

Southampton to London Pipeline Project

Volume 6

Environmental Statement (Volume B)
Chapter 6: Overview of Assessment Process
Application Document: 6.2

Planning Inspectorate Reference Number: EN070005
APFP Regulation No. 5(2)(a)
Revision No. 1.0
May 2019



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Contents

6	Overview of Assessment Process	1
6.1	General Approach	1
6.2	Geographical and Temporal Scope.....	2
6.3	Technical Scoping of the EIA	3
6.4	Assessment of Effects and Determination of Significance.....	3
6.5	Mitigation	7
6.6	Residual Effects (with Mitigation)	7
6.7	Monitoring.....	7
6.8	References	7



6 Overview of Assessment Process

6.1 General Approach

6.1.1 This chapter describes the methodology which has been used to assess the potential significance of effects on the natural, human and built environment as a result of the project. The environmental impact assessment (EIA) process for the project has been undertaken in accordance with The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) and various advice notes issued by the Planning Inspectorate.

6.1.2 EIA is a systematic process which is based on the following steps:

- data collection and review to draw together readily available information about the study area, the project and likely environmental effects;
- optional screening to determine whether an EIA is required under the regulations;
- optional scoping to identify the issues to be addressed and how they are to be assessed;
- baseline data collection and specially commissioned surveys to characterise the existing baseline conditions;
- non-statutory and statutory consultation to request data, inform relevant parties about the project, and seek their feedback;
- identify and assess the magnitude of impacts of the project on identified receptors and evaluate the significance of effects;
- develop measures to mitigate the likely significant effects as well as other measures proposed to reduce or avoid effects that are not significant in relation to the EIA Regulations;
- assess the significance of the residual effects of the mitigated project and conclude whether there are likely significant effects for the purposes of the EIA Regulations, and
- present the assessment in the Environmental Statement (ES).

6.1.3 In general, the EIA follows a receptor-based assessment approach. Receptors are those aspects of the environment which are sensitive to change as a result of sources such as dust, noise and construction activities. The receptors to be considered in the EIA are listed in the EIA Regulations at Regulation 5(2) and Schedule 4 paragraph 4 which is provided in Appendix 1.3 to this ES. The receptors considered in this EIA are listed below and form the chapter headings from 7 to 13 in the ES.

- Biodiversity;
- Water;
- Historic Environment;
- Landscape and Visual;
- Soils and Geology;



- Land Use; and
- People and Communities.

- 6.1.4 The ES also considers the significant effects that may arise from the vulnerability of the project to major accidents or disasters that are relevant; this is addressed in Chapter 14 Major Accidents.
- 6.1.5 Technical notes have been appended to the ES to provide information on potential sources of impacts from the project on environmental receptors. These include air quality, noise and vibration, traffic and transport and human health.

6.2 Geographical and Temporal Scope

Geographical Scope

- 6.2.1 The Order Limits encompass the land required permanently and temporarily to build and operate the project. The Order Limits include the working width to install the pipeline, construction compounds, laydown areas, road access points, land required for permanent above and below ground installations, and an easement 3m extending either side of the pipeline.
- 6.2.2 The Order Limits include the Limits of Deviation, which represent the area within the Order Limits within which the pipeline could be installed. The EIA is based on the assumption that the pipeline could lie anywhere with the Limits of Deviation. This allows for minor deviations in the pipeline route without triggering the need to revise the EIA.
- 6.2.3 The study area for the EIA is based on the distance over which an impact is likely to occur. The study area is defined in each of the topic chapters and varies between topics. It may also vary within a topic chapter between the construction and operational phases. For example, direct physical impacts would only occur within the construction footprint; impacts on water quality at crossings would extend further downstream than upstream; the visual impact of the construction works may occur over a long distance; while the visual impact of the above ground permanent works may be constrained to a short distance around low lying features.

Temporal Scope

- 6.2.4 Works to install and commission the pipeline are expected to start from grant of development consent and be completed by early 2023. Certain advance works may take place prior to grant of development consent where consented under alternative regimes, for example, the Town and Country Planning Act 1990.
- 6.2.5 The project is based on a 60 year design life. The EIA does not cover the decommissioning phase of the project, as explained in Chapter 3 Project Description.
- 6.2.6 The EIA considers separately the effects that are expected to arise during the construction and operation phases and compares them with the current and future baseline. The general approach is summarised below and any variations from this are discussed in the relevant technical chapters.



- Baseline: the baseline is the reference level of the environmental conditions without implementation of the project, against which the effects of the project are assessed. The current baseline is 2018, when many of the environmental surveys were undertaken. For certain topics, the future baseline has been considered where on-going environmental change is likely to lead to different conditions compared with the current situation, in order to assess the effects of the project against a future no-project scenario;
- Construction Phase (including commissioning): 2021 to 2023; and
- Commencement of Operation: 2023.

6.2.7 The environmental assessment uses defined temporal scales to characterise the duration of potential effects. Short term is used in some chapters to reflect the transient nature of the construction works. For the purposes of assessment, short term is assumed to be less than six months and includes mobilisation and reinstatement. In some chapters, different temporal scales have been applied and these are explained where relevant.

6.2.8 The temporal nature of effects could be different to the phase in which the effects occur. For example, effects as a result of vegetation clearance during construction may be felt for a number of years after construction has been completed, before any replanted habitats have matured. For the purposes of this ES, the effects are described under the phase within which the impact arises, i.e. construction in relation to any vegetation loss.

6.3 Technical Scoping of the EIA

6.3.1 The proposed scope of the EIA was set out in the Scoping Report (Esso, 2018) submitted to the Planning Inspectorate on 26 July 2018, and has been subsequently updated to respond to the Scoping Opinion issued by the Planning Inspectorate on behalf of the Secretary of State on 5 September 2018. An explanation of how the scope of the EIA has been modified to take account of the Scoping Opinion, consultation responses and engagement with environmental consultees is provided in ES Chapter 5 Consultation and Scoping, and detailed further in Appendix 5.1.

6.4 Assessment of Effects and Determination of Significance

Identification and Assessment of Effects

6.4.1 Regulation 5(2) of the EIA Regulations state that '*the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on: (a) population and human health, (b) biodiversity, (c) land, soil, water, air and climate, (d) material assets, cultural heritage and the landscape; and e) the interaction between the factors referred to in sub-paragraphs (a) to (d).*'

6.4.2 Schedule 4 paragraph 5 of the EIA Regulations (provided in Appendix 1.3 to the ES) requires a description of the likely significant effects of the development on the environment resulting from, *inter alia*:



- *‘the construction and existence of the development including, where relevant, demolition works;*
- *the use of natural resources, in particular, land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;*
- *the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;*
- *the risks to human health, cultural heritage or the environment, for example due to accidents or disasters;*
- *the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;*
- *the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; and*
- *the technologies and the substances used.’*

6.4.3 An assessment of the effects has been undertaken by the technical specialists based on a comprehensive understanding of the construction and operation of the project and the baseline conditions within and adjoining the Order Limits.

Determination of Significance

6.4.4 The assessment of significance was based on a three-step process. The first step assigned sensitivity or inherent value to a receptor. Sensitivity is how easily the receptor is affected by change, and value is a measure of its inherent worth. Table 6.1 provides broad definitions of sensitivity or value. Each topic chapter defines the sensitivity or value of aspects specific to that topic.

6.4.5 The second step of the assessment determined the likely magnitude of the potential impact. This is the scale of the change caused to the baseline conditions. The assessment of magnitude takes into consideration all embedded design measures and good practice measures. These can be found within the Register of Environmental Actions and Commitments (REAC) in Chapter 16.



Table 6.1: Sensitivity and Value Criteria

Value/Sensitivity	General Criteria
High	Of value, importance or rarity on an international or national scale, and with very limited potential for substitution; and/or Very sensitive to change, or has little capacity to accommodate a change
Medium	Of value, importance or rarity on a regional scale, and with limited potential for substitution; and/or Moderate sensitivity to change, or moderate capacity to accommodate a change.
Low	Of value, importance or rarity on a local scale; and/or Not particularly sensitive to change, or has considerable capacity to accommodate a change.
Negligible	Of value, importance or rarity on a very local scale; and/or Not sensitive to change, or has very considerable capacity to accommodate a change.

6.4.6 Table 6.2 presents generalised magnitude criteria. These criteria form the basis for the individual topic magnitude definitions which are tailored to the topic area.

Table 6.2: Magnitude Criteria

Magnitude	General Criteria
Large	Adverse: Loss of resource or quality and integrity of resource; severe damage to key characteristics, features or elements; or Beneficial: Large scale or major improvement of resources quality; extensive restoration or enhancement; major improvement of attribute quality.
Medium	Adverse: Loss of resource, but not adversely affecting its integrity; partial loss of or damage to key characteristics, features or elements; or Beneficial: Benefit to, or addition of, key characteristics, features or elements; improvements of attribute quality.
Small	Adverse: Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one or more key characteristic, feature or element; or Beneficial: Minor benefit to, or addition of, one or more key characteristic, feature or element; some beneficial effect on attribute or a reduced risk of negative effect occurring.
Negligible	Adverse: Very minor loss or detrimental alteration to one or more characteristic, feature or element; or Beneficial: Very minor benefit to, or positive addition of, one or more characteristic, feature or element.

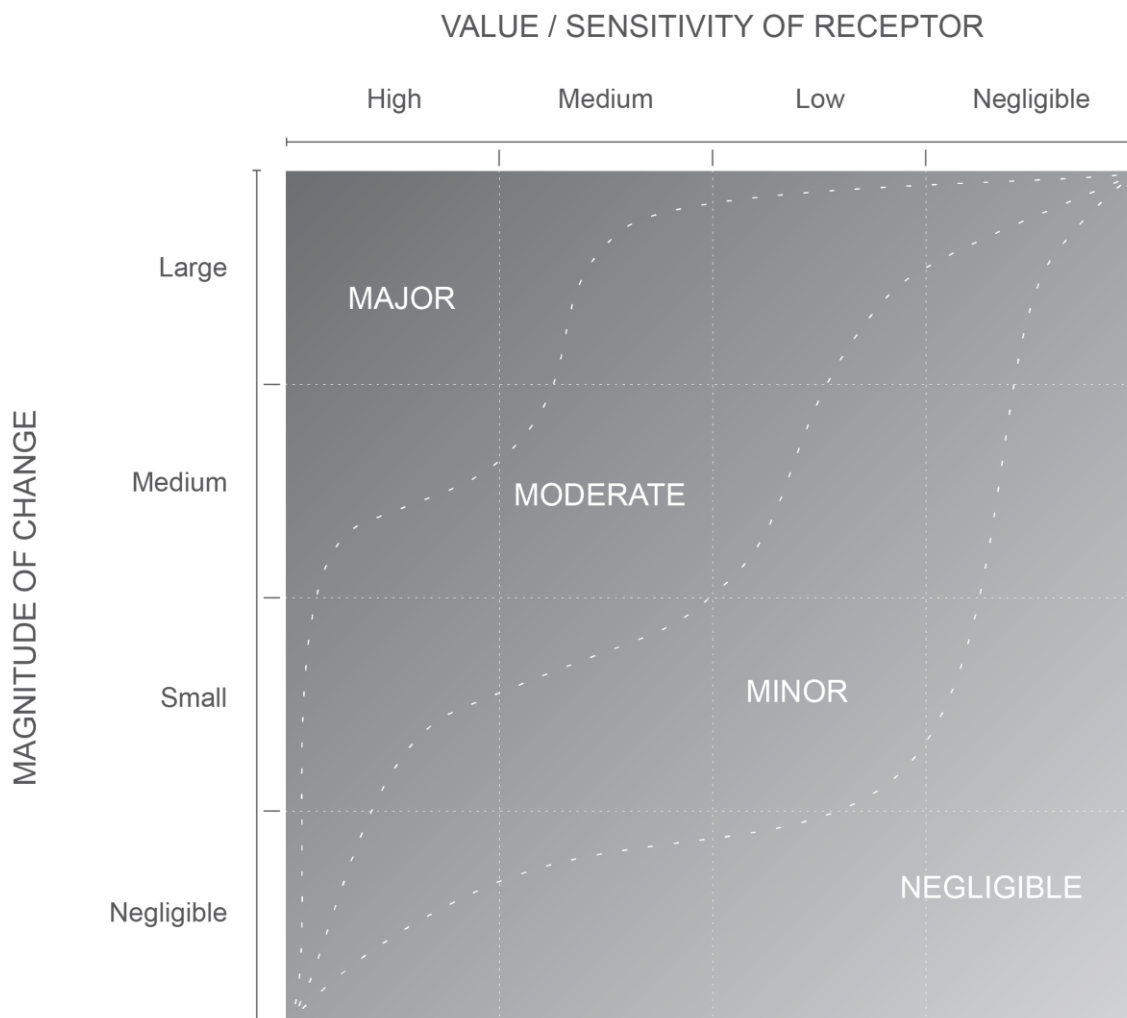
6.4.7 As the third step in the process, the significance of an effect on a receptor was considered in relation to the sensitivity or value of the receptor and the magnitude of the potential impact. A highly sensitive receptor subject to a large magnitude of change would suffer a major effect. A low sensitivity receptor with a small magnitude of change would suffer a minor effect.

6.4.8 The matrix shown in Illustration 6.1 has been used as the basis for assigning significance to an effect. It uses merging bands to reflect the role of professional judgement when allocating significance. This is of particular relevance where the assessment is based on a qualitative approach and the significance of effect is a matter of judgement rather than a quantified outcome.



- 6.4.9 The influence of impact duration on the overall significance of effect is considered indirectly as part of the determination of magnitude and sensitivity to change. Topic chapters describe in full the assignment of significance.
- 6.4.10 Under the EIA Regulations, the significant effects of the project on the environment must be reported in the ES. A significant effect in relation to the EIA Regulations is taken to mean a moderate or higher adverse or beneficial significance. Effects of minor or negligible significance are not considered to be significant effects on the environment but are used to acknowledge that there would be some differences from the baseline conditions.

Illustration 6.1: Significance Matrix



Difficulties Encountered

- 6.4.11 As required under the EIA Regulations, each of the technical chapters includes, where appropriate, commentary on any difficulties encountered while undertaking the assessment and the implications for the validity of the results.



6.5 Mitigation

- 6.5.1 After initial consideration of the effects of the project and their potential significance, consideration was given as to how those effects could be avoided, reduced or remedied. This is referred to as mitigation.
- 6.5.2 Each topic chapter, where relevant, details the environmental mitigation measures that are required to reduce the potential significant adverse effects of the project. Each mitigation measure has been given a unique reference code to help track, manage and monitor the mitigation actions going forward. The mitigation measures are itemised in the topic chapters and brought together in the REAC. See Chapter 16 Environmental Management and Mitigation for further details.

6.6 Residual Effects (with Mitigation)

- 6.6.1 Residual effects are those that are predicted to remain after the mitigation measures described in the ES have been implemented. These are described at the end of each topic chapter and are also documented in Chapter 17 Summary of Residual Effects.

6.7 Monitoring

- 6.7.1 The 2017 EIA Regulations introduced a requirement for monitoring where likely significant residual effects have been identified. The monitoring requirements are detailed within ES topic chapters where required, with clear and proportionate objectives. This is accompanied with a timescale for implementation and identification of the party who would be responsible for the monitoring, together with an outline of the remedial actions to be undertaken should results be adverse.

6.8 References

Esso (2018). Southampton to London Pipeline Project: Scoping Report (Volume 1). Planning Inspectorate Reference Number EN070005. July 2018.