

Lower Thames Crossing
6.3 Environmental Statement
Appendices
Appendix 1.3 Assessment of
proposed gas pipeline works
for the purposes of section 20
of the Planning Act 2008

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1 Introduction

1.1 Purpose of this document

1.1.1 This document provides an assessment of the gas pipeline works required as part of the A122 Lower Thames Crossing (the Project) for the purposes of determining whether section 20 of the Planning Act 2008 is engaged.

1.1.2 Section 20 of the Planning Act 2008 sets out the following conditions for the construction of a gas transporter pipeline to be a Nationally Significant Infrastructure Project (NSIP):

(1) The construction of a pipeline by a gas transporter is within section 14(1)(f) only if (when constructed) each of the conditions in subsections (2) to (5) is expected to be met in relation to the pipeline.

(2) The pipeline must be wholly or partly in England.

(3) Either –

(a) the pipeline must be more than 800 millimetres in diameter and more than 40 kilometres in length, or

(b) the construction of the pipeline must be likely to have a significant effect on the environment.

(4) The pipeline must have a design operating pressure of more than 7 bar gauge.

(5) The pipeline must convey gas for supply (directly or indirectly) to at least 50,000 customers, or potential customers, of one or more gas suppliers.

1.1.3 The gas pipeline works required by the Project, and an assessment of them against the criteria of section 20 of the Planning Act 2008 for section 14(1)(f) designation as NSIPs, are set out in Table 1.1.

Table 1.1 Gas pipeline works required by the Project

Schedule 1 Work No.	Pipeline Operator and Associated Pipeline Name	Section 20(2) Assessment	Section 20(3)(a) Assessment	Section 20(3)(b) Assessment	Section 20(4) Assessment	Section 20(5) Assessment	Section 14(1)(f) NSIP designation?
G1a & G1b	Southern Gas Network's Isle of Grain to St Mary's Cray Pipeline	✓	x	✓	x	✓	No
G2	National Grid Gas' Feeder 5 Phase 1	✓	x	✓	✓	✓	Yes
G3	National Grid Gas' Feeder 18	✓	x	✓	✓	✓	Yes
G4	National Grid Gas' Feeder 5 Phase 2	✓	x	✓	✓	✓	Yes
G5	Cadent's Inlet to Chadwell St Mary	✓	x	x	✓	✓	No
G6	Cadent's Baker Street to Canvey Pipeline	✓	x	x	✓	✓	No
G7	Cadent's Horndon to Baker Street Pipeline	✓	x	x	✓	✓	No
G8	Barking Power Limited's Ex-Barking Power Station Pipeline	✓	x	x	✓	x	No
G9	Barking Power Limited's Ex-Barking Power Station Pipeline	✓	x	x	✓	x	No

Schedule 1 Work No.	Pipeline Operator and Associated Pipeline Name	Section 20(2) Assessment	Section 20(3)(a) Assessment	Section 20(3)(b) Assessment	Section 20(4) Assessment	Section 20(5) Assessment	Section 14(1)(f) NSIP designation?
G10	Cadent's Horndon to Abridge Pipeline	✓	x	x	✓	✓	No
TFGP1	Thurrock Flexible Generation Plant	✓	x	x	✓	x	No
Part of MU16	SGN MP Pipeline - Valley Drive	✓	x	x	x	x	No
Part of MU23	SGN LP Pipeline - A226	✓	x	x	x	x	No
Part of MU35	Cadent LP Pipelines - Muckingford Road (East and West)	✓	x	x	x	x	No
Part of MU44 & MU47	Cadent MP Pipeline - A1013 Stanford Road	✓	x	x	x	x	No
Part of MU51	Cadent MP Pipeline - Baker Street	✓	x	x	x	x	No
Part of MU60	Cadent MP Pipeline - High Road	✓	x	x	x	x	No
Part of MU61	Cadent MP Pipeline - Mardyke	✓	x	x	x	x	No
Part of MU64	Cadent IP Pipeline - East of North Road	✓	x	x	x	x	No
Part of MU64	Cadent MP Pipeline - East of North Road (1 of 3)	✓	x	x	x	x	No

Schedule 1 Work No.	Pipeline Operator and Associated Pipeline Name	Section 20(2) Assessment	Section 20(3)(a) Assessment	Section 20(3)(b) Assessment	Section 20(4) Assessment	Section 20(5) Assessment	Section 14(1)(f) NSIP designation?
Part of MU64	Cadent MP Pipeline - East of North Road (2 of 3)	✓	x	x	x	x	No
Part of MU64	Cadent MP Pipeline - East of North Road (3 of 3)	✓	x	x	x	x	No
Part of MU69	Cadent MP Pipeline - North Road	✓	x	x	x	x	No
Part of MU71	Cadent IP Pipeline - West of North Road	✓	x	x	x	x	No
Part of MU71	Cadent MP Pipeline - West of North Road (1 of 3)	✓	x	x	x	x	No
Part of MU71	Cadent MP Pipeline - West of North Road (2 of 3)	✓	x	x	x	x	No
Part of MU71	Cadent MP Pipeline - West of North Road (3 of 3)	✓	x	x	x	x	No
Part of MU76	Cadent MP Pipeline - Ockenden Road	✓	x	x	x	x	No
Part of MU83	Cadent MP Pipeline - St Marys Lane	✓	x	x	x	x	No
Part of MU88, MU89, MU90 & MU91	Cadent MP Pipeline - A127	✓	x	x	x	x	No

- 1.1.4 These are set out fully in Schedule 1 of the draft Development Consent Order (Application Document 3.1) and in the Works Plans (Application Document 2.6).
- 1.1.5 Works Nos G1a and G1b have been assessed as likely to have a significant effect on the environment in relation to terrestrial diversity, however the condition in section 20(4), having a design operating pressure of more than 7 bar gauge, is not met, therefore is not considered further within this assessment.
- 1.1.6 Those pipelines that have a design operating pressure greater than 7 bar gauge are herein referred to as the Relevant Gas Pipeline Works.

2 Assessment of likely significant effects

- 2.1.1 This assessment is to determine whether the Relevant Gas Pipeline Works (i.e., those over 7 bar gauge) would have likely significant environmental effects and therefore meet the condition in section 20(3)(b) of the Planning Act 2008 to be considered NSIPs. This information provides the basis of the relevant part of the Explanatory Memorandum (Application Document 3.2) that sets out which parts of the Project are NSIPs or associated development. This has then informed which National Policy Statements must be considered (see the Planning Statement (Application Document 7.2)).
- 2.1.2 Table 2.1 provides a qualitative assessment of the environmental effects, based on the professional judgement of competent Environmental Impact Assessment experts. The review has taken into consideration the effects identified in the topic chapters of the Environmental Statement (Application Document 6.1). No formal independent screening in connection with these works in isolation has been requested on the basis that they are proposed (and therefore assessed) as part of the Project's Environmental Statement.
- 2.1.3 In line with best practice, and the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, the Environmental Statement and the topic chapters therein has assessed the Project as a whole, rather than disaggregating the different elements of the Project (which would run the risk of 'salami slicing' the Relevant Gas Pipeline Works from the other elements of the Project). Accordingly, the assessment below is necessarily based on a hypothetical scenario where the Relevant Gas Pipeline Works are disaggregated from other aspects of the Project for the purposes of making a determination under section 20(3)(b) of the Planning Act 2008.
- 2.1.4 For the purposes of this report, no environmental assessment is required for gas pipeline works that have a design operating pressure of 7 bar gauge or less, on the basis that such gas pipeline works are excluded from being NSIPs under section 20(4) of the Planning Act 2008. These works are nonetheless considered and assessed in the topic chapters of the Environmental Statement (Application Document 6.1).
- 2.1.5 As shown in Table 2.1, significant environmental effects are anticipated for three Relevant Gas Pipeline Works:
- a. Work No. G2 (Feeder 5 Phase 1)
 - b. Work No. G3 (Feeder 18)
 - c. Work No. G4 (Feeder 5 Phase 2)
- 2.1.6 As such, these three Relevant Gas Pipeline Works are 'likely to have a significant effect on the environment' for the purposes of section 20(3)(b) of the Planning Act 2008.
- 2.1.7 No likely significant environmental effects have been identified from the construction of the other remaining Relevant Gas Pipeline Works.
- 2.1.8 Where a pipeline name includes the word 'phase', this does not imply a potentially restrictive sequencing in relation to construction and operation.

Table 2.1 Assessment of potential likely significant environmental effect from the Relevant Gas Pipeline Works

Environmental topic	Schedule 1 Work No.									
	G2	G3	G4	G5	G6	G7	G8	G9	G10	TFGP1
Air quality	x	x	x	x	x	x	x	x	x	x
Cultural heritage	x	x	✓	x	x	x	x	x	x	x
Landscape and visual	x	x	x	x	x	x	x	x	x	x
Terrestrial Biodiversity	✓	✓	x	x	x	x	x	x	x	x
Marine Biodiversity	x	x	x	x	x	x	x	x	x	x
Geology and soils	x	x	x	x	x	x	x	x	x	x
Material assets and waste	x	x	x	x	x	x	x	x	x	x
Noise and vibration	x	x	x	x	x	x	x	x	x	x
Population and human health	x	x	x	x	x	x	x	x	x	x
Road drainage and the water environment	x	x	x	x	x	x	x	x	x	x
Climate	x	x	x	x	x	x	x	x	x	x

2.1.9 Those Relevant Gas Pipeline Works with likely significant environmental effects have further explanatory text regarding the findings in Table 2.2.

Table 2.2 Likely significant environmental effects

Schedule 1 Work No.	Pipeline operator and associated pipeline name	Likely significant environmental effect
Work No. G2	National Grid Gas' Feeder 5 Phase 1	Yes – in relation to terrestrial biodiversity Work No. G2 comprises the installation of a high-pressure pipeline located near Claylane Wood and therefore could result in significant adverse environmental effects as a result of the loss of irreplaceable ancient semi-natural woodland (ASNW). Further information can be found in ES Chapter 8, Paragraph 8.19 and Table 8.30 in the row relating to Claylane Wood ASNW (Application Document 6.1).

Schedule 1 Work No.	Pipeline operator and associated pipeline name	Likely significant environmental effect
Work No. G3	National Grid Gas' Feeder 18	<p>Yes – in relation to terrestrial biodiversity</p> <p>Work No.G3 comprises the installation of a high-pressure pipeline located near Claylane Wood, heading north on the western side of the Project route before passing east under the Project and Thong Lane, connecting to the existing network north of Shorne lfield Road, and could therefore result in significant adverse environmental effects as a result of the loss of irreplaceable ASNW. Further information can be found in ES Chapter 8, Paragraph 8.19 and Table 8.30 in the row relating to Claylane Wood ASNW (Application Document 6.1).</p>
Work No. G4	National Grid Gas' Feeder 5 Phase 2	<p>Yes – in relation to cultural heritage</p> <p>Work No. G4 comprises the installation of a high pressure pipeline connecting north of Claylane Wood and heading north on the western side of the Project route before passing east under the Project and Thong Lane, and then north to the A226 where the pipeline will connect to the existing utilities assets.</p> <p>Section 6.6: Assessment of likely significant effects, of ES Chapter 6: Cultural Heritage (Application Document 6.1) presents the assessment of likely significant effects on cultural heritage receptors resulting from the construction and operation of the Project. Paragraph 6.6.39 provides information on archaeological assets that would only be impacted by utility diversions.</p> <p>Work No. G4 will impact a number of undesignated heritage assets which are identified within the assessment tables in Appendix 6.10. The assessment confirms they are undesignated assets, which means they would experience a moderate adverse effect from construction activities, which would be a significant environmental effect.</p> <p>Further information can be found in ES Chapter 6, paragraphs 6.6.46 to 6.6.48 (Application Document 6.1).</p>
Work No. G5	Cadent's Inlet to Chadwell St Mary	<p>No.</p> <p>Works G5 comprises the installation of a high-pressure gas pipeline situated east of the realigned Brentwood Road.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. This includes cultural heritage archaeological assets 1808 and 259 and in terms of terrestrial ecology, Mucking Heath Local Wildlife Site.</p>
Work No. G6	Cadent's Baker Street to Canvey Pipeline	<p>No</p> <p>Work G6 comprises the installation of a high-pressure gas pipeline commencing at a point situated south of the improved A13 road heading northwest and terminating north of the realigned Stifford Clays Road.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. Although the diversion passes close to the setting of a Scheduled Ancient Monument known as 'Springfield' style enclosure and Iron Age enclosures</p>

Schedule 1 Work No.	Pipeline operator and associated pipeline name	Likely significant environmental effect
		south of Hill House, Baker Street (SM7) the route has been revised to avoid a likely significant environmental effect. Further information can be found in ES Chapter 6, (Application Document 6.1).
Work No. G7	Cadent's Horndon to Baker Street Pipeline	<p>No.</p> <p>Work G7 comprises installation of a high-pressure gas pipeline commencing at a point situated north of Green Lane, crossing the new A122 Lower Thames Crossing and terminating south of the new drainage pond.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. This includes consideration of cultural heritage archaeological assets and terrestrial ecology receptors.</p>
Work No. G8	Barking Power Limited's Ex-Barking Power Station Pipeline	<p>No.</p> <p>Work G8 comprises the diversion of existing gas pipeline commencing at a point north of utilities logistic hub and terminating east of North Road.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. This includes consideration of cultural heritage archaeological assets and terrestrial ecology receptors.</p>
Work No. G9	Barking Power Limited's Ex-Barking Power Station Pipeline	<p>No.</p> <p>Work G9 comprises the diversion of existing gas pipeline commencing at a point east of North Road and terminating west of the new A122 Lower Thames Crossing.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. This includes consideration of cultural heritage archaeological assets and terrestrial ecology receptors.</p>
Work No. G10	Cadent's Horndon to Abridge Pipeline	<p>No.</p> <p>Work G10 comprise the installation of a high-pressure gas pipeline situated south of Folkes Lane Wood and crossing the improved M25 road.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. This includes cultural heritage archaeological assets and terrestrial ecology receptors such as Hobbs Hole Ancient Woodland and Local Wildlife Site.</p>
Work No. TFGP1	Thurrock Flexible Generation Plant	<p>No.</p> <p>Work TFGP1 is a section of gas pipeline which runs across the Ashfieds site and through the edge of Low Street Pit.</p> <p>No likely significant effects are predicted against all the environmental topics listed in Table 2.1. Although the proposed route is close to Low Street Pit it is sufficiently far away to avoid any likely significant effects.</p>

3 Conclusion

- 3.1.1 The requirements of section 20 have been considered for all Works listed in Table 1.1 for the Project, to determine which gas pipeline works should be considered, under section 14(1)(f), as NSIPs in their own right. The assessment determined that, as the Project is wholly in England, all of the pipeline works meet the requirements in subsection (2). None of the proposed gas pipeline works are over 40km in length and therefore subsection (3)(a) is not satisfied; however, subsection (3)(b) is an alternative clause and is met by Work Nos. G1a, G1b, G2, G3 and G4. Of these five works, for the purposes of section 20(4) of the Planning Act 2008, Work Nos. G2, G3 and G4 have a design operating pressure of more than 7 bar gauge. All three of these works will convey gas for the supply (directly or indirectly) to at least 50,000 people, so the requirement in subsection (5) is also met.
- 3.1.2 Table 2.2, as read in conjunction with Table 2.1, considers the potential for likely significant environmental effects (subsection (3b)) in relation to the Relevant Gas Pipeline Works (subsection (4)).
- 3.1.3 Work Nos. G1a and G1b do not have a designed operating pressure of more than 7 bar gauge and so they are not an NSIP under section 20, though they would still have significant environmental effects.
- 3.1.4 By virtue of meeting the tests in sections 20(2), 20(3)(b), 20(4) and 20(5), Work Nos. G2, G3 and G4 are considered to be NSIPs and therefore considered to be within section 14(1)(f) of the Planning Act 2008.

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