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Cambridge Waste Water Treatment Plant Relocation Project
Anglian Water Services Limited

Statement of Common Ground: Cadent Gas

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1	5/10/2023		
2	6/11/2023		Updated following further agreement to Protective Provisions
<u>3</u>	<u>17/01/2024</u>		<u>Updated following agreement of Protective Provisions and actions from ISH3 for submission at Deadline 4.</u>
4	25/01/2024		<u>Updated to following the inclusion of Sustainable Gas to Grid Entry Connection agreement</u>
<u>5</u>	<u>11/04/2024</u>		<u>Updated following further agreement to Protective Provisions</u>

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1 Introduction

1.1 Purpose of this Document

- 1.1.1 This Statement of Common Ground (“SoCG”) is submitted as part of an application by Anlian Water Services Limited (“the Applicant”) for a Development Consent Order (DCO) under the Planning Act 2008 (‘the Application’) for the for the Cambridge Waste Water Treatment Plant Relocation Project (CWWTPR).
- 1.1.2 The Applicant is proposing to build a modern, low carbon waste water treatment for Greater Cambridge on a new site area north of the A14 between Fen Ditton and Horningsea within the Cambridge drainage catchment area, to replace the plant on Cowley Road, hereafter referred to as the existing Cambridge Waste Water Treatment Plant.
- 1.1.3 This SoCG has been prepared by the Applicant and with Cadent Gas. Any reference to ‘the parties’ means the Applicant and Cadent Gas.
- 1.1.4 This SoCG has been prepared to identify matters agreed, matters currently under discussion or not agreed between the Applicant and Cadent Gas.

1.2 Approach to the SoCG

- 1.2.1 This SoCG will evolve as the DCO application progresses through examination. It is structured as follows
 - Section 2 confirms the pre-application consultation and engagement undertaken to date between the Applicant and Cadent Gas;
 - Section 3 identifies the relevant documents on which the agreements recorded in this SoCG were reached;
 - Section 4 provides a summary of matters that have been agreed, are under discussion and not agreed;

Agreed	indicates where the issue has been resolved and is recorded in Green and marked “ Low ”
Under Discussion	indicates where these issues or points will be the subject of on-going discussion whenever possible to resolve or refine the extent of disagreement between the parties and is recorded in Amber and marked “ medium ”
Not Agreed	indicates a final position and is recorded in Red and marked high

- Section 5 includes the signatures of all parties to confirm their agreement that this SoCG is an accurate record of issues and discussions as at the date of this SoCG.

1.3 Status of the SoCG

- 1.3.1 This version of the SoCG represents the position between the Applicant and Cadent Gas as of ~~11 April 2024-17 January 2024~~. The SoCG will continue to be reviewed, discussed and progressed through the Examination stages as well as any actions arising from the Issue Specific Hearings.
- 1.3.2 A Principle Areas of Disagreement document on specific points between SoCG's will be updated and submitted to the Examining Authority (ExA) during the examination to reflect issues that require further discussion to achieve agreement.

2 Consultation and Engagement

- 2.1.1 The Applicant has consulted with Cadent Gas as part of the project to explore and understand the capability of the network in relation to the projects request for injection of Bio-methane into the Cadent network.
- 2.1.2 The Applicant has engaged with Cadent Gas in a series of virtual meetings and via email communication and the submission of a request for the preparation of a Detailed Analysis Study (DAS). This engagement is ongoing.

3 Documents considered in this SoCG

- 3.1.1 In reaching common ground on the matters covered in this SoCG, the parties made reference to the following documents.
 - a) Capacity and Costs Detailed Analysis Study CAD/UKD/DAS/277 – Sustainable Gas to Grid Entry Connection
 - b) Draft DCO and Protective Provisions (App Doc Ref 2.1).

4 Summary and Status of Agreement

4.1 Matters agreed ~~and still in discussion~~

Table 4.1: Details of the summary and status of agreement

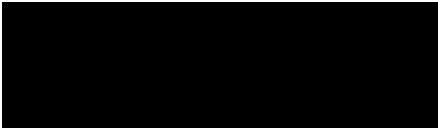
Topic	Details	Status	Record of agreement/comments
Anticipated injection requirement	Injection rate, Connecting pipe lay, connecting pipe size and material, parent pipe size and material	<u>Low</u>	DAS December 2021
Requirements and obligations	Compliant with Gas quality requirements of the Gas safety (management) Regulations 1996 Required FWACV has been met	<u>Low</u>	DAS December 2021
Costs	Summary of total costs involved in any options and for both connection models	<u>Low</u>	DAS December 2021
Point of connection	Point of connection and facility locations	<u>Low</u>	<u>Agreed in principle subject to final detailed design. Ongoing design work</u>
Delivery of connection option	Ongoing work to assess viability of using Utility Infrastructure Provider (UIP).	<u>Low</u>	<u>Agreed in principle subject to final detailed design. Ongoing design work</u>
Pipeline corridor	Pipeline corridor	<u>Low</u>	A basic route to the connection point has been outlined for each option for capacity analysis purposes only. Further work is required to establish the viability of each route. This design work is ongoing and will be established once a connection offer has been accepted.

Protective Provisions	The Protective Provisions required for the protection of Cadent Gas are <u>agreed</u> , discussion which is ongoing .	Low	<u>Protective provision agreed. See Appendix 1.</u> It is anticipated the Protective Provisions will be agreed by Deadline
<u>Option for Gas to Grid provision</u>	The Applicant has discussed with Cadent Gas confirm the potential for a gas to grid connection. This document dated December 2021 is included <u>Appendix 2.</u>	Low	<u>Potential for a gas to grid connection agreed. See Appendix 2.</u>

5 Agreement on this SoCG

This Statement of Common Ground has been jointly agreed by:

Name: Mark Malcolm

Signature: 

Position: Programme Director Major Infrastructure

On behalf of: Anglian Water Services Limited

Date: 11 April 2024

Name: _____

Signature: _____

Position: _____

On behalf of: Cadent Gas

Date: _____

6 Appendix 1

PART 3

FOR THE PROTECTION OF CADENT GAS LIMITED AS GAS UNDERTAKER

Application

19. For the protection of Cadent the following provisions will, unless otherwise agreed in writing between the undertaker and Cadent, have effect.

Interpretation

20. In this Part of this Schedule, unless context requires otherwise, the following terms have the following meanings—

“acceptable credit provider” means a bank or financial institution with a credit rating that is not lower than: “A-” if the rating is assigned by Standard & Poor’s Ratings Group or Fitch Ratings; and “A3” if the rating is assigned by Moody’s Investors Services Inc.;

“acceptable insurance” means a third party liability insurance effected and maintained by the undertaker to a level of not less than £50,000,000 (fifty million pounds) per occurrence or series of occurrences arising out of one event. Such insurance must be maintained for the construction period of the authorised works which constitute specified works and arranged with an internationally recognised insurer of repute operating in the London and worldwide insurance market underwriters whose security/credit rating meets the same requirements as an “acceptable credit provider”, such policy must include (but without limitation)—

- (a) Cadent as a Co-Insured;
- (b) a cross liabilities clause;
- (c) a waiver of subrogation in favour of Cadent; and
- (d) contractors’ pollution liability for third party property damage and third party bodily damage arising from a pollution/contamination event with cover of £10,000,000 (ten million pounds) per event or £20,000,000 (twenty million pounds) in aggregate;

“acceptable security” means either—

- (e) evidence provided to Cadent’s reasonable satisfaction that the undertaker has a tangible net worth of not less than £50,000,000 (Fifty Million Pounds) (or an equivalent financial measure);
- (f) a parent company guarantee from a parent company in favour of Cadent to cover the undertaker’s liability to Cadent to a cap of not less than £50,000,000 (fifty million pounds) per asset per event up to a total liability cap of £50,000,000 (fifty million pounds) (in a form reasonably satisfactory to Cadent and where required by Cadent, accompanied with a legal opinion confirming the due capacity and authorisation of the parent company to enter into and be bound by the terms of such guarantee);
or
- (g) a bank bond or letter of credit from an acceptable credit provider in favour of Cadent Gas Limited to cover the undertaker’s liability to Cadent for an amount of not less than £50,000,000 (fifty million pounds) per asset per event up to a total liability cap of £50,000,000 (fifty million pounds) (in a form reasonably satisfactory to Cadent);

“alternative apparatus” means appropriate alternative apparatus to the satisfaction of Cadent to enable Cadent to fulfil its statutory functions in a manner no less efficient than previously;

“apparatus” means any gas mains, pipes, pressure governors, ventilators, cathodic protections (including transformed rectifiers and any associated groundbeds or cables), cables, marker posts, block valves, hydrogen above ground installations or other apparatus belonging to or maintained by Cadent for the purposes of Cadent’s undertaking together with any replacement apparatus and such other apparatus constructed pursuant to this Order that becomes operational apparatus of Cadent for the purposes of Cadent’s undertaking and includes any structure in which apparatus is or will be lodged or which gives or will give access to apparatus;

“authorised works” has the same meaning as is given to the term “authorised development” in article 2 (interpretation) of this Order and includes any associated development authorised by the Order and for

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the purposes of this Part of this Schedule includes the use and maintenance of the authorised works and construction of any works authorised by this Schedule;

“Cadent” means Cadent Gas Limited (Company Number 10080864) whose registered office is situated at Pilot Way, Ansty, Coventry, England, CV7 9JU and any successor in title or assign and/or any successor as a gas transporter within the meaning of Part 1 of the Gas Act 1986;

“Cadent’s undertaking” means the rights, duties and obligations of Cadent Gas Limited as a public gas transporter within the meaning of Section 7 of the Gas Act 1986 (as amended by the Gas Act 1995);

“deed of consent” means a deed of consent, crossing agreement, deed of variation or new deed of grant agreed between the parties acting reasonably in order to vary and/or replace existing easements, agreements, enactments and other such interests so as to secure land rights and interests as are necessary to carry out, maintain, operate and use the apparatus in a manner consistent with the terms of this Part of this Schedule;

“functions” includes powers and duties;

“ground mitigation scheme” means a scheme approved by Cadent (such approval not to be unreasonably withheld or delayed) setting out the necessary measures (if any) for a ground subsidence event;

“ground monitoring scheme” means a scheme for monitoring ground subsidence which sets out the apparatus which is to be subject to such monitoring, the extent of land to be monitored, the manner in which ground levels are to be monitored, the timescales of any monitoring activities and the extent of ground subsidence which, if exceeded, will require the undertaker to submit for Cadent’s approval a ground mitigation scheme;

“ground subsidence event” means any ground subsidence identified by the monitoring activities set out in the ground monitoring scheme that has exceeded the level described in the ground monitoring scheme as requiring a ground mitigation scheme;

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, across, along or upon such land;

“maintain” and “maintenance” includes the ability and right to do any of the following in relation to any apparatus or alternative apparatus of Cadent including retain, lay, construct, inspect, maintain, protect, use, access, enlarge, replace, renew, remove, decommission or render unusable or remove the apparatus and the definition of “maintain” in article 2 does not apply to this Part of this Schedule;

“parent company” means a parent company of the undertaker acceptable to Cadent and which will have been approved by Cadent acting reasonably;

“plan” or “plans” include all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are reasonably necessary properly and sufficiently to describe and assess the works to be executed;

“rights” includes rights and restrictive covenants, and in relation to decommissioned apparatus the surrender of rights, release of liabilities and transfer of decommissioned apparatus;

“specified works” means any of the authorised works or activities undertaken in association with the authorised works which—

(h) will or may be situated over, or within, 15 metres measured in any direction of any apparatus the removal of which has not been required by the undertaker under paragraph 25(2) of this Part of this Schedule or otherwise;

(i) include any of the activities that are referred to in CD/SP/SSW/22 (Cadent’s policies for safe working in the vicinity of Cadent’s Assets).

On street apparatus

21.—(1) Except for paragraphs 22 (Apparatus of Cadent in closed streets), 25 (Removal of apparatus) in so far as sub-paragraph 21(2) of this Part of this Schedule applies, paragraph 26 (Facilities and rights for alternative apparatus) in so far as sub-paragraph 21(2) of this Part of this Schedule applies, 27 (Retained apparatus: protection of Cadent), 28 (Expenses) and 29 (Indemnity) of this Part of this Schedule which will apply in respect of the exercise of all or any powers under the Order affecting the rights and apparatus of Cadent, the other provisions of this Part of this Schedule do not apply to apparatus in respect of which the relations between the undertaker and Cadent are regulated by the provisions of Part 3 of the 1991 Act.(2) Notwithstanding sub-paragraph (1), paragraphs 25 and 26 of this Part of this Schedule apply to diversions even where carried out under the 1991 Act, in circumstances where any apparatus is diverted from

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an alignment within the existing adopted public highway but not wholly replaced within an existing adopted public highway.

(3) Notwithstanding article 11 or any other powers in the Order generally, section 85 of the 1991 Act in relation to cost sharing and the regulations made thereunder will not apply in relation to any diversion of apparatus of Cadent under the 1991 Act.

Apparatus of Cadent in closed streets

22. Notwithstanding the temporary closure or diversion of any street under the powers of article 12 (temporary closure of streets), Cadent will be at liberty at all times to take all necessary access across any such closed street and/or to execute and do all such works and things in, upon or under any such street as it would have been entitled to do immediately before such temporary closure or diversion in respect of any apparatus which at the time of the closure or diversion was in that street.

Protective works to buildings

23.—(1) The undertaker, in the case of the powers conferred by article 20 (protective works to buildings and structures), must exercise those powers so as not to obstruct or render less convenient the access to any apparatus without the written consent of Cadent and, if by reason of the exercise of those powers any damage to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal or abandonment) or property of Cadent or any interruption in the supply of gas by Cadent, as the case may be, is caused, the undertaker must bear and pay on demand the cost reasonably incurred by Cadent in making good such damage or restoring the supply; and subject to sub-paragraph (2), will—

(a) pay compensation to Cadent for any loss sustained by it; and

(b) indemnify Cadent against all claims, demands, proceedings, costs, damages and expenses which may be made or taken against or recovered from or incurred by Cadent, by reason of any such damage or interruption.

(2) Nothing in this paragraph 23 imposes any liability on the undertaker with respect to any damage or interruption to the extent that such damage or interruption is attributable to the act, neglect or default of Cadent or its contractors or workmen; and Cadent will give to the undertaker reasonable notice of any claim or demand as aforesaid and no settlement or compromise thereof will be made by Cadent, save in respect of any payment required under a statutory compensation scheme, without first consulting the undertaker and giving the undertaker an opportunity to make representations as to the claim or demand.

Acquisition of land

24.—(1) Regardless of any provision in this Order or anything shown on the land plans or contained in the book of reference to the Order, the undertaker may not appropriate or acquire any land interest or appropriate, acquire, extinguish, interfere with or override any easement, other interest or right and/or apparatus of Cadent otherwise than by agreement.

(2) As a condition of agreement between the parties in sub-paragraph (1), prior to the carrying out of any part of the authorised works (or in such other timeframe as may be agreed between Cadent and the undertaker) that are subject to the requirements of this Part of this Schedule that will cause any conflict with or breach the terms of any easement and/or other legal or land interest of Cadent and/or affects the provisions of any enactment or agreement regulating the relations between Cadent and the undertaker in respect of any apparatus laid or erected in land belonging to or secured by the undertaker, the undertaker must as Cadent reasonably requires enter into such deeds of consent and variations upon such terms and conditions as may be agreed between Cadent and the undertaker acting reasonably and which must be no less favourable on the whole to Cadent unless otherwise agreed by Cadent, and it will be the responsibility of the undertaker to procure and/or secure the consent and entering into of such deeds and variations by all other third parties with an interest in the land at that time who are affected by such authorised works.

(3) The undertaker and Cadent agree that where there is any inconsistency or duplication between the provisions set out in this Part of this Schedule relating to the relocation and/or removal of apparatus including but not limited to the payment of costs and expenses relating to such relocation and/or removal of apparatus and the provisions of any existing easement, rights, agreements and licences granted, used, enjoyed or exercised by Cadent and/or other enactments relied upon by Cadent as of right or other use in relation to the apparatus, then the provisions in this Schedule will prevail.

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(4) Any agreement or consent granted by Cadent under paragraph 27 of this Part of this Schedule or any other paragraph of this Part of this Schedule, will not be taken to constitute agreement under sub-paragraph (1).

(5) As a condition of an agreement between the parties in sub-paragraph (1) that involves de-commissioned apparatus being left in situ the undertaker must accept a surrender of any existing easement and/or other interest of Cadent in such decommissioned apparatus and consequently acquire title to such decommissioned apparatus and release Cadent from all liabilities in respect of such de-commissioned apparatus from the date of such surrender.

(6) Where an undertaker acquires land which is subject to any Cadent right or interest (including, without limitation, easements, and agreements relating to rights or other interests) and the provisions of this paragraph 24 do not apply, the undertaker must—

- (a) retain any notice of Cadent’s easement, right or other interest on the title to the relevant land when registering the undertaker’s title to such acquired land; and
- (b) (where no such notice of Cadent’s easement, right or other interest exists in relation to such acquired land or any such notice is registered only on the Land Charges Register) include (with its application to register title to the undertaker’s interest in such acquired land at the Land Registry) a notice of Cadent’s easement, right or other interest in relation to such acquired land.

Removal of apparatus

25.—(1) If, in the exercise of the agreement reached in accordance with paragraph 24 of this Part of this Schedule or in any other authorised manner, the undertaker acquires any interest in any land in which any apparatus is placed, that apparatus must not be decommissioned or removed under this Part of this Schedule and any right of Cadent to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed, is in operation, and the rights and facilities referred to in sub-paragraph (2) have been provided, to the satisfaction of Cadent and in accordance with sub-paragraphs (2) to (5) inclusive.

(2) If, for the purpose of executing any works in, on, under or over any land purchased, held, appropriated or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it must give to Cadent advance written notice of that requirement, together with a plan and section of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order Cadent reasonably needs to move or remove any of its apparatus) the undertaker must afford to Cadent to its satisfaction (taking into account paragraph 26(1) of this Part of this Schedule) the necessary facilities and rights—

- (a) for the construction of alternative apparatus (including appropriate working areas required to reasonably and safely undertake necessary works by Cadent in respect of the apparatus);
- (b) subsequently for the maintenance of that apparatus (including appropriate working areas required to reasonably and safely undertake necessary works by Cadent in respect of the apparatus); and
- (c) to allow access to that apparatus (including appropriate working areas to reasonably and safely undertake necessary works by Cadent in respect of the apparatus).

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of or land secured by the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, Cadent may, on receipt of a written notice to that effect from the undertaker, take such steps as are reasonable in the circumstances in an endeavour to assist the undertaker in obtaining the necessary facilities and rights in the land in which the alternative apparatus is to be constructed, save that this obligation will not extend to the requirement for Cadent to use its compulsory purchase powers to this end unless it (in its absolute discretion) elects to so do.

(4) Any alternative apparatus to be constructed in land of or land secured by the undertaker under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between Cadent and the undertaker.

(5) Cadent must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the prior grant to Cadent of any such facilities and rights as are referred to in sub-paragraph (2) or (3), have been afforded to Cadent to its satisfaction, then proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to decommission or remove any apparatus required by the undertaker to be decommissioned or removed under the provisions of this Part of this Schedule.

Facilities and rights for alternative apparatus

26.—(1) Where, in accordance with the provisions of this Part of this Schedule, the undertaker affords to or secures for Cadent facilities and rights in land for the access to, construction and maintenance of alternative apparatus in substitution for apparatus to be decommissioned or removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the undertaker and Cadent and must be no less favourable on the whole to Cadent than the facilities and rights enjoyed by it in respect of the apparatus to be decommissioned or removed unless otherwise agreed by Cadent.

(2) If the facilities and rights to be afforded by the undertaker and agreed with Cadent under sub-paragraph (1) in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are less favourable on the whole to Cadent than the facilities and rights enjoyed by it in respect of the apparatus to be decommissioned or removed (in Cadent's reasonable opinion) then the terms and conditions to which those facilities and rights are subject in the matter will be referred to arbitration in accordance with paragraph 33 of this Part of this Schedule and the arbitrator will make such provision for the payment of compensation by the undertaker to Cadent as appears to the arbitrator to be reasonable having regard to all the circumstance of the particular case.

Retained apparatus: protection of Cadent

27.—(1) Not less than 56 days before the commencement of any specified works the undertaker must submit to Cadent a plan and, if reasonably required by Cadent, a ground monitoring scheme in respect of those works.

(2) The plan to be submitted to Cadent under sub-paragraph (1) must include a method statement and describe—

- (a) the exact position of the works;
- (b) the level at which these are proposed to be constructed or renewed;
- (c) the manner of their construction or renewal including details of excavation, positioning of plant etc.;
- (d) the position of all apparatus;
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus; and
- (f) any intended maintenance regimes.

(3) The undertaker must not commence any works to which sub-paragraph (1) applies until Cadent has given written approval of the plan so submitted.

(4) Any approval of Cadent required under sub-paragraph (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (5) or (7); and
- (b) must not be unreasonably withheld or delayed.

(5) In relation to any work to which sub-paragraph (1) applies, Cadent may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus.

(6) Works to which this paragraph 27 applies must only be executed in accordance with the plan, submitted under sub-paragraphs (1) and (2) or as relevant sub-paragraph (5), as approved or as amended from time

to time by agreement between the undertaker and Cadent and in accordance with all conditions imposed under sub-paragraph (4)(a), and Cadent will be entitled to watch and inspect the execution of those works.

(7) Where Cadent requires any protective works to be carried out by itself or by the undertaker (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph 27, must be carried out to Cadent's satisfaction prior to the commencement of any authorised works (or any relevant part thereof) for which protective works are required prior to commencement.

(8) If Cadent in accordance with sub-paragraphs (5) or (7) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, sub-paragraphs (1) to (3) and (6) to (8) apply as if the removal of the apparatus had been required by the undertaker under sub-paragraph 25(2) of this Part of this Schedule.

(9) Nothing in this paragraph 27 precludes the undertaker from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph 27 will apply to and in respect of the new plan.

(10) The undertaker will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to Cadent notice as soon as is reasonably practicable and a plan of those works and must comply with—

- (a) the conditions imposed under sub-paragraph (4)(a) insofar as is reasonably practicable in the circumstances; and
- (b) sub-paragraph (11) at all times.

(11) At all times when carrying out any works authorised under the Order the undertaker must comply with Cadent's policies for safe working in proximity to gas apparatus "CD/SP/SSW/22 (Cadent's policies for safe working in the vicinity of Cadent's Assets)" and HSE's "HS(-G)47 Avoiding Danger from underground services".

(12) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the undertaker will implement an appropriate ground mitigation scheme save that Cadent retains the right to carry out any further necessary works for the safeguarding of its apparatus and can recover any such costs in line with paragraph 29 of this Part of this Schedule.

Expenses

28.—(1) Subject to the following provisions of this paragraph 28, the undertaker must pay to Cadent within 28 days of demand all charges, costs and expenses reasonably anticipated or incurred by Cadent in, or in connection with, the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new or alternative apparatus which may be required in consequence of the execution of any authorised works as are referred to in this Part of this Schedule including without limitation—

- (a) any costs reasonably incurred by or compensation properly paid by Cadent in connection with the negotiation or acquisition of rights or the exercise of statutory powers for such apparatus including without limitation all costs (including professional fees) incurred by Cadent as a consequence of Cadent—
 - (i) using its own compulsory purchase powers to acquire any necessary rights under paragraph 25(3); and/or
 - (ii) exercising any compulsory purchase powers in the Order transferred to or benefitting Cadent;
- (b) in connection with the cost of the carrying out of any diversion work or the provision of any alternative apparatus;
- (c) the cutting off of any apparatus from any other apparatus or the making safe of redundant apparatus;
- (d) the approval of plans;
- (e) the carrying out of protective works, plus a capitalised sum to cover the cost of maintaining and renewing permanent protective works;

(f) the survey of any land, apparatus or works, the inspection and monitoring of works or the installation or removal of any temporary works reasonably necessary in consequence of the execution of any such works referred to in this Part of this Schedule; and

(g) any watching brief pursuant to paragraph 27(6) of this Part of this Schedule.

(2) There will be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule and which is not re-used as part of the alternative apparatus, that value being calculated after removal.

(3) If in accordance with the provisions of this Part of this Schedule—

(h) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or

(i) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was situated,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the undertaker or, in default of agreement, is not determined by arbitration in accordance with paragraph 33 of this Part of this Schedule to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph (3) would be payable to Cadent by virtue of sub-paragraph (1) will be reduced by the amount of that excess save where it is not possible or appropriate in the circumstances (including due to statutory or regulatory changes) to obtain the existing type of apparatus at the same capacity and dimensions or place at the existing depth in which case full costs will be borne by the undertaker.

(4) For the purposes of sub-paragraph (3)—

(j) an extension of apparatus to a length greater than the length of existing apparatus will not be treated as a placing of apparatus of greater dimension than those of the existing apparatus; and

(k) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole will be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph (5) would be payable to Cadent in respect of works by virtue of sub-paragraph (1) will, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on Cadent any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

Indemnity

29.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works authorised by this Part of this Schedule (including without limitation relocation, diversion, decommissioning, construction and maintenance of apparatus or alternative apparatus) or in consequence of the construction, use, maintenance or failure of any of the authorised works by or on behalf of the undertaker or in consequence of any act or default of the undertaker (or any person employed or authorised by him) in the course of carrying out such works, including without limitation works carried out by the undertaker under this Part of this Schedule or any subsidence resulting from any of these works, any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of the authorised works) or property of Cadent, or there is any interruption in any service provided, or in the supply of any goods, by Cadent, or Cadent becomes liable to pay any amount to any third party, the undertaker will—

(a) bear and pay on demand the cost reasonably incurred by Cadent in making good such damage or restoring the supply; and

(b) indemnify Cadent for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Cadent, by reason or in consequence of any such damage or interruption or Cadent becoming liable to any third party as aforesaid other than arising from any default of Cadent.

(2) The fact that any act or thing may have been done by Cadent on behalf of the undertaker or in accordance with a plan approved by Cadent or in accordance with any requirement of Cadent or under its supervision including under any watching brief will not (unless sub-paragraph (3) applies) excuse the undertaker from liability under the provisions of sub-paragraph (1) unless Cadent fails to carry out and execute the works properly with due care and attention and in a skilful and workman like manner or in a manner that does not accord with the approved plan.

(3) Nothing in sub-paragraph (1) imposes any liability on the undertaker in respect of—

(e) any damage or interruption to the extent that it is attributable to the neglect or default of Cadent, its officers, servants, contractors or agents; and

(d) any authorised works and/or any other works authorised by this Part of this Schedule carried out by Cadent as an assignee, transferee or lessee of the undertaker with the benefit of the Order pursuant to section 156 of the Planning Act 2008 or article 8 (transfer of benefit of Order) subject to the proviso that once such works become apparatus (“new apparatus”), any authorised works yet to be executed and not falling within this sub-paragraph (3)(b) will be subject to the full terms of this Part of this Schedule including this paragraph 29.

(4) Cadent must give the undertaker reasonable notice of any such third party claim or demand and no settlement or compromise must, unless payment is required in connection with a statutory compensation scheme, be made without first consulting the undertaker and considering the representations.

(5) The undertaker must not commence construction (and must not permit the commencement of such construction) of the authorised works on any land owned by Cadent or in respect of which Cadent has an easement or wayleave for its apparatus or any other interest or to carry out any works within 15 metres in any direction of Cadent’s apparatus until the following conditions are satisfied—

(e) unless and until Cadent is satisfied acting reasonably (but subject to all necessary regulatory constraints) that the undertaker has first provided the acceptable security (and provided evidence that it will maintain such acceptable security for the construction period of the authorised works from the proposed date of commencement of construction of the authorised works) and Cadent has confirmed the same to the undertaker in writing; and

(f) unless and until Cadent is satisfied acting reasonably (but subject to all necessary regulatory constraints) that the undertaker has procured acceptable insurance (and provided evidence to Cadent that it will maintain such acceptable insurance for the construction period of the authorised works from the proposed date of commencement of construction of the authorised works) and Cadent has confirmed the same in writing to the undertaker.

(6) In the event that the undertaker fails to comply with sub-paragraph 29(5) of this Part of this Schedule, nothing in this Part of this Schedule will prevent Cadent from seeking injunctive relief (or any other equitable remedy) in any court of competent jurisdiction.

Enactments and agreements

30. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between Cadent and the undertaker, nothing in this Part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the undertaker and Cadent in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

Co-operation

31—(1) Where in consequence of the proposed construction of any of the authorised works, the undertaker or Cadent requires the removal of apparatus under paragraph 25(2) of this Part of this Schedule or Cadent makes requirements for the protection or alteration of apparatus under paragraph 27 of this Part of this Schedule, the undertaker must use its reasonable endeavours to co-ordinate the execution of the works in the interests of safety and the efficient and economic execution of the authorised development and taking into account the need to ensure the safe and efficient operation of Cadent’s undertaking and Cadent must use its reasonable endeavours to co-operate with the undertaker for that purpose.

(2) For the avoidance of doubt whenever Cadent’s consent, agreement or approval is required in relation to plans, documents or other information submitted by the undertaker or the taking of action by the undertaker, Cadent’s consent must not be unreasonably withheld or delayed.

Access

32. If in consequence of the powers granted under this Order the access to any apparatus (including appropriate working areas required to reasonably and safely undertake necessary works by Cadent in respect of the apparatus) is materially obstructed, the undertaker must provide such alternative rights and means of access to such apparatus as will enable Cadent to maintain or use the apparatus no less effectively than was possible before such obstruction.

Arbitration

33. Save for differences or disputes arising under sub-paragraphs 25(2), 25(4), 26(1), 29(5) and paragraph 27 of this Part of this Schedule any difference or dispute arising between the undertaker and Cadent under this Part of this Schedule must, unless otherwise agreed in writing between the undertaker and Cadent, be determined by arbitration in accordance with article 52 (arbitration) and in settling any difference or dispute, the arbitrator must have regard to the requirements of Cadent for ensuring the safety, economic and efficient operation of Cadent's apparatus.

Notices

34. The plans submitted to Cadent by the undertaker pursuant to sub-paragraph 27(1) must be sent to Cadent Gas Limited Plant Protection by e-mail to plantprotection@cadentgas.com copied by e-mail to landservices@cadentgas.com and sent to the General Counsel Department at Cadent's registered office or such other address as Cadent may from time to time appoint instead for that purpose and notify to the undertaker.

SCHEDULE 15 PROTECTIVE PROVISIONS

PART 3 FOR THE PROTECTION OF CADENT GAS LIMITED AS GAS UNDERTAKER

Application

~~1. For the protection of Cadent the following provisions will, unless otherwise agreed in writing between the undertaker and Cadent, have effect.~~

Interpretation

2. In this Part of this Schedule, unless context requires otherwise, the following terms have the following meanings—

“acceptable credit provider” means a bank or financial institution with a credit rating that is not lower than: “A-” if the rating is assigned by Standard & Poor's Ratings Group or Fitch Ratings; and “A3” if the rating is assigned by Moody's Investors Services Inc.;

“acceptable insurance” means a third party liability insurance effected and maintained by the undertaker to a level of not less than £50,000,000 (fifty million pounds) per occurrence or series of occurrences arising out of one event. Such insurance must be maintained for the construction period of the authorised works which constitute specified works and arranged with an internationally recognised insurer of repute operating in the London and worldwide insurance market underwriters whose security/credit rating meets the same requirements as an “acceptable credit provider”; such policy must include (but without limitation):

- (a) Cadent as a Co-Insured;
- (b) a cross liabilities clause;
- (c) a waiver of subrogation in favour of Cadent; and

(c) contractors' pollution liability for third party property damage and third party bodily damage arising from a pollution/contamination event with cover of £10,000,000.00 (ten million pounds) per event or £20,000,000.00 (twenty million pounds) in aggregate;

"acceptable security" means either:

(a) evidence provided to Cadent's reasonable satisfaction that the Undertaker has a tangible net worth of not less than £50,000,000.00 (Fifty Million Pounds (or an equivalent financial measure);

(b) a parent company guarantee from a parent company in favour of Cadent to cover the undertaker's liability to Cadent to a cap of not less than £50,000,000 (fifty million pounds) per asset per event up to a total liability cap of £50,000,000 (fifty million pounds) (in a form reasonably satisfactory to Cadent and where required by Cadent, accompanied with a legal opinion confirming the due capacity and authorisation of the parent company to enter into and be bound by the terms of such guarantee); or

(c) a bank bond or letter of credit from an acceptable credit provider in favour of Cadent Gas Limited to cover the undertaker's liability to Cadent for an amount of not less than £50,000,000 (fifty million pounds) per asset per event up to a total liability cap of £50,000,000 (fifty million pounds) (in a form reasonably satisfactory to Cadent);

"alternative apparatus" means appropriate alternative apparatus to the satisfaction of Cadent to enable Cadent to fulfil its statutory functions in a manner no less efficient than previously;

"apparatus" means any gas mains, pipes, pressure governors, ventilators, cathodic protections, (including transformed rectifiers and any associated groundbeds or cables), cables, marker posts, block valves, hydrogen above ground installations or other apparatus belonging to or maintained by Cadent for the purposes of Cadent's undertaking together with any replacement apparatus and such other apparatus constructed pursuant to this Order that becomes operational apparatus of Cadent for the purposes of Cadent's undertaking and includes any structure in which apparatus is or will be lodged or which gives or will give access to apparatus;

"authorised works" has the same meaning as is given to the term "authorised development" in article 2 (interpretation) of this Order and includes any associated development authorised by the Order and for the purposes of this Part of this Schedule includes the use and maintenance of the authorised works and construction of any works authorised by this Schedule;

"Cadent" means Cadent Gas Limited (Company Number 10080864) whose registered office is situated at Pilot Way, Ansty, Coventry, England, CV79JU and any successor in title or assign and/or any successor as a gas transporter within the meaning of Part 1 of the Gas Act 1986;

"Cadent's undertaking" means the rights, duties and obligations of Cadent Gas Limited as a public gas transporter within the meaning of Section 7 of the Gas Act 1986 (as amended by the Gas Act 1995);

"deed of consent" means a deed of consent, crossing agreement, deed of variation or new deed of grant agreed between the parties acting reasonably in order to vary and/or replace existing easements, agreement, enactments and other such interests so as to secure land rights and interests as are necessary to carry out, maintain, operate and use the apparatus in a manner consistent with the terms of this Part of this Schedule;

"functions" includes powers and duties;

"ground mitigation scheme" means a scheme approved by Cadent (such approval not to be unreasonably withheld or delayed) setting out the necessary measures (if any) for a ground subsidence event;

"ground monitoring scheme" means a scheme for monitoring ground subsidence which sets out the apparatus which is to be subject to such monitoring, the extent of land to be monitored, the manner in which ground levels are to be monitored, the timescales of any monitoring activities and the extent of ground subsidence which, if exceeded, will require the undertaker to submit for Cadent's approval a ground mitigation scheme;

"ground subsidence event" means any ground subsidence identified by the monitoring activities set out in the ground monitoring scheme that has exceeded the level described in the ground monitoring scheme as requiring a ground mitigation scheme;

"in" in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, across, along or upon such land;

"maintain" and "maintenance" includes the ability and right to do any of the following in relation to any apparatus or alternative apparatus of Cadent including retain, lay, construct, inspect, maintain, protect,

use, access, enlarge, replace, renew, remove, decommission or render unusable or remove the apparatus and the definition of “maintain” in article 2 does not apply to this Part of this Schedule;

“plan” or “plans” include all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are reasonably necessary properly and sufficiently to describe and assess the works to be executed;

“parent company” means a parent company of the undertaker acceptable to Cadent and which will have been approved by Cadent acting reasonably;

“rights” includes rights and restrictive covenants, and in relation to decommissioned apparatus the surrender of rights, release of liabilities and transfer of decommissioned apparatus;

“specified works” means any of the authorised works or activities undertaken in association with the authorised works which—

(a) will or may be situated over, or within, 15 metres measured in any direction of any apparatus the removal of which has not been required by the undertaker under paragraph 6(2) or otherwise;

include any of the activities that are referred to in CD/SP/SSW/22 (Cadent's policies for safe working in the vicinity of Cadent's Assets); and

On-street apparatus

3.—(1) Except for paragraphs 4 (Apparatus of Cadent in closed streets), 6 (Removal of Apparatus) in so far as sub-paragraph 3(2) applies, paragraph 7 (Facilities and Rights for Alternative Apparatus) in so far as sub-paragraph 3(2) below applies, 8 (retained apparatus: protection), 9 (expenses) and 10 (indemnity) of this Part of this Schedule which will apply in respect of the exercise of all or any powers under the Order affecting the rights and apparatus of Cadent, the other provisions of this Part of this Schedule do not apply to apparatus in respect of which the relations between the undertaker and Cadent are regulated by the provisions of Part 3 of the 1991 Act.

(2) Notwithstanding sub-paragraph (1), paragraphs 6 and 7 of this Part of this Schedule apply to diversions even where carried out under the 1991 Act, in circumstances where any apparatus is diverted from an alignment within the existing adopted public highway but not wholly replaced within an existing adopted public highway.

(3) Notwithstanding article 11 or any other powers in the Order generally, s85 of the 1991 Act in relation to cost sharing and the regulations made thereunder will not apply in relation to any diversion of apparatus of Cadent under the 1991 Act.

Apparatus of Cadent in closed streets

4. Notwithstanding the temporary closure or diversion of any street under the powers of article 12 (temporary closure of streets), Cadent will be at liberty at all times to take all necessary access across any such closed street and/or to execute and do all such works and things in, upon or under any such street as it would have been entitled to do immediately before such temporary closure or diversion in respect of any apparatus which at the time of the closure or diversion was in that street.

Protective works to buildings

5.—(1) The undertaker, in the case of the powers conferred by article 20 (protective works to buildings and structures), must exercise those powers so as not to obstruct or render less convenient the access to any apparatus without the written consent of Cadent and, if by reason of the exercise of those powers any damage to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal or abandonment) or property of Cadent or any interruption in the supply of gas by Cadent, as the case may be, is caused, the undertaker must bear and pay on demand the cost reasonably incurred by Cadent in making good such damage or restoring the supply; and subject to sub-paragraph (2), will—

(a) pay compensation to Cadent for any loss sustained by it; and

(b) indemnify Cadent against all claims, demands, proceedings, costs, damages and expenses which may be made or taken against or recovered from or incurred by Cadent, by reason of any such damage or interruption.

~~(2) Nothing in this paragraph imposes any liability on the undertaker with respect to any damage or interruption to the extent that such damage or interruption is attributable to the act, neglect or default of Cadent or its contractors or workmen; and Cadent will give to the undertaker reasonable notice of any claim or demand as aforesaid and no settlement or compromise thereof will be made by Cadent, save in respect of any payment required under a statutory compensation scheme, without first consulting the undertaker and giving the undertaker an opportunity to make representations as to the claim or demand.~~

Acquisition of land

~~6.—(1) Regardless of any provision in this Order or anything shown on the land plans or contained in the book of reference to the Order, the undertaker may not appropriate or acquire any land interest or appropriate, acquire, extinguish, interfere with or override any easement, other interest or right and/or apparatus of Cadent otherwise than by agreement.~~

~~(2) As a condition of agreement between the parties in sub-paragraph 6(1), prior to the carrying out of any part of the authorised works (or in such other timeframe as may be agreed between Cadent and the undertaker) that are subject to the requirements of this Part of this Schedule that will cause any conflict with or breach the terms of any easement and/or other legal or land interest of Cadent and/or affects the provisions of any enactment or agreement regulating the relations between Cadent and the undertaker in respect of any apparatus laid or erected in land belonging to or secured by the undertaker, the undertaker must as Cadent reasonably requires enter into such deeds of consent and variations upon such terms and conditions as may be agreed between Cadent and the undertaker acting reasonably and which must be no less favourable on the whole to Cadent unless otherwise agreed by Cadent, and it will be the responsibility of the undertaker to procure and/or secure the consent and entering into of such deeds and variations by all other third parties with an interest in the land at that time who are affected by such authorised works.~~

~~(3) The undertaker and Cadent agree that where there is any inconsistency or duplication between the provisions set out in this Part of this Schedule relating to the relocation and/or removal of apparatus (including but not limited to the payment of costs and expenses relating to such relocation and/or removal of apparatus and the provisions of any existing easement, rights, agreements and licences granted, used, enjoyed or exercised by Cadent and/or other enactments relied upon by Cadent as of right or other use in relation to the apparatus, then the provisions in this Schedule will prevail.~~

~~(4) Any agreement or consent granted by Cadent under paragraph 8 or any other paragraph of this Part of this Schedule, will not be taken to constitute agreement under sub-paragraph 6(1).~~

~~(5) As a condition of an agreement between the parties in sub-paragraph 6(1) that involves decommissioned apparatus being left in situ the undertaker must accept a surrender of any existing easement and/or other interest of Cadent in such decommissioned apparatus and consequently acquire title to such decommissioned apparatus and release Cadent from all liabilities in respect of such decommissioned apparatus from the date of such surrender.~~

~~(6) Where an undertaker acquires land which is subject to any Cadent right or interest (including, without limitation, easements and agreements relating to rights or other interests) and the provisions of paragraph 6 do not apply, the undertaker must:~~

~~(a) retain any notice of Cadent's easement, right or other interest on the title to the relevant land when registering the undertaker's title to such acquired land; and~~

~~(b) (where no such notice of Cadent's easement, right or other interest exists in relation to such acquired land or any such notice is registered only on the Land Charges Register) include (with its application to register title to the undertaker's interest in such acquired land at the Land Registry) a notice of Cadent's easement, right or other interest in relation to such acquired land.~~

Removal of apparatus

~~6.—(1) If, in the exercise of the agreement reached in accordance with paragraph 5 or in any other authorised manner, the undertaker acquires any interest in any land in which any apparatus is placed, that~~

apparatus must not be decommissioned or removed under this Part of this Schedule and any right of Cadent to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed, is in operation, and the rights and facilities referred to in subparagraph (2) have been provided, to the satisfaction of Cadent and in accordance with subparagraphs (2) to (5) inclusive.

(2) If, for the purpose of executing any works in, on, under or over any land purchased, held, appropriated or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it must give to Cadent advance written notice of that requirement, together with a plan and section of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order Cadent reasonably needs to move or remove any of its apparatus) the undertaker must afford to Cadent to its satisfaction (taking into account paragraph 7(1) below) the necessary facilities and rights—

- (a) for the construction of alternative apparatus (including appropriate working areas required to reasonably and safely undertake necessary works by Cadent in respect of the apparatus);
- (b) subsequently for the maintenance of that apparatus (including appropriate working areas required to reasonably and safely undertake necessary works by Cadent in respect of the apparatus); and
- (c) to allow access to that apparatus (including appropriate working areas to reasonably and safely undertake necessary works by Cadent in respect of the apparatus).

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of or land secured by the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, Cadent may, on receipt of a written notice to that effect from the undertaker, take such steps as are reasonable in the circumstances in an endeavour to assist the undertaker in obtaining the necessary facilities and rights in the land in which the alternative apparatus is to be constructed save that this obligation will not extend to the requirement for Cadent to use its compulsory purchase powers to this end unless it (in its absolute discretion) elects to so do.

(4) Any alternative apparatus to be constructed in land of or land secured by the undertaker under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between Cadent and the undertaker.

(5) Cadent must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the prior grant to Cadent of any such facilities and rights as are referred to in subparagraph (2) or (3) have been afforded to Cadent to its satisfaction, then proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to decommission or remove any apparatus required by the undertaker to be decommissioned or removed under the provisions of this Part of this Schedule.

Facilities and rights for alternative apparatus

7.—(1) Where, in accordance with the provisions of this Part of this Schedule, the undertaker affords to or secures for Cadent facilities and rights in land for the access to, construction and maintenance of alternative apparatus in substitution for apparatus to be decommissioned or removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the undertaker and Cadent and must be no less favourable on the whole to Cadent than the facilities and rights enjoyed by it in respect of the apparatus to be decommissioned or removed unless otherwise agreed by Cadent.

(2) If the facilities and rights to be afforded by the undertaker and agreed with Cadent under subparagraph (1) in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are less favourable on the whole to Cadent than the facilities and rights enjoyed by it in respect of the apparatus to be decommissioned or removed (in Cadent's reasonable opinion) then the terms and conditions to which those facilities and rights are subject in the matter will be referred to arbitration in accordance with paragraph 14 (Arbitration) of this Part of this Schedule and the arbitrator will make such provision for the payment of compensation by the undertaker to Cadent as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

Retained apparatus: protection of Cadent

~~8.—(1) Not less than 56 days before the commencement of any specified works the undertaker must submit to Cadent a plan and, if reasonably required by Cadent, a ground monitoring scheme in respect of those works.~~

~~(2) The plan to be submitted to Cadent under sub-paragraph (1) must include a method statement and describe—~~

- ~~(a) the exact position of the works;~~
- ~~(b) the level at which these are proposed to be constructed or renewed;~~
- ~~(c) the manner of their construction or renewal including details of excavation, positioning of plant etc.;~~
- ~~(d) the position of all apparatus;~~
- ~~(e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus; and~~
- ~~(f) any intended maintenance regimes.~~

~~(3) The undertaker must not commence any works to which sub-paragraph (1) applies until Cadent has given written approval of the plan so submitted.~~

~~(4) Any approval of Cadent required under sub-paragraph (3)—~~

- ~~(a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (5) or (7); and,~~
- ~~(b) must not be unreasonably withheld or delayed;~~

~~(5) In relation to any work to which sub-paragraph (1) applies, Cadent may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus.~~

~~(6) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraphs (1) and (2) or as relevant sub-paragraph (4), as approved or as amended from time to time by agreement between the undertaker and Cadent and in accordance with all conditions imposed under sub-paragraph (4)(a), and Cadent will be entitled to watch and inspect the execution of those works.~~

~~(7) Where Cadent requires any protective works to be carried out by itself or by the undertaker (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph, must be carried out to Cadent's satisfaction prior to the commencement of any authorised works (or any relevant part thereof) for which protective works are required prior to commencement~~

~~(8) If Cadent in accordance with sub-paragraphs (5) or (7) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, paragraphs (1) to (3) and (6) to (8) apply as if the removal of the apparatus had been required by the undertaker under sub-paragraph 6(2).~~

~~(9) Nothing in this paragraph precludes the undertaker from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph will apply to and in respect of the new plan.~~

~~(10) The undertaker will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to Cadent notice as soon as is reasonably practicable and a plan of those works and must comply with—~~

- ~~(a) the conditions imposed under sub-paragraph (4)(a) insofar as is reasonably practicable in the circumstances; and~~
- ~~(b) sub-paragraph (11) at all times.~~

~~(11) At all times when carrying out any works authorised under the Order the undertaker must comply with Cadent's policies for safe working in proximity to gas apparatus "CD/SP/SSW/22 (Cadent's policies for safe working in the vicinity of Cadent's Assets" and HSE's "HS(-G)47 Avoiding Danger from underground services"~~

~~(12) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the undertaker will implement an appropriate ground mitigation scheme save that Cadent retains the right to carry out any further necessary works for the safeguarding of its apparatus and can recover any such costs in line with paragraph 9.~~

Expenses

~~9.. (1) Subject to the following provisions of this paragraph, the undertaker must pay to Cadent within 28 days of demand all charges, costs and expenses reasonably anticipated or incurred by Cadent in, or in connection with, the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new or alternative apparatus which may be required in consequence of the execution of any authorised works as are referred to in this Part of this Schedule including without limitation—~~

~~(a) any costs reasonably incurred by or compensation properly paid by Cadent in connection with the negotiation or acquisition of rights or the exercise of statutory powers for such apparatus including without limitation all costs (including professional fees) incurred by Cadent as a consequence of Cadent—~~

~~(i) using its own compulsory purchase powers to acquire any necessary rights under paragraph 6(3); and/or~~

~~(ii) exercising any compulsory purchase powers in the Order transferred to or benefitting Cadent;~~

~~(b) in connection with the cost of the carrying out of any diversion work or the provision of any alternative apparatus;~~

~~(c) the cutting off of any apparatus from any other apparatus or the making safe of redundant apparatus;~~

~~(d) the approval of plans;~~

~~(e) the carrying out of protective works, plus a capitalised sum to cover the cost of maintaining and renewing permanent protective works;~~

~~(f) the survey of any land, apparatus or works, the inspection and monitoring of works or the installation or removal of any temporary works reasonably necessary in consequence of the execution of any such works referred to in this part of this Schedule; and~~

~~(g) any watching brief pursuant to paragraph 8(6).~~

~~(2) There will be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule and which is not re-used as part of the alternative apparatus, that value being calculated after removal.~~

~~(3) If in accordance with the provisions of this Part of this Schedule—~~

~~(a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or~~

~~(b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was situated,~~

~~and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the undertaker or, in default of agreement, is not determined by arbitration in accordance with paragraph 14 of this Part of this Schedule to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to Cadent by virtue of sub-paragraph (1) will be reduced by the amount of that excess save where it is not possible or appropriate in the circumstances (including due to statutory or regulatory changes) to obtain the existing type of apparatus at the same capacity and dimensions or place at the existing depth in which case full costs will be borne by the undertaker.~~

~~(4) For the purposes of sub-paragraph (3)—~~

~~(a) an extension of apparatus to a length greater than the length of existing apparatus will not be treated as a placing of apparatus of greater dimension than those of the existing apparatus; and~~

~~(b) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole will be treated as if it also had been agreed or had been so determined.~~

~~(5) An amount which apart from this sub-paragraph would be payable to Cadent in respect of works by virtue of sub-paragraph (1) will, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 month earlier so as to confer on Cadent any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.~~

Indemnity

~~10.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works authorised by this Part of this Schedule (including without limitation relocation, diversion, decommissioning, construction and maintenance of apparatus or alternative apparatus) or in consequence of the construction, use, maintenance or failure of any of the authorised works by or on behalf of the undertaker or in consequence of any act or default of the undertaker (or any person employed or authorised by him) in the course of carrying out such works, including without limitation works carried out by the undertaker under this Part of this Schedule or any subsidence resulting from any of these works, any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of the authorised works) or property of Cadent, or there is any interruption in any service provided, or in the supply of any goods, by Cadent, or Cadent becomes liable to pay any amount to any third party, the undertaker will—~~

~~(a) bear and pay on demand the cost reasonably incurred by Cadent in making good such damage or restoring the supply; and~~

~~(b) indemnify Cadent for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Cadent, by reason or in consequence of any such damage or interruption or Cadent becoming liable to any third party as aforesaid other than arising from any default of Cadent.~~

~~(2) The fact that any act or thing may have been done by Cadent on behalf of the undertaker or in accordance with a plan approved by Cadent or in accordance with any requirement of Cadent or under its supervision including under any watching brief will not (unless sub-paragraph (3) applies) excuse the undertaker from liability under the provisions of sub-paragraph (1) unless Cadent fails to carry out and execute the works properly with due care and attention and in a skilful and workman like manner or in a manner that does not accord with the approved plan.~~

~~(3) Nothing in sub-paragraph (1) imposes any liability on the undertaker in respect of—~~

~~(a) any damage or interruption to the extent that it is attributable to the neglect or default of Cadent, its officers, servants, contractors or agents; and~~

~~(b) any authorised works and/or any other works authorised by this Part of this Schedule carried out by Cadent as an assignee, transferee or lessee of the undertaker with the benefit of the Order pursuant to section 156 of the Planning Act 2008 or article 8 (transfer of benefit of Order) subject to the proviso that once such works become apparatus (“new apparatus”), any authorised works yet to be executed and not falling within this sub-paragraph (3)(b) will be subject to the full terms of this Part of this Schedule including this paragraph 10~~

~~(4) Cadent must give the undertaker reasonable notice of any such third party claim or demand and no settlement or compromise must, unless payment is required in connection with a statutory compensation scheme, be made without first consulting the undertaker and considering the representations.~~

~~(5) The undertaker must not commence construction (and must not permit the commencement of such construction) of the authorised works on any land owned by Cadent or in respect of which Cadent has an easement or wayleave for its apparatus or any other interest or to carry out any works within 15 metres in any direction of Cadent's apparatus until the following conditions are satisfied:~~

- (a) ~~unless and until Cadent is satisfied acting reasonably (but subject to all necessary regulatory constraints) that the undertaker has first provided the acceptable security (and provided evidence that it will maintain such acceptable security for the construction period of the authorised works from the proposed date of commencement of construction of the authorised works) and Cadent has confirmed the same to the undertaker in writing; and~~
- (b) ~~unless and until Cadent is satisfied acting reasonably (but subject to all necessary regulatory constraints) that the undertaker has procured acceptable insurance (and provided evidence to Cadent that it will maintain such acceptable insurance for the construction period of the authorised works from the proposed date of commencement of construction of the authorised works) and Cadent has confirmed the same in writing to the undertaker.~~

~~(6) In the event that the undertaker fails to comply with sub-paragraph 11(5) of this Part of this Schedule, nothing in this Part of this Schedule will prevent Cadent from seeking injunctive relief (or any other equitable remedy) in any court of competent jurisdiction.~~

Enactments and agreements

~~11. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between Cadent and the undertaker, nothing in this Part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the undertaker and Cadent in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.~~

Co-operation

~~12.—(1) Where in consequence of the proposed construction of any of the authorised works, the undertaker or Cadent requires the removal of apparatus under paragraph 6(2) of this Part of this Schedule or Cadent makes requirements for the protection or alteration of apparatus under paragraph 8, the undertaker must use its reasonable endeavours to co-ordinate the execution of the works in the interests of safety and the efficient and economic execution of the authorised development and taking into account the need to ensure the safe and efficient operation of Cadent's undertaking and Cadent must use its reasonable endeavours to co-operate with the undertaker for that purpose.~~

~~(2) For the avoidance of doubt whenever Cadent's consent, agreement or approval is required in relation to plans, documents or other information submitted by the undertaker or the taking of action by the undertaker, Cadent's consent must not be unreasonably withheld or delayed.~~

Access

~~13. If in consequence of the powers granted under this Order the access to any apparatus (including appropriate working areas required to reasonably and safely undertake necessary works by Cadent in respect of the apparatus) is materially obstructed, the undertaker must provide such alternative rights and means of access to such apparatus as will enable Cadent to maintain or use the apparatus no less effectively than was possible before such obstruction.~~

Arbitration

~~14. A Save for differences or disputes arising under sub-paragraphs 7(2), 7(4), 8(1), 11(5) and paragraph 9 any difference or dispute arising between the undertaker and Cadent under this Part of this Schedule must, unless otherwise agreed in writing between the undertaker and Cadent, be determined by arbitration in accordance with article 52 (arbitration) and in settling any difference or dispute, the arbitrator must have regard to the requirements of Cadent for ensuring the safety, economic and efficient operation of Cadent's apparatus.~~

Notices

~~15. The plans submitted to Cadent by the undertaker pursuant to sub-paragraph 8(1) must be sent to Cadent Gas Limited Plant Protection by e-mail to plantprotection@cadentgas.com copied by e-mail to landservices@cadentgas.com and sent to the General Counsel Department at Cadent's registered office or such other address as Cadent may from time to time appoint instead for that purpose and notify to the undertaker.~~

|

Appendix 2

Cadent
Your Gas Network

Capacity & Costs Detailed Analysis Study

Sustainable Gas to Grid Entry Connection

CAD/UKD/DAS/277
Grid Co-ordinates: 549426 / 261029
Site Name: Land Off A14/Cambridge Relocation Project

CWRP Relocation Ltd
December 2021

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Document Purpose

The aim of this document is to provide CWRP Relocation Ltd with the findings of the Capacity only Detailed Analysis Study (DAS), undertaken for the Bio-methane connection request at Land Off A14.

Detailed analysis has been carried out to understand the capability of the network in relation to the customer's request to connect and reserve this gas flow and outlines the connection options that are available. This study is a snapshot of the network at the current time and is **not** a guarantee of gas flow, due to the changing dynamics of the gas distribution network. This can on occasion reduce injection rates offered at the next stage.

Consideration is given to:

- Network connection options;
- Estimate of the programme of work required to deliver a connection;
- Other issues relevant to providing a connection;

Once you have reviewed the details in this document and wish to proceed, we suggest an initial meeting takes place to discuss your project further. The next steps include:

- Decision of connection model;
- Decision of connection type (if appropriate);
- Submission of Connection Application;

If, however you are already in a position to proceed to the connection application then please complete the application form on our website at <https://cadentgas.com/services/gas-producers/capacity-enquiry>

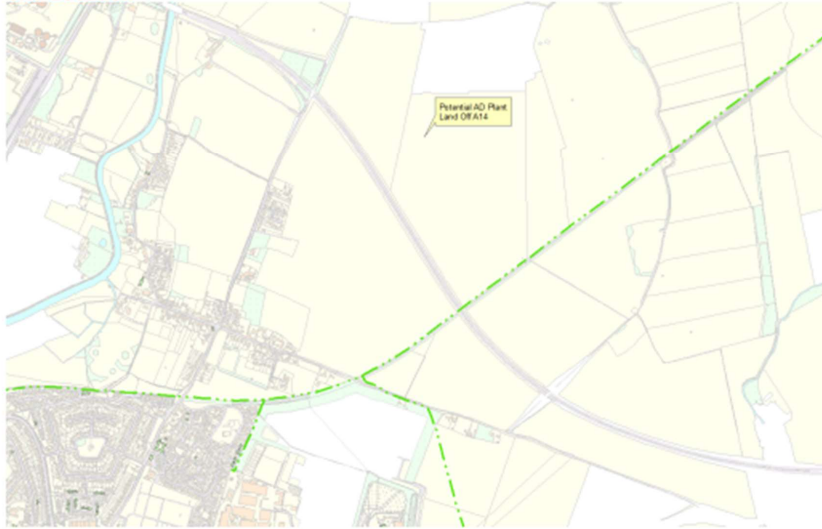
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Statement of Requirements

CWRP Relocation Ltd has requested a Detailed Analysis Study (DAS) to identify capacity for injection into the Cadent Network at Land Off A14.

Site Location



Anticipated Injection Requirement

This capacity only Detailed Analysis Study has been prepared in response to a request from CWRP Relocation Ltd to inject 650scm/h of Bio-methane into the Cadent gas distribution Network at Land Off A14, on a 24 hour a day, 7 days a week basis throughout the year.

Summary of Capacity

The connection options for the bio-methane injection site at Land Off A14, are outlined in full in Connection Options. Below is a table summary of the options into various pressure tiers.

Pressure Tier	Injection Rate	Connecting Pipe Lay	Connecting Pipe Size & Material	Parent Pipe Size & Material
IP	0 – 650scm/h	850m	180mm HDPE	8" ST

Pressure Tier	MOP	SOL
IP	7bar	7.7bar

Assumptions are that CWRP Relocation Ltd will ensure that the bio-methane injected fulfils the below criteria;

- Fully complies with the Gas Quality requirements of the Gas Safety (Management) Regulations 1996 (GS(M)R)
- The required FWACV has been met.

Factors such as point of connection and facility locations would need to be finalised prior to a firm connection being available. The pipeline corridor can then be designed.

For further information please contact:

Technical Queries

Tina Hawke
Sustainable Gas Connections Design Manager
Tel: 07825 676 694

Commercial Queries

Ruth Burden
Sustainable Gas Connections Specialist
Tel: 07717 513063

Summary of Total Costs

These are a summary of the approximate total costs involved for any options and for both connection models. A breakdown of costs can be found under the Connections Options section. (Details of the Connection Models can be found in the Appendix).

Pressure Tier	Minimum Connection Total	Maximum Connection Total
IP	£605,000	£957,000

Connection Option(s)

A basic route to the connection point has been outlined for each option, for capacity analysis purposes only. No study has been done to establish that the route is engineering viable. This should be established via the design once a connection offer has been accepted.

1. IP Connection Option

This option is based upon the Land Off A14 site delivering Bio-methane at a suitable pressure to enable CWRP Relocation Ltd to inject into the Intermediate Pressure system within the required range 3.5 -7barg.

The construction of connecting pipe work is open to competition and customers therefore have the option to employ a Utility Infrastructure Provider (UIP) to carry out this work. The UIP must have met the following obligations to undertake the work:

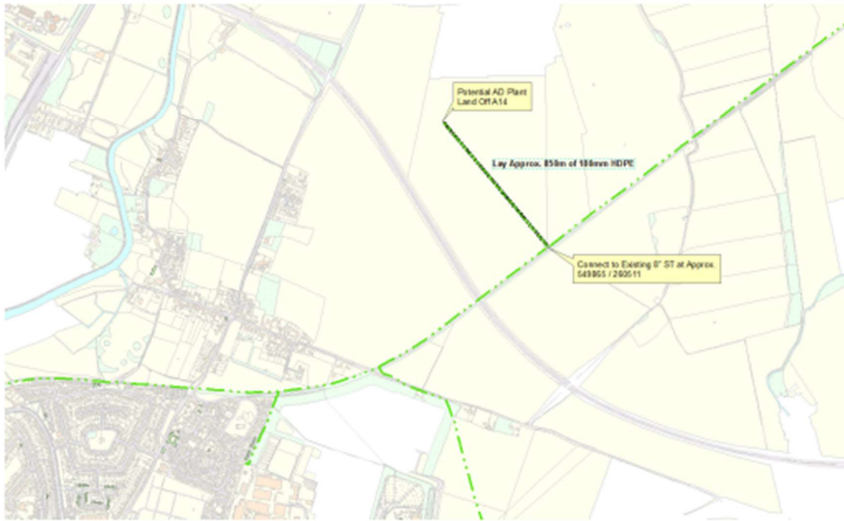
- The UIP must be a signatory to the Cadent Final Connection Agreement
- The UIP must hold the appropriate GIRS accreditation
- The UIP must follow Cadent Safe Control of Operations at all times whilst carrying out the works.

The proposal is to connect to the existing Intermediate pressure system approximately 850m to the south of the potential bio-methane production site.

1.1 IP Connection Route

A route for connecting to the East of England network has been identified and is shown in the image below. This route has been chosen to account for a connection point suitable for the required injection rate. This considers parent pipe size restrictions and pressure drops.

This route has been devised for analysis only and is not confirmed as engineering viable- the route should be confirmed in the design:



The connecting pipeline of 850m of 180mm High Density Polyethylene has been designed to maintain an acceptable velocity and an acceptable pressure drop (<10mb) for an Entry Connection with a source pressure (Bio-methane injection point) of between 3.5 – 7barg.

Any part of the connecting pipe laid through private land would require the landowner to grant an easement to Cadent before construction could begin therefore, the route corridor is subject to change, and analysis will need to be carried out on the new route.

Analysis of the IP system shows that there is sufficient capacity to accept a maximum flow of 650scm/h of Bio-methane on a variable basis, assuming that the Bio-methane fully complies with the requirements of GS(M)R. This is dependent on connecting to a reasonable sized section of the IP system.

1.2 Flow Rate Tables

The flow rate table below shows the estimated flow rates by month with industrial loads scaled down. As Cadent cannot guarantee the flow of our industrial customers, they are scaled down appropriately in the rates provided below. These rates would be used to form any potential connection offer.

Estimated Flow Rate Table (With Industry Scaled Down)

Time	Estimated Average Monthly Flow Rates (scm/h)
January	450 - 650
February	
March	
April	
May	0 - 650
June	
July	
August	
September	450 - 650
October	
November	
December	

N.B: Flow rates over bank holidays e.g. Christmas can be lower than those indicated.

Daily Estimated Flow Rate Table (With Industry Scaled Down/Summer Lowest Demand Conditions)

Time of Day	Min - Max Daily Hourly Rates (scm/h)
Midnight- 6am	0 - 650
6am – 11am	450 - 650
11am- 8pm	450 - 650
8pm - Midnight	0 - 650

Estimated Flow Rate Table (With Industry)

This second flow rate table is for illustrative purposes only and includes all industrial demands scaled on.

Time	Estimated Average Monthly Flow Rates (scm/h)
January	450 - 650
February	
March	
April	
May	0 - 650
June	
July	
August	
September	450 - 650
October	
November	
December	

N.B: Flow rates over bank holidays e.g. Christmas can be lower than those indicated.

1.3 Reinforcements / Network Adaptions / Comments

Please Note: Whilst sufficient capacity exists on the intermediate pressure network, restrictions have been identified on the above 7bar network that supplies this part of the grid. A variable rate from 0scm/h is all that can be offered without changes to the metering at our offtakes due to the potential of sending our above 7bar offtakes into low flow. This would potentially allow underised gas to enter the gas network and cause a major health and safety concern.

This is why there is no difference between the with and without industrial tables below. Options for making changes to the above 7bar metering to allow for a better injection rate can be explored but would subject to an additional design study.

Network strategic settings required to ensure bio site takes the lead under periods of low demand.

1.4 MP/IP Entry Facility Cost

Maximum Connection Model

The estimated cost of the Cadent Entry Facility, assuming that the Bio-methane producer delivers Bio-methane at a suitable pressure to enable Cadent to inject into the intermediate pressure network within the required range (3.5 - 7barg), has a budget indication of £532,000

This cost estimate is based upon the following:

- The functional specification of the Entry Facility as established from the Energy Market Issues for Bio-methane (EMIB);
- The required Telemetry & Communication solutions for Cadent that are not part of the functional specification;
- A budget indicated costs for support structures for the facility housing;
- The commissioning of the facility to Cadent Network;

Minimum Connection Model

The estimated cost of the Cadent ROV and RTU, assuming that the Bio-methane producer delivers Bio-methane at a suitable pressure to enable Cadent to inject into the intermediate pressure network within the required range (3.5 - 7barg), has a budget indication of £180,000

This cost estimate is based upon the following:

- The installation of the ROV and associated pipework;
- The required Telemetry & Communication solutions for Cadent that are not part of the functional specification;
- The commissioning of the facility to Cadent Network;

IP Connection Cost

850m of 180mm High Density Polyethylene connection pipe from the proposed bio-methane plant Land Off A14 to the IP located to the south of the said location has a budget indication of £425,000

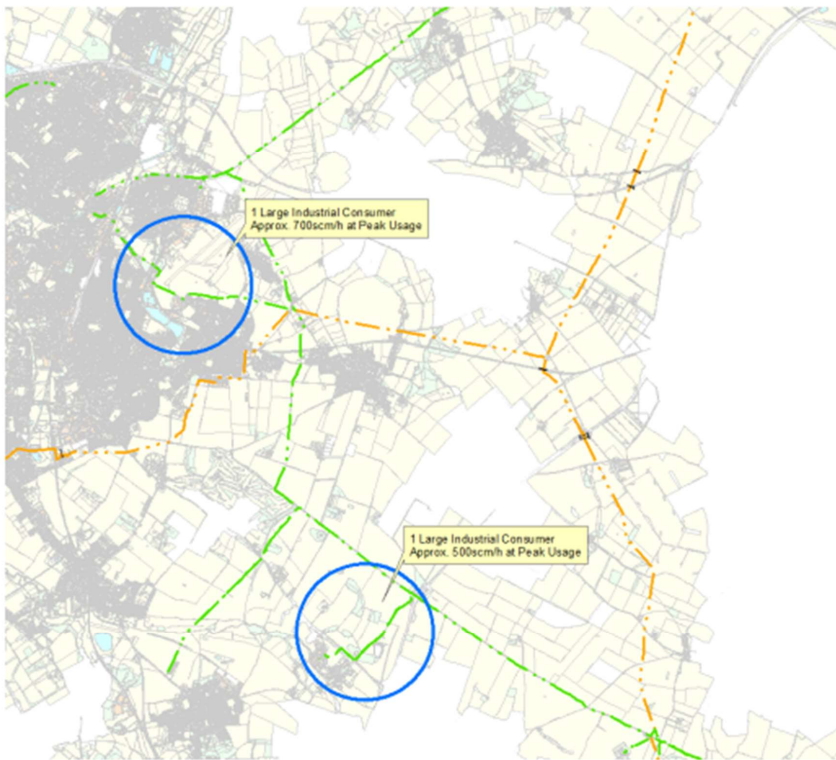
Summary of Costs

	Minimum Connection	Maximum Connection
Cadent Entry Facilities	£180,000	£532,000
Connecting Pipework	£425,000	£425,000
Total	£605,000	£957,000

(Not inclusive of VAT)

Local Industry & Large Consumers

The map below shows approximate locations of large industrial consumers that would facilitate increase flow through the potential site at Land Off A14. We are unable to legally name the companies, but the information provided below will hopefully be useful in providing additional confidence in the viability of the project.



Intermediate Pressure System Timescales

Should you wish to proceed with a Medium or Intermediate Pressure System connection, the time from your connection offer acceptance to commission, will be approximately 10-12 months. However Cadent Ltd would work with CWRP Relocation Ltd to identify any opportunities for reducing timescales where possible.

Appendix

GS(M)R Compliance

It is assumed that the Bio-methane will fully comply with all the requirements of GS(M)R unless where notified.

To ensure the Bio-methane produced is fully compliant the following requirements will need to be met

Property	Range or Limit
Hydrogen sulphide	Not more than 5 mg/scm
Total sulphur	Not more than 50 mg/scm
Hydrogen	Not more than 0.1% (molar)
Oxygen	1% as per HSE decision towards injection criteria
Hydrocarbon dewpoint	Shall be at such levels that they do not interfere with the integrity or operation of pipes or any gas appliance (within the meaning of regulation 2(1) of the 1994 Regulations) which a consumer could reasonably be expected to operate
Water dew point	Shall be at such levels that they do not interfere with the integrity or operation of pipes or any gas appliance (within the meaning of regulation 2(1) of the 1994 Regulations) which a consumer could reasonably be expected to operate
Wobbe number	In the range 47.20 to 51.41 MJ/scm
Impurities	Shall not contain solid or liquid material which may interfere with the integrity or operation of pipes or any gas appliance (within the meaning of regulation 2(1) of the 1994 Regulations) which a consumer could reasonably be expected to operate
Incomplete Combustion Factor	≤ 0.48
Soot Index	≤ 0.60

The requirements are inclusive but not limited to those specified above and Cadent may specify further requirements as necessary.

Further details of the requirements of GS(M)R at the following links:

<http://www.legislation.gov.uk/ukxi/1996/551/contents/made>

<http://www.hse.gov.uk/pubns/priced/l80.pdf>

Calorific Value

The CV of the Bio-methane must be in the range of 36.9 to 42.3 MJ/scm.

In addition, the Bio-methane will need to meet the Flow Weighted Average CV for the East of England Local Distribution Zone. Currently this means achieving a CV of approximately 39 MJ/scm. However, this value will vary over time and it is therefore important that your design solution is capable of providing gas with a CV of up to 42.3 MJ/scm.

If the CV of the Bio-methane is unlikely to meet this requirement then enrichment will be necessary. This is usually achieved by the addition of propane and would be the responsibility of the producer.

In order to avoid discrimination, we require all gas to grid facilities to install the capability to inject gas at the required CV/quality (36.9 MJ/scm – 42.3 MJ/scm).

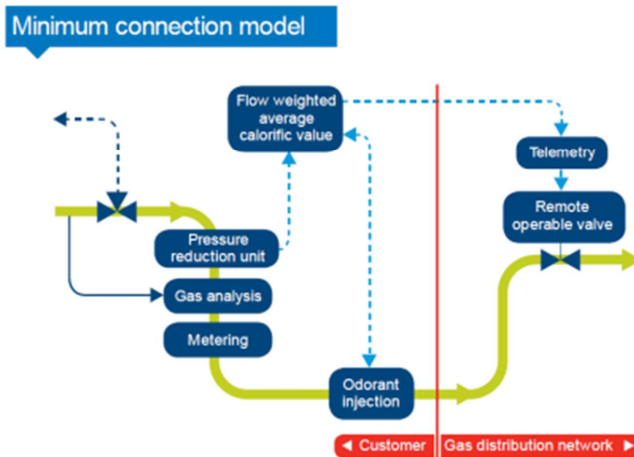
In the event that propane is added after biogas upgrading then this should be included in the hourly figure of gas injected into the network, for instance if 5% propane is required to reach the accepted CV levels, there must be 95% of the original Bio-methane present.

Connections Models

Cadent has two different connections models, enabling our customers to choose their level of ownership and responsibility. To help you decide which option to choose the following section explains each of the models.

Minimum Connection

In the minimum connection model, the biomethane producer will own and operate the Flow Weighted Average CV measurement. Cadent will own and operate the ROV and telemetry unit.

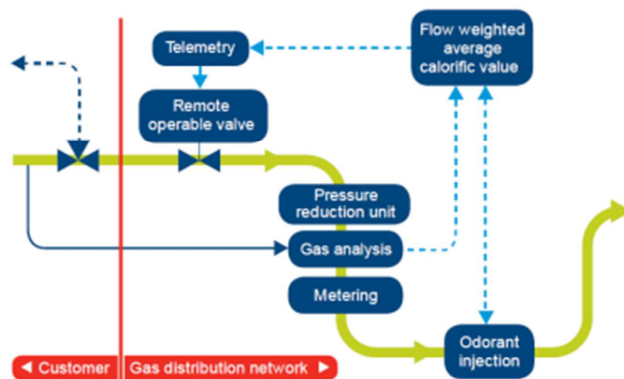


Producer Responsibilities	Overview
Biogas production facility	e.g. anaerobic digestion or gasification facility
Gas clean up plant	To upgrade the bioqas to biomethane in order for it to comply with the Gas Safety (Management) Regulations 1996 (GS(M)R).
Enhance the CV	If required, usually by injection of propane.
Compress the biomethane	(if required) compress to a pressure sufficient to enable it to enter the network or move it to a higher pressure tier for storage
Appoint a Shipper	Appoint a Shipper and provide details (expected and actual) of daily upfront volumes to the gas shipper
Meter the volume	Meter the volume of biomethane entering the network
Monitor the quality	For compliance with GS(M)R and any other requirements set out in the Network Entry Agreement
Make the connection	Making the physical connection from the ROV to the Cadent main
Measure the energy content and value	Measure the energy content and value of the biomethane (Calorific Value) on behalf of Cadent
Add odourant	Add odourant to give the biomethane the characteristic gas smell
Easements	The arrangement of easements/leases as required
Control the pressure	Control the pressure of the biomethane as it enters the network
Cadent Responsibilities	Overview
Own the ROV & Telemetry System	Cadent will adopt and own the ROV and telemetry units
Interrupt the flow of biomethane	Automatically interrupt the flow of biomethane into the network should it deviate from the requirements of GS(M)R and the Network Entry Agreement
Send telemetry data	Send telemetry data to the Cadent control centre for control and billing purposes and to the Producer as required

Maximum Connection

In the maximum connection model Cadent will own and operate the Flow Weighted Average CV measurement equipment as well as the ROV and telemetry unit.

Maximum connection model



Producer Responsibilities	Overview
Biogas production facility	e.g. anaerobic digestion or gasification facility
Gas clean up plant	To upgrade the biogas to biomethane in order for it to comply with the Gas Safety (Management) Regulations 1996 (GS(M)R).
Enhance the CV	If required, usually by injection of propane.
Compress the biomethane	(if required) compress to a pressure sufficient to enable it to enter the network or move it to a higher pressure tier for storage
Appoint a Shipper	Appoint a Shipper and provide details (expected and actual) of daily upfront volumes to the gas shipper
Meter the volume	Meter the volume of biomethane entering the network
Monitor the quality	For compliance with GS(M)R and any other requirements set out in the Network Entry Agreement
Make the connection	Making the physical connection from the ROV to the Cadent main
Measure the energy content and value	Measure the energy content and value of the biomethane (Calorific Value) on behalf of Cadent
Add odourant	Add odourant to give the biomethane the characteristic gas smell
Easements	The arrangement of easements/leases as required
Control the pressure	Control the pressure of the biomethane as it enters the network
Cadent Responsibilities	Overview
Own the ROV & Telemetry System	Cadent will adopt and own the ROV and telemetry units
Interrupt the flow of biomethane	Automatically interrupt the flow of biomethane into the network should it deviate from the requirements of GS(M)R and the Network Entry Agreement
Send telemetry data	Send telemetry data to the Cadent control centre for control and billing purposes and to the Producer as required

Glossary of Terms

Term	Description/Definition
barg	Bar gauge.
CV	Calorific Value - is a measure of heating power and is dependent upon the composition of the gas. The CV refers to the amount of energy released when a known volume of gas is completely combusted under specified conditions. The CV of gas, which is dry, gross and measured at standard conditions of temperature and pressure, is usually quoted in mega joules per standard cubic metre (MJ/scm).
FWACV	Flow Weighted Average CV – this is calculated by dividing the Actual Energy Flow into an LDZ by the volume of gas entering the LDZ.
Gas Analysis	This is the quality monitoring process step to ensure the gas to be injected is compliant to the Gas Safety (Management) Regulations 1996
GDN	Gas Distribution Network.
GS(M)R	Gas Safety (Management) Regulations 1996.
HSE	Health & Safety Executive.
IP	Intermediate Pressure – greater than 2 barg but less than 7 barg.
LDZ	Local Distribution Zone - A geographic area supplied by one or more NTS offtakes. Consists of IP and distribution system pipelines.
LP	Low Pressure – less than 75 mbarg.
LTS	Local Transmission System - A pipeline system operating at >7barg that transports gas from National Transmission System offtakes to distribution systems. Some large users may take their gas direct from the IP.
mbarg	Millibar gauge.
MJ	Mega Joule – A Joule is a unit of energy. A Mega Joule is one million Joules.
MP	Medium Pressure – greater than 75 mbarg but less than or equal to 2 barg.
NEA	Network Entry Agreement - A Network Entry Agreement sets out the technical and operational conditions for the connection and is required by the Uniform Network Code (UNC). The NEA is agreed between the Delivery Facility Operator (DFO) and National Grid.
Odourant Injection	The stage in which the characteristic gas smell is added
PE	Polyethylene.
Pressure Reduction Unit	An installation which reduces and controls gas pressures.
Remotely Operable Valve	Valve that controls the flow of gas into the system, which can be closed remotely by Cadent.
scm	Standard Cubic Metre - that amount of gas that, at Standard Temperature and Standard Pressure and being free of water vapour, occupies one cubic metre.
scm/h	Standard Cubic Metres per hour.
Telemetry	This refers to the communications equipment to provide signals to Cadent Control room.
UIP	Utility Infrastructure Provider.



Get in touch

You can contact us by:



Emailing at info@cwwtpr.com



Calling our Freephone information line on **0808 196 1661**



Writing to us at **Freepost: CWWTPR**



Visiting our website at www.cwwtpr.com

You can view all our DCO application documents and updates on the application on The Planning Inspectorate website:

<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/cambridge-waste-water-treatment-plant-relocation/>