shall be based upon industry best practice, including the measures

listed in the Institute of Air Quality Management's (IAQM) Guidance on the Assessment of Dust from Demolition and Construction. These measures will be set out in more detail in the CEMP.

Normal practice, when working with chalk, is to ensure that the material is placed in fill as soon as possible after excavation. Normally the material is hauled directly from the point of excavation to the fill location. There is, therefore, no expectation that the excavated chalk material will require to be stockpiled for any significant length of time.

Tunnel spoil will be processed in the Slurry Treatment Works, and the end product 'cakes' will be stockpiled for no more than a few days, given the limited storage space and the expected rate of production of tunnel spoil. Again, there is little chance of the material, which will be in a relatively 'wet' condition, from drying out over this period.

Should dust be at risk of becoming an issue, under conditions of extreme hot, dry weather, it is normal construction practice simply to spray the surface to suppress the dust.

Vegetation will be established on temporary bunds around construction compounds and on topsoil storage mounds at all locations.

M & R Hosier response to 8.49

We thank the Applicant for their explanation which has provided us with more clarity.

From this we understand that in the location of the deep cutting, there will be a risk of chalk dust during excavation. Due to the prevailing winds coming from a westerly direction, this will mean that our holding will be subject to Scheme dust. Will the Applicant put up fences to help combat "wind whipping" during construction, in the location of the western portal approach road? We trust that the Applicant will compensate us if this becomes a problem for our business, with livestock health issues or damage to crops. As we currently understand, the stockpiles of "cakes" will not be within the WHS or in close proximity to our holding.

11.1.70 18.2.50 Our concerns remain with our private borehole supply, so whilst the other boreholes are being monitored in the wider area, it is the direct supply into our boreholes that is critical to us. Even though the results of the monitoring have been assessed and found to be in line with the ground water model, this is not specific to our borehole supplies. Fissure flow could be hampered in the location of our borehole, yet this might not be detected on the monitoring boreholes.

Monitoring of our private boreholes that supply cottages and our farm business has yet to take place so there will be limited baseline data on our farm borehole supply. As previously stated, we have concerns with the groundwater model, which uses data over the large Wessex Basin area rather than that which is specific to the small corridor the Scheme occupies.

The Applicants response

Please see response in paragraph 11.1.62 above, which covers the point on monitoring.

As stated at paragraph 18.2.45 of REP5-003, there is no evidence of extensively connected fissures and fractures or karstic flow which would allow direct flow from the Scheme to water supply boreholes.

The groundwater model is also discussed in paragraph 18.2.45 which explains how each model cell is represented with aquifer properties appropriate to local data and the hydrogeological domain, such as interfluve, dry valley, river valley. The ES shows the calibration is good and has been accepted by experienced groundwater modellers from the Environment Agency and Wiltshire Council's groundwater modelling consultants.

The management of private water supplies, including consideration of monitoring, is provided for in item MW-COM6 of the OEMP.

M & R Hosier response to 8.49

The Applicant's position is that there is no requirement for monitoring private borehole supplies. However, from a precautionary stance, as no 3D modelling has taken place at this stage, it would be good practice and give private supplies users more confidence.

See our response to 11.1.62 in relation to water quality testing. The Applicant's water testing results cannot be compared to DWI water results on a like for like basis. The components analysed will vary, as each have differing handling criteria. Elemental levels will change over time if not handled to DWI standards, thus making them non comparable.

The Applicant cannot dismiss the presence of extensively connected fissures, fractures or kastic flow as this has not been backed up by 3D modelling.

We remain unconvinced that the groundwater model is precise enough in its grid squares. (See all our previous comments).

Although updated, the OEMP measures including MW-COM6 need additions to ensure they will adequately protect private water supplies.

11.1.71 18.2.51 The current A303 is at a much higher level than the existing ground form in the location of the western portal. However, we understand from the Applicant's response, that this current topography will remain, but the slopes from the top of the retained cutting will be graded.

The Applicants response

The existing A303 will remain, and approximately 2.5m of earthworks above the retained cutting for the new A303 will be graded at 1:2 slopes and be grassed slopes, as stated in Outline Environmental Management Plan D-CH5 [AS-085].

General Arrangement Drawing [APP-012] sheet 6 indicates the extent of regrading around the western portal and the position of the existing A303.

The combination of the retaining wall with the 2.5m grassed slopes above will enable the Scheme to be integrated into the existing landform.

M & R Hosier response to 8.49

From the Applicant's comments, we understand that the existing topography within the location of the western portal will remain unchanged. As previously mentioned, the current A303 is at a much higher level than the field where the western portal will be constructed. There will, in the location of the western portal, be views from the PRoW of the portal, deep cutting and potentially of the traffic on the road. This view will remain unchanged in this location even if the top 2.5m of the earthwork slope is graded to 1:2 and grassed.

General Arrangement Drawing [APP-012] sheet 6 shows that in the location of the western portal and approach road there will be:

No proposed hedging

No proposed earthwork embankment other than the deep cutting.

No proposed landscape re-profiling.

For these reasons we believe that there will be very clear and intrusive views of the western portal and approach road from the PRoW. This will not enhance the user experience as they eye will naturally be drawn to the Scheme. The other monuments within the landscape are not readily apparent within this location, so there is little to draw one's attention away from the Scheme.

The integration into the existing landform will only apply from a distance, and from north and south directions. The eastern and western views will always show the Scheme in some form or another. As the Applicant has yet to provide any answers on grassland management within the area, we reserve judgement on how well this will blend into the existing landscape. However, from the information provided, there is every chance that the management of the area will differ dramatically from the surrounding grassland and this will draw attention to the Scheme, rather than helping it to blend into the area.

11.1.72 18.2.52 The Applicant agrees that there will be views of the entrance of green bridge 4 and the open cutting at close range, but the view provided within CH010 is from some distance away, rather than at close range. Therefore, the green bridge will be seen within the cultural heritage landscape as a modern feature at both close and distant vantage points.

The Applicants response

Close range views have been undertaken and submitted as a dynamic sequence of views [AS-079 to AS-084].

OEMP D-CH23 requires the finished ground levels on Green Bridge No. 4 to replicate the existing ground levels, subject to the limits of deviation, such that the green bridge itself will be integrated in the landscape. The retaining walls and design of the approach to Green Bridge No. 4 are also covered by a number of design commitments and principles in the OEMP to achieve a high quality and imaginative design which respects and responds to the historic landscape as well as having due consideration of the objectives and policies of the WHS.

Therefore whilst the Scheme will be 'new' and 'modern' by virtue of it being implemented in the future, it will not be seen within the wider cultural heritage landscape nor distant viewpoints because it is below ground, such that focus of views will be the cultural heritage landscape, including the inter-visibility between monuments which is afforded by Green Bridge No. 4. This is also in the context of traffic on the 'modern' existing A303 being highly visible across the landscape and being removed as part of the Scheme to either in tunnel or deep cutting in this part of the WHS.

M & R Hosier response to 8.49

We understand that green bridge 4 is to replicate the existing ground level to enable it, where possible, to integrate into the landscape. However, this is still subject to deviation, so is not finite.

From the dynamic sequence of views as referenced, only [AS-081, AS-083 and AS-084] are close views of the Scheme. However, the Applicant has omitted to produce a view from the existing A303 in the location of the western portal to show the view from this location. As stated previously, the topography of this area (with the current A303 situated on a much higher level than the field where the portal will be built), means that there will be views down into the western portal, the cutting walls and most likely of the road itself. (See our response at Deadline 8 with our depiction of the view to the public from this location).

We thank the Applicant for producing the views looking both east and west from green bridge 4. These clearly illustrate the damage that the tunnel Scheme will inflict on the WHS at this location. As previously stated, OUV cannot look to offset damage in one area of the WHS, at the expense of another location. Not only will there be clear views of the western portal approach cutting, portal and road from green bridge 4, there will also be an increase in noise as a result of the extra traffic. This, in our opinion does nothing for the interconnectivity of the WHS, as the focus of attention will be on the moving traffic along the approach road, and not the monuments that are hardly visible from this location. As part of human nature, the eye is drawn to moving objects and not the static landscape.

With respect to the Applicant, the WHS does not need an approach road with an imaginative design as shown in [REP7-024] OEMP illustrated. The depictions of the "Tunnel West Portal Approach" and "Green Bridge 4" in our opinion, are not respecting and responding to the historic landscape and the policies of the WHS, as stated. We see no differences between these construction features and any other bridges or deep cuttings that we come across as we drive along other non WHS sections of the A303.

See our response to Deadline 8 in relation to [REP7-024].

11.1.73 18.2.53 We look forward to seeing the viewpoints east and west from the green bridge 4 in due course. We have concerns that although there is the intention within the DCO to have dimmer controlled lighting with minimum light spill outside of the bridge footprint, there is the potential for changes later, should it be proved there is a safety risk. Therefore, although the intention is set within the DCO it is not necessarily a long-term certainty.

The Applicants response

As noted in the response to the ExA's Written Questions - Landscape and Visual [REP6-030], the lighting under Green Bridge No. 4 will only occur between dawn and dusk, be varied, and be designed to minimise light spill outside of the bridge footprint.

This is a commitment in the OEMP and so compliance with it is secured by the DCO and it therefore must be followed.

Whilst it is the case that the operational performance and safety of the scheme will be monitored, any options to deal with any safety issues that arise would have to developed in compliance with the commitments and processes in the OEMP.

M & R Hosier response to 8.49

We note the Applicant's commitment to minimise lighting and light spill in the location of green bridge 4. However, as we have already stated, at some stage, due to health and safety risks. We do not understand how this would comply with the Applicant's commitments and parameters, or the OEMP. Therefore, although the intention is set within the DCO, it is not necessarily a long-term certainty.

11.1.74 18.2.54 We note that the location of the views for visual assessment in respect of green bridge 4 was agreed with National Trust and Wiltshire Council. However, the area of green bridge 4 is not within the ownership of NT or Wiltshire Council. As such, they would not be in a position to comment unless they had requested to view the area on site. The Cultural Heritage Settings Assessment [APP-218] paragraph 2.6.1 states "All heritage assets, or Asset Groups, were visited where access could be obtained from the landowner….This enabled all assets to be adequately observed within their current environment, their place within the landscape to be understood including physical and visual interconnections with other assets and topographical features, and the impacts of the Scheme to be assessed." During archaeological and geotechnical investigations, the Applicant has had the opportunity to assess the views from green bridge 4 in situ in respect of intervisibility of the monuments.

We maintain that the Scheme does not result in a beneficial effect to the OUV of the WHS as there are still four lanes of carriageway and portals within the WHS.

The Applicants response

The Applicant notes M&R Hosier's response. The Applicant respectfully does not agree with the Hosier's conclusions, with the beneficial effect to the OUV set out within the Environmental Statement and the Heritage Impact Assessment [APP-195]. For example, it would substantially reduce the negative impacts of roads and traffic on the WHS. The Scheme would encourage exploration of the landscape on foot through improved accessibility and the downgrading of both the A303 through the WHS and redundant sections of the A360 would introduce new rights of way for non-motorised users. In conclusion, the Scheme would bring substantial benefits to large parts of the WHS, in particular to the tunnel section where benefits would be experienced by a large number of Asset Groups and discrete and isolated heritage assets that contribute to the OUV of the WHS.

M & R Hosier response to 8.49

There will still be four lanes of traffic within the WHS leading to an increase in noise levels at this location. Therefore, the exploration of the area will be a similar experience as the status quo along the green bridge and western tunnel approach. The benefits the tunnel would bring to the discrete and isolated heritage assets that contribute to the OUV of the WHS, will not offset the damage that will be done in constructing the western approach road cutting. This shows a lack of understanding of OUV. This point has been clearly set out in ICOMOS written comments, as well as their participation at the Issue Specific Hearings for Cultural Heritage.

We do not see the Scheme as benefitting the southern part of the WHS. Instead, it will have a negative impact. All the negative issues of the northern part of the WHS, for example: erosion, reduced biodiversity due to high levels of public footfall and increased antisocial behaviours, to name but a few, will be brought into the southern part.

11.1.75 18.2.55 We stand by all our comments above. Although Wiltshire Council has the necessary legal powers to control the antisocial behaviours on the byway, it seems unable to do so. This is already having a negative impact on the WHS with visitors reluctant to use some stretches of the byways. It seems that organisations are only interested in what they can take from the WHS, but are unwilling to maintain it.

As previously stated and already known by the Applicant, fencing does not prevent access to private land, especially when the Applicant has already promoted the southern part of the WHS for roaming and exploring.

The Applicants response

See response to item 40.7.20 - 21 in the Comments on Written Representations [REP3-013].

40.7.20 The management and enforcement of access across the WHS is a matter for Wiltshire Council (as the local highway authority with responsibility for the public rights of way in its administrative area), as well as landowners, including the National Trust and English Heritage. The existing highway boundaries will remain as at present.

40.7.21 Fences along public rights of way would be provided to prevent access onto private land, grazed grassland or the highway. Public access to bridleways would be controlled by equestrian gates which are too narrow for most vehicles to use. Public access to restricted byways would be controlled by Kent carriage gaps which are designed to prevent entry by vehicles.

There is no suggestion in any material published by the Applicant associated with the Scheme that roaming and exploring in the southern part of the WHS should be on private land.

M & R Hosier response to 8.49

Our response was in part, about the other anti-social behaviours on the byways that go unchallenged, despite being brought to the attention of Wiltshire Council. Only today I witnessed someone defecating on the byway, leaving the faeces and wet wipe on the byway with a flint on top! I therefore asked the person to pick up his mess, as it was a health hazard to both humans and dogs

alike! What is required, is signage and better enforcement from statutory organisations to back up our stance. There must be some clause within the DCO that will pressurise Wiltshire Council into takeing proactive action on this and other antisocial byway behaviours.

As the Applicant is already aware, existing fencing along the PRoW does not keep trespassers out, hence their proposal to upgrade fencing around Normanton Down Reserve. Therefore, we have no confidence that the fencing provided as a result of the Scheme will offer any better protection.

The Applicant is fully aware that during consultation, the booklet promoted the southern part of the WHS for roaming and exploring. The Applicant made no attempt within the booklet to follow up this statement with the caveat that the exploration would only be via the network of existing and new byways as the greater part of the WHS is privately owned. As such, the Applicant has, of their own making, put extra recreational pressures on Normanton Down Stone curlew breeding reserve. Readers of the consultation booklet were not informed that the majority of the southern WHS is in private ownership and therefore not available for roaming and exploring.

11.1.76 18.2.56 We are of the opinion that the byways will facilitate antisocial practices within the area which are not in line with the Government's policy. This is already demonstrated by the practices on the current byways within the area.

The Applicants response

See response to item 40.7.9 in the Comments on Written Representations [REP3-013].

40.7.9 The management and enforcement of access across the WHS including byways 11 and 12 is a matter for Wiltshire Council (as the highways authority with responsibility for the public rights of way), as well as landowners, including the National Trust and English Heritage. Fences along public rights of way would be provided to prevent access onto private land, grazed grassland or the highway. Public access to bridleways would be controlled by equestrian gates which are too narrow for most vehicles to use. Public access to restricted byways would be controlled by Kent carriage gaps which are designed to prevent entry by vehicles (except for agricultural vehicles who have been permitted access), all embedding good design measures into the project.

M & R Hosier response

The Applicant's response gives us no confidence that measures are in place to ensure antisocial behaviours do not increase from current unacceptable levels.

11.1.77 18.2.57 "Stranded wire fences with barbed wire strands as necessary" would not be adequate along PRoW. This will not prevent access by people and will certainly not keep dogs out. With the Scheme promoting biodiversity, the Applicant has a duty to ensure that the wildlife that it seeks to encourage into the area has some protection from dogs. This is especially important as most dog walkers have their pets "off lead".

The Applicants response

Item MW-COM1 of the OEMP requires the ALO to discuss fencing requirements with landowners so this will be a matter of detailed design within the context of the commitments, principles and consultation processes set out in the OEMP.

Where appropriate, fencing requirements of landowners are being recorded as part of the Position Statements.

M & R Hosier response to 8.49

For security and biosecurity reasons, we would require stock netting with three strands of barbed wire around our perimeter fencing, in order to prevent dogs entering our holding and keep our livestock safe.

11.1.78 18.2.58 As demonstrated at the ETRO on byways 11 and 12 from summer solstice 2018 to winter solstice 2018, the trial bikes were still able to use the byways via the Kent Carriage gates. No doubt this practice will continue with no enforcement from Wiltshire Council. For the Scheme objectives to be achieved there needs to be an agreement on WC's behalf to enforce their authority on the PRoWs.

The Applicants response

The management and enforcement of access across the WHS including byways 11 and 12 is a matter for Wiltshire Council (as the highways authority with responsibility for the public rights of way), as well as landowners, including the National Trust and English Heritage. It would not be appropriate for Highways England to take on this responsibility for Wiltshire Council, given the differing statutory roles of the two organisations.

M & R Hosier response to 8.49

We understand the Applicant's response, but feel the situation demonstrates that the large number of additional byways being added to this area will mean that the upkeep of these, as well as the existing PRoW will be scant. It highlights Wiltshire Council's lack of respect for the WHS.