

REPORT on the IMPLICATIONS for EUROPEAN SITES

Proposed Southampton to London Pipeline Project

An Examining Authority report prepared with the support of the Environmental Services Team

Planning Inspectorate Reference: EN070005

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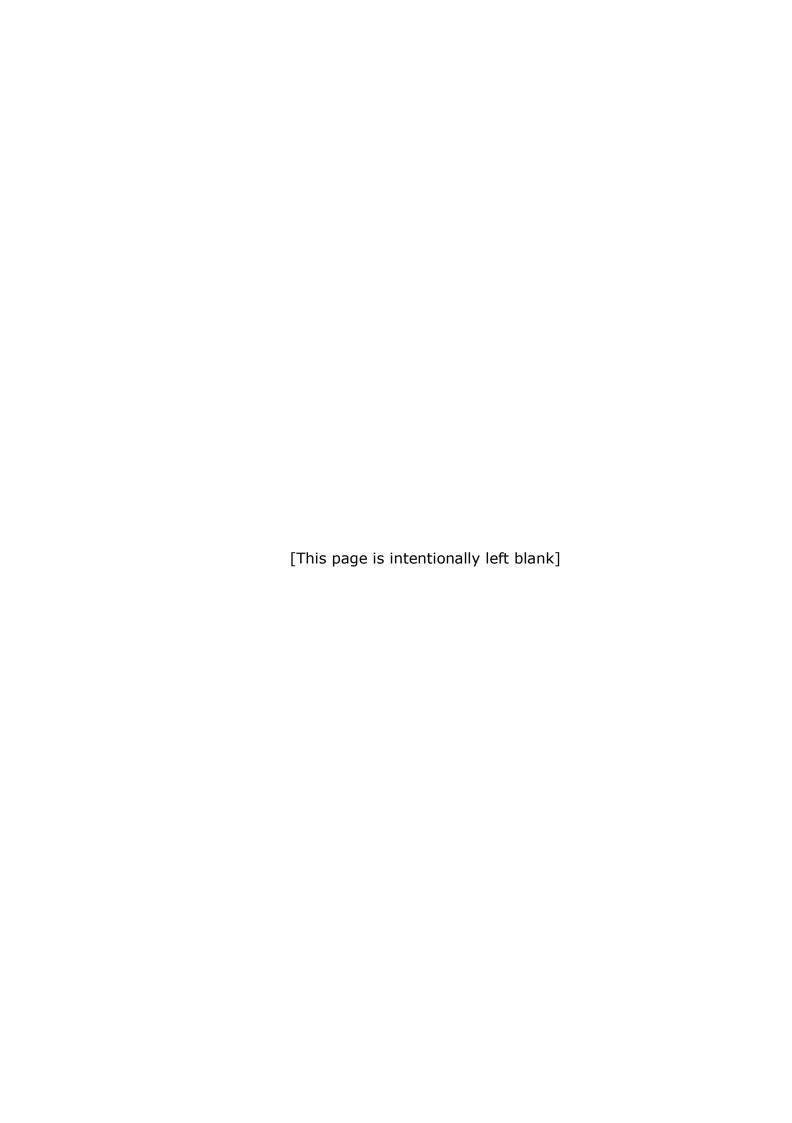
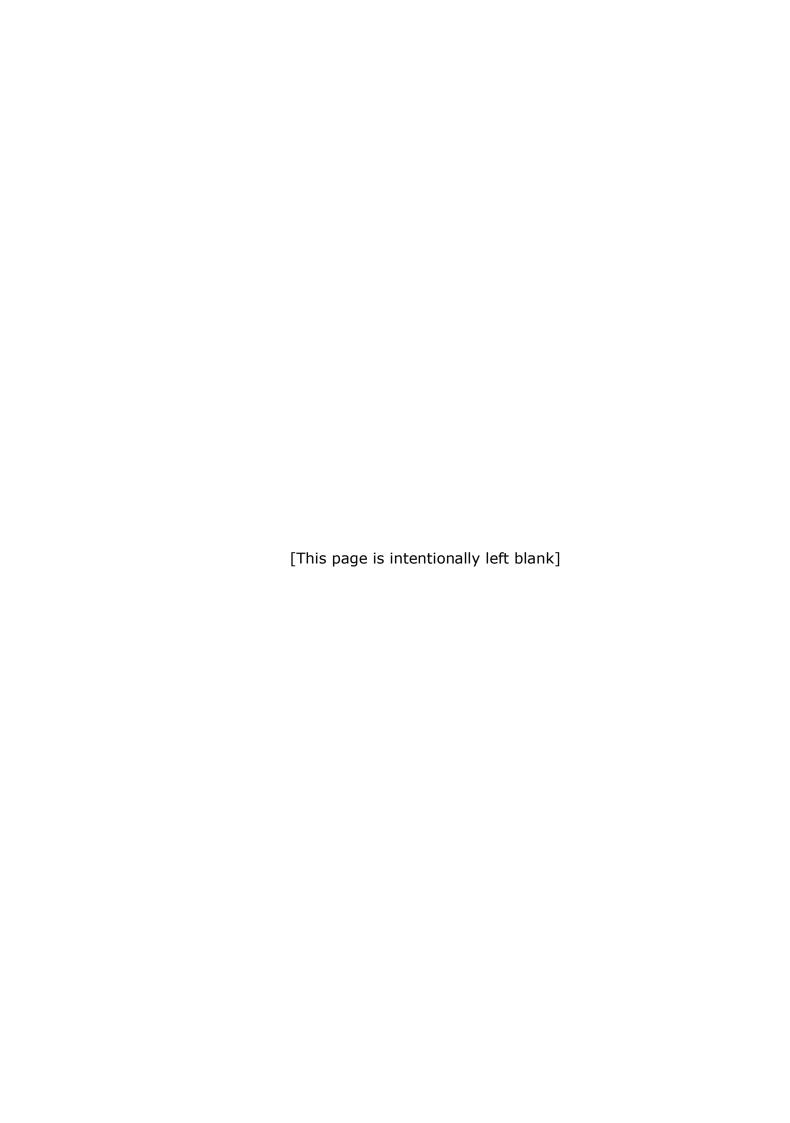


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1 INTRODUCTION

1.0 Background

- 1.0.1 Esso Petroleum Company, Limited (the Applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (PA2008) for the proposed Southampton to London Pipeline Project (the application). The Secretary of State has appointed an Examining Authority (ExA) to conduct an Examination of the application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.
- 1.0.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive¹ and the Habitats Regulations² for applications submitted under the PA2008 regime. The findings and conclusions on nature conservation issues reported by the ExA will assist the Secretary of State in performing their duties under the Habitats Regulations and the Offshore Marine Regulations.
- 1.0.3 This report compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the Examination by both the Applicant and Interested Parties (IPs), up to Deadline 6 of the Examination (5 March 2020) in relation to potential effects to European Sites³. It is not a standalone document and should be read in conjunction with the Examination documents referred to. Where document references are presented in square brackets [] in the text of this report, that reference can be found in the Examination Library published on the National Infrastructure Planning website at the following link:

http://infrastructure.planninginspectorate.gov.uk/document/EN070005-000316

1.0.4 This report is issued to ensure that IPs including the statutory nature conservation body Natural England (NE), are consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 63(3) of the Habitats Regulations. Following consultation, the responses will be considered by the ExA in making their recommendation to the Secretary of State and made available to the Secretary of State along with this report. The Report on the Implications for European Sites (the REIS) will not be revised following consultation.

¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the 'Habitats Directive').

² The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

³ The term European Sites in this context includes Sites of Community Importance (SCIs), Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), possible SACs, potential SPAs, Ramsar sites, proposed Ramsar sites, and any sites identified as compensatory measures for adverse effects on any of the above. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see PINS Advice Note 10.

1.0.5 The Applicant has not identified any likely significant effects (LSE) on Natura 2000 sites⁴ in other EEA States⁵ [APP-130 and APP-131].

1.1 Documents used to inform this RIES

- 1.1.1 The Applicant's DCO application concluded that there is potential for LSE, either alone or in-combination with other plans or projects, on eight European sites.
- 1.1.2 As such, the Applicant provided an HRA report [APP-130 and APP-131] entitled 'Habitats Regulations Assessment Report (stages 1 2)' with the DCO application, together with screening and integrity matrices. The Applicant resubmitted the HRA screening matrices (Appendix D to the HRA report) as an additional submission [AS-026] following acceptance of the application. At Deadline 6 to the Examination, the Applicant [REP6-074] submitted, without prejudice, information to inform an appropriate assessment on the Thames Basin Heaths Special Protection Area (SPA) with regards to habitat loss ('Appendix 1: ISH5-16 Technical Note'). This information included an integrity matrix for the potential effect of habitat loss on the Thames Basin Heaths SPA.
- 1.1.3 The HRA report [APP-130 and APP-131] and additional assessment submitted at Deadline 6 [REP6-074] concluded that there would be no adverse effect on the integrity (AEoI) of any European site, either alone or in-combination with other plans or projects.
- 1.1.4 Several errors and missing information were noted by the ExA and a request for these to be addressed was made in the written questions (BIO.1.61) [PD-008]. The Applicant responded to these points in their answers to written questions at Deadline 2 [REP2-040] and stated an errata document would be provided during the Examination. At Deadline 4 the Applicant provided a DCO errata document [REP4-056], which confirmed their response to the missing or incorrect information in the HRA report.
- 1.1.5 For those European sites and qualifying features where the Applicant's conclusions have been disputed or queried during the Examination, the Applicant's screening and integrity matrices have been updated by the ExA, with the support of the Planning Inspectorate's Environmental Services Team using relevant documents listed in the Examination Library for the Proposed Development. The revised matrices are included as Annex 2 and 3 to this report.

⁴ Natura 2000 sites are part of a European Union-wide network of nature protection areas established under Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna ('the Habitats Directive').

⁵ European Economic Area (EEA) States.

1.2 Structure of this RIES

- 1.2.1 The remainder of this report is as follows:
 - **Section 2** identifies the European sites that have been considered within the DCO application and during the Examination period, up to and including Deadline 6 of the Examination (5 March 2020). It provides an overview of the issues that have emerged during the Examination.
 - **Section 3** identifies the European sites and qualifying features for which the Applicant has identified a LSE, either alone or incombination with other projects and plans. This section also identifies matters relating to the Applicant's assessment of LSE which have been discussed or disputed during the Examination.
 - **Section 4** identifies the European sites and qualifying features that have been considered in terms of AEoI, either alone or incombination with other projects and plans. This section identifies where IPs have disputed the Applicant's conclusions.
 - Annex 1 lists the European sites and qualifying features considered during the Examination. It also identifies which sites and features the Applicant concluded would be likely to experience significant effects, the consideration of potential adverse effects on site integrity and the views of NE and other IPs on the Applicant's conclusion.
 - Annex 2 and 3 comprise matrices for those European sites and qualifying features for which the Applicant's conclusions were disputed in relation to potential LSE and AEoI of European sites.
 They summarise the evidence submitted by the Applicant and IPs up to Deadline 6 (5 March 2020).
 - Annex 4 summarises representations during the Examination on the five Suitable Alternative Natural Greenspaces (SANGs) considered: St Catherine's Road SANG; Southwood Country Park SANG; Windlemere SANG; Crookham Park / Queen Elizabeth Park SANG; and Chertsey Meads SANG.

2 OVERVIEW

2.0 European sites considered

- 2.0.1 The Proposed Development is not connected with or necessary to the management for nature conservation of any of the European sites considered within the Applicant's HRA report [APP-130 and APP-131].
- 2.0.2 The Applicant provided a HRA report [APP-130 and APP-131] with the DCO application, which identified a total of eight European sites for inclusion within the assessment. These eight sites comprise (see also Annex 1 for a list of qualifying features):
 - Solent and Southampton Water SPA;
 - Solent and Southampton Water Ramsar;
 - Solent and Dorset Coast potential SPA (pSPA);
 - Solent Maritime Special Area of Conservation (SAC);
 - South West London Waterbodies SPA;
 - South West London Waterbodies Ramsar;
 - Thames Basin Heaths SPA; and
 - Thursley, Ash, Pirbright and Chobham SAC.
- 2.0.3 The locations of these European sites relative to the Proposed Development are illustrated on Figure 9.1 of the HRA report [APP-130]. In addition, Figure 9.2 shows four Suitable Alternative Natural Greenspace (SANG) sites and one proposed SANG in relation to the Proposed Development. These SANG sites comprise mitigation for the Thames Basin Heaths SPA. Figure 9.3 shows the South West London Waterbodies SPA and Ramsar, together with Important Bird Areas of relevance to this SPA and Ramsar.
- 2.0.4 The full list of European sites and their qualifying features is included as a table in Annex 1 to this report. This table also identifies whether NE and other IPs agreed with or disputed the Applicant's conclusions for each European site and qualifying feature.
- 2.0.5 At the time of writing, no other European sites or qualifying features that could be affected by the Proposed Development have been identified by IPs.

2.1 Impacts considered

- 2.1.1 The HRA report [APP-130 and APP-131] considered the following impacts on European sites at the screening stage:
 - Physical disturbance (including direct habitat loss, disturbance of substrates, and disturbance to qualifying features);
 - Non-physical disturbance (including noise and visual disturbance);

- Hydrological changes (including changes to surface water and groundwater levels and flows, pollution of surface and groundwater, and changes to water chemistry);
- Air quality changes (including air emissions and release of dust);
- Ground contamination (including pollution of soils and changes to soil chemistry);
- Invasive Non-Native Species (INNS).
- 2.1.2 The temporal scope of impacts occurring during construction and operation of the Proposed Development were considered, as relevant.
- 2.1.3 With respect to the decommissioning stage of the Proposed Development, the HRA report [APP-130 and APP-131] stated at Section 2.5 that it is not possible to assess the probable effects of decommissioning at the present time, and "that when the operator of the replacement pipeline determines that it will permanently cease pipeline operations, it would consider and implement an appropriate decommissioning strategy taking account of good industry practice, its obligations to land owners under the relevant pipeline deeds and all relevant statutory requirements." The HRA report confirmed that for the purposes of the in-combination assessment, it is assumed that the decommissioning would involve leaving the pipeline in-situ and that the pipeline would not be excavated and removed.

2.2 Changes to the Proposed Development during the Examination

- 2.2.1 At Deadline 3 to the Examination, the Applicant submitted a non-material change request [REP3-022] for a number of temporary logistics hubs required to support the main construction works. This change was described by the Applicant as incorporating the following three elements:
 - reduce the number of temporary logistics hubs from six to two;
 - reduce the size of the remaining two temporary logistics hubs and amend the Order Limits; and
 - convert one of the temporary logistics hubs into a smaller construction compound.
- 2.2.2 In the change request document [REP3-022], the Applicant stated the HRA report would remain unaffected by the proposed change. No IPs have raised concerns with this conclusion. The non-material change request was accepted by the ExA on 6 February 2020 [PD-014].
- 2.2.3 Furthermore, at Deadline 4 [REP4-001] the Applicant identified that it was necessary to make three minor amendments to the DCO including the following:
 - Amendment to access rights at Valve 3 at Lower Preshaw Farm, Upham.

- Amendment in the location and access rights of Valve 9 on land owned by QinetiQ, Farnborough.
- Amendment in construction technique and Limit of Deviation (LoD) at Abbey Rangers Football Club, Chertsey.
- 2.2.4 The Applicant confirmed that "None of the changes require any change to order limits or result in any new or different likely significant environmental effects other than those reported in the Application and the conclusion of these assessments remain as reported." [REP4-001]. No IPs raised concerns with this conclusion. The non-material change request was accepted by the ExA on 9 March 2020 [PD-015].

2.3 HRA matters considered during the Examination

2.3.1 The main HRA matters raised by the ExA, NE and other IPs and discussed during the Examination include the following, ordered by European site.

Thames Basin Heaths SPA:

- The adequacy and conclusion of the Applicant's screening assessment in respect to direct habitat loss within the Thames Basin Heaths SPA;
- The data used to inform the Applicant's assessment, including bird survey data and visitor survey information / assumptions made in respect to SANGs;
- Assessment of in-combination effects including potential combined effect of increased recreational pressure and habitat loss on the Thames Basin Heaths SPA;
- The impacts of the Proposed Development on SANGs provided as avoidance / mitigation measures in respect of increased recreational pressure on the Thames Basin Heaths SPA, particularly:
 - St Catherine's Road SANG;
 - Windlemere SANG;
 - Southwood Country Park SANG; and
 - works within five SANGs in-combination (ie. Chertsey Meads, Crookham Park (Queen Elizabeth Barracks), Southwood Country Park, St Catherine's Road, and Windlemere).
- The Applicant's screening assessment in respect to hydrological effects to Eelmoor Marsh Site of Scientific Interest (SSSI), a component SSSI of the Thames Basin Heaths SPA;
- The approach to and status of proposed mitigation measures including:

- consideration of measures at the HRA stage 1 screening stage;
- adequacy of mitigation measures; and
- how measures are to be delivered and secured, including detail in outline management plans and drafting in draft DCO.

Thursley, Ash, Pirbright and Chobham Common SAC

- The Applicant's assessment of direct habitat loss;
- The approach to and status of proposed mitigation measures including:
 - consideration of measures at the HRA stage 1 screening stage;
 - adequacy of mitigation measures; and
 - how measures are to be delivered and secured, including detail in outline management plans and drafting in draft DCO.

Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, Solent and Dorset Coast pSPA, and Solent Maritime SAC

• The approach to and status of proposed mitigation measures;

General HRA matters, applicable to all European sites

- Assessment of in-combination effects, including the projects and plans considered; and
- Assessment of decommissioning.
- 2.3.2 These matters are discussed in Sections 3 and 4 of this RIES, as appropriate.

3 LIKELY SIGNIFICANT EFFECTS

3.1 The Applicant's assessment

- 3.1.1 Section 3 of the HRA report [APP-130] describes the assessment methodology followed by the Applicant and confirms at paragraph 3.2.1 that the Applicant's screening (stage 1) assessment applied a 'source-receptor-pathway' approach to identify the European sites considered for the HRA. The Zone of Influence (ZoI) applied to the screening assessment are described in Sections 3.2 of the HRA report, and the screening categories identified together with the relevant ZoI are presented in Table 3.1.
- 3.1.2 Section 4 of the HRA report [APP-130], specifically Tables 4.1 and 4.2, together with Appendix D: HRA Screening Matrices [AS-026], present the Applicant's Stage 1 screening assessment.
- 3.1.3 As described in Section 2 of the RIES above, the following eight European Sites and their qualifying features were identified and considered for LSE:
 - Solent and Southampton Water SPA;
 - Solent and Southampton Water Ramsar;
 - Solent and Dorset Coast pSPA;
 - Solent Maritime SAC;
 - South West London Waterbodies SPA;
 - South West London Waterbodies Ramsar;
 - Thames Basin Heaths SPA; and
 - Thursley, Ash, Pirbright and Chobham SAC.

In-combination assessment

- 3.1.4 The approach to the Applicant's in-combination assessment is described in Section 3.4 of the HRA report [APP-130]. The HRA report identifies that, in view of the Proposed Development's ZoI, the following developments were assessed in the Applicant's in-combination assessment:
 - Nationally Significant Infrastructure Projects (NSIPs) on the Planning Inspectorate's Programme of Projects within 1km of both the Order Limits and a European site, or with a hydrological pathway to vulnerable European sites identified by this study;
 - Major Developments (as defined under Development Management Procedure (England) Order 2010) within 1km of both the Order Limits and a European site or with a hydrological pathway to vulnerable European sites identified by this study;

- Local Plans; and
- Decommissioning of Esso's existing aviation fuel pipeline.
- 3.1.5 The Applicant's assessment of whether in-combination projects are likely to be significant is provided at Appendix E to the HRA report [APP-131]. The Applicant concluded that none of the plans and projects identified would act in-combination with the Proposed Development to result in LSE and warrant consideration under HRA Stage 2 (appropriate assessment).

Applicant's conclusions for the HRA Stage 1 screening

- 3.1.6 Having identified the above European sites within the ZoI, the HRA report [APP-130 and APP-131] discounted a number of potential impacts on all European sites considered. These included air quality changes, ground contamination, and INNS. Effects during the operational phase of the Proposed Development were also screened out for all European sites. A summary of the Applicant's screening conclusions is presented in the HRA screening matrices contained in Appendix D to the HRA report [AS-026].
- 3.1.7 The Applicant's screening assessment [APP-130, APP-131 and AS-026] concluded that the Proposed Development would have **no likely significant effect**, either alone or in-combination with other projects or plans, on the following European sites and their qualifying features.
 - Solent and Southampton Water SPA;
 - Solent and Southampton Water Ramsar;
 - Solent and Dorset Coast pSPA;
 - Solent Maritime SAC;
 - South West London Waterbodies SPA; and
 - South West London Waterbodies Ramsar.
- 3.1.8 The HRA report also concluded, in addition to those effects listed in paragraph 3.1.6 above, that there would be **no likely significant effect** as a result of physical disturbance (direct habitat loss) and hydrological changes to the Thames Basin Heaths SPA and **no likely significant effect** on the '4030: European Dry Heaths' qualifying feature of the Thursley, Ash, Pirbright and Chobham SAC.
- 3.1.9 The Applicant's screening conclusion was agreed with NE as stated in the signed Statement of Common Ground (SoCG) submitted at Deadline 1 [REP1-005] and in NE's response to the ExA's Written Questions submitted at Deadline 2 [REP2-074]. However, the Applicant's screening conclusions were disputed by a number of IPs during Examination, including the Applicant's decision to screen out the potential effect of direct habitat loss from the Thames Basin Heaths SPA; the screening out of the European dry heaths qualifying feature of the Thursley, Ash, Pirbright and Chobham SAC; and the screening out of potential effects as a result of hydrological changes. These disputed matters are discussed in detail at Section 3.2 and 3.3 below.

- 3.1.10 As a result of the Stage 1 screening assessment, the Applicant concluded that the Proposed Development is likely to give rise to likely significant effects on the Thames Basin Heaths SPA (all qualifying features) and Thursley, Ash, Pirbright and Chobham SAC (all qualifying features except 4030 European dry heaths), either alone or incombination with other projects or plans. These European sites and features therefore required further consideration at Stage 2 of the HRA process to establish if AEoI of these sites could be ruled out [APP-130 and APP-131].
- 3.1.11 The HRA report [APP-130, APP-131 and AS-026] identified the following construction phase impacts with the potential to result in LSE:
 - Thames Basin Heaths SPA (all qualifying features):
 - Non-physical disturbance displaced recreational disturbance due to construction works in SANGs, both within and outside of the breeding season; and
 - In-combination effects.
 - Thursley, Ash, Pirbright and Chobham SAC (all qualifying features except 4030 European dry heath):
 - Physical disturbance direct habitat loss;
 - Physical disturbance substrate properties;
 - Hydrological changes; and
 - In-combination effects.
- 3.1.12 The Applicant's conclusion of potential LSE on the Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC as a result of these potential effects was not disputed by IPs during Examination. Matters examined in respect of the Applicant's assessment of AEoI are discussed in Section 4 to this report.

3.2 Thames Basin Heaths SPA

Baseline Data – habitats and territories

- 3.2.1 Rushmoor Borough Council (BC) raised concerns during the Examination [RR-293, REP1-015, REP2-080, REP2-081, REP3-040, REP4-043] with regards to a lack of project-specific bird surveys and an absence of quantifiable data confirming the amount of breeding habitat and number of breeding bird territories in the Thames Basin Heaths SPA that would be affected by the Proposed Development.
- 3.2.2 Rushmoor BC [REP2-081] stated at Deadline 2 that to gain an accurate picture of the level of impact to the Thames Basin Heaths SPA, either breeding bird surveys should have been undertaken by the Applicant or full monitoring bird surveys should have been submitted to the Examination.

- 3.2.3 Rushmoor BC [REP2-081] considered that 30.68ha of breeding habitat would be lost to the Proposed Development within the three component SSSIs of the Thames Basin Heaths SPA. Rushmoor BC [REP2-081] stated that this habitat equates to 29 Dartford warbler, 11.4 nightjar and 5.2 woodlark territories (a total of 48 breeding territories) which would be impacted by the Proposed Development.
- 3.2.4 In response to the ExA's Further Written Question BIO.2.26 [PD-013] and in respect to baseline studies, NE [REP4-063] stated that they directed the Applicant to the primary source of information on the recorded location and numbers of breeding territories available for Annex 1 birds throughout the SPA. This data is collected annually by volunteer bird recorders working across the SPA to consistent methodology and is considered by NE to be the best available information on this aspect.
- 3.2.5 NE [REP4-063] confirmed that "This data identifies where Annex 1 birds have nested on the SPA and hence, to an extent, will assist in the identification of areas of habitat favoured by Annex 1 birds. However, heathlands are highly dynamic and the distribution of nesting birds will change from year-to-year depending on factors such as site management and natural vegetation growth. Nevertheless, assumptions can be made about the potential for utilisation of heathland habitats by Annex 1 birds based on observation of vegetation structure."
- 3.2.6 NE [REP4-063] also stated that they advised the Applicant during discussions and at site meetings on the high value habitats and particular sensitivities within the European site, and that they have a "high degree of confidence that this advice has been taken into consideration by the applicant".
- 3.2.7 Rushmoor BC's additional submission [AS-079] responded to NE's Deadline 4 representations, stating that "RBC has discussed the use of the data by ESSO with the surveyor that collected and collated the data. The surveyor confirmed that, in his professional opinion, the surveys were inadequate to calculate impact as they just recorded where a breeding territory was present and did not map the extent of the territory. He agreed that further more detailed surveys should be required to map the extent of breeding territories accurately to provide a reliable and accurate calculation of impact. This data is collected and paid for by developer contributions to monitor the effectiveness of the mitigation strategy. It was never intended to be used to evidence impact or as a basis for mitigation for a large and damaging infrastructure project."
- 3.2.8 At ISH5 [EV-021 to EV-025], the ExA queried whether more detailed surveys should be undertaken to ascertain the extent of breeding territories affected.
- 3.2.9 Rushmoor BC [EV-021 to EV-025 and REP6-088] stated that the monitoring data used by the Applicant was collected as evidence to determine whether the mitigation for effects on recreational pressure is working. It is not a detailed survey and is not for the purposes of determining habitat loss or loss of territories. Rushmoor BC contend that bespoke surveys are needed.

- 3.2.10 The Applicant [EV-021 to EV-025 and REP6-073] responded that it does not accept that surveys are needed. The Applicant contends that NE have recommended the use of the monitoring surveys, including for past projects, and that such surveys have been carried out over a long period, over eight years plus. The surveys show abundance and distribution, which is the information needed for the assessment. The Applicant stated that they do not need to know the precise boundary of a territory and that information on boundary size is well-known from desk-study data. Thus, it considers the use of the monitoring data to be appropriate.
- 3.2.11 A signed SoCG between the Applicant and Rushmoor BC [REP6-020] was submitted at Deadline 6. Although it does not specifically state whether the matter relates to the data / surveys used to inform the HRA, 'ecological surveys' are included as a matter 'not agreed' between the two parties.

Habitat Loss

- 3.2.12 The HRA report [APP-130 and APP-131] identifies that the Proposed Development lies within three component SSSIs of the Thames Basin Heaths SPA, namely: Bourley and Long Valley SSSI; Colony Bog and Bagshot Heath SSSI; and Chobham Common SSSI. It also lies adjacent to, but not within, one further component SSSI, Eelmoor Marsh SSSI.
- 3.2.13 Paragraphs 5.7.3 to 5.7.4 of the HRA report [APP-130] describes by area the supporting habitat present within the SPA, suitable for the qualifying features, that is located within the Order Limits. This is stated to comprise:
 - grassland habitats (including acid grassland, amenity grassland and marshy grassland) – 5.7ha (14.1%);
 - dry dwarf shrub heath 7.6ha (18.7%);
 - wet heath 1.7ha (4.1%);
 - dense scrub 2.2ha (5.5%) and
 - woodland habitats (including broadleaved semi-natural and coniferous plantation woodland) – 10.8ha (44.6%).
- 3.2.14 The HRA report states at paragraph 5.7.4 that "within the Order Limits at each site, there are also large areas of bare earth/hardstanding tracks. These areas total 2.68ha, or 6.6% of the total area within the Order Limits. The remaining 2.6ha, or 6.4%, of habitat is deemed unsuitable for qualifying species (for example, standing water)."
- 3.2.15 The total area of habitat in the SPA that lies within the Order Limits is stated to be 36.2ha (Table D7 of Appendix D [AS-026]). The HRA report states that five-year mean territory counts were calculated using 2Js Ecology data (data for the period 2014 to 2018) for the area within 250m of the Order Limits. The 2Js Ecology data is presented visually on figures at Appendix C to the HRA report [APP-130]. The five-year annual mean territory sizes for each qualifying feature in each component SSSI are described in paragraphs 5.6.8 to 5.6.28 of the HRA report [APP-130].

- 3.2.16 During the Examination, the ExA noted that the calculated area of SPA habitat within the Order Limits, together with the predicted number of qualifying feature territories, varied in representations from both the Applicant and Rushmoor BC. The ExA therefore asked both parties to confirm the calculated areas and number of territories at the Environmental ISH on 26 February 2020 [EV-021 to EV-025]. This request was included as an Action Points arising from ISH5 [EV-026].
- 3.2.17 At Deadline 6, the Applicant [REP6-073 and REP6-074] advised that 46 breeding territories and 36.95ha of habitat would be present within the Order Limits. A breakdown of the territories and habitat by component SSSI was also provided.
- 3.2.18 Rushmoor BC [REP6-088 and REP6-089] stated that the figure for breeding territories (corrected to 46) had been taken from the Applicant's HRA report [APP-130 and APP-131]. Rushmoor BC [REP6-089] also explained how they had calculated the figure of 47.6ha in their Local Impact Report (LIR) [REP1-015] stating that this had been derived using GIS mapping, but that it was subsequently quantified as 30.68ha using the Applicant's HRA report in their Deadline 2 submission.
- 3.2.19 The Applicant's HRA report [APP-130, APP-131 and AS-026] concludes that there would be no LSE on the Thames Basin Heaths SPA and its qualifying features as a result of physical disturbance and this matter was screened out of an assessment of AEoI. The HRA report states at Table 4.2:

"The area of supporting habitat that would be lost as a result of construction is expected to be small compared to the total area of the site (8,275ha). All loss of habitat suitable for the qualifying species of the SPA would be temporary. Heathland within statutory or non-statutory designated wildlife sites would be reinstated using natural regeneration, unless otherwise agreed with Natural England (HRA1)⁶. Restored habitat is anticipated to regenerate into pioneer heathland in the short term (i.e. within five years).

During habitat regeneration, there would be a large alternative resource of suitable breeding habitat available for the qualifying species. This is supported by a desk study (Appendix C) of breeding territories of qualifying species within the SPA component sites that would be affected by the project. This showed that the qualifying species breed in habitats widely distributed across the SPA and its component SSSIs. This suggests that there is suitable alternative breeding habitat available.

In summary, given the small scale and temporary nature of habitat loss resulting from the project, any effects to the SPA are considered to be insignificant."

⁶ This reference is to good practice measure HRA1 included in Table 16.2 of the Register of Environmental Actions and Commitments (REAC) [APP-056]. This measure is also included in the Outline Landscape and Ecological Management Plan (LEMP) [REP6-028 and REP6-029] and HRA Commitments Schedule [REP6-078] submitted at Deadline 6

- 3.2.20 Rushmoor BC raised concerns throughout the Examination with regards to the Applicant's conclusion to screen out potential effects of physical disturbance / direct habitat loss to the Thames Basin Heaths SPA. Their concerns are identified in their Relevant Representation (RR) [RR-293], LIR [REP1-015] and in subsequent submissions [REP2-031; REP2-080; REP2-081; REP3-038; REP3-040; REP3-041; REP4-071; REP4-072; REP5-043, EV-021 to EV-025, REP6-088 and REP6-089].
- 3.2.21 Rushmoor BC stated in their RR [RR-293] that they do not agree with the conclusion of the HRA report that direct habitat loss will not lead to LSE on the SPA in the short and medium term. Rushmoor BC's view is that direct habitat loss should be assessed within the HRA and it is their view that there is likely to be breeding habitat loss within the SPA that should be mitigated or compensated. Rushmoor BC also stated in their RR that consideration should be given to the impact caused by the time taken for the habitats to regenerate and the loss of breeding territories during the first five years.
- 3.2.22 At Deadline 3, Rushmoor BC [REP3-040] submitted outline legal submissions in respect to the Applicant's HRA. Within this opinion, Rushmoor BC stated that the Applicant's screening out of direct habitat loss is one of the three key problems they have identified with the HRA, stating that "The applicant's assessment has failed to identify the simple point that the extent and distribution of relevant habitats will be reduced during the course of construction, and for upwards of 15 years afterwards during natural regeneration. There has been no attempt to quantify the number of relevant bird breeding sites which would be lost. There is no restriction on the duration of the project (i.e. how many years the activity will be in place).
- 3.2.23 Importantly, there are no measures in the project which are included to address the impact on the SPA specifically (as otherwise they would have to be subject to appropriate assessment: see HRA 2.7.9). Thus there is no attempt to mitigate the impacts of direct habitat loss."
- 3.2.24 At Deadline 5, Rushmoor BC [REP5-043] confirmed that they remain concerned that significant amounts of SPA bird breeding habitat would be lost in the short to medium term as a result of the Proposed Development. They consider that the potentially affected area of the SPA is a significant area and the fact that this is only a small percentage of the overall SPA does not adequately address their concerns. Rushmoor BC consider that this affects the Conservation Objectives for the SPA, which include amongst others, to maintain or restore both the extent and distribution of the habitats of the qualifying features and to maintain and restore the distribution of the qualifying features within the site.
- 3.2.25 Rushmoor BC [REP5-043] is also concerned that the Applicant is relying on the temporary nature of the interference. Rushmoor BC are of the view that the duration of the works taking place within the SPA (stated to be up to 2 years) and the time required for natural regeneration to occur would mean that the effects on the SPA and its Conservation Objectives cannot be considered temporary.

- 3.2.26 In response to the Applicant's response to Further Written Questions, Rushmoor BC [AS-078] stated that they note that the Applicant claims that 9ha of heathland would be lost to the development; however, Rushmoor BC is still of the view that this habitat loss would cause a significant impact and should be mitigated.
- 3.2.27 Rushmoor BC [AS-078] expanded on their concerns with regards to regeneration and the use of habitats by the qualifying features. Rushmoor BC stated "For the ExA's information pioneer heather comprises heather seedlings and is not appropriate breeding habitat for either the nightjar or the Dartford Warbler which nest in dense mature heather. There are 4 stages of heather growth, pioneer seedling heather, building heather semi mature heather, mature heather dense heather in which the nightjar and Dartford Warbler breed and degenerative heather heather reaching the end of its life. RBC's case is not that heather will take 15 25 years to germinate, this process is fairly rapid, but that it will take 15 25 years to reach the maturity required to provide breeding habitat for the ground nesting birds."
- 3.2.28 At Deadlines 1 and 2, NE confirmed their agreement with the Applicant's HRA in their signed SoCG [REP1-005] and in their response to Written Questions [REP2-074]. However, no detail was provided to expand on the reasons for their agreement. The ExA therefore directed questions to NE in respect of direct habitat loss in their Further Written Questions [PD-013] BIO.2.21, 2.22, and 2.23.
- 3.2.29 In response to Further Written Question BIO.2.21 [PD-013], NE [REP4-063] stated that "When talking about habitat loss for this particular application, there is not permanent or long term loss. The losses are small in scale of the total size of TBH SPA, and are only of a temporary nature. All of the areas will continue to be available to Annex 1 birds throughout the period of habitat recovery immediately after works are completed. Thus we are able to confirm the applicants conclusions of no likely significant effect upon the integrity of the TBH SPA."
- 3.2.30 NE [REP4-063] in response BIO.2.23 stated that they do not recognise the statement that breeding territories for Dartford warbler, nightjar and woodlarks would be lost and stated that the Proposed Development would not result in the permanent loss of habitat capable of supporting Annex 1 birds in any part of the SPA. NE referred to measures proposed by the Applicant, including proposed timings of works to avoid the bird breeding season, resulting in no risk of disturbance, and to methods of working to ensure direct impacts on heathland are minimised and promotion of restoration of heathland habitats.
- 3.2.31 NE [REP4-063] stated that the areas affected by the works would continue to be available to Annex 1 birds after installation is complete, for foraging and nesting. NE stated there may be direct beneficial impacts for woodlark arising from this process of vegetation removal and habitat restoration as this species favours areas of bare ground and very short vegetation for foraging and nesting. They confirmed that "With the proposed range of protective measures in place Natural England is satisfied that there are unlikely to be significant impacts on integrity,

- there is no loss of suitable nesting habitat, and there is no impact on the overall extent of supporting habitat."
- 3.2.32 NE also stated "...it is important to note that the location of breeding territories of Annex 1 birds will change from year to year. Nightjar, woodlark and Dartford warbler all have different habitat preferences when selecting nesting sites, and so a key objective for land managers is to seek to maintain a diversity of habitat structures on heathland suitable for nesting Annex 1 birds. From the information available, Natural England is confident that the proposed works do not compromise the ability of site managers to continue to provide this habitat diversity capable of supporting nesting (and feeding) Annex 1 birds."
- 3.2.33 NE in response to BIO.2.22 stated that "Natural England is in agreement that the works can be described as small in scale. We have worked with the applicant to agree working methods in areas of open heathland to minimise loss, damage and disturbance of important habitat within TBH SPA and TAPC SAC." NE referred to the measures within the SPA for the works that they welcome, such as minimum working width, and avoidance of direct impacts on heathland through the use of existing tracks and trenchless methods, together with other measures such as use of ground protection matting.
- 3.2.34 NE also stated "There is also good evidence that the applicant has selected a route which avoids direct loss of areas which currently have high suitability to support nesting Dartford warbler, i.e. areas of dense, mature gorse. So our conclusion is that the applicant has taken reasonable steps to avoid direct impacts on habitats of European interest and habitats supporting Annex 1 birds and that residual impacts are sufficiently small in scale to be considered insignificant."

3.2.35 NE [REP4-063] confirmed that:

"The description of the potential impacts of works on heathland as 'temporary' is viewed as appropriate by Natural England. There is a large body of evidence available which demonstrates that dry heathland habitat is capable of recovering within 5 to 10 years given suitable treatment after removal of vegetation. In situations where heathland vegetation is removed and there is sensitive treatment of soils there is usually rapid re-colonisation by heather and other typical heathland plants through natural processes. Intervention such as spreading heather seed is not usually required. During the period of natural development of a full vegetation cover such areas can provide valuable habitat diversity and suitable conditions for specialised invertebrates of bare sand, and provide habitat for specialised plants, basking reptiles and feeding woodlark. We have recent experience such as in Swinley Forest, Berkshire where other pipeline works resulted in Annex 1 birds appearing on site within a matter of weeks following clearance and bare ground being incorporated. Such areas can also assist in providing additional resilience against risk of spread of uncontrolled wildfires. That is not to say that damage to heathland is acceptable, but works on heathland can have beneficial effects for wildlife if carefully planned and executed. Natural England is satisfied that the applicant has identified ways of working and other measures which seek to ensure that any impacts on heathland are indeed temporary in nature."

- 3.2.36 The Applicant responded at Deadline 4 [REP4-032] to Rushmoor BC's legal opinion, stating that "...RBC fail to acknowledge that an appropriate assessment is only required to be made in respect of a plan or project which is likely to have a significant effect on the conservation objectives of a site and is not directly connected with or necessary to the management of that site. In this case, the maximum area of the TBH SPA within the Order limits accounts for only 0.4% of the SPA's total area, and the areas which would be directly affected by construction works reduces to 0.1% with the implementation of narrow working techniques and trenchless crossings (which are secured by the code of construction practice) and the presence of embedded design measures and areas of existing hardstanding. Further, the effect would be a temporary one, during construction only. The Applicant's desk study of breeding sites of the qualifying species within the TBH SPA also confirms that the species use or have used in the recent past a much larger area than that which would be affected by the project."
- 3.2.37 The Applicant stated that their assessment of LSE accords with the European Commission's methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC⁷ and referenced paragraph 3.1.5 of that guidance "A common means of determining the significance of effects is through the use of key indicators."
- 3.2.38 The Applicant goes on to state that "One of these key indicators is percentage / magnitude of habitat loss. As noted, the area of the TBH SPA which would be temporarily affected during construction amounts to just 0.1% of the TBH SPA's total area. Qualifying species use or have used a much larger area of the TBH SPA. The duration of fragmentation and disturbance is also a key significance indicator. In this case, the works will only give rise to a temporary impact in respect of what is a very small part of the TBH SPA. Further, there would be no actual disturbance to qualifying features of the TBH SPA at all, since construction works within the TBH SPA would be limited to the period of 1 October to 31 January (inclusive). There would be no permanent impact on this part of the TBH SPA and land affected would be restored to a condition appropriate to its previous use. During regeneration of the land, habitat disturbed by the project would not be completely unsuitable for the qualifying species during the regeneration period (see p. 104 of the HRA). It is also relevant to note that qualifying bird species have been recorded in patches of bare earth. Therefore, whilst heathland may not have regenerated fully, qualifying species are still capable of utilising bare or developing substrate." And that the Applicant "was therefore entitled to screen out from assessment impacts which, on the basis of objective information and indicators, would not have a significant effect on the TBH SPA."

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⁷ https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura 2000 assess en.pdf

- 3.2.39 Rushmoor BC in their comments on NE's Deadline 4 submission [AS-079] stated that they do not agree with NE's appraisal of the Information to Inform the SPA or its conclusions.
- 3.2.40 With respect to habitat loss, Rushmoor BC dispute NE's assertion that the impacts would be temporary and short term. Stating that dense heather and gorse used by the ground nesting birds would take years to regenerate and in the case of heather would take 15 to 25 years, whilst gorse is a shorter-lived species and takes less time to regenerate.
- 3.2.41 Rushmoor BC acknowledged that the overall SPA is an extensive area; however, stated it is spread over a number of individual sites. Rushmoor BC stated that "If one is to assess the loss to the breeding birds, it is the council's view that the HRA needs to look at the proportion of individual sites that will be lost. RBC requests that the applicant provide information on the proportion of the individual sites to be lost."
- 3.2.42 Rushmoor BC [AS-079] stated that whilst they support the timing restrictions agreed with NE, it is their view that this does not mitigate the habitat loss, or the length of time that birds are unable to use the habitat to nest due to the immaturity of the habitat. Stating that "48 breeding territories are to be destroyed which will not be able to be used for at least 5 years in the case of gorse and 15 25 years in the case of heather. The council believe this is a significant impact that needs to be mitigated. At present the council cannot envisage any mitigation that could be provided on site to alleviate this impact and therefore RBC is concerned that the ExA may need to consider IROPI in this case."
- 3.2.43 In response to NE's view that the works could be positive for the breeding bird population, Rushmoor BC [AS-079] acknowledged the need for structural diversity within the heathland complex, but stated that this is not done over 30.68ha at one time but in discreet areas. They contend that "although more hunting ground maybe available for the woodlark, this will not compensate for the breeding habitat lost to the ground nesting birds, which is likely to decrease fecundity significantly and could cancel out the rises in population noted since the 2009 mitigation strategy was agreed within the individual sites to be impacted."
- 3.2.44 Rushmoor BC [AS-079] considered that if the assertion that heathland only takes 5 to 10 years to regenerate is accepted by the ExA, this can hardly be called short term. In their view the loss of breeding habitat for 48 breeding pairs could lead to a reduction of between 240 and 480 successful broods, lowering fecundity significantly.
- 3.2.45 At ISH5 [EV-021 to EV-025], the ExA posed a number of questions to the Applicant and Rushmoor BC with regards to the Applicant's assessment of no LSE arising from direct habitat loss in the Thames Basin Heaths SPA.
- 3.2.46 Rushmoor BC [EV-021 to EV-025 and REP6-088] maintained that if 9ha+ of habitat is removed from the SPA then it will undermine the Conservation Objectives for the site. Rushmoor BC [REP6-088] stated that the direct impacts on the SPA would fail to "maintain" the extent and distribution of those habitats, stating that the Applicant's negative

screening decision cannot be justified and there must be an appropriate assessment of the impacts given the temporary loss of a substantial amount of habitat. Rushmoor BC [REP6-088] stated that "The "temporary" nature of that impact is relevant to the appropriate assessment but not a reason to not carry it out, particularly when the habitat will take some years to regenerate. The applicant is wrong to contend that only the impact on the birds needs to be assessed in the SPA: the habitat is protected, and the conservation objectives make that clear beyond doubt." Rushmoor BC [EV-021 to EV-025] explained that the Conservation Objectives for the European site are about the extent and distribution of the habitats, not the number of territories. Rushmoor BC [REP6-088] stated that "the conservation objectives measure the integrity of the site by protecting the breeding habitats, with three out of five objectives ensuring that the extent, distribution, structure, function and supporting processes of the habitat are preserved. If there is a loss of habitat then that is an adverse effect on integrity in its own right. There is also a risk to the breeding success of the SPA qualifying features."

- 3.2.47 The Applicant [EV-021 to EV-025] stated that they do not accept that the habitat is lost, rather they consider it is merely changed. The Applicant explained that they do recognise that 48[46] breeding territories would be affected by the Proposed Development, but consider that no single territory would be lost, as whilst these 48[46] territories are intersected by the Order Limits, the majority of each territory area would still be present. The Applicant also stated that the territories are not held all year and the works for the Proposed Development would not be present in the breeding season. The Applicant responded that the habitats present respond very well to human intervention and will start to bounce back as soon as works are complete.
- 3.2.48 A signed SoCG between the Applicant and Rushmoor BC [REP6-020] was submitted at Deadline 6, which identifies that direct habitat loss within the Thames Basin Heaths SPA is a matter 'not agreed' between the two parties. The SoCG states:

"The Parties do not agree on the potential for direct habitat loss and impacts arising from any direct habitat loss within the Thames Basin Heath SPA.

The Parties have set out their respective positions within written and oral submissions to the Examination. Esso noted in its submissions to the Examination that there are no construction works within the SPA within Rushmoor Borough.

The Authority as part of the Thames Basin Heaths Partnership and the determining authority for the discharge of requirements of the DCO is of the opinion that impacts need to be mitigated in line with the E.C Birds Directive."

Measures

3.2.49 As noted above, the Applicant's HRA report [APP-130 and APP-131] screens out physical disturbance / habitat loss on the basis of the small

area of the total SPA resource that would be affected, the temporary nature of the loss, and the ability of natural regeneration to restore the habitats to acid grassland and pioneer heathland in the short term (ie within five years following construction) (See Table D.7 of Appendix D [AS-026]).

- 3.2.50 In terms of measures relied upon for the screening out of physical disturbance / habitat loss to the Thames Basin Heaths SPA, the Applicant's HRA considers those 'embedded measures' listed in Table 2.1 of the HRA report [APP-130]. Embedded measures are described in Section 2.7 of the HRA report [APP-130] as "design measures that have been incorporated into the project to avoid or reduce impacts".
- 3.2.51 These include measures such as use of existing tracks, use of Horizontal Directional Drilling (HDD) to avoid sensitive areas (such as wetland habitats), and narrow working widths. Table 2.1 includes a column describing the 'purpose' of the measure. The stated purpose includes to reduce, lessen or avoid impacts on the European sites or their component SSSIs.
- 3.2.52 Appendix B [APP-131] to the HRA report includes "Design drawings showing the indicative construction working areas and construction techniques at relevant component SSSIs of the Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC." These design drawings are also referred to by the Applicant and within the draft DCO (latest version [REP6-003 and REP6-004]) as the 'SSSI Working Plans'. They include plans showing the areas of narrow working and the typical working cross sections, as described in Table 2.1 and considered by the Applicant to be embedded measures.
- 3.2.53 The HRA report [APP-130] also identifies that "the assessment was made taking into account pipeline design integrity measures to avoid potential impacts to sensitive environmental receptors, such as:
 - The principles of inherent safe design have been incorporated into the design of the pipeline as per Esso design standards for fuel pipelines, relevant industry codes of practice and standards and the requirements of the Pipeline Safety Regulations 1996 (O8);
 - Inclusion of remotely operated valves to allow isolation of sections of the pipeline if required (O9); and
 - 24-hour remote monitoring of pipeline operation to detect leaks and enable remote shut down of the pipeline if required. (O10)."
- 3.2.54 The HRA report also describes "good practice measures" included in the Register of Environmental Commitments (REAC) [APP-056] and Code of Construction Practice (CoCP) (latest version is [REP6-009 and REP6-010]). These include, for example, measures to prevent and control pollution incidents, and measures to avoid and reduce the effects of lighting and noise. The HRA report [APP-130] states that where such good practice measures would be implemented specifically to avoid or reduce potential impacts to European sites, they are considered in Sections 5 and 6 (appropriate assessment) to the HRA report. The HRA

report [APP-130 and APP-131] references the European Court of Justice case in People Over Wind and Sweetman v Coillte Teoranta (Case 323/17) (hereafter referred to as the 'Sweetman judgment') and states that "...good practice measures (other than embedded measures) specifically intended to reduce the adverse effects of a plan or project on a European site have not been taken into account during the Stage 1 Screening."

- 3.2.55 During the Examination, the ExA queried with the Applicant and IPs whether the consideration of such 'embedded measures' at the screening stage is consistent with the Sweetman judgment [PD-008, PD-013, and EV-021 to EV-025].
- 3.2.56 In response to the ExA's Written Question BIO.1.46 [PD-008], the Applicant [REP2-040] responded that "As stated in paragraph 16.1.2 of Environmental Statement (ES) Chapter 16 (Application Document APP-056), embedded measures are an intrinsic part of the development that would be consented and are utilised regardless of the presence of any European sites." and that "Good practice measures identified within the Code of Construction Practice (Document Reference 6.4 Appendix 16.1 (2)) and Register of Environmental Actions and Commitments have not been included in the screening assessment to the Habitats Regulations Assessment (HRA) Report. Therefore, the Applicant can confirm that mitigation measures are not relied upon and are not relevant to screen out likely significant effects in the HRA Report (Application Documents APP-130 and APP-131) for European sites and qualifying features. Paragraph 4.2.7 of the HRA Report states that 'the Stage 1 Screening study is compliant with the Sweetman ruling as mitigation other than embedded measures was not considered as part of the study to inform Screening'."
- 3.2.57 The Applicant was also requested by the ExA in Written Question BIO.1.61 [PD-008] to correct references to the Appendix B design drawings, which were referred to in a number of places in the HRA report and other relevant documents, including the draft DCO, as forming "Annex B" to the HRA report. The Applicant confirmed in response to BIO.1.61 [REP2-040] that these references were incorrect and should refer to "Appendix B". The reference was corrected in the draft DCO submitted at Deadline 6 [REP6-003 and REP6-004].
- 3.2.58 The Applicant [REP2-040] responded to the ExA's Written Question BIO.1.47 [PD-008] that embedded measures are an intrinsic part of the development that would be consented and are utilised regardless of the presence of any European sites, and that good practice measures identified within the CoCP and REAC have not been included in the screening assessment to the HRA report. The Applicant stated that therefore in their view the screening assessment presented in the HRA report is compliant with the Sweetman judgment.
- 3.2.59 The ExA asked in BIO.1.55 [PD-008] for the Applicant to confirm where the measures described at paragraph 6.8.35 of the HRA report [APP-130] "To reduce vegetation loss and to protect soils, the existing access tracks would be utilised as haul routes where practicable" are secured

through the REAC / CoCP, and to explain how it would be determined how existing tracks would be used and who would be responsible. The Applicant was also asked to comment on whether the conclusions reached in the HRA would be affected if such measures were 'not practicable'.

3.2.60 The Applicant [REP2-040] responded that:

"design measures relating to use of specific existing tracks in European sites are set out in the Register of Environmental Actions and Commitments (REAC) in Section 16.3 of Environmental Statement (ES) Chapter 16 (Application Document APP-056). The REAC also includes reference to how the commitments would be implemented (or secured) through the Development Consent Order (DCO) process. Compliance with the Code of Construction Practice (CoCP) (Document Reference 6.4 Appendix 16.1 (2)) is secured by DCO Requirement 5. In assessing which access tracks within European sites could be used as haul routes, the Applicant determined the following were practicable and the following commitments are detailed in Table 6.1 (pages 12, 14 and 19) of ES Chapter 16 (Application Document APP-056):

- D60: Bourley and Long Valley SSSI/SPA Use the existing track north of Aldershot Road rather than habitat area as haul road;
- D80: Colony Bog and Bagshot SSSI/SPA Heathland Use the existing Ministry of Defence (MoD) track plus narrow working area;
- D82: Colony Bog and Bagshot SSSI/SPA Wetland Align the pipe on high ground to the north or lay in existing track; and
- NW23 and NW24: Chobham Common SAC/SSSI/National Nature Reserve (NNR) Working width reduced along and adjacent to the existing track to reduce impacts on Chobham Common SSSI/NNR."

"...the Applicant has already determined the locations where existing tracks would be used and the commitments detailed above are included in the REAC (Application Document APP-056) and would be secured by the CoCP which is DCO Requirement 5. The design measures listed above (D60, D80, D82, NW23 and NW248) are not qualified by 'where practicable' and are specific measures to be adhered to by the Applicant. Therefore, the HRA's conclusions would not be affected."

3.2.61 In BIO.1.57 [PD-008], the ExA also asked the Applicant "With reference to mitigation measure G38 in the CoCP [APP-128]: i) Explain what would constitute "potentially disturbing construction works" and what works (if any) would be permitted in the SPA during the period 1 February to 30 September. ii) Update measure G38 in the CoCP [APP-128] and the REAC [APP-056] to explicitly include reference to the areas where

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⁸ Measures D60, D80, D82, NW23 and NW24 are included in the latest CoCP [REP6-009 and REP6-010]

- seasonal constraints would apply (stated to be Figures 9.9, 9.10 and 9.11 in the HRA report [APP-130] and [APP131]) and seek to agree the proposed timings of seasonal constraints with NE."
- 3.2.62 The Applicant in response [REP2-040] listed out those works, also outlined in Section 3.4 of Environmental Statement (ES) Chapter 3 [APP-043], which could be considered potentially disturbing, including:
 - setting out;
 - utility diversions;
 - working area preparation;
 - temporary fencing;
 - pre-construction drainage;
 - temporary access for construction;
 - construction compounds;
 - public highways and public rights of way closures and diversions;
 - topsoil removal and storage;
 - haul road construction;
 - pipe storage and stringing;
 - welding and joint coating;
 - trench excavation and pipe installation;
 - trenchless crossing installation;
 - dewatering;
 - pipeline hydrostatic testing; and
 - land reinstatement.
- 3.2.63 The Applicant stated that it would comply with all legislative requirements and would seek any necessary consents from NE for works listed above with the potential to impact the SPA. Works that are not considered to be potentially disturbing construction works and therefore could take place in the SPA during the period 1 February to 30 September include photographic record of condition, survey work, ecological habitat manipulation, protected species relocation and reinstatement seeding.
- 3.2.64 The Applicant also stated in response that if the SPA bird breeding season is deemed to have prematurely ended, agreement would be sought from NE for other works within the SPA.
- 3.2.65 The Applicant [REP2-040] confirmed at Deadline 2 that commitment G38 has been amended in the CoCP to read: 'Thames Basin Heaths SPA: Potentially disturbing construction works within the Thames Basin Heaths SPA would be undertaken between 1 October and 31 January unless

otherwise agreed with Natural England.' And stated that this would apply to the areas identified in Figures 9.9, 9.10 and 9.11 within the HRA [APP-130 and APP-131]. At Deadline 4 measure G38 was removed from the CoCP [REP4-012 and REP4-013] but was included in the Outline CEMP [REP4-036] and is included in the updated Outline CEMP submitted at Deadline 6 [REP6-030 and REP6-031].

- 3.2.66 In respect to this measure (G38), the ExA queried with the Applicant at ISH5 [EV-021 to EV-025] how long construction works would take place within the Thames Basin SPA, as the HRA report [APP-130] appeared to contain only a single reference to the duration at footnote c of Table D.7 of the HRA report [APP-130 and AS-026] to "The duration of effects would likely be for a single winter and would not affect the birds in subsequent years...".
- 3.2.67 The Applicant stated at ISH5 [EV-021 to EV-025] that it would confirm at Deadline 6 but that it would be four months. In responding at Deadline 6, the Applicant [REP6-074] stated this is secured in the CoCP9 and the wording had been amended to state "G38: Potentially disturbing construction works within the Thames Basin Heaths Special Protection Area (SPA) would be undertaken in the four months between 1 October and 31 January unless otherwise agreed with Natural England. This would apply to the areas identified in Figures 9.9, 9.10 and 9.11 within the HRA Report (Application Documents APP-130 and APP-131)."
- 3.2.68 This measure is also listed in the HRA Commitments Schedule [REP6-078] submitted by the Applicant at Deadline 6. However, this measure is in its original form: "Potentially disturbing construction works within the Thames Basin Heaths SPA would be undertaken between 1 October and 31 January unless otherwise agreed with Natural England."
- 3.2.69 The ExA asked the Applicant in BIO.1.58 [PD-008] to clarify why there are no seasonal restrictions to the proposed works in the north-eastern section of Bourley and Long Valley SSSI. The Applicant [REP2-040] responded that "As agreed with Natural England in a site meeting held on 24 July 2018, any habitat not suitable for breeding by the qualifying bird species of the SPA, within the SPA, does not require seasonal constraints in vegetation clearance. The north-eastern section of the Bourley and Long Valley SSSI comprises coniferous plantation which is highly unlikely to support these qualifying bird species while breeding (see Figure 7.4, Sheet 20 of 35 in Application Document APP-061). This is confirmed by the annual bird monitoring surveys which are reviewed in Figures C1, C2 and C3 of the HRA Report (Application Document APP-130)."
- 3.2.70 The ExA also asked the Applicant in BIO.1.59 [PD-008] the following: "With reference to REAC/CoCP measure HRA4 and the legend to the Figures in Appendix B to the HRA report [APP-130], confirm where in the HRA report it identifies the areas where topsoil stripping would not be

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⁹ This measure (G38) is not within the CoCP [REP6-009 and REP6-010] but is contained in the Outline CEMP [REP6-030 and REP6-031]

- reduced to a minimum extent within European sites and SSSI. What is the minimum extent and how is it defined?"
- 3.2.71 The Applicant [REP2-040] responded that Drawings B1 to B7 in Appendix B of the HRA report [APP-130 and APP-131] detail the construction approaches to be adopted within European sites and SSSIs, showing a range of working widths. "Sections of the project within which the working width, and hence the amount of topsoil stripping, would not be reduced to a minimum are shown on Drawing B7 (Bourley and Long Valley SSSI), denoted by Cross Section E." and "The minimum extent of topsoil removal (in designated sites) would occur in areas of minimum working corridor width (Cross Section F, down to 10m) where bogmats can be used."

Natural regeneration

- 3.2.72 At BIO.1.60 [PD-008], the ExA queried the hyperlink to the supporting article¹⁰ concerning natural regeneration referenced by the Applicant in the HRA report [APP-130]. The ExA queried whether a similar programme of seed collection and preparation was planned for the Proposed Development or whether it would be entirely natural regeneration with no intervention. The ExA also asked the Applicant to expand on regeneration being successful within 5 years, which was not explicitly stated in the said article; and whether the Applicant intended to monitor the success of the restoration post-completion, and/or would remedial measures be proposed if remediation is not as planned. The ExA noted that monitoring proposals were not apparent within the HRA report [APP-130 and APP-131]; however, reference to monitoring was included in measures G47 and G4 of the REAC [APP-056] / CoCP [APP-128].
- 3.2.73 In answer to the first point, the Applicant [REP2-040] confirmed that it assumes natural regeneration with no intervention. The Applicant stated that "The Lowland Heathland Management Handbook a Natural England publication states such an approach is an acceptable standard conservation measure with a high degree of confidence of success. Consequently, no other measures are proposed."
- 3.2.74 The Applicant confirmed that the five-year timeframe is taken from the Lowland Heathland Management Handbook, which states that it can take four to five years for plants to be become established in regeneration areas. The Applicant stated that "The Swinley Forest article was written only two years after the reseeding activities at that site, and had already deemed the project to be successful. A period of up to five years for regeneration to be likely to be successful without reseeding measures is therefore reasonable."
- 3.2.75 In response to the final point, the Applicant identified that commitment G47 of the REAC [APP-056] / CoCP [APP-128] states 'A programme of

¹⁰Confirmed to be [REP2-040]: https://corporate.southeastwater.co.uk/news-info/wildlife-corridor-in-swinley-forest-heralded-an-environmental-success

- post-construction monitoring and objectives/targets for designated ecological sites, would be agreed and implemented in accordance with DCO requirements. DCO Requirement 5 (CoCP) and DCO Requirement 12 (Landscape and Ecological Management Plan)'.
- 3.2.76 The Applicant confirmed that it has identified the following designated ecological sites which would receive post construction ecological monitoring against objectives/targets:
 - Bourley and Long Valley SSSI;
 - Colony Bog and Bagshot Heath SSSI;
 - Chobham Common SSSI/National Nature Reserve (NNR); and
 - Chertsey Meads Local Nature Reserve.
- 3.2.77 The Applicant stated that "The LEMP[Landscape and Ecological Management Plan] would set out how the details of the monitoring including potential remedial measures that could be implemented if the reinstatement does not occur as planned." and that "The programme and content of post construction monitoring would be agreed with Natural England and recorded within the LEMP." [measure G47]
- 3.2.78 This same commitment (measure G47) is stated in the latest Outline LEMP provided at Deadline 6 [REP6-028 and REP6-029] and in the latest CoCP [REP6-009 and REP6-010].
- 3.2.79 Within Written Questions [PD-008] (at DCO.1.33, BIO.1.1, BIO.1.2), the ExA sought views from the Applicant and IPs on the Outline CEMP submitted with the DCO application and the absence of an Outline LEMP. Several local authorities responded that an Outline LEMP should be provided to the Examination (including [REP2-088, REP2-066, REP2-080, REP2-079, REP2-086, REP2-088]).
- 3.2.80 At ISH2 [EV-009a and EV-009b] IPs, including local authorities, considered the REAC / CoCP and Outline CEMP measures were currently too vague and that an Outline LEMP should be provided to the Examination. The ExA stated that the submission of a comprehensive and detailed Outline LEMP was necessary to assess the specific effects and mitigation necessary specifically for the identified "hotspot" areas. The Applicant agreed to submit an Outline LEMP for Deadline 4. An Outline LEMP was also submitted as a joint response by the local authorities of Rushmoor, Spelthorne, Surrey Heath and Runnymede BC at Deadline 3 [REP3-042].
- 3.2.81 In anticipation of the Outline LEMP, the ExA asked the Applicant in Further Written Question GQ.2.2 [PD-013] to indicate briefly how the Outline LEMP would address the concerns raised by the ExA and IPs, and the concerns of local authorities as set out in their joint response at D3 [REP3-042].
- 3.2.82 The Applicant [REP4-019] responded to the question with a number of points, those of relevance to the HRA were as follows:

"The Outline LEMP (Document Reference 8.50) is structured so that it sits alongside the Code of Construction Practice (Document Reference 6.4 Appendix 16.1 (3)) and the Outline CEMP (Document Reference 8.51), as shown on Illustration 1.1 in the CoCP. The CoCP contains the commitments for the embedded design measures, narrow working and trenchless crossings, all of which would avoid or reduce the impacts of construction on natural habitats and open spaces"

"Rushmoor Borough Council (REP3-042) requests the Outline LEMP to contain an assessment of the impacts on the project on sensitive ecological sites and open spaces. The Applicant does not consider this to be the purpose of the LEMP as this would duplicate the purpose of the Environmental Statement and Habitats Regulation Assessment Report, which perform that function. The purpose of the LEMP is to provide details about how measures identified within the ES would be implemented."

"REP3-042 states that the Outline LEMP should provide further details on the Natura 2000 and SSSI network. The Applicant does not agree with this suggestion, as the assessment of impacts on Natura 2000 sites is already provided within the HRA Report (Application Documents APP130 and APP-131) and the impact on SSSIs is provided in ES Chapter 7 (Application Document APP-047). Both of these documents set out the good practice measures in relation to habitat sites and these are secured as commitments within the CoCP is[sic] (Document Reference 6.4 Appendix 16.1 (3)), and are also set out within the Outline LEMP (Document Reference 8.50)."

"REP3-042 suggests that the Outline LEMP will require a site specific assessment of the impacts on SANGs, including paragraphs 5.8.8 to 5.8.29. The Applicant does not agree with this approach, as the impact assessment on SANGs is covered within the HRA Report (Application Document APP-130)."

"The Applicant is not intending to produce a Site Specific Plan for Chobham Common, as the information about the construction method and reinstatement is provided within the Habitats Regulation Assessment (HRA) Report (Application Document APP-130 and APP-131)."

- 3.2.83 In question GQ.2.4 [PD-008] concerning 'Narrow Working Widths', the ExA queried the use of the watermark 'Provisional' on the Alignment sheets of narrow working widths [REP3-023], [REP3-024] and [REP3-025].
- 3.2.84 The Applicant [REP4-019] responded that it "confirms that all narrow working areas are only provisional (in terms of their position but not their width). Because the narrow working width could be located anywhere within the Order Limits it is difficult to visually represent the lateral extent of narrow working on the Alignment Sheets. Therefore, the narrow working width is shown in an illustrative preferred location based upon a provisional pipeline alignment. The lateral location of this narrow working width could be located elsewhere and the definitive criteria for narrow working are set out in Annex A of the COCP."

- 3.2.85 The Applicant stated [REP4-019] that it has provided the plans for information only, at a greater, more detailed scale than the DCO plans. The Applicant also stated it "will be moving into the detail design phase of the works should the DCO be granted and the Alignment Sheets have been produced at this early stage to help inform the ExA and are also being used as part of the Invitation to Tender which the Applicant is the process of negotiating with the contracting industry."
- 3.2.86 The Applicant also stated that it has not reduced the Limits of Deviation for the following reasons:
 - "There may be unknown buried obstructions which negate the ability to route the pipeline in the location assumed on the narrow working area.
 - Ecological constraints such as badger setts may require the narrow working route to be revised.
- 3.2.87 In other words, it is the width rather than the location within the Limits of Deviation that is being committed to, with a potential alignment being shown on the Alignment Sheets."
- 3.2.88 In Further Written Question BIO.2.5 [PD-013], the ExA asked the Applicant to clarify, with reference to Table 7.6 of the ES [APP-047], why enhancement measures at Bourley and Long Valley SSSI are proposed and how they relate to the ES. The Applicant responded [REP2-040] that no mitigation measures are required for Bourley and Long Valley SSSI and that the proposed heathland restoration and pond creation at Bourley and Long Valley SSSI is part of the Environmental Investment Programme, which is independent of the DCO application and biodiversity impact assessment and are not related to the ES.
- 3.2.89 In Further Written Question BIO.2.6 [PD-013], the ExA asked the Applicant to provide further detail on measure HRA1 of the REAC [APP-056], which states that heathland within statutory or non-statutory designated wildlife sites would be reinstated using natural regeneration unless otherwise agreed with NE, and would be secured through the LEMP. The Applicant was asked to provide details of where such heathland would be affected and confirm whether such details would be included within the Outline LEMP to be submitted at Deadline 4.
- 3.2.90 The Applicant [REP4-020] responded that the "Outline detail on heathland natural regeneration is provided in the Outline LEMP submitted at Deadline 4 (Document reference 8.50) with the final document providing comprehensive plans once the detailed design is known." Paragraph 5.4.1 of the Outline LEMP [REP6-028 and REP6-029] refers to the reinstatement of lowland heathland. Stating "…These sites will be reinstated using natural regeneration unless otherwise agreed with Natural England (Commitments HRA1 and HRA2). In these locations, a site-specific method statement would be developed. Once installation is complete, the soil would be replaced and no seeding would be undertaken. The heathland would naturally regenerate during the aftercare period." and that "The final LEMP will provide comprehensive"

- plans showing the location of the areas of scrub and woodland removal and the natural reinstatement once the pipeline alignment is known."
- 3.2.91 Rushmoor BC [AS-078] in commenting on the Applicant's comments to submissions and answers to ExA Questions at Deadline 3, stated in response to ExA's further written question GQ2.2 that they note "that none of the European sites have site specific plans within the LEMP with the applicant claiming that all information is within the HRA. This increases our concerns in regards to protection of the Natura 2000 network as there is still no information on protection measures or any additional mitigation to be provided."
- 3.2.92 Rushmoor BC [AS-078] in response to the Applicant's response to Further Written Question BIO.2.5 [PD-013] stated "RBC is concerned regarding the lack of mitigation for the European sites. Our concerns would increase if the few mitigation measures proposed were delivered outside the legally binding DCO process." Rushmoor BC also stated that they do not feel that the embedded design and good practice measures provide appropriate mitigation for impacts on internationally and nationally designated sites.
- 3.2.93 With regards to measure HRA1 of the Outline LEMP submitted at Deadline 4 [REP4-035], Rushmoor BC [REP5-044] remain of the view that natural regeneration alone is not adequate to compensate for the habitat lost to the Thursley, Ash, Pirbright and Chobham SAC and Thames Basin Heaths SPA. Rushmoor BC [REP5-044] also stated that "Rushmoor agrees there is no other way to restore heathland other than natural regeneration and that scrub clearance, within limits will improve the ecological value of the habitat." and go on to say that "The Council's concerns stem from the destruction of large areas of SPA and SAC habitat. The habitat enhancement can be seen as only a small part of the mitigation package required to ensure no significant impact on the Natura 2000 network."
- 3.2.94 Rushmoor BC [REP5-044] also stated in respect to measure G41 of the Outline LEMP that they have very serious concerns about Annex B [Appendix B] of the HRA report, as stated in previous representations.
- 3.2.95 Surrey Heaths BC [REP5-048] also stated at Deadline 5 in respect of measures HRA1 and HRA2 that they continue to seek information on what 'natural regeneration' would mean in practice and over what period this would be expected to take place. Surrey Heaths BC stated that "This lack of clarity means that the heathland could be impacted for an indeterminate period which would be of concern."
- 3.2.96 At ISH5 [EV-021 to EV-025], the ExA raised with the Applicant the concerns of Surrey Heath BC with regards to the natural regeneration proposed for the Thames Basin Heaths SPA. The Applicant [EV-022 and REP6-073] responded that the heathland would rebound quickly and that within a short period of completing the works, the area affected by those works would begin to provide a valuable habitat for qualifying bird species.

- 3.2.97 The Applicant [REP6-073] stated that within a well-managed heathland habitat, one would have areas of the habitat at different stages of age and structure. In the Applicant's view, the success of that natural regeneration was likely to be contingent upon two main factors. The first factor was substrate quality. The second factor was the existence of a seed bank to recolonise the strip of land affected by the works.
- 3.2.98 The Applicant [REP6-073] also confirmed that "the good practice measures which were built into the Applicant's assessments took care of the substrate reinstatement. As regards the existence of a seed bank, Mr Shepherd [for the Applicant] confirmed that there was a high degree of confidence that this would remain viable and would regenerate shortly after completion of the works. Mr Shepherd confirmed that there were many good examples of successful dry heathland restoration projects, such as Swinley Forest in Surrey, which people could refer to and see that wildlife started to use that corridor within a very short space of time."
- 3.2.99 It was noted by the Applicant that one of the qualifying bird species within the SPA, namely the woodlark, nest and feed in bare areas, and would therefore find some benefit from the bare areas that would be opened up as part of the works. The Applicant stated that natural regeneration was specifically requested by the Surrey Wildlife Trust (SWT), NE, the Ministry of Defence (MoD) and the Hampshire & Isle of Wight Wildlife Trust.
- 3.2.100 Rushmoor BC [EV-021 to EV-025] stated that they agree that heathland regenerates quickly, but that at five years it will only be pioneer heathland and that two of the qualifying feature species nest in mature heather which would not be present at five years. Rushmoor BC stated that they consider the loss over such a period to be significant and that they do not know of any clearance of mature heather of the extent proposed by the Applicant.
- 3.2.101 The Applicant [EV-021 to EV-025] in response stated that the 9ha directly affected by the Proposed Development is within a linear arrangement across three SSSIs. The Applicant accepted that it will take longer to reach a mature heather stage but stated that the qualifying bird features were not reliant upon any specific clump of mature heather and that there would be ample resource in the rest of the territory for those birds to find a place to nest.
- 3.2.102 Surrey Heath BC [EV-021 to EV-025] stated that they agree with the natural regeneration approach but considered the Outline LEMP needs to contain more information.
- 3.2.103 At ISH5 [EV-021 to EV-025], the ExA also asked the Applicant to confirm which if any measures were relied upon by the Applicant in reaching a decision to screen out direct impacts on the Thames Basin Heaths SPA from appropriate assessment.
- 3.2.104 The Applicant [REP6-073] stated that the decision was based upon the absence of any permanent habitat loss, the small-scale and temporary nature of the works and the ability of the affected habitat to

regenerate quickly. The Applicant [REP6-073] stated that these factors were sufficient to reach a decision to screen out effects from appropriate assessment and that the good practice measures and other measures set out in the assessment were not a reason for screening out effects in the first instance. The Applicant agreed at ISH5 to clarify the process which lead to a negative screening conclusion in respect of direct impacts on the Thames Basin Heaths SPA at Deadline 6.

- 3.2.105 The ExA [EV-021 to EV-025] also asked the Applicant to confirm which measures they were relying upon for the purposes of the HRA and how they were secured by the draft DCO. At the ISH, the Applicant [REP6-073] confirmed "that the embedded measures referred to in Table 2.1 of the HRA were carried across to the CoCP, for example Annex A of the CoCP which dealt with narrow working, Annex B of the CoCP which dealt with trenchless working, as well as the commitments to avoiding the bird breeding season and to working in the SANGs for a maximum of 2 years, which were also set out in the CoCP." The Applicant confirmed that, in each case, those commitments were secured by Requirement 5 of the draft DCO. The commitment to avoid the bird breeding season is contained in the Outline CEMP [REP6-030 and REP6-031], which is secured via DCO Requirement 6 (CEMP). The Applicant agreed to provide a table detailing the measures relied upon for the purposes of the HRA at Deadline 6.
- 3.2.106 At Deadline 6, the Applicant [REP6-074] provided a statement to clarify its position in respect of screening out of habitat loss. The Applicant in response stated that it "stands by its position that the measures referred to in Table 2.1, including narrow working and trenchless construction techniques, are properly regarded as embedded measures. They are all measures which were applied at an early stage in the design of the project and reflected the Applicant's desire to implement appropriate engineering solutions at the most sensitive, legally protected sites along the route."
- 3.2.107 However, the Applicant also stated that it has recognised that there is a currently some degree of ambiguity as to when such measures should be regarded as 'embedded' or otherwise. The Applicant stated that when undertaking its screening exercise, it excluded proposals for trenchless construction working and techniques consideration. The Applicant [REP6-074] stated "To be clear, the Applicant can confirm that neither narrow working, nor trenchless construction techniques, both of which form part of the measures set out in Table 2.1, were relied upon by the Applicant in order to 'screen out' from appropriate assessment effects on the Thames Basin Heaths Special Protection Area which would or should otherwise have been screened in to assessment."
- 3.2.108 The Applicant directed to footnote (a) of Table D.7 of the HRA report [AS-026] in support of their position stating that "Even in a hypothetical scenario during which the total 36.20ha area of SPA within the Order Limits were temporarily destroyed during construction, it is not anticipated that LSE would arise given the small area of the total SPA resource that would be affected". The Applicant stated that the reduced

figure of 7.96ha [REP4-020] was being referred to as a way of illustrating how the Applicant's approach to the design of the scheme through the SPA leads to a reduction in the level of impact on that sensitive habitat.

- 3.2.109 The Applicant stated that it was entitled to reach a conclusion of no LSE as a result of habitat loss, on the basis of "matters which include the small area of the SPA (i.e. the 36.20ha area) which would be affected by the works as a proportion of the extent of the SPA overall, the temporary nature of the impact and the propensity of the habitat to regenerate successfully and quickly following completion of the works." The Applicant reiterated that NE endorsed its conclusion in REP4-063.
- The Applicant concluded that "notwithstanding the matters set out 3.2.110 above, and without prejudice to the Applicant's firm position that the screening process undertaken was entirely robust for the reasons already set out, the Applicant nevertheless recognises that in the course of ISH 5 the ExA expressed concern that measures such as trenchless and narrow working referred to in Table 2.1 were relied upon in reaching a negative screening conclusion in respect of physical disturbance to the SPA during construction. As already explained such measures were not in fact relied upon in reaching that screening conclusion." And to "assist the ExA and the Secretary of State and to dispel any residual doubt that the ExA may have in relation to the approach adopted in the HRA Report, the Applicant has considered and provided at Deadline 6 a note setting out the data and analysis required by the competent authority to perform an Appropriate Assessment in relation to the effect of physical disturbance to the SPA during construction. This note reaches the firm conclusion that there would be no adverse impact on the integrity of the SPA due to this impact."
- 3.2.111 'Appendix 1: ISH5-16 Technical Note' to the Applicant's response to Action Points [REP6-074] sets out the Applicant's information to inform an appropriate assessment for habitat loss on the Thames Basin Heaths SPA
- 3.2.112 In response to the ExA's Action Point requesting clarification on the measures relied upon for the purposes of the HRA, the Applicant provided an 'HRA Commitments Schedule' [REP6-078]. This schedule has also been included as a certified document in Schedule 11 of the draft DCO [REP6-003 and REP6-004] and Requirement 5 (CoCP) and 17 (SSPs) in the draft DCO have been amended to include reference to the measures contained within the HRA Commitments Schedule, stating "...and in either case such change must not give rise to any materially new or materially different environmental effects to those assessed in the environmental statement and must not result in a variation to the measures set out in the HRA Commitments Schedule which adversely affects the findings of the Habitats Regulations Assessment."
- 3.2.113 At Deadline 6, the Applicant also submitted, amongst other plans, an updated CoCP [REP6-009 and REP6-010], updated Outline CEMP [REP6-030 and REP6-031], and an updated Outline LEMP [REP6-028 and

REP6-029], together with an updated draft DCO [REP6-003 and REP6-004].

Pollution measures and Eelmoor Marsh SSSI

- 3.2.114 Rushmoor BC identified concerns with the Applicant's screening of hydrological effects, namely run-off and pollution control [RR-293, REP1-015, REP2-081, REP3-040, REP5-043 and AS-079].
- 3.2.115 Rushmoor BC identified in their Written Representation (WR) [REP2-081] that "The outline CEMP provides no details regarding how the Thames Basin Heaths will be protected from pollution and contamination, or how the hydrological processes within the sensitive wetland habitats are to be preserved."
- 3.2.116 The Applicant responded to Rushmoor BC's WR at Deadline 3 [REP3-016], referring back to their response to RR document [REP1-003] and response to the ExA's Written Question DCO.1.33 [REP2-042]. The Applicant stated that they are aware of the sensitive environment at Eelmoor Marsh SSSI and that a CEMP would be prepared by the Applicant and submitted for approval by Rushmoor BC prior to the commencement of the works, as secured under draft DCO Requirement 6. The Applicant points out that Requirement 5 secures that the construction of the replacement pipeline must accord with the submitted CoCP. The Applicant stated that project-wide measures included in the CoCP would appropriately manage construction close to the SSSI, including measures G8, G11, G28, and G40. In respect to operation, the Applicant referred to their standard operating procedure, as set out in Commitment O10 of the CoCP.
- 3.2.117 Rushmoor BC [REP3-040] identified as one the three key problems in their legal opinion the Applicant's screening out of hydrological changes to Eelmoor Marsh stating that "the applicant has "screened out" impacts on the aquatic environment from run off by assuming the application of measures to prevent such run off from construction sites. However, those measures have not been properly explained in the documents submitted to date. In People Over Wind, it was held that measures to prevent silt run off to protected sites could not be used to "screen out" and had to be considered through the appropriate assessment. Although the point is a general one, the particular concern of Rushmoor BC relates to Eelmore Marshes which forms a component part of the SPA."
- 3.2.118 The Applicant responded at Deadline 4 [REP4-032] that "The general summary of People Over Wind is agreed. However, the Applicant questions the relevance of the principles cited in the context of this application. There is no suggestion that the Applicant has sought to rely upon mitigation measures in order to "screen out" from appropriate assessment, in a manner which would be contrary to the principle confirmed in People Over Wind. The decision to screen out direct habitat loss and impacts on the aquatic environment from runoff from appropriate assessment was based upon an assessment of significance and does not seek to rely upon mitigation measures in order to avoid or

reduce effects. Natural England is content with and endorse those screening decisions"

- 3.2.119 Rushmoor BC at Deadline 5 [REP5-043] and in response to the Applicant stated that "RBC notes that the Applicant does not rely on mitigation measures in respect of the impacts on the SPA from construction run off, and on that basis it does not appear that the issue in People Over Wind arises. RBC's concerns in respect of the risk from such run-off remain in any event."
- 3.2.120 At ISH5 [EV-021 to EV-025], the ExA queried with Rushmoor BC their outstanding concerns on this matter. Rushmoor BC [EV-021 to EV-025 and REP6-088] responded that following submission of the Outline CEMP and due to assurances from the Environment Agency (EA), their concerns are have lessened. Rushmoor BC also stated as a post hearing note that "The surface water drainage measures are fairly rigorous, although RBC would promote three forms of drainage before water is released onto the designated sites. RBC are concerned that any structure such as lagoons dug into the ground would cause further habitat impacts within the SPA and would promote the use of free standing bowsers and other mechanisms for filtration purposes."

3.3 Thursley, Ash, Pirbright and Chobham SAC

Screening out of effects on the European dry heath qualifying feature

- 3.3.1 The HRA report [APP-130] identifies that the Thursley, Ash, Pirbright and Chobham SAC comprises four SSSIs with a total area of 5,154.5ha. Of these, two SSSIs are of relevance to the Applicant's assessment, namely Colony Bog and Bagshot Heath SSSI and Chobham Common SSSI.
- 3.3.2 The HRA report confirms at Section 6 that the area of the SAC within the Order Limits is approximately 14.50ha at Colony Bog and Bagshot Heath SSSI and 14.05ha at Chobham Common SSSI. The route through the two SSSI components of the SAC is shown in Figure 9.13 of the HRA report [APP-130 and APP-131].
- 3.3.3 As described for Thames Basin Heaths SPA above, the ExA noted discrepancies within submissions with regards to the area of SAC habitat affected by the Proposed Development, including the areas of each qualifying feature. Rushmoor BC [AS-079] commented on the figure of 7.61ha of European dry heath in their additional submission after Deadline 5 that "The figure of 7.61 ha of dry heath came from the applicants own HRA. Despite repeatedly asking the applicant for a breakdown of areas of actual heathland and the area of the tracks within the order limits, over many months this information has still not been provided. To resolve the issue of the habitat loss on the SAC, RBC requests that the ExA require the applicant to provide accurate figures of the amount of actual SAC habitat to be lost. Without such information it is difficult to identify or assess the impact on the designated sites."

- 3.3.4 The Applicant was requested to clarify the areas of SAC habitat at the Environmental ISH of 26 February 2020 [EV-021 to EV-25] and in the Action Points issued following ISH5 [EV-026]. As noted for Thames Basin Heaths SPA above, the Applicant provided at Deadline 6 [REP6-073 and REP6-074] a breakdown of the 36.95ha of habitat within the component SSSIs that is present within the Order Limits.
- 3.3.5 The Applicant's HRA report [APP-130 and AS-026] concludes that there would be no LSE on the 4030 European dry heaths qualifying feature of the SAC for all potential effects considered (ie physical disturbance/habitat loss, hydrological changes, air quality changes, ground contamination, INNS, and in-combination) and thus this qualifying feature was screened out of an assessment of AEoI.
- 3.3.6 Table 4.2 of the HRA report [APP-130] and Table D.8 of Appendix D [AS-026] summarise that given the relatively small area of loss and reinstatement measures proposed, the effect on the SAC in respect of the 'European dry heaths' feature is considered to be *de minimis*.
- 3.3.7 Effects associated with potential spread of INNS, hydrological change, and air quality change were also screened out on the basis of the small area of SAC affected by the Order Limits when compared to the overall size of the site; the small area of the SAC and the nature of the works; and the relatively small scale, localised nature, and short duration of the works (respectively) (Table 4.2 of the HRA report [APP-130]).
- 3.3.8 The ExA in Written Question BIO.1.44 [PD-008] asked the Applicant to explain why no pathway for hydrological changes and resulting effects is considered to exist for European dry heaths. The Applicant responded [REP2-040] that "European dry heaths are not critically dependent on levels or flows of groundwater and would not be sensitive to fluctuations in the water table, either drawing down or raising, unless these were significant and long-term. The vegetation types representing this Annex I habitat are characteristic of well-drained sandy profiles where the water table is well below ground level throughout most of the year, particularly in the growing season when there is typically a large soil-moisture deficit."
- 3.3.9 The Applicant [REP2-040] stated that construction and operation of the pipeline would be unlikely to result in significant and / or long-term changes in groundwater levels in areas supporting European dry heaths habitat, as in locations where the Order Limits pass through or near to this habitat, the pipeline would likely be installed in the unsaturated zone below the habitat, and so would not intercept groundwater flows. The Applicant stated that installation of the pipeline in areas where the water table could be closer to the ground surface would be likely to support habitats other than European dry heaths (such as North Atlantic wet heaths with *Erica tetralix* qualifying habitat), and changes in groundwater levels and flows at such locations would likely be very localised in extent due to the size and design of the pipeline and so be unlikely to significantly affect nearby European dry heaths habitat.
- 3.3.10 The Applicant [REP2-040] stated it is unlikely that the Proposed Development would result in any changes to surface water levels or

- flows, that the Proposed Development would not modify watercourses, and stands of European dry heaths habitat that are located in elevated or sloping ground so that surface drainage patterns would be unlikely to be modified. The Applicant therefore concluded there would be no potential for LSE by changes to surface water levels or flows.
- 3.3.11 The ExA also asked the Applicant [PD-008] to clarify the potential for LSE arising from the spread of INNS, ground contamination and air quality changes, and whether they are relying on mitigation measures to dismiss LSE associated with such effects. The Applicant responded [REP2-040] that for all three pathways (INNS, ground contamination and air quality), the potential for LSE to arise is very low given the very small scale of the works compared to the extent of the SAC. Similarly, for all three effects sources, if an effect was to occur, it would be considered *de minimis*. The Applicant confirmed that mitigation measures are not relied upon to screen out LSE.
- 3.3.12 In their signed SoCG [REP1-005] and in response to the ExA's Written Questions [REP2-074], NE stated that they confirm agreement with the Applicant's assessment and conclusions in the HRA report, including the Thursley, Ash, Pirbright and Chobham SAC. Surrey County Council in their LIR [REP1-023] stated they own Chobham Common SSSI and that "The County Council is satisfied that adequate consideration has been given to the European designations (Thames Basin Heaths SPA and Thursley, Ash, Pirbright & Chobham SAC) and the national designations (SSSI and NNR) that cover the Common, and that the integrity of those designations would not be compromised by the proposed scheme." Surrey County Council [REP1-023] also stated in respect to the SAC that "Paragraph 7.5.14 (p.82) of Chapter 7 of the ES reports that the area of dry heathland that would be small and that therefore significant adverse impacts would be unlikely to arise. Table 4.2 (pp.37-39) in Chapter 4 (Stage 1 Screening) of the HRA report concludes that the impact of the pipelines installation on the European dry heaths habitat of the SAC would be de minimis, and required no further assessment. The County Council does not disagree with the conclusions of that assessment."
- 3.3.13 Representations on HRA matters made by Rushmoor BC during the Examination predominantly included specific reference to the supporting habitats within the Thames Basin Heaths SPA rather than the SAC [RR-293, REP1-015, REP2-031; REP2-080; REP2-081; REP3-038; REP3-040; REP3-041; REP4-071; REP4-072; REP5-043; EV-021 to EV-025; REP6-088]. However, Rushmoor BC did cite concerns with the screening out of LSE on the European dry heaths qualifying feature [REP4-071], stating that it is Rushmoor BC's view that the project would adversely affect the integrity of the Natura 2000 network as there is likely to be a direct impact to 48 breeding territories and 30.68ha of breeding habitat used by Thames Basin Heaths SPA birds and 7.61ha of European dry heath designated within Thursley, Ash Pirbright and Chobham SAC.
- 3.3.14 Rushmoor BC [AS-079] stated in response to NE's Deadline 4 response that "In respect of the Thursley, Ash, Pirbright and Chobham SAC, again the council welcomes the avoidance measures listed with NE's response as this will minimise impact. However this does not absolve the applicant

- from ensuring that there is mitigation for the 7.61ha to be lost as a result of the proposals and the council could not agree with NE's conclusion that appropriate measures are proposed to ensure there is no direct loss or damage to habitats of European importance when the applicant acknowledges that 7.61ha of habitat will be lost in its entirety."
- 3.3.15 The ExA asked the Applicant in Further Written Question BIO.2.27 [PD-013] to explain how there would be no significant impacts on the SAC when 7.61 ha of European dry heaths are within the Order limits, open trenching is to be used and only natural regeneration is relied on for mitigation.
- 3.3.16 The Applicant responded [REP4-020] arguing that generally the habitat loss attributable to the Proposed Development would be small in scale when compared to total habitat area within the SAC. Also, when taking account of the embedded measures intended to reduce impact the impact would be even smaller. The loss would be temporary since the site is capable of being restored through a preferred method of natural restoration. Careful soil management would be required to deliver on this and would be secured through a number of specific commitments.
- 3.3.17 The ExA in Further Written Question BIO.2.28 [PD-013] asked the Applicant to provide details as to what mitigation would be provided to ensure no net loss of qualifying mature and semi mature European dry heath during the regeneration of the heathland.
- 3.3.18 The Applicant responded [REP4-020] that specific mitigation is not proposed or necessary for the effect on the Thursley, Ash, Pirbright and Chobham Common SAC in respect of potential disturbance to European dry heaths. This qualifying feature was screened out of LSE.
- 3.3.19 The Applicant [REP4-020] stated that heathland habitat is dynamic and is often in unfavourable condition if left unmanaged. The Applicant referred to the SSSI condition report for Chobham Common SSSI in the area of the Order Limits stating they are in unfavourable recovering condition with management required to increase the proportion of early stages heathland succession. The Applicant stated that the vegetation clearance and turf stripping for the Proposed Development is comparable to these management techniques.
- 3.3.20 In their Additional Submission submitted after Deadline 5 [AS-079] and in response to NE's response at Deadline 4 [REP4-063], Rushmoor BC confirmed their continuing concerns with regards to the loss of European dry heath qualifying feature and the absence of mitigation.
- 3.3.21 As noted for Thames Basin Heaths SPA above, the Applicant responded at ISH5 [EV-021 to EV-025] that they do not consider the heathland habitat would be lost but consider it would be changed. The Applicant stated that the SAC habitats respond well to human intervention and heathland would bounce back.
- 3.3.22 At Deadline 6 and in response to ISH5 Action Point 5 [EV-026], habitat areas within the SAC affected by the Proposed Development, the Applicant stated that the "Implementation of the narrow width working, trenchless construction techniques and other good practice measures

- would reduce the area of habitats actually impacted... ... Table 3 shows how the construction area within the Thursley, Ash, Pirbright and Chobham SAC is reduced to approximately 6.41ha with 1.8ha of that comprising Annex I qualifying habitat [European dry heath]."
- 3.3.23 In response to ISH5 Action Point 7 [EV-026] requesting confirmation of the amount of habitat that would be lost in the SAC in total and for each qualifying interest, the Applicant [REP6-074] confirmed that the Order Limits encompass approximately 29.30ha of land within the SAC in total, which comprises approximately 14.06ha at Colony Bog and Bagshot Heath SSSI and 15.25ha at Chobham Common SSSI. Of these habitats, European dry heath comprises 7.6ha; North Atlantic wet heaths with *Erica tetralix* comprises 1.13ha; and Depressions on peat substrates of the *Rhynchosporion* comprises 0.12ha. The Applicant contends that no habitats which are qualifying features of the SAC would be permanently lost and areas of affected SAC habitat would be reinstated and allowed to naturally regenerate.
- 3.3.24 The Applicant also stated that detailed habitat, vegetation and botanical survey of both SSSI components of the SAC was undertaken in summer 2018 and is reported in Appendix F to the HRA report [APP-130 and APP-131]. Table 4 in the response provides the approximate areas of the qualifying interest habitats present within the Order Limits both with and without the application of measures.
- 3.4 Solent and Southampton Water SPA and Ramsar, Solent and Dorset Coast pSPA, and Solent Maritime SAC

Qualifying features

3.4.1 The ExA in Written Question BIO.1.61 [PD-008] queried the number provided for the qualifying waterfowl assemblage of the Solent and Southampton Water SPA, as the HRA report [APP-130 and APP-131] differed from that stated on the Natura 2000 data form. The Applicant confirmed in response [REP2-040 and REP4-056] that the number in the HRA report is an error and that the correct number is 51,361.

Water quality and pollution control measures

3.4.2 Eastleigh BC in their LIR [REP1-011] commented on the need to ensure there are no adverse impacts on the water quality from the proposed construction (through de-watering, construction drainage etc) given the presence of the Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar site downstream of Ford Lake. They also raised concerns in their WR and responses to ExA Written Questions [REP2-064] with regards to water quality impacts to watercourses and the need to protect the Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar. Eastleigh BC stated that Article 17 of the draft DCO, "paragraph 6 should be made stronger as it is essential that water quality is not compromised. The ecology of the receiving watercourses must not be impacted and with European sites nearby downstream, the Habitats Regulations must be adhered to."

- 3.4.3 Eastleigh BC stated that with reference to a drainage ditch and sustainable drainage system for the adjacent Boorley Park development that proposes to feed into this ditch, which ultimately downstream feeds into the Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar site, that the water quality of the surface water run-off from the adjacent Boorley Park development is important and the flow of water along the ditch provides one of three required stages of natural filtration. It is vital therefore that the proposed pipeline does not damage the ditch or pollute the water within it during construction.
- 3.4.4 The Applicant [REP3-016] responded by directing to measure G82 and G12 of the CoCP, which includes for pre-construction drainage surveys and no intentional discharge of site run-off without appropriate treatment and agreement with the appropriate authority. The Applicant also referred to Requirement 6 of the draft DCO (production and agreement of a CEMP) to agree the details of the water mitigation and management measures, and also to measures G8, G123, and G130. Consequently, the Applicant did not consider it necessary to strengthen Article 17 of the draft DCO.
- 3.4.5 An Outline Surface Water Drainage Plan [REP4-045] and Outline Water Management Plan [REP4-038] (Appendix B to the Outline CEMP) was submitted by the Applicant at Deadline 4.
- 3.4.6 A signed SoCG between the Applicant and Eastleigh BC [REP6-016] was provided at Deadline 6. The SoCG confirmed agreement on matters of water and flood risk; surface and foul water drainage; and water mitigation and management measures, including drainage during construction. With regards to the latter, it states that Eastleigh BC "identified the need for further details to be provided, including on construction related drainage, and reinstatement of drainage. The parties are in agreement that the detailed water mitigation and management measures will be set out in the Water Management Plan (Appendix B to the CEMP), an Outline of which was submitted by the Applicant at Deadline 4, and the detail of which will be discussed with and submitted for the approval of the Authority as secured by DCO Requirement 6"
- 3.4.7 The SoCG identified that the detailed content of the Outline Plans (CEMP and LEMP) and CoCP remains a matter 'not agreed' at this time. The current situation is described as: "Esso will submit an updated CoCP, Outline LEMP and Outline CEMP (and Appendices) at Deadline 6. The Authority reserves its position on these plans until it has reviewed them.
- 3.4.8 Esso is confident that an acceptable CoCP will be submitted to the Examination and certified as part of the approval of the DCO. Esso is also confident that an acceptable detailed CEMP and LEMP will be discussed with and submitted to the Authority for approval prior to the implementation of any Stage of the development within Eastleigh Borough, as secured by DCO Requirement 6 (CEMP) and 12 (LEMP)."

Nutrient release

3.4.9 The ExA queried in Written Question BIO.1.39 [PD-008] whether the Proposed Development is likely to result in the release of additional

nutrients into the system / European sites, as the potential for generation of nutrient run-off during construction was identified in the HRA report for the Solent and Southampton Water SPA and Ramsar, and Solent Maritime SAC but was not described in any detail in the screening assessment at Appendix D to the HRA report [APP-130, APP-131 and AS-026].

- 3.4.10 The Applicant [REP2-040] responded that the screening assessment provides detail of the potential effect pathway in relation to generation of nutrient runoff (e.g. via silting) and describes associated control measures. The Applicant stated that the project is not likely to result in release of nutrients into the system / European site.
- 3.4.11 The ExA [PD-008] also asked NE in Written Question BIO.1.40 to confirm whether the issues raised in the recent European Court of Justice (CJEU) 'Dutch case' C293/171 and addressed in NE's advice on achieving nutrient neutrality for new development in the Solent region are applicable in this case, given the location of the Proposed Development in proximity to European sites within the Solent. NE were also asked to identify any concerns with regards to the Proposed Development and the Applicant's assessment of LSE on the Solent European sites.
- 3.4.12 NE [REP2-074] confirmed in response that the issues currently ongoing with regard the Solent and nutrients are not applicable in this case and stated that "this issue should not hinder the assessment of this scheme by the Examiner." NE did not respond directly to the second part of the question in their response but confirmed agreement with the assessment and conclusions in the Applicant's HRA report [REP2-074] and in the signed SoCG [REP1-005].

3.5 Assessment of decommissioning

- 3.5.1 Rushmoor BC in its WR [REP2-081] raised concern that decommissioning of the existing aviation fuel pipeline and the new pipeline have not been assessed in the HRA and EIA.
- 3.5.2 Rushmoor BC stated that "The information provided does not assess the intra project in-combination impacts of the decommissioning of the old or new pipelines. There is a high risk that the habitats lost could again be disturbed during the decommissioning of both pipes. We note that ESSO state that, due to advances in technology, it would be difficult to ascertain the impacts during the decommissioning stage for the new pipeline and that no final plans have been made for the decommissioning of the pipe in use. However, where there is uncertainty the Habitats Directive advocate that a precautionary principal is used, with the worst-case scenario being modelled. Therefore, the council would suggest that a loss of breeding habitat at the same level as within the construction process is assumed within decommissioning, with appropriate mitigation being required to ensure that any replacement habitat would not be impacted within the decommissioning stage."
- 3.5.3 Appendix E to the HRA report [APP-131] included consideration of the decommissioning of the existing aviation fuel pipeline. The Applicant

considered that there would be no temporal overlap of works but identified potential for additive effects if works took place concurrently. The HRA concluded "in the event pipeline decommissioning immediately followed construction of the new pipeline, this could extend the duration of works within protected sites. Potential in-combination issues would concern additive ground disturbance to SAC habitats only. Additive disturbance to SPA birds would not arise based on the conclusions of this HRA.

- 3.5.4 It is anticipated that decommissioning would be in-situ and would not involve excavation and removal of the existing pipe. Instead, the existing pipe would be grouted by pumping liquid concrete into it. As such, it is anticipated that activities associated with decommissioning could be undertaken outside the SAC and SPA and so no LSE would arise."
- 3.5.5 The Applicant, in response to the ExA's Written Question EIA.1.6 [PD-008] and in directing a response to Rushmoor BC's WR, stated that "Taking the existing pipeline out of service, known as decommissioning, is covered by the original pipeline consent and therefore does not form part of this project. The existing pipeline would be decommissioned once the replacement pipeline is operational. The nature of the pipeline network means that at no point can both pipelines be operational at the same time" and that a strategy for decommissioning would be produced at that stage. The Applicant stated that there would be no overlap between the construction phase of the proposed pipeline and the decommissioning of the existing pipeline and described the likely procedure, including a preference for grouting over removal.
- 3.5.6 The Applicant [REP2-039] in response to ExA's Written Question GQ.1.1 [PD-008] stated "The decommissioning of the existing pipeline is not secured in the draft DCO (Document Reference 3.1 (3)) and does not need to be in the Applicant's view." The Applicant stated that decommissioning of the existing pipeline would be carried out in accordance with the requirements of the Pipeline Safety Regulations 1996 and in accordance with good industry practice. The need for other consents such as environmental permits or species protection licences would be fully assessed and sought as necessary. The Applicant reiterated that due to the connections, it is impossible to operate both pipelines concurrently. The Applicant stated that no additional development consents or land rights are required to undertake the decommissioning work and it is not included in the scope of the Proposed Development.
- 3.5.7 The Applicant [REP2-041] confirmed in response to CA.1.17 [PD-008] that there is no requirement in the Existing Authorisation or the 1962 Act regarding the manner or timing of decommissioning for the existing pipeline; the relevant legislation is the Pipeline Safety Regulations 1996.
- 3.5.8 In response to DCO.1.28 [PD-008], the Applicant [REP2-042] explained that "accepted practice for onshore oil industry pipelines is that abandoned pipelines are typically isolated, purged and cleaned of their former hydrocarbon contents and are then usually filled with an inert cement grout. The pipeline is, therefore, left in situ in a safe condition

- and the presence of the grout means that even if the outer steel case corrodes over time, no void space is left that could become a channel for water or gasses or cause surface subsidence (in compliance with the regulations and guidance cited above)"
- 3.5.9 With respect to the Proposed Development, the Applicant's Planning Statement [APP-132] states that "When the operator of the replacement pipeline determines that it will permanently cease pipeline operations, it will consider and implement an appropriate decommissioning strategy taking account of good industry practice, its obligations to land owners under the relevant pipeline deeds and all relevant statutory requirements.
- 3.5.10 At the time that decommissioning will take place, the regulatory framework, good working practices and the future baseline could have altered. It is not possible to assess the probable future effects at the present time."
- 3.5.11 The Applicant included in the draft DCO [REP6-003 and REP6-004] Requirement 16: Commercial operation of the existing fuel pipeline, which states "16. The undertaker must ensure that the existing fuel pipeline is no longer capable of commercial operation once the pipeline works have been commissioned."
- 3.5.12 The signed SoCG with Rushmoor BC [REP6-020] identifies that decommissioning is a matter 'not agreed' between the Parties. The SocG states "As set out in the Authority's Local impact Report, it is the Authority's view that the impacts of decommissioning of the existing and proposed replacement pipelines should be considered within the EIA with the worst case scenario being assessed to ensure all impacts are mitigated. Due to the uncertainty regarding the technology available at the decommissioning stage, the Authority feels the precautionary principal should be used when assessing significant impacts. It also has concerns as a landowner which are set out in its written representations. Esso's position on decommissioning has been set out in its submissions to the Examination."
- 3.5.13 No other IPs raised concerns with regards to decommissioning and the conclusions of the Applicant's HRA in this regard.

3.6 In-combination assessment

- 3.6.1 The ExA queried in Written Questions BIO.1.37 [PD-008] the information and assumptions made in reaching the conclusion that visual, dust and noise impacts would not act in-combination with impacts from proposals to expand the Heathrow Airport, as the ExA understands that these proposals are in earlier stages of development and that detailed information may not yet be available on which to base the assessment.
- 3.6.2 The Applicant [REP2-040] responded that the "baseline information about the Heathrow Expansion Project was obtained from the Environmental Impact Assessment Scoping Report (Heathrow Airport Limited, May 2018) published on the Planning Inspectorate website. This was used along with technical knowledge of the likely effects based on

similar schemes." The Applicant confirmed that the "distance from the project Order Limits and the Heathrow Expansion boundary is approximately 1km. The Habitats Regulations Assessment (HRA) Report (Application Document APP-130 and APP-131) makes clear that the effects resulting from the project would be very localised and short term in nature. Therefore, due to the distance between the two schemes and nature of the project, no in-combination impacts are anticipated."

3.6.3 During the Examination, additional projects / plans were highlighted by a number of local authorities in their LIRs and/or in response to ExA Written Questions EIA.1.7 and EIA.1.8 [PD-008] during the Examination, as identified in Table 3.1 below. The table also identifies the Applicant's response.

Table 3.1 Projects and Plans identified by Local Authorities and IPs with respect to the Applicant's cumulative / in-combination assessment

Local Authority/ Interested Party	Project or Plan identified	Applicant's response	
Eastleigh BC [REP2-064]	104 dwellings at Land South of Maddoxford Lane, west of Westfield, Boorley Green (F/19/85178)	Applicant [REP3-016] stated that this project was not included in the cumulative assessment as was submitted on 12 March 2019, after the completion of the cumulative effects assessment [APP-055] The signed SoCG with Eastleigh BC [REP6-016] states that it is agreed that "The Authority is satisfied that the Applicant has and continues to take account of development sites within the borough, and is working with the respective landowners and developers to avoid or mitigate potential impacts. The Authority has commented that Chapter 15 of the submitted Environmental Statement (APP-055) does not refer to application F/19/85178 which was submitted to the Authority in March 2019. Esso confirmed in REP3-016 that "application F/19/85178 was submitted on 12 March 2019, which was after the completion of the Cumulative Effects Assessment included within the Application and therefore is not included within the application documents"	
Eastleigh BC [REP2- 064]	Land off Woodhouse Lane (0/18/83634) – outline permission was granted on 6 September 2019	Applicant [REP3-016] stated O/18/83634 was assessed within the interdevelopment cumulative effect assessment and presented in ES Appendix 15.3 [APP-127], which concluded effects were not significant	
Runnymede BC [REP2-079]	Heathrow Airport Expansion	Applicant [REP3-020 and REP2-053] confirms this project was included in the long list of developments considered in ES Chapter 15 [APP-055] The draft (unsigned) SoCG between the Applicant and Runnymede BC [REP6-019] states under matters agreed: "The Authority agrees that the list of developments and allocations within its borough, considered in the cumulative effects assessment and reported in Chapter 15 of the Environmental Statement, is satisfactory." Heathrow Airport Expansion is identified in the list appended to the SoCG.	

Local Authority/ Interested Party	Project or Plan identified	Applicant's response
Runnymede BC [REP2-079]	River Thames Scheme	Applicant [REP3-020 and REP2-053] confirms this project was included in the long list of developments considered in ES Chapter 15 [APP-055] The draft (unsigned) SoCG between the Applicant and Runnymede BC [REP6-019] states under matters agreed: "The Authority agrees that the list of developments and allocations within its borough, considered in the cumulative effects assessment and reported in Chapter 15 of the Environmental Statement, is satisfactory." The River Thames Scheme is identified in the list appended to the SoCG.
Spelthorne BC LIR [REP1-021]	Listed at Appendix SBC-1 other major developments in Spelthorne close to the pipeline corridor SBC identify potential impacts in this appendix	Applicant [REP3-020] responded that they have undertaken an incombination effects or inter-project cumulative effects assessment as required under the EIA Directive and NPS EN-1 and considers the cumulative effects assessment in both the ES [APP-055] and the HRA Report [APP-131] to be both adequate and proportionate to the scale of the works The signed SoCG between the Applicant and Spelthorne BC [REP6-022] states under matters agreed: "The Authority agrees that the list of developments and allocations within its borough considered in the cumulative effects assessment and reported in Chapter 15 of the Environmental Statement (ES) is satisfactory. A list of developments can be found in Appendix D of this document. The Ministry of Housing, Communities and Local Government granted Esso safeguarding for the proposed Order Limits on 10 June 2019. Therefore Esso is aware of the more recent planning developments included within appendix SBC-1 of the Authority's Local Impact Report (LIR - REP1-021)."
Surrey County Council [REP2-089]:	The proposed Garden Village at Longcross and the associated provision of a SANG on land at Chertsey Common	No specific response from the Applicant to this project/plan could be found In the signed SoCG between the Applicant and Surrey County Council [REP6-023] states that "The Authority agrees that the list of developments and allocations within the county, considered in the cumulative effects assessment and reported in Chapter 15 of the Environmental Statement is satisfactory."

Local Authority/ Interested Party	Project or Plan identified	Applicant's response
Surrey County Council [REP2-089]	Applicant stated in HRA report Appendix E that permission has been granted for RU.17/0793 (Longcross South, Chertsey); however, this was only a scoping opinion in 2017	Applicant [REP3-020] accepted this error and stated that it does not undermine the findings of the HRA
Surrey County Council [REP2-089]	Surrey Waste Plan (SWP) and emerging Surrey Waste Local Plan (SWLP). Identified that "the adopted Plan and the emerging Plan both allocate an area of land off Kitsmead Lane at Longcross, immediately to the east of the proposed Longcross Garden Village site, for waste related development. Both the adopted SWP and the emerging SWLP have been subject to plan level HRA, which concluded in each case that no significant impacts were likely in respect of the Chobham Common SSSI component of the Thames Basin Heaths SPA and the Thursley, Ash, Pirbright & Chobham SAC. For completeness Appendix E to the HRA should take account of the SWP and the SWLP."	No specific response from the Applicant to this project/plan could be found In the signed SoCG between the Applicant and Surrey County Council [REP6-023] states that "The Authority agrees that the list of developments and allocations within the county, considered in the cumulative effects assessment and reported in Chapter 15 of the Environmental Statement is satisfactory."

- 3.6.4 Hampshire County Council [REP2-066], Hart District Council [REP5-018], South Downs National Park Authority (SDNPA) [REP2-086], Surrey Heath BC [REP2-091], and Winchester City Council [REP2-097] had no comments or no concerns with the projects and plans considered in the Applicant's cumulative and/or in-combination assessment.
- 3.6.5 NE did not raise any concerns with regards to the Applicant's incombination assessment and confirmed their agreement with the assessment and conclusions in the Applicant's HRA report in their SoCG [REP1-005] and in their response to ExA's Written Questions [REP2-074].
- 3.6.6 Rushmoor BC also raised concern with regards to the Applicant's incombination assessment of effects on SANGs and recreational displacement to the Thames Basin Heaths SPA. This is discussed in detail in Section 4 of this report.

3.7 Summary of HRA screening outcomes during the Examination

- 3.7.1 A total of eight European sites were screened by the Applicant prior to Examination, as listed in Annex 1 to this report. Of these sites, the Applicant concluded that there would be no LSE on six European sites and their qualifying features. IPs did not dispute the Applicant's conclusion of no LSE on these six European sites and their qualifying features during the Examination.
- 3.7.2 As noted above, Rushmoor BC disputed the Applicant's screening conclusion of no LSE arising from direct habitat loss on the Thames Basin Heaths SPA and the screening out of LSE on the European dry heath qualifying feature of the Thursley, Ash, Pirbright and Chobham SAC. Screening matrices for these two European sites are included in Annex 2 to this report to reflect the disputed positions between the Applicant and Rushmoor BC. A summary of the European sites, their qualifying features and an indication of agreement with IPs is also included in Annex 1 to this report.
- 3.7.3 The Applicant concluded LSE on two European sites: Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC. The Applicant's assessment of AEoI for these sites is discussed in Section 4 below.

4 ADVERSE EFFECTS ON INTEGRITY

4.0 Conservation Objectives

4.0.1 The conservation objectives for the two European sites (Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC) assessed by the Applicant for AEoI are included within the Applicant's HRA report [APP-130] at Sections 5.5 and 6.5, respectively. The Conservation Objectives for all eight European sites are also referenced briefly in Table 4.1 of the HRA report [APP-130].

4.1 Thames Basin Heaths SPA

- 4.1.1 The Applicant considered the potential for AEoI on the Thames Basin Heaths SPA from the Proposed Development alone within Section 5 of the HRA report [APP-130] and in the integrity matrix at Table 5.4 [APP-130]. The potential effects considered for AEoI included:
 - noise and visual disturbance of breeding qualifying species within the SPA during construction; and
 - noise and visual disturbance of breeding qualifying species within the SPA due to displacement of recreational activities (into the SPA) from SANGs intersected by the Order Limits.
- 4.1.2 Potential effects were considered for all three qualifying features: Dartford warbler; nightjar; and woodlark.
- 4.1.3 The HRA report [APP-130] states that no in-combination effects were identified during the stage 1 screening assessment. The plans and projects considered for the in-combination assessment are discussed above in Section 3.6 to this report.
- 4.1.4 The Applicant concluded that the project **would not adversely affect the integrity** of the Thames Basin Heaths SPA.
- 4.1.5 NE stated that they support the conclusions of the HRA that there would be no AEoI after the implementation of appropriate mitigation and good practice measures [REP1-005 and REP2-074]. SWT [REP1-004] also confirmed they agree with the conclusion that there would be no AEoI of either the Thames Basin Heaths SPA or the Thursley, Ash, Pirbright and Chobham SAC after implementation of appropriate mitigation and good practice measures.
- 4.1.6 The Applicant's conclusions **were disputed** by a number of IPs during the Examination and a number of matters in respect to the Applicant's HRA and assessment of AEoI were discussed. These are detailed below. Where conclusions around AEoI have been disputed by IPs during the Examination, the Applicant's Stage 2 integrity matrices [REP3-023] have been updated for the relevant sites and features (see Annex 3 of this report).

Noise and visual disturbance of breeding qualifying species within the SPA during construction

- 4.1.7 The HRA report [APP-130, APP-131 and AS-026] identifies the potential for LSE arising from the construction works within and near the Order Limits. The HRA report describes likely sources of noise as that arising from movement of plant and personnel within the construction area, excavation and other ground works, and transport.
- 4.1.8 The HRA report states at paragraph 5.8.5 that "To avoid disturbance to the qualifying species during the breeding season, potentially disturbing construction works within the Thames Basin Heaths SPA would be undertaken between 1 October and 31 January unless otherwise agreed with Natural England (G38). Areas where seasonal constraints would apply due to the risk of disturbance during breeding season are indicated by Figures 9.9, 9.10 and 9.11."
- 4.1.9 It is concluded that in view of the avoidance measures proposed, there would be no AEoI of the Thames Basin Heaths SPA as a result of noise and visual disturbance.
- 4.1.10 This avoidance measures (G38) was included in the CoCP up until Deadline 4, at which point it was deleted and subsequently placed in the Outline CEMP [REP4-036] in 'Section 2.2: Construction Schedule' and remains at Deadline 6 [REP6-028 and REP6-029]. The CEMP is secured through Requirement 6 of the draft DCO [REP6-003 and REP6-004]. The Outline CEMP is a certified document in Schedule 11 to the draft DCO [REP6-003 and REP6-004].
- 4.1.11 At ISH5 [EV-021 to EV-025] the ExA asked whether the proposed timings of works in respect to the HRA conclusions should be included on the face of the DCO. The Applicant stated that legally speaking it is fine to be included in the CoCP¹¹ and confirmed that the CoCP is not an outline document.
- 4.1.12 As noted at paragraphs 3.2.67 above, the ExA at ISH5 [EV-021 to EV-025] asked the Applicant to confirm how long construction works would take place in the Thames Basin Heaths SPA. The Applicant [REP6-074] responded that this is secured in the CoCP and the wording had been amended to state "G38: Potentially disturbing construction works within the Thames Basin Heaths Special Protection Area (SPA) would be undertaken in the four months between 1 October and 31 January unless otherwise agreed with Natural England. This would apply to the areas identified in Figures 9.9, 9.10 and 9.11 within the HRA Report (Application Documents APP-130 and APP-131)."
- 4.1.13 The Applicant however also confirmed at Deadline 6 [REP6-073] in a post-hearing note to their Written Summary of ISH5 that this measure was included in the Outline CEMP but has now been moved to CoCP. However, in the Deadline 6 submissions this measure remains in the

¹¹ This measure (G38) is not within the CoCP [REP6-009 and REP6-010] but is contained in the Outline CEMP [REP6-028 and REP6-029]

- Outline CEMP [REP6-030 and REP6-031] and not in the updated CoCP [REP6-009 and REP6-010].
- 4.1.14 This measure is also listed in the HRA Commitments Schedule [REP6-078] submitted by the Applicant at Deadline 6 but in its original, rather than amended, form.

Displacement of recreational activities to the SPA due to construction works in SANGs

- 4.1.15 The HRA report [APP-130 and APP-131] confirmed that the Order Limits for the Proposed Development pass through four SANGs and one proposed SANG. These include:
 - Crookham Park / Queen Elizabeth Barracks SANG (SU 81596 51584);
 - Southwood Golf Course proposed SANG (SU 84727 54817);
 - St Catherine's Road SANG (SU 89025 58134);
 - Windlemere SANG (SU 94264 61763); and
 - Chertsey Meads SANG (TQ 06159 66151).
- 4.1.16 During the Examination it was confirmed by Rushmoor BC that the proposed Southwood Golf Course SANG is a designated formal SANG named Southwood Country Park [EV-021 to EV-025 and REP6-088]. In addition, Runnymede BC [REP3-035] confirmed the history and current status of Chertsey Meads SANG as a formal SANG, which the Applicant stated they understood not to be a SANG but treated as if it was formalised in their assessment [REP3-014 and REP4-029].
- 4.1.17 The HRA report [APP-130] confirmed at Section 5.8 that, unlike works in the Thames Basin Heaths SPA, there would be no seasonal restriction to construction works during within SANGs. The report states that the assessment has been undertaken on a worst-case scenario "whereby all construction works within SANG sites would be undertaken between 1 February and 30 September. This period includes the time when recreational activities are likely to be at their peak i.e. during the late spring and summer."
- 4.1.18 The HRA report [APP-130] also confirmed at paragraph 5.8.13 that construction activity would take place at multiple 'work fronts' and could theoretically affect all SANGs simultaneously or consecutively. The Applicant stated that scenarios relating to both maximum displacement intensity (assuming concurrent working) and maximum duration of displacement (assuming consecutive working) have been considered.
- 4.1.19 The HRA report describes at paragraph 5.8.15 that construction activity would not require total closure of any SANG, there are no SANG car parks affected by the Proposed Development, and that all SANGs would still be accessible during the works.
- 4.1.20 The report states that open cut trenching would be used for the majority of the route, but that where a different construction technique is

assumed, such as trenchless crossings or narrow working, works would take longer. The HRA report confirms that in some areas, including in partial areas of four of the five affected SANGs, there is a commitment to 'narrow working' for either the full extent of the crossings, or for specified sections, and therefore works could take longer due to these constraints.

- 4.1.21 The HRA report concludes that the "likely short duration and limited extent of the potential period of works within a SANG is considered to reduce the risk of significant levels of recreational displacement."
- 4.1.22 Paragraphs 5.8.20 to 5.8.29 of the HRA report [APP-130] describe each SANG affected by the Proposed Development and also include a description of anticipated receptor areas for any displacement from SANGs. A summary of representations on individual SANGs during the Examination is included in Annex 4 to this report.
- 4.1.23 The Applicant concludes that visitors would typically continue to use the SANGs and any displacement of recreational activities back to the SPA would be very low. Therefore, the Applicant concludes overall there would be no AEoI on the SPA as a result of displacement from SANGs during the construction of the Proposed Development [APP-130].
- 4.1.24 During the Examination, a number of IPs raised concerns regarding the Applicant's conclusions in this respect and questioned the assumptions and adequacy of information in the HRA report.
- 4.1.25 Concerns were initially raised by Surrey Heath BC in their RR [RR-033] and LIR [REP1-024] and in Rushmoor BC's RR [RR-293] and LIR [REP1-015]. Subsequent representations during the Examination detailed their ongoing concerns [REP2-081, REP3-040, REP3-049, REP4-076, REP5-043, REP5-048, and AS-079]. These concerns are expanded on further below.
- 4.1.26 Spelthorne BC [REP1-021] and Runnymede BC [REP1-017] in their LIRs raised concerns in respect to protected habitats and requested NE's involvement on HRA matters. Hampshire County Council [REP1-013] in their LIR stated they had no overriding concerns with regards to biodiversity but stated the concerns of Rushmoor BC and others in respect to disruption to the SANGs as mitigation for the Thames Basin Heaths SPA and noted and broadly agreed with.
- 4.1.27 Surrey County Council in their LIR [REP1-023], confirmed they are the owners of Chobham Common SSSI (a component SSSI of the Thames Basin Heaths SPA), and stated they do not disagree with the conclusions of the Applicant's ES and HRA with reference to the effects of visitor displacement from nearby SANGs on the integrity of the Chobham Common component of the Thames Basin Heaths SPA.
- 4.1.28 As noted earlier in this report, NE and SWT's signed SoCG with the Applicant submitted at Deadline 1 [REP1-005 and REP1-004, respectively] confirmed they agreed with the Applicant's conclusion in the HRA subject to the appropriate mitigation and good practice measures.

- 4.1.29 Rushmoor BC and Surrey Heath BC detailed in their RR [RR-093 and RR-293] and LIRs [REP1-015 and REP1-024] concerns with the Applicant's assessment of visitor displacement arising from construction works within SANGs, citing that any impact on an area of SANG has a consequential impact on the Thames Basin Heath SPA because SANGs are specifically provided and required in order to mitigate the impact of new development on the SPA [REP1-024]. Both local authorities stated that the Applicant's HRA relied on unverified assumptions with regards to the likely displacement of users of the affected SANG.
- 4.1.30 Surrey Heath BC's LIR [REP1-024] described that new development is specifically allocated to one SANG and therefore reliance cannot be placed on a range of SANGs, particularly for bespoke SANGs such as that at St Catherine's Road. Therefore, if the purpose of the SANG is compromised, the impacts on the SPA would likely be significant, with individuals looking to the SPA as an alternative source of recreation. Surrey Heath BC also commented that St Catherine's Road SANG is one of the only SANGs in West Surrey and Windlemere SANG is in very close proximity to the SPA. Surrey Heath BC stated that there are long term impacts if access is restricted, even temporarily, since visitors might be deterred from using the SANG in the future. Moreover, there are currently no provisions in the draft DCO to limit the time for which the Applicant can undertake works in the SANG, which are required to be managed in perpetuity. Surrey Heath BC stated that the temporary loss of other open space during construction could, along with the temporary loss of a SANG, exacerbate recreational pressures in the SPA.
- 4.1.31 Rushmoor BC [REP1-015] stated in their LIR that visitor capacity is calculated when a SANG is designated using the formula of 8ha /1000 population increase. Rushmoor BC stated that SANGS are required to serve a prescribed catchment to ensure that residents can access the Alternative Natural Greenspace easily and so use it in preference to the SPA. Rushmoor BC raised concerns with regards to the Applicant's statement in the HRA report that impacts associated with works in SANGs would be short-term and also the absence of visitor data / empirical data to calculate the likely displacement. Rushmoor BC stated that visitor displacement onto the SPA is likely to be exacerbated still further by the cumulative impact from the Proposed Development on five SANGS within close proximity, the disruption to natural habitats within the short and medium term, and the indication that the work on the SANGS would be undertaken within the summer months when SPA ground nesting birds are breeding.
- 4.1.32 Rushmoor BC raised concerns throughout the Examination [RR-293, REP1-015 and REP2-092] with the Applicant's assumptions in the HRA and the absence of visitor data, stating that a relatively accurate calculation of visitor numbers could be undertaken using the formula that calculates capacity (8ha/1000 population). During the Examination Surrey Heath BC [REP4-074] also highlighted concerns with regards to the Applicant's assumptions and an absence of visitor data.
- 4.1.33 The ExA [PD-008] asked questions of the Applicant in response to the concerns raised by the Rushmoor BC (as outlined above).

- 4.1.34 In response, the Applicant [REP2-040] stated that there is no available data on visitor numbers at the SANGs. The Applicant confirmed that in the absence of such data, paragraphs 5.8.15 to 5.8.29 of the HRA Report used information which is available to construct a reasoned case to assess the likelihood of displacement of visitors away from SANGs and to illustrate that if visitors are displaced from affected SANGs to the Thames Basin Heaths SPA, the displacement would not lead to adverse effects on site integrity of the SPA. The Applicant provided the following summary facts behind their reasoning:
 - no SANG will close;
 - no SANG car park will be affected;
 - works within SANGs will be temporary and of short duration;
 - unaffected alternative open spaces (other than the SPA) suitable for recreational activities are present in the vicinity; and
 - the proportion of the total size of the affected area within SANGs (c. 20ha) to the size of the SANGs overall (c.260ha) is small (c.8%).
- 4.1.35 The Applicant [REP2-040] stated that based on these facts, a low likelihood of visitors being displaced from SANGs to the SPA is concluded and that "if displacement does occur, it is reasonable to assume the resulting increase in potential disturbance to the bird species which are the Qualifying Interests of the SPA will be negligible, not leading to adverse effects on site integrity." The Applicant identified that the HRA [APP-130 and APP-131] concludes this with the worst-case scenario, ie all works and consequent potential visitor displacement could take place during the bird breeding season when all of the qualifying feature species of the SPA are present and at their most vulnerable to disturbance.
- 4.1.36 The Applicant [REP2-040] summarised the assumptions they made regarding the likely displacement from each SANG, stating that the assumption is made that if visitors decide not to use the affected SANG during construction, they are likely to select a nearby SANG or other open access space for recreational activities. The Applicant also stated "there can be no certainty in predicting what people choose to do; the assumptions made provide an assessment of likelihood of how visitors are expected to respond, given the choice of alternative sites available. The Applicant is not aware of any suitable measures that could be applied to reduce the uncertainty about how people would respond."
- 4.1.37 The Applicant [REP2-040] responded to the request to provide calculations with two points: Firstly, the project would not generate any additional population and therefore, there is no requirement to provide permanent SANG mitigation; and secondly, the pipeline would have a temporary impact during construction only. The Applicant stated that the adopted formula does not give an indication of visitor numbers, it only demonstrates the minimum number of hectares that should be provided for 1000 new occupants where mitigation for new residential development is provided in the form of a SANG.

- 4.1.38 The Applicant [REP2-040] stated that it is the current intention to use open-cut trench techniques for installing the pipeline and the application includes a commitment on access within the SANG, as OP04 in the CoCP (currently [REP6-009 and REP6-010]). The Applicant identified that there are two separate trenchless crossings (TC014 and TC021) and one area of narrow working (NW8) within SANGs. The Applicant stated that it is anticipated that visitors would typically continue to make use of the SANG during the construction period and any displacement of recreation activity to the SPA. Therefore, it is considered that the displacement of recreational activities associated with the construction phase of the project would not lead to AEoI of the SPA or its ecological functions as defined by the Conservation Objectives.
- 4.1.39 At Deadline 2, Rushmoor BC [REP2-081] and Surrey Heath BC [REP2-092] expanded on their outstanding concerns in their WRs.
- 4.1.40 Rushmoor BC's WR [REP2-081] pointed out that the Applicant states impacts to SANGs to be temporary but they have been informed they could be disturbed on a number of occasions throughout the construction period, with compounds present for up to two years. Therefore, works within SANGs could take place over three summer seasons. Rushmoor BC noted the Applicant's statements that they cannot commit to working times until a contractor is appointed but also noted that timing restrictions in the SPA have been agreed and queried why this could not also be the case for works in SANGs. Rushmoor BC concluded that they considered that, as the application currently stands, it would not be possible to conclude no AEoI, particularly as any measures are uncertain and cannot be relied upon.
- 4.1.41 Surrey Heath BC in their WR [REP2-092] reiterated concerns expressed in their LIR and stated they considered it essential the Applicant mitigate the impacts on St Catherine's Road SANG due to the potential for likely significant effects on the SPA. Surrey Heath BC also noted that there was no specific indication of the duration of works in the SANG.
- 4.1.42 Surrey Heath BC [REP2-092] confirmed they had made two suggested potential approaches to the Applicant that would deliver appropriate mitigation for the proposals impact on the SANG. The first was to remove the temporary construction compound from St Catherine's Road SANG and reduce the Order Limits relating to the construction of the pipeline to ensure that the SANG's circular walk and general tranquillity are not compromised during construction. Surrey Heath BC stated they would also seek for a restriction on the time period for which works could be undertaken on the SANG and for any works to be conducted outside of bird nesting season.
- 4.1.43 The second suggestion, if the Applicant was not prepared to remove the construction compound, was for the Applicant to agree to mitigate the impacts on the SANG by an appropriate financial contribution towards new SANG in the Borough, which would represent an alternative to the St Catherine's Road SANG. Surrey Heath BC also reiterated its view that the most appropriate location for the compound for materials around Frith Hill and in the vicinity of the SANG is that of the Deepcut Bridge

- Road compound (formerly proposed as a logistic hub) and that the compound in St Catherine's Road SANG is unnecessary.
- 4.1.44 Surrey Heath BC in their WR [REP2-092] also put forward two requirements they consider should be included in the DCO to ensure that the impacts on open space and SANG are fully addressed, and which they stated would help address concerns relating to the impacts of the proposed development on SANG and Open Space.
- 4.1.45 Runnymede BC [REP2-079] confirmed that it shared the concerns raised by Surrey Heath BC in respect of the effects of the Proposed Development on the Thames Basin Heaths SPA and associated SANGs. Runnymede BC stated the addition of two additional DCO Requirements above, as requested by Surrey Heath BC to provide safeguards in respect of the provision and capacity of SANGs and the management of open space generally during the construction of the Proposed Development, are supported.
- 4.1.46 At ISH2 and ISH3 [EV-009 and EV-010], matters in relation to impacts on SANGs were discussed. At the hearings the Applicant confirmed that site works, and the temporary construction compounds were required for a period of up to two years. The Applicant's response to ISH2 Action Point 18 [REP3-013] also confirmed that work within SANGs would not extend for more than two years. The Applicant stated that the CoCP would be amended for Deadline 4 to include a commitment limiting the duration of construction works within SANGs to two years, and that it does not consider that a wider Requirement controlling construction works in SANGs necessary. The Applicant also stated that in response to Surrey Heath BC's WR that it "does not consider that any evidence has been provided regarding impacts on St Catherines Road SANG which would require alternative SANG to be provided."
- 4.1.47 Local Authorities were also asked at ISH3 to submit a composite map showing the location of SANGs that would be affected by the construction of the proposed development [EV-010c]. Links to and/or maps were provided by Surrey Heath BC (referred to information submitted in LIR [REP1-024]), Runnymede BC [REP3-035], and Rushmoor BC [REP3-038]. Spelthorne BC [REP3-045] responded that there are no SANGs within the administrative area of Spelthorne BC that would be affected by the construction of the Proposed Development.
- 4.1.48 As noted in Section 3 to this report, Rushmoor BC issued a legal opinion at Deadline 3 titled 'Outline Legal submissions to address the legal adequacy of the Habitats Regulations Assessment submitted by the Applicant at Deadline 3 to the Examination [REP3-040]. Within this opinion, Rushmoor BC identified the conclusions of no AEoI from the impact to SANGs as one of their three key problems with the Applicant's HRA. They considered that: "Every SANG has been created to avoid recreational pressure on the SPA. If there was no risk of recreational pressure (e.g. because users would not go to the SPA, but instead go elsewhere) then the contribution under s 106 agreements for the creation and maintenance of SANGs could not have been justified. The SANG network is fundamental to the avoidance of recreational pressure

in the TBH SPA; it is a longstanding and carefully developed avoidance measures. In the HRA, the applicant claims (at 5.8.14) to have exercised "professional judgment" as to the impacts of affecting SANGs. But that judgment has already been made by the competent authorities: without the SANGs in question the recreational activity will be displaced to the SPA. At 5.8.18, the applicant relies on the "likely short duration" of construction activities, but the duration is in the control of developer. The applicant has now explained that the duration of interference would be up to 2 years. The applicant relies on recreational pressure being absorbed elsewhere and not in the SPA: but that is a false assumption, which undermines the justification for the creation of the SANGs in question. Further, it relies (at 5.8.21) on an existing SANG as a receptor, but that SANG is itself fully "subscribed" and has no capacity for absorbing recreational pressure from elsewhere."

- 4.1.49 Rushmoor BC's legal opinion [REP3-040] advocated that the Applicant's HRA falls well short of establishing no AEoI beyond reasonable scientific doubt. Stating that the contention that the Thames Basin Heaths SPA can accommodate extra recreational pressure is contrary to the practice of seeking to avoid additional recreational pressure.
- 4.1.50 Surrey Heath BC also issued a 'Written Representation on matters relating to the Thames Basin Heaths SPA and St Catherine's Road SANG' at Deadline 3 [REP3-049]. This raised points specific to the St Catherine's Road SANG and Windlemere SANG, which are summarised further in Annex 4 to the RIES. Comments were provided on the Applicant's responses at Deadline 2 with regards to the statement that the Applicant has worked extensively with NE on the Proposed Development and that NE are satisfied with the HRA. Surrey Heath BC considered there had been very limited information submitted to the Examination to evidence how NE reached this conclusion or any discussions with regards to potential measures given the potential for displaced recreational pressure.
- 4.1.51 Surrey Heath BC [REP3-049] reiterated points raised in their LIR and WR that the HRA report relies on unverified assumptions that nearby non-SANG sites would mitigate any displaced recreational pressure. This is on the basis that to be considered as a SANG, land in these areas would need to meet the requirements of the Surrey Heath Thames Basin Heaths SPA Avoidance Strategy Supplementary Planning Document, included as an appendix to Surrey Heath BC's LIR [REP1-024], and be subject to agreement with the Local Planning Authority in consultation with NE.
- 4.1.52 In response to points raised at ISH3, Surrey Heath BC [REP3-049] stated that SANGs are considered to be 'at capacity' once development equating to the total capacity available at the SANG has been allocated and that in many cases, bespoke SANGs such as St Catherine's Road are at capacity at the point of being delivered.
- 4.1.53 Surrey Heath BC [REP3-049] also stated that a SANG is provided and funded so they can function in perpetuity (considered to be at least 125 years in accordance with relevant legislation) and be provided in advance

of dwelling occupation to ensure no LSE on the Thames Basin Heaths SPA. As such it is Surrey Heath BC's view that if you interfere with a SANG you interfere with its quality and quantity and generate potential for displacement back to the SPA. Surrey Heath BC also stated that temporary impacts can give rise to AEoI on the Thames Basin Heaths SPA.

- 4.1.54 Surrey Heath BC identified that the duration, timings and construction design would be key to demonstrating no displaced recreational pressure and explained that they have requested Construction Method Statements for 'hot spot' areas including for St Catherine's Road SANG and Windlemere SANG.
- 4.1.55 Surrey Heath BC concluded that in order for them to be satisfied that construction activities, including the siting of the construction compound in St Catherine's Road SANG, would not give rise to the potential for adverse impact on the Thames Basin Heaths SPA due to displaced recreational pressure, the Applicant would need to demonstrate that:
 - "There are no alternative locations for the construction compound than on St Catherines Road SANG and in this eventuality demonstrate that appropriate mitigation would be provided through the provision or contribution to alternative SANG.
 - Absolutely minimise the construction period, including siting of the construction compound, within SANGs.
 - For any works that do take place in SANG, there needs to be a clear and detailed assessment of any potential displaced recreational pressure. This should include clear commitments to not carrying out works in SANGs during bird nesting season, minimising noise and visual impacts on the sites tranquility."
- 4.1.56 NE were not in attendance at ISH2 and ISH3, therefore the ExA issued specific questions to NE in a Rule 17 (R17) further information request [PD-010]. The R17 included a request for comments on the consideration of SANGs; the assumptions and methodology applied by the Applicant in their assessment; and comments on the timings of, and any restrictions to works in SANGs.
- 4.1.57 Hart District Council were also not present at ISH3, during which the Applicant [REP3-014] stated with regards to Crookham Park SANG that "Hart District Council had taken no issue with the approach of the Applicant and the subsequent impact on this SANG." The ExA therefore directed questions asking Hart District Council to confirm their view in the R17 further information request [PD-010]. Hart District Council responded [REP4-066] that following further discussions with the Applicant, they had no outstanding concerns regarding impact to the SANG. The signed SoCG between the Applicant and Hart District Council submitted at Deadline 5 [REP5-018] confirmed that Hart District Council are satisfied with the Applicant's HRA report, stating that it "satisfactorily assesses potential impacts on the SPA". The SoCG also stated that Applicant has taken into account information provided by the local

- authority over the routing through the Crookham Park SANG and the details of construction methodologies and mitigation for any impacts.
- 4.1.58 The ExA issued Further Written Questions [PD-013] to the Applicant and IPs, including NE, on outstanding matters of SANGs and the HRA for responses by Deadline 4. The Applicant and NE were asked in BIO.2.18 to comment on the legal opinion received from Rushmoor BC at Deadline 3 [REP3-040].
- 4.1.59 The Applicant issued in a response [REP4-032] to Rushmoor BC's legal opinion at Deadline 4. In respect to SANGs, the Applicant stated "The Applicant agrees RBC's summary of the principle confirmed in Holohan. However, the Applicant considers that in making the development consent order sought, the Secretary of State will be in a position to impose controls which will be strict enough to ensure that there will be no adverse effect on the integrity of the TBH SPA. In particular, the use of Order limits and limits of deviation (including narrow working within four of the five SANGs which are crossed by the replacement pipeline) for the project constrain the area within which construction activity may be carried out and the final location and alignment of any permanent and temporary works."
- 4.1.60 The Applicant stated that it "considers that these requirements will provide sufficient certainty that any powers to determine later parameters relating to the construction phase of the project, such as the location and timing of the works, are subject to controls which would guarantee that the exercise of those powers will not adversely affect the integrity of the TBH SPA."
- 4.1.61 In response to the point made by Rushmoor BC that professional judgement to estimate the likely level of visitor displacement from SANGs to the SPA has already been made by the competent authorities, the Applicant stated that this is not correct. Rather "the judgement made by competent authorities is whether there is a need for SANG provision in order to provide mitigation for the potential impact of residential development on the TBH SPA by providing alternative recreational facility and thus preventing an increase in visitor pressure on the TBH SPA."
- 4.1.62 The Applicant stated that given the proportion of each SANG affected, the temporary nature of the effect, and the existing green space local to each SANG, it was entirely appropriate for the Applicant to conclude that recreational pressure was capable of being absorbed by alternative green space outside the SPA.
- 4.1.63 The Applicant stated that it does not accept Rushmoor BC's case that recreational activity would inevitably be displaced to the SPA. The Applicant stated that "This appears to rely upon an assumption that the SANGs affected are "at capacity" and are therefore not capable of accommodating any further displaced recreational activity. However, the fact that a SANG is "at capacity", in the sense that no more new housing can be permitted in reliance on that SANG as mitigation for the potential effects of population growth, does not bear on the question of whether that SANG is capable, on a temporary basis, of accommodating

- recreational activity which may be temporarily displaced as a result of this project."
- 4.1.64 NE responded to the ExA's R17 and Further Written Questions at Deadline 4 [REP4-063 and REP4-064]. NE confirmed agreement with the conclusions presented in the Applicant's response to the legal opinion [REP4-064].
- 4.1.65 NE [REP4-063] stated that it is satisfied with the Applicant's general approach in considering possible risk of visitor displacement from SANGs to parts of Thames Basin Heaths SPA and with the conclusions in the HRA. NE acknowledged that the assessment of possible risk of visitor displacement and prediction of where people might go is challenging and stated they were aware that concerns remain over this aspect at St Catherine's Road SANG as a result of use of this site. NE confirmed they had raised this concern with the Applicant and sought assurance that the risk is being properly considered. NE stated that they believe it possible to minimise or avoid this risk through agreement over working methods and scheme design, stating this could be achieved through specific measures in a CEMP.
- 4.1.66 NE [REP4-063] also stated that "When considering the issue of displacement, the key unit of measurement is displacement of visits onto the SPA. That is what the TBH SPA project and SANG relies upon, for alternative sites to draw SPA visits away. In terms of St Catherine's Road SANG it is Natural England's view that if visitors were discouraged from using the site by construction activities or the presence of a works compound they are most likely to take advantage of the adjoining MoD land in Frimley, which has a public right of way running from St Catherine's Road. This land in not part of TBH and so there is no risk of recreational disturbance impacts." and that the "Secretary of State should give consideration to this residual risk when assessing the HRA and whether sufficient controls are, or can, be put in place to ensure the integrity of TBH SPA. However, Natural England is satisfied that this risk is de minimus."
- 4.1.67 NE [REP4-063] confirmed that they provided advice to Surrey Heath BC on suggested means of avoiding or minimising risk of visitor displacement to discuss directly with the Applicant. These included:
 - Provision of clear, user-friendly information at access points in advance of works so that regular visitors are aware of what is going on, and which makes clear that the site will remain open;
 - Provision of information whilst work is taking place which makes clear that people are still welcome;
 - Having people on site whilst work is taking place who can interact with visitors and provide a friendly interface;
 - Planning works so as to avoid obstruction of main access routes;
 - Minimising temporary land take for storage of vehicles, materials, etc.

- Positioning 'stringing out' area so that it avoids obstructing access routes;
- Keep working width to minimum; and
- Maintain screen of vegetation alongside access routes where this might help maintain low visibility of works area.
- 4.1.68 NE [REP4-063] concluded "With measures such as these in place Natural England has a high degree of confidence that the risk of visitor displacement and hence risk of increased recreational disturbance at Thames Basin Heaths SPA can be avoided. These measures can be secured through a CEMP or similar constraints applied to the DCO, should the application be approved."
- 4.1.69 In response to the ExA's R17 [PD-010], NE [REP4-064] stated that they fully considered construction effects on SANGs when advising the Applicant. They also stated in the South East of England they regularly receive consultations on items of infrastructure that run through SANGs and the SPA, such as water utilities (water pipes through Swinley Forest) or electrical utilities (such as the undergrounding of pylons at Edenbrook Country Park in Hart). NE stated that they "try to be as pragmatic as we possibly can, and look at the term of impacts long term versus short."
- 4.1.70 NE stated that it is their understanding that the Proposed Development would move fast and no area of SPA or SANG would be impacted for any great length of time. They stated they had been informed by the Applicant that when working in SANGs disruption would be kept to a minimum and that these spaces could continue to be used by visitors. NE confirmed that they are of the opinion that the impacts to SANGs during construction are short term, temporary impacts, that would not lead to integrity issues on the SPA and "As it stands in our mind, we can confirm that Esso's proposals are unlikely to have significant effect upon the integrity of Thames Basin Heaths SPA."
- 4.1.71 The Applicant [REP4-020] responded to the ExA's Further Written Question BIO.2.21 arguing that a worst case approach has been adopted but maintains that actual displacement from the SANGs to the SPA is likely to be low and the impacts within the SANGs occur on a temporary basis subject to controls identified in the CoCP (discussed above). Mitigation beyond that specified in the CoCP is described by the Applicant as being embedded design measures and adherence with good practice measures beyond this are considered unnecessary.
- 4.1.72 The ExA's Further Written Questions [PD-013] included questions to the Applicant regarding the measures / controls proposed to ensure that the necessary attributes of SANGs would be maintained in those SANGs through which the Proposed Development would run and / or where a construction compound would be located. The Applicant was also asked to confirm and clarify the assumptions in the HRA report [APP-130 and APP-131] with regards to duration of works in SANGs.
- 4.1.73 The Applicant [REP4-029] responded with reference to the relevant guidance produced by Surrey Heath BC and Rushmoor BC dated 2019,

confirming that there are no Above Ground Installations proposed within SANGs and the proposed compounds are considered to be of little intrusion and of a temporary nature. The Applicant confirmed that secure fencing of the working area would not preclude walkers from exercising dogs off the lead. The Applicant also stated that CoCP commitment OP04 secures the circular walks are maintained and that if construction works conflicts with the footpath, a temporary diversion would be provided.

- 4.1.74 The Applicant [REP4-029] confirmed that the HRA report considers a worst-case scenario and confirmed that the maximum time period of works in the SANG would be two years. The Applicant stated that "The short duration referred to in the HRA Report, for example at paragraph 5.8.18, highlights that in practice, having regard to the construction techniques employed, the actual duration would be significantly less than two years. The use of the word temporary in the HRA Report is to signify that the works have a limited time period, and that a position is not 'permanent'."
- 4.1.75 The Applicant directed to the updated CoCP submitted at Deadline 4 [REP4-012 and REP4-013], which stated that:

"Construction works in the SANGs will be limited to a maximum of two years in duration. This will run from the commencement of any fencing activity or other works that deny access to any part of the SANG to members of the public. Esso will provide advance written notice to the relevant planning authority of the commencement date.

All construction activities within the SANG will be fully demobilised within the two years period and reinstatement completed with all protective fencing removed. When planning reinstatement of the SANG, Esso will consult with the relevant planning authority over the timetable for reinstatement taking account of ecological good practice and recognising that it may be appropriate to defer replanting and reseeding/turfing to take advantage of optimum growing seasons and conditions.

In such circumstances, and only with the agreement of the relevant planning authority, it may be appropriate to extend reinstatement and maintain protective fencing beyond the two year deadline.

Where operating under such an extension, Esso would make sure that all affected paths and circular walks are restored to their original condition and available for public use and any protective fencing required would be the minimum necessary taking account of the nature of the replanting."

4.1.76 The Applicant [REP4-029] stated in response to SANG.2.6 [PD-013] that it had limited works to two years as it was confident all works could be completed in that time period, and confirmed the two year period was the basis of the assessment in the HRA report [APP-130 and APP-131]. The Applicant provided tables in its response setting out the estimated duration of works in Southwood Country Park SANG (45 weeks) and St Catherine's Road SANG (13 months), based on a working 6 days per week. The Applicant stated that reinstatement could be subject to

- seasonal constraints in relation to seeding and planting, hence proposing to limit construction works to two years.
- 4.1.77 Rushmoor BC [REP4-072] in response to SANG.2.3 [PD-013] reiterated their concerns with regards to the Applicant's assumptions about the temporary nature of the works. A summary of representations in respect of Southwood Country Park is included in Annex 4 to the RIES, but in summary Rushmoor BC concluded:
- 4.1.78 "RBC's view is that the assessment of impact on the SANGs within the HRA report due to:
 - A 2 year construction period cannot be viewed as short term impact.
 - The level of disruption to access has been underestimated.
 - There has been no attempt to quantify the level of displacement onto the SPA either from individual SANGs or in-combination.
 - The suggestion that Southwood Woodland can be used as an alternative SANG evidences a misunderstanding of the 2008 mitigation strategy and the science and studies behind the calculation of capacity."
- 4.1.79 Surrey Heath BC [REP4-076] at Deadline 4 were of the view that in respect of St Catherine's Road SANG, the open access woodland at Frith Hill does not present a viable unaffected alternative space to mitigate any displaced recreational pressure. Surrey Heath BC stated Frith Hill woodland is not a SANG and existed prior to the SANG being created. Surrey Heath BC stated "Notably, if the woodland was a viable mitigation for recreational displacement, then the St Catherine's Road SANG would have not been required for the Keaver Drive development. In any event, if another SANG within the vicinity of St Catherine's Road were to be identified as a receptor for any displaced recreational activity, the Council would require a proportionate contribution in order that this capacity could be allocated to such an alternative SANG." Also, in respect of Windlemere SANG that "West End Recreation Ground is identified as an area that may act as a receptor for displaced recreational activity, despite the recreation ground not being a SANG and existing prior to Windlemere being created."
- 4.1.80 Surrey Heath BC [REP4-074] also noted that no visitor surveys were completed as part of the HRA and stated it is therefore difficult to quantify the number of visitors that could be displaced during the construction of the Proposed Development. Surrey Heath BC responded to the Applicant's comments at Deadline 3, which highlighted that they had asked Surrey Heath BC to produce evidence of visitor numbers for the St Catherine's SANG and that they confirmed it does not have any up-to-date data on user numbers for this SANG. Surrey Heath BC stated that it is true that they do not have up-to-date data on user numbers for the SANG; however, the local authority is under no obligation to keep such a record and the Applicant did not make a request that the local authority produce evidence of visitor numbers for the St Catherine's

- SANG. Surrey Heath BC stated it is for the Applicant to provide evidence that clearly and robustly demonstrates that there will be no LSE on the Thames Basin Heaths SPA. Surrey Heath BC reiterated that in this context, recreational activity arising from one additional residential unit is considered to give rise to the potential for adverse effects on the integrity of the Thames Basin Heaths SPA.
- 4.1.81 In response to SANG.2.4 [PD-013], Surrey Heath BC [REP4-074] reiterated points raised in their Deadline 3 submission that SANGs are to be provided in perpetuity and points raised at the ISH of 4 December 2019, that if you interfere with a SANG you interfere with its quality and quantity, and any works that impact on the function of a SANG must be seen to impact on the in perpetuity management of that SANG. Surrey Heath BC reiterated their Deadline 3 submission although an impact may be temporary, there is nonetheless the potential for it to give rise to likely significant effects on the Thames Basin Heaths SPA.
- 4.1.82 At Deadline 4 Surrey Heath BC [REP4-074] stated that it considers that it has provided practical and proportionate mitigation solutions to the Applicant that could be secured through a Section 106 agreement, which they consider to be proportionate to the development that St Catherine's Road mitigates, and excluded the in perpetuity management cost that the Council levies as part of its SANGs charge.
- 4.1.83 Rushmoor BC [REP4-072] stated at Deadline 4 that due to uncertainty with regards to the duration and timescales of construction works, coupled with significant impacts due to construction compounds, directional drill pits and haul roads proposed within Southwood Country Park, it is their view that there are no guarantees within the application documents that the disruption to the Southwood Country Park would not last for the entire length of the Proposed Development. Rushmoor BC are of the view that a 2-year disruption to amenity "cannot be classed as short and therefore the assumptions on which the HRA assessment is based cannot be substantiated and the assessment is flawed." Rushmoor BC stated that this is particularly pertinent in the case of Southwood Country Park, as the timing of the project, 2021 to 2023 is likely to coincide with the occupation of the residences within Farnborough and Aldershot Town Centre. Stating that the Country Park provides SANGs mitigation for these areas and this would be exactly the period when Rushmoor BC would be hoping to encourage new residents to use the park.
- 4.1.84 At Deadline 4 the Applicant submitted (amongst other revised documents) a revised CoCP [REP4-012 and REP4-013], revised Outline CEMP [REP4-036], an Outline LEMP [REP4-035] and Site Specific Plans (SSP) for two SANGs: Southwood Country Park SSP [REP4-052] and St Catherine's Road SSP [REP4-053]. The Applicant also submitted a REAC signposting document [REP4-046], whose purpose was to map the actions and commitments in the application REAC in Chapter 16 of the ES [APP-056] to where the commitment or action is currently secured within the application. It also included the planning good practice measures from Section 3 of the CoCP at the point of application [APP-128].

- 4.1.85 The revised CoCP [REP4-012 and REP4-013] included the commitment to the timings of works in SANGs as described in paragraph 4.1.74 above.
- 4.1.86 At Deadline 5, the Applicant [REP5-021] responded to the Deadline 4 submissions of Rushmoor BC and Surrey Heath BC. In the most part the Applicant referred back to their Deadline 4 response to Rushmoor BC's legal opinion. In response to Rushmoor BC's statement that it does not agree with the Applicant's HRA and displacement from SANGs, the Applicant stated it has committed to maintaining access along principle pedestrian routes within the SANG during construction, with only short-term temporary closure or diversions whilst pipeline construction works cross the paths. The Applicant considers that the network of pedestrian routes proposed within the SANG offer potential alternative routes whilst any short duration works affect a path. As a result, a circular path would be maintained during the construction period.
- 4.1.87 The Applicant [REP5-021] stated "through commitment OP04 within the CoCP [REP4-012] and Section 3.1 of the SSP for Southwood Country Park [REP4-052], it has committed to maintaining access along principle pedestrian routes within the SANG during construction, with only short term temporary closure or diversions whilst pipeline construction works cross the paths. The CoCP is secured under Requirement 5 of the draft DCO [REP4-006]; the SSP is secured under Requirement 17 of the draft DCO."
- 4.1.88 The Applicant [REP5-021] reiterated the text from the SSP for Southwood Country Park, confirming the two year working period but also stating that the "There is a two-year working window for the construction works, as the programme will need to take account of any seasonality such as ecological constraints and optimum replanting periods. Notwithstanding the above constraints, the detailed scheduling of the works will look to rationalise and work simultaneously where there is the ability to do so, to reduce disturbance to the park. Once the construction plans have been finalised, the local community will be informed and updated in line with the Community Engagement Plan. Based on the preferred construction methodology, it is expected that within Southwood Country Park SANG approximately 45 weeks of work will be required for the installation of the pipeline and reinstatement."
- 4.1.89 At Deadline 5, and with reference to the representations of Surrey Heath BC at Deadline 4, the Applicant [REP5-021] confirmed that "The Applicant has discussed this matter further at a meeting on the 7 February 2020 and understands that the concern regarding the impact of the project on St Catherines SANG is now resolved and will be reported in the agreed Statement of Common Ground."
- 4.1.90 Rushmoor BC [REP5-043] at Deadline 5 provided a response to the Applicant's response on the legal opinion submitted at Deadline 3. With respect to the matter of SANG displacement, Rushmoor BC stated their case being:

- "a. SANGs are only justified (such that they can be funded and delivered through s 106 contributions) on the basis that they are necessary to avoid adverse effects on the SPA;
- b. SANGs have an established capacity based on methodologies supported by NE;
- c. Reduction in capacity from the project can be quantified by reference to those methodologies. The Applicant has failed to do that, instead asserting that the impacts would be very low. When the decrease in capacity is properly considered, that conclusion cannot stand up to scrutiny. RBC have calculated those impacts in respect of the area of temporary land take (excluding effects other areas which would become less attractive to visitors) and identified that the potential displacement across from Southwood Country Park would amount to 875 visitors. That is the equivalent effect of granting permission for c 300 new dwellings within 5km of the SPA. On the figures in 2.30, which RBC suggests are not sufficiently precautionary, the Applicant concedes a temporary loss of 12.45 Ha of SANG capacity, equivalent to capacity for 1,556 residents;
- d. It is well-established that any development which increases recreational pressure on the SPA will, when considered incombination with other plans and projects, cannot be excluded from having an adverse effect on integrity. Since the Applicant concedes an increase in recreational pressure from its project, the conclusion must be the same."
- 4.1.91 Rushmoor BC [REP5-043] stated that the assertion that at SANG which is viewed as being at capacity can nonetheless accommodate further recreational pressure is unevidenced and contrary to well-established practice. Rushmoor BC concluded that it maintains its concerns about the legal adequacy of the HRA.
- 4.1.92 Rushmoor BC [AS-079] provided an additional submission after Deadline 5 and before ISH5, which included comments on NE's Deadline 4 representation. Rushmoor BC commented in respect of NE's response on timings of works in SANGs that it would appear from the comments that NE is merely relying on the verbal assurances of the Applicant, with no reference to the application documents which clearly state that work within SANGs will be limited to two years. Rushmoor BC stated that NE's opinion also takes no account of the construction compounds situated in most of the SANGs, which would serve not just the work in the SANGs but other phases of the pipeline but merely focuses on the trenching proposed.
- 4.1.93 With respect to NE's response that the Applicant may wish to discuss opportunities to reduce the working timescales, Rushmoor BC [AS-079] stated at Deadline 5 that "At no time during the application process have ESSO been willing to discuss either limiting the time they are within the

SANGs, ensuring that only one SANG is impacted at a time or providing additional Suitable Alternative Natural Greenspace. We have presented a solution to deflection of visitors onto the SPA, but so far have been unable to engage with the applicant to discuss funding enhancements to the Cove Brook Greenways. By making this corridor attractive to visitors it could easily accommodate the overspill from the Country Park, and its connectivity with SCP and the fact it is not designated as a SANG makes it ideal for this purpose. The funding of this project combined with a work schedule that minimises the time that ESSO are working within the SANG would, the council feels, provide appropriate mitigation to alleviate the individual impacts on SCP."

- 4.1.94 Rushmoor BC [AS-079] reiterated that they do not agree with NE's assessment that the impacts to SANGs during construction are short term temporary impacts, that won't lead to integrity issues on the SPA, as they do not feel that 2 years is temporary. Rushmoor BC also stated that they do not agree with NE's appraisal of the Information to Inform the SPA or its conclusions. Comment was made that no mention of Southwood Country Park in NE's representation, only St Catherine's Road SANG. Rushmoor BC consider Southwood Country Park is a far more sensitive site with biodiversity value in its own right. It is also mitigation for a far greater number of new residents, 5,875. Rushmoor BC stated "With Southwood Woodlands at capacity and the adjoining Cove Brook Greenways requiring enhancement to make it an attractive alternative to the SANG, we have no alternative open space within the locality that would accommodate the 875 people that could be displaced by the proposals."
- 4.1.95 At ISH5 [EV-021 to EV-025] measures in respect of SANGs were discussed. As an Action Point [EV-026], the ExA asked the Applicant and IPs to consider whether the time period of works within SANGs could be limited and if so, whether this could reduce the impact on SANGs and any likely displacement to the SPA.
- 4.1.96 Rushmoor BC [REP6-088] responded that "In relation to the query regarding the time period of works in the SANGS and whether if this was limited it could reduce the impact, this would indeed limit the impact due to indirect recreational pressure due to displacement from the Southwood Country Park SANG, which would limit the in-combination impacts from displacement and direct habitat loss. The stipulation not to undertake works within the SANGs network, during the summer breeding period would help to ensure that recreational pressure was kept to a minimum. [Post hearing note: For works which cannot be scheduled outside the breeding season, such as in the Flood Alleviation Area, RBC is advocating that the applicant fund the Cove Brook Enhancement Project to provide additional Suitable Alternative Natural Green Space (SANGS) along the Cove Brook Greenways, which run through Farnborough. RBC is of the opinion that if the above measures were specified within the DCO there would be no significant in-combination impact on the Thames Basin Heaths SPA as a result of recreational pressure, within the Rushmoor Borough.]"

4.1.97 In response to the Action Point [EV-026] requesting the Applicant to consider whether it would be possible to limit works within SANGs to a number of weeks within the two year period, the Applicant [REP6-074] stated it has amended the CoCP to include a requirement to minimise the amount of time it is constructing the pipeline in a SANG.

"...due to the possibility of unforeseen circumstances, it cannot commit to a particular number of weeks within the two-year period. In addition, the Applicant has indicated for each SANG the potential time periods which should afford sufficient time to undertake the known scope of works. These are based on the preferred construction methodologies and set out approximately how long the work will take within the two-year construction period. It should be noted that works may not run concurrently due to seasonal constraints, ecological constraints, optimum replanting periods and optimum soil handling periods. The time periods specified do have a level of contingency built in. However, the Applicant will continue to refine its proposals to minimise the time and impact on each individual SANG, where practicable.

The Applicant would also highlight that the concern about the length of time works will take place in a SANG and the subsequent displacement of people this may cause is only raised in relation to Southwood SANG. As well as the durations provided in the Southwood SANG Site Specific Plan (Document Reference 8.60 (2)) the Applicant has held constructive discussions with Rushmoor BC about the timing of works to reduce the potential for displacement, for example by undertaking the open cut works in the autumn rather than summer months when visitor numbers would be lower."

4.1.98 In response to the ExA's request at ISH5 [EV-021 to EV-025] to review whether it would be possible to commit to not working in more than one SANG at any one time and indicate how/where this could be secured, the Applicant stated [REP6-074]:

"...The Applicant does not believe that there is a clear justification to further impact on the construction schedule as a result of passing through SANGs.

The project is subject to detailed commitments (such ecological constraints) regarding the timing of works in certain areas, and the construction timetable requires flexibility to accommodate these commitments.

In addition, all the SANGs affected by the project require works in open 'greenfield' areas where the accepted good practice is to work in the summer months to minimise damage to the soil structure, avoid site flooding and generate fewer issues such as silt generation. Landowners such as Rushmoor BC have made it explicitly clear to the Applicant (meeting 27 February 2020) that they would not want works to take place in Southwood SANG during the winter months.

Combined with the ecological constraints, the need to undertake the work in the summer months in all SANGs would make the commitment

- to working in only one SANG at any one time, onerous and excessively restricting on the contractor's programme."
- 4.1.99 In response to the ExA's request to confirm whether the proposed construction compound at Frith Hill / Deepcut could be used as an alternative to St Catherine's Road SANG, the Applicant [REP6-074] stated that the construction compound at Frith Hill / Deepcut is sited on Ministry of Defence (MoD) land and is the only aspect of the Proposed Development which the MoD are unwilling to provide a voluntary agreement for and cannot be secured compulsorily. Therefore, this compound is unlikely to be available to the Proposed Development. The Applicant stated that it would continue to seek to use the compound on a voluntary basis.
- 4.1.100 The Applicant also stated that "the construction compound at Frith Hill/Deepcut is not an appropriate replacement during construction because the works to St Catherines Road require the highway to be closed to traffic. This will prevent deliveries being made from the southern end of St Catherines Road. This therefore requires that any materials, such as pipe, will need to be delivered to a storage area prior to the road being closed. The Applicant has designated this storage area to be the SANG at St Catherines. The use of the SANG will reduce the potential impact of construction delivery vehicles having to be routed through the housing estate to the north of St Catherines Road, that is via Regent Road, Melville Avenue and Alphington Avenue."
- 4.1.101 At Deadline 6 the Applicant submitted (amongst other plans) an updated CoCP [REP6-009 and REP6-010], updated Outline CEMP [REP6-030 and REP6-031], updated Outline LEMP [REP6-029 and REP6-029], updated SSP for St Catherine's Road SANG [REP6-059 and REP6-060] and updated SSP for Southwood Country Park SANG [REP6-057 and REP6-058].
- 4.1.102 The Applicant also submitted in response to the ExA's request at ISH5 [EV-021 to EV-025], an HRA Commitments Schedule [REP6-078]. This was provided to identify the measures that are relied upon for the purposes of the HRA and detail how they are secured under the draft DCO. The HRA Commitments Schedule is included as a certified document in Schedule 11 of the draft DCO [REP6-009 and REP6-010]. It is also referenced in Requirements 5 (CoCP) and 17 (SSPs) of the draft DCO [REP6-003 and REP6-004].
- 4.1.103 In response to Action Point ISH5-22 [EV-026], the Applicant [REP6-074] also submitted an 'Appendix 2: ISH5-22 Measures Proposed for SANGS' to their responses to Action Points document. This appendix is stated to be a short overarching document to set out the mitigation / measures proposed for SANGs. The Applicant stated that the text contained within the Appendix has been incorporated into the CoCP [REP6-009 and REP6-010] in Sections 1.16 (construction schedule) and 2.15 (construction method).
- 4.1.104 At Deadline 6, a signed SoCG between the Applicant and Rushmoor BC was submitted [REP6-020], which identified Southwood Country Park SANG and potential effects on the Thames Basin Heaths SPA arising from

visitor displacement are a matter subject to ongoing discussion. The signed SoCG stated:

"The Authority has highlighted through oral and written submissions to the Examination its concern that the construction works within Southwood Country Park SANG, alone or in combination with construction works in other SANGS cumulatively, has the potential to lead to visitor displacement to the Thames Basin Heaths SPA.

Esso has responded directly to these concerns through its oral and written submissions to the Examination. It notes that the Authority is to provide additional information in response to Action ISH5-21, and will review this information when submitted.

Notwithstanding the above positions, the Parties have engaged constructively on the details of the construction proposals through Southwood Country Park since the February 2020 ISHs, as requested by the Examining Authority. The Parties are working together on additional controls relating to the timing and detail of works within the SANG to address concerns expressed by the Authority based on those proposed by the Authority at the ISH.

Esso considers that the principles of various matters have been agreed and is submitting an updated CoCP and Site Specific Plan for Southwood Country Park at Deadline 6 to reflect this. Esso considers that these additional measures further reduce the potential for any displacement of visitors from the SANG.

The Authority reserves its final position pending sight of the updated documents.

The Authority is providing to Esso proposals for the provision of a Cove Brook Enhancements Project which will provide attractive natural open space along the Cove Brook Greenways to accommodate visitors which the Authority considers may be displaced from the SCP SANG.

The Authority is endeavouring to set up an urgent meeting between Esso, the EA and the Authority to discuss this and hopes to work constructively with Esso to come to a resolution.

Esso will carefully review the information when it is provided by the Authority, and reserves its position pending receipt of this, and any meeting taking place."

4.1.105 At Deadline 6, a further draft (unsigned) SoCG between the Applicant and Surrey Heath BC [REP6-024] was submitted to the Examination. This includes the 'SPA and St Catherine's Road SANG' as a matter subject to ongoing discussion. It states that "SHBC does not remove its objection to the Order Limits within the St Catherine's Road SANG but the Parties consider that an agreement can be reached regarding the specific terms of the occupation of the SANG should this be necessary and are continuing negotiations." The outline plans, including outline CEMP, LEMP, CEP and Site Specific Plans for St Catherine's SANG and CoCP documents also appear to be matters subject to ongoing discussion.

- 4.1.106 In respect of Windlemere SANG, the draft (unsigned) SoCG between the Applicant and Surrey Heath BC [REP6-024] states it is agreed that "SHBC is satisfied that the Applicant's Code of Construction Practice and the Register of Environmental Actions and Commitments (REAC) establish reasonable generic principals for managing post construction impacts, on Open Spaces crossed by the Order Limits at... ... Windlemere SANG."
- 4.1.107 A draft (unsigned) SoCG between the Applicant and Runnymede BC [REP6-019] was submitted at Deadline 6, which states (as previous versions) it is agreed that "The Authority is satisfied that the project is appropriately managing the impacts, including the temporary installation and post construction impacts, on Open Spaces crossed by the Order Limits: Chertsey Meads community use (SANG land)."

In-combination / intra-project effects of working in multiple SANGs

- 4.1.108 In their WR, Rushmoor BC [REP2-081] stated that they are concerned by the intra-project impacts associated with multiple SANGS being disturbed at the same time. Rushmoor BC stated that they feared this could lead to further increases of visitors using the Thames Basin Heaths SPA. Rushmoor BC stated "Agreement to the timing of such works will go some way to alleviating these concerns, but to ensure that increases in visitor numbers are kept to a minimum we would wish to agree that no more than one SANG is disturbed at any one time. A requirement in respect of the management of works in SANGs is considered necessary"
- 4.1.109 The Applicant in response to Rushmoor BC's WR [REP3-016], stated that it has undertaken an in-combination effects or inter-project cumulative effect assessment (referred to here as the Cumulative Effects Assessment) as required under the EIA Directive and Overarching NPS EN-1, directing to Section 5.8 of the HRA report [APP-130].
- 4.1.110 The Applicant quoted paragraph 5.8.13 of the HRA report [APP-130 and APP-131], which states that "construction activity would take place at multiple 'work fronts' and could theoretically affect all SANGs simultaneously or consecutively. Scenarios relating to both maximum displacement intensity (assuming concurrent working) and maximum duration of displacement (assuming consecutive working) have been considered." Therefore, the Applicant stated that an in-combination assessment has been completed.

In-combination / intra-project effects of habitat loss and visitor displacement from the SANGs to the Thames Basin Heaths SPA

4.1.111 Rushmoor BC repeatedly raised concerns in their submissions (RR [RR-293], WR [REP2-081], LIR [REP1-015] and legal opinion [REP3-040]) that the Applicant has not provided an assessment of effects on the Thames Basin Heaths SPA arising from the combination of direct habitat loss and increased recreational pressure resulting from the displacement of visitors from the SANG network. In its Deadline 4

submission [REP4-071], Rushmoor BC stated that it "cannot find an incombination assessment relating to breeding territories lost through direct impact and territories likely to be disturbed as a result of 2500 additional visitors to the SPA".

- 4.1.112 The Applicant responded at Deadline 4 [REP4-032] that such an assessment was screened out, stating at paragraph 2.39 that "The combined effects of recreational pressure and direct habitat loss do not impact on the conclusions reached in the HRA. As noted, the effects to the TBH SPA of direct habitat loss were assessed to be 'de minimis' (Table D.7 at p. 104 of the HRA) and were screened out from appropriate assessment on that basis. Similarly, no likely significant effects are anticipated as a result of displacement of recreational activity (see Table 4.2 at p. 38 of the HRA); such displacement would in any event be very low (paragraph 5.28 of the HRA) and both temporary and short-term in duration. In those circumstances, there is in the Applicant's view no reasonable basis for finding that the combined effects of recreational pressure and direct habitat loss, which taken individually are very small, would lead to adverse effects on the integrity of the TBH SPA."
- 4.1.113 Rushmoor BC responded at Deadline 5 [REP5-043], stating that the Applicant's justification for screening out such an assessment (because the effects are too small) was not tenable stating that "in any event it is still incumbent on the competent authority to consider whether any effect from direct habitat loss combined with any effect from recreational pressure gives rise to likely significant effects. That is true even if the Applicant's assessments on those issues taken individually are accepted, which they should not be."
- 4.1.114 The Applicant responded at Deadline 6 [REP6-075] stating "In terms of cumulative impacts, there are no adverse effects on site integrity (AESI) from habitat 'loss' the birds will continue to use the spatial extent of the SPA as before, maintaining their distribution throughout the SPA habitats. There are no AESI from increased recreational pressure. The worst case implication of increased recreational pressure is disturbance of birds which, in the breeding season, could lead to lowering of number of chicks raised (productivity). This effect would need to be at play long term for it to lead to AESI two seasons worth is much too short term to lead to AESI. Finally, as there is no AESI from either pathway individually and there is no compounding mechanism between the two effects, this means there are no AESI from cumulative impacts."
- 4.1.115 NE made no specific comment on the in-combination effect of habitat loss and visitor displacement, maintaining that it is satisfied with the scope and conclusions of the HRA [REP1-005 and REP4-063].

4.2 Summary of AEoI

4.2.1 The Applicant has concluded in their HRA report [APP-130, APP-131 and AS-026] and throughout the Examination that there would be no AEoI on the Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC. This conclusion currently remains disputed by Rushmoor BC,

- particularly in respect of direct habitat loss to the Thames Basin Heaths SPA.
- 4.2.2 Matters also remain to be agreed between the Applicant and a number of local authorities with respect to the detail of the measures relied upon for managing the displacement of visitors to SANGs during construction.
- 4.2.3 Throughout the Examination NE have confirmed their agreement with the conclusion of the Applicant's HRA.

ANNEX 1: EUROPEAN SITES AND QUALIFYING FEATURES CONSIDERED

Table 1.1: UK European sites and qualifying interest features identified by the Applicant

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
Solent and Southampton Water SPA	Common tern (Sterna hirundo) B ¹	No	Yes - NE ² [REP1-005 and REP2-074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Little tern (Sterna albifrons) B	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Mediterranean gull (<i>Larus melanocephalus</i>) B	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Roseate tern (Sterna dougallii) B	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Sandwich Tern (Sterna sandvicensis) B	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Black-tailed godwit (<i>Limosa limosa islandica</i>) W ³	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) W	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]

¹ B – Breeding feature

² Natural England

³ W – Wintering feature

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
	Teal (Anas crecca) W	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	Ringed plover (Charadrius hiaticula) W	No	Yes – NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	Water bird assemblage (51,361 individuals) W	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
Solent and Dorset Coast pSPA	Common tern B	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Little tern B	No	Yes – NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Sandwich tern B	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
Solent Maritime SAC	1130 Estuaries	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	1320 Spartina swards (Spartinion maritimae)	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	No	Yes – NE [REP1- 005 and REP2-	No	Yes – NE [REP1- 005 and REP2-

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
			074]		074]
	1110 Sandbanks which are slightly covered by sea water all the time	No	Yes – NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	1140 Mudflats and sandflats not covered by seawater at low tide	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	1150 Coastal lagoons	No	Yes – NE [REP1- 005 and REP2- 074]	No	Yes – NE [REP1- 005 and REP2- 074]
	1210 Annual vegetation of drift lines	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	1220 Perennial vegetation of stony banks	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	1310 Salicornia and other annuals colonising mud and sand	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	2120 'Shifting dunes along the shoreline with Ammophila arenaria ('white dunes')'	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Desmoulin's whorl snail (Vertigo moulinsiana)	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
Solent and Southampton Water Ramsar	Ramsar Criterion 1: The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs.	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Ramsar criterion 2: The site supports an important assemblage of rare plants and invertebrates.	No	Yes – NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Ramsar criterion 5: Assemblages of international importance: Species with peak counts in winter: 51,343 waterfowl (five-year peak mean 1998/99-2002/2003)	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Ramsar criterion 6: species/populations occurring at levels of international importance	No	Yes - NE [REP1- 005 and REP2-	No	Yes - NE [REP1- 005 and REP2-
	Ringed plover (<i>Charadrius hiaticula</i>), 397 individuals, representing an average of 1.2% of the GB population (five-year peak mean 1998/9- 2002/3) B		074]		074]
	Ramsar criterion 6: species/populations occurring at levels of international importance	No	Yes - NE [REP1- 005 and REP2-	No	Yes - NE [REP1- 005 and REP2-

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
	Dark-bellied brent goose (<i>Branta bernicla bernicla</i>), 6,456 individuals, representing an average of 3% of the population (five-year peak mean 1998/9- 2002/3) W		074]		074]
	Ramsar criterion 6: species/populations occurring at levels of international importance	No	Yes - NE [REP1- 005 and REP2-	No	Yes - NE [REP1- 005 and REP2-
	Teal (Anas crecca), 5,514 individuals, representing an average of 1.3% of the population (five-year peak mean 1998/9-2002/3) W		074]		074]
South West London Waterbodies SPA	Gadwall (Anas strepera) W	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
	Shoveler (Anas clypeata) W	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
South West London Waterbodies	Ramsar criterion 6: species/population occurring at levels of international importance.	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]
Ramsar	Gadwall (Anas strepera) W		_		_
	Ramsar criterion 6: species/population occurring at levels of international importance.	No	Yes - NE [REP1- 005 and REP2- 074]	No	Yes - NE [REP1- 005 and REP2- 074]

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
	Northern shoveler (Anas clypeata) B				
Thames Basin Heaths SPA	Dartford warbler (Sylvia undata)	Yes	Yes – NE [REP1- 005, REP2-074, REP4-063 and REP4-064] No (habitat loss) – Rushmoor BC ⁴ [REP6-020]	No	Yes - NE [REP1-005, REP2-074, REP4-063 and REP4-064], SWT ⁵ [REP1-004], Surrey CC ⁶ [REP1-023], and Hart DC ⁷ [REP5-018] No (habitat loss) - Rushmoor BC [REP6-020] No / unclear (recreational pressure) - Rushmoor BC [REP6-020], Surrey Heath BC ⁸ [REP6-024],

Rushmoor Borough Council
 Surrey Wildlife Trust
 Surrey County Council

⁷ Hart District Council

⁸ Surrey Heath Borough Council

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
					Runnymede BC ⁹ [REP6-019]
	Nightjar (Caprimulgus europaeus)	Yes	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064] No (habitat loss) - Rushmoor BC [REP6-020]	No	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064], SWT [REP1-004], Surrey CC [REP1-023] and Hart DC [REP5- 018] No (habitat loss) - Rushmoor BC [REP6-020]
					No / unclear (recreational pressure) – Rushmoor BC [REP6-020], Surrey Heath BC [REP6-024], Runnymede BC [REP6-019]

⁹ Runnymede Borough Council

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
	Woodlark (<i>Lullula arborea</i>)	Yes	Yes – NE [REP1- 005, REP2-074, REP4-063 and REP4-064] No (habitat loss) – Rushmoor BC [REP6-020]	No	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064], SWT [REP1-004], Surrey CC [REP1-023], and Hart DC [REP5- 018]
					No (habitat loss) - Rushmoor BC [REP6-020]
					No / unclear (recreational pressure) – Rushmoor BC [REP6-020], Surrey Heath BC [REP6-024], Runnymede BC [REP6-019]
Thursley, Ash, Pirbright and Chobham	4010 North Atlantic wet heaths with <i>Erica</i> tetralix	Yes	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064]	No	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064], SWT

Name of European site	Qualifying Feature	Applicant concludes potential for LSE?	Agreed with NE and other relevant parties?	Applicant concludes potential AEoI?	Agreed with NE and other relevant parties?
					[REP1-004] and Surrey CC [REP1-023]
	4030 European dry heaths	No	Yes - NE No (habitat loss) - Rushmoor BC [REP4-071, REP5-044 and AS-079]	No	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064], SWT [REP1-004], and Surrey CC [REP1-023] No / unclear (habitat loss) - Rushmoor BC [REP4-071, REP5-044 and
	7150 Depressions on peat substrates of the Rhynchosporion	Yes	Yes - NE [REP1- 005, REP2-074, REP4-063 and REP4-064]	No	AS-079] Yes - NE [REP1-005, REP2-074, REP4-063 and REP4-064], SWT [REP1-004] and Surrey CC [REP1-023]

ANNEX 2: STAGE 1 MATRICES: SCREENING FOR LIKELY SIGNIFICANT EFFECTS

The Applicant's screening matrices for the eight European sites can be found in AS-026.

This annex of the RIES identifies the European sites and qualifying features for which the Applicant's conclusions were disputed by IPs. Revised screening matrices have therefore been produced by the Planning Inspectorate for the Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC.

Key to Matrices:

- ✓ Likely significant effect (LSE) cannot be excluded
- × No LSE
- ? Applicant and Interested Parties do not agree that LSE can be excluded
- C construction
- O operation
- D decommissioning
- B breeding
- W wintering
- P on passage

Information supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European Site the cell in the matrix is formatted as follows:



HRA Screening Matrix 2.1: Thames Basin Heaths SPA

Thames Basin Heaths Special Protection Area (SPA)

EU Code: UK9012141

Distance to NSIP – The SPA comprises part or all of 12 SSSIs. The Order Limits pass through or near to four of these sites (Figure 9.5 [APP-130 and APP-131]). These sites are 1) Bourley and Long Valley SSSI for approximately 1.5km 2) Chobham Common SSSI for approximately 2.4km 3) Colony Bog and Bagshot Heath SSSI for approximately 4km and 4) Eelmoor Marsh SSSI, where the Order Limits are outside the site, but the route passes along the northern site boundary for approximately 300m.

European site features		Likely effects of NSIP																			
Effect	Physical disturbance		Non-physical disturbance		Hydrological changes			Air quality changes		Ground contamination			Invasive non-native species			In- combination effects					
Stage of development	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Dartford warbler (<i>Sylvia</i> undata)	?a	?b		√c	×d		×е	×f		×g			×h	×f		×i			×j	×j	
Nightjar (<i>Caprimulgus</i> europaeus)	?a	?b		√c	×d		×е	×f		×g			×h	×f		×i			×j	×j	
Woodlark (Lullula arborea)	?a	?b		√c	×d		Хe	×f		×g			×h	×f		×i			×j	×j	

a. Physical disturbance (construction) – The route would affect habitat within the SPA. Construction of the pipeline within the Order Limits would require excavations and clearance of vegetation within the SPA. Excavations would be required to install the pipeline; these would mostly be by open cut although two consecutive trenchless crossing (TC011 and TC012) would be used to avoid wetland areas within the Bourley and Long Valley SSSI component of the SPA (see Figure 9.6). The assumed technique for TC011 and TC012 is HDD trenchless technique over approximately 312m and 400m respectively. Three trenchless crossings are proposed in the Chobham Common SSSI component of the SPA to cross areas of wetland. The assumed technique for TC024, TC025 and TC026 is HDD trenchless technique over approximately 237m, 232m and 271m respectively (Figure 9.14). Vegetation clearance would be required in advance of construction works (where these areas were vegetated) to facilitate the movement of construction plant etc. and to displace wildlife from the working area (e.g. reptiles and amphibians). Construction activity would be

restricted to tracks as far as possible, but habitat adjacent to the track would be temporarily removed to allow for additional working areas where these could not be accommodated within tracks. The qualifying species of the SPA could potentially use any of the heathland habitats to be affected by the works, either for breeding, roosting or foraging and could suffer the effects of habitat loss. The main breeding habitats of Dartford warbler, nightjar and woodlark comprise open habitats of dwarf shrubs with scattered scrub and trees.

Effects to the SPA via the pathway of loss of habitat supporting the qualifying species are considered not to be significant. The total area of the SPA is 8,274.7ha. The total area of habitat within the Order Limits is approximately 36.20ha and accounts for approximately 0.4% of the SPA's total area. It is not anticipated that the entire Order Limits area would be given over to construction activity. Even in a hypothetical scenario during which the total 36.20ha area of SPA within the Order Limits were temporarily destroyed during construction, it is not anticipated that LSE would arise given the small area of the total SPA resource that would be affected. All area of habitat loss would be temporary, to be restored on completion of the works. Full regeneration to acid grassland and pioneer heathland is anticipated to occur within the short term (i.e. within five years following construction) (South East Water, 2018).

The results of the desk study of breeding sites of the qualifying species within the SPA (Appendix C) confirm that the species use or have used in the recent past a much larger area than that which would be affected by the project. This would indicate that there is ample available habitat elsewhere in the SPA for qualifying species to relocate to, while restored habitat develops. Areas of bare earth are suitable for nesting nightjar (Berry, 1979) and woodlark (Sitters, et al., 1996), so that habitat disturbed by the project would not be completely unsuitable for the qualifying species during the regeneration period.

In summary, the loss of habitat suitable for the qualifying species of the SPA is of small scale and temporary. Any effects to the SPA via the pathway of habitat loss are therefore considered to be *de minimis*. **[AS-026]**

The Applicant's screening assessment of no likely significant effects as a result of physical disturbance (habitat loss / loss of breeding territories) during construction was disputed by Rushmoor BC [REP6-020] during the Examination.

b. Physical disturbance (operation) – It is feasible that emergency repairs to the buried pipeline, once in operation, could be necessary involving the excavation and repair activities within the pipeline easement. These operations would be rare and highly localised. Further specifics on the operation of the replacement pipeline are provided in section 3.5 of ES Chapter 3. Given the nature and frequency of these activities, no significant habitat impacts, would arise during the operational phase of the project. **[AS-026]**

The Applicant's screening assessment of no likely significant effects as a result of physical disturbance (habitat loss / loss of breeding territories) was disputed by Rushmoor BC [REP6-020] during the Examination.

c. Non-physical disturbance (construction)

Disturbance as a result of noise and visual stimuli during construction

For the duration of construction of the project there would be changes to noise and visual stimuli generated by movement of plant and personnel within the construction area, excavation and other groundworks, and transport. Anthropogenic noise and visual changes have well-documented disturbance effects on bird species, resulting in both behavioural and population changes (e.g. Latimer *et al.*, 2003). The potential impacts of noise and visual disturbance to qualifying species of the SPA associated with the project should therefore be considered.

Breeding season

There is no current authoritative guidance on how far a noise study area should extend from construction activities due to the variability of the potential noise generating activities and plant used. However, the effects of noise (as well as visual/human presence) are only likely to be significant where the boundary of the project extends within or is directly adjacent to the boundary of the European site, or within/adjacent to an offsite area of known foraging, roosting or breeding habitat that supports mobile animal species for which a European site is designated. As the project would take place within and immediately adjacent to the SPA, the project has the potential to impact SPA populations of the qualifying species. A desk-study of breeding sites of qualifying species between 2007-2018 (Appendix C) shows that the Order Limits pass through areas of the SPA that have consistently supported breeding territories for the qualifying species of the site. The proposed works would be temporary and would not involve activities likely to generate continuous or regular loud noise events (e.g. pile driving, blasting etc.), that are more typically associated with causing disturbance to birds (Latimer et al, 2003). As construction would take place largely along tracks open to the public there would already be a level of disturbance along the Order Limits. Nonetheless, in the absence of mitigation and in view of the sensitivity of the qualifying interests to disturbance, the risk of LSE cannot be discounted. The pathway for LSE due to noise and visual stimuli during construction should be considered at Appropriate Assessment.

Outside the SPA

The habitat outside of the SPA is generally suboptimal, with only very small pockets of relict heathland within plantation forestry and amenity areas. While works outside of the SPA may occur during the breeding season, any effects resulting from the project due to disturbance of SPA populations of the qualifying species breeding outside of the site are therefore likely to be *de minimis*.

Non-breeding season

The Conservation Objectives concern the maintenance of breeding population levels and supporting habitat, including minimisation of human disturbance and protection from predation. Breeding success would not be impaired by any construction works outside the breeding season. Nightjar migrate in August or September and are not present within the SPA outside the breeding season. Winter disturbance impacts to this qualifying species are therefore not considered further. Dartford warbler and woodlark are present during winter but are much less sensitive to disturbance outside the breeding period (Natural England, 2016). Mallord *et al.* (2006) found that woodlark only settled to breed in low-disturbance areas, but heavily disturbed areas were still used for foraging.

There could be a temporary disruption in habitat connectivity/structure as a result of the project. As a proportion of the construction working corridor would comprise existing tracks (e.g. around 3-5m wide at Chobham Common SSSI) in some places,

this temporary disruption would be a small increase in the width of existing fragmentation. As the qualifying species of the SPA are highly mobile and the works avoidable, this temporary disruption would not be consequential to habitat connectivity.

Noting that breeding success would not be affected at this time of year and the vast availability of alternative supporting habitat within the site, it is not considered that these objectives would be undermined, or the ecological integrity of the site compromised during winter. As supporting habitat has been identified within and adjacent to the Order Limits, the two Annex I birds present in winter would likely experience some temporary changes in the audio-visual baseline. Notwithstanding, it is not considered that disturbance could undermine the integrity of the supporting (foraging and roosting) habitat available within the site, or the population status of the two Annex I species present in winter. This is on the basis that plenty of 'disturbance-free' areas would provide safe feeding sites and allow sufficient time for the birds to feed and recover from any physiological stress.

The duration of effects would likely be for a single winter and would not affect the birds in subsequent years, other than the clearance of dense scrub and trees would create better conditions for foraging in future years (Wotton and Gillings, 2000).

It could also be relevant that in 2007, 70% of the SPA was classified as 'disturbed' due to urban development, traffic noise and other sources of intrusion (CPRE, 2007). Land within Colony Bog and Bagshot Heath SSSI is owned by the MoD and used as training areas and artillery ranges. Within Unit 4, the Order Limits are within 100m of Red Road. Based on variations in behaviour towards humans, several studies have suggested that habituation to disturbances can occur. Reaction distances for several species were shorter in high-disturbance areas compared to undisturbed areas (Cooke, 1980; Titus and van Druff, 1981; Burger and Gochfield, 1981; Keller, 1989).

Disturbance as a result of increased recreational activity within the SPA

As construction works would take place within three SANGs sites and one proposed SANG, there is a potential for project activities to discourage people from using these sites during the works period. Consequently, some recreational activity might be displaced to the SPA, resulting in increased noise and visual disturbance of qualifying species of the SPA, trampling of nests and physical disturbance of supporting habitat. If this displacement were to take place during the breeding season, then this could result in effects to the SPA. As such, the pathway for LSE by displaced recreational activities should be considered at Appropriate Assessment to clarify the location of the sites, the potential for regional displacement and the extent of the risk to site integrity. **[AS-026]**

- **d. Non-physical disturbance (operation)** It is feasible that emergency repairs to the buried pipeline, once in operation, could be necessary involving the excavation and repair activities within the pipeline easement. There is a low-risk that such activities could cause changes in the audio-visual baseline and disturbance to bird species in the local vicinity. However, these operations would be rare and highly localised where necessary. Further specifics on the operation of the replacement pipeline are provided in section 3.5 of ES Chapter 3. Given the nature and frequency of these activities, no significant changes in the audio-visual baseline or disturbance impacts would arise during the operational phase of the project. No LSE are anticipated. **[AS-026]**
- **e. Hydrological changes (water quality) (construction)** The project has very low potential to generate emissions to ground and surface water bodies during construction (accidental spillages, silting etc.) which could significantly damage supporting

habitats of the qualifying species of the SPA. This is due to the low vulnerability of the preferred habitats of the qualifying feature (i.e. dry heath and gorse scrub) to water quality changes. As such, the potential for LSE via this effect pathway are *de minimis*. **[AS-026]**

- f. Hydrological changes (water quality) and ground contamination (operation) Emissions to watercourses or soils local to the pipeline route could be generated during pipeline operation as a result of pipeline leaks. This could result in the loss or degradation of supporting habitats for qualifying species and could place the qualifying features at risk of both lethal and sublethal effects. The risk of operational contamination is considered to be extremely low. The principles of inherent safe design have been incorporated into the design of the pipeline as per Esso design standards for fuel pipelines, relevant industry codes of practice and standards and the requirements of the Pipeline Safety Regulations 1996 (O8). Key principles of the design include a design life of 60 years; protection against corrosion; necessary equipment required for pipeline inspection; inclusion of remotely operated valves to allow isolation of sections of the pipeline if required (O9); and 24-hour remote monitoring of pipeline operation to detect leaks and enable remote shut down of the pipeline if required (O10). As such, the risk of contamination of the SPA during the operational phase of the project is considered to be extremely low and no LSE are anticipated. [AS-026]
- g. Air quality changes (construction) The supporting habitats of the qualifying species of the SPA, i.e. heathland, are sensitive to changes in air quality resulting from pollution, including the generation of dust and combustion exhaust gases (such as NO_x and SO_2). Construction activities for the project have the potential to generate effects associated with dust deposition within 50m of its boundary (IAQM, 2014). Excessive dust deposition can significantly change the nature of the supporting habitat for the qualifying features (Natural England, 2016). The total area of the SPA is 8,274.7ha. The total area of habitat within the Order Limits is approximately 36.20ha and accounts for approximately 0.4% of the SPA's total area. Even in a hypothetical scenario whereby all habitat within the Order Limits and the 50m zone of influence were temporarily modified due to dust deposition, this would still only account for approximately 49ha or 0.5% of the total area of the SPA. Furthermore, potentially disturbing construction works within the Thames Basin Heaths SPA would be undertaken between 1 October and 31 January unless otherwise agreed with Natural England (G38), During this period activities would be less likely to generate significant amounts of dust as the ground and atmospheric conditions are typically damp. The results of the desk study of breeding sites of the qualifying species within the SPA (Appendix C) confirm that the species use or have used in the recent past a much larger area than that which would be affected by the project; this would indicate that there is ample available habitat elsewhere in the SPA for qualifying species to relocate to while affected habitat is restored. Given this combination of factors, any effects of dust are predicted to be insignificant.

Construction activities for the project have the potential to generate effects resulting from air pollution associated with combustion exhaust gases arising from construction activities, leading to the deposition of nitrogen and acidifying pollutants that can adversely affect the composition and structure of vegetation. The SPA is already in exceedance of minimum and maximum critical loads for nitrogen deposition (maximum critical load: 15 kg N/ha/yr; current deposition: 21.7-26.5kg N/ha/yr.) and in exceedance of the minimum critical load for acid deposition (Air Pollution Information System, 2017). Eelmoor Marsh SSSI would likely be buffered from additional deposition resulting from construction activities along Old Ively Road due to the screen of dense scrub and trees between Old Ively Road and the site for most of this part of the route corridor (Google Earth, 2018). The deposition of pollutants may therefore have an effect at the other SPA sites through which the route passes.

IAQM guidance (2014) specifies that 'experience with assessing the exhaust emissions from on-site plant and site traffic suggests that they are unlikely to make a significant impact on local air quality, and in most cases, they will not need to be quantitatively assessed'. Effects of construction activities resulting from air quality are therefore likely to be de minimis. Moreover, construction works would be of short duration and relatively low intensity, with relatively low numbers and sizes of plant and machinery items anticipated to operate for the construction of the pipeline simultaneously. As the most significant negative effects of nitrogen and acid deposition likely to affect the qualifying species of the SPA, such as degeneration of cover by dwarf shrubs and increase in grass cover, develop with long-term deposition (Stevens et al., 2011), the short-term nature of deposition arising from project activities would also indicate that any effects are likely to be de minimis. [AS-026]

- h. Ground contamination (construction) The accidental release of hazardous chemicals during construction works as a result of equipment failure or human error could result in soil contamination, which could in turn impact local ecology. There is a theoretical pathway for effects to qualifying species of the site that use inland terrestrial habitats for foraging due to a loss, or degradation of supporting habitats due to soil contamination. Given the scale and temporary duration of the works that would not permit a pervasive, or large-scale contamination event and large-scale availability of habitats suitable to the qualifying species, LSE are not predicted. [AS-026]
- **i. Invasive non-native species (construction)** The SPA is vulnerable to the spread of a number of invasive non-native plant species, e.g. rhododendron (*Rhododendron ponticum*) which is present within the SPA. The spread of such species could negatively alter habitat structure making habitat unsuitable to the qualifying species of the SPA. Ground disturbance caused by construction activities as part of the project could spread invasive species into new areas of the SPA.

Activities associated with the project are only likely to spread INNS to areas within, or immediately adjacent to, the Order Limits. The total area of the SPA is 8,274.7ha and the total area of habitat within the Order Limits is approximately 36.20ha (0.4% of the site's total area). In the unlikely event that invasive non-native plants were introduced to new areas, there is considered to be negligible potential for this to result in LSE, especially as the qualifying features are not highly vulnerable to this impact pathway. **[AS-026]**

j. In combination – An in-combination assessment has been undertaken and is presented in Appendix E. No in-combination effects are anticipated. **[AS-026]**

HRA Screening Matrix 2.2: Thurley, Ash, Pirbright and Chobham SAC

Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC)

EU Code: UK0012793

Distance to NSIP – The Order Limits pass through two SSSI components of the SAC: Chobham Common SSSI for approximately 2.4km and Colony Bog and Bagshot Heath SSSI for approximately 4km.

European site features		Likely effects of NSIP																			
Effect	Physical disturbance		Non-physical disturbance			Hydrological changes			Air quality changes		, I				Invasive non- native species			In- combination effects			
Stage of development	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
4010 North Atlantic wet heaths with <i>Erica tetralix</i>	√a	×c					√d	×е		×f			×g	×е		×h			×i	×i	
4030 European dry heaths	?b	Хc						Хe		×f			×g	×е		×h			×i	×i	
7150 Depressions on peat substrates of the Rhynchosporion	√a	×c					√d	×е		×f			×g	×е		×h			×i	×i	

a. Physical disturbance (construction) – Construction of the route would require excavations and clearance of vegetation within the SAC. Excavations for the project would disturb substrates, including for the excavation of the pipeline trench and for any topsoil stripping within the construction working area. This could have implications for the drainage, nutrient cycling etc. of qualifying habitats of the SAC. Where qualifying habitats are present within the Order Limits, this could lead to the physical loss of qualifying habitats of the SAC. For the more spatially restricted qualifying habitats 'Atlantic wet heaths with *Erica tetralix'* and 'Depressions on peat substrates of the *Rhynchosporion'*, changes in overall extent are more likely to be significant. As all areas of land used within the SAC would be restored or enhanced following construction, there would therefore be no permanent land-take for the project. Notwithstanding, as the Conservation Objectives of the SAC seek to maintain the extent of these qualifying habitats (other than a 'trivial loss'), this pathway could lead to LSE and should be considered at Appropriate Assessment, to clarify how these features would be affected by the project. **[AS-026]**

b. Physical disturbance (construction) – European dry heaths – The route would affect dry heath habitat within the SAC. Construction of the pipeline within the Order Limits would require excavations and clearance of vegetation to install the pipeline. Vegetation clearance would be required in advance of works commencing (where these areas were vegetated) to facilitate the movement of construction plant etc. and to displace wildlife from the working area (e.g. reptiles and amphibians). Construction activity would be restricted to tracks as far as possible, but habitat adjacent to the track would be temporarily removed to allow for additional working areas where these could not be accommodated within tracks.

For dry heathland habitats (i.e. the 'European dry heaths' feature) reinstatement would be achieved using natural regeneration and there is a high degree of confidence that this would be successful as the seedbank would be maintained and heathland flora responds well to ground disturbance. Full regeneration to acid grassland and pioneer heathland is anticipated to occur within the short term (i.e. within five years following construction) (South East Water, 2018). Based on priority habitat information available from Natural England, the area of 'European dry heaths' within the Order Limits is estimated to comprise approximately 1% of the area of this habitat within the SAC. Given the relatively small area of loss and reinstatement measures proposed, the effect on the SAC in respect of the 'European dry heaths' feature is considered to be de minimis. [AS-026]

The Applicant's screening assessment of no likely significant effects as a result of physical disturbance (habitat loss) during construction was disputed by Rushmoor BC during the Examination [REP4-071, REP5-044 and AS-079.

- c. Physical disturbance (operation) It is feasible that emergency repairs to the buried pipeline, once in operation, could be necessary involving the excavation and repair activities within the pipeline easement. These operations would be rare and highly localised. Further specifics on the operation of the replacement pipeline are provided in section 3.5 of ES Chapter 3. In light of the nature and frequency of the works, no LSE are anticipated. [AS-026]
- d. Hydrological changes (hydrogeological functioning) (construction and operation) Wetland habitats are qualifying features of the SAC, i.e. 'North Atlantic wet heaths with Erica tetralix' and 'Depressions on peat substrates of the Rhynchosporion'. These habitats can be groundwater-or surface water-dependent or rainwater-dependent (ombrotrophic) (but less likely the latter in the current context) and are very sensitive to changes in water levels, flows and chemistry. Given the above sensitivities, a pathway to LSE exists to habitat loss and or degradation through the disturbance of hydrological and hydrogeological functioning (hydro-ecology) of the qualifying habitats of the SAC. This could occur through changes to ground conditions and drainage arising during construction and/or through the permanent presence of the buried pipeline. Depending on the habitat and its hydroecological functioning, the zone of influence within which hydrological changes could arise could be extensive, with effects arising along diffuse pathways. There are likely areas of wetland qualifying habitats within the Order Limits which could be directly hydrologically disturbed by construction and operation of the pipeline. The location, extent and hydro-ecological function of these water-dependent habitats within the SAC should be clarified to establish how these habitats would interact with construction and operation of the pipeline. As there is a need for further information, the pathway for LSE by hydrological changes should be

considered at Appropriate Assessment and the mechanisms that support these habitats within the SAC along the route clarified. **[AS-026]**

Hydrological changes (water quality) - Due to the nature of the proposals, the project has very low potential to generate emissions to ground and surface water bodies during construction (accidental spillages, silting etc.) which could significantly damage qualifying habitats of the SAC. As such, the potential for LSE via this effect pathway are *de minimis*. Effects due to the silting of waterbodies or the uncontrolled discharge of nutrient-enriched runoff as a result of the excavations are also considered very unlikely to occur; no LSE are anticipated. **[AS-026]**

e. Hydrological changes (water quality) and ground contamination (operation) – The risk of operational contamination is considered to be extremely low. The principles of inherent safe design have been incorporated into the design of the pipeline as per Esso design standards for fuel pipelines, relevant industry codes of practice and standards and the requirements of the Pipeline Safety Regulations 1996 (O8). Key principles of the design include a design life of 60 years; protection against corrosion; necessary equipment required for pipeline inspection; inclusion of remotely operated valves to allow isolation of sections of the pipeline if required (O9); and 24-hour remote monitoring of pipeline operation to detect leaks and enable remote shut down of the pipeline if required (O10). As such, the risk of contamination of the SAC during the operational phase of the project is considered to be extremely low and no LSE are anticipated. [AS-0261]

f. Air quality changes (construction)

Exhaust emissions from plant

Qualifying habitats of the SAC are considered sensitive to changes in air quality, particularly nitrogen and acid deposition. Exceedance of critical values for air pollutants may modify the chemical status of substrate supporting qualifying habitats, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. The project has the potential to generate effects associated with air pollution by combustion exhaust gases arising from construction activities. The SAC is already in exceedance of critical loads for nitrogen deposition (maximum critical load for 'depression on peat substrates of the *Rhynchosporion*': 15 kg N/ha/yr; current deposition: 16.1kg N/ha/yr) and in exceedance of the minimum critical load for acid deposition (Air Pollution Information System, 2017). The deposition of pollutants may therefore have an effect at the SAC sites through which the route passes.

IAQM guidance (2014), specifies that 'experience with assessing the exhaust emissions from on-site plant and site traffic suggests that they are unlikely to make a significant impact on local air quality, and in the vast majority of cases they will not need to be quantitatively assessed'. Effects of construction activities resulting from air quality are therefore likely to be de minimis. Moreover, construction works would be of short duration and relatively low intensity, with relatively low numbers and sizes of plant and machinery items anticipated to operate for the construction of the pipeline simultaneously (see Chapter 3 Project Description of the Environmental Statement). As the most significant negative effects of nitrogen and acid deposition likely to affect the qualifying features of the SAC (e.g. degeneration of cover by dwarf shrubs and increase in grass cover) develop with long-term

deposition (Stevens *et al.*, 2011), the short-term nature of deposition arising from project activities would also indicate that any effects are likely to be *de minimis*. **[AS-026]**

Dust

The construction work for the project would require plant and machinery that have the potential to generate dust. Construction activities for the project have the potential to generate effects associated with dust deposition within 50m of its boundary (IAQM, 2014). Excessive dust deposition can significantly change the nature of the supporting habitat for the qualifying features (Natural England, 2016). The total area of the SAC is 5,154.5ha. The total area of habitat within the Order Limits is approximately 29ha and accounts for approximately 0.5% of the SAC's total area. Even in a hypothetical scenario whereby all habitat within the Order Limits and the 50m zone of influence were temporarily modified due to dust deposition, this would still only account for approximately 40ha or 0.8% of the total area of the SAC. Furthermore, potentially disturbing construction works within the Thames Basin Heaths SPA would be undertaken between 1 October and 31 January unless otherwise agreed with Natural England (G38) (see Table 2.1 for details of seasonal constraints). This commitment covers the areas of the SAC crossed by the project. During this period activities would be less likely to generate significant amounts of dust as the ground and atmospheric conditions are typically damp. As such, any effects of dust are predicted to be *de minimis*. [AS-026]

- g. Ground contamination (construction) The accidental release of hazardous chemicals during construction works as a result of equipment failure or human error could result in soil contamination, which could in turn impact local ecology. Given the scale and temporary duration of the works that would not permit a pervasive, or large-scale contamination event, LSE are not predicted. The use of material not native to the SAC also has the potential to cause changes to chemistry of substrates within the SAC (e.g. pH). This could result in long-term effects leading to degradation or loss of qualifying habitats if qualifying habitats were present within the Limits of Deviation. The use of concrete or other kinds of material that could cause changes to chemistry of substrates within the SAC (e.g. pH) could have the potential for effects. The pathway for LSE by changes to substrate properties will be considered at Appropriate Assessment. [AS-026]
- **h. Invasive non-native species (construction)** The SAC is vulnerable to the spread of invasive non-native plant species, e.g. rhododendron (*Rhododendron ponticum*), which are potentially present within the Order Limits (Natural England, 2016). The spread of such species could negatively alter habitat structure and eventually the loss of qualifying habitats and could result from ground disturbance caused by construction activities as part of the project. Ground disturbance caused by construction activities as part of the project could spread invasive species into new areas of the SAC. **[AS-026]**
 - The SAC comprises four SSSIs with a total area of 5,154.5ha (JNCC, 2015). The area of the SAC within the Order Limits is approximately 14.50ha at Colony Bog and Bagshot Heath SSSI and 14.05ha at Chobham Common SSSI (a total of approximately 0.5% of the SAC's area). Activities associated with the project are only likely to spread INNS to areas within, or immediately adjacent to, the Order Limits. In the unlikely event that invasive non-native plants were introduced to new areas, there is considered to be negligible potential for this to result in LSE. **[AS-026]**
- i. In combination An in-combination assessment has been undertaken and is presented in Appendix E. No in-combination effects are anticipated. [AS-026]

ANNEX 3: STAGE 2 MATRICES: ADVERSE EFFECT ON INTEGRITY

The Applicant produced two integrity matrices in the HRA report [APP-130] and APP-131]. These included Thames Basin Heaths SPA at Table 5.4 and Thursley, Ash, Pirbright and Chobham SAC at Table 6.4.

An additional integrity matrix for the Thames Basin Heaths SPA for the potential effect of habitat loss was submitted by the Applicant at Deadline 6, as 'Appendix 1: ISH5-16 Technical Note' to the Applicant's Response to Action Points from the Issue Specific Hearing on Environmental Matters (ISH5) [REP6-078].

This annex of the RIES identifies the European sites and features for which the Applicant's conclusions with regards to adverse effects on integrity were disputed by IPs. Therefore, revised integrity matrices have been produced by the Planning Inspectorate for the Thames Basin Heaths SPA and the Thursley, Ash, Pirbright and Chobham SAC.

Key to Matrices:

- √ Adverse effect on integrity (AEoI) cannot be excluded
- × No AEoI
- ? Applicant and Interested Parties do not agree that an AEOI can be excluded
- C construction
- O operation
- D decommissioning

Information supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European Site the cell in the matrix is formatted as follows:

n/a

HRA Integrity Matrix 3.1: Thames Basin Heaths SPA

Thames Basin Heaths Special Protection Area (SPA)

EU Code: UK0012793

Distance to NSIP – The SPA comprises part or all of 12 SSSIs. The project's Order Limits pass through or near to four of these sites (Figure 9.5). These sites are: 1) Bourley and Long Valley SSSI for approximately 1.7km; 2) Eelmoor Marsh SSSI (the Order Limits are outside the SSSI but pass along the site boundary for approximately 300m); 3) Colony Bog and Bagshot Heath SSSI for approximately 4km; and 4) Chobham Common SSSI for approximately 2.4km.

European site features	Adver	se effe	ect on i	ntegrit	У									
Effect	Habita (non- breedi seasor	ng	Habitat loss (breeding season)		Noise and visual disturbance (Non-breeding season)		Noise and visual disturbance (Breeding season)		Displaced recreational disturbance (Non-breeding season)		Displaced recreational disturbance (Breeding season)		In- combination effects	
Stage of development	С	0	С	0	С	0	С	0	С	0	С	0	С	0
Nightjar <i>(Caprimulgus europaeus)</i> B			?a	?b	×c	×a	×d	×a	×c	×a	?e	×a	?g	×a
Dartford warbler <i>(Sylvia undata)</i> B			?a	?b	×f		×d		×f		?e		?g	
Woodlark (Lullula arborea) B			?a	?b	×f		×d		×f		?e		?g	

a. Physical disturbance (construction) (breeding season) – habitat removal and all construction works would be programmed to avoid the bird breeding season for the qualifying bird species. Therefore, no pathway to effect exists **[REP6-078]**.

The Applicant's conclusion in respect to physical disturbance (habitat loss / loss of breeding territories) was disputed by Rushmoor BC [REP6-020] during the Examination.

b. Physical disturbance (operation) (breeding season) - Plants removed and bare earth created post-pipeline installation would be available for birds to use in the breeding season; this may be for nesting, roosting or foraging. While individual plants may have been removed the habitat would remain, in a pre-pioneer stage at first, but with all the potential to quickly re-establish while

creating a diverse mix of structure and age leading to overall benefit of the habitat and subsequently qualifying bird species **[REP6-078]**.

The Applicant's conclusion in respect to physical disturbance (habitat loss / loss of breeding territories) was disputed by Rushmoor [REP6-020] BC during the Examination.

- **c. Non-physical disturbance (noise and visual disturbance, non-breeding season) –** As long-distance, trans-equatorial migrants, nightjar are not present in the SPA in winter; winter disturbance impacts to this species are therefore not feasible and would not cause an adverse effect on the integrity of the SPA [APP-130].
- d. Non-physical disturbance (noise and visual disturbance, breeding season) During construction, there would be changes to noise and visual stimuli due to the movement and operation of plant and personnel within the construction area, excavation and other groundworks and transport. Disturbance can affect breeding success with implications for population level impacts to Dartford warbler, nightjar and woodlark. To avoid disturbance to the qualifying species during the breeding season, potentially disturbing construction works within the Thames Basin Heaths SPA would be undertaken between 1 October and 31 January unless otherwise agreed with Natural England. Given the proposed timing of construction activities, the risk of disturbance resulting in an adverse effect on site integrity can be excluded. [APP-130]
- e. Non-physical disturbance (displaced recreational disturbance, breeding season) SANGs are areas of strategic green space identified, maintained and/or created by local authorities in order to relieve recreational pressure on the SPA. The Order Limits would pass through four allocated and one proposed SANG. Construction works could result in a temporary reduction in amenity use of these sites, with visitors potentially deterred by noise, visual changes, or restricted access. This could undermine the mitigation function provided by SANGs by diverting recreational pressure back to the SPA. On the basis of the short term duration of the proposed works, that the SANGs would still be largely accessible during the construction period, and that any displacement of recreational activity is likely to be absorbed by existing green space local to the respective SANG (Figure 9.12), adverse effects on site integrity are not anticipated. Moreover, it is considered that any small and temporary increase in visitors on the established walking routes within the SPA is unlikely to result in detrimental levels of disturbance; this is because disturbance is already greater near footpaths so that the relative impact of marginally raising visitor numbers to these areas would be small (Langston *et al.* 2007). It is therefore considered that the displacement of recreational activities, associated with the construction phase of the project would not lead to adverse effects on the integrity of the SPA or its ecological functions as defined by the Conservation Objectives. [APP-130]

The Applicant's conclusion in respect to potential visitor displacement due to works within individual or multiple SANGs was disputed by Rushmoor BC [REP6-020], Surrey Heath BC [REP6-024] and Runnymede BC [REP6-019] during the Examination. The latest SoCG for these IPs indicate that matters relating to works in SANGs are either agreed but the SoCG is not yet signed, or are still under discussion and further negotiations.

- f. Non-physical disturbance (displaced recreational disturbance, non-breeding season) Woodlark and Dartford warbler are present during winter but are much less sensitive to disturbance outside the breeding period (Natural England, 2016). Mallord et al. (2006) found that woodlark only settled to breed in low-disturbance areas, but heavily disturbed areas were still used for foraging. On the basis that there would be an abundance of 'disturbance-free' areas nearby to provide safe feeding sites and allow sufficient time for the birds to feed and recover from any physiological stress, and as breeding success would not be affected at this time of year, it is not considered that these objectives would be undermined or that the ecological integrity of the site would be compromised during winter. As such, the site would continue to support the requirements of the qualifying species for roosting and foraging. [APP-130]
- **g. In-combination effects** An in-combination assessment has been undertaken and is presented in Appendix E. No incombination effects are anticipated. **[APP-130]**

The appraisal of the individual potential impacts (noise and vibration during construction; displacement of recreational activity; and habitat loss) concluded that none would result in adverse effects on the integrity of the Thames Basin Heaths SPA. When taken in-combination, it can be seen that while there is some small degree of recreational disturbance possible during the breeding season at the SPA, the other two potential impacts have no pathways to effect when considering their relative timing, proportion of SPA area temporarily impacted and propensity of heathland and scrub habitats to regenerate. [REP6-078].

Rushmoor BC disputed that the Applicant should have undertaken an assessment of the potential combined effects of habitat loss and visitor displacement as a result of works within SANGs [AS-079].

HRA Integrity Matrix 3.2: Thursley, Ash, Pirbright and Chobham SAC

Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC)

EU Code: UK0012793

Distance to NSIP: The route passes through two SSSI components of the SAC: Chobham Common SSSI for approximately 2.4km and Colony Bog and Bagshot Heath SSSI for approximately 4km.

European site features	Adverse effect on integrity								
Effect		Physical disturbance (direct habitat loss)		Physical disturbance (substrate properties)		Hydrological changes		In combination effects	
Stage of development	С	0	С	0	С	0	С	0	
4010 North Atlantic wet heaths with <i>Erica tetralix</i>	×a	×a	×b	×b	×c	×c	×d	×d	
4030 European dry heaths	?e	?e							
7150 Depressions on peat substrates of the <i>Rhynchosporion</i>	×a	×a	×b	×b	×c	×c	×d	×d	

a. Physical disturbance (Direct habitat loss) – While the Order Limits intersect the SAC, the results of detailed habitat survey undertaken within the SAC in summer 2018 are considered sufficient to demonstrate that the route has been designed to reduce impacts to qualifying habitats. The Order Limits intersect 0.35% of the SAC resource of 'Northern Atlantic wet heaths' and 0.34ha of 'Depressions on peat substrates of the Rhynchosporion' qualifying habitats. However, direct impacts would be avoided through the use of trenchless construction techniques at Chobham Common SSSI, by aligning the Limits of Deviation to avoid these habitats at Colony Bog and Bagshot Heath SSSI, and through the application of good practice measures. Moreover, any loss would be temporary, with the project requiring no permanent land-take within the SAC and impacted areas restored following construction works. Such small and temporary loss is not considered sufficient to undermine the integrity of the SAC. [AS-026]

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- **b.** Physical disturbance (changes to substrate properties) Direct impacts to 'Northern Atlantic wet heaths' and 'Depressions on peat substrates of the *Rhynchosporion*' qualifying habitats would be avoided through the use of trenchless construction techniques at Chobham Common SSSI, and by aligning the Limits of Deviation to avoid these habitats at Colony Bog and Bagshot Heath SSSI. Techniques to mitigate activities that might change the substrate characteristics of the SAC would be implemented to preserve the properties of substrates, including the use of ground protection matting and the reduction in topsoil stripping. Given these embedded and good practice measures, it is not anticipated that activities involving ground disturbance would compromise the substrate processes supporting qualifying habitats. **[AS-026]**
- c. Hydrological changes (construction and operation) Conceptual Site Models (CSM) for habitats within and adjacent to the Order Limits address the uncertainty identified at Screening surrounding the interaction between the route and surface and groundwater systems supporting qualifying habitats. The CSM are considered sufficient to conclude that the potential scale, severity and duration of effects would be extremely limited, and would not compromise the hydrological processes supporting qualifying habitats, other than inconsequentially. The application of good practice measures would further reduce any potential for adverse effects. [AS-026]
- **d. In-combination effects** An in-combination assessment has been undertaken and is presented in Appendix E. No incombination effects are anticipated. **[AS-026]**
- **e. Physical disturbance (Direct habitat loss dry heath)** During the Examination Rushmoor BC disputed the Applicant's conclusion in respect of loss of European dry heathland **[AS-026]**

ANNEX 4: SUMMARY OF REPRESENTATIONS ON INDIVIDUAL SANGS

St Catherine's Road (Clewborough) SANG

- 1.1 St Catherine's Road SANG lies within the Borough of Surrey Heath.
- 1.2 The HRA report [APP-130] at paragraph 5.8.22 states the following with regards to likely visitor displacement from St Catherine's Road SANG during construction: "St Catherine's Road SANG is a small site approximately 2km from the SPA. The site is not listed as one of Surrey Heath Borough Council's strategic SANG and so no information relating to the position of its boundary or size has been obtained (Surrey Heath BC, 2019). However, based on the site's signage it is assumed that the SANG occupies a triangular parcel of grassland approximately 1.4ha in area between St Catherine's Road and Frith Hill Road. The assumed area of the SANG within the Order Limits is approximately 0.7ha (50% of the total SANG area). Within 1km of the SANG there is open-access woodland at Frimley Fuel Allotments and Frith Hill. These extensive areas of woodland would likely be suitable alternative locations for any small amount of recreational displacement from the SANG for the short duration of construction."
- 1.3 In Written Questions BIO.1.52 and BIO.1.53 [PD-008], the ExA asked the Applicant and Surrey Heath BC to confirm the boundary, location and size of the St Catherine Road SANG. In response, the Applicant [REP4-020] acknowledged there is some uncertainty regarding this SANG. The Applicant confirmed it is normally known as St Catherine's Road SANG, but it is also sometimes referred to by Surrey Heath BC as Clewborough SANG. The Applicant noted that it is not identified as a strategic SANG on the local authority's website and confirmed that it was created in 2010, as part of a planning permission for 60 dwellings on the former Clewborough House School site, St Catherine's Road, Frimley, and that it occupies a triangle-shaped area of approximately 1.6ha.
- 1.4 Surrey Heath BC provided at Appendix 2 of their LIR [REP1-024] the layout plan of St Catherine's Road SANG and confirmed [REP2-091] that the site is 1.6ha and located east of St Catherine's Road, opposite Keaver Drive, Frimley.
- 1.5 Surrey Heath BC stated in their RR [RR-033] "With regards to the potential impacts on the Thames Basin Heaths Specially Protection Area, the applications order limits currently pass through two Suitable Alternative Natural Greenspaces (SANGs) which mitigate the impact of new residential development in Surrey Heath on the Thames Basin Heaths SPA, namely St Catherine's Road SANG and Windlemere SANG. The SANGs can be considered the only alternative recreation mitigation for the developments that are allocated capacity to the SANG and therefore if the construction of the pipeline were to compromise the functioning of the SANG, for even a short period of time, there remains the potential for a significant impact on the integrity of the Thames Basin Heaths SPA."

- 1.6 Surrey Heath BC's LIR [REP1-024] stated that the works within the Order Limits at St Catherine's Road SANG, including the temporary construction compound, would compromise the function of the SANG and lead to an unacceptable impact. Surrey Heath BC requested that the Applicant consider removing the construction compound from the SANG and suggested the Applicant use the compound at Balmoral Drive and/or the logistics hub on Deepcut Bridge Road.
- 1.7 Surrey Heath BC [REP1-024] stated that the appropriate site layout and housekeeping measures set out in the CoCP [APP-128] are generic and that the impacts to the St Catherine's Road SANG are very specific. Therefore, specific and bespoke mitigation measures are required. Surrey Heath BC considered that the current best practice measures OP04, G28 and G7 in their current form to be insufficient to conclude there would be no LSE on the Thames Basin Heaths SPA. Surrey Heath BC was also concerned over the lack of detailed plans and information in the DCO application regarding effects on St Catherine's SANG.
- 1.8 The Applicant was asked in the ExA's Written Question BIO.1.43 [PD-008] to respond to the points raised in Surrey Heath BC's RR [RR-093] with regards to the potential adverse effects on the integrity of the Thames Basin Heaths SPA that would result from the Proposed Development's effect on the two SANGs (St Catherine's Road and Windlemere) within the borough.
- 1.9 The Applicant responded [REP2-040] that it had assessed the impacts to SANGs against the overarching policy requirements in NPS EN-1 and EN-4 and that it has worked extensively with NE on the matter of HRA. The HRA report concludes no AEoI on the Thames Basin Heaths SPA. The Applicant responded that it "is aware of Surrey Heath's concern that construction activity could impact on both of the borough's SANGs/open Catherine's Road SANG and Windlemere spaces simultaneously. Although it is too early to make a commitment about the schedule of construction activity, as the Applicant is yet to appoint a contractor and define the phasing for installation, the Applicant will continue to engage with Surrey Heath regarding the construction timings and this will be recorded in the Statement of Common Ground."
- 1.10 The Applicant described the proposed works within St Catherine's Road SANG, including the following three elements:
 - the corridor for the pipeline itself it is proposed to adopt a narrow working open cut construction methodology secured through NW20 in the REAC;
 - there is a stringing out area for pipe should it be necessary to use
 a trenchless construction technique in St Catherine's Road to the
 south, this area would be necessary to lay pipe on the surface of
 the ground on rollers in preparation for pulling through the drill. The
 Applicant would prefer to use an open cut methodology and close St
 Catherine's Road during construction, therefore not requiring this
 stringing out area; and

- a temporary construction compound to support the construction works in St Catherine's Road, the SANG and Frith Hill.
- 1.11 The Applicant confirmed that the Proposed Development would not preclude the continued use of the SANG or Frith Hill during construction for recreational activity and identified the likely alternative sites in respect of the two SANGs. The Applicant stated that its "current intention is to use open-cut trench techniques in SANG locations, thereby reducing the period of construction activity. The Applicant would ensure crossing points are provided so that the SANG is useable during construction and would not prevent its use by the community, see commitment OP04: 'Principal pedestrian routes within SANGs crossing the working area would be managed with access only closed for short periods while construction activities occur. Additional signage for diversions on to alternative existing paths will be utilised as appropriate.' This will be secured through the CoCP and secured through Requirement 5 of the DCO."
- 1.12 Surrey Heath BC in their WR [REP2-092] stated it was essential for the Applicant to deliver mitigation for the impacts on the St Catherine's Road SANG. Surrey Heath BC made two suggestions to the Applicant, firstly to remove the compound from the SANG, or if the Applicant is not prepared to do this, then to agree to mitigate the impacts by an appropriate financial contribution towards a new SANG. Surrey Heath BC also reiterated its view on the most appropriate location for the compound and put forward two Requirements it considered should be included in the draft DCO in respect of SANGs.
- 1.13 At ISH3 [EV-010] matters of St Catherine's Road SANG were discussed. The Applicant was given an action by the ExA [EV-010c] to consider whether a haul road between Balmoral Drive and St Catherine's Road would be possible to potentially negate the need for a construction compound on St Catherine's Road SANG.
- 1.14 The Applicant responded at Deadline 3 [REP3-016] that:

"Temporary logistics hubs and construction compounds required during installation of the pipeline are described in ES Chapter 3 Project Description (Application Document APP-043). Areas of high environmental and social sensitivity were avoided where practicable, and the design development sought to reduce potential effects on receptors (see Planning Statement (Application Document APP-132).

The compounds need to be adjacent to the working area. The location and number of construction compounds was determined through a balanced appraisal of the most efficient locations for construction management purposes, while accounting for potential environmental impacts (see Planning Statement (Application Document APP-132).

In the Frimley area, the compound in Balmoral Drive would serve the street works in Balmoral Drive itself. There is a significant change in topography levels between Balmoral Drive and St Catherines Road. It is therefore not possible to serve the street works in St Catherines Road without significant vehicle movements along residential roads. In

addition, it should be noted that St Catherines Road is the only road that would be closed to all traffic during construction.

Therefore, to serve these works without a compound on St Catherines Road would lead to additional construction traffic on residential roads. The Applicant has sought to balance the need to manage potential disruption for local residents with the impact on the open space at St Catherines Road SANG."

- 1.15 In responses to WRs [REP3-016], the Applicant stated it had met with Surrey Heath BC on 9 December 2019 to discuss the impact of the project on St Catherine's SANG and that the Applicant has agreed with the local authority "the location of the methodology statement to provide additional details regarding the construction and management of impacts for the pipeline in this area of Frimley."
- 1.16 The Applicant stated it does not agree with Surrey Heath BC in respect of the impact on the SANGs and therefore the mitigation measures suggested by Surrey Heath BC are not required. The Applicant stated it would confirm in the CoCP that it would not occupy this SANG for more than two years.
- 1.17 The Applicant also stated that it "wishes to highlight that they have asked the Council to produce evidence of visitor numbers for the St Catherines SANG. The Council has confirmed that it does not have any up-to-date data on user numbers for this SANG. The Applicant wishes to draw the Examining Authority's attention to the fact that there have been no consultation responses or written representations made from any users regarding the project and its impact on this SANG with the sole exception of the council. The Applicant would, therefore, challenge the assumption that this SANG was well-used and that the potential for displacement to SPA would be significant. From the Applicant's observations, the majority of visitors to this SANG use it as an access point to the adjoining Frith Hill area. The Applicant is proposing to maintain access to Frith Hill and to provide a circular walk within St Catherines SANG in line with commitments OP04 and G114."
- 1.18 At Deadline 3, Surrey Heath BC [REP3-049] included specific points in respect to St Catherine's Road SANG, stating that other SANGs within the catchment area of the development for which St Catherine's Road SANG was created either have limited or no remaining capacity. Surrey Heath BC noted that the Applicant has not considered the delivery of additional SANG in their HRA, given that it is recognised that there would be recreational displacement.
- 1.19 Surrey Heath BC [REP3-049] stated that it considers the Applicant's statement regarding 'short term duration and extent of works' is inaccurate given the large area of St Catherine's Road SANG impacted and the potential for two years of occupation of the proposed compound within the SANG.
- 1.20 At Deadline 4 Surrey Heath BC [REP4-049] stated they are concerned that the construction compound would be in place for two years and would directly impact on the SANGs circular walk, a principal pedestrian route, and therefore would result in the closure or diversion of this route for a sustained period of time. Surrey Heath BC [REP4-049] referred to

NE's detailed response on a bespoke SANG created for Fairoaks Airport, in which NE requested additional information including the submission of a CEMP and restriction on noise, so as not to have a detrimental effect on the users of SANGs. Surrey Heath BC therefore queried the noise impacts arising from the use of the proposed compound within St Catherine's Road SANG.

- 1.21 At Deadline 4, the Applicant [REP4-029] stated it has provided a Site Specific Plan (SSP) for St Catherine's Road SANG and confirmed the preferred methodology indicates that works within the SANG will take up to 13 months, although this may not be 13 months of continuous works. A table is provided to show how this is calculated. However, the Applicant also states that "...the compound is required to support the complex streetworks in St Catherines Road and the less complex open cut trench in the SANG itself. Therefore, having regard to the complexity and risks associated with the streetworks it is prudent to commit to a two-year period for works in the SANG. In order to provide a robust assessment of the project's impacts, a worstcase scenario that construction works will take place over a two-year period has been assessed. The Applicant is applying the same time limit on all land within the SANGs. This is being achieved through amendments to the Code of Construction Practice (Document Reference 6.4 Appendix 16.1 (3))."
- 1.22 In Further Written Question SANG.2.5 [PD-013], the ExA asked the Applicant and Surrey Heath BC to provide an update as to the progress and content contained within the CoCP and whether it would adequately manage the St Catherine's Road SANG during construction of the Proposed Development.
- 1.23 The Applicant responded [REP4-029] that

"the updated version of the Code of Construction Practice (CoCP) submitted at Deadline 4 (Document Reference 6.4 Appendix 16.1 (3)) includes a commitment which limits the period of work within SANGs to two years. A Site Specific Plan for St Catherines Road SANG (Clewborough) is also submitted at Deadline 4 (Document Reference 8.61) which also reflects this two-year limit.

The Applicant considers that this commitment, combined with the limited extent of construction works within St Catherines Road SANG, the small number of dwellings which the SANG supports and the SANG's close proximity to alternative green space (located outside the Thames Basin Heaths SPA) which is capable of absorbing any small amount of recreational displacement for the short duration of construction, adequately manage the effects of construction on St Catherines Road SANG.

Compliance with the CoCP is secured by Requirement 5 of the draft DCO (Document Reference 3.1(5)). The CoCP would be a document certified by the Secretary of State for the purposes of this Order. The Site Specific Plan is also secured by Requirement 17 of the draft DCO."

1.24 In response to SANG.2.5, Surrey Heath BC [REP4-076] stated they are in discussion with the Applicant regarding mitigation for the impact of construction activities on St Catherine's Road SANG. However, it stated that at this stage and based on discussions with the Applicant, it is

unlikely that an agreement will be reached on the adequacy of managing the St Catherine's Road SANG during construction of the Proposed Development. Surrey Heath BC stated they consider that they have provided practical and proportionate mitigation solutions to the Applicant that could be secured through a Section 106 agreement.

- 1.25 In SANG.2.7 the Applicant, NE and SWT were asked to provide a response to Surrey Heath BC's Deadline 3 response [REP3-049] regarding St Catherine's Road SANG and the effects on the Thames Basin Heaths SPA with specific reference to the 5 questions posed by the Surrey Heath BC in Paragraph 38 of that representation.
- 1.26 The Applicant [REP4-029] responded to the questions posed by Surrey Heath BC. Firstly, with regards to the selection of the compound in St Catherine's Road SANG and alternatives as question a), the Applicant stated it

"...has identified a compound to serve the works on St Catherines Road and the SANG. The St Catherines SANG construction compound (CO-5C) would be set up and accessed from the south prior to the closure of St Catherines Road for the street works phase of the construction. This compound would also support the open trench construction for St Catherines Road SANG (Clewborough) itself. The location of the compound has been selected to avoid the need to remove mature trees, and to allow for the safe loading, unloading and movement of pipe without obstruction from overhanging mature tree branches. It is therefore on open ground close to the highway to allow for the delivery of materials and staff.

Any compound located away from a highway would require the transfer of materials from road vehicles to off-road vehicles which would require space off the highway – of a similar size to the proposed compound – therefore a replacement compound elsewhere would not remove the need for a compound/access area in St Catherines Road SANG (Clewborough).

There are existing pipelines running along the edge of Frith Hill woods in an easement which is also used as a public footpath (not a designated PRoW) for access to Frith Hill. The location of the compound avoids conflict with this established access path into Frith Hill and additional impact on mature trees.

It is therefore reasonable to say that there are no available alternatives that do not involve the removal of mature trees. The response to question b) addresses Frith Hill as an alternative in more detail."

- 1.27 The Applicant went on to describe why other compounds (CO-5A, CO-5B, and LH4) would not be able to support the Proposed Development in this area.
- 1.28 In respect to b) and the query regarding the use of areas of Frith Hill, the Applicant responded [REP4-029] that Frith Hill is heavily treed and designated a Site of Nature Conservation Interest (SNCI). The Applicant cites the removal of a large number of trees, the provision of an

- additional haul road, and a new access road, a wider working width in Frith Hill with additional environmental impacts.
- In response to c), the Applicant stated that SANG 'capacity' is calculated 1.29 based on the number of homes built, compared to the area of mitigation and it is not based on the number of people who are actually using the SANG at any one time. The Applicant stated "It is important to recognise in this case that the St Catherines Road SANG (Clewborough) does not have a car park and is intended to serve the residents of the land immediately opposite. If one of these residents was to decide not to walk on the SANG because of the impact of the Applicant's construction works, the likelihood is they would carry on into Frith Hill, which is in any event considerably larger, rather than get in their car and go somewhere else. The use of Frith Hill for local residents is encouraged by the provision of direct access from the SANG." The Applicant referred to footpaths and bridleways linking the SANG to public access land that meets the SANG criteria within Frith Hill and including a newly designated Frimley Fuel Allotments SANG. Therefore, the Applicant concludes visitors are unlikely to go to the SPA. The Applicant also referred to the small number of people the SANG development serves, being 60 units (including 27 flats) and that not all of the SANG would be affected.
- 1.30 The Applicant continued that SANG capacity in planning terms is a concept for the provision of SANGs and not in relation to the number of people that can physically use the SANG at any one time. The Applicant stated that the St Catherine's Road SANG is not purely for the residents of the Keaver Drive development.
- 1.31 NE [REP4-063] confirmed at Deadline 4 that Surrey Heath BC had been in contact and that NE had subsequently contacted the Applicant to seek assurance that Surrey Heath BC's concerns were being properly considered. NE stated that they provided advice to Surrey Heath BC on suggested means of avoiding or minimising risk of visitor displacement to discuss with the Applicant.
- 1.32 NE concluded "With measures such as these in place Natural England has a high degree of confidence that the risk of visitor displacement and hence risk of increased recreational disturbance at Thames Basin Heaths SPA can be avoided. These measures can be secured through a CEMP or similar constraints applied to the DCO, should the application be approved."
- 1.33 In Further Written Question SANG.2.8 [PD-013] the Applicant was asked to explain the circumstances in which the stringing area would need to be utilised in St. Catherine's Road SANG.
- 1.34 In response, the Applicant [REP4-029] stated that it is not currently not anticipating the stringing area being utilised in St Catherine's Road SANG (Clewborough) and that

"The Applicant would prefer to use an open cut methodology and close St Catherines Road to the south during construction, therefore not requiring this stringing out area. However, the final decision on whether a trenchless technique will be necessary would be made once detailed design and pre-construction surveys have been completed. Installation in this area is complex due to the narrow working within the road, the topography, existing pipelines and other utility services, and the close proximity of residences requiring access. If the Applicant is unable to work in the road because of these factors, then these are the circumstances which would determine whether the stringing area would need to be utilised in St Catherines Road SANG (Clewborough). The option for a trenchless installation technique has been retained in the Order Limits because of this uncertainty.

In the unlikely event it should be necessary to use a trenchless construction technique in St Catherines Road, this area would be necessary to lay pipe on the surface of the ground on rollers in preparation for pulling through the drill. The stringing out area would not be required for any other activity.

If trenchless construction was necessary and the stringing area utilised, the area and duration of the construction would be reduced as it would not be supporting the open cut in St Catherines Road."

- 1.35 In Further Written Question CA.2.15 [PD-013] the Applicant was asked to provide an update as to progress with Surrey Heath BC, who stated in representations [REP3-032] and [REP3-033] that it maintains an objection to Compulsory Acquisition unless matters are resolved in respect to St Catherine's Road SANG.
- 1.36 The Applicant [REP4-021] responded that it has prepared a SSP for St Catherine's Road SANG (submitted for Deadline 4 [REP4-053]), which would form part of the CEMP and included details of: an indication of construction periods; elements of the works, construction methods, illustrations of working arrangements; and how the works would be managed. The Applicant stated that the draft SSP was discussed with Surrey Heath BC and that the outcomes would be reported in a SoCG to be submitted at Deadline 5. The Applicant stated that it "remains hopeful that SHBC will agree that these are appropriate measures for the use of St Catherine's Road SANG for the replacement pipeline and will enter into a voluntary land agreement with the Applicant. In the event that SHBC continues to reject a voluntary approach to the acquisition of land rights the Applicant will seek compulsory acquisition of the rights to construct the pipeline and the siting of the compound in support of the works in St Catherines Road and St Catherines Road SANG through the DCO."
- 1.37 At Deadline 5 Surrey Heath BC [REP5-048] provided comment on the SSP for St Catherine's Road SANG. Surrey Heath BC stated that it welcomes the submission of the SSP for St Catherine's Road SANG and the greater level of detail it provides in respect of construction works; however, further clarification on habitat, tree and vegetation removal was required. Requests were also made for greater information on soil storage, lighting and reinstatement. Surrey Heath BC also stated that the SSP should include specific, detailed measures to minimise disruption to

remainder of the SANG and prevent recreational displacement. Recommendations were included as follows:

- a. Acoustic fencing to limit the impacts of noise pollution on the tranquillity of the SANG.
- b. Using materials for fencing that reduce the visual impacts on the SANG, maintaining low visibility of the work area.
- c. Minimising the use of the SANG as far is as practical to limit any potential impacts, including temporary land take for storage vehicles, materials etc.
- d. Introducing up to date, clear and user friendly information within the SANG for its users, including details of timings and potential routes through the Frith Hill woodland, as well as making clear the remainder of the site will remain open.
- e. Laying the pipeline into the SANG outside bird nesting season to limit any potential impact.
- f. Avoid obstruction of main access routes.
- g. Ensuring that the site remains secure for dogs to be safely let of the lead.
- h. Reinstating the site in accordance with the SANG management plan.
- i. In advance of any construction works taking place, providing an information pack to every Keaver Drive residence detailing the timescale of the works, notification that the SANG will remain open and potential routes that can be utilised within Frith Hill and the Frimley Fuel Allotments.
- 1.38 Surrey Heath BC also noted a discrepancy between the time period of likely occupation of the SANG (stated as being 13 months, although this may not be for a continuous period of time) and the statement that activities would be demobilised within the two-year period. Clarification was sought.
- 1.39 The Applicant at Deadline 5 [REP5-021] stated in respect to St Catherine's Road SANG that "The Applicant has discussed this matter further at a meeting on the 7 February 2020 and understands that the concern regarding the impact of the project on St Catherines SANG is now resolved and will be reported in the agreed Statement of Common Ground."
- 1.40 At ISH5 [EV-021 to EV-025], the Applicant stated that authorities with planning functions in respect of SANGs, with the exception of Rushmoor BC, no longer maintained a concern in relation to their SANGs. Surrey Heath BC noted that the Applicant had been slow to recognise the displacement issue. Surrey Heath BC stated that they had responded to the SSP at Deadline 5 and had identified practical measures (page 11 of REP5-048) which they are picking up with the Applicant. The Applicant

- confirmed at ISH5 agreement to all of the measures identified by NE for the St Catherine's Road SANG.
- 1.41 At Deadline 6, Surrey Heath BC [REP6-096] confirmed that "The Council does not remove its objection to the Order Limits within the St Catherine's Road SANG but the Parties consider that an agreement can be reached regarding the specific terms of the occupation of the SANG should this be necessary and are continuing negotiations. Furthermore the Council would draw attention to its Deadline 5 submission 8.61 Site Specific Plan (SSP) St Catherine's SANG Revision No 1.1. As such the Council would envisage that a revised Site Specific Plan would be submitted to address the matters and concerns made in its submission."
- 1.42 A revised SSP for St Catherine's Road SANG has been submitted by the Applicant for Deadline 6 [REP6-059 and REP6-060]. A draft (unsigned) SoCG between the Applicant and Surrey Heath BC was also submitted at Deadline 6 [REP6-024] stating as a matter subject to ongoing discussion that "SHBC does not remove its objection to the Order Limits within the St Catherine's Road SANG but the Parties consider that an agreement can be reached regarding the specific terms of the occupation of the SANG should this be necessary and are continuing negotiations."
- 1.43 The Applicant also submitted at Deadline 'Appendix 2: ISH5-22 Measures Proposed for SANGS' [REP6-074], which sets out the mitigation/ measures proposed for SANGs. The Applicant stated that the text contained within the Appendix has been incorporated into the CoCP [REP6-009 and REP6-010] in Sections 1.16 (construction schedule) and 2.15 (construction method).

Southwood Country Park SANG

- 1.44 Southwood Country Park SANG lies within the borough of Rushmoor.
- 1.45 The HRA report [APP-130] states with respect to Southwood Country Park SANG: "Southwood Golf Course proposed SANG is 2.4km from the Bourley and Long Valley SSSI component of the SPA, in the borough of Rushmoor. The proposed SANG would be an extension to the existing Southwood Woodland SANG and would comprise four new areas: the disused golf course to the east of the A327; the disused golf course to the west of the A327; existing football pitches south of Grasmere Road; and the open space to either side of the Cove Brook. Combined, the existing and proposed SANG has an area of approximately 98.5ha. The Order Limits would intersect all areas of the proposed SANG. The area of the proposed SANG within the Order Limits is approximately 7.1ha (7.2% of the total SANG area). No SANG car parks would be directly affected by the project. It is anticipated that the existing Southwood Woodland SANG (approximately 350m to the west of the Order Limits) and unaffected parts of the proposed Southwood Golf Course SANG would act as a receptor for any displaced recreational activity for the short duration of construction, with the former already a well-established area for walkers."
- 1.46 Rushmoor BC [EV-021 to 025 and REP6-088] at ISH5 confirmed that Southwood Country Park is now open and has been designated by NE as

- a SANG. Rushmoor BC confirmed that it will be allocated shortly for the Farnborough and Aldershot regeneration.
- 1.47 Rushmoor BC's LIR [REP1-015] stated that "The proposed Southwood Country Park SANG is a 57ha site, not a 68.5ha site as detailed within the HRA information. The Country Park has capacity for 712.5 people. The majority of this capacity will be filled by 2021. Southwood Woodland is already at full capacity being designated in 2008. The SANGs are designed to reflect the peace and tranquillity found within the SPA. If Southwood Woodland was forced to accommodate further visitors from the Country Park, the site would become very busy and visitors would be likely to visit the SPA, where tranquillity can be assured.
- 1.48 The applicant states that 7% of the total area of both SANGS will be impacted, the correct figures are over 8% as the area of the Country Park and Southwood Woodlands were miscalculated. Due to the SANG methodology above, the percentage of impact would need to be calculated within the golf course alone as Southwood Woodlands has reached carrying capacity for visitors. Therefore over 12% of the Country Park would be impacted. This calculation does not take into consideration the far greater impact of the noise and visual intrusion into a site that is meant to be peaceful."
- Rushmoor BC's WR [REP2-081] expanded on the role of Southwood 1.49 Country Park, being created to provide capacity development associated with the regeneration of Farnborough and Aldershot Town Centres. The WR confirmed that the Country Park has capacity for 5,875 people, with the contributing development expected to have gained permission by mid-2020. Rushmoor BC stated that "At the time that planning permission is granted the SANGS payments are triggered to enable the provider to deliver mitigation before houses are occupied. The council is concerned that, due to the position of the route straight through the middle of the park and the timing of construction, the tranquillity of the Country Park will be affected at exactly the time when the council would be encouraging new residents to use this resource. This could result in new residents using the SPA making the SANGS mitigation ineffectual. Further, impacts on the delivery of the SANG and its recreational use may mean that it cannot be relied upon by developers as an avoidance measure, which may in turn lead to a delay in the grant of permission for new housing in the Borough."
- 1.50 Rushmoor BC [REP2-081] referred to the Applicant's assumption that displaced Southwood Country Park SANG users could use the adjacent Southwood Woodlands and that Southwood Woodlands site reached its capacity a number of years ago. Rushmoor BC stated that they agree that this site accommodates many visitors, including regular dog walkers; however, raised concerns that the peace and tranquillity within this site would be compromised and existing users as well as those displaced may revert to walking within the SPA if further new residents displaced from Southwood Country Park, were to start using Southwood Woodlands. Rushmoor BC stated that the Applicant can only rely on other SANGs where capacity has not been reached.

- 1.51 Rushmoor BC raised concerns with regards to the route passing through the middle of the SANG, with two compounds also being located within the park boundaries, and that such works would limit where people can go to gain the peace and tranquillity requirements that are characteristics required of a SANG. It is Rushmoor BC's view that users would be displaced back to the SPA, which is only 0.5km away from the SANG.
- 1.52 The Applicant responded at Deadline 3 [REP3-016] that

"The Applicant notes that this SANG only partly opened in September 2019. The Applicant's approach to construction within SANGs, and its approach to the control and mitigation of potential impacts through the REAC, CoCP, CEMP and LEMP secured in the draft DCO were the subject of detailed discussions as part of the Issue Specific Hearings.

The Applicant is undertaking additional technical work following the Hearings and will hold further meetings and engagement with Rushmoor Borough Council in relation to the issue raised relating to Southwood Country Park as part of the examination process. The examination will be updated through the SoCG, and through the submission of further written submissions at Deadline 4."

- 1.53 Matters relating to SANGs were discussed at the ISH in December 2019, as noted above, with Further Written Questions issued by the ExA on 13 January 2020 [PD-013].
- 1.54 In response to the ExA's Further Written Question SANG.2.3 Rushmoor BC [REP4-072 and also REP4-071] stated that it has become clear during the Examination that disruption in SANGs could occur for two years and that it is their view that this cannot be classed as short and "therefore the assumptions on which the HRA assessment is based cannot be substantiated and the assessment is flawed." Rushmoor BC stated that "The length of disruption is particularly pertinent in the case of Southwood Country Park, as the timing of the project, 2021 -2023 is likely to coincide with the occupation of the residences within Farnborough and Aldershot Town Centre. As the Country Park provides SANGs mitigation for these areas, this is exactly the period when the council would be hoping to encourage new residents to use the park."
- 1.55 Rushmoor BC cited concerns with regards to the compound, which in they understand would be within view of the planned visitor centre, haul roads that could limit visitor access to the river network, together with severance of the circular walk by the pipeline installation. Rushmoor BC considered that "...with the level of visual and auditory intrusion, as well as the limitations on access, RBC do not agree with the assumption that the level of disruption to the SANG would be minor."
- 1.56 Rushmoor BC also reiterated concerns regarding the absence of quantified data / calculations for visitor displacement and the reliance on Southwood Woodlands SANG to absorb displaced users. Rushmoor BC stated "This assumption evidences a serious misunderstanding of the criteria used to establish the amount of SANG required to mitigate additional housing and the reasons why SANG provision was thought to be necessary in the first place. SANGs were provided to ensure there was adequate natural open space available for new residents as an

alternative to the SPA. Visitor studies, undertaken during research for the 2008 mitigation strategy, found that people were using the SPA due to the lack of natural habitat available. The studies also highlighted that existing alternative natural sites were avoided by visitors using the SPA as they were too busy and therefore did not provide the tranquillity experienced within the SPA."

- 1.57 Rushmoor BC stated "Southwood Woodland is a popular site for walkers and dog walkers alike. Car park figures coupled with visitor studies show that the site is operating at the capacity for which it was identified. Car parking to the site is limited and as the woodland was one of the original SANGs all capacity has now been taken up. If significant numbers of additional visitors were to use the site, there is a serious risk that the displacement could extend to current users of the woodland, disrupting positive behaviour and again increasing visitor numbers on the SPA."
- 1.58 In Further Written Question SANG.2.9 [PD-013], the ExA asked the Applicant to explain why it considers areas of land which have full SANG capacity, such as Southwood Woodlands SANG, would be a "suitable alternative" to Southwood Country Park SANG in absorbing displaced recreational pressure, and to provide evidence to support this conclusion.
- 1.59 In response, the Applicant [REP4-029] stated

"The area around the Thames Basin Heath (TBH) SPA has experienced wide-scale housing in the last 50 years, with Natural England expressing concern that further large-scale development could increase recreational pressures on the TBH SPA area and its nesting birds reported in draft Delivery Plan (the "dDP") Natural England, February 2005. The disturbance from recreational activities can have an adverse impact in various ways:

- through increased nest predation by natural predators when adults are flushed from the nest or deterred from returning to it by the presence of people or dogs;
- chicks or eggs dying of exposure because adults are kept away from the nest;
- through accidental trampling of the eggs by people, given that the nest is on the ground and often close to footpaths;
- through predation of chicks or eggs by domestic dogs and cats;
 and
- increasing stress levels in adult birds.

The Surrey Heath Thames Basin Heaths Special Protection Area (TBH SPA) Avoidance Strategy Supplementary Planning Document 2019 states that 'Surrey Heath will provide SANGs for new developments at a standard of at least 8 hectares per 1,000 head of population as set out in the JSPB Delivery Framework. All SANGs, including on-site provision, will be expected as a minimum to meet the 8ha per 1,000 new population standard.'

SANG "capacity" is, therefore, calculated based on the number of homes built compared to the area of mitigation SANG area available for community recreation use. It is not based on the number of people who are actually using the SANG at any one time and at capacity in terms of the number of people actively using the space at any one point in time.

This means that even if the housing growth has been delivered up to the limit of the capacity for a specific SANG in planning policy terms, it does not mean that, during construction, people would be unable to use the temporarily affected SANG or a nearby SANG because it is at capacity. There is no restriction on any resident using a SANG, nor any bar to entering a SANG which is 'at capacity'. The term is simply an indication that the housing allocated in the area and mitigated by the provision of the SANG has been delivered.

It is also relevant to note that only a small part of the SANG would be affected by construction works. The Applicant concluded that this approach is supported by NE.

- 1.60 In Further Written Question SANG.2.10 [PD-013], the Applicant was requested to explain how the impacts of construction activity would affect accessibility of Southwood Country Park and if it would how would this effect the capacity of the SANG i.e. would it be reduced?
- 1.61 The Applicant responded [REP4-029] that the construction of the pipeline would not prevent access to any of the car parks serving Southwood SANG, nor would footpath access into the SANG be severed by the construction of the pipeline. The Applicant stated it would ensure through commitments G114 and OP04 that circular paths would be retained, as secured through the CoCP.
- 1.62 The Applicant stated that only a small part of the SANG would be affected by construction works and that all footpaths, including the circular walks, would remain operational during construction. Therefore, the Applicant considers that the SANG would continue to function as effective mitigation for the current and proposed housing areas in this part of Farnborough.
- 1.63 At Deadline 4, the Applicant submitted a SSP for Southwood Country Park SANG [REP4-052].
- 1.64 At ISH4, Rushmoor BC [REP6-088] stated with respect to the SSPs that "it was noted that the SSP's have been submitted very late in the examination process. The plans are welcomed but they require further detail and further work. The SSP's should be subject to approval by the local authority. The aim is not to govern route selection but to control environmental impacts."
- 1.65 At ISH5, Rushmoor BC [REP6-088] responded in respect to the ExA's query to the Applicant regarding the ability to restrict the timing of works within SANGs and whether this would reduce the impact, stating that "...this would indeed limit the impact due to indirect recreational pressure due to displacement from the Southwood Country Park SANG, which would limit the in-combination impacts from displacement and direct habitat loss. The stipulation not to undertake works within the SANGs network, during the summer breeding period would help to ensure that recreational pressure was kept to a minimum."

- 1.66 As a post hearing note, Rushmoor BC [REP6-088] stated "For works which cannot be scheduled outside the breeding season, such as in the Flood Alleviation Area, RBC is advocating that the applicant fund the Cove Brook Enhancement Project to provide additional Suitable Alternative Natural Green Space (SANGS) along the Cove Brook Greenways, which run through Farnborough. RBC is of the opinion that if the above measures were specified within the DCO there would be no significant in-combination impact on the Thames Basin Heaths SPA as a result of recreational pressure, within the Rushmoor Borough."
- 1.67 Rushmoor BC [EV-021 to EV-025 and REP6-088] stated that the SSP provided for Southwood Country Park is helpful; however, in terms of management of the works, Rushmoor BC asked that the following factors be considered:
 - "There is limited working;
 - The work is seasonal and does not impact on breeding birds; and
 - That the Cove Brook Greenways linear corridor is enhanced to attract more visitors and provide further SANG capacity to accommodate the displacement of visitors."
- 1.68 Rushmoor BC stated [REP6-088] that "if these factors can be adhered to then impact on our SANG would be mitigated."
- 1.69 At ISH5 [EV-021 to EV-025], Rushmoor BC stated that the Southwood Country Park SANG was linked to the regeneration of Farnborough and Aldershot Town Centres and that the planning applications in respect of those developments were at the pre-application stage, with applications for some due in 2020.
- 1.70 The Applicant [EV-023 and REP6-073] stated as regards Southwood Country Park SANG, the Applicant noted that the SANG was designated for housing allocations comprising up to 2,450 dwellings. The Applicant stated, however, that Rushmoor BC's "own housing land supply document of June 2019 stated in terms that at least 750 of those dwellings which the SANG was intended to accommodate would not be delivered during the period 2020-2023 and would not therefore be delivered during the period of construction of the scheme, so spare capacity in housing allocation terms would remain available."
- 1.71 Rushmoor BC agreed at ISH5 to submit a note regarding the housing allocation for the SANG [EV-026]. This was submitted in the responses to Action Points at Deadline 6 [REP6-089]. Rushmoor BC identified those formally allocated (352.3); those in formal pre allocation and allocation to be made and application expected to be received by end of March 2020 (954.1); those in informal pre-application and allocation to be made and application expected summer 2020 (3748.8); and other anticipated Local Plan schemes (436.4). Concluding a total requirement of 5,491.6, with a capacity at Southwood Country Park SANG of 5,250.
- 1.72 Rushmoor BC stated "As can be seen the allocations made and expected exceed the Southwood Capacity. It is likely that the Civic Quarter and Farnborough Town Centre will require less SANG than allowed for by the standard methodology when final mixes are determined. However it is

likely other windfall schemes may come forward. So this demonstrates that the Southwood Country Park SANG will be fully or substantial allocated and being utilised during the period of the Pipeline construction."

- 1.73 In their response to the Applicant's Deadline 5 representations, Rushmoor BC [REP6-087] stated that "In respect of recreational pressure from Southwood Country Park SANG, RBC feels that there is appropriate mitigation which could limit displacement of the visitors onto the SPA. The council is working with the EA, our partners in the delivery of the existing Southwood and Cove Brook River and Floodplain Improvement Project, to devise a mitigation strategy which would ensure that displacement from the SANG onto the SPA would be minimised. As detailed within the hearing the strategy would contain three safeguards to limit recreational impact." Rushmoor BC listed the safeguarding measures in their representation [REP6-087].
- 1.74 Rushmoor BC [REP6-087] point out that they have requested a meeting with the Applicant and the Environment Agency (EA) in the next week to discuss habitat and amenity enhancement of the Cove Brook Greenways. "The EA and the council are working on a joint costed project plan, which we are hoping to share with the applicant when we meet. We hope that ESSO will be willing to work with us on this plan so we can assure the SPA is protected from recreational pressure within Rushmoor Borough."
- 1.75 The SoCG between the Applicant and Rushmoor BC at Deadline 6 [REP6-020] identified Southwood Country Park SANG and potential effects on the Thames Basin Heaths SPA arising from visitor displacement are a 'matter subject to ongoing discussion'.
- 1.76 An updated SSP for Southwood Country Park SANG [REP6-057 and REP6-058] was submitted by the Applicant at Deadline 6, alongside an updated CoCP. As noted above, the Applicant also submitted an 'Appendix 2: ISH5-22 Measures Proposed for SANGS' [REP6-074], which has been incorporated into the CoCP [REP6-009 and REP6-010] in Sections 1.16 (construction schedule) and 2.15 (construction method).

Windlemere SANG

- 1.77 Windlemere SANG lies within the borough of Surrey Heath.
- 1.78 The HRA report [APP-130] states at paragraph 5.8.23 with respect to Windlemere SANG: "Windlemere SANG is a strategic SANG within the borough of Surrey Heath. The SANG has a total area of approximately 15ha (Aspect Ecology, 2017). The area of the SANG within the Order Limits is approximately 1.5ha (10% of the total SANG area). No current SANG car parks would be directly affected by the project. The Turf Hill area of the SPA is approximately 100m to the west of Windlemere SANG, albeit on the opposite side of the A322 dual carriageway. A Surrey Wildlife Trust car park allowing access to the Brentmoor Heath area of the SPA lies approximately 300m to the west of Windlemere SANG. As such, a measure of displacement could result from Windlemere SANG to the SPA via Brentmoor Heath. However, it is reasonable to assume that the unaffected area of SANG would be sufficient to absorb any displaced recreational activity. In addition, the 5.5ha West End Recreation Ground

is an area of common land approximately 410m from Windlemere SANG that may also act as a receptor for any displaced recreational activity for the short duration of construction."

- 1.79 Surrey Heath BC's LIR [REP1-024] identified concerns with regards to impacts on the Windlemere SANG in West End; however, it also stated "on evaluation of the current order limits in Windlemere, provided that disturbance to the SANG is minimised and the circular walk is retained during construction, the Council agrees that the impact will likely be negligible on the Thames Basin Heaths SPA."
- 1.80 At ISH3, the Applicant [REP3-014] explained that it had been in extensive discussions with Surrey Heath BC who expressed no concerns with regard to the impact of the Proposed Development on Windlemere SANG.
- 1.81 Surrey Heath BC's WR on matters relating to the Thames Basin Heaths SPA and St Catherine's Road SANG submitted at Deadline 3 [REP3-049] stated

"In respect of Windlemere SANG, the Council has previously raised concerns with the applicant in meetings and is not objecting to the principal of works in the SANG given the nature of the SANG and verbal commitments made by the applicant, for example minimising impacts on the SANG's tranquillity through appropriate construction methods and through retaining the SANGs circular walk during construction. However, such commitments have not been fully reflected in the draft DCO application and supporting documentation. The Council therefore wishes to see these commitments secured through the DCO requirements.

The Council has requested that the applicant produce detailed Construction Methods Statements for 'hot spot' areas along the replacement pipeline route, including a CMS for St Catherines Road SANG and Windlemere SANG. The Council has been working with other Local Planning Authorities to propose an outline CMS, which has also been shared with Esso ahead of Deadline 3. The Council understands that the applicant will submit detailed CMS's for these areas at Deadline 4. It is expected that if the appropriate detail is provided in respect of construction activities in Windlemere SANG, that the Council will be able to conclude that the proposals would not give rise to displaced recreational activity."

- 1.82 Surrey Heath BC at Deadline 4 [REP4-076] reiterated previous statements that the Applicant's HRA relies on unverified assumptions in respect of alternatives and stated that "...in the case of Windlemere, West End Recreation Ground is identified as an area that may act as a receptor for displaced recreational activity, despite the recreation ground not being a SANG and existing prior to Windlemere being created."
- 1.83 A draft (unsigned) SoCG with Surrey Heath BC [REP5-020] was submitted for Deadline 5 and at Deadline 6 (unsigned) [REP6-024], which states: "SHBC is satisfied that the Applicant's Code of Construction Practice and the Register of Environmental Actions and Commitments (REAC) establish reasonable generic principals for managing post

construction impacts, on Open Spaces crossed by the Order Limits at: The informal open spaces along Balmoral Drive; and Windlemere SANG".

Crookham Park / Queen Elizabeth Barracks SANG

- 1.84 Crookham Park / Queen Elizabeth Barracks SANG lies within the district of Hart.
- 1.85 The HRA report [APP-130] states at paragraph 5.8.20 that "Crookham Park SANG is located at its closest point approximately 550m from the boundary of Bourley and Long Valley SSSI, in the borough of Hart. The SANG has a total area of 71.55ha (Hart District Council, 2012). The SANG comprises 14 interconnected areas. The Order Limits intersect six of these areas (Areas 5, 7, 8, 10, 11, and 12). The area of the SANG within the Order Limits is approximately 4.75ha (6.6% of the total SANG area). No SANG car parks would be directly affected by the project. It is expected that eight unaffected adjacent areas within the SANG would absorb any displaced recreational activity for the short duration of construction."
- 1.86 Taylor Wimpey's WR [REP2-121] raised concerns with regards to the SANG, stating:

"Taylor Wimpey's land interests in the Order Lands (as indicated by the book of reference) comprise: (a) a 999 year leasehold interest in agricultural land at Church Crookham plots 845, 846, 848, 851, 852, 853, 854, 855, 858, (sheet 30, 101 and 102). The land in Taylor Wimpey's ownership extends beyond the Order Lands and is shown on figures 1 and 2 below edged green (Title number HP649214). This land is part of SANG Land which was brought forward as part of an 872 residential unit development of the Queen Elizabeth Barracks. The associated S106 Agreement requires the maintenance of the SANG Land in accordance with the requirements of a management schedule for 80 years."

"Taylor Wimpey is concerned as to the blight and loss of amenity that could be caused as a consequence of the proposed construction and future management and maintenance of the Pipeline. Taylor Wimpey need, therefore, to fully understand the nature of the works and how the environmental impacts will be fully mitigated and seeks the engagement of the Applicant in this regard. Taylor Wimpey reserve the right to make further representations following that engagement should it remain dissatisfied as to how impacts will be addressed and if it does not have the assurance that its residential proposals can be developed alongside the Pipeline proposals and that the SANG obligations can continue to be discharged."

1.87 At ISH3, the Applicant [REP3-014] stated with regards to Crookham Park SANG that "Hart District Council had taken no issue with the approach of the Applicant and the subsequent impact on this SANG." Hart District Council were not present at ISH3 and therefore the ExA directed a Rule 17 further information request [PD-010] to Hart DC, requesting confirmation on whether the Crookham Park SANG and the SANG referred to by Taylor Wimpey are the same SANG and to confirm, in light of the draft SoCG and the comments by Taylor Wimpey, if the Applicant's

comments at the Hearing that Hart DC are satisfied on this issue were correct.

- Hart DC responded [REP4-066] that it is the same SANG, and that 1.88 "Following further discussions with the applicant the Council has no outstanding concerns regarding this issue, reflected in the latest SOCG. The Council had sought clarification that access from the Naishes Lane car park to the SANG will be maintained during pipeline construction. The Applicant identified relevant good practice and mitigation measures included in the Code of Construction Practice to the Authority, including commitment OP04 in the Code of Construction Practice, that "Principal pedestrian routes within SANGs crossing the working area would be managed with access only closed for short periods while construction activities occur. Additional signage for diversions on to alternative existing paths will be utilised as appropriate." The Applicant also confirmed that principal pedestrian routes within SANGs would be treated the same as rights of way in terms of crossings, with any temporary diversions around and during live construction works across the pedestrian route being made within the vicinity of the works. Advance notification to the local community of works affecting users of the SANG is secured through a site-specific Community Engagement Plan, as committed to within the Outline Community Engagement Plan¹⁰. On this basis, the Authority confirmed that its concerns are overcome."
- 1.89 At Deadline 5, the Applicant [REP5-021] stated in respect of this SANG that "The Applicant notes that the Council has no outstanding concerns about the works in SANG."
- 1.90 A signed SoCG between the Applicant and Hart DC [REP5-018] was submitted at Deadline 5, which stated it is agreed that:

"The Authority is satisfied that the submitted Habitats Regulations Assessment (application documents APP-130 and APP-131) satisfactorily assesses potential impacts on the SPA, and acknowledges that the project has taken into account information provided by the Authority over the routing through the Crookham Park SANG and the details of construction methodologies and mitigation for any impacts."

"The proposed routeing of the proposed development through the Crookham Park SANG, coupled with mitigation secured through the DCO including managing of principal access routes, leads the Authority to not raise concerns over potential temporary impacts on users of the Crookham Park SANG during construction, nor as a result of any temporary displacement of users to the SPA should that occur."

"The Authority had sought clarification that access from the Naishes Lane car park to the SANG will be maintained during pipeline construction. The Applicant identified relevant good practice and mitigation measures included in the CoCP to the Authority, including commitment OP04 in the CoCP, that "Principal pedestrian routes within SANGs crossing the working area would be managed with access only

¹⁰ Section 9 of the latest Outline Community Engagement Plan [REP6-046 and REP6-047] refers to 'Location-specific tactical communication plans' to be implemented for SANGs

closed for short periods while construction activities occur. Additional signage for diversions on to alternative existing paths will be utilised as appropriate." The Applicant also confirmed that principal pedestrian routes within SANGs would be treated the same as rights of way in terms of crossings, with any temporary diversions around and during live construction works across the pedestrian route being made within the vicinity of the works. Advance notification to the local community of works affecting users of the SANG is secured through a site-specific Community Engagement Plan, as committed to within the Outline Community Engagement Plan. On this basis, the Authority confirmed that its concerns are overcome."

"The Authority had sought confirmation from the Applicant that the location of the proposed Logistics Hub at Hartland Park (as proposed to be changed), and use of Bramshot Lane (private road) to access that site, would not adversely affect agreed pedestrian routes through the Hartland Park development to the land East of Bramshott Lane which is a SANG (Kennel Lane SANG). The Applicant confirmed to the Authority that the location of the proposed Logistics Hub was agreed with the landowner/developer and did not affect the pedestrian routes to the SANG from the initial phases of residential development. The pedestrian routes, and pedestrian crossing of Bramshot Lane lie to the south of the proposed logistics hub and so are not affected by the proposed logistics hub nor traffic accessing it from the north along Bramshot Lane. On this basis, the Authority confirmed that its concerns are overcome."

Chertsey Mead SANG

- 1.91 Chertsey Mead SANG lies within the borough of Runnymede.
- 1.92 The HRA report [APP-130 and APP-131] states with regards to Chertsey Meads "Chertsey Meads SANG in Runnymede has a total area of approximately 73ha (Surrey Wildlife Trust, 2017). The area of the SANG within the Order Limits is approximately 6.3ha (9% of the total SANG area). No SANG car parks would be directly affected by the project. Chertsey Meads SANG is approximately 7km from the SPA at Chobham Common SSSI. To travel to the SPA's closest car park (Longcross Car Park) from the SANG would require an 18-minute car journey (Google Maps, 2018). There are ten alternative SANG sites within 5km of Chertsey Meads, all of which are closer to it than the nearest component of the Thames Basin Heaths SPA. These are:
 - Homewood Park SANG;
 - Franklands Drive SANG;
 - Hare Hill SANG;
 - Chaworth Copse SANG;
 - Ottershaw Chase SANG;
 - Queenswood SANG;
 - Ether Hill SANG;

- Timber Hill SANG;
- Ottershaw Memorial Fields SANG; and
- St Ann's Hill SANG."
- 1.93 At ISH3, the Applicant [REP3-014] stated with regards to Chertsey Meads "that whilst not technically a SANG, the Applicant treated this site as a SANG and Runnymede Borough Council had not expressed any concerns with regard to the impact on Chertsey Meads during discussions."
- 1.94 Runnymede BC [REP3-035] stated at Deadline 3 in response to Hearing Action Point Q10 [EV-007b] and Protective Provisions, "RBC are seeking confirmation of working practices and timetable to be used for pipe installation over Chertsey Meads. Verbally it has been agreed that the Applicant will: i) Use narrow working practices across the Meads to minimise damage to the natural environment"
- 1.95 Runnymede BC [REP3-035] also stated in response to Hearing Action Point Q4 [EV-009c] (to provide a written summary to clearly articulate S106 requests in terms of the legal tests for S106) that "Without prejudice, RBC do not envisage a requirement for S106 requests regarding the pipeline at this time, in relation to land owned by the Council and impacted by the pipeline at Chertsey Meads. RBC are currently seeking assurance under the DCO regarding the following: i) construction method for installation including 'narrow working' ii) timing of construction to avoid impacting the Chertsey Agricultural Show including preparation and dismantling periods Subject to these elements being secured within the condition of the DCO, no S106 agreements are expected to be required"
- 1.96 In Further Written Question SANG.2.11 [PD-013], the ExA asked the Applicant whether the submission from Runnymede BC [REP3-035] advising that Chertsey Meads is now formally recognised by NE as a SANG for mitigating impact on the Thames Basin Heaths SPA, affects any of the assumptions made in the ES and HRA report and do any of the application documents need to be updated to reflect the change in status of this area of open space?
- 1.97 The Applicant responded at Deadline 4 [REP4-029] that it "was aware of the likelihood that Chertsey Meads would become a SANG. As a result, Chertsey Meads was included in the Habitats Regulations Assessment Report as a SANG (Application Documents APP-130 and APP-131), see paragraph 5.8.10 (top of page 53) and paragraph 5.8.24 which is specifically about Chertsey Meads and notes that there are 10 alternative SANGs between Chertsey Meads and the SPA. The Applicant is satisfied that no adjustment needs to be made to the HRA Report given that it already considered the site as a SANG.
- 1.98 SANGs were not specifically considered in the biodiversity chapter of the ES as they are not biodiversity receptors (see paragraph 7.2.20 of ES Chapter 7 (Application Document APP-047)). The Applicant is satisfied that the recognition of Chertsey Meads as a SANG does not therefore lead to a need to update the ES, the HRA or any other application documents."

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- 1.99 At ISH5 [EV-021 to EV-025] the Applicant stated that, with the exception of Rushmoor BC and Southwood Country Park, the authorities with planning functions in respect of SANGs no longer maintained a concern in relation to them.
- 1.100 At Deadline 6 a draft (unsigned) SoCG [REP6-019] between the Applicant and Runnymede BC was submitted, which states as an agreed matter that "The Authority is satisfied that the project is appropriately managing the impacts, including the temporary installation and post construction impacts, on Open Spaces crossed by the Order Limits: Chertsey Meads community use (SANG land)."