### Appendix D – Utilities Report (1/6)



| Utilit                  | у Туре             |                  |          |
|-------------------------|--------------------|------------------|----------|
| 4                       | Electricity        | STATUS:          | AFFECTED |
|                         | LIECTICITY         | NUMBER AFFECTED: | 2        |
|                         | Gas                | STATUS:          | AFFECTED |
| $\mathbb{C}$            | 085                | NUMBER AFFECTED: | 1        |
| 7                       | Water and Sewerage | STATUS:          | AFFECTED |
| <u> </u>                | water and Sewerage | NUMBER AFFECTED: | 1        |
|                         | Telecoms           | STATUS:          | AFFECTED |
|                         | Telecoms           | NUMBER AFFECTED: | 2        |
| $\overset{\circ}{\sim}$ | Other              | STATUS:          | AFFECTED |
| অ                       |                    | NUMBER AFFECTED: | 4        |
|                         |                    |                  |          |

Total Number of Utility Companies Contacted: **20** 

### **Report Information**

Works Description: Development Appraisal

Batch: A

Status: Complete - Please see 'Understanding This Report'

This report is issued for the site described as: **Site off Queens Road, Immingham** 

Report Number LM / 100245

### National Grid Reference

520610 415720,521083 416229,519144 415638,520805 416488,520193 414952

Customer Reference 285109404\_1

Report Date 19 October 2021

### CONTACT DETAILS

If you require any assistance, please contact our customer services team on:

### 0844 844 9966

or by email at: helpdesk@landmark.co.uk







### i Understanding this report

We have asked a comprehensive list of Utility companies whether they have any apparatus or underground services in the vicinity of the site.

### **Report Summary**

The table provides a breakdown of the number of responses received by utility category; however, it must be noted that some utility companies provide services across multiple categories. As a result, the total number of responses gathered will often be greater than the total number of utility companies contacted.

### **Location Map**

This shows the plan that was dispatched to the Utility companies. The companies have been asked to return information on the area outlined, which will encompass your chosen site.

### **Request Status Report**

This will confirm the current status of the information requests. We list which responses we have received and whether the company is affected. The Status Report will be divided into the following sections.

Affected Utilities – We have received plans/information No Response Received – We are still awaiting a full response Not affected Utilities – We have received a not affected/no plant present response

### Responses

Affected responses are listed by company. Any responses from companies confirming they are not affected are provided at the back of the report for your records.

### 'Awaiting Further Responses' or 'Pack Complete'?

We do not include Local Authority requests when indicating if the pack is 'Complete' or 'Awaiting Further Responses' as Local Authorities are not obliged to reply to these enquiries.

The local authority for the area is contacted to see if they have any council owned property that may be affected by works. In general, these plant enquiries go to the highways department for responses regarding street lighting and drainage. However, the responses we receive can vary each time depending on resources available at the council and we often don't receive replies from local authorities at all

### i Landmark Utilities Report Service PAS 128 Statement

Prepared for: Landmark Information Group Ltd Practitioner: Atkins Report Number: LM / 100245 Client Reference: 285109404\_1 Site Name: Site off Queens Road, Immingham Date of Order:22 September 2021 Date of Issue: 19 October 2021

Thank you for using our Utility Report Service.

This report has been completed in accordance with the standards defined under Survey Category D of PAS128, a Publicly Available Specification for underground utility detection, verification and location published by the British Standards Institution.

Positional accuracy of plant is not guaranteed from information presented in a desktop search alone and the location of underground utilities should be verified through other means prior to breaking ground.

Information relating to the presence of Radio Frequency Identification Devices (RFIDs) has been requested from relevant utility companies or taken from mapping systems where available.

Utility companies who have not responded to enquiries are referenced on the enclosed Status Report accordingly. Their response will be chased and forwarded on for a period of up to four working weeks. Whilst we cannot guarantee that a utility company will respond to our enquiries, we endeavour to obtain responses from those that have not responded.

Any responses contained within this report have been obtained between the start date of the order and the date of issue.

If you want to discuss your report further with us, please contact Landmark Customer Services.



### የ Search data map



#### Please ensure that search data covers the COMPLETE AREA within the boundary lines on this map. This is marked by

Landmark will not be held responsible for any incident or accident arising from the use of the information associated with this particular Statutory Search. The details provided are given in good faith, but no liability whatsoever can be accepted in respect thereof.

#### Client Reference: 285109404\_1

Route: Site off Queens Road, Immingham

Postcode: DN40 2QQ OSGR:

520390 415640

Check by: PS



### 🗧 Request Status Report

Route: Site off Queens Road, Immingham

Postcode: DN40 2QQ OSGR: 520390 415640 Date Requested: 22 September 2021

Client Reference: 285109404\_1 Report Number:

LM / 100245

SCG Validation Date: 19 October 2021

Checked and Validated By:

### Affected Utilities

We have received plans/information from the following companies. Please see the enclosed response.

| Utility                                     | Category                | Date Issued     | Notes   |
|---|-------------------------|-----------------|---|
| Anglian Water                               | Water, Sewerage         | 19 October 2021 | Only affected shown.  |
| Cadent Gas                                  | Gas                     | 19 October 2021 |   |
| Environment Agency                          | Environmental<br>Agency | 19 October 2021 | See response.   |
| LinesearchbeforeUdig                        | Other                   | 19 October 2021 | Cadent Gas, National<br>Grid Gas<br>Transmission -<br>Identified as affected.<br>See separate<br>responses. |
| Network Rail                                | Rail                    | 19 October 2021 |   |
| North East Lincolnshire<br>Council          | Council                 | 19 October 2021 | See response.   |
| Northern Powergrid                          | Electric                | 19 October 2021 |   |
| Openreach - [British<br>Telecommunications] | Telecom                 | 19 October 2021 | Only affected shown.  |
| Utility Assets                              | Electric                | 19 October 2021 | See response.   |
| Virgin Media                                | Telecom                 | 19 October 2021 |   |

### Not Affected Utilities

We have received a not affected/no plant present response from the following companies.

| Utility  | Category                         | Date Issued     | Notes |
|--|----------------------------------|-----------------|-------|
| C.A. Telecom UK - [Colt<br>Technology Services]                        | Telecom                          | 19 October 2021 |       |
| CityFibre  | Telecom                          | 19 October 2021 |       |
| GTC  | Telecom, Gas,<br>Electric, Water | 19 October 2021 |       |
| Instalcom - [CenturyLink,<br>Global Crossing, Fibernet<br>& Fibrespan] | Telecom                          | 19 October 2021 |       |
| KCOM Group   | Telecom                          | 19 October 2021 |       |
| Lincolnshire County<br>Council   | Council                          | 19 October 2021 |       |
| National Grid Gas<br>Transmission                                      | Gas                              | 19 October 2021 |       |
| SKY Telecommunications<br>Services                                     | Telecom                          | 19 October 2021 |       |
| Verizon  | Telecom                          | 19 October 2021 |       |
| Vodafone   | Telecom                          | 19 October 2021 |       |















| Manhole Refe | erence Easting   | Northing         | Liquid T | ype Cover Lev  | vel Invert Leve | Depth to Inver |
|--------------|------------------|------------------|----------|----------------|-----------------|----------------|
| 001          | 519008           | 415046           | F        | 2.46           | -0.04           | 2.5            |
| 002<br>003   | 519040<br>519014 | 415012<br>415048 | F<br>F   | 2.49<br>2.55   | 0.12<br>-1.26   | 2.37<br>3.81   |
| 004          | 519043           | 415075           | F        | 2.46           | -1.1            | 3.56           |
| 005<br>009   | 519008<br>519043 | 415087<br>415016 | F<br>F   | 2.74           | 1.22<br>-       | 1.52<br>-      |
| 101<br>102   | 519085<br>519047 | 415113<br>415133 | F<br>F   | 2.49<br>2.72   | 1.44<br>-0.99   | 1.05<br>3.71   |
| 103          | 519032           | 415110           | F        | 2.68           | -1.05           | 3.73           |
| 104<br>105   | 519002<br>519090 | 415155<br>415178 | F<br>F   | 2.55           | -0.59<br>-      | 3.14<br>-      |
| 106<br>107   | 519082<br>519077 | 415162<br>415153 | F        | -              | -               | -              |
| 108          | 519004           | 415186           | F        | -              | -               | -              |
| 109<br>201   | 519008<br>519096 | 415197<br>415216 | F        | - 3.42         | - 0.08          | - 3.34         |
| 901          | 519099           | 414956           | F        | 2.42           | -1.47           | 3.89           |
| 902<br>903   | 519024<br>519064 | 414906<br>414980 | F<br>F   | 2.89<br>2.47   | -1.54<br>0.24   | 4.43<br>2.23   |
| 903<br>904   | 519065           | 414992           | F        | 2.58           | -1.36           | 3.94           |
| 905<br>911   | 519016<br>519089 | 414951<br>414967 | F<br>F   | 2.39           | 0.45            | 1.94           |
| 001          | 519157           | 415065           | F        | 2.53           | 1.48            | 1.05           |
| 002<br>003   | 519126<br>519175 | 415099<br>415065 | F<br>F   | 2.55           | 1.34            | 1.21           |
| 004          | 519183           | 415071           | F        | -              | -               | -              |
| 005<br>101   | 519191<br>519108 | 415061<br>415127 | F<br>F   | -<br>2.46      | -<br>1.32       | - 1.14         |
| 102          | 519108           | 415169           | F        | 2.54           | 1.63            | 0.91           |
| 103<br>104   | 519130<br>519147 | 415142<br>415187 | F<br>F   | 2.46<br>2.3    | 1.29            | 1.17<br>0.67   |
| 105          | 519161           | 415168           | F        | 2.39           | 1.58            | 0.81           |
| 106<br>201   | 519162<br>519186 | 415148<br>415268 | F<br>F   | 2.4<br>3.41    | 1.17<br>0.63    | 1.23<br>2.78   |
| 202          | 519189           | 415266           | F        | 3.39           | 1.34            | 2.05           |
| 301<br>302   | 519136<br>519126 | 415356<br>415365 | F<br>F   | 2.65<br>2.79   | 1.03<br>1.2     | 1.62<br>1.59   |
| 401          | 519166           | 415430           | F        | -              | -               | -              |
| 001<br>002   | 519255<br>519272 | 415063<br>415072 | F<br>F   | 2.6<br>2.72    | 1.23<br>1.17    | 1.37<br>1.55   |
| 004          | 519295           | 415088           | F        | 2.73           | 0.88            | 1.85           |
| 005<br>101   | 519278<br>519215 | 415088<br>415126 | F<br>F   | 2.751<br>2.68  | 1.366<br>1.11   | 1.385<br>1.57  |
| 102<br>103   | 519262<br>519237 | 415161<br>415196 | F<br>F   | 3.07           | 0.81            | 2.26           |
| 201          | 519205           | 415279           | F        | - 3.23         | 0.76            | - 2.47         |
| 202<br>203   | 519258<br>519244 | 415210<br>415203 | F        | 2.95<br>3.13   | 1.13<br>0.99    | 1.82<br>2.14   |
| 301          | 519280           | 415341           | F        | 2.67           | 2.06            | 0.61           |
| 302<br>901   | 519298<br>519212 | 415322<br>414996 | F        | 2.44<br>2.87   | 1.87<br>1.82    | 0.57<br>1.05   |
| 001          | 519354           | 415032           | F        | 2.84           | 0.11            | 2.73           |
| 101<br>201   | 519305<br>519350 | 415102<br>415269 | F<br>F   | 2.97<br>2.81   | 0.55<br>1.66    | 2.42<br>1.15   |
| 202          | 519330           | 415257           | F        | 2.81           | 1.58            | 1.23           |
| 301<br>801   | 519317<br>519457 | 415302<br>414886 | F<br>F   | 2.73<br>2.59   | 1.86<br>-0.64   | 0.87<br>3.23   |
| 901          | 519405           | 414959           | F        | 2.64           | -0.23           | 2.87           |
| 802<br>000   | 519786<br>518890 | 414880<br>415045 | F<br>F   | 2.59<br>2.46   | -2.04<br>0.18   | 4.63<br>2.28   |
| 001          | 518870           | 415066           | F        | 2.391          | 1.271           | 1.12           |
| 002<br>018   | 518857<br>518849 | 415079<br>415087 | F        | 2.575          | 1.3<br>-        | 1.275<br>-     |
| 100          | 518848           | 415178           | F        | 3.036          | -0.244          | 3.28           |
| 101<br>102   | 518850<br>518859 | 415101<br>415119 | F<br>F   | -              | -               | -              |
| 200          | 518879           | 415274           | F        | -              | -               | -              |
| 201<br>801   | 518865<br>519893 | 415231<br>414897 | F<br>F   | -              | -               | -              |
| 901          | 518856           | 414920           | F        | 2.467          | 1.332           | 1.135          |
| 901<br>902   | 519868<br>519894 | 414922<br>414910 | F<br>F   | 3.05<br>2.8    | -2.2<br>-2.34   | 5.25<br>5.14   |
| 903          | 519896           | 414901           | F        | 2.62           | 1.43            | 1.19           |
| 904<br>000   | 518866<br>518992 | 414927<br>415072 | F<br>F   | 2.474          | 1.234<br>-      | 1.24<br>-      |
| 001          | 518955           | 415026           | F        | -              | -               | -              |
| 002<br>003   | 518970<br>518979 | 415037<br>415055 | F<br>F   | -              | -               | -              |
| 004          | 518989           | 415051           | F        | -              | -               | -              |
| 100<br>101   | 518979<br>518950 | 415119<br>415104 | F<br>F   | 2.613<br>2.506 | 0.693<br>-0.309 | 1.92<br>2.815  |
| 801          | 518910           | 414876           | F        | 2.406          | 1.016           | 1.39           |
| 901<br>902   | 518987<br>518964 | 414928<br>414913 | F<br>F   | 2.399<br>2.396 | 0.664           | 1.735<br>1.66  |
| 051<br>052   | 519053<br>519003 | 415089<br>415045 | S<br>S   | 2.63<br>2.51   | 0.43<br>1.28    | 2.2<br>1.23    |
| 052<br>053   | 519003           | 415006           | S<br>S   | -              | -               | -              |
| 054<br>055   | 519071<br>519082 | 415010<br>415022 | S<br>S   | -              | -               | -              |
| 056          | 519069           | 415034           | S        | -              | -               | -              |
| 057<br>151   | 519096<br>519077 | 415013<br>415194 | S<br>S   | - 3.13         | -<br>1.37       | - 1.76         |
| 152          | 519065           | 415175           | S        | -              | -               | -              |
| 153<br>251   | 519041<br>519078 | 415110           | S<br>S   | 2.67<br>3.2    | 0.6             | 2.07<br>2.22   |
| 253          | 519076           | 415213<br>415216 | S        | 3.03           | 0.98            | 1.92           |
| 451<br>951   | 519052<br>519005 | 415476<br>414951 | S<br>S   | 2.65<br>2.35   | 0.54<br>1.45    | 2.11<br>0.9    |
| 952          | 519056           | 414986           | S        | 2.53           | 1.44            | 1.09           |
| 953<br>051   | 519049<br>519164 | 414994<br>415003 | S<br>S   | - 2.38         | -<br>0.38       | - 2            |
| 052          | 519157           | 415061           | S        | 2.48           | 1.31            | 1.17           |
| 151<br>152   | 519108<br>519126 | 415165<br>415143 | S<br>S   | 2.52<br>2.45   | 1.34<br>0.89    | 1.18<br>1.56   |
| 153          | 519147           | 415190           | S        | 2.29           | 1.54            | 0.75           |
| 154<br>155   | 519163<br>519163 | 415168<br>415151 | S<br>S   | 2.37<br>2.45   | 1.28<br>1.11    | 1.09<br>1.34   |
| 157          | 519105           | 415129           | S        | 2.47           | 0.67            | 1.8            |
| 451<br>452   | 519150<br>519133 | 415422<br>415441 | S<br>S   | 2.71<br>2.72   | 0.52<br>0.56    | 2.19<br>2.16   |
| 453          | 519171           | 415418           | S        | 2.57           | 0.41            | 2.16           |
| 454<br>851   | 519160<br>519130 | 415418<br>414887 | S<br>S   | 2.64<br>2.24   | 0.42<br>0.68    | 2.22<br>1.56   |
| 051          | 519208           | 415004           | S        | 2.76           | 1.63            | 1.13           |
| 151<br>251   | 519214<br>519255 | 415128<br>415211 | S<br>S   | 2.63<br>2.98   | 1.19<br>0.45    | 1.44<br>2.53   |
| 252          | 519253           | 415214           | S        | 2.95           | 0.42            | 2.53           |
| 351<br>352   | 519202<br>519218 | 415388<br>415375 | S<br>S   | 2.63<br>2.57   | 0.53<br>0.48    | 2.1<br>2.09    |
| 353          | 519269           | 415325           | S        | 2.33           | 0.46            | 1.87           |
| 354<br>355   | 519281<br>519209 | 415314<br>415394 | S<br>S   | 2.45<br>2.44   | 0.43<br>0.29    | 2.02<br>2.15   |
| )51<br>)52   | 519334           | 415044           | S<br>S   | 2.78           | 0.12<br>0.31    | 2.66           |
| )54          | 519358<br>519337 | 415064<br>415048 | S        | 2.08<br>2.84   | 0.13            | 1.77<br>2.71   |
| 151          | 519307<br>519311 | 415157<br>415253 | S<br>S   | 2.7            | 0.32            | 2.38           |
| 251<br>051   | 519311<br>518883 | 415253<br>415045 | S        | 3<br>2.46      | 0.4<br>1.42     | 2.6<br>1.04    |
| 953<br>050   | 518853<br>518918 | 414923<br>415092 | S<br>S   | 2.487<br>2.48  | 1.705<br>1.4    | 0.782<br>1.08  |
| 051          | 518918           | 415087           | S        | 2.5            | 1.297           | 1.08           |
| 151<br>152   | 518943<br>518995 | 415161<br>415138 | S<br>S   | 2.644<br>2.658 | 1.249<br>1.088  | 1.395<br>1.57  |
| 153          | 518949           | 415107           | S        | 2.524          | 1.088           | 1.57           |
| 154<br>155   | 518985<br>518903 | 415143<br>415107 | S<br>S   | -              | -               | -              |
| 451          | 518958           | 415478           | S        | -              | -               | -              |
| 951          | 518926           | 414984           | S        | 2.47           | 1.49            | 0.98           |
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| Manhole Reference | Easting | Northing | Liquid Type | Cover Level | In |
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| e | Easting | Northing | Liquid Type | Cover Level | Invert Level | Depth to Invert |
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| Manhole Reference | Easting | Northing | Liquid Type | Cover Level | Invert Level | Depth to Invert |
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| Manhole Reference    | e Easting                  | Northing Liqui  | d Type Co | over Level | Invert Level | Depth to Invert   | Manhole Reference     Easting     Northing     Liquid Type     Cover Level     Invert Level     Depth to Invert   | Manhole Reference | Easting | Northing | Liquid Type Cover Level Invert Level   | Depth to Invert | Manhole Reference | e Easting Northing Liquid Type   | Cover Level | Invert Level | Depth to Invert |
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| 4801<br>5801<br>5802 | 520444<br>520511<br>520542 | 414849     F       414884     F       414884     F       414879     F |           |            |              | 3.17<br>3.48<br>- |   |                   |         |          |  |                 |                   |  |             |              |                 |
| 6901<br>7901         | 520636<br>520769           | 414924 F<br>414970 F  | -<br>3.ź  | 142 ·      | -<br>-1.508  | -<br>4.65         | Image: Constraint of the second sec |                   |         |          |  |                 |                   |  |             |              |                 |
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| Manhole Reference | Easting                    | Northing Liquid Type                               | Cover Level | Invert Level          | Depth to Invert | Manhole Reference Easting North | hing Liquid Type Cover Level Invert Level Depth to Invert   | Manhole Referen | e Easting | Northing | Liquid Type Cover Level Invert Level  | Depth to Invert | Manhole Reference | e Easting Northing Lie  | quid Type Cover Level | Invert Level | Depth to Invert |
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| 4801<br>5801      | 520444<br>520511<br>520542 | 414849     F       414884     F       414879     F | 2.572       | -0.598<br>-0.809<br>- | 3.17<br>3.48    |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
| 6901              | 520636<br>520769           | 414924 F<br>414970 F                               | -<br>3.142  | -<br>-1.508           | -<br>4.65       |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
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|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          | Image: Constraint of the second sec |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          | Image: Constraint of the second sec |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          | Image: Constraint of the second sec |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          | Image: Constraint of the second sec |                 |                   | Image: select |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: constraint of the second sec       |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 | Image: second        |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       |              |                 |
|                   |                            |  |             |                       |                 |                                 |   |                 |           |          |   |                 |                   |   |                       | Our D        | ef: 665474 - 4  |

| Manhole Reference    | e Easting                  | Northing Liquid Type           | Cover Level         | Invert Level | Depth to Invert   | Manhole Reference Easting Northing Liquid Type Cover Level Invert Level Depth to Invert   | Manhole Referen | e Easting | Northing | Liquid Type Cover Level Invert Level | Depth to Invert | Manhole Reference | Easting Northing Liquid Type | Cover Level | Invert Level [ | Depth to Invert |
|----------------------|----------------------------|--------------------------------|---------------------|--------------|-------------------|---|-----------------|-----------|----------|--------------------------------------|-----------------|-------------------|------------------------------|-------------|----------------|-----------------|
| 4801<br>5801<br>5802 | 520444<br>520511<br>520542 | 414849 F   414884 F   414879 F | 2.572<br>2.671<br>- |              | 3.17<br>3.48<br>- |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
| 6901<br>7901         | 520636<br>520769           | 414924 F<br>414970 F           | -<br>3.142          | -<br>-1.508  | -<br>4.65         | Image: state stat               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: state stat               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second se   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | IndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndextIndext  |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: Constraint of the second se |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 | _         |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: selection of the |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: selection of the |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second        |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: Constraint of the second sec       |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: Second               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image:               |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: sector |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   | Image: second |                 |           |          |                                      |                 |                   |                              |             |                |                 |
|                      |                            |                                |                     |              |                   |   |                 |           |          |                                      |                 |                   |                              |             | Our Re         | ef: 665474 - 4  |

| Manhole Reference | Easting          | Northing Liquid Type           | Cover Level | Invert Level          | Depth to Invert   | Manhole Reference Easting Northing Liquid Type Cover Level Invert Level Depth to Invert  | Manhole Reference | Easting | Northing | Liquid Type Cover Level Invert Level | Depth to Invert | Manhole Reference | e Easting Northing Liquid Type | Cover Level | Invert Level D | Depth to Invert |
|-------------------|------------------|--------------------------------|-------------|-----------------------|-------------------|--|-------------------|---------|----------|--------------------------------------|-----------------|-------------------|--------------------------------|-------------|----------------|-----------------|
|                   | 520511<br>520542 | 414849 F   414884 F   414879 F |             | -0.598<br>-0.809<br>- | 3.17<br>3.48<br>- | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   | 520636           | 414924 F<br>414970 F           | -<br>3.142  | -<br>-1.508           | -<br>4.65         |  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   |  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: selection of the  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: state     Image: state<   |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   |  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: Constraint of the second sec        |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: Sector of the sector                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second         |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second se  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   |  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image: second  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   |  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   |  |                   |         |          |                                      |                 |                   |                                |             |                |                 |
|                   |                  |                                |             |                       |                   | Image:                |                   |         |          |                                      |                 |                   |                                |             |                |                 |
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| From:           | plantprotection@cadentgas.com                                      |  |  |  |  |  |
|-----------------|--|--|--|--|--|--|
| Sent:           | 27 September 2021 09:48  |  |  |  |  |  |
| То:             | Utility Solutions Searches   |  |  |  |  |  |
| Subject:        | Saved/RPA LSBUD Ref: 23378509 Your Ref: LM 100245/DoM DBYD Initial |  |  |  |  |  |
|                 | Enquiry  |  |  |  |  |  |
| Attachments:    | 23378509_CadentGas.pdf   |  |  |  |  |  |
| Follow Up Flag: | Follow up  |  |  |  |  |  |

Date: 27/09/2021 LinesearchbeforeUdig ref: 23378509 Your ref: LM 100245/DoM

Dear Sir/Madam,

Flag Status:

#### Please submit a planned works enquiry for your project

Flagged

We have received a notification from the LinesearchbeforeUdig (LSBUD) platform regarding your initial enquiry to undertake works. As this is an initial enquiry, we haven't undertaken an assessment into the impact and risk posed to our assets. We need more information from you to do so.

### You must not start any work until we confirm it is safe to do so after submission of a planned works enquiry.

#### There are Cadent gas pipes in the area you're planning to work. These pipes may impact and possibly prevent your work for safety or legal reasons.

If your works are proposed to be undertaken in an easement, please note any auto-response from our enquiry system does not constitute written consent and formal, signed written consent which will only be provided following consultation with our plant protection team.

#### What you need to do

To help develop your initial enquiry into a planned works enquiry, please review our attached plans, which detail the Cadent gas assets in the area along with our key guidance document <u>Specification for Safe Working in the Vicinity of Cadent Assets</u>.

Once you have a plan for review by our engineering teams, please submit a "Planned Works" enquiry via LSBUD. In the meantime, if you want to discuss specifics associated with your initial enquiry please contact us at <u>plantprotection@cadentgas.com</u> or on 0800 688 588 quoting your reference at the top of this letter.

#### Your responsibilities and obligations

It is your responsibility to ensure that the information you have given us is accurate, therefore you must not undertake any works until a planned works enquiry has been submitted for assessment. You must also share all relevant documents, including the guidance notes, with anyone who carries out work on your behalf.

Cadent may have a Deed of Easement on the pipeline, which provides us with a right of access for a number of functions and prevents change to existing ground levels and storage of materials. It also prevents the erection of permanent/temporary buildings, or structures. If necessary Cadent will take action to legally enforce the terms of the easement. This letter does not constitute any formal agreement or consent for any proposed development work either generally or related to Cadent's easements or other rights, or any planning or building regulations applications.

Cadent Gas Ltd or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

**Kind Regards,** Plant Protection Team T: 0800 688 588 plantprotection@cadentgas.com <u>cadentgas.com</u>





































# **Specification for Safe Working in the Vicinity of Cadent Assets**

CAD/SP/SSW/22 August 2021





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### **Cadent contact details**



### **Central admin team**

Address: Cadent, Brick Kiln Street, Hinckley, Leicestershire, LE10 0NA Phone: 0800 688 588 Email: plantprotection@cadentgas.com

### **East of England Operations Plant Protection**

Address: Cadent Gas Limited, Vicarage Farm Road, Peterborough, PE1 5TP Email: <a href="mailto:eaplantprotectionops@cadentgas.com">eaplantprotectionops@cadentgas.com</a>

### **East Midlands Operations Plant Protection**

Address: Cadent Gas Limited, Effingham Street, Sheffield, S4 7YP Email: <a href="mailto:emplantprotectionops@cadentgas.com">emplantprotectionops@cadentgas.com</a>

### North London Operations Plant Protection

Address: Cadent Gas Limited, Uxbridge Road, Slough, SL2 5NA Email: <a href="mailto:nlplantprotection@cadentgas.com">nlplantprotection@cadentgas.com</a>

### **North West Operations Plant Protection**

Address: Cadent Gas Limited, Plant Protection (Block C), Mersey Road North, Failsworth, Greater Manchester, M35 9FF Email: <a href="mailto:plantprotection.nw@cadentgas.com">plantprotection.nw@cadentgas.com</a>

### West Midlands Operations Plant Protection

Address: Cadent Gas Limited, Windsor Street, Birmingham, B7 4DN Email: <a href="mailto:plantprotection.wm@cadentgas.com">plantprotection.wm@cadentgas.com</a>

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## **Step by Step Process**

#### Register with LinesearchbeforeUdig (LSBUD)

LSBUD provide a free online enquiry service giving results within minutes from a grid reference, postcode or street name. This allows you to submit enquiries about activities and work that you are planning which may have an impact on the gas network.

www.linesearchbeforeudig.co.uk

#### **Submit an enquiry**

Within LSBUD there are 3 enquiry types, initial enquiry, planned works and emergency works. Initial enquires are for information only purposes and will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry. If your works are of a genuine emergency nature (e.g. burst water main etc.) then you should submit an emergency enquiry.

#### Review the response, asset location and enclosed guidance

LSBUD will auto-generate a response based on your enquiry details and our assets in the area. The assessment will be based on the selected Work Category and Work Type, if your planned works propose activities to be undertaken within the distances specified within this booklet you must obtain site specific advice from our specialist operational plant protection team.

#### If your response says that we need to assess your enquiry further, you must not start any work until we confirm it is safe to do so.

If you are advised to proceed with caution, then you must ensure that you utilise the provided asset plans and follow the guidance in this document.

#### **Observe restrictions**

In addition to the guidance contained in this booklet, you must ensure that you observe any site-specific advice provided by our specialist operational plant protection teams.

# If in doubt contact Cadent using the details in this booklet



## Keeping you, your workers and the public safe when working near our pipelines



#### Disclaimer

This document is provided for use by third parties for safe working in the vicinity of Cadent assets. Where this document is used by any other party it is the responsibility of that party to ensure that this document is correctly applied.

Users should ensure that they are in possession of the latest edition of this document by referring to the Digging Safely webpage on the Cadent website. www.cadentgas.com/help-advice/digging-safely

#### Mandatory and non-mandatory requirements

In this document:

- Shall: indicates a mandatory requirement
- Should: indicates best practice and is the preferred option

If an alternative method is used then a suitable and sufficient risk assessment shall be completed to show that the alternative method delivers the same, or better, level of protection.

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## Introduction Safe Working in the Vicinity of Cadent Assets: Requirements for Third Parties

This specification is for issue to third parties carrying out work in the vicinity of Cadent gas assets and associated installations. It is provided to ensure that individuals planning and undertaking work take appropriate measures to prevent damage.

Any damage to a gas asset, or its coating, can affect its integrity and can result in failure leading to potentially serious hazardous consequences for individuals located in the vicinity.

It is therefore essential that the safety advice outlined in this document, along with any site-specific advice given by our operatives, is complied with when working near to our assets. If Cadent consider any work to be in breach of the requirements stipulated in this document, then the Cadent Plant Protection Officer will request that work is suspended until the non-compliances have been rectified.

Every reasonable precaution shall be undertaken to avoid personal injury or damage to our apparatus. If we incur any direct or indirect costs as a consequence of your works and we are required to repair or divert any gas apparatus, you'll be recharged in full.

Any damage to our apparatus will be subject to legislative reporting responsibilities to the HSE under Reporting of Injuries, Diseases & Dangerous Occurrences Regulations 2013, Gas Safety Management Regulations 1996 and the Pipelines Safety Regulations 1996.

The requirements in this document are in line with the Institution of Gas Engineers and Managers (IGEM) recommendations IGEM/SR/18 Edition 3 - Safe Working Practices to Ensure the Integrity of Gas Assets and Associated Installations and the HSE's guidance document HS(G)47 Avoiding Danger from Underground Services.

It is the responsibility of the third party to ensure that any work carried out also conforms with the requirements of the Construction and Design Management (CDM) Regulations 2015 and all other relevant health and safety legislation. Reference shall be made to our apparatus within your site Health and Safety file.



## 1.Scope

This specification sets out the safety precautions and other conditions associated with working in the vicinity of Cadent assets, located in negotiated easements (see Section 13) and public highways.

Where the guidance in this document cannot be adhered to, then the diversions process shall be followed.



Before contacting our diversions team, you'll need to have your site information and any design proposals available.

Once you have this information, please contact our diversions team <u>diversions@cadentgas.com</u> or on 0330 678 1034.

Visit <u>www.cadentgas.com/diversions</u> for more information.





## 2. Formal Consent

Cadent's assets are either located in an easement agreed with the landowner at the time of installation, or within the highway. As the required arrangements for working in an easement and working in the highway differ, this section describes the specific requirements for these two areas.

Any documents handed to contractors or other individuals undertaking work (e.g. farmers, local authorities etc.), on site by Cadent, shall be signed for and adhered to by the site. All personnel working on site shall be made aware of the potential hazards of working near gas assets and the actions they should follow in case of an emergency.

## 2.1 Within an easement

The promoter of any works (see Section 13) within an easement shall provide Cadent with details of the proposed works, including a risk assessment and method statement of how the work is intended to be carried out. Work shall not commence in an easement strip until formal written consent has been provided by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number. On acceptance of Cadent's requirements, the promoter of the works shall give Cadent at least 14 days' notice before commencing work on site.

Where clearance to proceed has been granted directly from the system, for example, if your works only affect low pressure assets (operating at less than 75 mbar), but the asset concerned is within an easement, the promoter of the works shall contact the network Plant Protection Office for formal written consent.

In addition to formal written consent, an easement crossing agreement (deed of indemnity) may be required. This shall be discussed with the Cadent Plant Protection Officer prior to the commencement of the works.

The width of an easement is dependent on a number of factors and is mainly dependent on the operating pressure, pipeline material and diameter as these factors influence safe working requirements and building proximity distances. Easement details should be registered at Land Registry however if you are unsure please liaise with your network Plant Protection Officer.





Below is a list of our standard easement widths, however, some easements may vary:

| Pressure tier/ Material | Diameter                                 | Easement Width (total)                       |
|-------------------------|--|--|
| HP Steel                | 900mm, 1060mm,<br>1200mm (36", 42", 48") | 24.4m (80')                                  |
| HP Steel                | 750mm and 600mm (30" & 24")              | 18.3m (60')                                  |
| HP Steel                | Up to and including<br>450mm (18")       | 12.2m (40')                                  |
| HP RTP                  | Determined on a case by case basis       |  |
| IP Steel                | All sizes                                | 6m plus pipe diameter                        |
| IP PE > 5.5 bar         | Above 500mm (19")                        | 30m plus pipe diameter                       |
|                         | 356mm to 500mm                           | 16m plus pipe diameter                       |
|                         | 126mm to 365mm                           | 12m plus pipe diameter                       |
|                         | Up to and including<br>125mm             | 12m plus pipe diameter                       |
| IP PE <5.5 bar          | Above 500mm (19")                        | 26m plus pipe diameter                       |
|                         | 356mm to 500mm                           | 8m plus pipe diameter                        |
|                         | 126mm to 365mm                           | 8m plus pipe diameter                        |
|                         | Up to and including<br>125mm             | 8m plus pipe diameter                        |
| AGI's                   | All sites                                | 3m restrictive width around the installation |
| MP PE                   | Above 500mm (19")                        | 12m plus pipe diameter                       |
|                         | 356mm to 500mm                           | 6m plus pipe diameter                        |
|                         | 126mm to 355mm                           | 5m plus pipe diameter                        |
|                         | Up to and including<br>125mm             | 4.5m plus pipe diameter                      |
| MP Steel                | All sizes                                | 6m plus pipe diameter                        |
| MP Iron*                | All sizes                                | 6m plus pipe diameter                        |
| LP                      | Above 125mm                              | 3m plus pipe diameter                        |
|                         | Up to and including<br>125mm             | 1m plus pipe diameter                        |



## 2.2 Within a highway

Work shall be notified to Cadent in accordance with the requirements of the New Roads and Street Works Act (NRSWA) and HS(G)47. The promoter of any works within the highway should provide Cadent with details of the proposed works, including a risk assessment and method statement of how the work is intended to be carried out. This shall be submitted at least 14 days before the planned work is to be carried out. If similar works are being carried out at several locations in close proximity, a single risk assessment and method statement should be adequate depending on the nature of the works. Work should not go ahead until formal written consent has been given by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number.







## **3. Location of Gas Assets**

A copy of our plans with your marked-out site is provided in our LSBUD response. Cadent asset records shall be consulted to establish the indicative location of the gas assets in relation to the promoter's work area.

*If the marked-out area is incorrect you MUST resubmit your enquiry with the correct area marked out.* 

Prior to work commencing on site, the gas assets should be located to verify the indicative location from plans.

This should initially be carried out through nonintrusive methods utilising pipe locators where possible. The indicative location should be verified through trial holes. Once located, the gas assets should be marked out at regular



intervals using asset location markers with triangular flags (see Appendix A) or other suitable methods.

For assets exceeding 2 bar, the excavation of all trial holes shall be monitored by Cadent. For assets not exceeding 2 bar, monitoring will be at the discretion of the Cadent Plant Protection Officer.

Safe digging practices, in accordance with HSE publication HS(G)47, shall be followed. Direct and consequential damage to gas plant can be dangerous both to employees and to the general public.

We utilise marker posts and surface boxes to denote the location of our apparatus providing access to key parts of our network. Free access shall be maintained to such apparatus during and after your works and these shall not be moved, covered or damaged during the works.







## **4. Temporary and Permanent Protective Measures**

No temporary or permanent protective measures, including the installation of concrete slab protection, shall be installed over or near to a Cadent asset without the prior written consent of Cadent. Cadent will need to approve the material, dimensions and method of installation for the proposed protective measure.

The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to Cadent. Where permanent protection is to be installed over an asset, Cadent will normally carry out a coating survey of metallic assets to check that there is no existing damage to the coating, prior to the slab protection being installed. Cadent shall, therefore, be given at least 14 days' notice prior to the laying of any slab protection to arrange for this survey to be carried out.

Generally, due to the need for future access to below 2 bar gas assets, permanent protection is not permitted, however, can be approved at Cadent's discretion.

The safety precautions detailed in Sections 5, 6, 7 or 8 of this document should also be observed during the installation of the asset protection.







## 5. Working in the Vicinity of a High or Intermediate Pressure Gas Asset (Operating at Pressures Greater than 2 bar)

The below information shall only be used as guidance, for all works in the vicinity of High and Intermediate Pressure Pipelines the autoresponse from the system will advise not to carry out any works until we have undertaken a technical review of the planned works and provided site specific safe working advice.

Initial enquires are for information only purposes and will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry for assessment.









## 5.1 Excavation

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators, and any other powered mechanical plant, shall not dig on one side of the asset with the cab of the excavator positioned on the other side.

All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

#### 5.1.1 In proximity to an asset in an easement

Following location and marking of assets in agreement with the Cadent Plant Protection Officer, powered mechanical excavation may be used no closer than 3m (see Figure 1). The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework on an asset shall be exposed by hand.

If third parties are using any form of trench support system, they shall ensure that none of the components are in contact with the Cadent asset.

Consideration may be given to a relaxation of these limits or lower risk excavation methods by agreement with the Cadent Plant Protection Officer on site.

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.) and following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm, using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or close to above ground gas installations.

After the completion of the work, the level of cover over an asset should be the same as that prior to work commencing, unless otherwise agreed by Cadent.

No new service shall be laid parallel to an asset within the easement. In special circumstances, and only with formal written agreement from Cadent, this may be relaxed for short excursions where the service shall be laid no closer than 600mm.

Where work is being carried out parallel to an asset, within or just alongside the easement, suitable barriers shall be erected for protection between the works and the asset to prevent encroachment.

#### 5.1.2 In proximity to an asset in the highway

Following locating and marking of assets in agreement with the Cadent Plant Protection Officer, powered mechanical excavation may be used no closer than 3 meters (see Figure 1).

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.





Any fitting, attachment or connecting pipework shall be exposed by hand.

If third parties are using any form of trench support system, they shall ensure that none of the components are in contact with the Cadent asset.

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 300mm, unless any attachments or projections are present on an asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers is not permitted within 3m of an asset. The Cadent Plant Protection Officer may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools under the observation of Cadent.

In special circumstances, consideration may be given to a relaxation of these rules by agreement with the Cadent Plant Protection Officer and only whilst they remain on site.



#### 5.1.3 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a clearance distance of 600mm between the crown of the asset and underside of the service should be maintained. If this cannot be achieved, the service shall cross below the asset (see Section 5.1.4).

In special circumstances, this distance may be reduced at the discretion of the Cadent Plant Protection Officer on site.

#### 5.1.4 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a clearance distance of 600mm between the crown of the new service and underside of the asset shall be maintained. Where lengths of pipe greater than one metre are to be exposed, the Cadent Plant Protection Officer shall be consulted. Exposed assets should be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.





In special circumstances, this clearance distance may be reduced at the discretion of the Cadent Plant Protection Officer on site.

#### 5.1.5 Cathodic protection

Cathodic protection (CP) is applied to Cadent's buried steel pipe and is a method of protecting assets from corrosion by maintaining an electrical potential between the pipe and anodes placed at strategic points along the asset.

Where a new service is to be laid and similarly protected, the party installing the CP system shall undertake tests to determine whether the new service is interfering with the cathodic protection of Cadent assets.

Should any cathodic protection posts or associated apparatus need to be moved to facilitate third party works, at least 14 days' notice shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

#### 5.1.6 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment and method statement shall be submitted to Cadent for approval, prior to the works commencing.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's assets. The costs for any stray current mitigation systems required will be borne by the promoter of the works.

## 5.2 Construction traffic

Where existing roads cannot be used, construction traffic shall only cross an asset at locations agreed with the Cadent Plant Protection Officer. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points, and the fence should cover the width of the easement and extend a further 6 metres along the length of the easement on both sides (see Figure 2).

Assets shall be protected at all crossing points by a suitable method agreed with the Cadent Plant Protection Officer prior to installation. The promoter of the works shall

review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the protection required.

For larger scale projects or permanent solutions, a protection slab may be required.







## 5.3 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of an asset. The promoter of works is required to consult Cadent when intending to undertake one of the listed activities and/or further advice is required on whether the work has the potential to affect the asset. The table below shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought.

| Activity                   | Distance within which Cadent advice shall be sought  |
|----------------------------|--|
| Piling                     | 15m  |
| Surface mineral extraction | 100m   |
| Landfilling                | 100m   |
| Demolition                 | 150m or 400m for structure mass > 10,000 tonnes  |
| Blasting                   | 500m if the MIC is > 200kg 250m if the MIC is > 10kg but $\leq$ 200kg 100m if the MIC is $\leq$ 10kg |
| Deep mining                | 1000m  |
| Wind turbine               | 1.5 times mast height  |

#### 5.3.1 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced. This risk assessment and method statement shall be formally agreed with Cadent prior to the commencement of the work. Please provide Cadent with at least 14 days' notice as the Cadent Plant Protection Officer may wish to be present to monitor this work.

#### 5.3.2 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Cadent shall be consulted for any activity proposed that will lead to a change in cover over the asset. Expert advice may need to be sought, which will be determined by the Cadent Plant Protection Officer.



#### 5.3.3 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec. The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

#### 5.3.4 Demolition

No demolition should be allowed within 150m of an asset, or 400m for a structure mass greater than 10,000t without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

#### 5.3.5 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

The peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance.







The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

#### 5.3.6 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of an asset. Consideration should also be given to extraction around other plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined by Cadent. The easement strip should be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, Cadent shall assess whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 5.3.5 apply.

#### 5.3.7 Deep mining

Assets within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

#### 5.3.8 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of an asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which an asset is routed.





#### 5.3.9 Pressure testing

Hydrostatic testing of a third-party asset should not be permitted within 8 metres either side of a Cadent asset, to provide protection against the effects of a burst. Where this cannot be achieved, typically where the third-party asset needs to cross a Cadent asset, one of the following precautions would need to be adopted:

- Iimiting of the design factor of the third-party pipeline to 0.3 at the asset's nominated maximum operating pressure (MOP), and the use of pre-tested pipe
- the use of sleeving
- Cadent conduct risk analysis of pipe failure

In either case, the third party shall submit their site-specific risk assessment and safe system of works for consideration by Cadent.

#### 5.3.10 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of an asset that will result in peak particle velocities in excess of 75mm/sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

#### 5.3.11 Hot work

Where a Cadent metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions has been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, should not take place within 500mm of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent Plant Protection Officer to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent Plant Protection Officer shall be present to monitor all welding, burning or other 'hot work' that takes place.

#### 5.3.12 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of a gas asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) -Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.





#### 5.3.13 Solar farms

Solar Farms can be built adjacent to gas assets but never within an easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) -Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

#### 5.4 Backfilling

No backfilling should be undertaken without Cadent's agreement to proceed and the Cadent Plant Protection Officer will stipulate the necessary requirements. Some equipment may not be suitable for use over or around an asset due to the adverse effects of excessive compaction and vibration levels. The Cadent Plant Protection Officer will be able to advise on suitable equipment. Third parties undertaking work shall provide Cadent with 48 hours' notice, or shorter only if agreed with Cadent, of the intent to backfill over, under or alongside the asset.

This requirement should also apply to any backfilling operations that:

- are within 3 metres of an asset
- could influence the ground stability

Any damage to an asset or its coating shall be reported to Cadent in order that damage can be assessed, and repairs carried out.

Minor damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If an asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party shall re-excavate to enable the condition of the asset coating to be assessed.





## 6. Working in the Vicinity of a Medium Pressure Gas Asset (Operating at Pressures Greater than 75 mbar but not Exceeding 2 bar)

The below information shall only be used as guidance, and where appropriate, will be supplemented by site specific safe working advice from the network Plant Protection Officer.

Initial enquires are for information only purposes and will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry for assessment.

#### 6.1 Temporary and permanent structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for medium pressure assets is as follows:

| Material          | Minimum proximity to premises                        |
|-------------------|--|
| Cast/Spun Iron    | 3m   |
| Ductile Iron      | 30m  |
| Steel             | 1m   |
| PE (inserted)     | 1m   |
| PE (non-inserted) | 2m for diameters ≤ 500mm<br>5m for diameters > 500mm |

Please note that the easement distance may be greater than the building proximity distance. For any proposed structures in the easement, please consult with the Cadent network Plant Protection Officer.







#### 6.2 Excavation

#### 6.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of the asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until the asset has been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of a gas asset. Any mechanical excavation should utilise a banksman. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on an asset shall be exposed by hand.

Where concrete is exposed around gas apparatus, it shall not be removed without first consulting with a Cadent Plant Protection Officer as it could be providing protection or anchorage to live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with an asset.

The use of chain trenchers is not permitted within 3m of the confirmed location of an asset.

#### 6.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered and, where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works, including basement conversions, underground carparks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered, care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework, any corrosion identified on the pipeline shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.







#### 6.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or other gas assets.

After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing.

No new service shall be laid parallel to the asset within the easement.

Where work is being carried out parallel to the asset, within or alongside the easement, suitable barriers shall be erected between the works and the asset to prevent encroachment or damage.

#### 6.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

#### 6.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over a gas asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 6.2.6.

#### 6.2.6 Crossing below an asset (Open cut)

Where a service is to cross below a gas asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.





#### 6.2.7 Cathodic protection

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system shall liaise with the Cadent Plant Protection Officer and undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, at least 14 days' notice shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

#### 6.2.8 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party, a risk assessment carried out and this shall be provided to the Cadent Plant Protection Officer for inspection. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets is required.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of cathodic protection systems. In these instances, Cadent will require the promoter of the works to work with the Cadent Plant Protection Officer to ensure that pre and post energisation potential surveys of Cadent's assets are undertaken. The costs for any stray current mitigation systems required will be borne by the third-party promoter.

#### 6.3 Construction traffic

The promoter of the works shall review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs should be allowed over gas assets.

Iron pipes, or pipes that are not already within an existing road (such as those within footways or verges), shall not be crossed by construction vehicles without suitable protection and the consent of the Cadent Plant Protection Officer.

Where existing roads cannot be used, construction traffic should only cross Cadent assets at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 2).
- Have signs attached to the fence denoting the asset that the crossing point is located over







Be regularly inspected and maintained in good condition

Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)

For larger scale projects or permanent crossings, diversion of the asset may be required.









## 6.4 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below to obtain further site-specific advice on whether the work has the potential to affect the asset. The table below shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought.

| Activity                   | Distance within which Cadent advice shall be sought  |
|----------------------------|--|
| Piling                     | 15m  |
| Surface mineral extraction | 100m   |
| Landfilling                | 100m   |
| Demolition                 | 150m or 400m for structure mass > 10,000 tonnes  |
| Blasting                   | 500m if the MIC is > 200kg 250m if the MIC is > 10kg but $\leq$ 200kg 100m if the MIC is $\leq$ 10kg |
| Deep mining                | 1000m  |
| Wind turbine               | 1.5 times mast height  |

#### 6.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge, you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

#### 6.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced and submitted to the Cadent Plant Protection Officer for review prior to commencing work. Please provide Cadent with at least 14 days' notice as we may wish to be present to monitor the work.



#### 6.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets, an integrity assessment should be carried out according to the industry standard **IGEM/TD/12 – Pipework stress analysis for gas industry plant**. An expert on Soil/Pipe Interaction Analysis should be consulted when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works, due to the likely impact on our assets.

#### 6.4.3 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Where a change in cover is required, contact your network Plant Protection Officer.

#### 6.4.4 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made, which may require expert advice.







#### 6.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

#### 6.4.6 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.







#### 6.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of a gas asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined. Where an easement exists, the easement strip shall be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 6.4.6 apply.

#### 6.4.8 Deep mining

Gas assets within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

#### 6.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

#### 6.4.10 Pressure testing

Pressure testing should not be permitted within 8m of an asset unless suitable precautions have been taken against the effects of a pipe failure.







#### 6.4.11 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

#### 6.4.12 Hot work

Where the Cadent's metallic gas assets have been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions have been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, shall not take place within 500mm of the gas asset. For further advice contact your network Plant Protection Officer.

Protection measures shall be agreed with the Cadent Plant Protection Officer prior to installation to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

The Cadent Plant Protection Officer will determine the need to remain on site to monitor all welding, burning or other 'hot work' that takes place.

#### 6.4.13 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) -Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

#### 6.4.14 Solar farms

Solar Farms can be built adjacent to gas assets, but never within an easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.





Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) -Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

#### 6.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of medium pressure apparatus a site-specific risk assessment and lift plan is required to be reviewed by the Cadent Plant Protection Officer.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

#### 6.5 Backfilling and reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset, or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset.

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe.

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the asset shall not exceed 1.5t/m<sup>2</sup> and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks





Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the main.

Prior to backfilling, if the asset is coated, Cadent require the opportunity to inspect its condition in order assess and to carry out any repairs as necessary. Please contact your network Plant Protection office to arrange this. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Officer so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.







## 7. Working in the Vicinity of a Low Pressure Gas Asset (Operating at Pressures up to 75 mbar)

For planned and emergency works in the vicinity of Low Pressure gas assets, the promoter will be advised proceed with caution. The guidance contained within this section must be followed. If it cannot, contact shall be made with the network Plant Protection office for advice.

## 7.1 Temporary and permanent structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for low pressure assets is as follows:

| Material      | Minimum proximity to premises |
|---------------|-------------------------------|
| All materials | 1m                            |

Please note that the easement distance may be greater than the building proximity distance, for any proposed structures in the easement please consult with the Cadent network Plant Protection Officer.

#### 7.2 Excavation

#### 7.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of an asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until gas assets have been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of gas assets. Any mechanical excavation should utilise a banksman. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on the asset shall be exposed by hand.





Where concrete is exposed around gas apparatus this shall not be removed as it could be providing protection or anchorage to the live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with the asset.

The use of chain trenchers to do this is not permitted within 3m of the confirmed location of the asset.

#### 7.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered, and where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works including basement conversions, underground carparks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and is protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework should any corrosion be identified on the pipeline this shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.

#### 7.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or other gas assets.

After the completion of the work, the level of cover over an asset should be the same as that prior to work commencing.

No new service shall be laid parallel to an asset within an easement.

Where work is being carried out parallel to an asset, within or alongside an easement, suitable barriers shall be erected between the works and the asset to prevent encroachment or damage.

#### 7.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by





mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

#### 7.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 7.2.6.

#### 7.2.6 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

#### 7.2.7 Cathodic protection

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system shall undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, appropriate notice, shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

#### 7.2.8 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment carried out. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets will be required.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of cathodic protection systems. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's assets. The costs for any stray current mitigation systems required will be borne by the third-party promoter.

## 7.3 Construction traffic

The promoter of the works should review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs shall be allowed over gas assets.





Iron pipes, or pipes that are not already within an existing road such as those within footways or verges shall not be crossed by construction vehicles without suitable protection being designed and installed. Consideration shall be given to the requirement for access to low pressure apparatus therefore for large scale, long duration projects, or permanent crossings, the diversions process shall be followed to determine whether the asset requires diversion/replacement in advance of the works taking place.

Where existing roads cannot be used, construction traffic should only cross Cadent assets with a minimum depth of cover of 750mm (post crossing construction) at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 2).
- Have signs attached to the fence denoting the asset that the crossing point is located over
- Be regularly inspected and maintained in good condition

Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)





## 7.4 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below and further advice is required on whether the work has the potential to affect the asset.

#### 7.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

#### 7.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced prior to commencing work.

Trial holes shall be undertaken to ensure that sufficient clearance exists between gas assets and the proposed third-party asset (or the pipe to be split if a pipe splitting technique is being used) prior to the works.

If an asset is to be replaced using pipe splitting techniques in the vicinity of iron mains, in addition to the below clauses, an integrity assessment shall be undertaken.

When running parallel to gas assets, the minimum clearance shall be:

**1**m

When crossing gas assets, the minimum clearance shall be:

**5**00mm or 1.5 times the diameter of the asset, whichever is greater.

Clearances may need to be increased due to the following factors:

- Ground conditions
- Largest reamer diameter
- Type of reamer used, e.g. hollow, finned, etc.
- Accuracy of equipment being used
- Construction of adjacent services and structures
- Configuration of other underground services crossing or running parallel to the drill path
- Consequences of damage
- Pipe stress increase from potential ground movement





The exposed asset should be suitably supported and be protected by matting and suitable timber cladding to reduce the risk of damage from any broken pipe fragments (if pipe

splitting is used). Supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

All lateral crossings shall be exposed around their full circumference with an additional 250mm clearance below. The width of the excavation shall be three times the diameter of the largest reamer or 500mm either side of the largest reamer, whichever is the greatest. These clearances shall be measured from the drill path centre. Each crossing should be manned during the drilling/splitting operation to watch the reamer/splitter pass.

For pipe splitting running parallel to a buried gas asset, trial holes should be undertaken at suitable and frequent locations along the proposed route to confirm sufficient clearance distances exist, and the pipe route is confirmed.

The line of the pipe to be installed/split should be monitored along its length to ensure no variance from its path.

Consideration should be given for a leakage survey to be undertaken before work starts, during the works if safe to do so and following completion. If there is any likelihood of damage to the asset, the operation shall be stopped immediately.

#### 7.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets an integrity assessment should be carried out according to the industry standard **IGEM/TD/12 – Pipework stress analysis for gas industry plant**. An expert on Soil/Pipe Interaction Analysis should be sought when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, due to the likely impact on our assets you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.




# 7.4.3 Changes to depth of cover

The depth of cover over or around Cadent's iron assets shall not be altered. If a change in the depth of cover is required, you must contact the diversions team to arrange for diversion or replacement of the asset before commencement of your works.

For PE and steel pipes, reductions in depth of cover are only permitted if the below minimum depths of cover can be maintained (following investigation across the affected length):

- In fields and agricultural land 1.1m
- In roads and verges 750mm
- In footpaths 600mm
- In private property 600mm

Substantial increases in depth of cover shall not be permitted.

Where a change in the depth of cover affects attachments and projections such as services and valves, liaison with our diversions team is required to ensure these are appropriately protected or altered.

### 7.4.4 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made, which may require expert advice.







# 7.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought.

Where demolition is proposed you must ensure that the gas supply to the premises has been isolated in a suitable, identified location.

### 7.4.6 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.







Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought.

# 7.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of an asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined. Where an easement exists, the easement strip shall be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability.

This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 7.4.6 apply.

### 7.4.8 Deep mining

Assets routed within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance.

# 7.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. An assessment shall be carried out by the promoter of the works to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.







# 7.4.10 Pressure testing

Pressure testing should not be permitted within 8m of an asset unless suitable precautions have been taken against the effects of a pipe failure.

### 7.4.11 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

### 7.4.12 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, shall not take place within 500mm of the gas asset.

Protection measures shall be installed to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset shall require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

### 7.4.13 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) -Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

### 7.4.14 Solar farms

Solar Farms can be built adjacent to assets but never within an easement.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.







Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) -Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

## 7.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of low pressure apparatus a site-specific risk assessment and lift plan is required.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

# 7.5 Backfilling and reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the pipe shall not exceed 1.5t/m<sup>2</sup> and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks
- Foamed concrete shall not be used





We will require marker tape to be installed at least 250mm above the crown of the pipe. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Office so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.







# 8. Working in the Vicinity of a Pressure Reduction Installation (PRI)

Pressure reduction installations come in a variety of forms:

- Above Ground Installation (AGI) Sites with exposed pipes surrounded by fencing
- Above Ground Installation (AGI) District governors often found in large above ground kiosks with vent stacks attached
- Below Ground Installation District governors with large surface governors for valves and pressure reduction equipment with an above ground control cabinet and vent stack
- Service governor Installations Small service governors providing gas to a small number of customers in an area often identified by a small green or brick kiosk

Where excavations are to be made within 10 metres of the perimeter of a pressure reduction installation (above or below ground), with the exception of service governor installations, appropriate protection methods should be determined and recorded by the Cadent Plant Protection Officer.

These installations may have magnetic slam shut devices which could operate in the event of high vibration levels being caused by the works. Advice on whether these are present shall be sought from the Cadent Plant Protection Officer and we may need to have an operative, with the competence to reset the plant, on site whilst your works are being undertaken.

Hazardous areas may be present around these installations and no ignition sources are permitted within these zones. Information on the zonings shall be sought from the Cadent Plant Protection Officer prior to commencement of any works on site.

There may be telemetry and pressure recording lines in the vicinity of these installations therefore extreme caution must be exercised when planning and undertaking works it the vicinity of these assets.

In addition to this, the safety advice detailed in either or a combination of Sections 5, 6 or 7 shall be observed when working in the proximity of an AGI.

Access to gas assets shall be maintained at all times.







# 9. Tree Planting

Before any tree planting is carried out in the vicinity of a Cadent asset or its easement, written consent should be obtained. This approval should be subject to Cadent retaining the right to remove any trees which might become a danger or restrict access to the asset at any time in the future.

The only hardwood plants which can be planted directly across an asset are shallow rooting hedge plants such as Quickthorn, Blackthorn, etc., and these shall only be planted where a hedge is necessary for screening or to indicate a field boundary.

Raspberries, Gooseberries and Blackcurrants shall not be planted within 2m of the outside edge of the pipe.

Dwarf Apple Stocks shall not be planted within 3m of an asset.

Christmas trees (Picea Abies) shall not be planted within 3 metres of an asset. However, permission may be given on the strict understanding that Christmas trees are clear-felled at intervals not exceeding seven years.

The following trees, and those of similar size which may be deciduous or evergreen, shall not be planted within 6 metres of an asset:

Ash, Beech, Birch, most Conifers, Elm, Maple, Horse Chestnut, Oak, Sycamore, Apple, Lime and Pear trees.

Dense mass planting shall not be carried out within 10m of the outside edge of the pipe.

Poplar and Willow trees shall not be planted within 10m of the outside edge of the pipe.

For further guidance please refer to NJUG Volume 4.







# **10. Unidentified Exposed Pipes**

An unidentified pipe is one that is not shown on any current or historical records.

Iron and steel water pipes and gas pipelines may appear very similar. If any such pipe is uncovered, it shall be treated as if it were a gas pipe.

If upon checking with all other utilities you believe an unidentified pipe to be a gas pipe, the promoter of the works shall contact <a href="mailto:plantprotection@cadentgas.com">plantprotection@cadentgas.com</a> with the following information:

- LSBUD enquiry reference
- Site address (please include postcode and grid references)
- Site contact details
- Size of pipe
- Pipe material
- Confirmation that the unidentified pipe is exposed (if not, it will need to be exposed prior to our attendance)
- Confirmation that Cadent and all other asset owners plans, are available for review and inspection
- Photos of the pipe

Please be aware that it can take up to 28 days for us to confirm whether the unidentified exposed pipe is a gas asset or not.







# 11. Action in case of Damage to an Asset

If you hit a gas asset, whether the damage is visible or not, or in the event of an emergency, call the National Gas Emergency Service immediately on 0800 111 999\*.

If the Cadent asset is damaged, even slightly, and even if no gas leak has occurred, then the following precautions shall be taken immediately:

- Shut down all plant and machinery and extinguish any potential sources of ignition.
- Evacuate all personnel from the vicinity of the asset
- Notify Cadent using the free 24-hour emergency telephone number 0800 111999
- Notify the Cadent responsible person immediately using the contact telephone number provided.
- Ensure no one approaches the asset.
- Do not try to stop any leaking gas.
- Provide assistance as requested by Cadent, or emergency services to safeguard persons and property









# 12. References

| Document<br>reference | Title   |
|-----------------------|---|
| HASAWA                | The Health and Safety at Work etc Act 1974  |
| CDM                   | The Construction (Design and Management) Regulations 2015   |
| LOLER                 | Lifting Operations and Lifting Equipment Regulations 1998   |
| RIDDOR                | Reporting of Injuries, Diseases & Dangerous Occurrences<br>Regulations 2013,  |
| GS(M)R                | Gas Safety (Management) Regulations 1996  |
| PSR                   | Pipelines Safety Regulations 1996   |
| NRSWA                 | New Roads and Street Works Act 1991   |
| HS(G)47               | Avoiding Danger from Underground Services   |
| IGEM/SR/18            | Safe Working Practices to Ensure the Integrity of Gas<br>Pipelines and Associated Installations                                 |
| IGEM/TD/12            | Pipework stress analysis for gas industry plant   |
| NJUG Volume 4         | Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees                            |
| UKOPA/11/0027         | Requirements for the Siting of Wind Turbines Close to HP<br>Pipelines   |
| UKOPA/GP/013          | Requirements for the Siting and Installation of Wind Turbines<br>Installations in the Vicinity of Buried Pipelines              |
| UKOPA/GP/014          | Requirements for the Siting and Installation of Solar<br>Photovoltaic (PV) Installations in the Vicinity of Buried<br>Pipelines |







# 13. Glossary of Terms

| Term                                  | Definition  |
|---------------------------------------|---|
| Easement                              | Easements are negotiated legal entitlements between<br>Cadent and landowners and allow Cadent to lay, operate and<br>maintain assets within the easement strip. Easement strips<br>may vary in width, typically between 6 and 25 metres<br>depending on the diameter and pressure of the pipeline.<br>Consult Cadent for details of the extent of the easement<br>strip where work is intended.                         |
| Liquefaction                          | Liquefaction is a phenomenon in which the strength and<br>stiffness of the soil is reduced by earthquake shaking or<br>other rapid loading. Liquefaction occurs in saturated soils,<br>that is, soils in which the space between individual particles is<br>completely filled with water. When liquefaction occurs, the<br>strength of the soil decreases and the ability of the soil to<br>support assets are reduced. |
| Promoter of<br>works                  | The person or persons, firm, company or authority for whom<br>new services, structures or other works in the vicinity of<br>existing Cadent assets and associated installations<br>operating above 7 bar gauge are being undertaken.  |
| Cadent Plant<br>Protection<br>Officer | The person or persons appointed by Cadent with the competencies required to act as the Cadent representative for the purpose of monitoring a particular activity.   |
| Banksman                              | Another person who assists the machine operator from a position where they can safely see into the excavation and warn the driver of any services or other obstacles.<br>This person should remain outside of the operating radius of the excavator arm and bucket.   |





# Appendix A – Asset Location Markers









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| From:        | Enquiries, Unit <enquiries@environment-agency.gov.uk></enquiries@environment-agency.gov.uk> |
|--------------|---|
| Sent:        | 28 September 2021 18:13   |
| То:          | Utility Solutions GDC Requests  |
| Subject:     | Saved/RPA FW: Plant Enquiry - 100245 - Site off Queens Road,                                |
|              | Immingham - Please respond by 13/10/2021  |
| Attachments: | 100245-Map.pdf  |

Dear Customer,

You may need an environmental permit if you intend to carry out work in, under, over or near to a main river flood or sea defence. You can find more information about this at:

https://www.gov.uk/guidance/flood-risk-activities-environmental-permits

Although the Environment Agency is classed as a statutory undertaker for certain purposes, we do not generally have plant equipment or pipelines situated in the public highway.

We have drafted this reply without conducting a specific search of our records. We ask that you make the necessary checks and if you have reason to think that your proposal will affect land or equipment which we own or is close to a watercourse as defined above, please resubmit your enquiry making this clear in your reply.

Kind regards

Liam Morris Incident Communication Service Operations: Regulation, Monitoring and Customer Environment Agency

External number: 0800 80 70 60
 Web Site: <a href="http://www.gov.uk/environment-agency">www.gov.uk/environment-agency</a>

Click an icon to keep in touch with us:-



From: requests.utilitysolutions@atkinsglobal.com
[mailto:requests.utilitysolutions@atkinsglobal.com]
Sent: 27 September 2021 05:13
Cc: requests.utilitysolutions@atkinsglobal.com
Subject: Plant Enquiry - 100245 - Site off Queens Road, Immingham - Please respond by 13/10/2021

Our Reference: 100245 Site Name: Site off Queens Road, Immingham Works Description: Development Appraisal Site Grid References: 520610 415720,521083 416229,519144 415638,520805 416488,520193 414952

To whom it may concern,

# Standard notice [not for use with Special Data, Personal Data or unlicensed 3rd party rights]



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| Enquirer |   |        |              |  |
|----------|---|--------|--------------|--|
| Name     | Mr Ben Evans  | Phone  | 01454662086  |  |
| Company  | Atkins - Utility Solutions  | Mobile | Not Supplied |  |
| Address  | The Hub, 500 Park Avenue, Aztec West<br>Almondsbury Bristol<br>BS32 4RZ |        |              |  |
| Email    | searches.utilitysolutions@atkinsglobal.com                              |        |              |  |

| LM 100245/DoM       |  |  |   |  |  |  |
|---------------------|--|--|---|--|--|--|
| Initial Enquiry     | Work cate  | gory   | Utility V   | Vorks  |  |  |
| 13/10/2021 Work typ |  |  | Work type Single excavation   |  |  |  |
| 13/01/2022          | Site size  |  | 747114 metres square  |  |  |  |
| XY= 520390, 415640  | Work type buf  |  | 50 meti   | ietres   |  |  |
| 520645 415741       |  |  |   |  |  |  |
| Not Supplied        |  |  | one No  | Not Supplied   |  |  |
|                     |  | 1  |   |  |  |  |
|                     |  |  |   |  |  |  |
|                     | Initial Enquiry<br>13/10/2021<br>13/01/2022<br>XY= 520390, 415640<br>520645 415741 | Initial Enquiry       Work cate         13/10/2021       Work type         13/01/2022       Site size         XY= 520390, 415640       Work type         520645 415741       Vork type | Initial EnquiryWork category13/10/2021Work type13/01/2022Site sizeXY= 520390, 415640Work type buffer*520645 415741Site size | Initial EnquiryWork categoryUtility W13/10/2021Work typeSingle G13/01/2022Site size747114XY= 520390, 415640Work type buffer*50 metr520645 415741Site size50 metr |  |  |

\* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.





#### LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

| List of affected LSBUD members |             |                |                |  |  |  |  |
|--------------------------------|-------------|----------------|----------------|--|--|--|--|
| Asset Owner                    | Phone/Email | Emergency Only | Status         |  |  |  |  |
| Cadent Gas                     | 0800688588  | 0800111999     | Await response |  |  |  |  |
| National Grid Gas Transmission | 01926654844 | 0800404090     | Await response |  |  |  |  |

LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD Members make regular changes to their assets and this list may vary for new enquiries in the same area.

# List of not affected LSBUD members

| AWE Pipeline                                   | Balfour Beatty Investments Limited       | BOC Limited (A Member of the Linde Group)                                 |
|--|--|---|
| Box Broadband                                  | BP Exploration Operating Company Limited | BPA   |
| Carrington Gas Pipeline                        | CATS Pipeline c/o Wood Group PSN         | Cemex   |
| Centrica Storage Ltd                           | CNG Services Ltd                         | Concept Solutions People Ltd  |
| ConocoPhillips (UK) Teesside Operator Ltd      | Diamond Transmission Corporation         | DIO (MOD Abandoned Pipelines)   |
| DIO (MOD Live Pipelines)                       | E.ON UK CHP Limited                      | EirGrid   |
| Electricity North West Limited                 | ENI & Himor c/o Penspen Ltd              | EnQuest NNS Limited   |
| EP Langage Limited                             | ESP Utilities Group                      | ESSAR   |
| Esso Petroleum Company Limited                 | euNetworks Fiber UK Ltd                  | Exolum Pipeline System  |
| Fulcrum Pipelines Limited                      | Gamma                                    | Gas Networks Ireland (UK)   |
| Gateshead Energy Company                       | Gigaclear Ltd                            | Gtt   |
| Harbour Energy                                 | Heathrow Airport LTD                     | Humbly Grove Energy   |
| IGas Energy                                    | INEOS FPS Pipelines                      | INEOS Manufacturing (Scotland and TSEP)                                   |
| INOVYN ChlorVinyls Limited                     | INOVYN Enterprises Limited               | Intergen (Coryton Energy or Spalding Energy)                              |
| Jurassic Fibre Ltd                             | Last Mile                                | Mainline Pipelines Limited  |
| Manchester Jetline Limited                     | Manx Cable Company                       | Marchwood Power Ltd (Gas Pipeline)  |
| Melbourn Solar Limited                         | Murphy Utility Assets                    | National Grid Electricity Transmission                                    |
| Neos Networks                                  | Northumbrian Water Group                 | NPower CHP Pipelines  |
| NTT Global Data Centers EMEA UK Ltd            | NYnet Ltd                                | Oikos Storage Limited   |
| Ørsted   | Palm Paper Ltd                           | Perenco UK Limited (Purbeck Southampton<br>Pipeline)                      |
| Petroineos                                     | Phillips 66                              | Portsmouth Water  |
| Premier Transmission Ltd (SNIP)                | Redundant Pipelines - LPDA               | RWE - Great Yarmouth Pipeline (Bacton to Great<br>Yarmouth Power Station) |
| RWEnpower (Little Barford and South Haven)     | SABIC UK Petrochemicals                  | Scottish and Southern Electricity Networks                                |
| Scottish Power Generation                      | Seabank Power Ltd                        | SES Water   |
| SGN  | Shell                                    | Shell NOP   |
| SSE Generation Ltd                             | SSE Transmission                         | SSE Utility Solutions Limited   |
| Tata Communications (c/o JSM Construction Ltd) | Total Colnbrook Pipelines                | Total Finaline Pipelines  |
| Transmission Capital                           | UK Power Networks                        | Uniper UK Ltd   |
|  |  |   |

| University of Cambridge Granta Backbone<br>Network | Vattenfall                 | Veolia ES SELCHP Limited |
|--|----------------------------|--------------------------|
| Veolia ES Sheffield Ltd                            | VPI Power Limited          | Wales and West Utilities |
| West of Duddon Sands Transmission Ltd              | Western Power Distribution | Westminster City Council |
| Zayo Group UK Ltd c/o JSM Group Ltd                |                            |                          |









Worksite Survey Team National Records Centre Audax Road YORK

YO30 4US

**NRSWA Asset Enquiries** 

Dear Sir/Madam,

#### Please find information available as per the checklist.

The information contained herein is based on Network Rail's records and, where appropriate, third parties such as utility companies. The search enclosed does not cover a search of local council records. Also, schematic Signal and Telecom (S&T) cables plans are not provided as part of the search results, therefore you must assume S&T cables are present until proven otherwise.

Although at the date of this letter the information is as up to date as possible, it is **NOT** a statement of validity, accuracy or completeness as to any of the enclosed search information and must not be relied on as such.

Your risk assessment **MUST** take into account:

- That the information supplied, including the services shown on the map from the Rail Infrastructure Network Model (RINM), does not provide any guarantee as to the accuracy of the actual location of services on site and **MUST** be considered as for guidance purposes only.
- That new/unrecorded services are likely to be present
- That the enclosed buried services search information has been collated only for the ELR and Mileage boundaries as stated on the original request form

Included in the buried services search is a list of ASPRO engineers & managers you **MUST** contact before any ground disturbance is carried out, to check whether further information is held locally.

Further guidance can be obtained from the Health and Safety Executive publication HSG47 "Avoiding Danger from Underground Services" and the Network Rail Publication NR/L2/INI/CP1030.

Should you become aware of any additional underground services or assets within the locality during your investigations and/or works, including redundant assets, please identify them as a matter of urgency to the site manager. Records of the location of these assets should be kept for onward transmission and entry into the Hazard Directory.

Yours sincerely

#### **NRSWA** Team

Worksite Survey

NetworkRail

| <b>Buried Services</b> |  |
|------------------------|--|
| Information Checklist  |  |
|                        |  |



**NIL RETURN:** After interrogating the information made available to us, no records containing buried services information have been returned for this worksite. However, reference must be made to the guidelines supplied with this buried services search, which contain important information on safe working practices.





Order ID: 108762

| ELR  | Start Mileage | End Mileage |
|------|---------------|-------------|
| PYE1 | 106.0255      | 106.1198    |
| BRI2 | 105.0648      | 106.0931    |
| PYE2 | -0.0210       | 0.0016      |

**National** 

Hazard

Directory



#### **Terms and Conditions**

The National Hazard Directory (NHD) is issued by Network Rail to provide information on those hazards recorded as present on Network Rail's infrastructure. Its' purpose is to alert users to the typical hazards they may come across whilst working on Network Rail's Infrastructure. The National Hazard Directory is maintained by Network Rail to provide its employees and contractors with information on known hazards present on the infrastructure in order to assist in the identification of the associated risks working 'on or near the line'.

The records are updated regularly and therefore Network Rail believe that the contents are reasonably accurate at the time of issue, but some of the information can vary in age and accuracy so for that reason Network Rail will give no warranty as to the suitability of its use. It is recommended that all searches (in particular for buried services) should be conducted together with a site specific risk assessment/site visit, taking into account the requirements of the appropriate track safety rules, rule books/industry standards and so on. Network Rail will accept no liability in respect of the content or subsequent use of the National Hazard Directory or any of the information contained within.

Users of the Directory must note that when working on or near the line that the appropriate requirements of the Rule Book, especially the provisions of the track safety rules, must be applied as appropriate to the activity concerned.

OnTrac Ltd does not warrant the use of the Network Rail National Hazard Directory or any of the information contained within and no representations or warranties are made as to completeness or accuracy of the data. The data should be used for reference purposes only. Accordingly, OnTrac Ltd will accept no responsibility for loss of profit or for any indirect, incidental or consequential damages.

#### **National Hazard Directory**

#### **Customised Report**

Search Criteria: ELR(s) = PYE1; Mileage From = 106.0255; Mileage To = 106.1198; Hazard Code(s) = HB, HBA, HBC, HBCS, HBD, HBE, HBF, HBFR, HBFS, HBG, HBI, HBL, HBM, HBN, HBO, HBP, HBR, HBS, HBSW, HBT, HBU, HBW, HCT, HU, HXE Date: 27/09/2021

|      | 5 Hazards found.                                       |                 |               |                |                                |                                 |                        |                                   |  |  |
|------|--|-----------------|---------------|----------------|--------------------------------|---------------------------------|------------------------|-----------------------------------|--|--|
| ELR  | ELR Name   | Mileage<br>From | Mileage<br>To | Hazard<br>Code | Hazard<br>Description          | Local Name                      | Track ID               | Free Text                         |  |  |
| PYE1 | PYEWIPE (IMMINGHAM EAST DOCK<br>JCN TO MILEAGE CHANGE) | 106.0748        | 106.0748      | HBG            | Buried Gas<br>Pipe             | FORMER SIGNAL<br>BOX            | All/Multiple<br>Tracks | High Pressure<br>Gas Pipeline.    |  |  |
| PYE1 | PYEWIPE (IMMINGHAM EAST DOCK<br>JCN TO MILEAGE CHANGE) | 106.0748        | 106.0748      | HBW            | Buried Water<br>Main           | FORMER SIGNAL<br>BOX            | All/Multiple<br>Tracks | High Pressure<br>Water Pipeline.  |  |  |
| PYE1 | PYEWIPE (IMMINGHAM EAST DOCK<br>JCN TO MILEAGE CHANGE) | 106.0748        | 106.0748      | HBF            | Buried Foul<br>Water Service   | FORMER SIGNAL<br>BOX            | All/Multiple<br>Tracks | Sewage.                           |  |  |
| PYE1 | PYEWIPE (IMMINGHAM EAST DOCK<br>JCN TO MILEAGE CHANGE) | 106.0748        | 106.0748      | HB             | Buried<br>Service              | IMMINGHAM<br>EAST SIGNAL<br>BOX |                        | High Tension<br>Cable.<br>TELECOM |  |  |
| PYE1 | PYEWIPE (IMMINGHAM EAST DOCK<br>JCN TO MILEAGE CHANGE) | 106.0748        | 106.0748      | HBE            | Buried<br>Electrical<br>Cables | FORMER SIGNAL<br>BOX            | All/Multiple<br>Tracks | Electricity<br>Cable.             |  |  |

#### **National Hazard Directory**

#### **Customised Report**

Search Criteria: ELR(s) = BRI2; Mileage From = 105.0648; Mileage To = 106.0931; Hazard Code(s) = HB, HBA, HBC, HBCS, HBD, HBE, HBF, HBFR, HBFS, HBG, HBI, HBL, HBM, HBN, HBO, HBP, HBR, HBS, HBSW, HBT, HBU, HBW, HCT, HU, HXE Date: 27/09/2021

|     | 0 Hazards found. |              |            |             |                    |            |          |           |  |
|-----|------------------|--------------|------------|-------------|--------------------|------------|----------|-----------|--|
| ELR | ELR Name         | Mileage From | Mileage To | Hazard Code | Hazard Description | Local Name | Track ID | Free Text |  |

#### **National Hazard Directory**

#### **Customised Report**

Search Criteria: ELR(s) = PYE2; Mileage From = -0.0210; Mileage To = 0.0016; Hazard Code(s) = HB, HBA, HBC, HBCS, HBD, HBE, HBF, HBFR, HBFS, HBG, HBI, HBL, HBM, HBN, HBO, HBP, HBR, HBS, HBSW, HBT, HBU, HBW, HCT, HU, HXE Date: 27/09/2021

| ELR  | ELR Name   | Mileage | Mileage | Hazard<br>Code | Hazard<br>Description | Local<br>Name |  | Free Text   |
|------|--|---------|---------|----------------|-----------------------|---------------|--|---|
|      |  | From    | To      |                |                       |               |  | Fiee lext   |
| PYE2 | PYEWIPE (MILEAGE CHANGE<br>TO GRIMSBY DOCKS BRB/ABP<br>BOUNDARY) | 0.0000  | 0.0510  | HBG            | Buried Gas<br>Pipe    |               |  | High Pressure Gas Pipeline. RT Document:<br>RTP LP NO.405. 13604/0030 RTP MENTOR<br>REF ACROSS RAILWAY TO NORTH SIDE<br>THEN EAST |
| PYE2 | PYEWIPE (MILEAGE CHANGE<br>TO GRIMSBY DOCKS BRB/ABP<br>BOUNDARY) | 0.0000  | 0.0510  | HBG            | Buried Gas<br>Pipe    |               |  | High Pressure Gas Pipeline. RT Document:<br>RTP LP NO.405. 13604/0030 RTP MENTOR<br>REF ACROSS RAILWAY TO NORTH THEN<br>EAST      |
| PYE2 | PYEWIPE (MILEAGE CHANGE<br>TO GRIMSBY DOCKS BRB/ABP<br>BOUNDARY) | 0.0000  | 2.0080  | HB             | Buried<br>Service     |               |  | High Pressure Pipleline   |
| PYE2 | PYEWIPE (MILEAGE CHANGE<br>TO GRIMSBY DOCKS BRB/ABP<br>BOUNDARY) | 0.0000  | 2.0080  | HBG            | Buried Gas<br>Pipe    |               |  | High Pressure Gas Pipeline. RT Document:<br>RTP LP NO.405. 13604/000? RTP MENTOR<br>REF SOUTH SIDE OF RAILWAY ACROSS<br>AT END    |
| PYE2 | PYEWIPE (MILEAGE CHANGE<br>TO GRIMSBY DOCKS BRB/ABP<br>BOUNDARY) | 0.0014  | 0.0054  | HB             | Buried<br>Service     |               |  | High Tension Cable. RT Document: RTP LP<br>NO.404. 13064/0043 RTP MENTOR REF<br>ACROSS RAILWAY AND SIDINGS AREA                   |
| PYE2 | PYEWIPE (MILEAGE CHANGE<br>TO GRIMSBY DOCKS BRB/ABP<br>BOUNDARY) | 0.0014  | 0.0054  | НВ             | Buried<br>Service     |               |  | High Tension Cable. RT Document: RTP LP<br>NO.404. 13064/0043 RTP MENTOR REF<br>SOUTH SIDE OF RAILWAY AND ACROSS<br>AT END        |





# Network Rail Company Ownership Boundary

Order Polygon

Order ID: 108762 Plot Date: 27/09/21



# User Drawn Polygon / Area of Interest - Order ID : 108762



# Legend

 Commership

 Image: Prechold Ownership

 Image: Prohibitive Interest

 Image: Prohibitive Interest
 <

Nearest station: Stallingborough Stn

Order ID: 108762

Order Ref: 108762 Plot Scale: 1:2500 Page Index: 1 Centre X, Y: 519293, 415088 Plot Date: 27/09/21



# User Drawn Polygon / Area of Interest - Order ID : 108762



# Legend

| Cor | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 15  | Leasehold Ownership      |
| 25  | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
|     | Tunnel                   |
|     | Order Polygon            |



Order ID: 108762

Order Ref: 108762 Plot Scale: 1:2500 Page Index: 2 Centre X, Y: 519293, 415723 Plot Date: 27/09/21



User Drawn Polygon / Area of Interest - Order ID : 108762



# Legend



# Legend

| Cor | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 11  | Leasehold Ownership      |
| 25  | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
|     | Tunnel                   |
|     | Order Polygon            |

### Nearest station: Stallingborough Stn

Order ID: 108762

Order Ref: 108762 Plot Scale: 1:2500 Page Index: 4 Centre X, Y: 520880, 415088 Plot Date: 27/09/21







# Network Rail Company Ownership Boundary

Order Polygon

Order ID: 108762 Plot Date: 27/09/21


**Network Rail - Drainage** 







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| Con | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 11  | Leasehold Ownership      |
| 25  | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
|     | Tunnel                   |
| 击   | Order Polygon            |
|     |                          |



DB Asset Line DC Asset Line

Order Ref: 108762 Plot Scale: 1:1250 Page Index: 2 Centre X, Y: 519094, 415564 Plot Date: 27/09/21



Network Rail - Drainage



| Con | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 1   | Leasehold Ownership      |
| 25  | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
|     | Tunnel                   |
| 日日  | Order Polygon            |



DB Asset Line DC Asset Line

Order Ref: 108762 Plot Scale: 1:1250 Page Index: 3 Centre X, Y: 519094, 415881 Plot Date: 27/09/21



WB



### Legend

| Con | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 11  | Leasehold Ownership      |
| 25  | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
|     | Tunnel                   |
|     | Order Polygon            |



LC

DB Asset Line DC Asset Line

Order Ref: 108762 Plot Scale: 1:1250 Page Index: 4 Centre X, Y: 519491, 415246 Plot Date: 27/09/21







### Legend

| Con | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 11  | Leasehold Ownership      |
| 25  | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
| O   | Tunnel                   |
| 日   | Order Polygon            |



DB Asset Line DC Asset Line

Order Ref: 108762 Plot Scale: 1:1250 Page Index: 6 Centre X, Y: 519888, 414929 Plot Date: 27/09/21





#### Legend

| Con | npany Ownership          |
|-----|--------------------------|
|     | Freehold Ownership       |
| 11  | Leasehold Ownership      |
|     | Prohibitive Interest     |
|     | Bridge (Rail over Rail)  |
|     | Bridge (Rail over River) |
|     | Bridge (Rail over Road)  |
|     | Bridge (Road over Rail)  |
|     | Level Crossing           |
|     | Tunnel                   |
| H   | Order Polygon            |



DB Asset Line DC Asset Line



Order Ref: 108762 Plot Scale: 1:1250 Page Index: 7 Centre X, Y: 519888, 415246 Plot Date: 27/09/21



**Network Rail - Drainage** 



| *  | Con | ipany Ownership          |
|----|-----|--------------------------|
|    |     | Freehold Ownership       |
| -  | 11  | Leasehold Ownership      |
| 50 | 25  | Prohibitive Interest     |
|    |     | Bridge (Rail over Rail)  |
|    |     | Bridge (Rail over River) |
| /  |     | Bridge (Rail over Road)  |
| 2  |     | Bridge (Road over Rail)  |
| 2  |     | Level Crossing           |
|    |     | Tunnel                   |
|    |     | Order Polygon            |
|    |     |                          |



DC Asset Line

**Network Rail - Drainage** 





#### Legend





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DB Asset Line DC Asset Line

Order Ref: 108762 Plot Scale: 1:1250 Page Index: 10 Centre X, Y: 520682, 414929 Plot Date: 27/09/21



Network Rail - Drainage









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| British Railways Board  |          |
| British Railways Board<br>Chief Civil Engineer  |          |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House  | Зy       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>Telephone 0904-5302   | Зy       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>Telephone 0904-5302   | Зy       |
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| <b>British Railways Board</b><br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.S. for Men<br>Asst. Works Engineer<br>4.3.7% Chief Civil Engineer   | Зy       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.S. for Gillen<br>Asst. Works Engineer<br>4.3.76 Chief Civil Engineer<br>MMINGHAM   | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.S. for Gillen<br>Asst. Works Engineer<br>4.3.76 Chief Civil Engineer<br>MMINGHAM   | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.5.<br>A.J.5.<br>Asst. Works Engineer<br>Asst. Works Engineer<br>Asst. Works Engineer<br>Asst. Chief Civil Engineer<br>MMINGHAM<br>raction Maintenance Depot  | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.S. for Green<br>A.3.76 Chief Civil Engineer<br>A.3.76 Chief Civil Engineer<br>MMINGHAM<br>raction Maintenance Depot<br>VERSION OF FOUL DRAINAGE TO SEWE  | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.5.<br>A.J.5.<br>Asst. Works Engineer<br>Asst. Works Engineer<br>Asst. Works Engineer<br>Asst. Chief Civil Engineer<br>MMINGHAM<br>raction Maintenance Depot  | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.J.S. for Green<br>A.3.76 Chief Civil Engineer<br>A.3.76 Chief Civil Engineer<br>MMINGHAM<br>raction Maintenance Depot<br>VERSION OF FOUL DRAINAGE TO SEWE  | By       |
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| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York YOI 1HP<br>J.S. A.J.S. for Gener<br>Asst. Works Engineer<br>4.3.76 Chief Civil Engineer<br>MMINGHAM<br>raction Maintenance Depot<br>NVERSION OF FOUL DRAINAGE TO SEWE<br>etails of Revised Drain Route<br>sale<br>1:100<br>CE. W 38/750/31.  | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York Y01 1HP<br>J.S. A.JS.<br>J.S. A.JS.<br>Asst. Works Engineer<br>Asst. Works | By       |
| British Railways Board<br>Chief Civil Engineer<br>British Rail Eastern<br>Hudson House<br>York YOI 1HP<br>J.S. A.J.S. for Gener<br>Asst. Works Engineer<br>4.3.76 Chief Civil Engineer<br>MMINGHAM<br>raction Maintenance Depot<br>NVERSION OF FOUL DRAINAGE TO SEWE<br>etails of Revised Drain Route<br>sale<br>1:100<br>CE. W 38/750/31.  | By       |



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|                                  |            |   | bridge                  |
|----------------------------------|------------|---|-------------------------|
| •<br>•                           |            |   | Service Pipe overbridge |
|                                  | ·          |   |                         |
|                                  |            |   |                         |
| Cut in 12,192 closer             | 3962 Check | Existing Switches<br>140m Rad.<br>483m Rad. |                         |
| Cut in 13.716 closer<br>Im clear | 3962 Check | 19,849 (S-N)                                | B' SWIT CHES            |
| FUELLING POINT                   |            | · · · · · · · · · · · · · · · · · · ·       | 7050                    |
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# PLAN (SHOWING POSITION OF TOP PLATES)

|  | RAIL FIXING ANCHOR         | WHEEL STOP                                 | ¢<br>Support           | ¢<br>1-1'-1'/2" 2'-6" 2'-6" | € € €<br>2'-7½" 2'-6"     | £. £<br>2'-6* | E RAIL BASE<br>PLATES |
|--|----------------------------|--|------------------------|-----------------------------|---------------------------|---------------|-----------------------|
| TO WORKSHOP  | <b>3</b> 3                 | * AT PITS 1,2 4 3 ONLY<br>3-6" AT PIT Nº 4 | TO OPEN END<br>OF SHED | 3"3" - 3"3" - 2<br>         | <b>3</b> "3" <b>3</b> "3" |               |                       |
| I No. TOP PLATE  | F. B. 109 10, RAIL         |  |                        |                             | F.B. 109/ Ib. RAIL        |               |                       |
| 2 No. 84 WIDEX 104 LONG X<br>12 DEEP EX PAMET' No. 600<br>BOLT BOXES | D' THE 2 N. BTM PLATES 'B' |  |                        |                             |                           |               |                       |
| 4 No. 8% WIDE'X 6% LONGX   |                            |  |                        |                             |                           |               |                       |
|  |                            |  |                        | TRANSITION SLAB AT FRONT E  | ND OF SHED                |               |                       |

0 "

3" TO I FT.

# **ELEVATION** WORKSHOP END OF PIT)

2 No. 3/4" DIA. STIRRUPS 4 No. 1% DIA HOLES 34 PLATE -(1)--

2



1-8"





1. S.

•

# C C

# PLAN (SHOWING POSITION OF TOP PLATES)

# ELEVATION (STEPPED END OF PIT)

# GENERAL ARRANGEMENT OF RAIL FIXINGS 1/2" TO I FT.

| WORK SHOP |             |                                     |  |          |               |
|-----------|-------------|-------------------------------------|--|----------|---------------|
| END       | <b></b>     | 2007 <b>- 1</b> . N                 | 10. 3/4" DIA. STI  | RRUP     | 5             |
| 5%<br>    |             | 4 No. 1/8" DIA HOI                  | £5   | 32/4 "   | 236"          |
| 34        | <b>•</b> •• | <sup>3</sup> ∕4 <sup>™</sup> Plate— |  |          | ₩             |
| 23%       |             |                                     | $\left  \begin{array}{c} \bullet \\ \bullet \end{array} \right $ |          | <sup>5%</sup> |
| 3"        |             |                                     | 2"   | 3″ _ 3″  | 2"            |
|           |             |                                     |  | io"<br>ح | P PLATE       |



<u>'C</u>'

DETAIL OF M.S. BOTTOM PLATE 'D'

2 No. TAPERED WASHERS-1:2 STIFF GROUT -71/4" M.S. BOTTOM PLATE TYPE 'D' OR 'B'

4 . . .

WORKSHOP END OF F

FIRST RAIL SUPPORT

l'- 9"

15/8 15/8

r Pha

834"

<u>B - B</u>

<u>3" TO IFT:</u>

<u>3" to l.ft.</u>

.

4- 812" GAUGE

2.0



# THIS ARRANGEMENT APPLIES TO PITS Nº 1, 2 4 3. PIT Nº 4 ARRANGEMENT SHOWN DOTTED









<u>A - A</u>

2'- O".

DETAIL OF 4" C.I. DRAIN 1. TO I FT.





- 4 No "NYLOC' 1" LOCKNUTS (NP/V326/11/2)

-2 No. 1" DIA PLAIN WASHERS -3/4" CHAMFER

109 15. F.B. RAIL

-2 No. 1" DIA M.S. HOLDING DOWN BOLTS 1-2"LONG

- 'EXPAMET' No. GO BOLT BOX (FOR DETAILS SEE ELEVATION)





<u>C-C</u> 3" TO I FT.

|                     | ASSOCIATED             |
|---------------------|------------------------|
| CONTRACT<br>DRG. Nº | TITL                   |
| 13                  | MAINT SHED DETAILS OF  |
| 14                  | MAINT. SHED DETAILS OF |
| 43                  | DRAINAGE LAYOUT        |
|                     |                        |

| • |                       | BRITISH RAH  | LWAYS BOARD   |
|---|-----------------------|--------------|---------------|
|   |                       | REVISED      |               |
|   |                       |              | IMM           |
|   |                       |              | DIESEL M      |
|   | n shini<br>1200 - Ali |              | MAINTEI       |
|   |                       |              | INSPECTION    |
|   |                       |              | RAIL FIX      |
|   | D.E.                  | CORRES. C.E. | APPROVED      |
|   |                       | NW 27568     |               |
| 1 | K-G                   |              | J.D. WEST YOS |
|   | E. W                  | . H.         |               |
|   |                       |              |               |

- 118" DIA. HOLE 15/16 1/16

DETAIL OF TAPERED WASHER



(s)

and the second second

# 1 5 5 5 5 5 5 5 5





# TRADE EFFLUENT SAMPLING POINT \_\_\_\_\_ CAR PARK

# FALLS FROM EFFLUENT SAMPLING POINT TO CONNECTION TO COUNCIL SEWER IN QUEENS ROAD TO BE I IN 200.

A several second and a second s QUEENS ROAD 1.2. 7.70 CHAMBER & PUMP

EXISTING 12" DIA. BOILER HOUSE - 15.50 FINE'S SILO-+(

STORES SERVICING SHED 1.L.12.2 ы жа аландынынын колдонул аландынын колдон колорганын түмкөн көнөнү көзүнү каталары каталарын каталары катал 

4 SOIL DRAIN OIL INTERCEPTOR TRADE EFFLUENT SAMPLING POINT FOR DETAILS OF CONCRETE SUPPORTS 6"STEEL"PIPE CAR PARK FOR 20 CARS and the second second

A \_\_\_\_/ ///

OFFICES

DRAINAGE BETWEEN M.H.S. 12 - 14 (NOT IN THIS CONTRAC) 

а тури на разли на правити на правити и правити и правити страти и правити и правити на правити на корити страти 





|  |    |    | T 12  |      | TY       | 75                                    |     |             |                            | <u> </u>    |             |                 | <u> </u> | TY |           | CUT                                   | TER-           | LE |
|--|----|----|-------|------|----------|---------------------------------------|-----|-------------|----------------------------|-------------|-------------|-----------------|----------|----|-----------|---------------------------------------|----------------|----|
| LOCATION   | A  | З  |       |      | 2        | с,                                    | C   | 4           | ٢,                         | C<br>No.    | •<br>• X    | A               |          |    | <br> <br> | G.                                    | G2<br>L=12 -5" |    |
| IMMINGHAM  |    |    | ····· | 140. | ••••••   | ************                          | Ne. |             | ···· · · · · · · · · · · · | eenterioted | n Series    | r:s::-::-::-::+ |          | E  |           |                                       | <u> </u>       |    |
| DIE SEL<br>MAINTE NANCE<br>AND<br>SERVICING<br>DEPOT |    |    |       |      |          | Ŧ                                     | · · |             |                            |             |             |                 |          |    |           |                                       |                |    |
| TANKER<br>DELIVERY<br>SIDING                         | 30 | 60 | 22    | 6    | 2-6      | ,<br>• ]                              |     | · · · · · · | 1                          |             |             | 29              | 5.8      | 29 |           | 6                                     | 12             |    |
| FUELLING<br>POINT                                    | 14 | 14 | L     |      |          | -<br>                                 | -   |             |                            |             | · · · · · · | 12              | 12       |    |           | · · · · · · · · · · · · · · · · · · · |                |    |
|  |    |    |       |      |          | <br>                                  |     | · · ·       |                            | -<br>-      |             |                 |          | :  | · · · ·   |                                       |                |    |
| 2  |    |    |       |      |          | · · · · · · · · · · · · · · · · · · · |     |             |                            |             |             |                 | • • • •  |    |           |                                       |                |    |
| TOTAL  | 44 | 74 | 22    | 6    |          | 1                                     |     |             | 1                          |             |             | 41              | 70       | 29 |           | 6                                     | 12             |    |
| BRITISH RAIL   |    |    |       |      | <u> </u> | _* <u></u>                            |     | ST          | ΈE                         | L_          | DR          | AIN             | 1AC      | Æ  | -         | RAYS                                  |                | A  |
| EASTERN REG<br>CHIEF CIVIL                           |    |    |       |      |          |                                       |     |             | FOR                        | 2           | FUE         | LLÍ             | NG       | P  | OIN       | TS                                    |                |    |





| <u>PLAN</u><br>( <u>SHOWING POSITION OF TOP PLATES</u> ) ( <u>SHOWING POSITION</u>   | N<br>N OF TOP PLATES  |
|--|---|
| RAIL FIXENS ANCHOR WHEEL STOP LAST RAIL SUPPORT   1-0* 5'-0*   TO. WORKSHOP 3'3*   1-0* 1-0*   1-0* 1-0*   1-0* 1-0*   1-0* 1-0*   1-0* 1-0*   1-0* 1-0*   1-0* 10 OPEN END   3*3* 3*3*  | £ £ £ £ £ RAIL BASE<br>2'-6" 2'-6" 2'-6" 5'-0"<br>3"3" 3"3" 3"3" 3"3" |
| E.B. 109 Ib. RAIL<br>F.B. 109 Ib. RAIL<br>I.N. TOP PLATE 'A'<br>I.N. TOP | FIRST RAIL S  |
| 2 No. 8% WIDEX 10% LONG X<br>12 "DEEP" EXPAMET" No. GO<br>BOLT BOXES<br>4 No. 8% WIDEX 6% LONGX<br>12 "DEEP 'EXPAMET" No. GO<br>BOLT BOXES   |   |
| TRANSITION SLAB AT FRONT END OF SHED   | 1-9ª  |

3" TO I FT.

# ELEVATION WORKSHOP END OF PIT)

- 2 No. 34" DIA. STIRRUPS

| No 1% DIA HOLES | 34 2 |      |          |   |
|-----------------|------|------|----------|---|
|                 |      |      | 12%      |   |
| 34" PLATE       | 34   |      |          |   |
|                 |      |      |          |   |
| 31              | 2.*  | 1-8* | <br>**** |   |
|                 |      |      |          | 2 |

# DETAIL OF M.S.TOP PLATE 'A'



treat the

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# ELEVATION (STEPPED END OF PIT) GENERAL ARRANGEMENT OF RAIL FIXINGS 1/2" TO 1 FT.











<u>D-D</u> 3" TO I FT.





DETAIL OF 4 C.I. DRAIN 1" TO 1 FT.



والأرباب والمعاجد معرفي والأندام وترجع والأندي المراجع

FIRST RAIL SUPPORT

<u>B - B</u>

3" TO IFT.

4- 812" GAUGE 109 16. F.B. RAIL - 4 No."NYLOC' I" LOCKNUTS (NP/Y326/11/2) -2 No 1" DIA PLAIN WASHERS -3/4" CHAMFER

> -2 No. 1" DIA M.S. HOLDING DOWN BOLTS 1-2"LONG HOL AFTER ACCURATELY POSITIONING BASEPLATE

- EXPAMET' No GO BOLT BOX (FOR DETAILS SEE ELEVATION)







|       |   | ASSOCIATED               |
|-------|---|--------------------------|
| -<br> | CONTRACT  | TITLE                    |
|       | 13  | MAINT. SHED DETAILS OF   |
|       | 4   | MAINT. SHED DETAILS OF I |
|       | 43  | DRAINAGE LAYOUT          |
|       | and the second se |                          |

| · · · · · · · · · · · · · · · · · · · | BRITISH RAILWAYS BOARD |               |  |  |  |  |  |  |  |  |
|---------------------------------------|------------------------|---------------|--|--|--|--|--|--|--|--|
|                                       | REVISED                | - IMMI        |  |  |  |  |  |  |  |  |
| · · · ·<br>· · ·                      |                        | DIESEL MAI    |  |  |  |  |  |  |  |  |
|                                       |                        | MAINTEN       |  |  |  |  |  |  |  |  |
| *                                     |                        | INSPECTION I  |  |  |  |  |  |  |  |  |
| 2                                     | D.E. CORRES. C.E.      | APPROVED      |  |  |  |  |  |  |  |  |
|                                       | NW 276 68              |               |  |  |  |  |  |  |  |  |
|                                       | K-C-M                  | J.D. WEST YOS |  |  |  |  |  |  |  |  |
|                                       |                        | CIVIL ENG     |  |  |  |  |  |  |  |  |



