

Southampton to London Pipeline Project

Deadline 6

Response to Action Points from Issue Specific
Hearing on Environmental Matters (ISH5)

Application Document: 8.85

Planning Inspectorate Reference Number: EN070005

Revision No. 1.0

March 2020



**Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)**



Contents

1	Response to Action Points from the Issue Specific Hearing on Environmental Matters (ISH5)	1
2	References	41
	Appendix 1: ISH5-16 Technical Note	42
	Appendix 2: ISH5-22 Measures Proposed for SANGS	43
	Appendix 3: ISH5-40 Rushmoor Borough Council - Proposal for temporary play provision in QEP	44



1 Response to Action Points from the Issue Specific Hearing on Environmental Matters (ISH5)

Table 1.1: Applicants response to Action Point

Action No.	Action:	Applicant response to Action:
1	All documents to be updated to delete references to National Joint Utilities Group (NJUG) and replace with reference to British Standard (BS) 5837 2012	1.1 The Applicant has amended the Landscape and Ecological Management Plan (LEMP), Code of Construction Practice (CoCP) and associated documents at Deadline 6.
3	Applicant to confirm number of breeding territories that would be affected by the proposed development	<p>1.2 As proposed vegetation clearance and all construction works would be limited to the four months between 1 October to 31 January (inclusive) in accordance with the Outline Construction Environmental Management Plan (Document Reference 8.51 (2)), i.e. outside of the breeding season, no breeding territories would be affected by the project via disturbance during construction.</p> <p>1.3 Annual bird monitoring data (2014-2018), from surveys undertaken during the breeding season, show that a total of 46 (29.4+11.4+5.2) territories of SPA qualifying interest species typically occur within 250m of the Order Limits. The breakdown of territories within each component SSSI affected by the project is given in Table 1.</p> <p>1.4 The monitoring data show records of birds displaying territorial behaviour, normally singing male birds, which typically range up to a few hundred metres from their nest site location. It is therefore assumed that a bird recorded within 250m of the Order Limits could be maintaining a territory which is at least in part intersected by the Order Limits and hence potentially affected by changes to habitat within the Order Limits as a result of the project.</p>



Action No.	Action:	Applicant response to Action:																							
		<p>Table 1: Five-year mean territory counts (2014-2018)</p> <table border="1"> <thead> <tr> <th rowspan="2">Site where Order Limits cross</th> <th colspan="3">Five-year mean territory counts <i>Within Order Limits plus 250m</i></th> </tr> <tr> <th>Dartford Warbler</th> <th>Nightjar</th> <th>Woodlark</th> </tr> </thead> <tbody> <tr> <td>Bourley and Long Valley SSSI</td> <td>0.6</td> <td>1.0</td> <td>0.8</td> </tr> <tr> <td>Colony Bog and Bagshot Heath SSSI</td> <td>14.4</td> <td>5.2</td> <td>2.2</td> </tr> <tr> <td>Chobham Common SSSI</td> <td>14.4</td> <td>5.2</td> <td>2.2</td> </tr> <tr> <td>Totals</td> <td>29.4</td> <td>11.4</td> <td>5.2</td> </tr> </tbody> </table>	Site where Order Limits cross	Five-year mean territory counts <i>Within Order Limits plus 250m</i>			Dartford Warbler	Nightjar	Woodlark	Bourley and Long Valley SSSI	0.6	1.0	0.8	Colony Bog and Bagshot Heath SSSI	14.4	5.2	2.2	Chobham Common SSSI	14.4	5.2	2.2	Totals	29.4	11.4	5.2
Site where Order Limits cross	Five-year mean territory counts <i>Within Order Limits plus 250m</i>																								
	Dartford Warbler	Nightjar	Woodlark																						
Bourley and Long Valley SSSI	0.6	1.0	0.8																						
Colony Bog and Bagshot Heath SSSI	14.4	5.2	2.2																						
Chobham Common SSSI	14.4	5.2	2.2																						
Totals	29.4	11.4	5.2																						
5	Applicant to confirm areas of Special Protection Area (SPA) and Special Area of Conservation (SAC) within the Order Limits together with areas of supporting habitat in each case	<p>1.1 A detailed habitat survey of the Order Limits where they cross the three SSSI components of the Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC was undertaken in summer 2018 (Figures 9.6 – 9.8 of the Habitats Regulations Assessment Report (Application Document APP-130 and APP-131)).</p> <p>1.2 The Order Limits encompass approximately 36.95ha within the Thames Basin Heaths SPA. The component SSSIs are Bourley and Long Valley SSSI; Colony Bog and Bagshot Heath SSSI; and Chobham Common SSSI.</p> <p>1.3 The Order Limits encompass approximately 29.30ha within the Thursley, Ash, Pirbright and Chobham SAC. The component SSSIs are Colony Bog and Bagshot Heath SSSI and Chobham Common SSSI.</p> <p>1.4 The habitats (as per Phase 1 Habitats categories defined in JNCC, 2010) within the Order Limits of the Thames Basin Heaths SPA are summarised in Table 2.</p> <p>1.5 The area of qualifying Annex I qualifying habitat within the Order Limits of the Thursley, Ash, Pirbright and Chobham SAC is shown in Table 3.</p> <p>1.6 Implementation of the narrow width working, trenchless construction techniques and other good practice measures would reduce the area of habitats actually impacted. Table 2 shows</p>																							



Action No.	Action:	Applicant response to Action:																																				
		<p>how the area of the Thames Basin Heaths SPA which is within the Order limits is reduced to approximately 11.4ha, with the specific area of supporting habitat for qualifying bird species further reduced to approximately 7.96ha. 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.</p> <p>Table 2: Phase 1 habitat types within the Order Limits where they cross the Thames Basin Heaths SPA</p> <table border="1"> <thead> <tr> <th>Habitat</th> <th>Approx. area within entire Thames Basin Heaths SPA*</th> <th>Approx. area within Order Limits where they cross the Thames Basin Heaths SPA</th> <th>Approx. area within Order Limits likely to be impacted after implementation of measures</th> <th>Impacted area of habitat as a % of that present in entire SPA</th> </tr> </thead> <tbody> <tr> <td>Woodland habitats (including broadleaved semi-natural and coniferous plantation woodland)</td> <td rowspan="2">3722.9ha</td> <td>15.88ha</td> <td>3.37ha</td> <td rowspan="2">0.1%</td> </tr> <tr> <td>Dense scrub</td> <td>2.43ha</td> <td>0.7ha</td> </tr> <tr> <td>Grassland habitats (including acid grassland and marshy grassland)</td> <td>407.2ha</td> <td>4.07ha</td> <td>2ha</td> <td>0.5%</td> </tr> <tr> <td>Dry dwarf shrub heath</td> <td rowspan="2">3656.4ha</td> <td>7.6ha</td> <td>1.9ha</td> <td rowspan="2">0.5%</td> </tr> <tr> <td>Wet heath</td> <td>1.67ha</td> <td>0.03ha</td> </tr> <tr> <td>Sub-total of supporting habitat</td> <td>7786.5ha</td> <td>31.65ha</td> <td>7.96ha (decimal rounding above)</td> <td>0.1%</td> </tr> <tr> <td>Hardstanding / tracks</td> <td>523.6</td> <td>2.86ha</td> <td>1.4ha</td> <td>0.5%</td> </tr> </tbody> </table>	Habitat	Approx. area within entire Thames Basin Heaths SPA*	Approx. area within Order Limits where they cross the Thames Basin Heaths SPA	Approx. area within Order Limits likely to be impacted after implementation of measures	Impacted area of habitat as a % of that present in entire SPA	Woodland habitats (including broadleaved semi-natural and coniferous plantation woodland)	3722.9ha	15.88ha	3.37ha	0.1%	Dense scrub	2.43ha	0.7ha	Grassland habitats (including acid grassland and marshy grassland)	407.2ha	4.07ha	2ha	0.5%	Dry dwarf shrub heath	3656.4ha	7.6ha	1.9ha	0.5%	Wet heath	1.67ha	0.03ha	Sub-total of supporting habitat	7786.5ha	31.65ha	7.96ha (decimal rounding above)	0.1%	Hardstanding / tracks	523.6	2.86ha	1.4ha	0.5%
Habitat	Approx. area within entire Thames Basin Heaths SPA*	Approx. area within Order Limits where they cross the Thames Basin Heaths SPA	Approx. area within Order Limits likely to be impacted after implementation of measures	Impacted area of habitat as a % of that present in entire SPA																																		
Woodland habitats (including broadleaved semi-natural and coniferous plantation woodland)	3722.9ha	15.88ha	3.37ha	0.1%																																		
Dense scrub		2.43ha	0.7ha																																			
Grassland habitats (including acid grassland and marshy grassland)	407.2ha	4.07ha	2ha	0.5%																																		
Dry dwarf shrub heath	3656.4ha	7.6ha	1.9ha	0.5%																																		
Wet heath		1.67ha	0.03ha																																			
Sub-total of supporting habitat	7786.5ha	31.65ha	7.96ha (decimal rounding above)	0.1%																																		
Hardstanding / tracks	523.6	2.86ha	1.4ha	0.5%																																		



Action No.	Action:	Applicant response to Action:				
		Remaining unsuitable habitats (standing water, ruderal habitats etc)		2.44ha	2ha	
		Total	8311.06ha	36.95ha	11.4ha	0.1%
		(*) = https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9012141.pdf				
		Table 3: Annex I qualifying habitat within the Order Limits where they cross the Thursley, Ash, Pirbright and Chobham SAC				
		Habitat	Approx. area within entire Thursley, Ash, Pirbright and Chobham SAC*	Approx. area within Order Limits where they cross Thursley, Ash, Pirbright and Chobham SAC	Approx. area within Order Limits likely to be impacted after implementation of measures	Impacted area of habitat as a % of the present in entire SA
		H4030 European dry heaths	1830ha	7.61ha	1.8ha	0.01%
		H4010 North Atlantic wet heaths with <i>Erica tetralix</i>	321ha	1.13ha	0.01ha	0.003%
		H7150 Depressions on peat substrates of the <i>Rhynchosporion</i>	35.3ha	0.12ha	0ha	0%
		Non-qualifying interest habitats	2951.7ha	20.44ha	4.6ha	0.2%
		Total	5138ha	29.30ha	6.41ha	0.1%



Action No.	Action:	Applicant response to Action:																		
		(*) = http://publications.naturalengland.org.uk/publication/5141075941392384																		
7	Applicant to confirm the amount of habitat that would be lost in the SAC in total and for each qualifying interest	<p>1.1 The Order Limits encompass approximately 29.30ha of land within Thursley, Ash, Pirbright and Chobham SAC. This comprises approximately 14.06ha at Colony Bog and Bagshot Heath SSSI and 15.25ha at Chobham Common SSSI.</p> <p>1.2 No habitats which are qualifying features of the SAC are permanently lost. Areas of SAC habitat affected by the works are to be reinstated and allowed to naturally regenerate.</p> <p>1.3 Detailed habitat, vegetation and botanical survey of both SSSI components of the SAC was undertaken in summer 2018 and is reported in Appendix F of the Habitats Regulations Assessment Report (Application Document APP-130 and APP-131). The approximate areas of the qualifying interest habitats present within the Order Limits are provided in Table 4. The approximate area likely to be impacted following the application of measures such as narrow working and trenchless crossing is also set out in Table 4.</p> <p>Table 4: Qualifying interest habitats within the Order Limits where they cross the Thursley, Ash, Pirbright and Chobham SAC</p> <table border="1"> <thead> <tr> <th>Annex 1 Habitats (qualifying interest habitats)</th> <th>Approximate area within Order Limits</th> <th>Approximate area within Order Limits likely to be impacted after implementation of measures</th> </tr> </thead> <tbody> <tr> <td>H4030 European dry heaths</td> <td>7.61ha</td> <td>1.8ha</td> </tr> <tr> <td>H4010 North Atlantic wet heaths with <i>Erica tetralix</i></td> <td>1.13ha</td> <td>0.01ha</td> </tr> <tr> <td>H7150 Depressions on peat substrates of the <i>Rhynchosporion</i></td> <td>0.12ha</td> <td>0ha</td> </tr> <tr> <td>Non-qualifying interest habitats</td> <td>19.69ha</td> <td>4.6ha</td> </tr> <tr> <td>Total</td> <td>28.55ha</td> <td>6.41ha</td> </tr> </tbody> </table>	Annex 1 Habitats (qualifying interest habitats)	Approximate area within Order Limits	Approximate area within Order Limits likely to be impacted after implementation of measures	H4030 European dry heaths	7.61ha	1.8ha	H4010 North Atlantic wet heaths with <i>Erica tetralix</i>	1.13ha	0.01ha	H7150 Depressions on peat substrates of the <i>Rhynchosporion</i>	0.12ha	0ha	Non-qualifying interest habitats	19.69ha	4.6ha	Total	28.55ha	6.41ha
Annex 1 Habitats (qualifying interest habitats)	Approximate area within Order Limits	Approximate area within Order Limits likely to be impacted after implementation of measures																		
H4030 European dry heaths	7.61ha	1.8ha																		
H4010 North Atlantic wet heaths with <i>Erica tetralix</i>	1.13ha	0.01ha																		
H7150 Depressions on peat substrates of the <i>Rhynchosporion</i>	0.12ha	0ha																		
Non-qualifying interest habitats	19.69ha	4.6ha																		
Total	28.55ha	6.41ha																		



Action No.	Action:	Applicant response to Action:
8	In relation to Environmental Mitigation Areas (EMA) to provide a note to link what is shown on the Works Plans with the relevant section of the Environmental Statement (ES) and to provide greater clarity about the provision of environmental mitigation and measures in the relevant plans,	1.1 The Applicant has produced a table in Appendix E of the Outline Landscape and Ecological Management Plan (LEMP) (Document Reference 8.50 (2)) with additional text explaining the purpose of the Environmental Mitigation Areas (EMAs) shown on the Works Plans (Additional Submissions AS-046, AS-047 and AS-048) and the relevant references within the Environmental Statement (ES) and the Habitats Regulations Assessment (HRA) Report (Application Documents APP-130 and APP-131). The table in Appendix E sets out whether the measure is a good practice measure or mitigation, for example in relation to a European Protected Species licence. The EMAs are also shown on the figure in Appendix E of the Outline LEMP, which matches the locations on the Works Plans.
9	To consider drawing all the proposed environmental mitigation measures into one document	1.1 In response to this action point, the Applicant is assuming the reference to mitigation is the Environmental Mitigation Areas (EMAs) referenced in action point ISH5-8. As outlined in the response to action point ISH5-8, the Applicant has now drawn all of these measures into one place and inserted them into Appendix E of the Outline Landscape and Ecological Management Plan (LEMP) (Document Reference 8.50 (2)).



Action No.	Action:	Applicant response to Action:
10	To provide an update on the status of the legal agreements that are being negotiated in relation to the EMA and details of how the environmental mitigation measures proposed would be secured and managed/maintained in the long term	<p>1.1 Of the voluntary (Option) agreements being negotiated with landowners, there are 37 Option Agreements that include land identified for Environmental Mitigation Areas (EMAs). Of those 37 Option Agreements, 20 have been signed and exchanged with the majority of the remaining 17 in well advanced legal drafting. The Applicant expects those agreements to be completed by the close of examination or shortly thereafter. The voluntary agreement allows for the long-term maintenance of these areas by the Applicant.</p> <p>1.2 The Applicant's powers to implement the EMAs form part of the principal powers to construct the authorised development described in Schedule 1. Under lettered work (m) of Schedule 1, the Applicant is authorised in connection with the construction of any of the numbered works described in Schedule 1 to undertake '<i>works associated with <u>the provision of ecological mitigation</u> and other works to mitigate any adverse effects of the construction, maintenance or operation of the authorised development (emphasis added)</i>'.</p> <p>1.3 As regards land powers in the absence of voluntary agreements being secured, the Applicant would be authorised under article 29 (temporary use of land for carrying out the authorised development) of the draft DCO to take temporary possession of the land comprised in the EMAs for the purposes of constructing those EMAs. The Applicant would also be authorised to enter onto the land for the purposes of maintaining the EMAs once implemented under article 30 (temporary use of land for maintaining the authorised development) of the draft DCO. This power is time limited to a period of five years following the date on which the relevant part of the authorised development is brought into operational use (or five years from the date of any replacement or landscape planting) and upon the cessation of that period full control of the land would revert to the owner.</p>



Action No.	Action:	Applicant response to Action:
11	Section 5.7 of the outline Landscape and Ecological Management Plan (LEMP) to be updated to make the connections between the LEMP and EMAs stronger	1.1 The Applicant has updated the Outline LEMP (Document Reference 8.50 (2)) with additional text explaining the purpose of the Environmental Mitigation Areas (EMAs) shown on the Works Plans (Additional Submissions AS-046, AS-047 and AS-048). Further detail is included in Appendix E of the Outline LEMP, including a table with a reference to each EMA and also a plan showing the locations of the EMAs.
13	Applicant to highlight where in the ES the issue of biodiversity net loss is considered.	<p>1.1 Although the ES Biodiversity chapter (Application Document APP-047) makes a number of references to avoiding a net loss of habitat for certain habitat, for example woodland habitat at 7.5.422 and bat habitat at 7.5.689, there is no express reference to 'biodiversity net loss'.</p> <p>1.2 It is understood that this concept derives from work by the European Commission who define it in the following way: <i>'to avoid a net loss of biodiversity and ecosystem services, damages resulting from human activities must be balanced by at least equivalent gains'</i>. The Commission indicates that, whilst compensation for damage occurring in Natura 2000 sites is a legal requirement of the EU Birds and Habitats Directives, there is currently no requirement for the compensation of unavoidable residual impacts on species and habitats that are not covered by nature legislation.</p> <p>1.3 There is no reference to the concept in NPS EN-1 or NPS EN-4 (Department of Energy and Climate Change, 2011a; 2011b). For a DCO application, the test is merely to ensure that the benefits outweigh the adverse impacts (Section 104(7) Planning Act 2008). It should therefore be noted that the biodiversity impacts do not need to be eliminated. However, the Environmental Statement concludes that there will be no residual impacts on biodiversity.</p> <p>1.4 The application is for a buried pipeline, where all infrastructure would be underground (except for limited locations at the pigging station and the valves). Any habitats temporarily lost during construction would be reinstated following installation (in the appropriate growing season). Post installation, hedgerow gaps would be replanted, open cuts through water</p>



Action No.	Action:	Applicant response to Action:
		<p>crossings reinstated, woodland replanted (to include shrub planting directly over the pipeline), grassland re-seeded and heathland habitats left to naturally regenerate.</p> <p>1.5 Trees that are removed as a result of the construction of the project will be replaced on a one-for-one basis in accordance with the vegetation reinstatement plans approved under the LEMP (Document Reference 8.50 (2)). Where possible, replacement tree planting will be located at or in close proximity to the original tree. It should be noted that such tree reinstatement would not apply to areas where tree removal is for habitat improvement reasons (supplementary good practice measures), such as at Chobham Common, and this has been agreed with Natural England and the relevant landowners.</p>
14	To agree a Statement of Common Ground (SoCG) on the matter of the status of the HRA.	<p>1.1 The Applicant has agreed a Statement of Common Ground (SoCG) with Natural England (REP1-005). This states that <i>'Natural England support the conclusion of the Habitats Regulations Assessment that there would be no adverse effects on the integrity of either the Thames Basin Heaths Special Protection Area...after implementation of appropriate mitigation and good practice measures'</i>.</p> <p>1.2 In its Deadline 2 submission (REP2-074) in response to questions BIO1.41, BIO1.42 and BIO1.56 Natural England again confirmed <i>'agreement with the assessment and conclusions in the Habitats Regulations Assessment'</i>.</p> <p>1.3 In its Deadline 4 submission (REP4-063), Natural England stated in response to question BIO 2.18, <i>'Natural England is satisfied with the scope of the HRA and its conclusions. It is acknowledged that some aspects of working methods will only become clear at the detailed design stage. However, Natural England remains confident, using our expert judgement, that the risk of significant impacts on the integrity of TBH SPA and TAPC SAC can be avoided, based on the information presented.'</i></p> <p>1.4 The Applicant has also agreed an SoCG with Rushmoor. The SoCG is submitted at Deadline 6 (Document Reference 8.4.27 (2)) provides an updated and expanded explanation of</p>



Action No.	Action:	Applicant response to Action:
		<p>matters agreed, matters not agreed, and matters remaining under discussion with regard to the HRA Report.</p>
<p>15</p>	<p>To confirm the status of the EC's methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive</p>	<p>1.1 The Habitats Regulations Assessment (HRA) Report (Application Documents APP-130 and APP-131) was informed by the European Commission's methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. The introduction to the guidance states that it '<i>...is based upon research carried out on behalf of the European Commission's Directorate General for the Environment</i>' Though non-mandatory, the guidance remains valid and in use. Further, it remains a published document on the Commission's website. At paragraph 3.1.1, the guidance confirms that '<i>it may often be possible to make the screening decision using currently published material and consultation with the relevant nature conservation agencies</i>', which was the approach taken by the Applicant. Natural England were consulted throughout the HRA process, including at the screening stage of the project to ensure a robust, precautionary approach was taken based on best available scientific information, and has consistently confirmed that it endorses the conclusions reached by the Applicant.</p>
<p>16</p>	<p>Provide a note clarifying the position regarding embedded measures and mitigation and why the measures proposed are embedded measures rather than mitigation; explain the steps that were taken to reach these conclusions and how the conclusion that Appropriate Assessment (AA) was not necessary</p>	<p>1.1 The Applicant provided its Habitats Regulations Assessment (HRA) Report with its DCO application (Application Documents APP-130 and APP-131). The first of these documents includes at Table 2.1 a list of 11 items which are collectively referred to as embedded mitigation. The ExA queried whether all of the items on that list are properly regarded as such. In particular, the ExA queried the inclusion of 'narrow working' in this regard.</p> <p>1.2 The Applicant has reviewed this table and 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.</p>



Action No.	Action:	Applicant response to Action:
		<p>1.3 However, the Applicant has always recognised that there is a currently some degree of ambiguity as to when such measures should be regarded as ‘embedded’ or otherwise. Accordingly, when undertaking its screening exercise the Applicant adopted a robust approach and excluded its proposals for narrow working and trenchless construction techniques from consideration. 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.</p> <p>1.4 As set out at footnote (a) of Table D.7 (HRA screening matrix for Thames Basin Heaths SPA) on page 104 of the HRA Report (Application Document APP-130 and APP-131), <i>‘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’</i>. The 36.20ha figure quoted in this section does not take into account measures such as narrow working and trenchless crossings which are, as noted, within the ambit of the embedded measures set out in Table 2.1. Whilst the application of these measures does result in a reduction in the area of the SPA which would be affected by the works to approximately 7.96ha, that reduced figure was not relied upon by the Applicant at the screening stage to screen out physical disturbance to the SPA during construction from appropriate assessment. The reduced figure was referred to in the context of the Applicant’s response to further written question BIO.2.21 (REP4-020), 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.</p> <p>1.5 It is also important to note that in the HRA, the Applicant did conduct an Appropriate Assessment in relation to two effects on the Thames Basin Heaths SPA; namely in relation to noise and disturbance during construction and in relation to displacement of recreational activities from Suitable Alternative Natural Greenspaces during construction. This is</p>



Action No.	Action:	Applicant response to Action:
		<p>described in section 5 of the HRA Report. It also conducted an Appropriate Assessment in relation to three effects on the Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC), at section 6. The Applicant did not, however, conduct an Appropriate Assessment in relation to the effect of physical disturbance to the Thames Basin Heaths SPA during construction, having screened that effect out of the assessment at the screening stage. The Applicant was entitled to reach that conclusion, 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. Further, and significantly, Natural England endorsed that conclusion, e.g. in its Deadline 4 Submission – Response to the Examining Authority’s written questions and requests for information (ExQ2) issued 13 January 2020 (REP4-063) – Natural England’s response to BIO 2.21 in relation to HRA screening and adverse effects states <i>‘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.’</i></p> <p>1.6 However, notwithstanding the matters set out 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. However, in order 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</p>



Action No.	Action:	Applicant response to Action:						
		<p>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.</p> <p>1.7 The note adopts the same format as the existing section 5 of the HRA Report and can be found at Appendix 1 to this document.</p>						
17	Provide a table that lists all environmental mitigation measures and how they would be secured	<p>1.1 The Applicant prepared the REAC Signposting Document at Deadline 4 (REP4-046) as a tool to show every commitment set out by the project and where these are secured. It includes the embedded measures, such as trenchless crossings and narrow workings and additional good practice measures and ES mitigation. This has been updated for Deadline 6 (Document Reference 8.54 (2)).</p> <p>1.2 Following the discussions at the Issue Specific Hearing for Environment on 27 February 2020, the Applicant has also collated all of the mitigation measures identified within the Habitats Regulations Assessment (HRA) Report (Application Documents APP-130 and APP-131) in Table 5 below.</p> <p>Table 5: Mitigation measures identified within the Habitats Regulations Assessment (HRA) Report</p> <table border="1"> <thead> <tr> <th>Mitigation measures identified within the HRA Report</th> <th>Included within:</th> </tr> </thead> <tbody> <tr> <td> <u>Trenchless Crossings:</u> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: TC011 and TC012 Chobham Common SSSI: TC024, TC025 and TC026 Other European sites: TC001, TC037 and TC039 </td> <td>Requirement 5 (CoCP) Annex B</td> </tr> <tr> <td> <u>Narrow Width Working</u> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: NW11 and NW13 Colony Bog and Bagshot Heath SSSI: NW21 </td> <td>Requirement 5 (CoCP) Annex A</td> </tr> </tbody> </table>	Mitigation measures identified within the HRA Report	Included within:	<u>Trenchless Crossings:</u> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: TC011 and TC012 Chobham Common SSSI: TC024, TC025 and TC026 Other European sites: TC001, TC037 and TC039 	Requirement 5 (CoCP) Annex B	<u>Narrow Width Working</u> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: NW11 and NW13 Colony Bog and Bagshot Heath SSSI: NW21 	Requirement 5 (CoCP) Annex A
Mitigation measures identified within the HRA Report	Included within:							
<u>Trenchless Crossings:</u> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: TC011 and TC012 Chobham Common SSSI: TC024, TC025 and TC026 Other European sites: TC001, TC037 and TC039 	Requirement 5 (CoCP) Annex B							
<u>Narrow Width Working</u> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: NW11 and NW13 Colony Bog and Bagshot Heath SSSI: NW21 	Requirement 5 (CoCP) Annex A							



Action No.	Action:	Applicant response to Action:	
		<ul style="list-style-type: none"> Chobham Common SSSI: NW23, NW24 and NW25 	
		<p><u>Embedded design measures</u></p> <ul style="list-style-type: none"> Bourley and Long Valley SSSI: D60 Colony Bog and Bagshot Heath SSSI: D80, D82, D84, D85 	<p>Requirement 5 (CoCP) Table 3.1</p> <p>D85 is secured through the Order Limits.</p>
		<p><u>Specific HRA Commitments:</u></p> <ul style="list-style-type: none"> HRA1: Heathland within statutory or non-statutory designated wildlife sites would be reinstated using natural regeneration, unless otherwise agreed with Natural England. HRA2: At heathland SSSIs, targeted scrub and secondary woodland within the Order Limits would be removed. Subject to landowner consent, these areas would be reinstated as heathland or acid grassland through natural regeneration. HRA4: Topsoil stripping would be reduced to a minimum extent within European sites and SSSIs except where identified within the HRA Report. (Some unavoidable stripping would take place as part of the trenching for the pipeline and in construction compounds where matting is not a workable alternative). 	<p>Outline LEMP</p>
		<p><u>Good practice commitments within the HRA Report</u></p> <ul style="list-style-type: none"> O7: Where required, water stops (or “stanks”) would be installed at intervals through the pipe bedding and side fill. G38: 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. G40: Where sensitive features are to be retained within or immediately adjacent to the Order Limits, an appropriate buffer 	<p>O7 is secured in Table 3.1 of the CoCP</p> <p>G38 Outline CEMP</p>

Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)



Action No.	Action:	Applicant response to Action:
		<p>zone would be created where this extends within the Order Limits. The buffers would be established using appropriate fencing and signage. A suitable method statement would be produced to ensure that construction works are undertaken in a manner that reduces the risk of damage or disturbance to the sensitive feature.</p> <ul style="list-style-type: none"> • G48: Working within ecologically designated sites would be controlled using a variety of methods. These would take account of the reasons for designation to identify the appropriate techniques to reduce impacts. This could include to limit the number of compounds, reduce corridor widths and use lighter vehicles within the sites. • G51: Where works in wet heath would be unavoidable, effects on soils and surface vegetation would be reduced through the use of ground protection matting and use of appropriate machinery where practicable. • G61: Construction within Bourley and Long Valley SSSI, Colony Bog and Bagshot Heath SSSI and Chobham Common SSSI would be in accordance with Annex B of the HRA Report (Application Document 6.5). Where necessary, detailed methodologies would be agreed with Natural England prior to commencement. All construction works would be in accordance with the detailed methodologies. • G132: The contractor(s) would ensure that the time the trench is open in the vicinity of certain features would only be as long as necessary for the installation of the pipeline. The required dewatering of the trench would be undertaken only as and when necessary to enable safe working and preparation for pipe installation. • G134: Temporary stanks would be installed within the trench prior to undertaking dewatering/draining activities, to prevent migration of water within the trench.

G40 is secured in paragraph 2.5.5. of the CoCP

G48 is secured in Table 4.2 of the CoCP

G51 Outline LEMP

G61 Outline LEMP

G132 Outline WMP



Action No.	Action:	Applicant response to Action:	
		<ul style="list-style-type: none"> G151: A method statement would be produced for stripping, handling, storage and replacement of all soils to reduce risks associated with soil degradation. G159: Different soil types and made ground would be stripped and stored separately where applicable. 	<p>G134 is secured in Table 4.3 of the CoCP</p> <p>G151 Outline SMP</p> <p>G159 Outline SMP</p>
		<p><u>Additional measures identified in relation to SANGs:</u></p> <ul style="list-style-type: none"> Construction work in SANGs will be limited to a maximum of two years' duration. The SANG circular walk will be maintained. Pedestrian access to the SANG and vehicle access to SANG carparks will be maintained. Fencing of compounds within SANGs will be agreed with the relevant planning authority. 	<p>Secured in Sections 2.14 and 2.2 of the CoCP (Requirement 5)</p>
18	Confirm that the reference in footnote C of Table D7 to 'one winter' working in the SPA means 4 months and indicate where/how this would be secured	<p>1.1 The following commitment is secured in the Code of Construction Practice updated at Deadline 6 (Document Reference 6.4 Appendix 16.1 (4)):</p> <p>1.2 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).</p>	



Action No.	Action:	Applicant response to Action:
19	Review whether it would be possible to commit to limiting the works within Suitable Alternative Natural Greenspaces (SANGs) to a number of weeks within a two year period and indicate how/where this could be secured	<p>1.1 The Applicant has amended the CoCP to include a requirement to minimise the amount of time it is constructing the pipeline in a SANG. However, 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.</p> <p>1.2 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.</p>
20	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	<p>1.1 The Applicant's Habitats Regulations Assessment (HRA) Report (Application Documents APP-130 and APP-131) has taken a worst-case scenario of all the SANGs' land being impacted at the same time (paragraph 5.8.16) and concluded that there is no significant effect on the SPA.</p> <p>1.2 The construction of the proposed 97km pipeline is subject to a number of constraints that impact on the construction programme, such as environmental seasonal constraints, working in schools outside term time, and avoiding the football season when working on sports pitches. In addition, the project would be subject to further constraints relating to street works through the permit schemes. The Applicant does not believe that there is a</p>



Action No.	Action:	Applicant response to Action:
		<p>clear justification to further impact on the construction schedule as a result of passing through SANGs.</p> <p>1.3 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.</p> <p>1.4 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.</p> <p>1.5 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.</p>
22	Provide a short overarching document setting out all of the mitigation/measures proposed in SANGs and confirm how/where they would be secured	<p>1.1 The mitigation/measures related to SANGS have been summarised in a short overarching document (Appendix 2)</p> <p>1.2 The SANG specific measures have been collated in 2.15 of the Code of Construction Practice (CoCP) (Document Reference 6.4 Appendix 16.1 (4)). These are secured through Requirement 5.</p>

Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)



Action No.	Action:	Applicant response to Action:
23	To confirm whether the proposed construction compound at Frith Hill/Deepcut could be used as an alternative to St Catherine's Road and if not, why not?	<p>1.1 The construction compound at Frith Hill/Deepcut is sited on MOD land. This compound is the only aspect of the project 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 project. The Applicant will continue to seek to use the compound on a voluntary basis.</p> <p>1.2 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.</p>
24	Update all documents that are to be certified to ensure that all reference to the Register of Environmental Actions and Commitments (REAC) is removed	<p>1.1 The Applicant has removed references to the Register of Environmental Actions and Commitments (REAC) from all of the certified documents except the Habitats Regulations Assessment (HRA) Report (Application Document APP-130 and APP-131).</p> <p>1.2 All of the references to the REAC in the HRA Report are signposting to where the full list of commitments could be found at the time of the assessment, namely Chapter 16 of the Environmental Statement. The HRA Report is no longer relying on the REAC as a securing mechanism, as all measures are secured through other documents. See response to Action Point 9 for more details. Therefore, the Applicant does not consider it necessary to update the HRA Report to remove references to the REAC. A full list of references to the REAC in the HRA Report can be found in Table 6.</p>



Table 6: References to the REAC in the HRA Report (APP-130 and APP-131)

Paragraph	Reference to REAC
Document Ref (APP-130) Main Report	
2.1.3	These commitments are set out in the project's Register of Environmental Actions and Commitments REAC...and secured through DCO requirements such as the Code of Construction Practice (CoCP).
2.7.7	The REAC included in ES Chapter 16 Environmental Management and Mitigation sets out a series of measures and standards of work that would be applied by the contractor(s) throughout the construction period, and which would be secured through DCO requirements such as the CoCP.
2.7.8	Typical good practice standards that have been incorporated into the REAC include measures to prevent and control pollution incidents; seasonal restrictions; avoid or reduce air quality changes; avoid or reduce the effects of lighting and noise; and control the spread of invasive non-native species (INNS).
6.8.26	The Limits of Deviation... do not encompass any of this habitat and works within European sites would be undertaken in accordance with commitments set out in the REAC.
6.8.36	Furthermore, good practice measures set out in the REAC would be implemented to reduce impacts, including where necessary.
7.1.7	Good practice measures would be applied to further reduce the potential for adverse effects; these are set out in the REAC and secured through DCO requirements such as the CoCP.
Document Reference APP-130 (Plans in Appendix B)	
Note 4	MORE INFORMATION ON MITIGATION CAN BE FOUND WITHIN THE REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS (REAC) IN ES CHAPTER 16 ENVIRONMENTAL MANAGEMENT AND MITIGATION.
Document Reference APP-131	
1.1.18	In addition to the embedded measures, there would be a range of construction good practice measures set out in the Register of Environmental Actions and Commitments (REAC) that would be implemented through DCO requirements such as the Code of Construction Practice (CoCP). The REAC is included in ES Chapter 16 Environmental Management and Mitigation.
1.2.35	The embedded design measures would reduce the risks to water quality during installation. In addition to the embedded mitigation, a range of construction good practice measures set out in the REAC and secured by DCO requirements such as the CoCP.

**Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)**



Action No.	Action:	Applicant response to Action:	
		1.3.32	Pipeline integrity measures have been embedded into the design (including corrosion protection and remotely operated valves). In addition to the embedded mitigation, construction good practice measures set out in the REAC would be implemented through DCO requirements such as the CoCP, that would protect water quality during installation.
		1.4.29	Good practice measures set out in the REAC would be implemented through DCO requirements such as the CoCP that would reduce the risk of diesel spillages during construction.
25	Set out the proposed protection measures that would be used in Blackwater Valley if the open cut technique were to be used	1.1	<p>As noted at the Issue Specific Hearing on 27 February, the preferred construction method for crossing the Blackwater Valley would be a trenchless crossing. However, the method cannot be confirmed until further investigations and detailed design have been concluded. Therefore, both options (open cut and auger bore or Horizontal Directional Drilling) were assessed within the ES and included within the scope of the project.</p> <p>1.2 The proposed good practice measures are set out within the Outline Construction Environmental Management Plan (Document Reference 8.51 (2)) and associated appendices. In particular, Appendix B the Outline Water Management Plan (WMP) (Document Reference 8.51 (2)) sets out the measures for maintaining water quality and Appendix F the Outline Soil Management Plan (Document Reference 8.51 (2)) sets out the measures for managing areas of known contamination risk.</p> <p>1.3 In addition, the Applicant has included a technical note in Appendix B1 to the Outline WMP (Document Reference 8.51 (2)), which provides an outline methodology (including proposed protection measures) if the open cut/auger bore option was chosen at this location. A more detailed methodology would be provided as an appendix to the final Water Management Plan. Esso will implement protection measures set out in the methodology if it adopts the open cut/auger bore option. In addition, the Applicant has included a technical note in Appendix B1 to the Outline WMP (Document Reference 8.51 (2)), which provides an outline methodology if the open cut/auger bore option was chosen at this location. A more detailed methodology would be provided as an appendix to the final Water Management Plan. Esso will implement protection measures set out in the methodology if it adopts the open cut/auger bore option. In addition, the Applicant has included a technical</p>



Action No.	Action:	Applicant response to Action:
		<p>note in Appendix B1 to the Outline WMP (Document Reference 8.51 (2)), which provides an outline methodology if the open cut / auger bore option was chosen at this location. A more detailed methodology would be provided as an appendix to the final Water Management Plan. Esso will implement protection measures set out in the methodology if it adopts the open cut/auger bore option.</p>
26	<p>Amend the Code of Construction Practice (CoCP) to include more detailed methodologies with regards to tree protection measures</p>	<p>1.1 The Applicant has updated the CoCP, see Section 2.11 Working Near Trees, submitted at Deadline 6 (Document Reference 6.4 Appendix 16.1 (4)).</p>
27	<p>Amend Construction Traffic Management Plan (CTMP) to include section on monitoring and non-compliance as set out in commitment G111</p>	<p>1.1 The Applicant has updated the Outline Construction Traffic Management Plan (CTMP) with text regarding monitoring and compliance. This can be found in Section 9 of the Outline CTMP (Document Reference 8.49 (2)).</p>
28	<p>To provide a short note providing further detail with regards to noise and the use of monthly against daily averaging</p>	<p>1.1 The adoption of a monthly average in the noise assessment is described in the Scoping Report Appendix 8.3 (AS-019) (paragraph A8.3.3.39), and the Methodology Chapter of Appendix 13.3 (Application Document APP-121) (Chapter 5, paragraph 5.1.10).</p> <p>1.2 The adopted assessment approach is based on a theoretical scenario where the construction of the entire project is undertaken within a month. The assessment is based on a daily noise level (e.g. $L_{Aeq,10hr}$), logarithmically averaged over the working days within this theoretical month. This is a conservative approach which condenses all of the works (including those which generate the greatest noise levels) into a single month period, as in</p>



Action No.	Action:	Applicant response to Action:
		<p>practice the works in most locations will be spread out over a much longer duration, and the average monthly construction noise level would be much lower than the assessed value.</p> <p>1.3 BS 5228-1:2009+A1:2014 does not prescribe a particular methodology for determining significance, but advises the assessor to adopt a pragmatic approach, and provides various example assessment approaches that an assessor may draw from. The key reasons for the adoption of monthly average, as opposed to a value averaged over a single day which was suggested at the issue specific hearing on environmental matters on 26 February 2020, are outlined below.</p> <p>1.4 BS 5228-1:2009+A1:2014 and the Institute of Environmental Management and Assessment (IEMA) Guidelines for Noise Impact Assessment (2014) both recognise that the duration of impact is a key consideration when identifying significance, and requires the assessor to take the duration of the noise into account when determining if there is a significant effect. Guidance from the various example approaches in BS 5228-1:2009+A1:2014 has informed the consideration of duration in the assessment.</p> <p>1.5 The example approach described in paragraph E.3.2 of the standard uses an approach where a daily noise level is compared to a threshold. If the threshold is exceeded, the overall duration of the exceedance needs to then be considered before the assessor determines whether a significant effect occurs. This example approach indicates that effects lasting a day should not necessarily be considered as significant.</p> <p>1.6 Another example assessment approach, described in paragraph E.3.3 of the standard, uses an approach where significant effects are identified only where the impact occurs for one month or more.</p> <p>1.7 BS 5228-1:2009+A1:2014 states that the example assessment approaches within the standard only apply to projects of a 'significant size'. The assessment approaches in the standard are most commonly applied to large, static construction sites where noise may be experienced at nearby properties during every working day for weeks, months or in some cases, years. This is very different to the proposed works in this case, where the highest</p>



Action No.	Action:	Applicant response to Action:								
		<p>noise levels would only occur for a very short duration. If an average of noise over one day had been adopted for the assessment of this project, significance would be determined based on the single noisiest activity, which would occur only for a short duration. This approach would fail to recognise the duration of impact as a key consideration when identifying significance.</p> <p>1.8 In the context of the above guidance within BS 5228-1:2009+A1:2014, it is considered appropriate to determine significance based on noise levels averaged over a month.</p> <p>1.9 The use of a longer average is also informed by practical considerations. In order to accurately calculate a 10-hour average, the assessor is required to understand the works that would combine within a particular day at a particular location. Due to the realities of any complex project, the programme is not known with sufficient granularity so far in advance of the works. The adopted approach is more robust in this respect, as the list of all works is much better understood.</p> <p>1.10 A monthly average noise level is a well-established basis for the assessment of construction noise. Table 7 provides some examples of Nationally Significant Infrastructure Projects where a similar approach has been used as the basis of the construction noise assessment in the associated Environmental Statement.</p> <p>Table 7: Examples of Nationally Significant Infrastructure Projects using similar construction noise assessment</p> <table border="1" data-bbox="757 1141 2033 1422"> <thead> <tr> <th data-bbox="757 1141 1137 1268">NSIP</th> <th data-bbox="1137 1141 1512 1268">Relevant document application</th> <th data-bbox="1512 1141 1691 1268">Relevant Paragraph</th> <th data-bbox="1691 1141 2033 1268">Approach to construction noise assessment</th> </tr> </thead> <tbody> <tr> <td data-bbox="757 1268 1137 1422">A14 Cambridge to Huntingdon improvement scheme</td> <td data-bbox="1137 1268 1512 1422">Environmental Statement, Chapter 14 - Noise and Vibration</td> <td data-bbox="1512 1268 1691 1422">14.2.50</td> <td data-bbox="1691 1268 2033 1422">Construction noise assessment based on monthly average noise level</td> </tr> </tbody> </table>	NSIP	Relevant document application	Relevant Paragraph	Approach to construction noise assessment	A14 Cambridge to Huntingdon improvement scheme	Environmental Statement, Chapter 14 - Noise and Vibration	14.2.50	Construction noise assessment based on monthly average noise level
NSIP	Relevant document application	Relevant Paragraph	Approach to construction noise assessment							
A14 Cambridge to Huntingdon improvement scheme	Environmental Statement, Chapter 14 - Noise and Vibration	14.2.50	Construction noise assessment based on monthly average noise level							

**Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)**



Action No.	Action:	Applicant response to Action:			
		A30 Chiverton to Carland Cross	Environmental Statement, Chapter 11 - Noise and Vibration	11.6.5	Construction noise assessment based on monthly average noise level
		Network Rail Norton Bridge Area Improvements	Environmental Statement, Volume 3, Report 6, Noise and Vibration Technical Report	7.2.6 / 7.2.11	Construction noise assessment based on monthly average noise level
		Thames Tideway Tunnel	Environmental Statement – Volume 2: Environmental Assessment Methodology	9.5.14	Construction noise assessment based on monthly average noise level
		Hinkley Point C Connection Project	Environmental Statement Volume 5.14.1, Chapter 14 – Noise and Vibration	14.4.33	Construction activity lasting less than one month considered not significant.
		<p>1.11 During the Issue Specific Hearing (ISH5) on Environmental Matters it was suggested that noise mitigation measures may be set out across various documents such as the outline CEMP, outline CTMP and CoCP. It is confirmed that the direct noise mitigation measures are now all presented within the Appendix E Outline Noise and Vibration Management Plan (Document Reference 8.51(2)).</p>			



Action No.	Action:	Applicant response to Action:
29	To review the roads suggested by the Local Planning Authorities that they consider would benefit from acoustic/echo fencing with particular reference to the properties in Valley Way	<p>1.1 The Applicant understands the road being referenced in the action should refer to Village Way rather than Valley Way and has answered accordingly.</p> <p>1.2 The adopted mitigation strategy involves the use of temporary noise barriers to mitigate noise at locations where the assessment has identified a potential significant effect. These effects are deemed to occur where calculated noise levels exceed the adopted assessment thresholds.</p> <p>1.3 Locations where such significant effects have been identified are presented in Appendix 13.3 Noise and Vibration Technical Note Addendum - Revision No. 2.0 (REP4-017). The majority of these locations are adjacent to open cut sections of the route, in urban locations where hard surfaces are required to be broken out, and where building facades are in relatively close proximity to the works. Noise levels from work sites that do not involve the breaking out of hard surfaces are lower.</p> <p>1.4 The locations suggested by Spelthorne Borough Council, Surrey Heath Borough Council and Neighbours and Users of Queen Elizabeth Park at Deadlines 4 and 5 have been reviewed, and it is confirmed that the calculated noise levels at all identified locations are below the adopted thresholds at receptors.</p> <p>1.5 In relation to Village Way, the noise levels at all properties are expected to be at least 5dB below the adopted significance threshold. This is due to the following reasons:</p> <ul style="list-style-type: none"> • As detailed within the Site Specific Plan for Ashford Town Centre (REP5-038), the drive shafts for the trenchless crossings to Station Road and St. James School will be located in the northwest corner of the Clarendon School playing field, near the railway. Therefore, the operation of plant would occur away from receptors on Village Way, and noise effects would be reduced. • Although the Order Limits include an area to the east of Clarendon School, this is for the provision of an access road. The use of this access road would not cause noise levels to exceed the adopted significance threshold.



Action No.	Action:	Applicant response to Action:								
		<p>1.6 The roads suggested by the local planning authorities have been checked in line with the assessment and there are no likely significant effects for the reasons outlined above. For completeness, the list is shown in Table 8 below.</p> <p>Table 8: Local planning authorities effects from assessment</p> <table border="1"> <thead> <tr> <th data-bbox="712 560 954 608">Stakeholder</th> <th data-bbox="954 560 2076 608">Location</th> </tr> </thead> <tbody> <tr> <td data-bbox="712 608 954 842"> Spelthorne Borough Council REP4-073 </td> <td data-bbox="954 608 2076 842"> <ul style="list-style-type: none"> • Along the section of the southern boundary of Fordbridge Park where residential properties on Celia Crescent side onto the park. • To the rear of residential properties on Ashford Close, off Woodthorpe Road in Ashford, where homes back onto proposed construction compound CO5Q. • To the rear of residential properties on Village Way in Ashford. • To the rear of properties towards the northern end of Edward Way in north Ashford. </td> </tr> <tr> <td data-bbox="712 842 954 1161"> Surrey Heath Borough Council REP4-076 </td> <td data-bbox="954 842 2076 1161"> <ul style="list-style-type: none"> • Lightwater: Briar Avenue, Broomfield, Spruce Drive, Colville Gardens, Heronscourt, Lightwater Road, Guildford Road; • Windlesham/Chobham: Windlesham Road/Woodcock Drive, Brock Cottage, Steep Hill, Oakfield House, Halebourne Lane; • West End: Blackstroud Lane East; • Heatherside Camberley: The Maultway, Buttermere Drive, Kendall Grove, Habershon Drive, Cheylesmore Drive, Yockley Close; and • Frimley: Raglan Close, St Catherines Road, Broadlands, Windsor Way, Wansdyke Close, Henley Drive, Frimley Green Road. </td> </tr> <tr> <td data-bbox="712 1161 954 1286"> Neighbours and Users of Queen Elizabeth Park REP5-054 </td> <td data-bbox="954 1161 2076 1286"> <ul style="list-style-type: none"> • Queen Victoria Court </td> </tr> </tbody> </table>	Stakeholder	Location	Spelthorne Borough Council REP4-073	<ul style="list-style-type: none"> • Along the section of the southern boundary of Fordbridge Park where residential properties on Celia Crescent side onto the park. • To the rear of residential properties on Ashford Close, off Woodthorpe Road in Ashford, where homes back onto proposed construction compound CO5Q. • To the rear of residential properties on Village Way in Ashford. • To the rear of properties towards the northern end of Edward Way in north Ashford. 	Surrey Heath Borough Council REP4-076	<ul style="list-style-type: none"> • Lightwater: Briar Avenue, Broomfield, Spruce Drive, Colville Gardens, Heronscourt, Lightwater Road, Guildford Road; • Windlesham/Chobham: Windlesham Road/Woodcock Drive, Brock Cottage, Steep Hill, Oakfield House, Halebourne Lane; • West End: Blackstroud Lane East; • Heatherside Camberley: The Maultway, Buttermere Drive, Kendall Grove, Habershon Drive, Cheylesmore Drive, Yockley Close; and • Frimley: Raglan Close, St Catherines Road, Broadlands, Windsor Way, Wansdyke Close, Henley Drive, Frimley Green Road. 	Neighbours and Users of Queen Elizabeth Park REP5-054	<ul style="list-style-type: none"> • Queen Victoria Court
Stakeholder	Location									
Spelthorne Borough Council REP4-073	<ul style="list-style-type: none"> • Along the section of the southern boundary of Fordbridge Park where residential properties on Celia Crescent side onto the park. • To the rear of residential properties on Ashford Close, off Woodthorpe Road in Ashford, where homes back onto proposed construction compound CO5Q. • To the rear of residential properties on Village Way in Ashford. • To the rear of properties towards the northern end of Edward Way in north Ashford. 									
Surrey Heath Borough Council REP4-076	<ul style="list-style-type: none"> • Lightwater: Briar Avenue, Broomfield, Spruce Drive, Colville Gardens, Heronscourt, Lightwater Road, Guildford Road; • Windlesham/Chobham: Windlesham Road/Woodcock Drive, Brock Cottage, Steep Hill, Oakfield House, Halebourne Lane; • West End: Blackstroud Lane East; • Heatherside Camberley: The Maultway, Buttermere Drive, Kendall Grove, Habershon Drive, Cheylesmore Drive, Yockley Close; and • Frimley: Raglan Close, St Catherines Road, Broadlands, Windsor Way, Wansdyke Close, Henley Drive, Frimley Green Road. 									
Neighbours and Users of Queen Elizabeth Park REP5-054	<ul style="list-style-type: none"> • Queen Victoria Court 									

**Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)**



Action No.	Action:	Applicant response to Action:
30	Update the outline LEMP with a specific commitment to confirm that tree replacement would be on a one for one basis and, where possible would be on the site of, or within close proximity to the existing lost tree.	1.1 The Applicant has made a new commitment, Commitment G200, as follows: ‘Trees that are removed as a result of the construction of the project will be replaced on a one for one basis in accordance with the vegetation reinstatement plans approved under the LEMP. Where possible, replacement tree planting will be located in close proximity to the original tree. It should be noted that such tree reinstatement would not apply to areas where tree removal is for habitat improvement reasons, such as at Chobham Common and this has been agreed with Natural England and the relevant landowners’. This has been included in the Outline LEMP (Document Reference 8.50 (2)) and other applicable documents submitted at Deadline 6.
31	To amend commitment G95 to read that tree protection measures must be undertaken in full compliance with BS 5837 2012	<p>1.1 The Applicant has amended Commitment G95 to replace the reference to the National Joint Utilities Group Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (‘NJUG Volume 4’ (2007)) with the British Standard BS 5837:2012:</p> <p>1.2 ‘The contractor(s) would apply the relevant protective principles set out in the British Standard 5837:2012 Trees in relation to design, demolition and construction. This would be applied to trees within the Order Limits which would be preserved through the construction phase, and to trees outside of the Order Limits where such measures do not hinder or prevent the use of the relevant working width for construction’.</p> <p>1.3 This commitment has been updated in the documents submitted at Deadline 6.</p>

Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)



Action No.	Action:	Applicant response to Action:
32	Amend commitment G97 to state that the shrub planting would be provided over the pipeline easement in addition to replacement tree planting	<p>1.1 The Applicant has amended Commitment G97 to clarify that the type and scope of shrub planting would be agreed with the relevant planning authority through the reinstatement plans, and that this commitment does not substitute for the replacement of trees. The wording 'where appropriate' is in reference to certain areas where restoration to promote heathland has been agreed, and therefore in this instance, trees would not be replaced. This approach would be agreed with the relevant planning authority and landowner as necessary.</p> <p>1.2 <i>'Where woodland vegetation is lost and trees cannot be replaced in situ due to the restrictions of pipeline easements, native shrub planting approved by Esso would be used as a replacement in accordance with the vegetation reinstatement plans to be approved by the relevant planning authorities as part of the LEMP. The approved vegetation reinstatement plan will also include replacement tree planting where appropriate.'</i></p> <p>1.3 This commitment has been updated in the documents submitted at Deadline 6.</p>
33	Update Site Specific Plan (SSP) for Ashford Road to provide more detailed information about tree route zones to enable more detailed plan to be developed	1.1 The Applicant has updated the Site Specific Plan for Ashford Road at Deadline 6 (Document Reference 8.63 (2)).
34	Insert details of the protective site fencing for QEP in the SSP	1.1 This is now covered within the Site Specific Plan for QEP (Document Reference 8.57 (2)).

**Southampton to London Pipeline Project
Response to Action Points from the Issue Specific Hearing on
Environmental Matters (ISH5)**



Action No.	Action:	Applicant response to Action:
35	To provide additional information on the QEP SSP on the auger bore area, the open-trench construction practice (discreet areas) and to re- provide the tree surveys including veteran trees undertaken at Appendix 1 on the Applicant's D4 submission [REP-031]	1.1 The Applicant has provided an updated Site Specific Plan for QEP at Deadline 6 (Document Reference 8.57 (2)).
38	Respond in writing to Surrey Heath Borough Council's points made at the meeting regarding Turf Hill.	1.1 The Applicant has responded to the points made by Surrey Heath Borough Council regarding Turf Hill Site Specific Plan (REP5-048) in (Document Reference 8.6).



Action No.	Action:	Applicant response to Action:
39	To work together to consider how the detailed landscape issues could be managed/mitigated in the South Downs National Park and how this could be secured, including whether Requirements 8 and 12 in the draft Development Control Order (dDCO) need to be amended	<p>1.1 The South Downs National Park Authority had identified a significant number of trees and hedgerows lying within or adjoining the Order Limits within the South Downs National Park that it was concerned may be impacted by construction works.</p> <p>1.2 Following extensive and constructive discussions between the Authority and the Applicant, further commitments have been given by the Applicant in relation to the hedgerows and trees identified by the Authority lying within or adjoining the Order Limits within the South Downs National Park. These commitments are included within a Schedule of Vegetation Retention Commitments in the South Downs National Park (Document Reference 8.87) that has been submitted at Deadline 6 and which will become a certified document.</p> <p>1.3 The wording of draft DCO Requirement 8 has been amended at Deadline 6 (Document Reference 3.1 (7)) to require that any vegetation removal and retention plans for the South Downs National Park must be in accordance with the SDNP Schedule unless otherwise agreed by the SDNPA.</p>
40	Produce a note providing an update on the negotiations on the temporary re-provision of the play space in QEP including details of where this would be; the type of play space to be provided; when it would be delivered and, critically how it would be secured in the dDCO	<p>1.1 As previously confirmed (in response to paragraph 9.12, (REP5-021)), the Applicant arranged a site visit to Queen Elizabeth Park on 11 February 2020, which was attended by the parks manager for Rushmoor Borough Council and a representative from Earth Wrights (a company who are pioneers in the design and build of inspirational places where children can experience the full potential of play, learning and discovery). The project selected this potential partner to demonstrate how a temporary play provision could be provided.</p> <p>1.2 Subsequent to that site visit, a proposal was shared with Rushmoor Borough Council (Appendix 3) by Earth Wrights, which offers information regarding:</p> <ul style="list-style-type: none"> • the type of play space that could be installed, how the Parties would work with the community on the design and what age range/users it would be geared towards; • the potential location that was suggested to the Applicant by the Council (large glade outside of the Order Limits, but within the park);



Action No.	Action:	Applicant response to Action:
		<ul style="list-style-type: none"> • installation approach – suggested installation methods to reduce environmental impacts such as non-porous surfaces, and using timber/organic materials; and • details regarding the ongoing maintenance and the option of retaining the play area following reinstatement of the existing NEAP. <p>1.3 The mechanism for securing any agreement to provide the facilities outside the Order Limits would be a legally binding side agreement, subject to obtaining all necessary consents and approvals. This was agreed in principle at a meeting on 27 February 2020. If an agreement did not crystallise, the position set out in Commitment OP05 of the Code of Construction Practice would apply and the Applicant would provide the facilities within the Order Limits.</p> <p>1.4 For completeness, Commitment OP05 of the Code of Construction Practice (Document Reference 6.4 Appendix 16.1 (4)) provides: <i>'In recognition that the existing neighbourhood equipped area for play (NEAP) at Queen Elizabeth Park would be impacted by the pipeline construction, the project would reinstate the existing NEAP as soon as practicable after construction (G94). The project will provide an alternative NEAP for use while the existing NEAP is out of commission. The alternative NEAP would either be provided by the project within the Order Limits in the vicinity of the existing NEAP on land belonging to Rushmoor Borough Council or would be provided in collaboration with Rushmoor Borough Council in accordance with the details agreed.'</i></p> <p>1.5 Compliance with the Code of Construction Practice is secured by Requirement 5 of the draft DCO (Document Reference 3.1 (7)) and the Applicant is seeking all necessary works and land powers to deliver these alternative play facilities. The provision of temporary alternative facilities is therefore ultimately secured by the draft DCO.</p> <p>1.6 The Parties have arranged a further site visit to give consideration to the trees in the glade on 11 March 2020, which will be attended by the Applicant, Rushmoor Borough Council, Earth Wrights and an arboricultural expert.</p>



Action No.	Action:	Applicant response to Action:
41	Provide an update on the Peter Driver Sports Ground and the progress with finding the football teams that play alternative facilities for the duration of the proposed works and details of how this would be secured	<p>1.1 The Applicant completed the voluntary agreement with Church Crookham Parish Council who own the Peter Driver Sports Ground on 19 June 2019. The Applicant completed the voluntary agreement with Church Crookham Parish Council, who own the Peter Driver Sports Ground, on 19 June 2019. The voluntary agreement provides a contractual indemnity and compensation mechanism to cover losses associated with any unavailability of the football pitches.</p> <p>1.2 A meeting is scheduled for the end of April 2020 between the Applicant and Church Crookham Parish Council to discuss pitch use and pipeline installation timings so that disruption to pitch use can be reduced.</p>
42	Provide an update on the Farnborough Gate Sports Ground and the progress with finding the football teams that play alternative facilities for the duration of the proposed works and details of how this would be secured	<p>1.1 The Applicant has been engaging with the managers of Farnborough Gate Sports ground to understand which teams use the football pitch and when. The Applicant has had a prolonged dialogue with the owners of the football pitch – it is likely that the council will need to relocate the football club within the construction and recovery period. The council has not made the Applicant aware that they wish the Applicant to provide an alternative pitch. At present, the Applicant does not have sufficient information on usage and the alternative pitch standards that would be required in order to confirm alternative arrangements.</p> <p>1.2 The Applicant has nevertheless also contacted Hampshire Football Association to discuss alternative provision for these teams during construction. These discussions will continue.</p>



Action No.	Action:	Applicant response to Action:
43	Where/how is the commitment to working with displaced teams at Abbey Rangers to find/fund alternative facilities secured?	<p>1.1 The Applicant has provided wording intended to secure a number of commitments as part of the proposed deed of grant with Abbey Rangers.</p> <p>1.2 These include a commitment that the Applicant will only take access to the ground after the end of the football season and will have completed all work and reinstatement by 1 August, in the case of the first team pitch, and the 1 September in the case of the other pitches in that year.</p> <p>1.3 Further, the Applicant has confirmed that the club will have sufficient pitch space outside of the working area to carry out their pre-season and training activities whilst construction works are ongoing.</p> <p>1.4 The Applicant has also committed to the club that, as a fallback position, the FA Ground Grading Category F facilities will be provided on the club's unaffected 3G pitch in order to allow the club's first team to continue to play their competitive home fixtures at their ground.</p> <p>1.5 The Applicant has also confirmed that it will provide funding and additional support as required to source additional playing facilities as required.</p> <p>1.6 The Applicant has agreed terms in principle with club with progression of the option and deed of grant pending agreement on whether the FA Ground Grading Category F facilities provided on the 3G pitch will be temporary or permanent. The Applicant has agreed terms in principle with the club with progression of the option and deed of grant pending agreement on whether the FA Ground Grading Category F facilities provided on the 3G pitch will be temporary or permanent.</p>



Action No.	Action:	Applicant response to Action:
44	Part of Sport England's guidance 'Natural Turf for Sport' (2011) has been worked into the CoCP regarding the reinstatement of grass but Sport England asked that a specialist sports turf contractor or agronomist be used. Could the CoCP be amended to include this or should it be secured through a requirement?	1.1 The wording in the Code of Construction Practice (Document Reference 6.4 Appendix 16.1 (4)) has been updated to clarify that, in addition to working in accordance with the guidance 'Natural Turf for Sport' (Sport England, 2011), a specialist sports turf contractor would be used.
45	Provide an update on the playspace on Buxted Road/Woodthorpe Road including confirmation as to whether this would need to be removed during construction and if it did where/how would this and its reinstatement be secured?	1.1 The Applicant can confirm that there will be no impact or requirement to remove the play area on Buxton Road/Woodthorpe Road.



Action No.	Action:	Applicant response to Action:
46	Paragraph 1.9.2 of the Planning Statement refers to the possibility that planning permission for the logistics hubs might be sought in advance of the DCO application being determined – provide an update	1.1 The Applicant can confirm that Planning Permission for the logistics hubs at A31/A32 and Hartland Park will be sought under Town and Country Planning in advance of the DCO. At this stage, no formal planning applications have been made. However, the project will be looking to submit for Hartland Park, which remains on the current critical path, subject to pre-application discussions and consultation with the local authorities in Q1 and Q2 2020. The project will be looking to undertake an initial pre-application meeting with the local authority for the A31/A32 logistic hub, which will inform whether a planning application will be applied for.
47	Planning Statement refers to flight markers being located approximately every 500 meters – is this the same for both rural and urban areas and if not, what happens in urban areas?	1.1 Paragraph 4.4.20 of the Planning Statement (Application Document APP-132) indicates: <i>‘The route of the replacement pipeline will also be marked with new red and black colour-coded flight marker posts at a frequency of about 500m. These will be for use when the pipeline is inspected by helicopter and will be positioned at field boundaries where possible.’</i> 1.2 The Applicant can confirm that this spacing is the same for both urban and rural areas.



Action No.	Action:	Applicant response to Action:
49	A number of Local Impact Reports refer to emerging development plans. Provide an update on where in the process these plans are and whether any would be adopted before the end of the Examination	<p>1.1 The following information has been taken from the relevant Statements of Common Ground with each local planning authority.</p> <p>Eastleigh District Council</p> <ul style="list-style-type: none"> • Saved policies of the Eastleigh Borough Local Plan Review 2001-2011 (adopted May 2006). <p><u>Emerging policy documents</u></p> <ul style="list-style-type: none"> • Eastleigh Borough Local Plan 2016-2036 is an emerging plan. Examination hearings completed 29 January 2020. <p>Winchester City Council</p> <ul style="list-style-type: none"> • Winchester District Local Plan Part 1 – Joint Core Strategy 2013-2031 (adopted jointly by WCC and SDNPA in March 2013). • Winchester District Local Plan Part 2 – Development Management and Site Allocations 2013-2031 (adopted by WCC only in April 2017). <p>East Hampshire District Council</p> <ul style="list-style-type: none"> • Saved policies of the Local Plan: Second Review (2006) • Local Plan Part 1: Joint Core Strategy (adopted jointly by EHDC and SDNPA in June 2014) • Local Plan Part 2: Housing and Employment Allocations (adopted by EHDC only in April 2016) • Medstead and Four Marks Neighbourhood Plan (made May 2016) • Alton Neighbourhood Plan (made May 2016) • Bentley Neighbourhood Plan (made May 2016) • Ropley Neighbourhood Plan (made September 2019)



Action No.	Action:	Applicant response to Action:
		<p>Emerging policy documents</p> <ul style="list-style-type: none"> • East Hampshire Local Plan 2036 – Regulation 19 consultation scheduled for spring 2020, with submission scheduled for late summer 2020. • Beech Neighbourhood Plan – examination public hearing held 12 February 2020 <p>South Downs National Park Authority</p> <ul style="list-style-type: none"> • South Downs Local Plan 2014-2033 (adopted July 2019) <p>Hart District Council</p> <ul style="list-style-type: none"> • Hart District Local Plan 1996-2006 – saved policies (adopted April 2009) • Fleet Neighbourhood Plan (made November 2019) <p><u>Emerging policy documents</u></p> <ul style="list-style-type: none"> • Hart Local Plan: Strategy and Sites 2016-2032 – Inspector’s Report identifying Plan to be ‘Sound’ received 10 February 2020 – Council proposing to adopt Plan on 26 March 2020. • Crondall Neighbourhood Plan – Inspector’s Report received 8 November 2019 – Council to make decision by 12 March 2020 on whether to take the Neighbourhood Plan to a referendum. <p>Rushmoor Borough Council</p> <ul style="list-style-type: none"> • Rushmoor Local Plan 2014-2032 (adopted February 2019) <p>Hampshire County Council</p> <ul style="list-style-type: none"> • Hampshire Minerals and Waste Local Plan 2013-2030 (adopted October 2013) <p>Surrey Heath Borough Council</p> <ul style="list-style-type: none"> • Surrey Heath Core Strategy and Development Management Policies (2012)



Action No.	Action:	Applicant response to Action:
		<ul style="list-style-type: none"> • Surrey Heath Local Plan 2000 – saved policies • Camberley Town Centre AAP (2011-2028) • Surrey Minerals Local Plan 2011 – Core Strategy, Primary Aggregates DPD, Mineral Sites Restoration SPD • Surrey Waste Plan 2008 • Windlesham Neighbourhood Plan, ‘Made’ 2019 • Thames Basin Heaths Special Protection Area Avoidance Strategy SPD 2019 • Thames Basin Heaths Special Protection Area Delivery Framework (2009) • Emerging Surrey Heath Draft Local Plan – Issues and Options 2018 Consultation due late 2020 <p>Runnymede Borough Council</p> <ul style="list-style-type: none"> • Runnymede Local Plan 2001-2006 – saved policies • Planning obligations – Thames Basin Heaths SPA and Strategic Access Management and Monitoring (SAMM) 2015 • Runnymede Submission Local Plan 2015-2030 Main modifications consultation closed 21 February 2020. <p>Spelthorne Borough Council</p> <ul style="list-style-type: none"> • Spelthorne Core Strategy and Policies DPD 2009 • Allocations DPD 2009 • Adopted Proposals Map 2009 • Spelthorne Borough Local Plan 2001 – saved policies and proposals 2007



Action No.	Action:	Applicant response to Action:
		<ul style="list-style-type: none"> • Spelthorne Local Plan 2020-2035 – preferred options November 2019 Consultation ongoing February 2020 <p>Surrey County Council</p> <ul style="list-style-type: none"> • Surrey Minerals Local Plan 2011 – Core Strategy, Primary Aggregates DPD, Mineral Sites Restoration SPD • Surrey Waste Plan 2008. • Surrey Draft Waste Local Plan 2017 proposed modifications consultation closed 23 February 2020. <p>London Borough of Hounslow</p> <ul style="list-style-type: none"> • Hounslow Local Plan (adopted on 15 September 2015), • West London Waste Plan, and • London Plan Consolidated with Alterations since 2011. • The draft New London Plan has been through Examination in Public. The response of the Secretary of State has been delayed and is now expected on 16 March 2020. • The Council are currently undertaking two Local Plan Reviews: the West of Borough Local Plan review and the Great West Corridor Local Plan review.



2 References

British Standards Institution (BSI) (2014). BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Noise. British Standards Institution, London.

Department of Energy and Climate Change (2011a). Overarching National Policy Statement for Energy (EN-1). Accessed March 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf

Department of Energy and Climate Change (2011b). National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). Accessed March 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47857/1941-nps-gas-supply-oil-en4.pdf

IEEMA (Institute of Environmental Management & Assessment). (2014). Guidelines for Environmental Noise Impact Assessment.

Sport England (2011). Natural Turf for Sport. Accessed March 2020. <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/natural-turf-for-sport.pdf>

Joint Nature Conservation Committee (JNCC). (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough, ISBN 0 86139 636 7.



Appendix 1: ISH5-16 Technical Note



Contents

1	Introduction.....	1
2	Temporary habitat change.....	3
3	Information for Stage 2 - Appropriate Assessment	4
3.1	Source-receptor pathways.....	4
3.2	Existing threats and pressures and current conservation status.....	4
3.3	Qualifying species potentially exposed to risk.....	5
3.4	Conservation Objectives.....	7
3.5	Supporting habitat within the vicinity of the Order Limits	8
3.6	Habitat occupancy within the vicinity of the Order Limits	9
4	Stage 2 – Appropriate Assessment	13
4.1	Impacted area.....	13
4.2	Habitat regeneration	13
4.3	Bird territories	14
4.4	Summary	15
5	In-combination assessment	16
6	Conclusion	17
7	References	19

1 Introduction

- 1.1.1 The Southampton to London Pipeline (SLP) project includes pipeline installation in the Thames Basin Heaths Special Protection Area (the SPA), designated for its populations of European importance of the following species listed on Annex I of the Birds Directive during the breeding season: Dartford warbler (*Sylvia undata*); nightjar (*Caprimulgus europaeus*); and woodlark (*Lullula arborea*). The project has undergone a Habitats Regulations Assessment (HRA) (**Application Document APP-130 & APP-131**) as required by the Conservation of Habitats and Species Regulations 2017 and the report has been published on the [Planning Inspectorate website](#).
- 1.1.2 During examination of the Development Consent Order (DCO) application for the project and in response to submitted documentation, a query has been raised as to the justification for 'screening out' from Appropriate Assessment physical disturbance to the SPA during the construction stage. The published HRA report concludes that
- 1.1.3 *'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). Restored habitat is anticipated to regenerate into pioneer heathland in the short term (i.e. within five years).*
- 1.1.4 *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.*
- 1.1.5 *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'.*
- 1.1.6 Further, in Appendix D Planning Inspectorate DCO screening matrices Table D7 footnote (a) on page 104 of the HRA, it is stated: *"Even in a hypothetical scenario during which the total 36.20ha¹ 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."*
- 1.1.7 Despite the Applicant maintaining its position that it correctly screened out that effect, this report provides the data required to perform an Appropriate Assessment of temporary change to habitat in the SPA and its conclusion should an Appropriate

¹ Recent area calculations have adjusted the area within the Order Limits to 36.95ha, a non-material change of 0.75ha



Assessments have been deemed necessary. These together follow the format of the existing section 5 of the HRA.

- 1.1.8 No other European sites or other potential likely significant effects are discussed in this document.

2 Temporary habitat change

2.1.1 The SPA comprises part or all of 13 Sites of Special Scientific Interest. The Order Limits, of approximately 30m in width, pass through three of these sites: 1) Bourley and Long Valley SSSI for approximately 1.5km; 2) Colony Bog and Bagshot Heath SSSI for approximately 4km; and 3) Chobham Common SSSI for approximately 2.4km. Table 1 details the area within the Order Limits at each SSSI and within the SPA.

Table 1: Area within Order Limits

Bourley and Long Valley SSSI	Colony Bog and Bagshot Heath SSSI	Chobham Common SSSI
7.65ha	14.06ha	15.25ha
Thames Basin Heaths SPA		
36.95ha		

2.1.2 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 undertaken by open cut method although trenchless crossing techniques are proposed at the following locations:

- two consecutive trenchless crossing points (TC011 and TC012) within the Bourley and Long Valley SSSI component of the SPA to avoid wetland areas. The assumed technique for TC011 and TC012 is Horizontal Directional Drilling (HDD) trenchless technique over approximately 312m and 400m respectively; and
- three trenchless crossing locations (TC024, TC025 and TC026) in the Chobham Common SSSI component of the SPA to cross areas of wetland. The assumed technique for is HDD trenchless technique over approximately 237m, 232m and 271m respectively.

2.1.3 The main breeding habitats of Dartford warbler, nightjar and woodlark comprise open habitats of dwarf shrubs with scattered scrub and trees. 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 some wildlife species from the working area (e.g. reptiles and amphibians prior to commencement of works for the purpose of avoiding a breach of protected species legislation). The qualifying species of the SPA could potentially use any of the habitats affected by the works, either for breeding, roosting or foraging and could consequently suffer the effects of habitat loss.

2.1.4 The total area of the SPA is 8,311.06ha (JNCC, 2001). The total area of habitat within the Order Limits is approximately 36.95ha and accounts for approximately 0.4% of the SPA's total area. All area of habitat change would be temporary, to be restored on completion of the works. It is not anticipated that the entire Order Limits area would be given over to construction activity.

It is the Applicant's strong view, endorsed by Natural England and the Wildlife Trusts, that the Stage 1 - Screening conclusion in the HRA report is robust. However, in the event that the Examining Authority and/or Secretary of State concludes otherwise, the data to inform the Stage 2 – Appropriate Assessment in presented in Section 3.

3 Information for Stage 2 - Appropriate Assessment

3.1 Source-receptor pathways

- 3.1.1 The HRA Report Stage 1 Screening identified that the following Likely Significant Effects (LSE) required Appropriate Assessment: 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. These pathways to likely significant effects on the SPA are not discussed further in this report. Their full assessment can be found in the HRA Report.
- 3.1.2 For the purposes of this report, the likely significant effect of physical disturbance to the SPA during construction (habitat change) is screened in for assessment purposes. This pathway to LSE involves the project alone; no in-combination effects were identified during the Stage 1 Screening study.

3.2 Existing threats and pressures and current conservation status

- 3.2.1 The integrity of the SPA is under pressure from fragmentation, disturbance and the effects of urbanisation (e.g. encroachment, fly tipping, vandalism, uncontrolled fires and trampling). Encroachment of secondary woodland and scrub on to open heathland is an ongoing process (Natural England, 2014) and a lack of grazing or other management to control this encroachment would typically result in the loss of valuable heathland (qualifying bird breeding) habitat.
- 3.2.2 Natural England has highlighted disturbance as a significant issue for the SPA given its proximity to urban areas and pressures from new residential development. It is Natural England's position that significant impacts would result from new residential development within 5km of the site's boundary (Thames Basin Heaths Joint Strategic Partnership Board, 2009). Concerns relate to light and noise pollution from new housing estates, new roads and increased recreation by new residents, in particular dog walking. Increased predation by household pets can also be detrimental to ground nesting birds. Since 2006, Natural England has sought to counter impacts on the SPA's integrity from new residential development by making planning permission conditional on the provision, by developers, of alternative open space in the form of Suitable Alternative Natural Greenspace (SANGs).
- 3.2.3 The structure and function of habitats which support the qualifying species are also sensitive to changes in air quality (Natural England, 2016).
- 3.2.4 Of the total area of the three SSSIs intersected by the Order Limits (approximately 2,608ha), approximately 2% (40ha) is classified as 'unfavourable-declining', approximately 52% (1,367ha) is classified as 'unfavourable-recovering', and approximately 46% (1,203ha) is 'favourable'.
- 3.2.5 SSSI units are divisions of SSSIs used to record management and condition details. The condition assessments of the SSSI units intersected by the Order Limits are provided in Table 2.

Table 2: Condition status of SSSI units within the Thames Basin Heaths SPA intersected by the Order Limits (Natural England, 2020 a,b,c).

SSSI component of the SPA	SSSI Units	Current Condition Status	Year of most recent assessment
Bourley and Long Valley SSSI	1 – 001	Unfavourable – Recovering	2011
	2 – 002	Unfavourable – Recovering	2011
	4 - 004	Unfavourable – Declining	2013
Colony Bog and Bagshot Heath SSSI	9 – Chobham Ridges	Favourable	2016
	4 – Folly Bog	Favourable	2014
	5 – Turf Hill	Unfavourable - Recovering	2017
Chobham Common SSSI	17 -Near Windsor Road	Unfavourable - Recovering	2013
	21 – Langshot Bog	Favourable	2019
	19 - Albury Bottom (2)	Unfavourable - Recovering	2012
	20 – Glover’s Pond	Favourable	2013
	22 – Albury Bottom (3)	Unfavourable - Recovering	2012
	23 – Butts Hill	Unfavourable - Recovering	2012
	25 – Old Slade	Favourable	2013

3.2.6 The current condition status of the three Annex I bird species is not provided in the Conservation Objectives. For an indication of status, Natural England’s supplementary advice note refers to its attribute targets that indicate whether the current objective is to ‘maintain’ or ‘restore’ the attribute (Natural England, 2016). Notwithstanding, Natural England requires that impacts are assessed on a case-by-case basis using current information on the features’ condition. Further information on the current population status of the three Annex I species is provided in Section 3.3.

3.3 Qualifying species potentially exposed to risk

Dartford warbler

3.3.1 The SPA supports the second largest concentration of Dartford warbler in Great Britain (JNCC, 2001). Dartford warblers are found almost exclusively in lowland dry heathland with a mix of heather (*Calluna vulgaris*), trees and gorse (*Ulex spp.*) (Wotton, 2009). Birds nest close to the ground (JNCC, 2004) and require an abundance of shrub-layer invertebrates. Extensive unbroken dwarf shrub heath of mature heather interspersed with low to medium height gorse represents optimum breeding habitat. Undamaged, healthy gorse provides protection from harsh weather during winter, and from predators (Murison et al., 2007).

3.3.2 Dartford warbler breeds between April and August inclusive and is most vulnerable to disturbance during this period. Murison et al. (2007) reported that the species is particularly susceptible during the nest-building stage and within heather-dominated territories (as opposed to gorse that could offer greater protection). Disturbance causes reductions in breeding productivity and the number of successful broods and chicks fledged by breeding pairs (Murison et al., 2007).

- 3.3.3 From 2010 to 2016, the SPA population was showing signs of recovery. However, in 2016 counts were lower than for 2015 (a reduction from 456 territories to 427). Notwithstanding, increases were reported at Chobham Common SSSI and Bourley and Long Valley SSSI (2Js Ecology, 2016). The declines could be accounted for by the difficulty in obtaining accurate counts when numbers are high, or increased mortality due to a series of severe frosts that occurred when food supplies were at their lowest (2Js Ecology, 2016).

Nightjar

- 3.3.4 The nightjar is a ground-breeding bird associated with dry heathland habitat. Known habitat preferences include open ground with low vegetation, bare patches and sparse woodland/scrub cover. Scattered trees are used for roosting. Nightjar utilise developing heathland within the SPA, including woodland areas subject to rotational clearance, storm damaged areas and areas alongside forest rides. Nightjar can forage several kilometres from their nesting territory (Natural England, 2016).
- 3.3.5 Nightjar breed in the UK between May and September inclusive, nesting within gaps in deep heather on dry heath, often at the edge of woodland or heathland (JNCC, 2004). Chicks are raised in secluded patches of bare ground within shrubby vegetation. Nightjar migrate in August or September, over-wintering in sub-Saharan Africa, and return to the UK in May (Natural England, 2016).
- 3.3.6 Annual monitoring bird surveys undertaken by 2Js Ecology indicate that despite some annual fluctuations, nightjar has maintained its population within the SPA. Numbers were higher in 2016 (a territory count of 332) than in 2015, but lower than the peak number reported for 2014 (355) (2Js Ecology, 2016). Natural England report a mean-count of 264 pairs for 1998-1999 (JNCC, 2001).
- 3.3.7 The species is known to be sensitive to disturbance. There is increasing evidence that nightjar are vulnerable to disturbance, for example by dogs which flush the adult from the nest allowing predators to take the eggs or chicks. Significantly fewer chicks are raised to adulthood on sites with high levels of disturbance than on undisturbed sites (Ruddock and Whitfield, 2007).

Woodlark

- 3.3.8 Woodlark is strongly associated with heathland habitat, nesting on the ground in shallow scrapes, often at the edge of woodland. Woodlarks require a mix of scrub/tree cover and sparsely vegetated land with bare ground and an abundance of invertebrates (Natural England, 2016). Higher numbers of birds are associated with areas where vegetation has been manually cleared or burnt. Tussocky vegetation is required for nesting (Natural England, 2016). Woodlark also forage on land adjacent to heathland, which can include grassland and fields outside the SPA boundary, as well as using open areas such as wide rides and breaks in plantations (Natural England, 2016).
- 3.3.9 The core breeding season for woodlark is between February and June inclusive, but the birds are likely to be present within the SPA in lower numbers outside these months (Natural England, 2016).

- 3.3.10 Of the three Annex I species within the SPA, only woodlark has continued to decline. In 2016, 117 territories were reported. This is the lowest count since surveys began in 2003 and represents a 49% decline from the peak number reported (229 in 2007) (2Js Ecology, 2016). Natural England based the designation of the SPA on a report of 149 pairs provided by volunteer bird recorders for 1997.
- 3.3.11 Habitat availability is likely to be the principal factor limiting recovery of woodlark (Natural England, 2016). Population density is also negatively affected by human disturbances at heathland sites, although impacts are partially offset by higher breeding productivity permitted by lower densities (Mallord et al. 2007).
- 3.3.12 Woodlark is particularly vulnerable in winter and high rates of mortality have been associated with severe winter weather (Langston et al., 2007).

3.4 Conservation Objectives

- 3.4.1 The SPA's Conservation Objectives provide the necessary parameters to define the favourable conservation status of the populations of Dartford warbler, nightjar and woodlark for which the site has been designated.
- 3.4.2 The Conservation Objectives of the SPA (Natural England, 2014) require the maintenance or restoration of:
- the extent and distribution of the habitats of the qualifying features;
 - the structure and function of the habitats of the qualifying features;
 - the supporting processes on which the habitats of the qualifying features rely;
 - the population of each of the qualifying features; and
 - the distribution of the qualifying features within the site.
- 3.4.3 The Conservation Objectives are elucidated by 'Supplementary Advice' (Natural England, 2016) that provides information to enable the achievement of the Conservation Objectives, including specific targets, provided in Table 3.

Table 3: Relevant Conservation Objectives for qualifying bird species of the Thames Basin Heaths SPA (Natural England, 2016)

Qualifying Feature	Conservation Objective
Dartford warbler	Breeding population – Maintain or restore the size of the breeding Dartford warbler population at or to a minimum of 445 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.
	Supporting habitat (both within and outside the SPA): predation – Reduce or restrict predation and disturbance caused by native and non-native predators.
	Supporting habitat (both within and outside the SPA): disturbance caused by human activity – Restrict or reduce the frequency, duration and/or intensity of disturbance affecting nesting, foraging or feeding birds so that the Dartford warbler feature is not significantly disturbed.
Nightjar	Breeding population – Maintain the size of the breeding nightjar population at or above 264 'churring' males, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.

Qualifying Feature	Conservation Objective
	Supporting habitat (both within and outside the SPA): predation – Reduce or restrict predation and disturbance caused by native and non-native predators. Maintain or restore the safe passage of birds moving between nesting and feeding areas.
	Supporting habitat (both within and outside the SPA): disturbance caused by human activity – Restrict and reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting and/or foraging birds so that the nightjar feature is not significantly disturbed.
Woodlark	Breeding population – Maintain the size of the breeding woodlark population at a level which is at or above 149 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.
	Supporting habitat (both within and outside the SPA): predation – Reduce or restrict predation and disturbance caused by native and non-native predators.
	Supporting habitat (both within and outside the SPA): disturbance caused by human activity – Restrict and reduce the frequency, duration and/or intensity of disturbance affecting nesting, foraging or feeding birds so that the woodlark feature is not significantly disturbed.

3.5 Supporting habitat within the vicinity of the Order Limits

- 3.5.1 A detailed habitat survey of the Order Limits where they cross the three SSSI components of the SPA was undertaken in summer 2018. The results of the survey have provided an understanding of habitat with the potential to support the qualifying species of the SPA within, and adjacent to, the Order Limits (Figures 9.6 – 9.8 of the HRA Report). The full European sites habitat survey report is available as Appendix F to the published HRA Report.
- 3.5.2 The Order Limits extend for approximately 36.95ha within the SPA. A breakdown of the different habitats is as follows:
- 3.5.3 Potential supporting habitat suitable for the qualifying species:
- grassland habitats (including acid grassland, amenity grassland and marshy grassland) – 4.07ha (11.01%);
 - dry dwarf shrub heath – 7.6ha (20.59%);
 - wet heath – 1.67ha (4.52%);
 - dense scrub – 2.43ha (6.58%); and
 - woodland habitats (including broadleaved semi-natural and coniferous plantation woodland) – 15.88ha (42.98%).
- 3.5.4 Habitat potentially unsuitable for the qualifying species:
- hardstanding tracks - 2.86ha (7.74%); and
 - remaining unsuitable habitats e.g. standing water – 2.44ha (6.6%).
- 3.5.5 The above habitats could be used by one or more of the qualifying species of the SPA at any point in their life cycles e.g. nesting, territorial behaviours, foraging or roosting. With respect to woodland, scattered individual trees and the woodland edge could be utilised for roosting although larger blocks of continuous woodland are not likely to be used by the qualifying species.

3.6 Habitat occupancy within the vicinity of the Order Limits

- 3.6.1 Annual breeding bird surveys coordinated by 2Js Ecology on behalf of JNCC have provided an understanding of the historical distribution of breeding territories of the qualifying species of the SPA in relation to the route. Plans of breeding territories within 1km of the Order Limits recorded between 2008 and 2018 are provided in Appendix C of the HRA Report.
- 3.6.2 Five-year mean territory counts have been calculated using 2Js Ecology data (2014 – 2018) for the area within 250m of the Order Limits. Territories were usually identified by the presence of territorial males, otherwise by the identification of a nest site. A 250m buffer has been used as it represents the typical distance territorial birds range from their nest site. The calculations are presented below for each component SSSI of the SPA and summarised in Table 4.

Table 4. Five year mean territory counts (2014-2018)

Site where Order Limits cross	Five year mean territory counts <i>Within Order Limits plus 250m</i>		
	Dartford Warbler	Nightjar	Woodlark
Bourley and Long Valley SSSI	0.6	1.0	0.8
Colony Bog and Bagshot Heath SSSI	14.4	5.2	2.2
Chobham Common SSSI	14.4	5.2	2.2
Thames Basin Heaths SPA	29.4	11.4	5.2
Conservation Objective	445	264	149
% of Conservation Objective territories within 250m of the Order Limits	6.6%	4.3%	3.5%

Bourley and Long Valley SSSI

- 3.6.3 The total length of the route through Bourley and Long Valley SSSI is approximately 1.5km, from where it enters the site north of Tweseldown Racecourse (SU 82425 52308) and exits at the location of the trenchless crossing (TC013 of the A323 and Basingstoke Canal (SU 83298 53508) (Figure 9.6 of HRA Report). The SSSI units within the Order Limits within Bourley and Long Valley SSSI are Units 4, 2 and 1 (south to north). Desk study evidence indicates that the area of the SSSI through which the Order Limits would pass has occasionally supported breeding territories of the qualifying species but in low numbers, as described below (Figures C1-C3 in Appendix C of the HRA Report). The occurrence of potential supporting habitat relative to the Order Limits through the SSSI is also presented in Figure 9.6 of the HRA Report.
- 3.6.4 For Bourley and Long Valley SSSI, the five-year mean count of territories is 0.6, 1.0 and 0.8 for Dartford warbler, nightjar and woodlark respectively.

Units 4 and 2

- 3.6.5 Within Unit 4, habitats comprise a large open area of amenity grassland at Tweseldown Racecourse. Within Unit 2, habitat within the vicinity of the route comprises purple moor-grass dominated grassland along an existing pipeline easement, a footpath between Tweseldown Racecourse and Aldershot Road to the northeast, and broadleaved semi-natural and coniferous plantation woodland (Figure 9.6 of the HRA Report). Beyond the Order Limits, there is a large area of heathland to the east within Unit 2, supporting dry and wet dwarf shrub heath and valley mire.
- 3.6.6 Within Unit 4, breeding bird surveys indicate some use of the area by all three SPA species, but there is an apparent preference for the more open area within Tweseldown Racecourse to the east of the Order Limits (Figures C1-C3 in Appendix C of the HRA Report). Suitable breeding areas for woodlark and nightjar have declined in this unit, but a few birds have fledged young in the past (Natural England, 2011).
- 3.6.7 Breeding territories were identified overlapping with the Order Limits in Unit 2 at the base of Aunt's Pool Hill for Dartford warbler (in 2016), nightjar (in 2008, 2015 and 2016) and woodlark (in 2011, 2013 and 2015) (Figures C1-C3 in Appendix C of the HRA Report).

Unit 1

- 3.6.8 The route exits Unit 2, crosses Aldershot Road, and enters a car park on the boundary of Unit 1. From here, the pipeline would be constructed using trenchless techniques for approximately 580m, although a drilling compound would be required at the interface between an area of wet heath and wet woodland, approximately 320m from the car park.
- 3.6.9 Habitats potentially suitable for the qualifying species along the route comprise dense scrub of common gorse alongside a track, and wet and dry dwarf shrub heath to the north and south of the track. The presence of suitable breeding habitat is supported by reports of nightjar and woodlark numbers in excess of their targets within this unit (Natural England, 2011). Notwithstanding this, no territories of the three qualifying species were identified close to the Order Limits by breeding bird surveys organised by 2Js Ecology surveys between 2008 and 2018 (Figures C1-C3 in Appendix C of the HRA Report). As the route continues northeast through the unit, the higher ground is dominated by broadleaved woodland and coniferous plantation. The breeding bird surveys did not identify territories in the vicinity (2Js Ecology, 2008-2018) and this habitat is considered sub-optimal for nest sites for all three of the qualifying species.

Colony Bog and Bagshot Heath SSSI

- 3.6.10 The Order Limits cross Colony Bog and Bagshot Heath SSSI between Ordnance Survey grid references SU 90941 58809, SU 90896 60650 and SU 93765 61655. The total length of the route within the SSSI is approximately 4km. The SSSI units

within the Order Limits are: Unit 9 – Chobham Ridges, Unit 4 – Folly Bog and Unit 5 – Turf Hill.

- 3.6.11 Breeding territories of Dartford warbler have been recorded consistently within, and adjacent to, the Order Limits throughout the SSSI. There were no records of nightjar and woodlark in the last five years. In 2008, one woodlark territory was identified approximately 90m from the Order Limits (Figure C9 in Appendix C of the HRA Report).
- 3.6.12 The five-year mean count of territories within 250m of the Order Limits is 14.4, 5.2 and 2.2 for Dartford warbler, nightjar and woodlark respectively.

Unit 9 – Chobham Ridges

- 3.6.13 Unit 9 of the SSSI comprises a long narrow strip of mostly wooded habitat, with small areas of acid and neutral grasslands (Figure 9.10). These habitats are situated to the west and north of the land owned by the Ministry of Defence and used as training areas and artillery ranges. Breeding bird surveys indicate that the three qualifying species do not rely on habitat within Unit 9 during the breeding season (Figures C7-C9 in Appendix C of the HRA Report).

Unit 4 – Folly Bog

- 3.6.14 Unit 4 comprises a large area of open heathland, with stands of acid grassland, dry dwarf shrub heath, dense bracken, dense scrub and broadleaved woodland within the Order Limits (Figure 9.8 of the HRA Report). Folly Bog to the south of the Order Limits supports an extensive area of valley mire which would be avoided.
- 3.6.15 Habitat within Unit 4 is suitable for nightjar (Natural England, 2014), but no breeding territories have been reported since 2002 (Figure C8). The stands of dense gorse are known to support Dartford warbler (Natural England, 2014). Breeding bird surveys show a fluctuating presence of Dartford Warbler territories within this tract of dry heathland since 2012, with a peak of seven territories in 2015, but only one in 2017. Seven territories were identified in 2018 (2Js Ecology, 2008-18). Three woodlark territories have been observed since 2008, but not since 2015.

Unit 5 – Turf Hill

- 3.6.16 The route through Unit 5 of the SSSI would follow an existing track along the northern perimeter of the unit, wholly within coniferous plantation woodland. Trees would screen much of the works from more suitable heathland habitat within the unit (Figure 9.8 of the HRA Report). The route would exit the SSSI by crossing Guildford Road to the east. A construction compound would potentially be positioned at the eastern end of the unit on the edge of the heath where a small stand of Scots pine (*Pinus sylvestris*) trees are present.
- 3.6.17 Breeding bird surveys indicate that Dartford warbler and nightjar are frequently present during the breeding season, with a number of territories (Figures C7-C8 in Appendix C of the HRA Report). Woodlark have not been recorded in the last ten years (Figure C9 in Appendix C of the HRA Report).



Chobham Common SSSI

- 3.6.18 The Order Limits cross Chobham Common SSSI between Ordnance Survey grid references SU 99014 64629 and SU 96914 63552. The Order Limits follow a well-established track across the SSSI, approximately 2.4km in length. Potential supporting habitats along the route comprise acid grassland, dry and wet dwarf shrub heath and broadleaved and coniferous woodland (Figure 9.7 of the HRA Report).
- 3.6.19 Results of breeding bird surveys indicate consistent use of habitats by all three qualifying species during the breeding season within or near to the Order Limits within the SSSI (Figures C4-C6 in Appendix C of the HRA Report).
- 3.6.20 For Chobham Common SSSI, the five-year mean count of territories within 250m of the Order Limits is 14.4, 5.2 and 2.2 for Dartford warbler, nightjar and woodlark respectively.

4 Stage 2 – Appropriate Assessment

- 4.1.1 As stated previously, this section of the report relates to physical disturbance (habitat change) to the SPA during construction only. Appraisal of other potential impacts on the site is presented in section 5.8 of the published HRA Report.
- 4.1.2 As required by Advice Note 10 (Planning Inspectorate, 2017), an HRA integrity matrix for the SPA is provided in Table 5 below.

4.1 Impacted area

- 4.1.1 No part of the SPA habitat would be permanently lost as a result of the project. The only permanent infrastructure to be constructed in the SPA would be the pipe itself, located below ground level. The Order Limits through the SPA comprise approximately 36.95 hectares, which accounts for just 0.4% of the SPA total area.
- 4.1.2 With the implementation of measures within the SPA such as narrow working techniques (see 'Annex B – European site construction drawings' of the HRA Report); trenchless crossings (which are secured by the code of construction practice); the presence of good practice measures; and existing hardstanding within that area, mean that the total area of suitable habitat for the qualifying bird species for nesting or foraging likely to be directly impacted by construction activity would be approximately 7.96 hectares. This accounts for approximately 0.1% of the total SPA area.

4.2 Habitat regeneration

- 4.2.1 Any effect on habitat would be temporary only, with the habitat restored on completion of the pipeline installation.
- 4.2.2 Topsoils and subsoils intended for reinstatement would be temporarily stockpiled as close to where they were stripped as practicable (project commitment G155) and different soil types and made ground would be stripped and stored separately where applicable (G159). A methodology would be produced for stripping, handling, storage and replacement of all soils to reduce risks associated with soil degradation (G151). These project commitments are secured within the outline Construction Environmental Management Plan (CEMP), specifically Appendix F – Soil Management Plan (SMP) (**Document Reference 8.51(2)**).
- 4.2.3 Vegetation clearance and turf stripping, similar in nature to that required with the construction phase of the Project, are often employed in heathland habitat management and restoration programmes (Symes and Day, 2003). The heathland habitat is dynamic but is often in unfavourable condition if left unmanaged due to its low structural diversity, lack of bare ground and, scarcity of the early stage of succession. The SSSI condition report for many of the component SSSI of the SPA (undertaken by Natural England in 2012 and 2013) states that many of the SSSI units are in unfavourable recovering status with management required to increase the proportion of early stages of heathland succession.
- 4.2.4 Indeed, the 2019 condition assessment of unit 21 of Chobham Common SSSI discusses how turf stripping, heather mowing and clearance of tree encroachment

has reversed the undesirable status of low heather age-class diversity and low levels of representation of bare ground to a much more desirable mix of habitat structures with good representation of bare ground of high value for basking and burrowing invertebrates; the prey species for the qualifying bird species of the SPA. These works have also created well-structured edges to the heath providing good habitat for feeding nightjar and supporting habitat for Dartford warbler. The vegetation clearance and essential turf stripping proposed within the Order Limits is directly comparable to these heathland management techniques and may return their positive habitat response.

- 4.2.5 Natural regeneration is the preferred method of reinstatement and there is a high degree of confidence that disturbed habitats could be reinstated to pioneer heathland or acid grassland in the short to medium term by these methods (Gimingham, 1992). English Nature (undated) state that 'natural regeneration from the soil seedbank' is the preferred option in (re)-establishment of heathland vegetation. Heathers produce long-lived seeds capable of germinating many decades after deposition (Pywell et al., 2002). If construction were to take the maximum two years, the heathland seedbank would remain viable on reinstatement. Project experience of laying other pipelines (larger than that proposed in this application) in the SPA shows that pioneer heathland regeneration takes no more than five years and heathland habitat was evident, just three years post pipeline installation (South East Water, 2018).
- 4.2.6 Annual monitoring for five years would be implemented post-construction to amend management, as necessary to meet pre-defined habitat regeneration targets (Implementation of G47 in the outline Landscape and Ecological Management Plan (**Document Reference 8.51(2)**)).

4.3 Bird territories

- 4.3.1 Works within the SPA would be limited to four months between 1 October to 31 January (inclusive), which is secured via Commitment G38 DCO Requirement 6 (CEMP). Vegetation clearance and construction would be restricted to this timeframe, which is outside of the sensitive breeding season. Breeding territories are established on an annual basis and at the time of proposed works, no breeding territories would have been established.
- 4.3.2 Annual monitoring data would suggest a five-year average (2014-2018) of 46 territories, of all three qualifying bird species, are recorded per year within 250m of the Order Limits. Territorial birds typically range up to approximately 250m from their nest site locations during the breeding season, therefore a record of a territorial bird within 250m of the Order Limits represents an instance whereby a bird territory could be intersected by the Order Limits, and as such, no complete disturbance of any one territory would result from implementation of the Project as the Order Limits are no more than approximately 30m wide. Whilst some vegetation would inevitably require removal, breeding birds will still be able to establish and maintain territories and use them successfully for nesting and foraging throughout the habitat regeneration period. Areas of habitat affected by the works will be especially productive for foraging and will continue to offer nesting opportunities for the ground-nesting bird species.



- 4.3.3 Post works, during habitat regeneration, the land disturbed by the project would not be unsuitable for the qualifying species. Bare ground does not preclude the breeding of qualifying bird species with both nightjar (Berry, 1976) and woodlark (Sitters et al., 1996) recorded breeding on bare earth. Bare earth also increases the abundance of invertebrates, the prey species of all three qualifying bird species.

4.4 Summary

- 4.4.1 No supporting habitats, such as those used for nesting, breeding or roosting, or for prey species would be functionally reduced. Heathland habitat is successional and requires regular intervention and management to prevent succession into unfavourable condition and ultimately scrub and woodland. Heathland in favourable condition provides an age and structurally diverse habitat that includes the provision of bare earth.
- 4.4.2 Habitat disturbance associated with the construction phase of the project would be temporary with the habitat rebounding naturally. This habitat modification would not lead to adverse effects on the integrity of the SPA or its ecological functions as defined by the Conservation Objectives.

5 In-combination assessment

- 5.1.1 The potential impacts of noise and visual disturbance during construction on the qualifying bird species and the displacement of recreational activities from SANGs on the integrity of the Thames Basin Heaths SPA has been assessed in section 5.8 of the HRA Report. The appraisal of the individual potential impacts concluded that none would result in adverse effects on the integrity of the SPA or its ecological functions as defined by the Conservation Objectives.
- 5.1.2 If these potential impacts and the effect of habitat change are considered in-combination, no impact on integrity of the Thames Basin Heaths SPA is anticipated:
- Noise and visual disturbance to breeding birds would be avoided with restricted construction timescales, limited to outside of the breeding season, removing any pathway to effect.
 - Whilst there is the potential for a small degree of displacement of recreational activity to the Thames Basin Heaths SPA while construction is ongoing in the SANGs, including within the bird breeding season, a small, short-term increase in visitor pressure on the established walking routes within the SPA is extremely unlikely to lead to adverse effects. The increase in recreational activity could lead to an increased level of disturbance to the SPA birds during the breeding season. The resulting worst-case scenario is that a reduction in productivity i.e. number of chicks successfully reared would result. However, for this to lead to an adverse effect on site integrity, the impact would need to be long term; the maximum two breeding seasons required for construction works within SANGs is short term and not sufficient to lead to adverse effects on site integrity.
 - In relation to habitat change, the qualifying bird species would continue to use the spatial extent of the SPA as before, maintaining their distribution throughout the SPA habitats, without this distribution being diminished. Temporary habitat modification may result in improved foraging habitat, especially for woodlark, as bare earth areas can increase the abundance of invertebrate prey species.
- 5.1.3 As there is no effect on site integrity individually and no compounding mechanism between the three effects, therefore no adverse effect on site integrity from cumulative, in-combination impacts is predicted.

6 Conclusion

- 6.1.1 Irrespective of the application of good practice measures such as narrow working, habitat disturbance would be a minor proportion of the overall SPA, would be temporary and no supporting habitats for the qualifying bird species, such as those used for nesting, breeding or roosting, or prey species would be functionally reduced. Once further measures are introduced, the position is even more robust, with the disturbed area of habitat reducing from 36.95ha to approximately 7.96ha. Therefore, the project would not undermine the structure, ecological functioning or the essential character of the SPA as per the Conservation Objectives that define the favourable status of the qualifying features.
- 6.1.2 It is the Applicant's strong view, endorsed by Natural England and the Wildlife Trusts, that the Stage 1 - Screening conclusion in the HRA report is robust. However, in the event that the Examining Authority and Secretary of State concludes otherwise, this report shows that if physical disturbance to the SPA habitat during construction had been screened in to appropriate assessment, the same conclusion would have been reached.

Table 5: HRA integrity matrix for Thames Basin Heaths SPA (UK9012141) – habitat loss only (based on that set out in Planning Inspectorate Advice Note 10 (2017))

Matrix key

✓ = Adverse effect on integrity cannot be excluded; ✗ = Adverse effect on integrity can be excluded

C = Construction; O = Operation

B = breeding

Grey highlight indicates no significant pathway

1) Thames basin Heaths SPA						
2) EU Code: UK0012793						
Distance to NSIP - The Thames Basin Heaths SPA comprises part or all of 13 Sites of Special Scientific Interest. The Order Limits, of approximately 30m in width, pass through three of these sites: 1) Bourley and Long Valley SSSI for approximately 1.5km; 2) Colony Bog and Bagshot Heath SSSI for approximately 4km; and 3) Chobham Common SSSI for approximately 2.4km.						
3) European Site Features			4) Adverse effect on integrity			
Effect	Habitat loss (non-breeding season)		Habitat loss (breeding season)		In-combination effects	
Stage of development	C	O	C	O	C	O
Dartford warbler (<i>Sylvia undata</i>) B			✗ ^a	✗ ^b		✗ ^c
Nightjar (<i>Caprimulgus europaeus</i>) B			✗ ^a	✗ ^b		✗ ^c
Woodlark (<i>Lullula arborea</i>) B			✗ ^a	✗ ^b		✗ ^c

Evidence supporting conclusions



- 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.
- b. 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.
- c. 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.

7 References

- 2Js Ecology, 2016. Thames Basin Heaths Special Protection Area Annex 1 bird survey results [Online] Available at: <https://surreyheath.moderngov.co.uk/documents/s8821/2016%20Thames%20Basin%20Heaths%20Special%20Protection%20Area%20Annex%201%20bird%20survey%20results.pdf> [Accessed February 2020].
- Berry, R., 1976. Nightjar habitats and breeding in East Anglia. *British Birds*, 72(5), pp. 207-218.
- English Nature (undated) Heathland creation for wildlife – Factsheet 2
- Gimingham, C. H. 1992. *The Lowland Heathland management handbook* (ENSO8)
- Joint Nature Conservation Committee (JNCC), 2001 SPA description (information as published 2001) – Thames Basin Heaths SPA. [Online] Available at <http://jncc.defra.gov.uk/page-2050-theme=default> [Accessed February 2020].
- JNCC, 2004. *Common Standards Monitoring guidance for Lowland heathland*. ISSN 1743-8160
- Langston, R.H.W., Liley, D., Murison, G., Woodfield, E., Clarke, R.T. 2007. What effects do walkers and dogs have on the distribution and productivity of breeding Nightjar *Caprimulgus europaeus*. *Ibis* 149(Suppl. 1): 27–36.
- Mallord, W.J., Brown, A., Dolman, P., Sutherland, W.J. 2007. Quantifying density dependence in a bird population using human disturbance. *Oecologia*. 153(1). 49-56. doi: 10.1007/s00442-007-0716-0.
- Murison, G., Bullock, J.M., Underhill-Day, J., Langston, R., Brown, A.F. & Sutherland, W.J. 2007. Habitat type determines the effects of disturbance on the breeding productivity of the Dartford Warbler *Sylvia undata*. *Ibis*, 149(Suppl. 1): 16–26.
- Natural England, 2014. European Site Conservation Objectives for Thames Basin Heaths Special Protection Area. Site Code: 9012141 (Version 2). [Online] Available at: <http://publications.naturalengland.org.uk/publication/4952859267301379> [Accessed February 2020].
- Natural England, 2016. *Supplementary Advice on Conserving and Restoring Site Features*. Thames Basin Heaths Special Protection Area. Issue Version 2.
- Natural England, 2020a. Designated Sites View - Bourley and Long Valley SSSI. [Online] Available at: <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1006761&SiteName=&countyCode=19&responsiblePerson=&SeaArea=&IFCAAarea=> [Accessed February 2020].
- Natural England, 2020b. Designated Sites View - Chobham Common SSSI. [Online] Available at: <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1004332> [Accessed February 2020].
- Natural England, 2020c. Designated Sites View - Colony Bog and Bagshot Heath SSSI. [Online] Available at: <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1001957> [Accessed February 2020].
- Planning Inspectorate, 2017. *Advice note ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects*, Version 8. Bristol: Planning Inspectorate.
- Pywell, R.F., Pakeman, R.J., Allchin, E.A., Bourn, N.A.D., Warman, E.A., Walker, K.J., 2002. The potential for lowland heath regeneration following plantation removal. *Biol. Conserv.* 108, 247–258.



Ruddock, M & Whitfield, D.P. 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage.

Sitters, H. P., Fuller, R.J., Hoblyn, R.A., Wright, M.T., Cowie, N., Bowden, C.G.R. 1996. The Woodlark *Lullula arborea* in Britain: population trends, distribution and habitat occupancy. *Bird Study*, 32(2), pp. 172-187

South East Water, 2018. Wildlife corridor in Swinley Forest heralded an environmental success. [Online] Available at: <https://corporate.southeastwater.co.uk/news-info/wildlife-corridor-in-swinley-forest-heralded-an-environmental-success> [Accessed February 2020].

Symes, N., Day, J., 2003. A Practical Guide to the Restoration and Management of Lowland Heathland. Sandy: RSPB.

Thames Basin Heaths Joint Strategic Partnership Board, 2009. Thames Basin Heaths SPA Delivery Framework, s.l.: Bracknell Forest Council.

Wotton, S., Conway, G., Eaton, M., Henderson, I., Grice, P. 2009. The status of the Dartford Warbler in the UK and the Channel Islands in 2006. *British Birds* 102: 230–246.



Appendix 2: ISH5-22 Measures Proposed for SANGS



Contents

1	Measures Proposed for SANGs	1
1.1	SANG specific measures.....	1
1.2	Overarching measures secured in other documents	4



1 Measures Proposed for SANGs

1.1 SANG specific measures

1.1.1 This short overarching document sets out the mitigation/ measures proposed for SANGs as requested in Issue Specific Hearing 5 (ISH5) Action Point 22. The text below is incorporated into the Code of Construction Practice (**Document Reference 6.4 Appendix 16.1 (4)**) in Sections 1.16 (construction schedule) and 2.15 (construction method).

1.1.2 Construction Schedule in Suitable Alternative Natural Greenspace (SANGs)

1.1.3 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.

1.1.4 All construction activities within the SANG will be fully demobilised within the two-year 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 reseeded/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.

1.1.5 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.

1.1.6 Construction Method, SANGs

1.1.7 The generic Open Cut (section 2.5 of the CoCP (**Document Reference 6.4 Appendix 16.1 (4)**)) technique will be utilised with the exceptions noted below. Unless stated otherwise below, site set-up and reinstatement will be as per section 2.4 and section 2.17 of the CoCP (**Document Reference 6.4 Appendix 16.1 (4)**).

1.1.8 Construction work in SANGs will be limited to a maximum of two years duration. Notwithstanding this maximum period, Esso recognises the need to minimise the extent to which it will close any part of the SANG to the public and where possible it will limit the extent and duration of its occupation. In addition, the following measures will be taken (which incorporates Natural England advice):

- Access to the SANG circular walk will be maintained.



- Pedestrian access to the SANG and vehicle access to SANG car parks will be maintained.
- Fencing of compounds within SANGs will be agreed with the relevant planning authority.
- Clear, user-friendly information will be provided at access points in advance of works and whilst work is taking place so that regular visitors are aware of what is going on, and which makes clear that the site will remain open;
- Staff on site, whilst works are ongoing, will provide a friendly interface with visitors;
- Works will be planned so as to avoid obstruction of main access routes;
- 'Stringing out' area (where applicable) will be positioned to avoid obstructing access routes;
- Working width will be kept to the minimum required for construction based on the technique/location, including temporary land take for storage of vehicles, materials, etc.
- Any existing screen of vegetation will be maintained alongside access routes where this might help maintain low visibility of works area.

1.1.9 A summary of the works in SANGs is outlined in table 1.1.

Table 1.1 – Summary of works through SANGs

SANG	GA Plan	Description of Works
Southwood Country Park SANG	Sheet 33 & 34	<p>The route travels northeast through Open Cut technique, before a trenchless crossing (TC014) of the A327 Ively Road.</p> <p>There is access from Ively Road to the working areas for the trenchless crossing.</p> <p>The route continues north until it reaches the boundary of the Cove Cricket Club.</p> <p>From this point the project has committed to a narrow working width of 15m (NW16) for the remainder of the route until it reaches Cove Road. Within this narrow working area there is a trenchless crossing (TC014a) beneath the Cove Flood Barrier.</p> <p>There is a Site Specific Plan for this location.</p> <p>Based on the preferred construction methodologies works, will take approximately 45 weeks within the 2 year construction period. Works may not run concurrently due to seasonal constraints, ecological constraints, optimum replanting periods and optimum soil handling periods.</p>
Crookham Park (Queen Elizabeth Barracks) SANG	Sheet 30	<p>The route travels northeast through the area using the Open Cut technique.</p> <p>The woodland technique would be used through Wakefords Copse.</p>



SANG	GA Plan	Description of Works
		<p>There is also a short section of highway through Quetta Park which uses the streetworks technique.</p> <p>There are two areas that the project has committed to a narrow working width of 15m wide, NW8 at Ewshot Meadows SINC and NW9 at Wakefords Copse SINC.</p> <p>Based on the preferred construction methodologies, works will take approximately 35 weeks within the 2 year construction period. Works may not run concurrently due to seasonal constraints, ecological constraints, optimum replanting periods and optimum soil handling periods.</p>
Windlemere SANG	Sheet 41	<p>The route travels northeast through the area using the Open Cut technique.</p> <p>There is a trenchless technique (TC021) for the A322 crossing at the western side.</p> <p>Based on the preferred construction methodologies works will take approximately 12 weeks within the 2 year construction period. In addition, GCN trapping will be required in this location which will require a further period of up to 90 days prior to the commencement of construction works. Works may not run concurrently due to seasonal constraints, ecological constraints, optimum replanting periods and optimum soil handling periods.</p>
Chertsey Meads SANG	Sheet 48 and 49	<p>The route travels north through the area using the Open Cut technique.</p> <p>There is a narrow working commitment (NW29) in this location.</p> <p>To the north trenchless technique (TC034) will be used for the Thames crossing, which also requires a stringing out area within the SANG.</p> <p>Based on the preferred construction methodologies, works will take approximately 20 weeks within the 2 year construction period. Works may not run concurrently due to seasonal constraints, ecological constraints, optimum replanting periods and optimum soil handling periods.</p>
St Catherines Road SANG (Clewborough)	Sheet 36	<p>Open Cut working at the eastern edge of the SANG for pipe installation</p> <p>A construction compound located in the southern corner to serve the local works (specifically St Catherines Road).</p> <p>A stringing out area has been included in the Order Limits to accommodate a HDD in St Catherines road if required.</p> <p>There is a Site Specific Plan for this location.</p> <p>Based on the preferred construction methodologies, works will take approximately 56 weeks within the 2 year construction period. Works may not run concurrently due to seasonal constraints, ecological constraints, optimum replanting periods and optimum soil handling periods.</p>



1.2 Overarching measures secured in other documents

- 1.2.1 In addition to this, the commitments included within the Outline Construction Environmental Management Plan and associated appendices (**Document Reference 8.51(2)**) apply to the whole project and therefore would also apply to Suitable Alternative Natural Greenspace (SANG). These commitments are secured through Requirement 6 of the draft DCO. The commitments and measures included within the Outline Landscape and Ecological Management Plan (**Document Reference 8.50(2)**) also apply to SANGs and are secured through Requirement 12.
- 1.2.2 There is also a Site-Specific Plan for both Southwood Country Park (**Document Reference 8.60(2)**) and St Catherines (**Document Reference 8.61(2)**) SANGs submitted at Deadline 6 which contain details specific to these sites. These are secured through Requirement 17.



Appendix 3: ISH5-40 Rushmoor Borough Council - Proposal for temporary play provision in QEP

The existing NEAP and provision of a temporary play provision during works

The existing playground is a timber adventure-style play facility, suitable for all ages. The play area also includes climbing boulders to challenge older children, according to Rushmoor Borough Council's website.

The Southampton to London Pipeline project, if granted consent, would need to remove this play area temporarily to maintain safety during the works in the park, and Esso has committed to provide a replacement play area with new equipment following the completion of the works. Esso has also agreed to provide a temporary play provision during the works.

A temporary play provision could be provided within the Order Limits of the project along the southern boundary of the park, however on a site visit on 11 February 2020 with the Council's parks manager, an alternative location was suggested to the project team and Earth Wrights further north in a clearing (outside of the Order Limits). This play provision could be installed without damaging trees or their root systems using hand digging and no heavy machinery - more information can be found overleaf.



Left: Existing play structure. Right: Location identified by Rushmoor Borough Council for temporary play provision

Working with the community to design the play structure

Rushmoor Borough Council advised that the local community may wish to be involved in the design of the play structure and Earth Wrights has experience of working with communities to inform detailed design through a consultation-style approach. Esso would support this approach.

Maintenance and retention

Esso would maintain the play provision during its construction and at the end of the installation period, would allow Rushmoor Borough Council to take ownership of the ongoing maintenance, should it wish to retain the play structure, or Esso would work with Earth Wrights to reinstate the area to its former state.

Sensitivity to natural habitats, landscape and estate operations

One of the core principles of our company ethos is to have a beneficial impact on the environment by using low impact building techniques and creating designs which complement the landscape. We believe this approach engenders a respect for the environment and encourages children to develop a strong connection to nature.

Whilst we are proposing a striking and innovative design, the organic nature and texture of the materials will sit sympathetically within the woodland environment and work to enhance existing landscape features. The architecture and aesthetics of the design reflect forms found in nature and create a strong visual statement which will stand out in the the minds of visitors.

These we believe are key ingredients in creating a unique and iconic playscape in an exceptional visitor attraction.

Structures in the shelter belt area are designed for off-ground use in order to minimise compaction around trees from footfall.

In order to install the equipment with maximum sensitivity to the landscape, and especially the mature trees, we will use a combination of hand-dig, vacuum excavation techniques and minimal use of concrete.

Vacuum excavation

Vacuum excavation is an innovative method which uses a high power vacuum suction system to excavate soils or other materials during groundwork projects. The technique uses a jet of air (delivered via an air-spade) to loosen soils, rather than using mechanical excavation plant or hand-held tools. After loosening, the soil is extracted from the excavation through an air vacuum hose which transports materials to an on-board spoil/debris tank for later disposal.

Vacuum excavation also allows for excavation in areas of a site otherwise inaccessible to traditional plant. This technology can also be used as an alternative to manual hand digging, protecting site operatives by reducing manual handling and increasing the rate of progress for an excavation programme.

Vacuum excavation exposes tree roots without damage, quickly and efficiently. The tree roots are preserved therefore minimising the impact on the tree. It is especially recommended for "high value" trees and trees covered under a preservation order (TPO).



vacuum excavation in action

Minimising the use of concrete

In consultation with our structural engineer, we will establish which posts need to be installed with concrete for structural reasons, and if any roots are present we will wrap them with a protective shield to prevent chemical damage from the cement. Also, our design will be flexible enough to adjust the layout of posts to avoid significant roots. Where structural bracing from footings is not required, we will use compacted aggregate without cement. Another benefit of minimising the use of concrete is that it reduces the embodied carbon in the materials and so reduces the overall carbon footprint of the project.

Low impact construction

The majority of our equipment will be hand-built on site, or prefabricated and hand assembled on site. This allows us to operate in a very sensitive manner around the trees, with minimal impact. In addition to hand-dig and vacuum excavation techniques, our installers will use cable avoidance equipment to avoid damage to utilities and ensure safety. This also allows us to work with minimum obstruction to the operations of the estate and visitor attraction, which we take very seriously.

We will not drive any heavy machinery within the area of trees and will not make any fixings to the trees themselves. Where we do need to use plant equipment such as a telehandler, we will lay ground protection mats over any sensitive areas, such as root protection zones and footpaths.

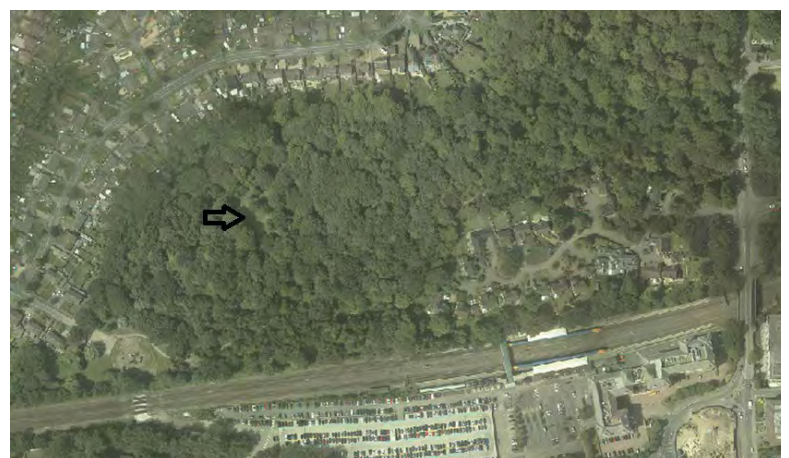
We would not use any artificial surfacing as this can impede natural drainage.

Our minimal use of heavy machinery has the added benefit of making our working environments quiet and peaceful avoiding disruption to wildlife and passing visitors. The nature of our designs and our use of natural materials results in us generating a bare minimum of waste, all of which is recycled as we have a zero to landfill policy. Earth and spoil generated on site will be re-used to create beneficial features on site such as mounds and retaining berms. Timber from the old dismantled play structure may be used to create further habitat piles in the park.

Our team

All of our team are DBS checked and are committed to following our behavioural code of conduct. They all have a respectful and sensitive attitude, enjoy interacting with clients and visitors and are happy to explain the nature of their work on site.

A recent testimonial: "I must also say they are a superb bunch to deal with; courteous, industrious, thorough and v friendly. My eight year old son went past two days ago and rather confidently shouted out the window 'well done .. keep going' to which one of your lads turned, smiled broadly and gave him a big thumbs up. In these tiny gesture you see the culture of Earthwrights." *Julian Mack, Director of Development, King's Schools Taunton*



Proposed location for temporary play provision



Love Your Garden - ITV



Cotehele - National Trust



Kings Hall School - Taunton



The Bewildernest -
Moors Valley Country Park