

**M25 junction 10/A3 Wisley interchange
TR010030**

**9.51 Applicant's comments on
Royal Horticultural Society's
Deadline 3 submission**

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The Infrastructure Planning (Examination Procedure) Rules 2010 (as amended)

M25 junction 10/A3 Wisley interchange

Development Consent Order 202[x]

9.51 Applicant's Response to Royal Horticultural Society's Deadline 3 submission

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1. Introduction

- 1.1.1 This document sets out Highways England's comments on the suite of documents [REP3-042 to REP3-059] submitted by the Royal Horticultural Society (RHS) at deadline 3 (28 January 2020).
- 1.1.2 Where issues raised within the Written Representation have been dealt with previously by Highways England, for instance in response to a question posed by the examining authority in its first round of written questions [REP2-013], in Highways England's comments on written representations [REP2-014] or within one of the application documents, 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 the 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.
- 1.1.4 Highways England has structured the response in the following way:
- *Section 2: Comments on RHS's Overview Letter [REP3-042]*
 - *Section 3: Comments on the RHS's Ockham Park Interchange Alternative Design [REP3-049]*
 - *Section 4: Comments on RHS's Response to REP2-014*
 - *Section 5: Comments on RHS's Response to REP2-022*

2. Comments on RHS's Overview Letter [REP3-042]

RHS Letter Reference	Issue	Highways England Response
1.	This Overview summarises the position of the RHS following ISH2 and encloses various additional documents in accordance with the requirements of the ExA.	N/A
2.	<p>The additional documentation comprises:</p> <ul style="list-style-type: none"> • Appendix 1–Summary of RHS Oral Case at ISH2; • Appendix 2-Submissions and written responses to REP2-014 including Appendices X and Y; Managing Natura 2000 Provisions; TTHC Drawings: M16114-A-051 'Ockham Roundabout: South Facing Slips (including Ripley Services)– Option 1' and M16114-A-052 'Ockham Roundabout: Comparison between RHS Alternative and DCO Scheme'. • Appendix 3–Written responses to REP2-022. • Appendix 4–Letter from BDB Pitmans to Richard Max & Co dated 24 December 2019. • Appendix 5–“Counterculture” Report dated November 2017. • Appendix 6–Plans showing recent consented development at RHS Wisley. • Appendix 7–Travel Plans and Section 106 Agreement associated with RHS Wisley consented development. • Appendix 8–Plans showing RHS Redwood Trees still at risk of harm by the DCO Scheme and Alignment Options Assessment. 	N/A
<p>POST-HEARING SUBMISSIONS <i>Highways and traffic impacts</i></p>		

RHS Letter Reference	Issue	Highways England Response
3.	<p>The RHS maintains its position that the DCO Scheme would result in the significant worsening of access to and from the RHS Garden. Each visitor would have to drive further (round trip) when visiting the RHS Garden and the new route, whether via the signposted A3 or via local villages, would be significantly less attractive. Cumulatively, the DCO Scheme would add approximately 3.0 million additional miles to the road network each year via the signposted route.</p>	<p>Highways England do not agree that DCO Scheme would result in the significant worsening of access to and from the RHS Garden Wisley. Whilst the overall distances for RHS Garden Wisley visitors increase due to the Scheme (although the distance is shorter for motorists leaving the gardens and heading south), the difference in journey times between the do-minimum and do-something scenarios is relatively small compared to likely overall average journey times for visitors, given the highly dispersed places of residence of RHS Garden Wisley visitors across the South East of England. Access will also be safer with the Scheme.</p> <p>Highways England also disagree that the DCO Scheme would add approximately 3 million miles to the use of the road network each year. Highways England has calculated that the Scheme will add between 213,700 and 1.165 million miles per year depending on whether visitors choose to travel via Ripley or follow the signposted route via J10 (See Highways England's response to ExA written question 1.13.13 [REP2-013]).</p> <p>The Highways England estimate of added additional miles assumes a level of visitor numbers and vehicle occupancy consistent with RHS's predictions for visitors following completion of new facilities at the gardens [Appendix M of REP1-044].</p>
4.	<p>In comparison with the DCO Scheme, the RHS Alternative Scheme would result in much improved access arrangements; reduced journey times and less vehicular mileage (and therefore less pollution).</p>	<p>Highways England has responded to this issue previously in document REP2-014. This is further discussed in Section 3 below.</p>
5.	<p>HE's modelling shows that all RHS traffic from the south would not use the A3 Ripley Bypass route (strategic Road Network) but instead travel via the local villages of Send and Ripley. This is a less commodious route than the existing A3 route and results in significant inconvenience for RHS visitors.</p>	<p>Highways England has responded to this issue previously in document REP2-014.</p>

RHS Letter Reference	Issue	Highways England Response
6.	HE's modelling has not modelled the DCO Scheme taking accurate account of the RHS or Wisley Airfield. Without this modelling the ExA cannot properly assess the impact the DCO Scheme would have.	<p>The 2037 traffic modelling for the DCO Scheme includes the traffic forecast to be generated by the RHS and Wisley Airfield developments.</p> <p>The traffic model assumes a level of traffic demand equivalent to a very busy day (i.e. an event day) at RHS Wisley, which is in excess of levels of an average day, even taking into account the approved developments at the gardens.</p> <p>The traffic model reflects the Wisley Airfield development sufficiently accurate to enable the traffic impacts of the Scheme in combination with the Wisley Airfield development to be fully and thoroughly assessed. The traffic modelling does not, however, include the Burnt Common north-facing slips that are a prerequisite for the Wisley Airfield development and would remove traffic along the B2215 Portsmouth Road through Ripley. Therefore, the traffic modelling for the DCO Scheme will be overstating the likely volume of traffic through Ripley in 2037.</p>
7.	Further and in any event, HE's modelling cannot be relied upon because by its own admission (see letter from BDB Pitmans to Richard Max & Co dated 24 December 2019–Appendix 4) HE has not been able to validate the congested conditions within Ripley. As a consequence, the HE Baseline modelling is deficient which subsequently affects the reliability of the future modelled scenarios (with the DCO Scheme). Despite these deficiencies, HE now relies on the route through the villages in the future to accommodate traffic currently on the Strategic Route Network(A3).	<p>The BDB Pitmans letter to Richard Max of 24th December 2019 [REP3-051] explains why there is no deficiency.</p> <p>In short, the strategic model, which includes not only the Strategic Road Network, but also the local road network and which has formed the basis of the assessment of the Scheme, has been validated, including, therefore within Ripley.</p>
Air Quality		
8.	HE's air quality analysis relies on the flawed traffic modelling referred to above. Further and in any event, the air quality material before the ExA has a number of flaws that undermine the credibility of the assessments of both ecosystem and health impacts. The key flaws with regard to the ecosystem assessment are:	<p>The air quality assessment is a robust and conservative assessment, which has been undertaken in accordance with Highways England's DMRB method and uses a precautionary approach when considering future estimates.</p> <p>As a worst case the assessment uses the higher traffic flows at an earlier design stage.</p>

RHS Letter Reference	Issue	Highways England Response
	<ul style="list-style-type: none"> The assessment does not take into account the in-combination impact of the DCO Scheme with other plans and projects, as required by the Habitats Regulations. the calculations of nitrogen deposition (Ndep) have not included ammonia emissions from road vehicles and are therefore underestimated; and the exceedances of the critical level for NOx have not been considered either alone or in-combination. <p>As a consequence, the ExA cannot rely on the findings as presented.</p>	<p>The traffic modelling used to assess the impacts of the Scheme is not flawed. It has been developed, calibrated and validated in accordance with DfT best practice guidance (WebTAG) and a good level of model validation has been achieved that exceeds the minimum required to demonstrate its robustness.</p> <p>The approach for the air quality assessment was agreed with Natural England and further endorsed at a recent meeting in January 2020. The outcomes of the meeting will be documented in a revised SOCG with Natural England.</p> <p>Responses to the points raised by RHS Wisley are provided in the responses below in section 5.</p>
9.	<p>With regard to health impacts, the model underestimates the concentrations of nitrogen dioxide in Ripley. This is because the model has not been verified and adjusted against the monitoring data for Ripley. Again, this means that the ExA cannot rely on the conclusions that HE presents in this regard.</p>	<p>Verification of the modelled results was undertaken using 58 monitoring points within the study area for the 2015 base year. Once adjusted following standard practice, 57 out of 58 monitoring points were within 25% of the modelled results indicating good model performance (para 5.5.21 of APP-050 and table 5.4.4 of APP-080) in the study area overall. The verification did not take into consideration of the 2016 monitoring data in Ripley.</p> <p>As discussed in section 5, point 4.2.2 below, a local verification factor has now been derived for Ripley, and the results for the receptors updated.</p>
10.	<p>The RHS Alternative Scheme would lessen the air quality impacts as traffic flows and associated emissions through Ripley and on the A3 past the SPA would be significantly reduced.</p>	<p>There would not be any difference to the conclusions of the air quality assessment documented in APP-050 nor to the conclusions of the SIAA as a result of the RHS Alternative Scheme, as discussed in Section 5 below.</p>
<p>Habitats Regulations and Biodiversity</p>		
11.	<p>The HE SIAA is in turn based on the flawed air quality data referred to above. Further and in any event, the SIAA does not comply with published guidance or established case law and cannot be relied upon.</p>	<p>The approach taken by Highways England in the SIAA [REP -043] is correct, legally compliant and can be relied on. In setting out the justification for the approach, the following paragraphs also cover the points raised by RHS in their response to Highways England's comments at deadline 2 in REP2-014 [REP3-044] and REP2-022 [REP3-050].</p>

RHS Letter Reference	Issue	Highways England Response
		<p>As pointed out by RHS in their response to REP1-038-5, with regards Article 6(3) of the Habitats Directive (92/43/EEC), the Waddenzee Case (Case C-127/02 Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij) considers that, 'the plan or project in question may only be granted authorisation on the condition that the competent national authorities are convinced that it will not adversely affect the integrity of the site concerned' (paragraph 56). 'Where doubt remains as to the absence of adverse effects on the integrity of the site linked to the plan or project being considered, the competent authority will have to refuse authorisation' (paragraph 57).</p> <p>In accordance with Article 6(3) of the Habitats Directive (92/43/EEC), once a risk of adverse effect to site integrity has been identified, Article 6(4) must be applied (i.e. consideration of alternative solutions, imperative reasons of overriding public interest and compensatory measures).</p> <p>The SIAA has aligned with this approach, and it is important to note that Highways England have identified an adverse effect to the integrity of the SPA as a result of the Scheme, and in accordance with Article 6(4) of the Habitats Directive, have undertaken a consideration of alternative solutions, assessed imperative reasons of overriding public interest and designed a suite of compensatory measures in consultation with Natural England, Forestry Commission, RSPB, Surrey County Council and Surrey Wildlife Trust [APP-044].</p> <p>The reference to the Waddenzee test is therefore misleading as it has already been accepted by Highways England that it is not possible to conclude no adverse effect to site integrity. The adverse effect to site integrity follows a precautionary approach and is based on land take from the SPA and the potential for the woodland being lost to provide an invertebrate resource, even though it does not physically support the qualifying species.</p>

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		<p>The SIAA did however rule out adverse effects on the integrity of the SPA as a result of air quality impacts. This is because the SIAA determined that the spatial extent of the air pollution impact is confined to the established woodland that separates the heathland from the roads and acts as a protective buffer. The contribution made by this buffer to the ability of the site to support the qualifying features for which it had been classified will not be undermined or compromised by the changes in air quality which are predicted to occur. At the distance that the heathland occurs (i.e. the key supporting habitat for the SPA qualifying species which is potentially sensitive to deterioration in air quality, and for which the critical loads and levels are derived) there is no significant difference in nitrogen deposition rates between the with Scheme and without Scheme calculations. This is explored further below, after comments on the individual SPA species.</p> <p>Whilst this woodland buffer may also provide an invertebrate source for the wider SPA, it does not itself support any of the qualifying species as a foraging or nesting habitat. It is important to recognise that, in the case of a classified SPA, the ecological interest is the bird species which occur within the site. The classification of the site as an SPA recognises the importance of the habitats within the site, but only so far as they support the populations of SPA species for which the site has been classified. The habitats are not protected in their own right as would be the case for a designated SAC.</p> <p>In this regard, it is also necessary to recognise that, according to the Waddenzee decision, an effect is only considered 'likely' if it undermines the conservation objectives (refer to paragraph 47 of Case C-127/02). The spatial application of the conservation objectives across a site is therefore of primary importance. Natural England guidance has clearly recognised a site's conservation objectives are unlikely to apply equally to all parts of a site (Refer to paragraph 4.18 of Natural England (2018) Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001) [REP3-021]). The NE guidance continues, with particular reference to road schemes, at para 4.19:</p>

RHS Letter Reference	Issue	Highways England Response
		<p><i>“Where the applicant has provided reliable and precise information that models the likely deposition of road based pollutants in relation to the distribution of a site’s features and any sensitive features are not present within the area to be affected by emissions (and Natural England’s advice is that there is no conservation objective to restore the features to that area), it will be relatively straightforward to ascertain that the project poses no credible air quality risk to it.”</i></p> <p>In addition, following an appropriate assessment, EC guidance (European Commission (2019) Managing Natura 2000 sites: The provisions of article 6 of the Habitats Directive 92/43/EEC) has clarified the concept of the ‘integrity of the site’ at section 4.6.4 which states that <i>“It is clear from the context and from the purpose of the Directive that the ‘integrity of a site’ relates to the sites conservation objectives... In other words, if none of the habitat types or species for which the site has been designated is significantly affected then the site’s integrity cannot be considered to be adversely affected.”</i> It therefore follows that, where a site is classified as an SPA the integrity test cannot be answered one way or another by simply considering whether a critical load or level is exceeded. Instead it is necessary to consider how any predicted change in air quality might undermine the achievement of the site’s conservation objectives. The critical question to be addressed by an appropriate assessment is explained by Advocate General Sharpston in paragraph 50 of her opinion in the case of Sweetman (Peter Sweetman and Others v An Bord Pleanála Case C-258/11) and is to ask ‘what will happen to this site if this plan or project goes ahead; and is that consistent with maintaining or restoring the ‘Favourable Conservation Status’ of the habitats or species concerned’. Whilst the concept of favourable conservation status does not apply to an SPA, the question can be rephrased accordingly to refer instead to ‘achieving the aims of the Wild Birds Directive’.</p> <p>A brief summary of the justification for the conclusions in respect of air quality, with reference to the qualifying species for which the SPA has been classified, is listed here:</p>

RHS Letter Reference	Issue	Highways England Response
		<p><i>Dartford warbler</i></p> <p>The bullet points below explain why Highways England has concluded with confidence that Dartford warblers only associate with heathland habitats, and do not use the woodland buffer that separates the heathland from the A3 and M25:</p> <ul style="list-style-type: none"> • As described in paragraphs 4.7.7 and 4.7.8 of the HRA Stage 2 [APP-043], Dartford warblers are exclusively found within heathland habitats, favouring areas with tall dense gorse and tall mature heather for nesting. This text references a study by van den Berg at al. (2001) that identifies a negative association with woodland habitats; • The Thames Basin Heaths SPA conservation objectives supplementary advice (http://publications.naturalengland.org.uk/publication/4952859267301376) states that Dartford warblers have a close association with stands of gorse, and describes the optimal vegetation for Dartford warbler as containing a greater than 50% cover of heather and/or gorse, with less than 25 trees per ha (of 0.5-3 m in height); • As described in Table B.4 of Appendix B of the HRA Stage 2 [APP-043], surveys for Dartford warbler have been undertaken in 2016, 2017 and 2018. During these surveys, Dartford warblers have been observed, and breeding territories have been established. All Dartford warbler activity and all breeding territories were within the open heathland areas. The Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA was also surveyed in 2019 to ensure that the latest baseline was recorded. Again, all Dartford warbler activity and all breeding territories were within the open heathland areas; • As described in Table B.3 of Appendix B of the HRA Stage 2 [APP-043], breeding bird data has been provided annually for the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA by volunteer group 2J's. The data between 2013 and 2018 recorded Dartford

RHS Letter Reference	Issue	Highways England Response
		<p>warblers from 2015 onwards, and recorded all breeding territories within the open heathland areas;</p> <ul style="list-style-type: none"> The APIS website (http://www.apis.ac.uk/src1/select-a-feature?site=UK9012141&SiteType=SPA&submit=Next) shows that Dartford warblers are not sensitive to nitrogen impacts on coniferous woodland. This is because they do not use this habitat type within the Thames Basin Heaths SPA. <p><i>Nightjar</i></p> <p>The bullet points below explain why Highways England has concluded with confidence that nightjars do not use the established woodland that separates the heathland from the A3 and M25:</p> <ul style="list-style-type: none"> Several studies have been undertaken on the habitat requirements of nightjar. As described in paragraph 4.7.12 of the HRA Stage 2 [APP-043], these studies have identified that nightjars actively avoid established woodland for foraging, instead selecting open habitats, woodland edge and young woodland (less than ten years old); The Thames Basin Heaths SPA conservation objectives supplementary advice states that nightjars prefer bare patches or areas of very short vegetation with widely scattered trees. It also describes the optimal nesting conditions for nightjars as consisting of vegetation mostly of 20-60 cm, with frequent bare patches of greater than 2m², 10-20% bare ground and less than 50% tree/scrub cover, with trees being less than 2m in height. These habitat preferences fit well with the heathland habitats within the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA, and do not relate to the established woodland buffer that separates the heathland from the A3 and M25; As described in Table B.4 of Appendix B of the HRA Stage 2 [APP-043], surveys for nightjar have been undertaken in 2016, 2017 and 2018.

RHS Letter Reference	Issue	Highways England Response
		<p>During these surveys, nightjars have been observed, and breeding territories have been established. All nightjar activity and all breeding territories were within the open heathland areas. The Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA was also surveyed in 2019 to ensure that the latest baseline was recorded. Again, all nightjar activity and all breeding territories were within the open heathland areas;</p> <ul style="list-style-type: none"> As described in Table B.3 of Appendix B of the HRA Stage 2 [APP-043], breeding bird data has been provided annually for the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA by volunteer group 2J's. The data between 2013 and 2018 recorded all nightjar territories within the open heathland areas; The APIS website shows that nightjar are not sensitive to nitrogen impacts on coniferous woodland. This is because they do not use this habitat type within the Thames Basin Heaths SPA. <p><i>Woodlark</i></p> <p>The bullet points below explain why Highways England has concluded with confidence that woodlarks do not use the established woodland that separates the heathland from the A3 and M25:</p> <ul style="list-style-type: none"> The APIS website shows that woodlarks are sensitive to nitrogen impacts on coniferous woodland. As explained below, this association with coniferous woodland purely refers to the utilisation of recently felled woodland areas by woodlark and not established woodland; Several studies have been undertaken on the habitat requirements of woodlark. As described in paragraph 4.7.15 of the HRA Stage 2 [APP-043], these studies have identified that woodlarks require open areas with bare ground and short, sparse vegetation for foraging. Woodlarks would not use established woodland for foraging or nesting;

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		<ul style="list-style-type: none"> • The Thames Basin Heaths SPA conservation objectives supplementary advice states that woodlarks favour large areas of open terrain, largely free of obstructions, in and around their nesting, roosting and feeding areas. They show a preference for areas with an unobstructed line of sight in nesting, feeding or roosting habitat. They require areas with vegetation which is predominantly short (less than 5 cm tall) or medium in height (10-20 cm tall), with frequent patches of bare or sparsely-vegetated ground and scattered clumps of shrubs and trees. These preferences can be linked to the open heathland habitats within the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA, and do not relate to the established woodland buffer that separates the heathland from the A3 and M25; • As described in Table B.4 of Appendix B of the HRA Stage 2 [APP-043], surveys for woodlark have been undertaken in 2016, 2017 and 2018. During these surveys, woodlarks were recorded in 2017 only and two breeding territories were established. All woodlark activity and both breeding territories were within the open heathland areas. The Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA was also surveyed in 2019 to ensure that the latest baseline was recorded. No woodlarks were present on site in 2019; • As described in Table B.3 of Appendix B of the HRA Stage 2 [APP-043], breeding bird data has been provided annually for the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA by volunteer group 2J's. The data between 2013 and 2018 recorded woodlark up to and including 2017 and recorded all breeding territories within the open heathland areas; • As explained by the Surrey Wildlife Trust during the issue specific hearing on the 16th January 2020, the woodlarks colonised the site as a result of the clearance of areas of established woodland. Their recent declines within the site are thought to be linked to the maturation of the

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		<p>ground vegetation within previously cleared areas reducing their suitability for woodlarks.</p> <p>This approach to the SIAA considering the woodland to act as a buffer for the heathland habitats has been agreed with Natural England and this will be clarified in the next update of the SoCG to assist the ExA with their assessment. In addition, this approach fully aligns with the recent high court ruling on the 4th December 2019 in the Judicial Review case of <i>Compton Parish Council v Guildford Borough Council (CO/2173,2174,2175/2019 'the Compton Case')</i>, where the court ruled that a decision in respect of adverse effects to site integrity cannot be answered, one way or another, by simply considering whether there are exceedances of critical loads or levels. Instead the assessment was correct to consider air quality exceedances in light of an understanding of how significant the affected areas were for foraging and nesting by SPA birds.</p> <p>The Compton Case referred to the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA, and agreed with the findings of the SIAA undertaken by Guildford Borough Council, which determined that the area that would be most subject to elevated nitrogen deposition is the woodland buffer that lines the A3 and M25, and that this is the least likely area within the SPA to be used by the SPA qualifying birds.</p> <p>The combination of the Compton Case high court ruling, the studies on habitat preferences and the SoCG with Natural England should give confidence to the ExA that the approach to determining air quality impacts in the SIAA was correct to focus on the more sensitive habitats within the SPA, which provide the primary nesting and foraging habitats upon which the qualifying populations rely and to treat the woodland that separates the heathland from the A3 and M25 as a protective buffer. As recorded in response to REP1-038-5 in the Applicant's comments on written representations [REP2-014] for each of the transects within the SPA, the</p>

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		<p>heathland habitats occur at a distance of 150 m or greater, and therefore, any points closer than 150 m fall within the woodland buffer. Refer to Figure 7.2 of the Biodiversity figures [AS-013] for a plan of the woodland within the SPA.</p> <p>As has been recorded in Habitats Regulations Assessment Annex B [APP-041], in Item 4.0 of the meeting held on the 16th March 2018, the Surrey Wildlife Trust has confirmed that the intention of the current management plan for the Ockham and Wisley Commons SSSI component of the SPA is to maintain existing areas of heathland, rather than creating new areas of heathland by removing additional areas of the coniferous woodland buffer. Natural England confirmed this again by email on the 31st January 2020 - 'The current management plan for Ockham and Wisley Commons SSSI produced by Surrey Wildlife Trust, which Natural England has endorsed, is primarily focussed on the maintenance of the current areas of open heathland, and in particular the enhancement of the quality of the habitat so that it meets the basic objectives set by Natural England, so that the feature can be described as being in a 'favourable' condition. The current Countryside Stewardship agreement between Natural England and Surrey Wildlife Trust, which runs for 10 years, is also focussed on the management of the existing open heathland resource. It does not seek to extend the open heathland area through the felling of mature trees. Therefore, Highways England can confirm with a high degree of confidence that the removal of conifer trees to extend the open heathland is not part of the current management of the site or required to achieve Favourable Conservation Status.</p> <p>The suite of compensatory measures will include the removal of mature conifer trees within the site and the restoration of heathland, and as confirmed in 3.2.1.6 of Natural England's written representation [RR-020], this is additional to the existing management plans. The SPA management and monitoring plan [AS-015] includes 15 years of management and monitoring for the heathland restoration habitats, and this will enable the monitoring party and the steering group to respond accordingly should the areas in close</p>

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		<p>proximity to the roads require additional management measures. The SPA management and monitoring plan [AS-015] has been reviewed and agreed with Natural England. It is appropriate to recognise that a small part of the woodland buffer will be included within the compensatory area, but only in connection with enhancing ecological linkage across the planned green bridge at Cockcrow.</p> <p>The air quality calculations have been re-run taking into account updated velocities, RHS Wisley traffic and a precautionary approach to account for ammonia (as discussed in Section 2.7 of the response to RHS comments on air quality [REP2-022]). Highways England is clear that the ammonia assessment is not required and this view is supported by Natural England and this will be recorded in the SoCG.</p> <p>Taking into account these updated calculations, the changes in nitrogen deposition rates are below 1% of the lower range of the critical load for heathland at the distance that the heathland occurs, and therefore significant increases are confined within the woodland buffer that aligns the A3 and M25. Therefore, even when taking into account updated velocities, RHS Wisley traffic along the A3 and ammonia, the Scheme (in combination with all other plans and projects) will not lead to an adverse effect on the SPA as a result of air quality impacts.</p> <p>In addition, it must be noted that for every point of all of the transects within the SPA including both the open heathland and the established woodland buffer, the predicted operational nitrogen deposition levels (even when taking into account updated velocities, RHS Wisley traffic along the A3 and ammonia) fall below the current baseline. This is due to predicted reductions in future emissions.</p> <p>It is correct to take future reductions in emissions into account, as has recently (20th December 2019) been concluded in the Wealden District Council Local Plan examination. In this examination, the Inspector determined (when taking the Dutch Nitrogen case C-293/17 and C-294/17</p>

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		<p>into account) that Council were incorrect to use an air quality model that did not include predicted emissions improvements.</p> <p>This should give confidence to the ExA that the established woodland buffer (and indeed also the heathland) will receive lower levels of nitrogen deposition once the Scheme is operational than it currently does. Therefore, the established woodland will receive lower levels of nitrogen deposition than it currently does and will continue to provide the same buffer function as it currently does.</p> <p>In RHS's comment on REP1-038-5 in the RHS response to REP2-014 [REP3-044] it is suggested that the heathland habitat within the Ockham and Wisley Commons SSSI component of the SPA may be close to tipping point with regards to nitrogen deposition levels, and that this would cause one of the qualifying species to disappear. Highways England can demonstrate with certainty that this is not the case. The Thames Basin Heaths SPA was designated for its Dartford warbler, nightjar and woodlark populations in 2005, and this included the Ockham and Wisley Commons SSSI component. Therefore, the Ockham and Wisley Commons SSSI supported sufficient numbers of Dartford warbler, nightjar and/or woodlark in 2005 to qualify for designation as part of the Thames Basin Heaths SPA.</p> <p>As can be seen from the APIS website (http://www.apis.ac.uk/src/select-a-feature?site=UK9012141&SiteType=SPA&submit=Next), the nitrogen deposition trend shows a clear reduction in nitrogen deposition levels within the Thames Basin Heaths SPA over time since it was designated in 2005. Therefore, since the nitrogen deposition levels were considerably higher when the site was designated as an SPA than the current levels, then the heathland habitats within the Ockham and Wisley Commons SSSI component of the SPA cannot possibly be close to tipping point at their current levels of nitrogen deposition. In addition, the future reductions from the current baseline, when assessing the operational Scheme in combination</p>

RHS Letter Reference	Issue	Highways England Response
		<p>with other plans and projects, will ensure that the heathland continues to support the SPA qualifying species.</p> <p>When taking into account all of the points above, it should be clear to ExA that no reasonable scientific doubt remains as to the absence of adverse effects to the integrity of the SPA in the SIAA, and that Highways England are certain that the changes in air quality as a result of the Scheme (alone or in combination with other plans and projects) will lead to no adverse effects on the Thames Basin Heaths SPA as a result of changes in air quality.</p> <p>Therefore, the SIAA fully aligns with Article 6(3) of the Habitats Directive (92/43/EEC) and with paragraph 57 of the Waddenzee case (C-127/02) with regards to the air quality assessment, concluding with no reasonable scientific doubt that there will not be an adverse effect on the Thames Basin Heaths SPA as a result of changes in air quality.</p> <p>The findings of the SIAA, including the in-combination assessment, and in the light of the updated calculations, have been discussed and agreed with Natural England and this will be recorded in the next update of the SoCG between Highways England and Natural England.</p>
12.	<p>The air quality assessment is fundamentally flawed and therefore does not meet the required test of demonstrating <i>beyond reasonable scientific doubt</i> that there is no adverse effect from air quality upon the SPA.</p>	<p>As explained in point 11 above, when taking into account all of the points described, it should be clear to ExA that no reasonable scientific doubt remains that the changes in air quality as a result of the Scheme (alone or in combination with other plans and projects) will lead to no adverse effects on the Thames Basin Heaths SPA as a result of changes in air quality.</p>
13.	<p>The ExA must conclude that adverse impacts upon the integrity of the site and surrounding areas from changes in air quality cannot be ruled out and that the RHS Alternative Scheme must be considered as an alternative. HE has not assessed the RHS Alternative (or any variation on it, e.g. just</p>	<p>As explained in point 11 above, when taking into account all of the points described, it should be clear to ExA that no reasonable scientific doubt remains as to the absence of adverse effects to the integrity of the SPA in the SIAA, and that Highways England are certain that the changes in air quality as a result of the Scheme (alone or in combination with other plans and</p>

RHS Letter Reference	Issue	Highways England Response
	the south-facing slips). It would therefore be unlawful for the DCO Scheme to be approved.	projects) will lead to no adverse effects on the Thames Basin Heaths SPA as a result of changes in air quality. Therefore, adverse effects to the integrity of the SPA from changes in air quality can be ruled out in this case and so there is no requirement to consider alternatives in respect of air quality.
Socio-economic matters		
14.	The RHS maintains its position that the adverse highways and traffic impacts caused by the DCO Scheme will result in significant direct and indirect economic loss in relation to the operations of RHS Wisley Garden.	Highways England has responded to this issue previously in document REP2-014.
15.	The evidence base provided by the RHS forecasting the potential reduction in visitor trips to the RHS Wisley Garden is robust and no credible counter-evidence is produced by HE.	Highways England has responded to this issue previously in document REP2-014.
SUMMARY OF POSITION ON AGREEMENT OF SOCG		
16.	A draft SoCG has been circulated following ISH2 by HE including a number of propositions which are under discussion between the parties.	Confirmed.
FURTHER INFORMATION REQUESTED FROM THE RHS BY THE EXA		
17.	Copy of the "Counterculture" Report referred to by Mr Bunney in [REP1-039] and during the course of the ISH is attached as Appendix 5 .	N/A
18.	Plans to illustrate how the Gardens were prior to the implementation of the RHS's investment programme and how they will be at the conclusion of that programme in terms of built development are attached as Appendix 6 .	N/A
19.	Travel Plans associated with built development at the RHS Gardens are attached as Appendix 7 .	NA/

RHS Letter Reference	Issue	Highways England Response
UNRESOLVED DESIGN ISSUES LEADING TO POSSIBLE TREE ROOT IMPACTS		
20.	The RHS remains extremely concerned that the trees which were meant to be protected along the RHS Garden boundary of the A3 by the introduction of the overbridge from Wisley Lane remain at risk.	See response below (PINS APP reference 22)
21.	The trees in question are shown on the Atkins survey carried out for the HE, pdf is attached as Appendix 8 .	
22.	On 27 th January the RHS received an Alignment Options Assessment (also forming part of Appendix 8) which RHS arboriculturalists are now considering. The RHS has asked HE for the survey and technical information that would support this high-level design change but this has not yet been supplied.	The Alignment Options Assessment [REP3-058] was produced by Highways England. Its purpose is to illustrate how the alignment of the A3 northbound mainline carriageway is proposed to be amended in order to ensure that a number of trees along the RHS Wisley boundary are not damaged.
23.	If what is proposed in the Alignment Options Assessment is to be incorporated in the DCO Scheme, this will require further changes to the DCO Scheme. The RHS requests the ExA to direct HE that all available technical evidence and procedural time and process is afforded through a Targeted Consultation on detailed and deliverable design. The RHS reserves its position in this regard.	The proposed limits of deviation are such that it is possible to deliver the proposed alignment, as explained within the Alignment Options Assessment [REP3-058], without proposing any changes to them. As such, it is not necessary to undertake a targeted consultation.
LEGAL SUBMISSIONS		
24.	For the reasons set out in the RHS's evidence and its submissions at ISH2, the ExA cannot conclude with certainty (this being the relevant legal threshold) that the DCO Scheme would not harm the integrity of the SPA.	As explained above in the response at point 11 above, Highways England is not inviting the ExA or the Secretary of State to conclude that the Scheme would not harm the integrity of the SPA.
25.	It follows that the DCO Scheme should only be consented if (amongst other things) it could be shown that there was no reasonable alternative that would cause less harm to the SPA—see regulation 64 of the Conservation of Species & Habitats Regulations 2017.	Highways England's position is that the requirements of regulation 64 are met in this case and that the Competent Authority may agree to the Scheme proceeding. This is dealt with at length in the SIAA

RHS Letter Reference	Issue	Highways England Response
26.	HE has not assessed the RHS Alternative Scheme as an alternative to the DCO Scheme. It plainly should have done. In particular, the provision of south facing slips at the Ockham roundabout would take several million vehicle miles off the road each year, thereby reducing the impact of vehicle pollutants on the SPA.	As regards the proposed “left out” junction in the RHS Alternative Scheme Highways England responded to this point in its response to RHS’ written representations, see REP2-014, page 83. In short, this arrangement is not compliant with relevant standards and is unsafe and so it is not a feasible alternative. As regards south facing slips at the Ockham Roundabout, see point 11 above which explains that their provision would make no difference as regards air quality impacts on the SPA and point 27 below which explains why they are not being provided.
27.	The HE has belatedly tried to argue that there are practical issues with delivering the south facing slips, but its arguments are far too light touch to justify the conclusion that the south facing slips could not have been included in the DCO Scheme. Most obviously, HE’s observation that the south facing slips would require the acquisition of third party land is a point that applies equally to land that was included in the DCO scheme. HE has provided no engineering analysis to support its other contentions as to the delivery of the south facing slips. It simply cannot be concluded that the south facing slips would not be deliverable.	The reason that the south facing slips are not included in the Scheme has been explained at length by Highways England – see for example REP2-014. There are practical difficulties in providing them, but Highways England is not arguing that the difficulties are insurmountable and that the slips could not be delivered. Highways England’s position is that there is no justification for them being provided as part of the Scheme. Nor would the Scheme prevent their provision in the future were there to be a justification in planning terms and if funding were available.
28.	HE has additionally sought to argue that the RHS Alternative Scheme would not be less harmful to the SPA than the DCO Scheme. Again, however, it has provided no substantive analysis to support its position.	The RHS Alternative Scheme is not a feasible alternative for the reasons explained above, and in Section 3 below.
29.	Finally, HE confirmed at ISH2 that the extent of the DCO scheme was influenced by the availability of funding. That is no answer to the legal requirement for a proper assessment of reasonable alternatives.	There has been a proper assessment of alternatives as explained at length above.
30.	In conclusion, it is absolutely plain that the inclusion of south facing slips (either on their own, or as part of the RHS Alternative) should be considered to be a reasonable alternative to the DCO Scheme. There has been no substantive assessment of the RHS Alternative Scheme and therefore it cannot be concluded that there is no reasonable alternative to	See the responses above.

RHS Letter Reference	Issue	Highways England Response
	the DCO Scheme. It would therefore be unlawful for the DCO Scheme to be confirmed.	
CONCLUSIONS		
31.	For the reasons set out above, the ExA is asked to require HE either to undertake a proper assessment of the RHS Alternative Scheme in accordance with the requirements of the Habitats Regulations or to withdraw the DCO Scheme. The ExA is asked to consider and action this issue now, to avoid further wasted costs.	<p>There is no need to carry out an assessment of the RHS Alternative Scheme in order to meet the requirements of the Habitats Regulations for the reasons explained above, nor is there any prospect of accommodating the RHS Alternative Scheme at this stage, even if it were appropriate, which it is not.</p> <p>The south western section of the M25, which includes M25 J10, is the busiest in terms annual average daily traffic flow on the entire SRN. Presently, a total of 270,000 pass through or turn at M25 J10 daily on average. The implications of these high volumes of traffic include congestion and delay on the arms of the A3 and M25 approaching M25 J10 which is well in excess of the regional average. Furthermore, the congestion at the junction and on its approaches also cause this junction to have one of the highest reported accident rates on the entire M25, at 27 accidents per year within 1km of the junction. These problems are forecast to get worse as the growth aspirations in the neighbouring boroughs of Guildford and Elmbridge would result in more traffic using this junction; average vehicle delay is forecast to double from 4m:39s in 2015 to 9m:18s in 2037 if the Scheme is not built. Solving these problems is the focus of this Scheme.</p> <p>To put the issues raised by the RHS in context, the traffic associated with RHS Garden Wisley in one year is approximately the same as the traffic associated with M25 J10 in just four days. The importance of reducing congestion and improving safety at this junction has been made and the Scheme is demonstrably good value for money. The package of mitigation and compensation measures has been endorsed by statutory environmental bodies and will result in a much-enhanced natural environment. Furthermore,</p>

RHS Letter Reference	Issue	Highways England Response
		this Scheme is key to unlocking growth proposed in Guildford's Local Plan, not least over 2500 new homes along this part of the A3 corridor.

3. Comments on the RHS's Ockham Park Interchange Alternative Design [REP3-049]

3.1.1 In this section Highways England has commented on Appendix 2 - Ockham Roundabout - Comparison between Royal Horticultural Society Alternative and DCO Scheme [REP3-049]. Highways England has illustrated the issues and the non-compliance issues related to DMRB below.

A3 Southbound Ockham Park junction to Ripley Services

3.1.2 The connector slip road linking the Ockham Park circulatory carriageway with A3 southbound mainline is not compliant with the requirements set out in the Design Manual for Roads and Bridges (DMRB); CD 122 - Geometric design of grade separated junctions. This is because:

- *DMRB CD 122; paragraph 5.4* requires the slip road to be designed with a minimum design speed of 70kmph. The RHS Alternative design shows an insufficient length of slip road between the circulatory carriageway and the back of nose; it is not possible to fit the vertical geometry required by the design standards within this length.
- *DMRB CD 122; paragraph 5.8* requires a length of near straight (with a radius no less than 1020m) to be provided at the back of nose, at least equal in length to the nose. The RHS Alternative design makes no allowance for a near straight.
- *DMRB CD 122; paragraph 3.21* requires the nose length to be 85m. The RHS Alternative design provides a non-compliant 75m nose.

3.1.3 The connector slip road linking the A3 southbound mainline with Ripley services is also not compliant with the requirements set out in *DMRB CD 122 and CD169 - The design of lay-bys, maintenance hardstandings, rest areas, service areas and observation platforms*. This is because:

- *DMRB CD 169; paragraph 3.7* requires a separation of 450m between a lay-by and an at grade junction. The RHS Alternative design provides a separation of 420m between the existing lay-by and Ripley Services diverge.
- *DMRB CD 122; paragraph 3.31* requires a minimum auxiliary lane length of 170m. The RHS Alternative design provides a non-compliant 150m for the auxiliary lane. If the minimum length were to be provided, it would require modification to the structure carrying Rose Lane over the A3.

3.1.4 *DMRB CD 122; paragraph 4.5* requires a minimum weaving length of 1000m between a full grade separated junction and a service area. The RHS Alternative design shows a weaving length of just over 1km, but as detailed above, other aspects of the design are not compliant. In addition, the RHS Alternative design has shown the notional merge and diverge to be less than the required 150m. To make the RHS Alternative design compliant, the weaving length would need to be significantly less than 1km.

A3 Northbound Ripley Services to Ockham Park junction

3.1.5 The distance between the existing lay-by located on the A3 Northbound between Ripley services and the diverge to the Ockham Park junction does not comply with CD169 - *The design of lay-bys, maintenance hardstandings, rest areas, service areas and observation platforms*. This is because:

- *DMRB CD 169; paragraph 3.7 requires a separation of 450m between a lay by and an at grade junction. The RHS Alternative Design provides a separation of 370m which does not comply.*

3.1.6 The connector slip road linking the A3 northbound to the Ockham Park junction is not compliant with the requirements set out in *DMRB CD 122*. This is because:

- *DMRB CD 122; paragraph 5.8 requires a length of near straight (with a radius no less than 1020m) to be provided at the back of nose, at least equal in length to the nose. The RHS Alternative design makes no allowance for a near straight.*
- *DMRB CD 122; paragraph 5.4 requires the slip road to be designed with a minimum design speed of 70kmph. The RHS Alternative design shows an insufficient length of slip road between the circulatory carriageway and the back of nose, it is not possible to fit the vertical geometry required by the design standards within this length.*
- *DMRB CD 122; paragraph 3.33 requires the mainline Stopping Sight Distance (SSD) [295m] to be provided along the slip road up to the give way line at the circulatory carriageway. The slip road leading from the A3 northbound to the Ockham Park junction as shown on the RHS Alternative design is not of a suitable length to provide the vertical geometry required to achieve the SSD.*

3.1.7 *DMRB CD 122; paragraph 4.5 requires a minimum weaving length of 1000m between a full grade separated junction and a service area. The RHS alternative design shows a weaving length of just over 1km but as detailed above other aspects of the design are not compliant. In addition, the RHS alternative design has shown the notional merge and diverge to be less than the required 150m. To make the RHS alternative design compliant, the weaving length would need to be significantly less than 1km.*

4. Comments on RHS's Response to REP2-014

Reference	Highways England Comment	RHS Response	Highways England Further Response																
REP1-038-1	Highways England has had a lot of discussion with RHS and has provided a very substantial amount of traffic modelling data to RHS. Further requests for information from RHS have been met	<p>TTHC has reviewed the latest 'corrected' version of the traffic model output which was received in GIS format on 18/12/19 against the original Transport Assessment Report (APP-136) and the Transport Assessment Supplementary Information Report (REP2-011) but has been unable to replicate the flows stated in the reports. The outputs from the reports/models are not consistent.</p> <p>Examples of this (for traffic in and around Ripley) were discussed at a further SoCG meeting with Atkins on 21 January 2020.</p> <p>Atkins undertook to check and correct this information. TTHC has since received (on 23/01/20) RHS flow plots and (on 24/01/20) total traffic flow plots which are now being reviewed.</p> <p>TTHC has also requested 2015 base plots from HE which has advised that they are in preparation.</p>	<p>Highways England has provided all the information requested of it by RHS. There will be further discussions with TTHC.</p> <p>The 2015 base plots requested have been provided.</p>																
REP1-038-2	<p>Access</p> <p>Highways England does not accept that the Scheme would worsen the access to and from the RHS Garden Wisley; to the contrary, it will be improved. The Scheme removes unsafe access from Wisley Lane to the A3 and replaces it with a safe access at the Ockham Park junction, namely the Wisley Lane diversion. The implications of this on changes to journey distances is presented below. Drivers approaching the RHS Garden Wisley from M25 J10 (and A3 north of J10) currently represent approximately 50% of RHS generated traffic. These drivers would experience a negligible change in journey distance approaching the garden and the Scheme would reduce their journey time around M25 J10. When leaving the garden to travel towards the M25 J10 (and A3 north of J10), their journey distance would increase by approximately 2.4 km (1.5 miles) but would involve safer access to the A3.</p> <p>Drivers approaching the RHS Garden Wisley from the south currently represent approximately 34% of RHS generated traffic; with 24% currently approaching via the A3 and 10% currently approaching through Ripley. With the Scheme in place, those drivers that decide to route via Ripley would experience a negligible change in distance approaching the garden; whilst those drivers routing via M25 J10 (up to 24%) would experience a 6 km (3.7 mile) increase in journey length to the garden. When leaving the garden, those opting to travel via Ripley would experience a 3.5 km (2.2 mile) reduction in journey length, whilst those routing via M25 J10 would experience a 2.5 km (1.6 mile) increase in their journey. Analysis of changes in journey distances due to the Scheme and proportions of RHS traffic using different routes is provided in the Transport Assessment Supplementary Information Report submitted at Deadline 2 (Volume 9.16).</p>	<p>Access</p> <p>As noted at ISH2, the RHS maintains its position that the DCO Scheme would result in the worsening of access to and from the RHS Garden and that the RHS Alternative Scheme would result in much improved access arrangements compared to the DCO Scheme.</p> <p>Despite its current poor highway layout, there is no evidence that the existing Wisley Lane connection with the A3 is inherently unsafe. Most of the accidents on the A3 occur as a consequence of queuing back from J10 (shunt type accidents), which the DCO Scheme should reduce. The Applicant's Side Road Addendum (SRA) Report (which the ExA has asked to be included in the Examination Library) states a paragraph 3.1.1 page 18 that 6 accidents over the six-year period between 2010 and 2015 were directly related to the Wisley Lane connection with the A3. At paragraph 6.1.2 on page 66, the same report states that if Wisley Lane were to be kept open with a widened A3, there would on average be one more accident per year.</p> <p>However, there has been no analysis by the Applicant of the consequence of the closure of the Wisley Lane connection elsewhere on the network –in the absence of the connection traffic from Wisley Lane seeking to join the A3 would need to travel further on the highway using the new Link and the new connection with the Ockham Roundabout, circulate around the roundabout passing the other arms of the junction before joining the northbound on slip and joining the A3 to the south of where it would have connected with the retention of the Wisley Lane connection. None of the implications of this extra travel has been assessed by the Applicant. The Applicant's assessment is therefore flawed both in terms of decisions which resulted in the DCO Scheme and in the context of the RHS Alternative Scheme.</p> <p>Further, the Applicant has sought to increase the number of accidents it associates with the Wisley Lane access to the A3. Within REP1-044, it was noted at paragraph 5.10 that the September 2019 Technical Note (see Appendix B of REP1-044) suggested that a Wisley Lane access onto the A3 northbound would result in two extra accidents per annum rather than the one suggested in the SRA noted above.</p> <p>However, more recently, in the BDB Pitmans letter of the 24/12/19 [Overview REP3 -051 Appendix 4], it has now been suggested by the Applicant that accidents specifically related to weaving from the Wisley Lane connection with</p>	<p>Please refer to the Applicant's comments on the RHS Alternative Scheme in Section 3 above.</p> <p>Accident rates for the A3 are shown below (per million vehicle kilometres). COBALT has a standard accident rates of 0.101 (D3+), 0.077 (D2 between the junction slips) and 0.063 (for a two/three lane motorway) so therefore the A3 has fairly typical accident rate along the majority of the mainline, <u>apart from the merge with Wisley Lane which has at least three to five times more accidents than typical.</u></p> <table border="1"> <thead> <tr> <th>A3 mainline</th> <th>Northbound</th> <th>Southbound</th> </tr> </thead> <tbody> <tr> <td>Ockham to Wisley Ln</td> <td>0.06</td> <td rowspan="3">0.06</td> </tr> <tr> <td>Merge with Wisley Ln</td> <td>0.30</td> </tr> <tr> <td>after Wisley Ln to J10</td> <td>0.1</td> </tr> <tr> <td>Through J10</td> <td>0.05</td> <td>0.06</td> </tr> <tr> <td>J10 to Painshill</td> <td>0.10</td> <td>0.09</td> </tr> </tbody> </table> <p>A safety risk assessment (which takes account of the forecast reduction in queuing from the A3 northbound towards M25 J10) has been carried out which has shown that the risk from the existing DCO scheme is reduced, compared to the existing scenario. Collision assessment has been carried out to support this assessment This has involved analysis of 5 years DfT 'Stats 19' accident data from 1.12.13 – 30.11.18 and shows personal injury collisions (PICs) at the following locations:</p> <ul style="list-style-type: none"> Total of 20 PICs <ul style="list-style-type: none"> 4 slight injury collisions on the slip road, resulting in 5 casualties; 	A3 mainline	Northbound	Southbound	Ockham to Wisley Ln	0.06	0.06	Merge with Wisley Ln	0.30	after Wisley Ln to J10	0.1	Through J10	0.05	0.06	J10 to Painshill	0.10	0.09
A3 mainline	Northbound	Southbound																	
Ockham to Wisley Ln	0.06	0.06																	
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Through J10	0.05	0.06																	
J10 to Painshill	0.10	0.09																	

Reference	Highways England Comment	RHS Response	Highways England Further Response
		<p>the A3 amount to some 20 accidents for the five-year period 1/12/13 to 30/11/18.</p> <p>However, a check against the Accident Plot provided by the Applicant on the last page of its September 2019 Technical Note (Appendix B of REP1-044) shows that with the exception of just 1 accident, the Applicant has incorrectly assumed that every accident which has occurred on the A3 from Wisley Lane to a point 900m north has been a result of the Wisley Lane junction, which clearly cannot be the case –as set out above, most of these are “shunt” type accidents related to queuing back from Junction 10.</p> <p>Further discussions are being undertaken with the Applicant in this regard in order to advance the SoCG.</p> <p>Journey distances have been checked against the Applicant’s CAD plans and it is expected in conjunction with the SoCG that the key distances north and south will be agreed.</p> <p>Trip distribution data in relation to RHS-related activity has been collected by different sources by the Parties and, although similar, these sources are not directly comparable. There are discussions ongoing in respect of the SoCG which seek to ‘narrow the gap’ between these sources.</p> <p>This, along with traffic modelling of RHS trips, will then be used to provide an agreed range of potential effects of the DCO Scheme in respect of the changes in vehicle travel and to consider the wider safety implications of the DCO Scheme and RHS Alternative.</p>	<ul style="list-style-type: none"> ○ 8 slight and 1 serious injury collisions at the merge point, resulting in 12 casualties; ○ 7 slight injury collisions in the weaving zone (within c.150m downstream of Wisley Lane), resulting in 15 casualties <p>Stats 19 collision data provides some basic information regarding the causes of collisions, however this is limited and it is not always possible to be certain about the root cause. Where nose-to-tail collisions are recorded, congestion or a braking event is normally the cause. What is not clear from collision data, is what has caused a braking event (this is relevant at this location where late ‘swooping’ manoeuvres are often seen for the northbound off-slip). Whilst at peak times queuing is likely to be involved, at off peak times, merging and diverging (weaving) traffic is likely to be a factor.</p> <p>The current arrangement is challenging for drivers as they are required to carry out a merging manoeuvre onto a high speed road, which is especially difficult when they are required to join free-flowing London-bound traffic from an often congested lane This is made all the more difficult as they are competing for road space with diverging traffic that is leaving the A3 for the M25 J10 exit.</p> <p>In order to merge safely and avoid conflicts with adjacent traffic (and those ahead) drivers are required to have good awareness of what is happening around them. They need to be aware of traffic movements ahead, whilst at the same time using their mirrors and over the shoulder ‘lifesaver’ observation to check blind spots and judge the speed and distance of approaching mainline traffic.</p> <p>Given the complexity of this task, it is unsurprising that there are a high number of nose-to-tail and lane change collisions at this location, these are likely to be caused by hurried merging manoeuvres or drivers concentrating on traffic alongside and behind them and colliding with slow moving or stationary traffic ahead. Given the demands on drivers’ observation skills, it is also understandable that the contributory factor 405 – ‘Failed to look properly’ is by far the most common recorded, appearing as the primary contributory factor in 10 of 20 collisions. This rate of 50% at the Wisley Lane merge is compared to the national rate of 38% reported by Highways England’s annual casualty report.</p> <p>Collision summary (Stats 19 data):</p> <ul style="list-style-type: none"> ● On the Wisley Lane slip road there were 4 collisions – all ‘shunts’ all during peak periods. ● Within 150m downstream of the Wisley Lane merge there were 4 peak and 5 off-peak collisions (suggesting that congestion is only part of the problem) <p>There were 7 other northbound A3 collisions in the vicinity – 3 peak and 4 off-peak</p> <p>With the Scheme, the route via Ripley to and from the A3 south for RHS Wisley Garden visitors is shorter and quicker than following the signposted route via J10. The traffic modelling reflects this, with all traffic to and from the A3 south routing via Ripley. The Transport Assessment of impacts [APP-136] has therefore been undertaken on the most likely distribution of traffic on the road network. Should some of the RHS Wisley Garden traffic decide to follow the signposted route via J10, it is highly unlikely to have a</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
			<p>material impact on the conclusion of the Transport Assessment, since the volume of traffic involved would be negligible in comparison to forecast traffic flows on the A3 and circulating M25/J10.</p> <p>It is agreed that the trip distribution data in relation to RHS related traffic generation has been collected by different sources, both of which have different merits and shortcomings. However, the results are relatively similar. RHS's trip distribution is based on a sample survey of its members. Consequently, it does not capture visitors that are not RHS members, nor does it capture staff trips and deliveries, which would very likely alter the distribution if included. Highways England's ANPR survey only covered a single day and may not therefore reflect day to day variations in trip distribution, but does capture all vehicle trips including visitors (both RHS members and non-members), staff and deliveries. Highways England maintains its previous position on this matter as stated in Applicant's Comments on Written Representations [REP2-014].</p>
	<p>South facing slip</p> <p>Please see response to Questions 1.13.6, 1.13.7, 1.13.11, 1.13.15, 1.13.18 of the Highways England's the Examining Authority's Written Questions (Volume 9.18). Retention of Wisley Lane's direct "left out" connection to the A3. We have demonstrated in the schematic provided in our Technical Note dated September 2019 that the actual weaving length (Lact) is only 953 m. The minimum weaving length required by design standards is 1 km and therefore the RHS Alternative scheme does not comply with the appropriate standards. With regard to weaving, we disagree with the suggestion by RHS that it is only the Wisley Lane traffic which is heading northbound on the A3 towards London which actually results in a weaving component from the slip. There will be traffic joining the northbound A3 from the Ockham Park junction wishing to get from Lane 1 and Lane 2 to Lane 3 and Lane 4 to continue north into London on the A3. There will also be traffic in lane 3 and subsequently lane 4 through and beyond the Ockham Park Junction that will want to access the diverge leading to the M25. The introduction of a merge from Wisley Lane will introduce additional vehicles and weaving movements, which drivers will not be expecting. Therefore, it will increase the risk of accidents, particularly because the vehicles merging from Wisley Lane will be slow moving.</p> <p>Highways England maintains that TD42/95 is the design standard for Major/Minor priority at grade junctions, which is what this particular element of the Scheme should be, but the design standards do not allow this type of junction on Dual 3 lane All Purpose (D3AP) roads and therefore by implication it is not permitted for use on Dual 4 lane All Purpose (D4AP) roads. As proposed by RHS, Highways England maintains that CD122 is not the correct design standard to be used for the RHS Alternative Scheme.</p>	<p>South Facing Slip</p> <p>Whilst it is noted that the Applicant states (within REP2-013) its proposals do not preclude the future implementation of the south facing slips at Ockham, they note various 'challenges and constraints' to their delivery. This is within the context of more than 3 years of design development which has sought to address similar issues elsewhere within the DCO Scheme.</p> <p>Firstly, third party land would be needed to provide south facing slips at Ockham but such issues have not prevented the promotion of the DCO Scheme where third party land is of course required for other components of the proposals.</p> <p>The enlargement of the Ockham Roundabout (to deliver south facing slips) is as shown on the attached plan (TTHC drg M16114-A-052A). The modifications within the Flood Zone are relatively modest, particularly within the context of the new Wisley Lane link provision.</p> <p>In respect of the weaving distance to Ripley Services, TTHC drg M16114-A-051 shows one means of how the 1km weaving distance could be achieved for both directions of travel on the A3.</p> <p>Improved Wisley Lane connection to A3 Northbound</p> <p>The review of the proposed RHS Alternative Wisley Lane connection to the A3 Northbound against highway standards is currently subject to SoCG discussions. At this stage the parties continue to disagree.</p> <p>Within REP1-044, TTHC provided a response to the Applicant's position in respect of this matter.</p>	<p>Although there are challenges and constraints in providing south facing slips at Ockham Park Interchange, as Highways England ha explained the reason that they have not been provided in the Scheme is because they are not necessary to meet the Scheme's objectives. Therefore, the absence of south facing slips is not an issue that needs to be addressed.</p> <p>We disagree that a 1km weaving length between Ockham junction and Ripley services can be achieved with a DMRB compliant design for the Ockham south facing slip roads.</p> <p>Please refer to the Applicant's comments on the RHS Alternative Scheme in Section 3 above.</p> <p>The parties are continuing to discuss this matter, however Highways England's position remains that this arrangement would be non-compliant and unsafe.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
		Confirmation that Wisley Lane will be subject to a 30mph speed limit in the DCO Scheme will enable the standard applied by TTHC to some components of the RHS Alternative to be less onerous than that assumed to date.	
REP1-038-3	<p>Highways England does not accept that the RHS Alternative Scheme would result in much improved access arrangements compared to the Scheme. The RHS alternative contains two additional elements to the Scheme: a left out from Wisley Lane on to the A3 and south facing slips at Ockham Park junction. First, the existing junction between the A3 and Wisley Lane is unsafe. The operation and continued retention of the junction already breaches current standards set out in the Design Manual for Roads and Bridges relating to separation, weaving and merging distances and there is evidence that its presence is a significant contributory factor in the poor accident record of this section of the A3.</p> <p>This is because there would be greater conflict between traffic merging from Wisley Lane and traffic on the A3 northbound carriageway manoeuvring in to the two nearside northbound lanes in preparation for exit at M25 junction 10. The nearside of the two exit lanes would also be free-flowing at junction 10, which is a further important safety factor as traffic is likely to be moving more quickly. Highways England is not aware of any other examples of such a side road junction being retained on a D4AP road and where there is a 2-lane drop within 1 km of the next junction.</p> <p>Secondly, the retention of a left turn out of Wisley Lane would not comply with the relevant design standards. Fundamentally, there is insufficient space between Wisley Lane and M25 junction 10 to achieve an acceptable standard of merge lane for traffic exiting from Wisley Lane. For these reasons, a left turn out should not be retained and the Scheme therefore makes provision for an alternative access road to be provided, namely the Wisley Lane diversion. The traffic modelling shows traffic routing via Ripley in the morning and evening peaks although it does not follow from this that in reality Ripley High Street will become the preferred route for all Wisley Lane movements to and from the south. This is because the modelling cannot reflect the impact that the signage strategy will have on users as it assumes that all traffic takes the lowest cost route in terms of distance and time. The modelling is therefore a worst-case assessment for Ripley in this regard.</p> <p>Moreover, there is no highway justification for providing south-facing slips at the Ockham Park junction on account of the Scheme. The traffic modelling results presented in the Transport Assessment Report (see section 7.6) [APP-136] shows that the Ockham Park junction will operate within capacity in the future with the Scheme in place.</p> <p>The modelling and assessments also conclude that the Scheme would have a limited effect on the operational performance of the local road network through Ripley, and there is no justification to bring forward south-facing slips as mitigation for the Scheme's limited impact on that settlement.</p>	<p>Responses to the Applicant's safety claims in respect of the existing Wisley Lane junction are provided above. Also, the proposed RHS Alternative provides an improved slip road arrangement which has been designed to meet the highway standards set out in CD122 as explained in REP1-044. These are matters which are being discussed as part of SoCG exchanges.</p> <p>Within the 1km weaving context, the 2-lanedrop described by the Applicant during ISH2 is not precluded by the standards. Indeed, there is less than 1km weaving distance between J12 and J13 of the M60 Motorway junctions and a two lane drop downstream. This section of Motorway has recently been improved to Smart Motorway standard and yet these characteristics have been retained, despite being one of the busiest sections of motorway in the UK (170,000 veh ADT).</p> <p>The Applicant states that their traffic modelling shows Wisley Lane traffic routing via Ripley but that they have a signing strategy that will promote the A3 route (with its numerous u-turns). However, the Applicant doesn't know how much traffic will follow the signed route and that the modelling is therefore a worst-case assessment for Ripley in this regard. Aside from the points made in respect of signage in REP1-044 (from paragraph 4.16), and in addition to the Applicant not knowing how much traffic will use their proposed signed route as opposed to Ripley, we also know that the Applicant has been unable to validated traffic models of Ripley which reflect the congested conditions which already occur. There can simply be no confidence in the Applicant's proposals or their assessment of the effects of the DCO Scheme.</p> <p>The Applicant suggests there is no justification for providing south-facing slips at Ockham. The RHS maintains that south facing slips are justified and should have been assessed as a reasonable alternative to the DCO Scheme.</p> <p>The RHS Alternative Scheme must be considered in the context Habitats Regulations Assessment as an alternative which would cause less harm to the Thames Basin Heaths SPA as it would generate 3.3 million fewer miles/annum and consequently reduce the levels of Nitrogen deposition.</p>	<p>The parties are continuing to discuss this matter, however Highways England's position remains that this arrangement would be non-compliant and unsafe.</p> <p>The M60 motorway between J13 and J12 is not a direct comparison with the RHS Alternative Design for Wisley Lane. Vehicles are joining the M60 southbound carriageway from the grade separated junction 13 via a single lane gain and not are not having to merge with the mainline, which would be the case for Wisley Lane. Additionally, the alignment of the on-slip from junction 13 joins the mainline at a much shallower angle and radius than the 90-degree angle and 30m radius proposed by the RHS Alternative Design.</p> <p>With the Scheme the route via Ripley to and from the A3 south for RHS Wisley Garden visitors is shorter and quicker than following the signposted route via J10. The traffic modelling reflects this, with all traffic to and from the A3 south routing via Ripley. Should some of the RHS Wisley Garden traffic decide to follow the signposted route via J10 (Highways England accepts that it cannot predict with certainty the proportion of traffic that would route through Ripley), it is highly unlikely to have a material impact on the conclusion of the Transport Assessment [APP-136], since the volume of traffic involved would be negligible in comparison to forecast traffic flows on the A3 and circulating M25/J10.</p> <p>Regarding model validation, the provision of south facing slips at Ockham and the consideration of alternatives under the Habitats Regulations, these points are dealt with in Sections 2 and 3 above.</p> <p>Refer to Point 13 of Section 2 of this document</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>Nor would there be sufficient justification to provide the slips as mitigation for the effect on the RHS Garden Wisley's visitors who travel to the Gardens from the south. These journeys would, as a result of the Scheme, lose the benefit of direct access to Wisley Lane from the A3 and would incur an increase in return journey times of approximately seven minutes if they follow the signed route. However, the volume of traffic that would benefit from south-facing slips would be small in absolute and relative terms and insufficient to justify their inclusion in the Scheme. It is also important to recognise that any effect on Wisley Lane traffic should be balanced against the significant benefits that the Scheme would deliver in providing a safer alternative access.</p> <p>South facing slips at Ockham Park junction are not required to mitigate any impacts due to the Scheme and, consequently, they do not form part of the Scheme.</p> <p>The Scheme does not preclude future implementation of south facing slips at Ockham Park junction. However, it is evident that there are several challenges and constraints associated with providing them, including the likely need to acquire land outside the highway boundary, which would need to be overcome to demonstrate that they are deliverable without detriment to either the free or safe operation of the A3, affordable and offer the most appropriate solution to the identified problem. These include that:</p> <ul style="list-style-type: none"> • the Ockham Park roundabout would need to be enlarged and the B2215 Portsmouth Road, the B2039 Ockham Road North and the Wisley Lane diversion connections with the Ockham Park Roundabout would need to be re-aligned. The roundabout is located within the Stratford Brook flood zone (Zone 3) and adjacent to both a Site of Nature Conservation Importance (SNCI) and a historic landfill site, so these factors would need to be taken into account in any provision of new slips. • the Ripley services on the A3 are located only 1.5 kms south of Ockham Park junction. Consequently, there is insufficient distance between the junctions to provide a design with a standard compliant weaving length between the merge and diverge sections of the respective on and off slip roads. A minimum weaving length of 1000 m is required for a compliant design where only approximately 650 m northbound and 690 m southbound can be achieved. Therefore, the accesses off the A3 to the Ripley services would have to be relocated to accommodate south facing slips at the Ockham Park junction to achieve a compliant design; and • third party land outside of the boundaries of both the public highway and the DCO would be required to construct the enlarged roundabout and to realign the side road connections and the slip roads. On 26 October 2017 a Ministerial Statement was made in the House of Commons to confirm that south-facing slips at Ockham would not be provided as part of the Scheme, reaffirming that the funding commitments in the Government's Road Investment Strategy only relate to improving the junction 10/A3 Wisley interchange and the Painshill junction. Whilst Highways England's position therefore remains that there 	<p>The guidance on consideration of alternative solutions is clearly set out in the Commission notice "Managing Natura 2000 sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC". This document has been provided to the inquiry in full as it has been referred to by Mr Baker in his evidence and will also assist the ExA on other issues. Section 3.7.4 (p57) examines the consideration of alternatives. Of relevance is the fact that alternatives cannot be ruled out on cost alone and that the absence of alternatives 'must be demonstrated.</p>	

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>is no case for providing south-facing slips at Ockham as part of the Scheme, the construction of the Scheme would not prevent the delivery of south-facing slips at Ockham Park junction at some point in the future, should they be justified in planning terms, and should suitable funding be secured</p>		
<p>REP1-038-4</p>	<p>Highways England does not agree that the Scheme will adversely affect the SPA as a result of changes in NOx concentrations and nitrogen deposition rates at locations in near the A3.</p> <p>As set out in paragraphs 7.2.40 (construction) and 7.2.52 (operation) of APP-043, Highways England assessment does not show an adverse effect within the SPA as a result of changes in nitrogen deposition rates. This is because the wooded area close to the A3 acts as a buffer for the heathland (as documented in paragraph 7.4.4 of APP-043) where the qualifying features occur.</p>	<p>HE is required to show that that Nitrogen Deposition will NOT adversely affect the SPA, i.e. they have to prove a negative. Where there is uncertainty or gaps in the data a negative effect must be concluded.</p> <p>The RHS evidence shows that there are significant gaps in the data. The ExA has no choice but to conclude that there is a negative effect. The requirement to demonstrate no adverse effects is clearly set out in the guidance Commission notice "Managing Natura 2000 sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC at paragraph 3.7.3 where it is stated 'Where doubt remains as to the absence of adverse effects on the integrity of the site linked to the plan or project being considered, the competent authority will have to refuse authorisation (C-127/02 paragraph 57).'</p> <p>The evidence of Professor Laxen and Mr Hibbert clearly demonstrates that there is considerable doubt over the extent and magnitude of impacts from reduced air quality arising from the scheme.</p> <p>The evidence of Professor Laxen and Mr Hibbert also demonstrates that the deposition modelling grossly underestimates the magnitude and the extent of N dep. The actual levels arising from the scheme, both in isolation and in combination with other plans or projects is therefore unknown.</p> <p>The basic argument HE is presenting is that it is acceptable to increase nitrogen loadings within the buffer as this area does not support the interest features of the SPA. This approach is unlawful. It is a fundamental tenet of the Birds Directive (Directive 2009/147/EC) that member states must take steps to ensure that degraded habitats are restored.</p> <p>Article 3 states,</p> <ol style="list-style-type: none"> 1. In the light of the requirements referred to in Article 2. Member States shall take the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1.2. The preservation, maintenance and re-establishment of biotopes and habitats shall include primarily the following measures: <ol style="list-style-type: none"> (a) creation of protected areas; (b) upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones; (c) re-establishment of destroyed biotopes; (d) creation of biotopes. <p>It is clear that the coniferous forest within the site should be managed (in this case removed and converted to heathland) to improve the ecology of the site and increase the carrying capacity of the SPA for the interest features of the site. Indeed, removal of conifer trees is part of the current management of the site.</p> <p>This precise point was tested at a previous inquiry into Land south of Wallisdown Road, Poole, Dorset (Talbot Village Trust) APP/Q1255/V/10/2138124 (27 February 2012), in refusing an appeal the inspector stated that an appropriate assessment should 'take account of the</p>	<p>Refer to Point 13 of Section 2 of this document.</p> <p>In addition, Point 11 of Section 2 of this document sets out clearly why the woodland that separates the heathland from the A3 and M25 acts as a buffer.</p> <p>The case of Land south of Wallisdown Road, Poole, Dorset (Talbot Village Trust) APP/Q1255/V/10/2138124 (27 February 2012) as referred to by RHS determined that the appropriate assessment should take account of the restoration of a site to favourable conservation status, as opposed to taking a view that the proposed Scheme would not have an effect because, as a result of poor condition of the site, the interest features are not present.</p> <p>This is very different to the situation that the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA, where the qualifying species (i.e. the interest features) are present, but do not occur within the woodland buffer where the changes in air quality will occur. In addition, as explained in point 11 of Section 2 of this document, the removal of conifer trees to extend the open heathland is not part of the current management of the site or required to achieve Favourable Conservation Status.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>As discussed in the response to the RHS Air Quality Representation [REP1-041], even though the RHS Alternative Scheme has not been assessed, there is no basis for the proposition that it would have a notable effect on nitrogen deposition rates within the SPA compared to the Scheme. This is because the traffic modelling undertaken by Highways England has predicted that all the traffic travelling to and from RHS Wisley from the A3 south will access the gardens via Ripley and the results of the air quality assessment in the Environmental Statement, Chapter 5: Air Quality [APP-050] take this into account. Accordingly, the effect of this routing would be the same as the south facing slips forming part of the RHS Alternative Scheme in air quality terms.</p> <p>The assessment has shown that even with this traffic, changes in NO2 concentrations at receptors in Ripley near the High Street would be small or imperceptible, and still below air quality criteria. Hence, even though the RHS Alternative Scheme has not been assessed, it can be considered that it would not have a significant effect on NO2 concentrations at receptors in Ripley. To provide further clarification, an additional assessment (please see Response to RHS-DL-1 AQ REP1-041, Volume 9.17) was carried out to assess the effect of the traffic using the signposted route (i.e. via junction 10) and the additional traffic was shown to be unlikely to have any measurable effect on the reduction in species-richness as a result of changes in the nitrogen deposition rates and would still not cause an adverse effect on the integrity of the site.</p> <p>Although the RHS Alternative Scheme has not been assessed by Highways England, it can be considered that any reduction in CO2 emissions as a result of this Alternative would be negligible. Estimates of CO2 emissions as a result of the two routes that could be taken by traffic travelling between RHS Wisley and the A3 to the south are provided in Table 1 of the Response to RHS-DL-1 AQ REP1 -041, Volume 9.17. The key driver to reducing CO2 emissions will be through national policy measures, such as the move to zero emission vehicles.</p>	<p>potential for the restoration of the site to favourable conservation status, as opposed to taking the view that the proposed scheme would not have an effect because, as a result of the poor condition of the site the interest features are not present'.</p> <p>As the HE has conceded the RHS Alternative Scheme has not been assessed and therefore HE has not demonstrated the absence of a reasonable alternative that would be less damaging to the SPA</p> <p>Further comments on Ripley are provided the response to point 4.2.2 in REP2-022, where it is pointed out that the new calculations are not valid.</p> <p>Further comments on the assessment of traffic using the signposted route are provided in the response to point 2.1.2 in REP2-022.</p>	
REP1-038-5	<p>The Statement to inform Appropriate Assessment (SIAA) [APP-043] has been carried out correctly. The findings of the SIAA identify an adverse effect on the Thames Basin Heaths SPA as a result of the land take required by the Scheme (paragraph 7.4.7 of the Habitats Regulations Assessment: Stage 2 [APP-043]. However, an adverse effect as a result in changes in air quality was ruled out. This assessment of changes in air quality</p>	<p>See comment above on errors and omissions.</p>	

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>was correctly carried out, as explained below. The HRA has followed the process as outlined in:</p> <ul style="list-style-type: none"> • The Planning Inspectorate (2016) Habitat Regulations Assessment Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects; • Highways England (2009) The Design Manual for Roads and Bridges (DMRB) Volume 11, Section 4, Part 1 Assessment of Implications (of Highways and/or Road Projects) on European Sites (Including Appropriate Assessment) (HD 44/09) <p>As detailed in 5.3 Habitats Regulations Assessment Annex B [APP-041], the HRA process, including the methods for assessing air quality impacts on the SPA, both alone and in combination, was agreed with Natural England (refer to item 2.0 of meeting minutes for 27 March 2018, as found in A.13 of the Statement of Common Ground with Natural England [APP-138]).</p> <p>The SIAA considered the nitrogen deposition (Ndep) levels at six transects within the Ockham and Wisley Commons component of the Thames Basin Heaths SPA(N dep levels are reported in Tables 7 and 8 in 5.3 Habitats Regulations Assessment: Stage 2 [APP-043], transect locations are illustrated in Figures 4 and 5 of the Habitats Regulations Assessment Figures [AS-012]).</p> <p>The assessment considered nitrogen deposition levels at a range of distances from the road edge for each transect, allowing comparisons of the existing 2015 baseline, 2022 with no Scheme and 2022 with the Scheme.</p> <p>As agreed with Natural England, the assessment focused on increases of greater than 1% of the critical load when comparing the 2022 with no Scheme data against the 2022 with the Scheme data (refer to item 2.0 of meeting minutes for 27 March 2018, as found in A.13 of the Statement of Common Ground with Natural England [APP-138]).</p> <p>The critical loads were taken from Air Pollution Information System (APIS) website, which gave three critical load class habitat types for the Ockham and Wisley Commons SSSI component of the Thames Basin Heaths SPA:</p> <ul style="list-style-type: none"> • Fen, marsh and swamp –Valley mires, poor fens and transitional mires (critical load 10-15 kg N/ ha/year); • Dwarf shrub heath –Dry heaths (critical load 10-20 kg N/ ha/ year); and, • Dwarf shrub heath –Northern wet heath (critical load 10-20 kg N/ ha/ year) <p>In addition, as outlined in paragraphs 7.9.23-7.9.26, the Environmental Statement Chapter 7: Biodiversity [APP052] also assessed the changes between 2022 with no Scheme and 2022 with the Scheme for every point of each transect within the Ockham and Wisley Commons SSSI, against the increase in nitrogen deposition required to reduce measured species richness by one, as taken from Table 21 of Natural England Commissioned Report NECR210.</p>	<p>The SIAA (APP-043) used incorrect data to inform the assessment, as it did not consider NOx concentrations against the critical level, used incorrect deposition velocities to calculate Ndep, did not include ammonia in the Ndep calculations, and did not allow for traffic to RHS Wisley following the signposted route. It also did not carry out a valid in-combination assessment. These matters are explained in more detail in the responses to REP2-022.</p> <p>HE has omitted to set out the critical load for coniferous woodland that are cited on the APIS website for Thames Basin Heaths (App.Y).</p> <p>The lead author of NECR210, Dr Simon Caporn, has confirmed to Prof. Laxen that this part of the report was not designed to provide a basis for defining significance. It merely demonstrates the changes in Ndep affect species richness. HE has taken this evidence out of context and applied it inappropriately. Notwithstanding the errors in the calculations of Ndep one cannot take Table 21in NECR210to justify an increase in Ndep because it is too small to cause a loss of one species.</p> <p>The approach is flawed, how could HE know that the current levels of Ndep are not close to a tipping point that would cause a species to disappear? If this were the case, then a tiny increase could result in the loss of a species. Neither does this approach take into account the past loss of species due to Ndep and the requirement to reduce Ndep levels to at or below critical loads. It is the view of Mr Baker and Prof. Laxen that the use of Table 21in the way proposed is a completely unscientific approach and a distortion of the data presented in the NECR210 report.</p>	<p>Refer to Point 13 of Section 2 of this document Also, see responses in section 5 below.</p> <p>In developing the recently published DMRB air quality assessment methodology, Highways England had engaged extensively with representatives from Natural England on its proposed approach and in particular the use of Natural England's published report, "Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance" (NECR210), March 2016, to inform a competent expert for ecology on the judgement of significant air quality effects. It is for the promoting authority to determine the sources of evidence they use to develop their judgement.</p> <p>Natural England's guidance document "Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations" (NEA001), July 2019 in paragraph 5.49 signposts the use of NECR210 in decision making under the heading, "Consider the best available evidence on small incremental impacts from nitrogen deposition", para 5.49, "When assessing likely adverse effects on site integrity, the Natural England Commissioned Report 210: Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance (referred to above) may be of relevance."</p> <p>The use of the evidence in Table 21 is not illogical as suggested by Mr Laxen, rather the need for larger changes in deposition rates leading to the loss of 1 species at higher background critical loads, is more a reflection on the fact that the remaining species are more tolerant of higher nutrient nitrogen loads.</p> <p>Natural England's policy in paragraph 5.45 of NEA001, describes that worsening would not undermine the site objectives, "Which value you use</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>The approach to the air quality assessment with regards to the SPA, SSSI, and in combination was agreed with Natural England. The methodology aligns with the existing guidance and the advice from Natural England. In addition, the methodology and findings of the appropriate assessment were also reviewed and agreed with Natural England, the RSPB and Surrey Wildlife Trust (as recorded in the meeting minutes on 28 June 2018 (Item 4.0) and 09 October 2018 (Item 5.0, page 64), in the Habitats Regulations Assessment Annex B [APP-041]). As noted in the response to the points raised in REP1-041, NO_x concentrations were correctly projected forward using the LTTE6 factors in accordance with Highways England's Interim Advice Note (IAN) 170/12 v3, as noted in paragraph 5.5.23 of APP-050).</p> <p>There is no statutory requirement for ammonia to be included in the air quality assessment as discussed in the response to REP1-041. Paragraph 5.8 of the National Policy Statement for National Networks states that the air quality assessment should be consistent with Defra's published future national projections. Ammonia is not included in Defra's emission factors toolkit, nor is it included in Highways England DMRB guidance, and so there is no requirement for assessment. A sensitivity test was carried out to show the potential effect of including the contribution of ammonia as discussed in the response to REP1-041. This showed that there would be no material effect to the conclusions of the SIAA.</p> <p>The nitrogen deposition calculations were undertaken using the correct deposition velocity in the DMRB guidance at the time, however since then the deposition velocities have been revised. The revised nitrogen deposition calculations are provided in the response to REP1-041 and still show no adverse effect on the qualifying features of the site. This is further discussed in the response to 3.4 below.</p> <p>The air quality assessment takes into account traffic from other plans and projects in the wider area, in addition to the Scheme, as documented in paragraph 5.11.3 of APP-050, and therefore allows for in combination effects. Therefore, Highways England is able to confirm that the assessment was carried out correctly</p>	<p>The statement 'There is no statutory requirement for ammonia to be included in the air quality assessment' is incorrect. Under the Habitat Regulations there is a legal requirement to ensure that any HRA fully assesses all the pathways which may have an adverse effect upon a European site. This was established in the case law eg <i>Briels</i> Case C-521/12, para 27 'The assessment carried out under Article 6(3) of the Habitats Directive cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned (see, to that effect, <i>Sweetman and Others</i> EU:C:2013:220, paragraph 44 and the case-law cited).'</p> <p>Further comments on deposition velocities are provided in the response to point 2.8.1 in REP2-022. The air quality assessment has not shown the in-combination impacts of other plans and projects. This is discussed further in the response to point 2.9.1 in REP2-022.</p> <p>HE has not carried out the assessment correctly.</p>	<p><i>will depend on what type of habitat you are looking at. Figure 3 [in NEA001] shows an example of nitrogen deposition trends at Breckland SAC. Nationally predicted declines in nitrogen deposition on heathland at Breckland SAC from 27 kg N/ha/year in 2005 to 24 kg N/ha/year in 2014 could mean that some increases in nitrogen from a plan or project (alone and in combination) may not impede this downward trend. Taking into account all relevant factors and information, it may be possible to consider some increases as temporary and reversible, which would be unlikely to undermine site objectives. In other words, we can still expect - even with the plan/project – the overall environmental loading will return to below critical level and loads within an appropriate timeframe."</i></p> <p>In RHS's comment it is suggested that the heathland habitat within the Ockham and Wisley Commons SSSI component of the SPA may be close to tipping point. Refer to Point 11 in Section 2 of this document for an explanation of why that assumption is not correct.</p> <p>The <i>Briels</i> Case does not <u>require</u> an assessment of ammonia, as a matter of law and to assert that it does is misleading. It is a case which is primarily concerned with the distinction between what may be acceptable as a mitigation measures and what should, instead, be recognised as a compensatory measure. Paragraph 27 was simply setting out an established principle that an assessment under the Habitats Directive must be 'complete'. Whether it is necessary for ammonia emissions to be included in an assessment to render it 'complete' will be a case by case decision. In this regard the case of <i>Boggis</i> is of relevance as this case established another important principle that, whilst it is correct to recognise that an assessment under the Habitats Regulations is concerned with a 'risk' rather than a probability of an impact, the Court ruled that <i>'there must be credible evidence that there was a real rather than a hypothetical risk'</i>.</p> <p>As noted in Figure 1 of REP1-041, monitored ammonia concentrations in the Ashdown Forest SAC reduced rapidly from the edge of the road, such that background levels were reached by 30 metres from the road. As the qualifying features of the SPA are only present at 150 metres from the road, there would therefore be no discernible effect at this location.</p> <p>Further responses on deposition velocities are provided in section 5 below.</p>
REP1-038-5	<p>The Habitats Regulations Assessment: Stage 2 [APP-043] is compliant with case law and guidance on the carrying out of habitats assessments under the Habitats Directive and Habitats Regulations. Paragraph 39 of the Ecology and Habitats Regulations Assessment representation [REP1-043] submitted on behalf of RHS concludes that 'the TBHSPA is already receiving nitrogen deposition that is far in excess of critical loads and the conservation objectives for the site include an objective to reduce these levels to at or below the critical load'. As explained below, this is not correct.</p> <p>As stated in paragraph 4.21 in Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Natural</p>	<p>As set out above, the HRA is not legally compliant.</p>	<p>As stated above, the HRA is legally compliant. Refer to Point 11 of Section 2 of this document which explains why the HRA complies with legislation.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>England(2018)), "If none of the site's sensitive qualifying features known to be present within 200 m are considered to be at risk due to their distance from the road, there is no credible risk of a significant effect which might undermine a site's conservation objectives".</p> <p>The reference to the Ockham and Wisley Commons SSSI component of the SPA exceeding the critical load for nitrogen deposition in paragraph 7.2.31 of the Habitats Regulations Assessment: Stage 2 [APP-043] is referring to the lower limit of the critical load range (10 kg N/ ha/ year).</p> <p>The lower limit of the critical load range was selected for assessing 1% of the lower limit of the critical load range when comparing the 2022 with no Scheme data against the 2022 with the Scheme data as it is the most sensitive value. The lower limit of the critical load range for heathland (taken from the APIS critical loads for habitat types within the Ockham and Wisley Commons SSSI component of the SPA, as explained in paragraphs 7.2.29 and 7.2.30 of the Habitats Regulations Assessment: Stage 2 [APP-043]) was used in the SIAA to maximise the sensitivity for detecting any increases in nitrogen deposition by 1% of the critical load.</p> <p>However, critical loads are presented in APIS as a range. The critical load range for heathland habitats within the Ockham and Wisley Commons SSSI component of the SPA is 10-20 kg N/ ha/ year.</p> <p>Whilst the SIAA [APP-043] considered the lower limit of the range, this was selected as a precautionary approach to investigating risks. The Natural England Commissioned report NECR210 (2016) Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance used the upper limit when determining if critical loads were exceeded.</p> <p>The Thames Basin Heaths SPA is designated for its qualifying species (Dartford warbler, nightjar and woodlark) rather than its habitats.</p> <p>The APIS data for the qualifying features of the Thames Basin Heaths SPA (http://www.apis.ac.uk/src/select-a-feature?site=UK9012141&SiteType=SPA&submit=Next) shows that nitrogen deposition loads are below the upper critical load threshold for dry heaths for all three of the qualifying features of the SPA and therefore the nitrogen deposition loads within the SPA do not exceed the critical load threshold for nitrogen deposition. Therefore, in terms of Advocate General Kokott's opinion, the critical loads for nitrogen depositions are not</p>	<p>These statements on the range of critical loads are misleading. HE asserts that their assessment is precautionary and therefore their assessment is likely to err on the side of caution. This is not the case.</p> <p>Professor Laxen's evidence demonstrates that a key sources of nitrogen deposition (e.g. ammonia from road traffic) has been omitted from the assessment. The NERC210 (2016) report does NOT advocate the use of the upper limit when determining critical loads. Indeed, the report in fact explicitly states the opposite for example at section 5.7 it is stated richness. 'The implication of this is that ecosystems may be showing sensitivity to N deposition at much lower levels of N deposition than previously thought and certainly at the lower end of the critical load ranges.'</p> <p>This statement shows a fundamental lack of understanding of basic ecological principles. The qualifying species are reliant on the quality of the habitat to support their populations. Increased nitrogen causes reduction in species diversity and loss of flowering plants. It increased ground level shading (reduction in bare ground) which is likely to have adverse effects upon invertebrate species and thereby reduce the availability of food sources for the interest features of the site.</p> <p>APIS presents critical loads as a range but makes clear that the minimum of the critical value range should be applied during screening, with any modifying factors considered and applied at the detailed assessment stage (page 9 of App.X). The recommended values for use in a detailed assessment are 10 kgN/ha/yr for both dry heaths and coniferous woodland (page 6 on App.Xhttp://www.apis.ac.uk/sites/default/files/downloads/APIS%20critical_load_range_document.pdf)</p> <p>These statements on the range of critical loads are therefore misleading. The NERC210 (2016) report does NOT advocate the use of the upper limit when determining critical loads. Indeed, the report in fact explicitly states the opposite for example at section 5.7 it is stated,' The implication of this is that ecosystems may be showing sensitivity to N deposition at much lower levels of</p>	<p>Refer to Point 13 of Section 2 of this document. Point 11 of Section 2 of this document explains why the spatial extent of the air pollution impact is confined to the established woodland that separates the heathland from the roads, and acts as a protective buffer, and explains why Highways England can be confident that woodland does not itself support any of the qualifying species as a foraging or nesting habitat.</p> <p>Point 11 of Section 2 of this document also explains that nitrogen deposition levels will be lower than the current baseline, giving certainty that the woodland buffer will continue to function in its current state.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>exceeded within the heathland habitats where the qualifying features of the SPA occur.</p> <p>The SIAA considered the nitrogen deposition levels at six transects within the Ockham and Wisley Commons component of the Thames Basin Heaths SPA, comparing nitrogen deposition data for 2022 with no Scheme data against 2022 with the Scheme.</p> <p>As agreed with Natural England (see item 2.0 of meeting minutes for 27 March 2018, as found in A.13 of the Statement of Common Ground with Natural England [APP-138]), the SIAA assessed whether the 2022 with Scheme calculations would lead to a significant change (increases of greater than 1% of the lower limit of the critical load) in nitrogen deposition rates, when compared to the 2022 without Scheme data. In addition, the Environmental Statement assessed for increases of 0.8 kg N/ha/yr.</p> <p>After taking into account the updated air quality data (as described in Appendix B of the comments response to the Royal Horticultural Society air quality representation [REP1-041]), the increases of 1% or greater between the 2022 without Scheme and 2022 with Scheme data are confined to within 50 m of the road.</p> <p>The qualifying species occur within the heathland habitats of the Ockham and Wisley Commons SSSI component of the SPA. As demonstrated in Figures 4 and 5 of the Habitats Regulations Assessment Figures [AS-012], there is a belt of Scots pine-dominated woodland along the edge of the A3 and M25, forming a buffer of at least 150 m between the road and the heathland where the qualifying species occur.</p> <p>This woodland buffer protects the habitats that the SPA qualifying species utilise from the nitrogen deposition emissions from the road. For each transect, the distance of the heathland from the road, and the nitrogen deposition rates (2022 with and without Scheme) for that distance (up to 200 m from the road) are listed below, based on the updated air quality data.</p> <p>As can be seen, at the distance that the heathland is situated from the road, there is negligible difference between the nitrogen deposition loads for the 2022 without Scheme and 2022 with Scheme, with either no perceptible change, or in the majority of cases, minor improvements. On this basis, the SIAA correctly ruled out adverse effects on the SPA as a result of air quality changes resulting from the Scheme, either alone or in combination, and is therefore robust.</p>	<p>N deposition than previously thought and certainly at the lower end of the critical load ranges.'</p> <p>The upper critical load is not relevant. The APIS website clearly states that lower levels should generally be used for assessments. This statement is consequently incorrect. See App.X.</p> <p>The discussion of increases does not take account of the contribution of ammonia to N deposition. Thus, the values in the Table are not correct.</p> <p>As highlighted above, the extent of the increased nitrogen deposition has not been calculated correctly and the actual deposition arising from the scheme is likely to be significantly higher than that which is current erroneously predicted by the HE. Therefore, even notwithstanding the need for restoration, effects may extend beyond the current extent of the so-called conifer woodland buffer.</p>	
REP1-038-6	<p>The RHS Alternative Scheme cannot be provided because the left-out merge junction from Wisley Lane to the A3 northbound is not safe, and it cannot be provided in accordance with DMRB design standards. Accordingly, it would not meet the Scheme objectives and is not a feasible alternative. Further, if it were possible to provide a compliant design, the RHS Alternative Scheme would require SPA land to be taken.</p>		<p>As explained in Point 11 of Section 2 of this document, when taking into account all of the points described, it should be clear to ExA that no reasonable scientific doubt remains as to the absence of adverse effects to the integrity of the SPA in the SIAA, and that Highways England are certain that the changes in air quality as a result of the Scheme (alone or in combination with other plans and projects) will lead to no adverse effects on the Thames Basin Heaths SPA as a result of changes in air quality.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>The Scheme has been designed to minimise the amount of land take (both permanent and temporary) from the SPA, and an additional substantial permanent land take cannot be considered a less damaging solution.</p>		<p>However, it is important to note that Highways England has indeed identified an adverse effect to the integrity of the SPA as a result of the land take required by the Scheme, and in accordance with Article 6(4) of the Habitats Directive, has undertaken a consideration of alternative solutions, assessed imperative reasons of overriding public interest and designed a suite of compensatory measures.</p> <p>Therefore, due to the adverse effect to the integrity of the SPA occurring as a result of the land take, any alternative scheme that would require additional land take from the SPA cannot possibly be considered as a less harmful alternative.</p>
REP1-038-7	<p>Highways England does not agree with the level of reduction in visitor numbers to the RHS arising from the Scheme as set out in the Hatch Regeneris report included with the RHS Written Representation [REP1 -039] nor that the Scheme would have a severe economic impact on the RHS.</p> <p>In outline, the Hatch Regeneris report is flawed in a number of respects: The RHS data overstates distances and journey times. The journey distance and time changes in Table 4 and 5 do not accord with Highways England's data and Highways England hopes that the recent data sharing exercise will address this</p> <ul style="list-style-type: none"> Some of the key questions in the RHS survey were leading and have produced a misleading and in some instances exaggerated outcome. <p>For example, the response to Question 9, states that over a third (36% of visitors) felt that it [the changes to the journey times] would impact how frequently they would visit. The response does not explain that approximately 58% of the respondents stated that the additional journey time would not affect how frequently they would visit the garden.</p> <ul style="list-style-type: none"> On the basis that only those travelling along the A3 from the south would be affected on their journey to RHS Wisley, and that this represents approximately 24% of total visitors, the RHS forecast reduction in total visitor demand of 6.5% implies that a quarter of these visitors would cease to visit. This would be unlikely on account of such a small increase in journey distance and time. The additional distances that RHS Wisley Gardens visitors will need to travel to the Scheme (that does not include south facing slips at Ockham Park junction) is dependent on whether visitors from the south choose to follow the signposted route to and from the A3 via Junction 10 or choose to route via Ripley. <p>RHS has estimated that Wisley Gardens will attract approximately 1.494 million visitors a year due to their 10-year</p>	<p>The RHS commissioned a survey to formally canvas opinions on the potential impact the scheme will have upon the frequency of visits. The sample size, whilst relatively small, is still of sufficient size to provide credible insight into the views of the wider population of visitors to RHS.</p> <p>HE has provided no evidence to support their opinion that there DCO Scheme will have no impact upon RHS visitor numbers.</p> <p>The RHS considers the journey distances used within its analysis are broadly consistent with the HE data and will not materially affect any of the outcomes of the RHS economic analysis.</p> <p>The HE journey time data is reliant upon the accuracy and predicative capability of their traffic models. The RHS has previously indicated its concerns with some of the local calibration and validation of the baseline model on routes leading to / from RHS Wisley Garden and this remains the case.</p> <p>The questions in the RHS survey were not "leading" but were designed to portray, in a simple self-completion survey format, the negative traffic delay and disruption that resulting from the RHS Scheme. The survey was administered by fully trained and briefed market research staff (Plus Four Market Research).</p> <p>The responses to Question 9 clearly include the 58% of respondents who stated the additional journey time would not affect their frequency of travel. These responses are fully accounted for within the RHS analysis and no negative impacts are attributed against these individuals.</p> <p>HE trip distribution assumptions are derived from a single Automatic Number Plate Recognition (ANPR) survey on Tuesday 16th May 2017, 6am to 7pm. Table 3.6 of the Motion Report (REP2-040) shows daily visitor profiles and indicates that Monday and Tuesdays have under 50% of the daily visits than any other day of the week. Whilst not disputing the accuracy of the ANPR data, the RHS do not consider it to be representative of all visitor trips to the RHS Wisley Site. The data used by RHS is drawn from its database of visitor trip origins across the year and so provides a more representative assessment across a typical year.</p> <p>The RHS agree with this observation and had already taken this into account within its analysis. The HE model forecasts that 100% of trips will divert via Ripley but the RHS considers this, in part, reflects the limitations of the HE traffic model in accurately representing delays. The proportion of trips diverting via Ripley will also depend on whether mitigation measures are introduced in Ripley that will encourage RHS traffic to remain on the A3.</p> <p>The figures presented by HE for the two options appear inconsistent with each other. The RHS await revised figures.</p>	<p>Please refer to Highways England's written summaries of oral case for Issue Specific Hearing 2 [REP3-009] and evidence provided above.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<p>investment plan [Appendix M of REP1-044], which will generate approximately 626,650 vehicle arrivals and departures annually. Although Highways England does not know the expected growth profile of RHS Wisley, if all this growth is assumed to occur by 2022, then the total annual additional distance due to the Scheme would be approximately 355,400 kms (213,700 miles) if visitors to and from the south choose to route via Ripley, or approximately 1.9 km (1.16 miles) if visitors to and from the south choose to route via J10 (the signposted route). Note that these figures include visitors travelling to/from other directions as well as from the south.</p> <ul style="list-style-type: none"> • The RHS analysis overlooks the significant improved road safety provided by the Scheme. • The Hatch Regeneris report is based on a worst case scenario and therefore cannot be relied upon as evidence of the likely economic impact on the RHS Wisley. <p>Highways England is considering the Hatch Regeneris report in more detail and will be providing a response as soon as possible.</p>	<p>The RHS consider the RHS Alternative Scheme to be as safe as the DCO Scheme and so the RHS do not consider there will be any material difference in road safety. In addition, the HE analysis demonstrates that the distances travelled by RHS visitors will increase and so the exposure to accident risks could, potentially, increase.</p> <p>It is recognised that there are differences in opinion between RHS and HE in relation to the input variables, but the RHS do not consider there to be anything within its approach that represents an inherent worst-case scenario.</p>	
REP1-038-8	<p>Highways England does not agree with the wider economic impacts associated indirect and induced impacts to the RHS arising from the Scheme as set out in the Hatch Regeneris report included with the RHS Written Representation [REP1 - 039] nor that the Scheme would have a severe economic impact on the RHS.</p> <p>In outline, the Hatch Regeneris report is flawed in a number of respects:</p> <ul style="list-style-type: none"> • The sample was small and taken in late autumn and so the responses may differ from those that would be received in peak season. Whilst the report notes that the sample matches well with typical Wisley visitors; it does not provide details on the similarities and account for scaling the result up from the sample of 645 (from 293 questionnaires) to represent impacts on annual trips. • The questionnaire as reported asked visitors about the impact of an additional journey time of 10 minutes on journeys to Wisley, implying a 10 minute increase on a 1 way trip to RHS. However, the calculations appear to use the survey responses about the impact of the 10 minute increase on visit numbers in relation to the estimated increase in round journey time to and from Wisley, thereby overstating the impact. • The questionnaire only asked for respondents' reaction to one potential increase in journey time (10 minutes). As noted in the report, it is likely that visitors' response to increased journey time will not be linear and responses to shorter increases in journey time should have been asked. 	<p>The RHS has conducted its wider economic impacts in line with DfT Transport Analysis Guidance and HM Treasury Green Book requirements. Whilst it is accepted that HE and RHS have differences of opinion on various input data, the RHS consider there can be no dispute on the overall approach adopted by the RHS.</p> <p>HE has indicated they do not believe that the DCO Scheme would have severe economic impact on the RHS but they have presented no analysis to support this claim.</p> <p>The sample size, whilst relatively small, is sufficient to be statistically representative of the annual visitor population. As the survey was conducted in the Autumn half-term holidays, the profile of visitors is similar to those that would be received in peak season. This is evidenced in terms of the ratio of members to paying adults, as well as the age distribution of respondents. The RHS, therefore, maintain that the sample provides credible insight into the views of the wider population of visitors to RHS.</p> <p>The DCO Scheme would result in different journey times impacts for individuals' depending on whether they are travelling to and from the RHS Site. To counter this challenge, the survey was administered by qualified survey staff who provided a briefing on the wider context and explain the variety of impacts.</p> <p>As HE has indicated, the RHS analysis already indicates that the impacts may not be linear and this has been taken into account within the RHS assessment. At the time of the survey, HE had not provided data on potential journey time impacts; however, the selection of 10 minutes represented a tangible change in journey time from which the RHS could base its analysis.</p> <p>Increasing visitor journey times is, by definition, a negative impact. Presenting a scale of "not frustrated" through to "highly frustrated" is considered to represent the only reasonable response to this question.</p>	<p>Please refer to Highways England's written summaries of oral case for Issue Specific Hearing 2 (ISH2) [REP3-009] and evidence provided above.</p> <p>Highways England remains of the view that the economic analysis undertaken by Hatch Regeneris is flawed in a number of important respects, not least in overstating distances and journey times, as discussed at ISH2.</p> <p>To put it in the context of the overall Scheme, the Hatch Regeneris report [REP1-039] is concerned solely with the claimed economic impacts upon RHS Garden Wisley and does not consider the wider economic benefits of the Scheme.</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
	<ul style="list-style-type: none"> The phrasing of the questionnaire tended to invite negative responses by presuming the additional journey time would cause frustration rather than asking a more neutral question such as how respondents would feel about the increase in journey time. The report doesn't give sufficient information to fully replicate the calculations and it seems there may be some additional uplift factors included. Indeed, the basis for the 15% reduction in trips for the additional RHS anticipated scenario is not clear. The report refers to the view that the disruption of construction impacts may be more off putting to visitors than their current estimate allows for (but this would apply only to the years of construction whereas the example applies the higher rate of visit reduction to operational years too). 	<p>No additional uplift factors have been included, with all elements stated within the report. The disruption during construction has only been applied during the forecast years of construction.</p>	
REP1-038-9	<p>Highways England has raised a number of points above that show it does not agree with the economic analysis provided in relation both to those points above as well as this one.</p>	<p>The RHS analysis of the RHS Alternative Scheme is based upon the same robust set of survey data, trip distribution evidence, journey distance, and journey time data used in the assessment of the DCO Scheme. This evidence demonstrates that the provision of south-facing slips and retention of the left-turn egress from Wisley Lane onto the A3 will negate the significant economic disbenefits of the DCO Scheme.</p>	<p>The RHS Alternative Scheme is not an appropriate alternative and in any event it cannot be delivered as part of the DCO Scheme. There is therefore no value in carrying out an economic assessment in respect of it.</p> <p>Highways England does not accept that there are significant economic disbenefits of the Scheme either generally or to RHS.</p>
REP1-038-10	<p>A construction sequence and programme is set out in section 2.4 of the Environmental Statement, Chapters 1-4: Main Report [APP-049]. Following the appointment of the principal contractor, Highways England will facilitate discussions between the appointed contractor and the RHS regarding the construction programme.</p>	<p>Whilst additional detail on the impact of the DCO Scheme construction phase has now been presented by HE (REP2-011), this focusses upon the level of traffic that may divert from the strategic road network onto the local road network. It remains unclear how much additional journey time will be incurred by visitors travelling through the roadworks to RHS Wisley Garden. This is a critical element of the assessment of socio-economic impacts of the DCO Scheme, as the level of traffic delay translates directly into lost economic output.</p>	<p>Overall construction impacts have been considered in the Scheme's benefit-cost ratio. Highways England's approach will be to minimise so far as practicable adverse impacts during construction on all affected parties, and will be liaising with RHS and others affected accordingly.</p>
REP1-038-11	<p>Tree root surveys have been undertaken and the results are still being analysed to inform on the potential to retain the trees. This analysis will include detailed design reviews in these locations to see if any bespoke engineering solutions can be used to enable their retention should the survey results show that to be necessary.</p>	<p>The RHS reserves its position in this regard.</p>	<p>Information has been provided to RHS and the matter has also been discussed above.</p>
REP1-038-12	<p>RHS has not explained why it considers the land take to be excessive. Plot 11/2 is included to provide permanent rights to enable works to be undertaken and maintained to improve the biodiversity of this field and woodland fragment to ensure that it is suitable to be considered as part of the SPA compensation land.</p> <p>The field at Plot 11/2 has been selected due to its location and potential to be enhanced as an invertebrate resource (which would benefit the qualifying features of the SPA). The size of the plot (6.1 ha) is appropriate to provide a 1:1 ratio to compensate for the loss of permanent land take from the SPA (5.9 ha). An additional SPA compensation land parcel (Old Lane Compensation Land, 2.0 ha) has been provided to ensure that the adverse effects of the permanent loss of 5.9 ha of SPA are offset and to ensure that a 1:1 ratio is maintained. Further detail on the selection process of the SPA compensation land is provided within the HRA Annex C Report [APP042].</p>	<p>To be dealt with at the CPO Hearing.</p>	<p>N/A</p>

Reference	Highways England Comment	RHS Response	Highways England Further Response
REP1-038-13	It is not possible to remove the skew from the orientation of the bridge and keep the existing access to and from Wisley Lane and Elm Lane open during construction. Furthermore, the bridge cannot be straightened without taking more land from the SPA. The RHS alternative would not, therefore have a lesser effect on the SPA and so cannot be regarded as a feasible alternative solution for the purposes of the assessment required under the Habitats Directive.	The RHS does not accept this proposition.	RHS has not explained why this proposition is not accepted.

5. Comments on RHS's Response to REP2-022

Highways England Comment	RHS Response	Highways England Further Response
<p>2.1 Effect of Excess Distance Travelled to Access RHS Wisley</p> <p>2.1.1 The results of the air quality assessment that are provided in the ES [APP-050] and tables 5.7.10 and 5.7.12 of APP-080 are based on the data provided by the traffic model. The model assumes that with the Scheme, all traffic travelling to and from RHS Wisley from the south travels through Ripley rather than the longer signposted route via the A3 and M25 junction 10. The traffic data used in the assessment was based on the more conservative design fix 2 (DF2), rather than that which was revised for design fix 3 (DF3), as documented in paragraph 5.5.12 of APP-050.</p>	<p>It is accepted that for the ES, HE modelled all RHS Wisley traffic to and from the south as passing through Ripley. This is one worst-case assumption. The other worst-case assumption is that all this traffic would follow the signposted route and use the A3 up to junction 10, passing by the SPA. This was not modelled in the ES but has since been modelled with the results presented in REP2-022. The impacts arising from both these worst-case assumptions would be avoided with the RHS Alternative Scheme.</p>	<p>There would not be any difference to the conclusions of the air quality assessment documented in APP-050 nor to the conclusions of the SIAA as a result of the RHS Alternative Scheme, as explained in REP2-022.</p>
<p>2.1.2 However, an assessment has been carried out to determine the changes in NOx concentrations and nitrogen deposition rates within the Thames Basin Heaths SPA assuming that all the traffic which is currently travelling via Ripley to and from the Ockham junction to RHS Wisley would use the signposted route, based on the traffic data provided in the Transport Assessment Supplementary Information Report (Volume 9.16 submitted to the Examining Authority at Deadline 2). As documented in the response to point 3.1. of REP1-038, this is an</p>	<p>HE accepts that it had not modelled the worst-case for traffic on the A3 north of Ockham junction, which is that traffic would follow the signposting to RHS Wisley. It is this traffic that will pass the SPA, and the published ES has therefore not covered the impact of this traffic.</p> <p>Results are now presented by HE for the worst-case assumption that all RHS Wisley traffic to and from the south follows the signposted route in REP2-022 for N deposition, but not for NOx. They show that N deposition would be up to 1.5% higher (Appendix A in REP2-022) than the values presented in the ES. If</p>	<p>As recorded in response to REP1-038-5 in the Applicant's comments on written representations [REP2-014] for each of the transects within the SPA, the heathland habitats occur at a distance of 150 m or greater, and therefore, any points closer than 150 m fall within the woodland buffer. At this distance there would not be a discernible effect with the additional RHS Wisley traffic using the signposted route, and with the revised nitrogen deposition velocities. The nitrogen deposition calculations at the location of the qualifying features are provided below. These calculations include the revised nitrogen deposition velocities and the RHS Wisley traffic using the signposted route.</p>

Highways England Comment	RHS Response	Highways England Further Response																																																															
<p>unlikely scenario, as it is considered that some of the traffic will use the shorter route through Ripley, as it does now. The results for the four transects in proximity to the A3 are provided in Appendix A. The traffic data for these movements were only available for DF3, hence the original assessment for the receptors in the SPA using the DF2 traffic was additionally revised to provide the results for DF3. The results have also taken into account the revised nitrogen deposition velocities as discussed in the point below. This shows that with the additional traffic, the largest change in nitrogen deposition rates would be an increase of 0.15 kgN/ha/yr at receptor point R149, located 5m east of the A3.</p>	<p>ammonia had been included in the calculation, then the N deposition would be up to 3% higher. The RHS Alternative Scheme would remove this adverse impact on the SPA.</p>	<p>Estimated Nitrogen Deposition Results (kgN/ha/yr) for Ecological Transect Points in the Thames Basin Heaths SPA, including RHS Wisley traffic using signposted route, and revised velocities</p> <table border="1"> <thead> <tr> <th>Receptor ID</th> <th>Distance from road centre (m)</th> <th>2015 Base</th> <th>2022 DM</th> <th>2022 DS</th> <th>2022 Change</th> <th>Change as % of Lower Range of Critical Load</th> </tr> </thead> <tbody> <tr> <td colspan="7">Transect West of A3 (north of Wisley Lane)</td> </tr> <tr> <td>R132</td> <td>150</td> <td>16.32</td> <td>13.88</td> <td>13.85</td> <td>-0.03</td> <td>-0.3</td> </tr> <tr> <td>R133</td> <td>200</td> <td>16.01</td> <td>13.59</td> <td>13.56</td> <td>-0.03</td> <td>-0.3</td> </tr> <tr> <td colspan="7">Transect East of A3 (near Boldermere)</td> </tr> <tr> <td>R139</td> <td>150</td> <td>16.80</td> <td>14.35</td> <td>14.29</td> <td>-0.06</td> <td>-0.6</td> </tr> <tr> <td>R140</td> <td>200</td> <td>16.33</td> <td>13.91</td> <td>13.85</td> <td>-0.06</td> <td>-0.6</td> </tr> <tr> <td colspan="7">Transect West of A3 (close to junction 10)</td> </tr> <tr> <td>R147</td> <td>150</td> <td>17.34</td> <td>14.64</td> <td>14.64</td> <td><0.1</td> <td><0.1</td> </tr> </tbody> </table>	Receptor ID	Distance from road centre (m)	2015 Base	2022 DM	2022 DS	2022 Change	Change as % of Lower Range of Critical Load	Transect West of A3 (north of Wisley Lane)							R132	150	16.32	13.88	13.85	-0.03	-0.3	R133	200	16.01	13.59	13.56	-0.03	-0.3	Transect East of A3 (near Boldermere)							R139	150	16.80	14.35	14.29	-0.06	-0.6	R140	200	16.33	13.91	13.85	-0.06	-0.6	Transect West of A3 (close to junction 10)							R147	150	17.34	14.64	14.64	<0.1	<0.1
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<p>2.1.3 Table 5.7.11 of APP-080 shows that the background nitrogen deposition rate used in the assessment for the Thames Basin Heaths SPA was 12 kgN/ha/yr in the opening year of 2022. As documented in paragraph 7.9.24 of APP-052, to reduce the measured species-richness of a lowland heath habitat by one species, an increase of 0.8 kgN/ha/yr is required where the site has a background nitrogen deposition rate of 10 kgN/ha/yr. As the highest change of 0.15 kgN/ha/yr is below this level, there is unlikely to be any measurable effect on the reduction in</p>	<p>The data cited by HE from Table 21 of the Natural England Commissioned Report NECR210, have been used illogically to define the significance of impacts in the SIAA. Prof. Laxen has spoken to the author of the report NECR210, Dr Simon Caporn, who said that this table was not designed to be used as a basis for defining significance. The role of Table 21 is purely to show that as nitrogen deposition increases the species richness declines in a non-linear way, this being one of the adverse effects of additional nitrogen input to a habitat.</p>	<p>In developing the recently published DMRB air quality assessment methodology, Highways England had engaged extensively with representatives from Natural England on their proposed approach and in particular the use of Natural England's published report, "<i>Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance</i>" (NECR210), March 2016, to inform a competent expert for ecology on the judgement of significant air quality effects. It is for the promoting authority to determine the sources of evidence they use to develop their judgement.</p>																																																																						

Highways England Comment	RHS Response	Highways England Further Response
<p>species-richness as a result of the additional trips by the RHS Wisley traffic with the Scheme. Hence there would be no material effect within the SPA.</p>	<p>Use of Table 21 is based on the argument that as long as the increase in nitrogen deposition represents the loss of less than 1 species then it is insignificant. This is illogical for at least two reasons. Firstly, using the example of a deposition rate of 10 KgN/ha/yr, the table shows that the addition of 0.8KgN/ha/yr would be associated with the loss of 1 species, whereas, at 20KgN/ha/yr the loss of 1 species would arise from the addition of 1.7 KgN/ha/yr. The HE has thus implied that the more polluted the site is above the critical load, the more additional pollution can be added without it being a significant increase. This is not consistent with the need to reduce nitrogen input to a habitat to restore conditions where the critical load is being exceeded, which would be made that much harder the more polluted the site is. Secondly, this approach does not recognise whether or not the site is on the tipping point whereby a very small increase in nitrogen deposition might cause the loss of a species. It is, therefore, the professional view of Prof. Laxen and Mr Baker that the criterion of loss of one species cannot be used as a significance criterion and its use in this way in the SIAA is not valid.</p>	<p>Natural England's guidance document "<i>Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations</i>" (NEA001), July 2019 in paragraph 5.49 signposts the use of NECR210 in decision making under the heading, "Consider the best available evidence on small incremental impacts from nitrogen deposition", para 5.49, "<i>When assessing likely adverse effects on site integrity, the Natural England Commissioned Report 210: Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance (referred to above) may be of relevance.</i>"</p> <p>The use of the evidence in Table 21 is not illogical as suggested by Mr Laxen, rather the need for larger changes in deposition rates leading to the loss of 1 species at higher background critical loads, is more a reflection on the fact that the remaining species are more tolerant of higher nutrient nitrogen loads.</p> <p>Natural England's policy in paragraph 5.45 of NEA001, describes that worsening would not undermine the site objectives, "<i>Which value you use will depend on what type of habitat you are looking at. Figure 3 [in NEA001] shows an example of nitrogen deposition trends at Breckland SAC. Nationally predicted declines in nitrogen deposition on heathland at Breckland SAC from 27 kg N/ha/year in 2005 to 24 kg N/ha/year in 2014 could mean that some increases in nitrogen from a plan or project (alone and in combination) may not impede this downward trend. Taking into account all relevant factors and information, it may be possible to consider some increases as temporary and reversible, which would be unlikely to undermine site objectives. In other words, we can</i></p>

Highways England Comment	RHS Response	Highways England Further Response
		<p><i>still expect - even with the plan/project – the overall environmental loading will return to below critical level and loads within an appropriate timeframe.”</i></p> <p>In RHS’s comment on REP1-038-5 in the RHS response to REP2-014 [REP3-044] it is suggested that the heathland habitat within the Ockham and Wisley Commons SSSI component of the SPA may be close to tipping point with regards to nitrogen deposition levels, and that this would cause one of the qualifying species to disappear. Highways England can demonstrate with certainty that this is not the case. The Thames Basin Heaths SPA was designated for its Dartford warbler, nightjar and woodlark populations in 2005, and this included the Ockham and Wisley Commons SSSI component. Therefore, the Ockham and Wisley Commons SSSI supported sufficient numbers of Dartford warbler, nightjar and/or woodlark in 2005 to qualify for designation as part of the Thames Basin Heaths SPA.</p> <p>As can be seen from the APIS website (http://www.apis.ac.uk/src/select-a-feature?site=UK9012141&SiteType=SPA&submit=Next), the nitrogen deposition trend shows a clear reduction in nitrogen deposition levels within the Thames Basin Heaths SPA over time since it was designated in 2005. Therefore, since the nitrogen deposition levels were considerably higher when the site was designated as an SPA than the current levels, then the heathland habitats within the Ockham and Wisley Commons SSSI component of the SPA cannot possibly be close to tipping point at their current levels of nitrogen deposition. In addition, the future reductions from the current baseline, when assessing the operational Scheme in</p>

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		combination with other plans and projects, will ensure that the heathland continues to support the SPA qualifying species.												
<p>2.2 Other Points</p> <p>2.2.1 Other points that were raised under this heading included a discussion on the critical levels (paragraph 3.2 of REP1-041), and the alternative scheme proposed by RHS Wisley (paragraph 3.6 of REP1-041).</p>		N/A												
<p>2.3 Critical Levels</p> <p>2.3.1 As documented at paragraph 5.3.3 of APP-050, the critical levels for the protection of vegetation are set in the UK regulations (SI 2010/1001). Schedule 1 of the regulations provides details of the location of sampling points where the critical levels apply, which are documented in paragraph 5.3.3 of APP-050. Paragraph 5.3.3 also notes that it's Natural England's policy to apply the critical level for nitrogen oxides as a benchmark to all designated conservation sites. There is therefore no contradiction to what has been stated at paragraph 2.2 at Appendix A2 of REP1-041.</p>	<p>The SIAA has not included an assessment against the critical level for NOx. The ExA therefore does not have the necessary information to provide an informed Appropriate Assessment.</p>	<p>As noted previously at 2.5 of REP2-022 Natural England did not request information on changes in NOx concentrations to be included within the SiAA.</p> <p>At a further meeting with Natural England held on 24th January 2020, they confirmed that they had not changed their view. This information will be documented in a further draft of the SoCG with Natural England.</p> <p>Nonetheless the NOx concentrations are provided within the air quality assessment at table 5.7.10 of APP-080 and provided in the table below for the transect points within the SPA where qualifying features would be present. At the receptor points within the SPA there would not be any exceedances of the critical level at the location of the qualifying features, as shown in the table below.</p> <p>Estimated Annual Mean NO_x concentrations µg/m³ for ecological transect points in the Thames Basin Heaths SPA</p> <table border="1" data-bbox="1384 1238 2134 1390"> <thead> <tr> <th>Recept or ID</th> <th>Distan ce from road</th> <th>2015 Base NOx</th> <th>2022 DM NO_x</th> <th>2022 DS NO_x</th> <th>2022 NO_x Chang e</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Recept or ID	Distan ce from road	2015 Base NOx	2022 DM NO _x	2022 DS NO _x	2022 NO _x Chang e						
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		Transect West of A3 (north of Wisley Lane)					
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		R133	200	23.4	17.1	16.8	-0.3
		Transect East of A3 (near Boldermere)					
		R139	150	28.7	21.6	21.0	-0.6
		R140	200	25.5	18.9	18.5	-0.4
		Transect West of A3 (close to junction 10)					
		R147	150	32.2	23.3	23.1	-0.2
		R148	200	30.2	21.9	21.8	-0.1
		Transect East of A3 (close to junction 10)					
		R155	150	35.6	24.8	24.6	-0.2
		R156	200	31.8	22.4	22.2	-0.2
		Transect South of M25 (west of junction 10)					
		R163	150	33.4	24.8	24.9	+0.1

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		R164	200	30.2	22.3	22.3	<0.1
		Transect South of M25 (east of junction 10)					
		R193	150	35.0	25.4	25.1	-0.3
		R194	200	32.1	23.1	22.9	-0.2
<p>2.4 Alternative scheme</p> <p>2.4.1 The RHS Alternative includes south-facing slip roads for the A3 at Ockham roundabout. The south-facing slip roads at Ockham roundabout are not included in Highways England's Scheme, and have not been assessed. However, it would not be unreasonable to assume that the effect on the Thames Basin Heaths SPA would be similar to that assessed in the ES, as both the Alternative Scheme and the Scheme as assessed route traffic from the south to Ockham Park junction via south facing slips (Alternative scheme) or via Ripley (Scheme) and not via a u-turn movement at M25 j10.</p>	<p>This hinges on what people will do in practice. The RHS Alternative Scheme will ensure that neither the impacts on the SPA nor the impacts on Ripley would arise. This will not be the case with the DCO Scheme, as one or the other (the SPA or Ripley) or both would be affected by the DCO Scheme. The RHS Alternative Scheme will avoid these impacts and its adoption will therefore be beneficial in terms of reducing the effects of the scheme on residents in Ripley and the habitat within the SPA.</p>	<p>See response to 2.1.1 above.</p>					
<p>2.5 NOx concentrations should be included in the SiAA</p> <p>2.5.1 The method for the SiAA was carried out in agreement with Natural England, who requested information on the changes in nitrogen deposition rates, as noted in the minutes of 27 March 2018 and documented in 5.3 Habitats Regulations Assessment Annex B [APP-041]. The NOx concentrations for the Thames Basin Heaths SPA</p>	<p>See comment on 2.3.1 above.</p> <p>There are exceedances of the critical level for NOx, but there is no assessment of the extent of this exceedance nor the implications.</p>	<p>See response to 2.3.1 above.</p>					

Highways England Comment	RHS Response	Highways England Further Response
<p>were calculated as part of the air quality assessment and are included in Table 5.7.10 of Appendix 5.7 [APP-080].</p>		
<p>2.6 NOx concentrations should be projected forward correctly</p> <p>2.6.1 The ES notes that the assessment was undertaken in accordance with Highways England's Interim Advice Note (IAN) 170/12 v3 on the assessment of future NOx and NO2 projections on long term trends[paragraph 5.5.23 of APP-050]. Although not explicitly stated in the ES, the NOx concentrations were correctly projected forward using the LTTE6 approach, and the results are provided in Appendix 5.7 of APP-080.</p>	<p>It is accepted that the NOx concentrations in Table 5.7.10 of APP-080 have been projected forward using an LTTE6 approach. However, it is still the case that the rate of reduction predicted, for NOx, as shown in Table 2 of REP1-041, is higher than that of NO2, which is contrary to the detailed survey of UK measurements over the period 2010 to 2018, as cited in paragraph 3.11 of REP1-041. Thus, it is still the case that the predicted future year NOx concentrations are likely to have been reduced too much, and this will affect the assessment of impacts. The assessment has therefore not followed a precautionary approach as is required for an HRA.</p>	<p>Paragraph 3.11 of REP1-041 notes that Highways England should be required to apply the LTTE6 method to derive future NOx projections. RHS have now accepted that this method was followed.</p> <p>However, RHS have now responded by criticising the Highways England's LTTE6 method, noting that future projections do not match the rate of reduction in NOx concentrations in the Air Quality Consultant's report on NOx trends in the UK, as documented at para 3.11 of REP1-041.</p> <p>However, Air Quality Consultants have recently updated their trends report with additional NOx data for 2019 (Nitrogen Oxides Trends in the UK 2013 to 2019, January 2020, Air Quality Consultants), available at:</p> <p>https://www.aqconsultants.co.uk/CMSPages/GetFile.aspx?guid=af089039-6a2f-49b5-9533-fe31205f3134</p> <p>The executive summary notes that <i>"the average rate of reduction over the period 2013 to 2019 is considerably steeper than that for the 2010 to 2018 period reported previously. This is particularly true at roadside sites and is principally because of the non-linearity of the trend, with the steepest reductions occurring since 2016... NOx concentrations at roadside sites have been reduced by an average of 5.14% per year since 2013 with the average reduction since 2016 being greater than this."</i></p> <p>This therefore leaves no reason for doubting the rate at which the NOx projections are declining for the air quality assessment for this project and supports the evidence that the</p>

Highways England Comment	RHS Response	Highways England Further Response
<p>2.7 Ammonia should be Included in the SiAA</p> <p>2.7.1 There is no requirement for ammonia to be included in the air quality assessment given that it is not included in the Highways England DMRB guidance (HA207/07). As noted in paragraph 5.8 of the Department for Transport's National Policy Statement for National Networks (available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/387222/npsnn-print.pdf), the air quality assessment should be consistent with Defra's published future national projections based on future factors toolkit, and available at https://laqm.defra.gov.uk/review-andassessment/tools/emissions-factors-toolkit.html). The emissions factors toolkit provides emissions data for four pollutants: NOx, PM10, PM2.5, CO2 but not ammonia.</p>	<p>The calculations of Ndep have not included the contribution of ammonia from road traffic. As REP1-041 sets out in Appendix A4 starting at page 18, ammonia can make significant contribution to Ndep alongside roads (see in particular Figure 3 on page 22). These results are based on a comprehensive monitoring programme over two years across the Ashdown Forest SPA and show ammonia contributing over half of the Ndep in 2015-17. The evidence is that the nitrogen oxides emissions will decline with time but ammonia is likely to remain constant, thus the proportion of ammonia to nitrogen oxides in the Ndep will increase with time. On the basis of these results, the ammonia contribution in 2022 would be expected to be well above 50% and thus the Ndep results presented by HE would need to be more than doubled to account for ammonia.</p> <p>The inclusion of ammonia in the calculation of traffic contributions to Ndep is a feature of current modelling being carried out for local plans, for example by Wealden Council for impacts on the Ashdown Forest SAC, by Epping Forest Council for impacts on Epping Forest SAC and by Havant Council for impacts on various SACs and SPAs.</p> <p>It is insufficient to say that ammonia should not be included because the guidance does not say it should be. Professional judgement and current practice elsewhere clearly justify the need to include ammonia in Ndep calculations. It is therefore critical</p>	<p>LTTE6 trends are precautionary as stated at section 3.1, IAN 170/12v3.</p> <p>As noted previously at 2.7.1 of REP2-022, ammonia is not within the suite of tools produced by DEFRA for air quality assessment as documented in paragraph 5.8 of the DfT's National Policy Statement for National Networks, hence there is no requirement for assessment.</p> <p>In any case, the monitoring data for ammonia in the Ashdown Forest SAC to which RHS refer shows that in Figure 1 of REP1-041 concentrations of ammonia decrease rapidly from the edge of the kerb such that by 30 metres they are at background levels. This indicates that the contribution of ammonia to nitrogen deposition rates at the distance at which the qualifying features of the SPA are present would be comparable to the background rate, rather than attributable to a road source, and hence unlikely to have a discernible change at this distance.</p>

Highways England Comment	RHS Response	Highways England Further Response
	that ammonia from traffic is taken into account in the assessment presented to the ExA.	
<p>2.7.2 Furthermore the Institute for Air Quality Management (IAQM)'s more recently published guidance "A guide to the assessment of air quality impacts on designated nature conservation sites", available at https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2019.pdf, makes no explicit requirement to include ammonia within an air quality assessment, noting that the majority of emissions in the UK are from agriculture(paragraph D.6.1).</p>	See response to 2.7.1 above.	Response as per 2.7.1 above
<p>2.7.3 Even if the changes in nitrogen deposition rates with the Scheme, using the revised nitrogen deposition rates as discussed in the point below (paragraph 2.8.1), and presented in Appendix B of this response were to be doubled, this would mean that the largest change would be 0.92 kgN/ha/yr at a location 5 m east of the A3 (receptor point R149). Although this change is above the 0.8kgN/ha/yr threshold for a change in species-richness of a lowland heath habitat by one species, as discussed in the point above (paragraph 2.1.3) there are no qualifying features for the SPA in this area close to the A3 which acts as a buffer for the heathland (as documented in paragraph 7.4.4 of APP-043). The change would be below 0.8 kgN/ha/yr by 10 m east of the A3 (receptor point R150), with a change of 0.68 kgN/ha/yr.</p>	<p>The 0.92kgN/ha/yr is a 9.2% increase in the N deposition rate, which is well above the 1% used by Natural England to identify a 'likely significant effect' at the HRA screening stage.</p> <p>Furthermore, the calculations in Appendix B of REP2-022 do not include RHS traffic from and to the south following the signposted route via the A3 to junction 10. Appendix B of REP2-022 shows that this could increase N deposition by 1.5% at receptor R149, thus the total increase with the scheme could be around 10.7%at this receptor.</p>	<p>The revised nitrogen deposition calculations taking into account the RHS Wisley traffic using the signposted route and the revised nitrogen deposition velocities have been calculated and are provided in the response to 2.1.2 above.</p> <p>As recorded in response to REP1-038-5 in the Applicant's comments on written representations [REP2-014] for each of the transects within the SPA, the heathland habitats occur at a distance of 150 m or greater, and therefore, any points closer than 150 m fall within the woodland buffer. At the distance that the heathland occurs (i.e. the key supporting habitat for the SPA qualifying species which is potentially sensitive to deterioration in air quality, and for which the critical loads and levels are derived), there would be no discernible change in nitrogen deposition rates.</p>

Highways England Comment	RHS Response	Highways England Further Response
<p>2.7.4 Therefore the contribution of ammonia does not materially affect the conclusion of the SiAA.</p>	<p>See comment above (2.1.3) in reference to loss of species.</p>	<p>As per response to 2.1.3 above.</p>
<p>2.8 The Ndep calculations should use appropriate deposition velocities</p> <p>2.8.1 The air quality assessment was undertaken in accordance with the relevant Highways England DMRB guidance (HA207/07). However, since the ES (APP-050) was published, IAQM's 2019 guidance for air quality impacts on nature sites, as discussed in the point above, was issued recommending the use of AQTAG deposition velocities. The revised DMRB guidance (LA105) issued in November 2019 also advocates the use of these deposition velocities. The nitrogen deposition calculations that were presented in Table 5.7.12 in APP-080 for the transects within the Thames Basin Heaths SPA have been updated to include the latest information, and have used the nitrogen deposition velocity for forests, given that the majority of the transect points are in forested areas. As expected, with the revised deposition velocities the nitrogen deposition calculations are higher, and are provided in Appendix B. As discussed in the response to RHSRMC0.1, the largest change is 0.46 kgN/ha/yr which as noted in the responses above is considered unlikely to cause a measured reduction in species-richness of a lowland heath habitat. In addition, as explained in response 3.4 to Royal Horticultural Society Ecology and Habitats Regulations Assessment representation</p>	<p>HE has accepted the advice of Prof.Laxen. This illustrates that it is not always appropriate to rely on the published guidance.</p> <p>The result is that N deposition rates will be much higher than the values presented in the ES (APP-080, Table 5.7.12). For example, Receptor 149 has a 2022 DS deposition rate of 16.22 kgN/ha/yr in the published ES (APP-080, Table 5.7.2), but it is now accepted by HE that this should be 25.45 kgN/ha/yr (REP2-022, Appendix B). The published HRA was thus based on incorrect deposition values. (This is without the addition of ammonia from traffic and the worst-case assumption that RHS Wisley traffic to and from the south will follow the signposted route along the A3 to junction 10, which would increase N deposition rates, as discussed in response to 2.7.3 above.</p> <p>The buffer argument used by HE does not stand up to scrutiny. Firstly, there is no legal basis for effectively downgrading those part of the SPA which are not in favourable condition and do not therefore support the interest features of the SPA. It is a fundamental tenet of the Birds Directive (Directive 2009/147/EC) that member states must take steps to ensure that degraded habitats are restored.</p> <p>Article 3 states,</p> <p>1. In the light of the requirements referred to in Article 2, Member States shall take the requisite measures</p>	<p>Highways England has accepted that the professional air quality community position on use of deposition velocities has been updated since the air quality assessment was undertaken in 2018. The update to the DMRB guidance was published in November 2019, and it is for this reason that the revised velocities were applied to the nitrogen deposition rates. This does not imply that it is not always appropriate to rely on published guidance.</p> <p>As noted in the response above to 2.7.3 there would be no change in nitrogen deposition rates at the location of the qualifying features in the SPA.</p> <p>Regarding the woodland acting as a protective buffer this was accepted as appropriate within the recent judgement of the High Court in the Compton Parish Council vs Guildford Borough Council case (available at https://www.welhat.gov.uk/media/15858/EX175-Compton-PC-High-Court-Judgement-.pdf/EX175_Compton_PC_High_Court_Judgement_.pdf?m=637123680593970000).</p> <p>Para 199 – from 2019 Addendum 3.1.4 The woodland area serves “an important function through buffering and protecting those areas of the SPA which do support bird territories and foraging habitat”</p> <p>In addition, refer to Point 11 of Section 2 of this document sets out clearly why the woodland that separates the heathland from the A3 and M25 acts as a buffer.</p>

Highways England Comment	RHS Response	Highways England Further Response
<p>(REP1-038), there is a woodland buffer of at least 150 m between the road and the heathland where the qualifying species occur, and all changes in nitrogen deposition are contained within this woodland buffer. Therefore, the changes in air quality will not cause an adverse effect on the qualifying features of the SPA.</p>	<p>to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1.</p> <p>2. The preservation, maintenance and re-establishment of biotopes and habitats shall include primarily the following measures:</p> <ul style="list-style-type: none"> (a) creation of protected areas; (b) upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones; (c) re-establishment of destroyed biotopes; (d) creation of biotopes. <p>From 2b it is clear that the coniferous forest within the site should be managed (in this case removed and converted to heathland) to improve the ecology of the site for the SPA birds. Indeed, removal of conifer trees is part of the current management of the site.</p> <p>This precise point was tested at a previous inquiry into Land south of Wallisdown Road, Poole, Dorset (Talbot Village Trust) APP/Q1255/V/10/2138124 (27 February 2012), in refusing an appeal the inspector stated that an appropriate assessment should 'take account of the potential for the restoration of the site to favourable conservation status, as opposed to taking the view that the proposed scheme would not have an effect because, as a result of the poor condition of the site the interest features are not present'.</p>	<p>An explanation of why the case of Land south of Wallisdown Road, Poole, Dorset (Talbot Village Trust) APP/Q1255/V/10/2138124 is not relevant to this Scheme can be found in the response to REP1-038-4 in this document.</p>

Highways England Comment	RHS Response	Highways England Further Response
	<p>Secondly, as highlighted above the extent of the increased nitrogen deposition has not been calculated correctly and the actual deposition arising from the scheme is likely to be substantially above that which is currently predicted by the HE. Therefore, even notwithstanding the need for restoration of the area within the buffer woodland back to heathland, significant effects may extend beyond the current extent of the so-called conifer woodland buffer.</p>	
<p>2.9 The in-combination Assessment for the SiAA should be carried out correctly.</p> <p>2.9.1 The method for the appropriate assessment was agreed with Natural England, as noted in the minutes of 27th March 2018 and documented in 5.3 Habitats Regulations Assessment Annex B [APP-041]. The assessment takes into account traffic from other developments in the wider area, in addition to the Scheme, as documented in paragraph 5.11.3 of APP-050, and therefore correctly allows for in-combination effects.</p>	<p>An in-combination assessment requires the calculations of concentrations and deposition rates for three scenarios:</p> <ul style="list-style-type: none"> (1) baseline with no additional traffic from other plans and projects and no Scheme traffic; (2) baseline with additional traffic from other plans and projects and no Scheme traffic; and (3) baseline with additional traffic from other plans and projects and no Scheme traffic. <p>The (3) minus (2) becomes the Scheme impact and (3) minus (1) the in-combination impact.</p> <p>The assessment carried out by HE only presents the Scheme impact as defined above, (3) minus (2). No attempt has been made to carry out the calculations to allow an in-combination assessment as defined above, (3) minus (1).</p> <p>The need for this approach is evident in recent HRA assessments, including those carried out by Wealden District Council, Epping Forest District Council and</p>	<p>An in-combination assessment requires the decision maker to consider the effects of a project either alone or in combination with other plans and projects. The Courts (refer <i>Walton</i> [2011] CSOH 131) have established that a decision maker is entitled to exercise judgment as to the projects with whose effect the subject proposal has to be considered and emphasises that there must be a degree of flexibility in assessing the other plans and projects with which a particular proposal should be regarded as having an in-combination effect. The decision maker therefore has some discretion as to how the in-combination requirements are satisfied. It is incorrect to say that an in-combination assessment requires the calculations for the three scenarios referred to. Such an approach may be sufficient to satisfy the requirements for any given scenario but it does not follow that a different approach cannot also do so.</p> <p>The key question is whether the combined contributions represent a threat to the integrity of the site, or not. In this case the spatial scale over which traffic is likely to arise which may utilise the roads at junction 10 of the M25 is extensive. A pragmatic and proportionate approach has therefore been adopted which enables the predicted change in air quality as a</p>

Highways England Comment	RHS Response	Highways England Further Response
	<p>Havant Borough Council for the HRAs for their Local Plans, which have all used the calculation procedure set out above at the appropriate assessment stage. They have also included ammonia from road traffic. The calculations for these three examples of recent assessments have been carried out by three different consultants: Air Quality Consultants, AECOM and Ricardo Energy & Environment.</p>	<p>result of the predicted growth in traffic flows overall, with the junction improvements in place, to be subject to assessment.</p> <p>In this case the traffic model used for the Scheme has been developed in accordance with the Department for Transport's webTAG guidance, which takes account of traffic growth using National Trip End Model (NTEM) factors.</p> <p>The traffic data for the Do Something scenario includes traffic from other plans and projects as well as the traffic with the Scheme. It therefore represents an in-combination assessment.</p> <p>It should be noted that the examples of in-combination assessments that have been provided by RHS Wisley are for local plans, rather than road schemes.</p> <p>When considering the in-combination assessment for a local plan, rather than a road scheme, it is clearly important to take into account the traffic from neighbouring authorities, as this will not be taken account in a local authority's own traffic data. However, the same principle does not need to apply in this case, as traffic from other plans or projects is already taken into account within the strategic traffic model.</p> <p>Natural England did not consider a further in-combination assessment to be required, given that the nitrogen deposition rates for the Do Something situation already include other plans and projects.</p>
<p>10HE Response at Deadline 2 (REP2-022)RHS Response3. Climate Change</p> <p>3.1.1 The changes in distances travelled to and from RHS Wisley with the Scheme are documented in the Transport Assessment Supplementary Information Report Appendix C</p>	<p>HE has now calculated the increased emissions that could arise from traffic accessing RHS Wisley to and from the south(their Table 3.1). The results show that the DSCO2emissions would be 4,064 t/yr higher than the DM if this traffic follows the signposted route along the A3. If the traffic were all to go through</p>	<p>The difference in CO2 emissions between the two routes is 639 tonnes per year. With the RHS Alternative Scheme emissions would be similar to those calculated through Ripley. As noted previously at 3.1.1 of REP2-022 this is considered to be a negligible amount.</p>

Highways England Comment	RHS Response	Highways England Further Response
<p>(Volume 9.16 submitted to the Examining Authority at Deadline 2). The additional CO2 emissions from traffic arriving from the A3 to the south using the signposted route to travel to and from RHS Wisley in the opening year (2022) have been calculated and are provided in Table 3.1 below. The emissions for the Do-Minimum (DM) and Do-Something (DS) scenarios are taken from Table 5.13 in the Environmental Statement [APP-050]. The difference in emissions between the two routes in the opening year is expected to be 546 tonnes per year. This represents 0.04% of the total emissions with the Scheme in the opening year, which can be considered a negligible amount. The key driver to reducing CO2 emissions will be through national policy measures, such as the move to zero emission vehicles.</p>	<p>Ripley, this would be 639 t/yr lower (or 15.7% lower). The emissions would be expected to be lower still with the RHS Alternative Scheme (as the distances will be less than for the route through Ripley), thus the RHS Alternative Scheme would reduce the excess CO2 emissions that the DCO Scheme would give rise to by more than 16%, which would be a significant reduction in the additional harmful emissions that arise with the DCO Scheme. This further illustrates the benefits of the RHS Alternative Scheme.</p>	
<p>4. Impacts on Air Quality in Ripley 4.1 RHS Traffic Through Ripley Not Assessed 4.1.1 The air quality assessment as presented in the ES (APP-050) is based on the data provided by the traffic model. The model assumes that with the Scheme, all traffic travelling to and from RHS Wisley from the south travels through Ripley rather than the longer signposted route via the A3 and M25 junction 10. The results at the receptors in Ripley therefore already take this additional traffic into account.</p>	<p>Accepted</p>	<p>No further comment is provided by Highways England.</p>

Highways England Comment	RHS Response	Highways England Further Response
<p>4.2 Other Concerns About Air Quality Assessment in Ripley Receptors in Ripley</p> <p>4.2.1 It is usual practice to include worst-case receptors in an air quality assessment. As documented in paragraph 3.13 of the DMRB (HA207/07), areas likely to experience higher-than-average concentrations, such as junctions, should be identified. The closest residential receptor to the High Street/ Newark Lane junction was therefore included in the assessment.</p>	<p>HE has accepted that it had not addressed worst-case receptors in Ripley. Receptor R59 used in the ES to represent Ripley had a 2015 NO₂ concentration of 16.7 µg/m³ (receptor R59 in Table 5.7.1 in APP-080, page 34). Of the 6 receptors now used by HE to represent worst-case exposure in Ripley, 5 have concentrations above this value (see Table in 4.2.2 below).</p>	<p>Estimated concentrations at these other receptors are still below the annual mean nitrogen dioxide objective as would be expected.</p>
<p>4.2.2 However, it is acknowledged that there are other receptors in Ripley which are closer to the kerb, although not in closer proximity to the junction. Nitrogen dioxide concentrations at residential receptors in the areas identified in REP1-041 along Newark Lane and High Street, have been modelled to determine the expected changes in annual mean nitrogen dioxide concentrations with the Scheme. These additional receptors are provided in Figure 4.1, and the results provided in Table 4.1. The largest change is expected to be a change of 0.9 µg/m³, classified as a small increase, at a receptor on the High Street (R6).</p>	<p>Something is seriously wrong with the HE's modelling in Ripley. The modelled 2015 NO₂ concentrations, which are now all close to the edge of the road, are all less than 20 µg/m³. The measured concentrations at two locations in Ripley in 2016 were 29 and 34 µg/m³. The modelling is clearly grossly under-estimating the concentrations. The model should be verified and adjusted against the monitoring data, which has not been done. If the model is underestimating, then this will also apply to the changes in concentrations with the DCO Scheme. This underestimation is probably by a factor of around 2. Thus, a change of 0.9 µg/m³ with the Scheme (at R6) would become a change of 1.8 µg/m³, which is a 4.5% increase (in relation to the objective of 40 µg/m³). Very different from the 0.4 µg/m³ or 1% increase shown for receptor R59 in the ES (Table 5.7.9 in APP-080, page 63). The new assessment of impacts in Ripley should not be relied upon by the ExA.</p>	<p>Verification was undertaken at 58 monitoring sites within the study area, all of these sites had ratified data for 2015. Following adjustment, 57 out of 58 monitoring sites were within 25% of the modelled concentrations indicating acceptable model performance (para 5.5.21 of APP-050 and table 5.4.4 of APP-080). The verification did not take into consideration of the 2016 monitoring data in Ripley.</p> <p>A local verification factor of 2.75 has now been derived for Ripley using the 2016 monitoring data, and the results for the receptors updated to assist the ExA. The estimated annual mean nitrogen dioxide concentrations, using the more conservative DF2 traffic data are provided below and show that concentrations at all receptors are below the national annual mean air quality objective, and that the largest change at a receptor is 1.7 µg/m³, classed as a small change. The change with DF3 traffic data would be smaller, as explained previously at 4.2.4 in REP2-022.</p> <p>Estimated Nitrogen Dioxide Concentrations in Ripley, adjusted using local verification factor, µg/m³</p>

Highways England Comment	RHS Response	Highways England Further Response				
		Receptor ID	2015 Base	2022 DM	2022 DS	2022 Change
		R59	33.4	27.1	27.9	+0.8
		Additional Receptors in Ripley as documented in REP2-022				
		R1	30.6	24.5	25.3	+0.8
		R2	36.3	29.6	30.3	+0.7
		R3	34.3	27.7	28.8	+1.1
		R4	36.3	29.5	30.7	+1.2
		R5	37.6	31.3	33.0	+1.7
		R6	37.7	31.5	33.1	+1.6
4.2.3 These changes are based on traffic data from design fix 2 (DF2) which as documented in paragraph 5.5.12 of APP-050 were used as the basis for the air quality assessment, given that DF2 traffic data would provide more conservative results than the revised DF3 data, as a result of the changes in traffic being generally larger with DF2 than with DF3.	Noted.	N/A				
4.2.4 The change in traffic through Ripley with DF3 is markedly lower, with an expected increase	Noted.	N/A				

Highways England Comment	RHS Response	Highways England Further Response
<p>in annual average daily traffic (AADT) through Ripley of 1073, compared to an increase in AADT of 2535 with DF2.</p>		
<p>4.2.5 With the revised DF3 traffic data, changes in pollutant concentrations at all receptors would therefore also be lower.</p>	<p>Noted.</p>	<p>N/A</p>
<p>4.3 Presentation of Baseline Concentrations in Ripley 4.3.1 As Guildford Borough Council only started monitoring nitrogen dioxide concentrations in Ripley in July 2016 at two kerbside locations, monitoring data in Ripley were not available to verify the modelled base year of 2015. Measured concentrations at these sites, RP1 and RP2, are provided in Table 5.6.1 of APP-080, and show that in 2016, concentrations were 34 µg/m³ and 29 µg/m³ respectively, below the annual mean nitrogen dioxide objective of 40 µg/m³.</p>	<p>See 4.2.2 above</p>	<p>See response to 4.2.2 above</p>
<p>4.3.2 Even if the maximum change in nitrogen dioxide concentrations at a receptor in Ripley in the future opening year of 2022 (0.9 µg/m³ with DF2) was applied to the location of the monitored site with the highest concentrations (RP 1), a highly unrealistic situation, since concentrations would be lower both away from the road source, and in the future opening year as a result of policies to reduce emissions, the total concentration would be 34.9 µg/m³ which would still be below the objective of 40 µg/m³. It is therefore considered highly unlikely that there is</p>	<p>See 4.2.2 above –the 0.9 µg/m³ is likely to be too low. It is possible that the objective will not be exceeded in Ripley (once the modelling is corrected), but there are still effects on health arising from exposure to NO₂ below the objective and these would be increased with the HE Scheme. The RHS Alternative Scheme, on the other hand, will reduce these adverse effects.</p>	<p>See response to 4.2.2 above</p>

Highways England Comment	RHS Response	Highways England Further Response
<p>the risk of a significant adverse effect as a result of the Scheme at receptors in Ripley.</p>		
<p>4.4 Descriptors of Impacts 4.4.1 The air quality assessment was undertaken in accordance with the Highways England DMRB guidance (HA207/07) and relevant Interim Advice Notes (IANs), including IAN 174/13 which provides criteria for the magnitude of changes in pollutant concentrations, as documented in Table 5.3 of APP-050. There is no requirement whatsoever to use the IAQM descriptors of impacts provided in the IAQM planning guidance (available at https://iaqm.co.uk/text/guidance/airquality-planning-guidance.pdf), which clearly states at paragraph 1.4: "This guidance, of itself, can have no formal or legal status and is not intended to replace other guidance that does have this status. For example, for major new road schemes, Highways England has prepared a series of advice notes on assessing impacts and risk of non-compliance with limit values."</p>	<p>The views expressed by the Inspectors for the M4 Smart Motorway DCO are set out in Appendix A11 of REP1-041. This does not support the unequivocal use of the DMRB guidance for descriptors. If the Council was assessing the impacts of a local development on air quality in Ripley, it would expect the developer to use the IAQM descriptors of impacts, as these are recommended in the IAQM guidance for assessing planning applications. It is not clear why the same should not apply to a Highways England project, at least in addition results presented according to the DMRB guidance. (Note: DMRB guidance is now in LA 105 Air Quality, recently published by HE, but remains the same.). It is expected that there will be more impacts described as slight or moderate with the IAQM guidance, than is the case with the HE guidance. This would help the ExA have a more balanced view of the impacts of the DCO Scheme.</p>	<p>There is no reason to use the IAQM descriptors of impacts for reasons given in the earlier response (4.4.1 of REP2-022). The IAQM guidance is an advice document only, and does not have any legal status. To reiterate, as stated at paragraph 1.4 "This guidance, of itself, can have no formal or legal status and is not intended to replace other guidance that does have this status. For example, for major new road schemes, Highways England has prepared a series of advice notes on assessing impacts and risk of non-compliance with limit values". Paragraph 1.5 additionally states "This guidance document is particularly applicable to assessing the effect of changes in exposure of members of the public resulting from residential and mixed-use developments, especially those within urban areas where air quality is poorer."</p> <p>As this is a 'major new road scheme', it is wholly appropriate to use the descriptors provided in the Highways England guidance.</p> <p>It is for the ExA to make its own judgement regarding the use of descriptors for the assessment of air quality.</p> <p>Even with the use of the IAQM descriptors of impacts it is still necessary to form a judgement on the overall significance of the effect. The descriptors simply aid the process of determining the overall significance.</p>

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