

Southampton to London Pipeline Project

Deadline 2

Response to the Examining Authority's First Written
Questions Scope of Development and
Environmental Impact Assessment (EIA)

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Southampton to London
Pipeline Project

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Response to the Examining Authority's Written Questions - Scope of
Development and Environmental Impact Assessment (EIA)



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1 Response to the Examining Authority's Written Questions – Scope of Development and Environmental Impact Assessment (EIA)

Table 1.1: Applicant response to Question

ExQ1	Question:	Applicant response to Question:
EIA.1.1	<p>The Proposed Development includes permanent above ground facilities comprising a pigging compound, valves, a pressure transducer, cathodic protection transformer rectifier cabinets, cathodic protection test posts, industry standard marker posts, colour-coded flight marker posts, installation of a replacement booster pump at Alton Pumping Station and modification of an existing pigging station at the West London Terminal Storage Facility.</p> <p>i) Confirm what design parameters e.g. maximum heights and widths, have been assumed for these elements of the Proposed</p>	<p>1.1 In answer to i), the design parameters that have been assumed in the assessment of the effects of the above ground facilities are listed below together with an explanation of how they relate to the design details secured within the draft DCO (Document Reference 3.1 (3)).</p> <ul style="list-style-type: none"> Pigging Compound (Work No. 3A) – The dimensions of the pigging compound which were assumed as the design parameters for assessment purposes are 23m wide x 30m long x 3m high fencing as described in paragraph 3.2.8 of Environmental Statement (ES) Chapter 3 (Application Document APP-043). These dimensions are reflected in the description of Work No. 3A in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and are shown on the Works Plans (AS-048). The Pigging Compound and its dimensions are included in Other Plans (Application Document APP-025). These indicative layout drawings should be viewed in combination with Requirement 4 of the draft DCO (Document Reference 3.1 (3)), which requires the authorised development to be constructed in general accordance with the indicative layout drawings. Finally, the Applicant has now identified that one of the dimensions stated in the previous version of the draft DCO was slightly larger than assumed in the assessment and has therefore corrected this error in the revised version of the draft DCO submitted at Deadline 2. The revised text in the draft DCO in relation to Work No. 3A now reads as follows: <i>‘Works to construct an Above Ground Installation at Boorley Green (“the Boorley Green AGI”), being a secure compound with an approximate area of <u>23</u> metres by 30 metres and a maximum height of 3 metres.’</i> Valves and Pressure Transducer (Works Nos. 2B to 2G (inclusive) and 2I to 2O (inclusive)) – The dimensions of these structures which were assumed as the design parameters in the assessment in each case are up to 7m long x 5m wide x 2.4m high fencing as described in

ExQ1	Question:	Applicant response to Question:
	<p>Development in the assessment of effects and how these relate to design details secured through the draft DCO [AS-059].</p> <p>ii) Confirm how the parameters of the pipeline e.g. wall diameter, wall thickness, and installation depth set out in the ES would be secured through the draft DCO [AS-059].</p>	<p>paragraph 3.2.13 of ES Chapter 3 (Application Document APP-043). The vertical dimensions of these above ground installations are also shown in Other Plans (Application Document APP-025). These dimensions are reflected in and secured by the description of Works Nos. 2B to 2G (inclusive) and 2I to 2O (inclusive) in Schedule 1 of the draft DCO and Requirement 4 of the draft DCO (Document Reference 3.1 (3)), which requires the authorised development to be constructed in general accordance with the indicative layout drawings. These works are also subject to the limits of deviation in article 6 of the draft DCO and shown on the relevant Works Plans (Additional Submissions AS-046 AS-047 AS-048). The Applicant would not therefore be authorised to deviate from the lines and situations described in article 6 of the draft DCO and shown on the Works Plans in carrying out these works.</p> <ul style="list-style-type: none"> • Cathodic Protection Transformer Rectifier Cabinets – The dimensions of these cabinets would be similar to those located along the existing pipeline route, which are typically 1.3m wide x 0.6m deep x 1.2m high and it is these dimensions which have been used for assessment purposes. The Applicant has now identified that the refurbishment and/or replacement of these Transformer Rectifier Cabinets was not specifically referenced in the previous version of Schedule 1 of the draft DCO and has therefore now included reference to this in lettered work (d)(x) in the revised version of the draft DCO (Document Reference 3.1 (3)) submitted at Deadline 2. Whilst a specific dimensions are not included in the description of these works, the Applicant's ability to undertake any of the lettered works is subject to the preamble to the lettered works regarding what has been assessed in the environmental statement. This provides clarity that the Applicant may not depart significantly from the maximum parameters assessed. • Cathodic Protection Test Posts and Marker Posts – These posts are typically up to 1.2m high above ground level, as described in paragraph 3.2.17 of ES Chapter 3 (Application Document APP-043), and it is these dimensions which were used for assessment purposes. Cathodic protection test posts and marker posts are expressly referred to at Works Nos. 1A to 1H (inclusive) and at lettered work (d)(x) in Schedule 1 of the draft DCO. Whilst a specific

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		<p>height is not included in the description of these works, the Applicant's ability to undertake any of the lettered works is subject to the preamble to the lettered works regarding what has been assessed in the environmental statement. This provides clarity that the Applicant may not depart significantly from the maximum parameters assessed.</p> <ul style="list-style-type: none"> • Flight Marker Posts – The Flight Marker Posts are typically 2m high above ground level and it is these dimensions which were used for assessment purposes. Whilst a specific height is not included in the description of these works, the Applicant's ability to undertake any of the lettered works is subject to the preamble to the lettered works regarding what has been assessed in the environmental statement. This provides clarity that the Applicant may not depart significantly from the maximum parameters assessed. • Booster Pump at Alton Pumping Station (Work No. 3B) – The dimensions of the booster pump, together with its motor, which were assumed as the maximum parameters within which this work would be constructed for assessment purposes, are 4m long x 1m wide with an approximate height of 1.5m. Work No. 3B also includes modification to above ground pipework. The design assessed is therefore related to and secured by the definition of "authorised development" in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and shown on the Works Plans (Additional Submission AS-008). • Existing Pigging Compound at West London Terminal (Work No. 3C) – The maximum height of the equipment and pipework within this area would be approximately 3m. The design assessed is therefore related to and secured by the definition of "authorised development" in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and shown on the Works Plans (Additional Submission AS-009). <p>1.2 In answer to ii), the draft DCO secures the installation depth of the pipeline for assessment purposes via the vertical limits of deviation under article 6. The nominal internal diameter of the pipeline would be 25cm (10 inches) from the indicative start point shown on Sheet 1 of the Works Plans (Additional Submission AS-048) to the Boorley Green AGI (Work No. 3A) shown on Sheet 2 of the Works Plans (Additional Submission AS-048) and 30cm (12 inches) from the Boorley</p>



ExQ1	Question:	Applicant response to Question:
		<p>Green AGI (Work No.3A) shown on Sheet 2 of the Works Plans (Additional Submission AS-048) to the West London Terminal AGI (Work No. 3C) shown on Sheet 53 of the Works Plans (Additional Submission AS-048). The external diameter of the pipeline was stipulated in the Applicant's application form (Application Document APP-002) as approximately 330mm as per Regulation 6(4) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. The Applicant can confirm that this has now been added to the revised version of the draft DCO submitted at Deadline 2 (Document Reference 3.1 (3)). The pipe wall thickness would nominally be 11.9mm but would be dependent on engineering tolerances and coating thickness and the Applicant would ensure that the pipeline complies with regulation 5 of the Pipeline Safety Regulations 1996 regarding the design of a pipeline.</p>
EIA.1.2	<p>The Proposed Development includes permanent lighting at the proposed pigging compound.</p> <p>Confirm what assumptions have been made on the height, design and hours of operation of such lighting and confirm where this lighting would be secured in the draft DCO [AS- 059].</p>	<p>1.3 The project does not propose permanent lighting at the proposed pigging compound near Boorley Green. Work No. 3A in Schedule 1 of the draft Development Consent Order (DCO) (Document Reference 3.1 (3)) does not include any provision for permanent lighting at the pigging station and the relevant indicative layout drawing (Application Document APP-025) secured by Requirement 4 of the draft Development Consent Order does not include provision for any permanent lighting. Temporary lighting would be brought in on any occasions when lighting is necessary. This is provided for in lettered work d(ii) in Schedule 1 of the draft DCO.</p> <p>1.4 Where reference is made in the Environmental Statement (Application Documents APP-043 and APP-047) to lighting at the pigging station, this was to assess the potential worst-case scenario considered at that stage of project definition.</p> <p>1.5 Because the authorised development does not include powers to install permanent lighting at the Boorley Green pigging compound, the Applicant does not consider it necessary to include any provisions governing the operation of permanent lighting in the draft DCO (Document Reference 3.1 (3)).</p>



ExQ1	Question:	Applicant response to Question:
EIA.1.3	Chapter 3 of the ES [APP-043] defines the working width of the pipeline corridor as being 36m where adjacent to Esso's existing pipeline, 30m where the replacement pipeline moves away from the existing pipeline, and a greater (undefined) width where geology requires. Confirm what these geological requirements are, what would be the maximum working width of corridor that would be required as a result, whether these would be contained within the Order Limits and whether a worst-case assessment of potential environmental effects relating to this issue is presented in the ES.	<p>1.6 In areas where ground conditions are anticipated to be sands and gravels, the Applicant may have to align the trench of the proposed pipeline a few metres further away from its existing pipelines. This would be to provide a sufficient safety separation between its existing pipelines and the trench for the new pipeline at the particular location where such ground conditions are encountered.</p> <p>1.7 In addition, where ground conditions necessitate trenches to have wider slopes to reduce the risk of trench collapse, e.g. gravelly ground conditions, the working width required would also be greater. However, these would all be within the Order Limits as defined in the draft DCO and the Environmental Statement is based upon those Order Limits.</p>

ExQ1	Question:	Applicant response to Question:
EIA.1.4	<p>The construction of the Proposed Development includes logistics hubs and temporary construction compounds with office, welfare and security facilities.</p> <p>Confirm the maximum sizes and heights for structures as assessed in the ES and confirm how these parameters relevant to the worst-case assessment in the ES would be secured through the draft DCO.</p>	<p>1.1 The maximum heights for structures contained within the logistics hubs and temporary construction compounds would be as follows:</p> <ul style="list-style-type: none"> • temporary buildings for offices, welfare and security facilities: single storey; • fences: up to 3m; • floodlights: up to 4m; and • pipe stacks: up to 2m. <p>1.2 The typical layout of the logistics hubs and temporary construction compounds is shown on the indicative layout drawings. The indicative layout of these temporary hubs is shown on the indicative layout drawings (Application Document APP-025) and stipulates the maximum heights within these hubs (single storey offices, lighting with a maximum height of 4m, fencing with a maximum height of 3m and pipe storage with a maximum height of 2m) there is a requirement to construct these hubs in general accordance with those drawings (Requirement 4 of the draft DCO).</p> <p>1.3 The environmental assessment of the hubs and compounds has been based on the overall size of the fenced area within the individual land setting.</p>
EIA.1.5	<p>Chapter 3 of the ES [APP-043] states that after pipe laying the trench would be backfilled with subsoil arisings and compacted. At paragraph 3.4.70 a commitment is made to the restoration of existing sub surface drainage, such as field drains, and</p>	<p>Reinstatement of land for agricultural purposes</p> <p>1.1 The Code of Construction Practice (CoCP) (Document Reference 6.4 Appendix 16.1 (2)) commitment G94 states that '<i>Land used temporarily would be reinstated to an appropriate condition relevant to its previous use</i>'. Commitment G94 is set out in the CoCP. The Applicant would be required to undertake the authorised development in accordance with the CoCP. Commitment G94 is therefore secured by the draft DCO. It should also be noted that land used temporarily for carrying out the authorised development must upon completion be restored to the satisfaction of the owners of the land. In the Applicant's view these measures clarify that the pipeline corridor would be reinstated to a condition which is suitable for agricultural purposes</p>



ExQ1	Question:	Applicant response to Question:
	<p>the loosening of sub soil. However, these measures are not reflected in the REAC [APP-056] or CoCP [APP-128].</p> <p>Clarify how measures to render the pipeline corridor suitable for agricultural purposes or the reinstatement of planting following completion of construction would be secured, with reference to the draft DCO, the REAC and CoCP.</p>	<p>(subject to the rights and restrictions which the Applicant seeks to impose over the 6.3m easement strip in relation to the land).</p> <p>1.2 Paragraph 3.4.70 of the Environmental Statement Chapter 3 (Application Document APP-043) describes how reinstatement would operate, including the restoration of existing sub-surface drainage (such as field drainage) and the loosening of subsoil, measures which are covered by commitment G94.</p> <p>Reinstatement of planting following completion</p> <p>1.3 The CoCP (Document Reference 6.4 Appendix 16.1 (2)) commitments G87, G88 and G97 set out the following measures which the Applicant would be required to implement:</p> <ul style="list-style-type: none"> G87: 'Vegetation clearance, retention, protection and replanting/reinstatement drawings would be produced prior to the construction phase. The contractor(s) would implement these plans including agreed mitigation where practicable'; G88: 'Where possible, reinstatement of vegetation would generally be using the same or similar species to that removed (subject to restrictions for planting over and around pipeline easements)'; and G97: 'Where woodland vegetation is lost and trees cannot be replaced due to the restrictions of pipeline easements, native shrub planting approved by Esso would be used as a replacement.' <p>1.4 In addition, Requirement 8 in schedule 2 of the draft DCO (Document Reference 3.1 (3)) would require a written plan of reinstatement for all hedgerows and trees affected by the authorised development to be prepared and approved in accordance with Requirement 12 of the draft DCO.</p>



ExQ1	Question:	Applicant response to Question:
EIA.1.6	<p>Noting that decommissioning of the existing pipeline has not been identified as an “other development” for the purposes of the ES cumulative assessment [APP-055], [APP-125] and [APP-127], confirm the following:</p> <p>v) ES Chapter 3 [APP-043] explains that “an appropriate decommissioning strategy” would be implemented for the existing pipeline. a) When is such a strategy likely to be implemented and is there any potential that this could overlap temporally with the Proposed Development; and b) If the existing pipeline would be left in situ what types of impact are likely to occur from its decommissioning; and</p>	<p>1.1 Chapter 3 Project Description, paragraph 3.1.6 (Application Document APP-043) says that, ‘Taking the existing pipeline out of service, known as decommissioning, is covered by the original pipeline consent and therefore does not form part of this project. The existing pipeline would be decommissioned once the replacement pipeline is operational. The nature of the pipeline network means that at no point can both pipelines be operational at the same time’.</p> <p>1.2 Because of the way the replacement pipeline ties in part way along the existing pipeline route, it is impossible to operate both pipelines concurrently and once the replacement pipeline is commissioned, the existing pipeline cannot be operated and would be decommissioned.</p> <p>1.3 Once the replacement pipeline is fully commissioned, the Applicant would decommission the existing pipeline in accordance with the requirements of the Pipeline Safety Regulations and in accordance with good industry practice.</p> <p>1.4 In answer to v), a strategy would be developed at this stage. As the pipeline is already in a safe and inert condition, decommissioning can take place over an extended period of time and can be executed in several phases. There is no requirement that decommissioning be undertaken as a single stage or immediately. However, in answer to part a), there would be no overlap between the construction phase of the proposed pipeline and the decommissioning of the existing pipeline.</p> <p>1.5 In answer to part b), decommissioning would involve purging and cleaning the existing line of its former contents into tankage at West London Terminal for safe disposal. This process is typically achieved by displacing the product in the pipeline with nitrogen to leave the pipeline in an inert and safe condition. A strategy would then be developed to fill the decommissioned pipeline with grout. Any excavation works associated with grouting would be assessed in line with all relevant regulatory requirements, as is currently the case for all maintenance works in respect of the Applicant’s pipelines. The access points at which grout would be injected into the pipeline would be similar in scale to standard pipeline maintenance excavation and their location would be dependent upon topography, site sensitivity and the selected technology. Grouting is preferable to removing the pipeline completely, which would entail extensive and unnecessary construction activity and would introduce avoidable risk in working near existing services and the gas main laid</p>

ExQ1	Question:	Applicant response to Question:
	vi) In light of the Applicant's answers to a) and b) above, whether there is any potential for decommissioning of the existing pipeline to result in cumulative effects together with the Proposed Development	<p>alongside the existing pipeline. Any related above ground infrastructure that is not being used in connection with the replacement pipeline would be removed and the land restored.</p> <p>1.6 The Applicant would take site sensitivity into account when developing its decommissioning strategy. Just as is the case for current repair and maintenance activities, the Applicant would fully assess the scope of its decommissioning work and where any additional consents are required, such as where excavation work is being undertaken in a protected area, it would consult with the relevant regulators such as the Environment Agency and Natural England. It would obtain all necessary consents for the carrying out of its work. The Existing Authorisation does not contain any exclusions or exemptions from the need to obtain such additional consents. The type of activity associated with a grout injection point is similar in scale to standard pipeline maintenance work and this is the basis under which the Applicant has been operating and maintaining its pipelines around the country for the last 60 years.</p> <p>1.7 In answer to vi), in light of the above, the operation of the proposed pipeline would not result in any cumulative effects with the decommissioning of the existing pipeline.</p>
EIA.1.8	Confirm the ES [APP-055] to [APP-127] and the HRA report [APP-130] and [APP-131] have adequately assessed the cumulative or in-combination effects that could arise from other development, plans and projects along the proposed route.	<p>1.1 The Applicant has undertaken an in-combination effects or inter-project cumulative effect assessment (referred to here as the Cumulative Effects Assessment) as required under the EU Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive) and Overarching National Policy Statement for Energy (EN-1). The Cumulative Effects Assessment has been based on a proportionate approach given the scale of the potential effects from the project. This is in line with paragraph 3.4.5 from the Planning Inspectorate's Advice Note 17, which states: '<i>Whilst applicants should make a genuine attempt to assess the effects arising from multiple, individually non-significant effects, the CEA should be proportionate and should not be any longer than is necessary to identify and assess any likely significant cumulative effects</i>'.</p> <p>1.2 The Cumulative Effects Assessment has followed the four-stage approach as recommended in Planning Inspectorate's Advice Note 17. The scope of the Cumulative Effects Assessment was set out within the Scoping Report (AS-019).</p>

ExQ1	Question:	Applicant response to Question:
		<p>1.3 The proposed methodology and the long and short lists of proposed developments were issued to the relevant Local Planning Authorities for comment on 18 January 2019 and their comments were reflected in the Cumulative Effects Assessment presented within Chapter 15 (Application Document APP-055) of the Environmental Statement (ES) and within Appendix E of the Habitats Regulations Assessment (HRA) Report (Application Document APP-131)).</p> <p>1.4 The Applicant considers the Cumulative Effects Assessment in both the ES and the HRA Report to be both adequate and proportionate to the scale of the works.</p>
EIA.1.9	<p>i) Explain how the carbon assessment has informed the ES including the assessment of effects on people and communities. The assessment of greenhouse gas (GHG) emissions is focussed solely on CO₂ and no explanation is given as to why other GHG emissions are not considered. Can the Applicant explain why impacts to climate from other GHGs associated with the Proposed Development are not assessed in the ES.</p>	<p>1.1 In answer to i), the Applicant has considered all GHGs by using the 'CO₂ equivalent' measure. As noted by the UK Government's Conversion Factors for Company Reporting, 'there are seven main GHGs that contribute to climate change, as covered by the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). Different activities emit different gases and organisations are advised to report on the Kyoto Protocol GHG gases produced by activities specific to their activities'. Due to the relative proportion of CO₂ emissions it is accepted practice (as set out below) that GHGs have been equated CO₂ equivalents on the basis of their global warming potential (GWP).</p> <p>1.2 After review of the UK Government Environmental Reporting guidelines, it was considered appropriate to apply the UK Government's Department for Business, Energy & Industrial Strategy (BEIS) Carbon Factors for reporting GHG emissions. These factors are in units of 'kilograms of carbon dioxide equivalent of Y per X' (kg CO₂e of Y per X), where Y is the gas emitted and X is the unit activity. The associated introduction to the use of the carbon factors states: 'CO₂e is the universal unit of measurement to indicate the global warming potential (GWP) of GHGs, expressed in terms of the GWP of one unit of carbon dioxide. The GWPs used in the calculation of CO₂e are based on the IPCC's Fourth Assessment Report (2007) over a 100-year period (this is a requirement for inventory/national reporting purposes)'.</p>



ExQ1	Question:	Applicant response to Question:
	<p>ii) Explain the information source used to provide the values given for tonnes of CO₂ so that it can be understood how these values have been derived.</p> <p>iii) Explain the relevance of the use of 2017 CO₂ emissions values in the assessment and how the results of the assessment relate to the UK Carbon Budgets (for both construction and operation of the Proposed Development), which are based on 1990 emissions. Please explain how the results may be affected by the 2019 update on progress against the Carbon Budgets and the commitment made to net-zero carbon emissions.</p>	<p>1.3 The Applicant can clarify that, in paragraphs 1.6.24 to 1.6.25 and Table 1.11 of ES Appendix 13.2 (Application Document APP-120), the carbon assessment references to CO₂ equivalent should have been expressed as CO₂e and therefore the figures quoted do incorporate all of the other GHGs referred to in paragraph 1.1 above.</p> <p>1.4 In answer to ii), as reported above in i), the assessment was conducted using the BEIS Carbon Factors (2018). Updated factors were published by BEIS for 2019 GHG reporting over the summer of 2019 (latest set of factors at the time of writing were 9th August 2019). However, the factors used for the assessment were the most up to date at the time. Although the latest changes to the factors would change the results of the assessment, these changes are not of a high enough magnitude to change the findings of the assessment – i.e. that the impacts of the project are not significant.</p> <p>1.5 In answer to iii), the 2017 national UK CO₂ emissions inventory values used were the most recent available at the time of the assessment.</p> <p>1.6 The project's construction phase would occur between 2021 and 2023 over the period of the UK's 3rd (2018 to 2022) and 4th (2023 to 2027) Carbon Budgets. These budgets provide a legal limit for the total volume of GHG emissions the UK can emit. The 3rd Carbon Budget is 2,544 million tonnes CO₂e (which equates to a 37% reduction from 1990 by 2020). The 4th Carbon Budget is 1,950 million tonnes of CO₂e (which equates to a 51% reduction from 1990 by 2025).</p> <p>1.7 The construction and operational footprint of the project would result in 190,398 tonnes CO₂e. This will be too small to materially impact the UK Carbon Budget (note: the figure of 190,398 tonnes CO₂e this has a degree of conservatism within it as it includes the embedded carbon of steel pipe that in fact is likely to be manufactured overseas and the UK Carbon Budget would not be affected by embedded carbon from imported materials – the Carbon Budget only applies to domestic emissions). Table 1.11 in ES Appendix 13.2 (Application Document APP-120) sets out the results of the project's carbon assessment. The construction stage sub-total of 52,503 tonnes of CO₂ equivalent is 0.011% of the 460,200,000 tonnes emitted by the UK as a whole in 2017. During each year of operation, the average CO₂ equivalent emissions of 2,298 tonnes</p>



ExQ1	Question:	Applicant response to Question:																
		<p>(137,896 tonnes divided by an estimated 60 years of operation) represents 0.0005% of the UK's 2017 CO2 emissions.</p> <p>1.8 As stated above, the UK's 2017 carbon inventory was the most recent available at the time of the assessment. The provisional results for 2018 are available from the Government website and state that 449,000,000 tonnes of CO2 equivalent were emitted by the UK in 2018. Using the 2018 number, or future forecasts in the context of upcoming carbon budgets, the project emissions are immaterial to the UK meeting its future carbon budget targets or its overall 2050 net-zero target. The 2019 update on progress used the UK Total Carbon Inventory of 460,200,000 CO2e for 2017 as referred to in the ES and took into account sales of emissions allowances of 28 million tonnes to result in 488 million tonnes being accounted for in the second carbon budget in respect of 2017.</p> <table><tr><th></th><th>2017</th><th>2017*</th><th>2018</th></tr><tr><td>UK total carbon inventory</td><td>460,200,000</td><td>488,000,000 (July 2019 update)</td><td>449,000,000 (provisional)</td></tr><tr><td>Pipeline construction (52,503 tonnes of CO2e) as a percentage of UK total inventory</td><td>0.011%</td><td>0.011%</td><td>0.012%</td></tr><tr><td>Pipeline operation (2,298 tonnes per year of CO2e) percentage of UK total inventory</td><td>0.0005%</td><td>0.0005%</td><td>0.0005%</td></tr></table> <p>*The UK Total Carbon Inventory includes net UK purchases/ (sales) of emission allowances.</p>		2017	2017*	2018	UK total carbon inventory	460,200,000	488,000,000 (July 2019 update)	449,000,000 (provisional)	Pipeline construction (52,503 tonnes of CO2e) as a percentage of UK total inventory	0.011%	0.011%	0.012%	Pipeline operation (2,298 tonnes per year of CO2e) percentage of UK total inventory	0.0005%	0.0005%	0.0005%
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EIA.1.10	Explain the methodology used to determine the significance of effects applied to the carbon emissions assessment.	<p>1.1 There is currently no standard guidance for assigning significance in relation to a carbon emissions assessment. The Applicant compared the estimated carbon emissions from the construction and operation of the replacement pipeline against the UK total emissions in 2017 to assess whether they represented a significant proportion of total UK emissions and therefore could have a material impact on the ability of the Government to meet its carbon reduction targets.</p> <p>1.2 As set out in ES Appendix 13.2 (Application Document APP-120) the construction stage sub-total (including raw materials) of 52,503 tonnes of CO₂ equivalent would have been 0.011% of the 460,200,000 tonnes emitted by the UK as a whole in 2017, which is a very pessimistic figure as construction would take more than a year (note: the UK Carbon Budget would not be affected by embodied carbon from imported materials – the Carbon Budget only applies to domestic emissions, therefore should the steel pipe be imported, the contribution would be significantly lower). During each year of operation, the average CO₂ equivalent emissions of 2,298 tonnes (137,896 tonnes divided by an estimated 60 years of operation) represents 0.0005% of the UK 2017 CO₂ emissions. These numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets and therefore are not significant.</p>
EIA.1.11	With reference to the 'indicative' locations of Works 2A and 2O, explain whether a situation could arise where the final location of these works would result in a likely significant effect beyond that which has been assessed in the ES.	<p>1.1 The Environmental Statement (ES) assessed the impacts of valves in the locations indicated on ES Figure 3.1 (Application Document APP-059) and considered the limits of deviation in each case, to assume a reasonable worst case for the assessment. Therefore, the Applicant can confirm that a reasonable worst case has been assumed and has been assessed in the ES.</p>

ExQ1	Question:	Applicant response to Question:
EIA.1.12	<p>Works 2A to 2O states that the respective areas for valves and associated works are located at indicative points on the respective Works Plans [AS-046], [AS-047] and [AS- 048].</p> <p>i) Clarify whether such indicative locations will be defined.</p> <p>ii) Explain the maximum dimensions that have been assumed for these Works.</p> <p>iii) Clarify if these maximum dimensions are or should be secured in the draft DCO [AS-059].</p>	<p>1.1 In answer to i), the reference to “indicative locations” in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) simply denotes that the valves are shown (i.e. indicated) in the relevant locations on the Works Plans (Additional Submissions AS-046, AS-047 and AS-048). These locations are therefore defined by the application.</p> <p>1.2 In answer to ii), the maximum dimensions of the valve compounds are 5m x 7m x 2m (height) as set out in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and shown on the Works Plans (AS-048). The depth of these works is shown on the typical compound plan and sections (Application Document APP-025) and is secured by the downwards limits of deviation in article 6(1)(d) of the draft DCO (Document Reference 3.1 (3)). These maximum dimensions have been assumed for assessment purposes.</p> <p>1.3 In answer to iii), the Applicant considers that these maximum dimensions are sufficiently clear from the description of the works in Schedule 1 of the draft DCO and shown on the Works Plans. Because the dimensions are stipulated in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and shown on the Works Plans, they are therefore secured through the definition of “authorised development”. To exceed these maximum dimensions would not be authorised. The indicative height and depth of the valve compounds are also shown on the indicative layout plans (Application Document APP-025) which are secured by requirement 4 of the draft DCO.</p>
EIA.1.13	<p>Works 3A to 3C states that the respective above-ground installation and pipework, valves and vessels at the existing compounds are located at indicative points on the respective Works Plans</p>	<p>1.1 In answer to i), the reference to “indicative locations” in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) simply denotes that the above ground installations are shown (i.e. indicated) in the relevant locations on the Works Plans (Additional Submissions AS-046, AS-047 and AS-048). These locations are therefore defined by the application.</p> <p>1.2 In answer to ii), the maximum dimensions assumed for assessment purposes are as follows:</p>

ExQ1	Question:	Applicant response to Question:
	<p>[AS-046], [AS-047] and [AS-048]. Chapter 3 of the ES [APP-043] indicates that permanent lighting will be required at Work 3A; however, there is no mention of this in the draft DCO [AS-059].</p> <p>i) Clarify whether such indicative locations will be defined.</p> <p>ii) Explain the maximum dimensions that have been assumed for these Works.</p> <p>iii) Clarify if these maximum dimensions are or should be secured in the draft DCO [AS-059].</p> <p>iv) Confirm whether permanent lighting would be required and if so, make an additional Requirement for it.</p>	<ul style="list-style-type: none"> Work No. 3A (Boorley Green): 25m x 30m x 3m as set out in Schedule 1 of the draft DCO and shown on Sheet No. 2 of the Works Plans; and Works Nos. 3B (Alton) and 3C (West London Terminal) are as shown on Sheet Nos. 23 and 123 of the Works Plans and are wholly located within land which is currently owned by the Applicant. <p>1.3 In answer to iii), the Applicant considers that the maximum dimensions of these Works are sufficiently clear. As regards Work No. 3A, the dimensions are clearly stated in Schedule 1 of the draft DCO and are shown on Sheet No. 2 of the Works Plans (AS-048). To exceed these dimensions would not be authorised. As regards Works Nos. 3B and 3C, these works are shown on Sheet Nos. 23 and 123 of the Works Plans (AS-048) and are wholly located within land which is currently owned by the Applicant. Those Works would not be authorised outside of the land shown on Sheet Nos. 23 and 123 of the Works Plans (AS-048).</p> <p>1.4 In answer to iv), as regards permanent lighting:</p> <ul style="list-style-type: none"> Work No. 3A: No permanent lighting is now proposed to be installed at this site and therefore the draft DCO is correct and Chapter 3 of the ES (Application Document APP-043) is a worst case assessment. Work No. 3B: This facility currently has permanent lighting, which is likely to be modified for the works but would not result in any appreciable change from outside the fence line. Work No. 3C: This facility currently has permanent lighting, which is likely to be modified for the works but would not result in any appreciable change from outside the fence line.

ExQ1	Question:	Applicant response to Question:
EIA.1.14	<p>Works 4A to 4AE and 5A to 5T states that the respective areas for temporary compounds are located at indicative points on the respective Works Plans [AS-046], [AS-047] and [AS-048].</p> <p>i) Clarify whether such indicative locations will be defined.</p> <p>ii) Explain the maximum dimensions that have been assumed of these works.</p> <p>iii) Clarify if these maximum dimensions are or should be secured in the draft DCO [AS-059].</p>	<p>1.1 In answer to i), the reference to “indicative locations” in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) simply denotes that the construction compounds are shown (i.e. indicated) in the relevant locations on the Works Plans (Additional Submissions AS-046, AS-047 and AS-048). These locations are therefore defined by the application.</p> <p>1.2 In answer to ii), the maximum dimensions of the temporary compounds are those stated in Schedule 1 of the draft DCO, Works Nos. 4A to 4AE and 5A to 5T, and shown on the Works Plans (AS-046, AS-047 and AS-048). These maximum dimensions have been assumed for assessment purposes. The indicative layout of these temporary compounds is shown on the indicative layout drawings (Application Document APP-025) and stipulates the maximum heights within these compounds (single storey offices, lighting with a maximum height of 4m, fencing with a maximum height of 3m and pipe storage with a maximum height of 2m) there is a requirement to construct these compounds in general accordance with those drawings (Requirement 4 of the draft DCO).</p> <p>1.3 In answer to iii), the Applicant considers that these maximum dimensions are sufficiently clear from the description of the works in Schedule 1 of the draft DCO and shown on the Works Plans. The Applicant has used the word “approximately” to describe areas in Schedule 1 of the draft DCO, since these areas do not correspond easily to the length x width approach to describing areas as they are not exactly rectangular. However, because these descriptions are supplemented by appropriate references to the areas shown on the Works Plans, and since development consent would not apply to land outside those areas, it is sufficiently clear in the Applicant’s view that these dimensions denote the maximum extent of the temporary compounds. Because the dimensions are stipulated in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and shown on the Works Plans, they are therefore secured through the definition of “authorised development”. To exceed these maximum dimensions would not be authorised.</p>

ExQ1	Question:	Applicant response to Question:
EIA.1.15	<p>Works 6A to 6C and 7A to 7C states that the respective areas for the temporary logistics and construction materials storage hubs are located at indicative points on the respective Works Plans [AS-046], [AS-047], and [AS-048].</p> <p>i) Clarify whether such indicative locations will be defined.</p> <p>ii) Explain the maximum dimensions that have been assumed of these works.</p> <p>iii) Clarify if these maximum dimensions are or should be secured in the draft DCO [AS-059].</p> <p>iv) Detail how long the proposed hubs would be in place for and how their removal would be secured by the draft DCO.</p>	<p>1.1 In answer to i), the reference to “indicative locations” in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) simply denotes that the temporary logistics and construction materials storage hubs are shown (i.e. indicated) in the relevant locations on the Works Plans (Additional Submissions AS-046, AS-047 and AS-048). These locations are therefore defined by the application.</p> <p>1.2 In answer to ii), Works Nos. 6A to 6C and 7A to 7C in Schedule 1 of the draft DCO specify dimensions for Work No. 6A of 135m x 97m; for Work No. 6B of 450m x 150m; for Work No. 6C of 560m x 160m; for Work No. 7A of 170m x 150m; for Work No. 7B of 275m x 175m; and for Work No. 7C of 140m x 90m. These reflect the maximum dimensions for the temporary logistics and construction materials storage hubs which were assumed for assessment purposes. The indicative layout of these temporary hubs is shown on the indicative layout drawings (Application Document APP-025) and stipulates the maximum heights within these hubs (single storey offices, lighting with a maximum height of 4m, fencing with a maximum height of 3m and pipe storage with a maximum height of 2m) there is a requirement to construct these hubs in general accordance with those drawings (Requirement 4 of the draft DCO).</p> <p>1.3 In answer to iii), the Applicant considers that these maximum dimensions are sufficiently clear from the description of the works in Schedule 1 of the draft DCO and shown on the Works Plans. The Applicant has used the word “approximately” to describe areas in Schedule 1 of the draft DCO, since these areas do not correspond easily to the length x width approach to describing areas as they are not exactly rectangular. However, because these descriptions are supplemented by appropriate references to the areas shown on the Works Plans, and since development consent would not apply to land outside those areas, it is sufficiently clear in the Applicant’s view that these dimensions denote the maximum extent of the temporary logistics and construction materials storage hubs. Because the dimensions are stipulated in Schedule 1 of the draft DCO (Document Reference 3.1 (3)) and shown on the Works Plans, they are therefore secured through the definition of “authorised development”. To exceed these maximum dimensions would not be authorised.</p>

ExQ1	Question:	Applicant response to Question:
		<p>1.4 In answer to iv), the applicant anticipates that installation of the replacement pipeline would take two years to complete and these temporary logistics hubs would be required throughout that time. Article 29 (temporary use of land for carrying out the authorised development) of the draft DCO defines the process for the removal of these hubs and for the restoration of the land to be secured to the reasonable satisfaction of the owners of the land. Land can only be temporarily possessed until a year after the work(s) listed in Schedule 7 of the draft DCO for the plots in question has been completed. In the event that access to land to construct any of these hubs is secured by private agreement with the owners of the land, the voluntary lease or land deed would impose on the Applicant analogous obligations to those set out in Article 29 of the draft DCO (Document Reference 3.1 (3)). Article 29 of the draft DCO is supplemented by commitment G94 in the Code of Construction Practice (CoCP) (Document Reference 6.4 Appendix 6.1 (2)), which provides for land used temporarily to be reinstated to an appropriate condition relevant to its previous use. The CoCP is secured by Requirement 5 of the draft DCO.</p>
EIA.1.16	<p>Clarify that Works 8A to 8CY, 9A to 9AV, 10A to 10J and 11A to 11E state that the respective areas for permanent construction accesses are all defined by 'indicative' locations shown on the Works Plans [AS-046], [AS-047] and [AS-048].</p> <p>Clarify whether such indicative locations are contained within the Order Limits.</p>	<p>1.1 First, it should be noted that Works Nos. 8A to 8CY and 9A to 9AV comprise <i>temporary</i> construction accesses as opposed to <i>permanent</i> construction accesses, as set out in the description of those works in Schedule 1 of the draft DCO (Document Reference 3.1 (3)). Works Nos. 10A to 10J and 11A to 11E relate to permanent accesses which are required for the future maintenance of the authorised development.</p> <p>1.2 The indicative locations which are described in the draft DCO and shown on the Works Plans (AS-046, AS-047 and AS-048) simply reflect the locations at which these accesses would be constructed. The Applicant is not seeking powers to construct these accesses anywhere other than the indicative locations described in the draft DCO and shown on the Works Plans.</p> <p>1.3 The Applicant can confirm that these temporary and permanent accesses are all located within the Order limits.</p>



2 References

BEIS Carbon Factors (2018) downloaded 28/02/2019 from Gov.uk, Greenhouse gas reporting: conversion factors 2018 - full set:
<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2018>

Department for Business, Energy and Industrial Strategy (2019) 2018 UK Provisional Greenhouse Gas Emissions
<https://www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2018>

The CCC's July 2019 Progress Report to Parliament can be found at: <https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/>