

**M25 Junction 10/A3 Wisley Interchange
TR010030**

**9.86 Applicant's Comments on Royal
Horticultural Society's Deadline 6
submission**

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Table of contents

Chapter	Pages
1. Introduction	4
2. Response	5
2.1 Highways and Traffic Impacts	5
2.2 RHS's letter to Natural England (dated 3rd April 2020) and Freeths LLP Annex (including Baker Consultants Appendix)	5
2.3 Further Representations of Jon Bunney of Hatch Regeneris on Economic Impact	13
2.4 RHS table of comments on D5 Submissions (Highway Matters) – Appendix 1 of REP6-024	16
Appendices	18
Appendix A: Comments on the legal aspect of the Freeths Annex [REP6-025]	19

1. Introduction

- 1.1.1 This document sets out Highways England's comments on documents submitted by the Royal Horticultural Society (RHS) at Deadline 6 (3 April 2020). It responds to the points made within [REP6-024] *Deadline 6 Submission - Comments on any further information requested by the ExA received by D5 and D5a*.
- 1.1.2 Where issues raised within the submission have been dealt with previously by Highways England, a cross reference to that response or document is provided to avoid unnecessary duplication. The information provided in this document should, therefore, be read in conjunction with the material to which cross references are provided.
- 1.1.3 In order to assist the Examining Authority, Highways England has not provided comments on every point made by RHS, including for example statements which are matters of fact and those which it is unnecessary for Highways England to respond to. However, and for the avoidance of doubt, where Highways England has chosen not to comment on matters contained in the response, this should not be taken to be an indication that Highways England agrees with the point or comment raised or opinion expressed.

2. Response

2.1 Highways and Traffic Impacts

- 2.1.1 In reference to paragraph 5 of the comments submitted by RHS at Deadline 6 [REP6-024], the RHS Alternative Scheme, that retains a “left out” turn from Wisley Lane directly on to the A3, as a major/minor junction is not permitted on a Dual 4 lane all Purpose road in accordance with Design Manual for Roads and Bridges (DMRB) standards. Also, if it was provided as a grade separated junction, it cannot meet applicable highway design standards contained in the DMRB due to its proximity to the Wisley Lane northbound merge and the off-slip for junction 10. Such an access at this location would be inherently unsafe.
- 2.1.2 In reference to paragraph 6, the proposed access in the DCO Scheme, along the Wisley Lane diversion, would be safer for accessing and egressing the garden and would improve access to it.
- 2.1.3 In reference to paragraph 7, Highways England maintains that the model has been appropriately validated and is suitable for testing the scheme. This has been accepted by Surrey County Council
- 2.1.4 Regarding the point in paragraph 8 that “*for RHS traffic alone this represents an overall switch of 30% of traffic away from the Strategic Road Network and onto the Local Road Network*” this only refers to visitors to RHS from the south using the A3 corridor and is between approximately 20-30% of RHS traffic (depending upon which survey information is used) and of course only applies for the last few miles of the journey on the LRN, not the whole journey.
- 2.1.5 Regarding the modelling of the RHS alternative mentioned in paragraph 9, Highways England’s position remains that the “left out” on to the A3 would be too dangerous to consider, will not be built and so there is no basis for modelling it.

2.2 RHS’s letter to Natural England (dated 3rd April 2020) and Freeths LLP Annex (including Baker Consultants Appendix)

- A.1.1 At Deadline 6 RHS produced [REP6-025]:
- A letter from RHS to English Nature (sic) dated 3rd April 2020;
 - An annex to that letter by Penny Simpson, a partner at the law firm Freeths LLP (‘the Freeths Annex’) entitled ‘Natural England’s Incorrect Statutory Advice on Highways England’s Statement to Inform a Habitats Regulations Assessment of the DCO Scheme’ (3 April 2020); and
 - An appendix to the Freeths Annex by Baker Consultants (‘the Baker Consultants Appendix’) entitled ‘Review of impact of Nitrogen Deposition on invertebrates’ (31 March 2020).
- 2.2.2 These documents raise three key ecological issues, as follows:
- The potential impact of air quality changes within the woodland buffer of the invertebrate resource of the qualifying SPA species (paragraphs 9-40 of the Freeths Annex and the Baker Consultants Appendix);

- The robustness of the bird survey data collected (paragraphs 41-45 of the Freeths Annex);
- The air quality data, specifically regarding ammonia, and the delay in delivery of conservation objectives (paragraphs 46-68 of the Freeths Annex).

2.2.3 These points are responded to below and in Appendix A: Comments on the legal aspect of the Freeths Annex [REP6-025] of this document. It is clear, however, that RHS's REP6-025 submission is based on a series of misunderstandings or mischaracterisations of the evidence and makes absolutely no difference to the approach taken in the SiAA or, indeed, its conclusions.

The potential impact of air quality changes within the woodland buffer on the invertebrate resource of the qualifying SPA species

2.2.4 RHS in their submission [REP6-025] make three points with regards to potential impact of air quality changes within the woodland buffer on the invertebrate resource of the qualifying SPA species:

1. Because Highways England recognise that the physical loss of woodland could lead to an adverse effect on the SPA as a result of a reduction in invertebrate resource, it follows that any change in nitrogen deposition within the woodland buffer would have the same or similar adverse effect;
2. Nitrogen deposition rates will increase within the woodland buffer as a result of the Scheme;
3. Therefore, the change in invertebrates within the woodland buffer as a result of changes in nitrogen deposition rates resulting from the Scheme will lead to an adverse effect on the SPA and the Statement to inform appropriate assessment Rev 1 [REP4-018] has been carried out incorrectly.

Point 1: Because Highways England recognise that the physical loss of woodland could lead to an adverse effect on the SPA as a result of a reduction in invertebrate resource, it follows that any change in nitrogen deposition within the woodland buffer would have the same or similar adverse effect

2.2.5 The coniferous woodland that separates the A3 and M25 from the heathland, referred to by RHS in their submission [REP6-025] acts as a buffer between both of these roads and the heathland where the SPA qualifying species occur, and does not support any of the SPA qualifying species as a foraging or nesting habitat. This is set out in Point 11 on page 10 of the Applicant's comments on RHS's Deadline 3 submission [REP4-005] and again in 4.1 of the Applicant's comments on RHS's Deadline 5 submission [REP6-010].

2.2.6 This conclusion is consistent with the position set out by the High Court in their decision in *Compton Parish Council v Guildford Borough Council* [2019] EWHC 3242 ('the Compton Case'), where it was accepted that the woodland adjacent to the A3 and M25 is not suitable for nesting or foraging by the SPA qualifying species, but does provide an important function by providing a buffer to, and supporting areas of, the SPA that provide SPA qualifying species bird nesting and foraging habitat.

- 2.2.7 The SiAA [REP4-018] identified a possible pathway to an adverse effect on the SPA due to the physical loss of woodland and its potential to contribute to an invertebrate resource. This was a precautionary approach as it is unlikely that the loss of this woodland would actually have an adverse effect on the SPA qualifying species, when it is the heathland habitats which support them for nesting and foraging, and therefore the heathland habitats are likely to provide all of the invertebrate resource that they need.
- 2.2.8 Paragraph 7.2.12 of the SiAA [REP4-018] explains that the recent clearance of woodland in order to allow heathland restoration led to an increase in abundance of all three qualifying species. The increase in the SPA qualifying species as a result reduced areas of woodland and increased areas of heathland indicates that the heathland itself is likely to provide all the invertebrate resource that these qualifying species require, and that the clearance of woodland did not prevent the SPA qualifying species from increasing in response to the additional areas of heathland.
- 2.2.9 RHS asserts that, based on the precautionary assumption that the physical loss of woodland may reduce the invertebrate resource for the qualifying species of the SPA sufficiently to lead to an adverse effect, it must also be assumed that any changes in air quality within the woodland buffer could also lead to reductions in the invertebrate resource for the SPA qualifying species that could result in an adverse effect. RHS go on to say in paragraph 33 of their Freeths Annex:
- 2.2.10 *“The conclusion reached by NE and HE (summarised at paragraph 28 above) could only be sustained if NE and HE were certain, based on the best scientific knowledge in the field, that invertebrates in the woodland would in no way be affected by the acknowledged significant air quality deterioration in the woodland and where this were based on correct and robust air quality data (as to the air quality date, see “Further comments on the HE air quality evidence” below). No or insufficient evidence on this has as yet been presented by HE or requested by NE”.*
- 2.2.11 This assertion at paragraph 33 of the Freeths Annex is incorrect. There are many ways in which the invertebrate population may be affected by a range of activities and proposals; not all such ‘effects’ would represent an adverse effect to the integrity of the SPA.
- 2.2.12 The essential point that the Freeths Annex has misunderstood is that, whilst the forecast changes in nitrogen deposition rates may have a very small effect on the assemblage (i.e. composition) of invertebrate species in the woodland buffer, it will not have a material effect on the overall biomass (i.e. abundances) of invertebrates. This is important in the context that the SPA qualifying bird species are not reliant on a particular assemblage of invertebrates, but on their overall biomass. As stated previously, the SPA qualifying bird species do not forage within the buffer zones, but insofar as those buffer zones may contribute to the overall SPA invertebrate biomass, small changes in the invertebrate assemblage of buffer zones do not have an adverse effect on the integrity of the SPA.
- 2.2.13 The Thames Basin Heaths SPA supplementary advice refers to the distribution, abundance and availability of invertebrate prey. Some key prey item groups (e.g. moths, beetles, spiders) are identified but there is no reference to a specific

composition of woodland invertebrates being of particular significance. The overall advice supports a more logical interpretation that it is the biomass and distribution of key prey item groups which is of primary importance.

- 2.2.14 The Freeths Annex relies upon the Baker Consultants Appendix by way of substantiating the assertion at paragraph 33 that any effect on woodland invertebrates would introduce reasonable scientific doubt as to the absence of adverse effects to site integrity.
- 2.2.15 Paragraphs 1 and 2 of the Baker Consultants Appendix note that nitrogen deposition has deleterious effects on terrestrial biodiversity and that, in light of this, the conservation objectives include a target to restore the concentrations and deposition of air pollutants to at or below the site relevant critical load or level values. Paragraph 3 continues to then conclude that *“it is therefore clear that nitrogen deposition... may adversely affect the populations of the invertebrates in the woodlands”*. This statement is unqualified and misses the point that the focus of the HRA is on the integrity of the SPA itself and the extent to which it is able to support the populations of the qualifying bird species for which it has been classified; not on the current assemblage (i.e. composition) of invertebrate species within the buffer zones.
- 2.2.16 As explained in paragraph 7.2.23 and paragraphs 7.4.1 to 7.4.7 of the SiAA [REP4-018], based on the precautionary principle, it was assumed that the complete loss of woodland habitat within the SPA (permanent loss of 5.9 ha and temporary loss of 8.7 ha) would result in a quantifiable reduction in overall invertebrate biomass at a magnitude which cannot be disregarded in view of the SPA's conservation objectives. Therefore, a risk to site integrity was acknowledged. It does not follow, however, that any change whatsoever in invertebrate assemblage within remaining woodland would, likewise, represent a threat to site integrity.
- 2.2.17 There is a profound difference between the ecological implications for prey availability from a loss of woodland habitat (permanent loss of 5.9 ha and temporary loss of 8.7 ha) compared to a minor change in air quality across the extensive areas of woodland buffer habitats that remain.
- 2.2.18 The Baker Consultants Appendix relies on the findings of Fox *et al.* (2014) to support the link between nitrogen deposition and adverse effects to woodland invertebrate populations, but this study is of limited relevance to overall invertebrate biomass and distribution within a woodland habitat. Indeed, the Fox paper recognises, under a sub heading of 'Synthesis and applications', that its findings show that some species will increase whilst others decrease:
- 2.2.19 *“Our findings are consistent with large-scale responses to climatic and land-use changes, with some species increasing and others decreasing. We suggest that land-use change (e.g. habitat loss, nitrogen deposition) and climate change are both major drivers of moth biodiversity change, acting independently and in combination.”*
- 2.2.20 It is relatively straightforward to accept, on basic ecological principles, that a shift in vegetation composition as a result of nitrogen deposition will bring associated shifts in invertebrate biodiversity; many invertebrate species being more closely associated with particular plant communities. It does not follow however that any such shift would lead to a change in the overall biomass of the invertebrate resource of the SPA or represent a threat to the integrity of the Thames Basin

Heaths SPA. As some vegetation becomes more dominant as a result of increased nitrogen deposition, certain invertebrates species will benefit, and whilst the composition may vary, the overall invertebrate biomass is likely to remain stable, therefore providing a continued invertebrate resource to the wider SPA.

- 2.2.21 In conclusion, whilst Highways England has identified a potential pathway to an adverse effect under the precautionary principle, as a result of the physical loss of woodland habitat (permanent loss of 5.9 ha and temporary loss of 8.7 ha), Highways England does not accept that minor shifts in invertebrate composition as a result of changes in nitrogen deposition could lead to an adverse effect on the qualifying bird species of the SPA.

Point 2: Nitrogen deposition rates will increase within the woodland buffer as a result of the Scheme

- 2.2.22 The 'significant increases' referred to in paragraph 3 of the Freeths Annex should not be confused with the identification of a significant effect. An increase in nitrogen deposition of greater than 1% of the lower limit of the critical load is 'significant' in that it requires additional assessment to determine if this would lead to an adverse effect.
- 2.2.23 The SiAA demonstrated, however, that the established woodland buffer will receive lower levels of nitrogen deposition once the Scheme is operational than it currently does. This can be seen by comparing the existing baseline against the in-combination operational scheme effects in Table 8 of the revised Nitrogen Deposition rates within the SPA [REP5-024]; the levels of nitrogen deposition will actually be lower with the Scheme than the existing baseline for all points of all transects within the SPA.
- 2.2.24 In addition, as set out in Point 11 of page of 19 of the Applicant's comments on RHS's Deadline 3 submission [REP4-005], the nitrogen deposition rates were historically higher than the current baseline when the site was designated as an SPA in 2005, and yet even then they still provided sufficient invertebrate resource for the SPA qualifying species.
- 2.2.25 Therefore, it is clear that with the Scheme the retained established woodland will continue to provide the same woodland buffer function and invertebrate resource that it currently does and there will be no adverse effect on the integrity of the SPA as a result of air quality changes; of that there is no scientific doubt.

Point 3: The change in invertebrates within the woodland buffer as a result of changes in nitrogen deposition rates resulting from the Scheme will lead to an adverse effect on the SPA and the SiAA has been carried out incorrectly

- 2.2.26 Although the physical loss of woodland may result in a reduction in the invertebrate biomass, it can be concluded beyond reasonable scientific doubt that any changes in air quality within the woodland buffer as a result of the Scheme will not result in a perceptible reduction in the invertebrate biomass within the SPA for the SPA qualifying species.
- 2.2.27 When considering all the evidence it is reasonable for the SiAA to come to the view that there will not be any adverse effects on the integrity of the SPA as a

result of changes in nitrogen deposition rates attributed to the operation of the Scheme.

- 2.2.28 As explained in Point 11 on page 16 of the Applicant's comments on RHS's Deadline 3 submission [REP4-005], the approach to the air quality assessment within the SiAA does fully align with the Compton Case (above). However, unlike the Compton Case, this Scheme will result in physical land take from the SPA and has therefore considered the additional pathways to adverse effects on the SPA that may result from this habitat loss. The approach to the air quality assessment in the SiAA was also agreed with Natural England as recorded in Point 3.2.6 of the Statement of Common Ground (SoCG) between Highways England and Natural England [REP5-003].
- 2.2.29 As explained in paragraph 4.5.4 of the Applicant's comments on RHS's Deadline 5 submission [REP6-010], the alternative Scheme proposed by RHS Wisley would itself require additional land take from the woodland buffer when compared against the proposed Scheme (approximately 0.47 ha of additional SPA land take would be required for the left turn out of Wisley Lane onto the A3). The physical loss of woodland has been shown to lead to an adverse effect on the SPA that cannot be ruled out beyond reasonable scientific doubt, as explained above. Therefore, with regards to the Habitats Regulations Assessment, an alternative option that leads to increased land take from the SPA cannot be considered to be a better alternative solution.

The robustness of survey data collected

- 2.2.30 In paragraphs 41 to 45 of the Freeths Annex, RHS challenge the robustness of the survey data collected and reported in the Environmental Statement. This challenge is misplaced, and the survey data is indeed robust.
- 2.2.31 The approach to surveying the three qualifying SPA species was based on species-specific methodologies for each of the species, as described in the RSPB's guide Bird monitoring methods: A manual of techniques for key UK species (Gilbert *et al.* 1998).
- 2.2.32 This was an appropriate survey methodology for surveying the SPA qualifying species, enabling the surveyor to record the precise locations of the birds and any behaviours they were displaying, including foraging flight lines.
- 2.2.33 The methodology was agreed with Natural England (email dated 12th June 2017, as recorded in Appendix A.4 on page 43 of the SOCG between Highways England and Natural England [REP5-003]).
- 2.2.34 The surveys carried out in 2016, 2017, 2018 and again in 2019 (after the DCO submission, in order to maintain an up-to-date baseline for the SPA qualifying features) recorded the number and distribution of all three qualifying species within both the Ockham Common and Wisley Common components of the Thames Basin Heaths SPA, including observations on their foraging and display flights.
- 2.2.35 The surveys were based on the methodology given by Gilbert *et al.* for all three species, but the numbers of visits were increased in 2017 and 2018 (refer to Table B.2 on page 91 of the SiAA [REP4-018] for details of surveys) in order to gather additional activity information for the SPA qualifying bird species and fully understand the location of each territory (additional visits were carried out until the surveyor was absolutely certain that all territories had been recorded).

- 2.2.36 In addition, the data was also assessed alongside six years of 2Js data as shown in Table B.3 on page 92 of the SiAA [REP4-018].
- 2.2.37 Although no SPA qualifying species were observed visiting the woodland areas during the surveys (i.e. birds observed flying into or out of the woodland), a desk-based study was also undertaken to determine if any of the SPA qualifying species use established woodland habitats for nesting or foraging (as set out in Section 4.7 of the SiAA [REP4-018]). This included reference to a PhD study that radio-tracked nightjars and confirmed that they actively avoid established woodland for foraging (paragraphs 4.7.12 and 4.7.13 of the SiAA [REP4-018]). This existing research was used to inform the SiAA.
- 2.2.38 The alternative methodology that is suggested in paragraph 45 of the Freeths Annex with regards to nightjar, is one carried out by Baker Consultants using bioacoustics recorders (Zwart *et al.* (2014)). This study compared the effectiveness of bioacoustic recorders for detecting the presence of nightjars compared against surveyors using the methodology as per Gilbert *et al.* (1998), when covering large areas (e.g. transects of 6km in length). The methodology was shown to be more effective at determining presence/absence of nightjar when covering large distances, compared against surveyors walking at a speed of 3-4 km/h and stopping every few minutes to listen for churring or calling nightjars. However, bioacoustic recorders do not pinpoint locations of nightjars or any flight details; they simply confirm if a nightjar is present or not, based on whether a call or churring is recorded. The study did, however, confirm that the periods during which Highways England's surveys were undertaken (just before dawn and just after dusk) were the most effective periods for achieving high levels of detection.
- 2.2.39 The bioacoustics survey method would not be appropriate to determine abundance or distribution of nightjars within the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA. For example, in Ockham Common there is one continuous area of open heathland, which supports four nightjar territories, and nightjars from different territories regularly overlap with each other in their flight paths. A bioacoustics survey would not be able to record crucial details such as the flight paths of individual nightjars, the posts from which a nightjar churred, or note whether there were interactions between males and/or between males and females, and this methodology could not be used to determine where these behaviours occurred and therefore pinpoint the territories. Therefore, the bioacoustics survey methodology would have been wholly inappropriate for the purposes of the baseline data collection for this Scheme and is certainly not the best available technique available for this Scheme, as RHS claim in paragraph 45 of the Freeths Annex.
- 2.2.40 Highways England is confident that it has collected an extremely robust dataset and has an excellent understanding of the abundance, distribution and habitat utilisation of all three SPA qualifying species. The bird survey results and the findings of the SiAA were shared and agreed with Natural England (as recorded in the meeting minutes on 9 October 2018 in the HRA Annex B consultation report [REP4-016]) and RSPB (as recorded in Item 1.0 of the meeting minutes on 5 December 2018 in the HRA Annex B consultation report [REP4-016]).

Air Quality

- 2.2.41 The comments in the Freeths Annex on air quality relate to two key issues:

- ammonia; and
- future nitrogen deposition rates.

2.2.42 These are addressed in turn below.

Ammonia

- 2.2.43 The Freeths Annex considers that ammonia should be included within the HRA; see paragraphs 48-55. The air quality assessment for the DCO Scheme was undertaken in accordance with the relevant Highways England DMRB guidance and developed to satisfy the requirements described in the National Policy Statement for National Networks (NPS NN). Paragraph 5.8 of the NPS NN sets out that Department for Environment Food and Rural Affairs' (DEFRA) Emissions Factors Toolkit (EFT) should be used as the basis for assessment (see 2.7.1 of Response to RHS Comments on Air Quality [REP2-022]). The published EFT does not contain a set of vehicle emissions factors for ammonia.
- 2.2.44 Published guidance by Natural England and the Institute of Air Quality Management does not consider there to be a requirement for assessing the contribution of ammonia from road vehicles on the effect of ecological receptors (as noted in Applicant's Response to Examining Authority's Second Written Questions [REP5-014], point 2.3.3).
- 2.2.45 Highways England does not believe that it is a reasonable assertion to claim that the assessment of ammonia emissions from traffic is already commonplace in appropriate assessment. Whilst three examples were given, no references have been provided and so it has not been possible to investigate the relevance of those examples for this Scheme. A recently submitted SiAA for a Development Consent Order for a Highways England road scheme, A30 Chiverton to Carland Cross, was accepted by the Examining Authority and did not include ammonia within the air quality assessment.
- 2.2.46 The Freeths Annex considers that the data provided by RHS Wisley shows that ammonia concentrations would not be at background levels by 30 metres from the road. Highways England, however, considers that based on the measured ammonia data that have been provided in RHS' Deadline 1 Submission - Air Quality Representation [REP1-041] at Appendix A4, there is a clear decrease in ammonia concentrations with distance, with the greatest decrease occurring in close proximity to the road. Given that the average measured concentrations at 22 metres from the road are similar to those measured at 100 metres from the road, it can be concluded that by 22 metres, concentrations are indicative of background concentrations. There are no further points beyond 100 metres to ascertain whether concentrations fall any further. Furthermore, Figure 2 of Appendix 4 in REP1-041 is not relevant to the argument, as it is comparing the measured data from the transect points away from the road with a background concentration that is not measured using the same method, and is not, as far as is known, in line with the transect points (as discussed in response to question 3.4.3 of the Rule 17 Letter).
- 2.2.47 The habitats of the qualifying features of the Thames Basin Heaths SPA are located well beyond 22 metres from the edge of the road, and the data presented in Figure 1 of Appendix 4 in REP1-041 suggests that at the distance at which they occur (150 metres and beyond), ammonia concentrations (as with other traffic related pollutants) would be at or close to background levels. On this

basis, a change in the contribution to nitrogen deposition from a change in the number of road vehicles with the Scheme, is unlikely to have a discernible effect on nitrogen deposition rates at this distance (as discussed in REP5-014, point 2.3.3).

- 2.2.48 RHS' air quality consultants have amended Table 1 in the Natural England SoCG [REP5-003] to include ammonia, by doubling the road contribution to the total nitrogen deposition rate. However, as has already been established above, the supporting habitats for the qualifying features are present at locations of over 150 metres from the road. At this distance, the road contribution from ammonia emissions would not have a discernible effect, and hence there is no need to amend the table or to comment further.

Delay in delivery of conservation objectives

- 2.2.49 The Freeths Annex considers that the current HRA assessment does not address "*the extent to which the DCO scheme either alone or in combination, will slow down, and possibly prevent the conservation objectives target for this component of the SPA to meet/ fall under the relevant critical load for nitrogen deposition*" (paragraph 59).
- 2.2.50 Natural England's guidance is clear that a site's conservation objectives are unlikely to apply equally to all parts of a site. "*Many sites are designated for several different qualifying features. Not all features are present within a given location within a site*" (paragraph 4.18, NEA001) and "*If none of the site's sensitive qualifying features known to be present within 200m are considered to be at risk due to their distance from the road, there is no credible risk of a scientific effect which might undermine a site's conservation objectives.*" (paragraph 4.21, NEA001).
- 2.2.51 Hence, when examining the future nitrogen deposition rates, it is important to consider the changes at the location of the supporting habitats for the qualifying features rather than throughout the entirety of the site.
- 2.2.52 Any delay in achieving delivery of the conservation objectives needs to be considered in a proportionate and pragmatic manner, taking account of the circumstances which apply in view of the conservation objectives for the site (i.e. for this site the supporting habitats for the qualifying features).
- 2.2.53 As documented in REP5-024 Table 8, the transect receptor points which are located at a distance of 150 or 200 metres from the road, and are representative of the supporting habitats of the qualifying features, nitrogen deposition rates either show a decrease with the DCO Scheme, or a change of less than 0.01 kgN/ha/yr. There would therefore be no delay to the delivery of the conservation objectives.
- 2.2.54 In any case, NO_x emissions and nitrogen deposition rates are expected to reduce in future years (as discussed in point 1.4.5 at Applicant's Response to Written Questions [REP2-013]). Any small changes with the DCO Scheme would not affect the overall future downward trend.

2.3 Further Representations of Jon Bunney of Hatch Regeneris on Economic Impact

New RHS Market Research Questionnaires

- 2.3.1 At the second issue specific hearing in January 2020 Highways England explained why the survey carried out on behalf of RHS, contained in RHS' representations at REP1-039, is flawed in a number of respects.
- 2.3.2 Highways England also explained in responding to the ExA's second set of written questions at deadline 5 about the survey (questions 2.12.11 – 2.12.13) [REP5-014], why it could not be given any substantial weight.
- 2.3.3 Presumably in recognition of the flaws in the initial survey RHS has now conducted two further visitor surveys about the effects of the DCO Scheme on RHS Wisley. However, Highways England does not consider that the two additional surveys satisfactorily address the serious defects in the original survey.
- 2.3.4 Not least the criticisms of the original survey raised by Highways England relating to safety, route utilisation factors and the use of travel time information (sourced from Google maps) are not addressed in the new survey work or the report by Hatch Regeneris dated April 2020 [i.e. Appendix 3 of REP6-024]. Moreover, most of the questions in both of the new surveys still refer to journeys to RHS rather than also dealing with journeys from RHS.
- 2.3.5 Perhaps the most significant question in both of the new surveys is question 8; which concerns increased journey times and distances to and from the garden. The phrasing of the questions is likely to cause negative bias, inconsistencies in the analysis and an overestimation any stated reduction in anticipated frequency of future visits.

Operational phase survey

- 2.3.6 Question 8 supposes that there will only be increased journey time to and from the gardens as a result of the scheme. However, for some journeys the increase in time will be very small and in other cases there will be a time reduction.
- 2.3.7 The question does not present respondents with alternative trade-off scenarios. Instead, respondents are presented with a single hypothetical scenario of the worst-case increase in journey time and then asked to provide their opinion/response to this worst-case hypothetical scenario having not been provided with any context by way of reasons for the increased journey time and distance. A fairer question would have linked the route options in question 5 to possible responses to question 8.
- 2.3.8 The journey time information presented in the question is misleading:
- In question 8 of Survey 1 (i.e. for the operational phase) the journey time described presumably refers to journeys from the south on the A3 using M25 junction 10 which represents the biggest change in journey times on account of the scheme, but the figures have been rounded up and all other possible routes ignored.
 - For visitors from other directions (representing approximately 70% of customers), journey times are increased by a much smaller amount or in some cases reduced [REP02-011 – Table 2.8].

Construction phase survey

- 2.3.9 No detail is provided about the basis for the increased journey times and distances quoted in question 8 of this survey.
- These changes in journey times are expected to be minimal. This is on the basis that the existing number of lanes on the M25 and A3 are to be maintained during the construction phase (other than at weekends and overnight) with a reduced speed limit of 50mph imposed. The reduced speed limit will make virtually no difference during the morning and evening peak periods, since traffic congestion during peak periods is such that traffic speeds are less than 50mph anyway without the reduced speed limit. Highways England accepts that there would, however, be a small increase in journey times during the inter-peak period due to the reduced speed limit.
 - Describing the construction period as a scenario “...where you are required to travel through 5 miles of roadworks...” (question 8) generates a negative preconception. Firstly, that roadworks are commonly associated with delays and secondly, the question suggests that there will be roadworks occurring continuously over 5 miles, which is not the case.
- 2.3.10 The results from the construction phase survey states that close to 50% of 4981 respondents are likely to change their behaviour as a result of a 5 to 7 minutes added to their journeys (section 3.21 of the Hatch Regeneris report and answering “Definitely yes” or “Probably yes” to question 10). This percentage is significantly higher than the 25% of respondents who are suggested as likely to change their behaviour as a result of an additional 8 minutes to their journeys during the operational phase (section 3.17 and answering yes to question 10 in Survey 1).
- 2.3.11 These findings do not support the argument made by RHS that the greater the increase in journey time the less frequently people are likely to visit the garden.

Updated Economic Impact Assessment

- 2.3.12 The economic impact methodology and the way it was applied to assess the Wider Economic Impacts assessment of the DCO scheme is inappropriate for the following two reasons:
- Standard practice for undertaking a Wider Economic Impacts assessment has a national perspective as opposed to the local perspective adopted in the RHS analysis and documented in the Counterculture Report in 2017 [REP3-052] and the Hatch Regeneris report [Appendix 3 of REP6-024]. Wider Economic Impacts assessment should be focused on net additional economic impacts at the UK level, rather than an isolated view of a specific local area or an individual organisation.

- Even from a local or regional point of view, the local multiplier approach adopted by RHS is only one step of the entire process to ascertain the local economic impacts of an intervention. UK national additionality guide (<https://www.gov.uk/government/publications/additionality-guide>) sets out established principles for local economic impacts assessment, which covers other key factors to consider such as displacement and substitution, in addition to local multipliers. Neither economic report submitted on behalf of the RHS has considered that potential changes in outputs as a result of the intervention (e.g. visitor number) may be accounted for by opposite changes elsewhere in the region (displacement) or employers may substitute one activity for a similar one (substitution). Both changes will reduce or completely offset the forecast economic impacts, and therefore the current evidence presented in the RHS analysis is incomplete.

2.3.13 Taking points 1 and 2 above together, there is no evidence to suggest that any forecast reduction in visitors to RHS Wisley (although Highways England does not accept that there will be any reduction)) will lead to net loss at the national level in terms of consumer spending in the economy and the knock-on impacts (tier 2 and tier 3 impacts as termed in both aforementioned RHS reports) on their suppliers and suppliers' employees.

Conclusion

2.3.14 These findings do not support the argument made by RHS that the greater the increase in journey time the less frequently people are likely to visit the garden and Highways England remains of the opinion that no substantial weight ought to be given to the economic impact reports submitted on behalf of RHS.

2.4 RHS table of comments on D5 Submissions (Highway Matters) – Appendix 1 of REP6-024

Ref 2.13.10

2.4.1 The Side Road Addendum report [REP3-017], para 5.3.3.1, indeed refers to traffic using the A3 route (signposted route) as indicated by RHS in this table but this was based on an early version of the model. Highways England has already stated in [REP3-008] that the difference in time between the two routes (via Ripley or via the A3 signposted route) for journeys to RHS Wisley is minimal.

2.4.2 With regard to the point that the claimed safety issues associated with the existing Wisley Lane connection to the A3 have been dealt with in [REP5-053] (item 4) Highways England maintain its position in [REP5-014] question 2.13.20.

Ref 2.13.18

2.4.3 Highways England maintains that a Departure from Standard would be required in respect of weaving length. A response was provided by Highways England on this issue in [REP5-050] in Appendix A (the statement of common ground submitted at Deadline 5).

Ref 12

2.4.4 Highways England maintains that traffic demand for interchange between the A3 and M25 at Junction 10 does increase between the Base 2015 and the Do-

minimum scenarios in 2022 and 2037. However, the traffic throughput at the junction does slightly reduce or plateau compared to the 2015 Base. This is because increased congestion on both the M25 and A3 in the Do-minimum scenarios results in the additional demand being held up and not reaching junction 10 in the modelled peak hour or finding alternative routes to avoid the congestion. The Scheme reduces forecast congestion on both the A3 and M25 and allows the additional traffic demand to reach junction 10. Consequently, the interchange flows between the A3 and M25 at junction 10 are higher than the 2015 Base in both the Do-something scenarios.

Appendices

Appendix A.

Comments on the legal aspect of the Freeths Annex [REP6-025]

- A.1.1 The Freeths Annex rightly states (para 2) that Highways England has concluded in its 'Statement to Inform an Appropriate Assessment' ('SiAA') (APP-043) that the Scheme will not have an adverse effect on the integrity of the Thames Basin Heaths Special Protection Area ('the SPA') as a result of air quality changes and that Natural England supports this conclusion. The Freeths Annex then wrongly concludes (para 4) that "Based on the information presented by HE, this conclusion is incorrect and does not accord with the strict legal protection afforded to European sites as set out in legislation and caselaw."
- A.1.2 The Freeths Annex includes a very short summary of 'Key European Court caselaw and guidance' (paras 9-12). This comprises a few quotations from CJEU cases and from the European Commission Guidance on Managing Natural 2000. There is nothing remarkable about the quotations cited, which set out some basic aspects of the legal framework for undertaking Habitats Regulations Assessment. There is, quite rightly, no suggestion in the Freeths Annex that Natural England and Highways England are not aware of the relevant legal and policy framework.
- A.1.3 The Freeths Annex then seeks (paras 13-45) to apply CJEU caselaw and guidance to Natural Natural England and Highways England's assessment of air quality impacts on the 'Ockham and Wisley Common' component of the Thames Basin Heaths SPA. What follows is largely a commentary on various extracts of the ecological evidence from which the Freeths Annex draws erroneous conclusions. Part of the problem is that much of this section of the Freeths Annex legal analysis appears to proceed on the misapprehension that, in considering a potential adverse effect on the integrity of the SPA, there is some equivalence between the physical loss of part of the woodland buffer zone and changes in the level of nitrogen deposition within that zone. In its technical response to the Freeths Annex [Volume 9.86], Highways England's ecologist, Mr Paul Watts, explains how the Freeths Annex has misunderstood the evidence on this point. The technical response makes it clear that, properly understood, the evidence shows that there will be no adverse effect on the integrity of the SPA as a result of air quality changes; a conclusion with which Natural England agrees. The misunderstanding of the ecological evidence in this section of the Freeths Annex renders its legal analysis flawed and its central conclusion on integrity entirely wrong.
- A.1.4 At its paragraph 37-38 the Freeths Annex briefly touches on the decision of the High Court in *Compton Parish Council v Guildford Borough Council* [2019] EWHC 3242. The Freeths Annex seeks to draw distinctions between the Compton case and the present application. The plain fact is, however, that the approach adopted by Natural England and Highways England in relation to the SiAA is entirely consistent with the correct approach identified in paragraph 207 of the Compton judgement; as, indeed, Highways England made clear in its comments on RHS's Deadline 3 submission [REP4-005 page 16]. There is nothing in the Freeths Annex that demonstrates otherwise.

- A.1.5 Paragraphs 48-55 of the Freeths Annex turns to the issue of ammonia. The Highways England technical response to the Freeths Annex [Volume 9.86] explains that the relevant technical guidance on the effects of road vehicles on ecological receptors does not require an assessment of ammonia and nor is this common practice. More fundamentally, however, the technical response shows that at the distances from the carriageway where the qualifying features of the SPA are to be found the levels of ammonia with the Scheme would be at or close to background levels and would have no effect on integrity. References in this part of the Freeths Annex to 'CJEU caselaw' do not change that fundamental technical conclusion on the evidence and so the supposed legal issues in the Freeths Annex just fall away.
- A.1.6 Other parts of the Freeths Annex appear, once more, to be an ecological analysis by a law firm and, therefore, of limited evidential value. This note has not, therefore, commented further on that ecological analysis, although the Highways England technical response to the Freeths Annex does comment on such issues, where appropriate.
- A.1.7 The RHS covering letter to Natural England of 3 April 2020 states that "... if the Secretary of State follows the current statutory advice from NE (in relation to the assessment of impacts from the DCO Scheme on the SPA undertaken to date by HE), then any resulting Development Consent Order will be unlawful due to a failure to apply correctly the requirements of the European Habitats Directive (as it applies to the SPA) and the Conservation of Habitats and Species Regulations 2017." This seems to be a rather crude attempt to press Natural England into changing its technical advice on the effects of the Scheme and its very clear conclusion that it will not have an adverse effect on the integrity of the SPA as a result of air quality changes. In so far as it is an implied threat, it is a hollow and misplaced one.
- A.1.8 The Highways England SiAA has correctly complied with European and domestic legal and policy requirements, and Natural England is right to advise the Secretary of State that there will be no adverse effect on the integrity of the SPA as a result of air quality changes.

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