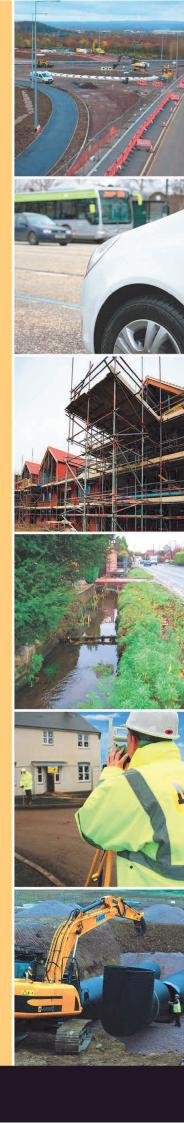


PROPOSED RESIDENTIAL DEVELOPMENT, LAND AT CHISWELL GREEN LANE, CHISWELL GREEN, ST ALBANS

**UTILITIES ASSESSMENT** 

SEPTEMBER 2021

**REPORT REF: 26728-07-UR-01** 



# PROPOSED RESIDENTIAL DEVELOPMENT, CHISWELL GREEN LANE, CHISWELL GREEN, ST ALBANS

# **UTILITIES ASSESSMENT**

**SEPTEMBER 2021** 

REPORT REF: 26728-07-UR-01

CLIENT: McPartland Planning Limited

ENGINEER: Mewies Engineering Consultants Ltd

The Old Chapel Station Road Hugglescote Leicestershire LE67 2GB

Tel: 01530 264753 E-mail: group@m-ec.co.uk

Report Prepared By:

Claire Hosford

**Utilities Technician** 

Report Approved By:

Alexander Bennett BEng(Hons) MCIHT MTPS

Director

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- H. UTILITIES CONSTRAINTS PLAN 26728\_07\_010\_01

#### 1.0 INTRODUCTION

- 1.1 Mewies Engineering Consultants Ltd (M-EC) has been commissioned by McPartland Planning Limited to undertake a Utilities Assessment for a proposed development at Chiswell Green Lane, Chiswell Green, St Albans. A site location plan is provided in **Appendix A** and a sketch masterplan contained within **Appendix B**.
- 1.2 The development proposals comprise of up to 330 residential dwellings.
- 1.3 The purpose of this report is to establish how the proposed development will be serviced with key utility supplies, whether diversion or protection of existing apparatus may be required and estimated costs for service connection and diversion works, where available.
- 1.4 Consultation has been undertaken with key Statutory Undertakers to establish:
  - Available capacity within existing infrastructure;
  - Required capacity improvement works to accommodate the development;
  - Required diversions of infrastructure to accommodate the proposed development;
  - Any required easements;
  - · Service connection locations; and
  - Service connection costs.
- 1.5 Consultation has been undertaken with the following Statutory Undertakers:
  - Thames Water (sewerage provider for Chiswell Green);
  - Affinity Water (clean water);
  - Cadent (gas);
  - UK Power Networks (electricity);
  - Openreach & Virgin Media (telecommunications);
  - HVSS (gas and electricity connections).
- 1.6 Consultation responses received from Statutory Undertakers are included within Appendices C-G. A services constraints plan has been produced from the apparatus plans, and is provided in Appendix H.
- 1.7 Following this introductory Section of the report, Section 2.0 details the existing utilities infrastructure in the vicinity of the site, Section 3.0 details proposed future supply to the site and Section 4.0 provides details on requisite diversions and easements. A summary of information is provided within Section 5.0.

- 1.8 M-EC has completed this report for the benefit of the organisation referred to in paragraph 1.1 and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from M-EC.
- 1.9 M-EC accepts no responsibility or liability for:
  - The consequence of this documentation being used for any purpose or project other than that for which it was commissioned.
  - The issue of this document to any third party with whom approval for use has not been agreed.

#### 2.0 EXISTING SERVICES

2.1 Formal requests have been made to relevant utility companies for a copy of their existing asset plans for the proposed development area. The following table summarises the Statutory Undertakers that have been approached, their response and likely requirements for diversion or extra protection measures of any existing apparatus. Further information on the diversion and extra protection of the affected apparatus can be found in **Section 4.0** of this report.

Service	Statutory Undertaker	Response Received	Area Affected	Diversion / Protection Required
Electricity	UK Power Networks	Yes	Yes – Underground LV cables within the site boundary crossing the proposed entrance and within Chiswell Green Lane.	Yes – refer to Section 4.0
Electricity	Utility Assets	Yes	No	No
Gas	Cadent	Yes	Yes – Low pressure gas mains within the eastern footway of The Croft and within the northern verge of Chiswell Green Lane c35m east of the proposed development site.	No
Gas	Engie	Yes	No	No
Potable Water	Affinity Water	Yes	Yes – Clean water mains within Chiswell Green Lane and within the eastern footway of The Croft.	Yes – refer to Section 4.0
Foul and Surface Water	Thames Water	Yes	Yes– Foul sewers within land south of Chiswell Green Lane and east of The Croft. Surface water sewer within The Croft.	No
Electricity/Gas	GTC	Yes	No	No
Telecoms	Openreach	Yes	Yes –Overhead cables within Chiswell Green Lane and within the site boundary at the southwest corner. Overhead and underground cables within The Croft.	Yes – refer to Section 4.0
Telecoms	Virgin Media	Yes	Yes – underground cables within the eastern footway of The Croft and within the northern verge of Chiswell Green Lane east of the proposed development site.	No
Telecoms	Lumen	Yes	No	No
Telecoms	Sky	Yes	No	No
Telecoms	Vodafone	Yes	No	No
Telecoms	Colt	Yes	No	No
Telecoms	Verizon	Yes	No	No
Telecoms	Mobile Broadband Network	Yes	No	No
Telecoms	Sota	Yes	No	No
Telecoms	City Fibre	Yes	No	No
Street Lighting	Herts County Council	Yes	No	No

#### 3.0 SERVICES SUPPLY

#### **Foul Water**

- 3.1 Thames Water (TW) have confirmed that in order to assess the impact of the new development on the existing sewer network and resources, a network capacity investigation will be necessary. The investigation determines whether any additional reinforcement or enhancement is required to provide sufficient capacity for foul flows from the proposed development.
- 3.2 The cost for the sewer modelling is entirely funded by TW and they will commence this work on receipt of authorisation from the landowner and confirmation of outline or full planning consent. Typical timescales for a development of this size would be 8 months to complete the modelling work, 6 months for the design work and 6 months to complete construction. A copy of the developer enquiry can be found in **Appendix C**.
- 3.3 The waste infrastructure charge for this development will be £365.00 per plot based on TW's published 2021/22 charging arrangements. The total waste infrastructure charge for this development is therefore calculated as £120,450.00.

#### **Clean Water**

- 3.4 Affinity Water (AW) have confirmed that there is sufficient capacity to supply the proposed development with clean water, therefore, reinforcement works are not required. Three points of connection will be required to supply the development: one within The Croft and two within Chiswell Green Lane adjacent to the southeast and southwest extents of the development.
- 3.5 AW have provide a budget new water main connection cost of £204,244.00 and a service connections cost of £157,057.00. It is to be noted that allowance is included for barrier pipe so costs may be reduced if a ground investigation report confirms there is no contamination present. It has been assumed that all onsite excavation will be carried out by the developer.
- Based on AW's current charging arrangements the clean water infrastructure charge for this site will be £249.00 per plot and the income offset will be -£387.26 per plot. The total clean water infrastructure charge is therefore calculated at -£45,625.80 for the proposed development. The AW clean water enquiry can be found attached within **Appendix C**.

#### Gas

3.7 Cadent have confirmed that there is sufficient capacity in the local low pressure gas network to supply the development site and therefore reinforcement is not required. Connections are to be made to the 4" CI low pressure gas main located within Chiswell Green Lane which is approximately 35m to the east of the site boundary. A developer enquiry response and a connection plan showing the connection point can be found within **Appendix D**.

#### **Electricity**

- 3.8 UK Power Networks (UKPN) have provided a budget estimate of £840,000.00 to connect the proposed development to their existing HV (11kV) network. UKPN have advised that the point of supply will be from the HV (11kV) underground cable approximately 400m east of the proposed development in Chiswell Green Lane. UKPN will lay a new HV network from this point of connection to 2 new ground mounted substations within the proposed development. From the substations, UKPN will lay the necessary LV cables to serve the entire development. A budget quotation developer enquiry response can be found within **Appendix E.**
- 3.9 The typical plot of land required for a UKPN GRP substation enclosure is 5 x 6m and 24/7 vehicle and pedestrian access will be required. A minimum of 10m clearance should be maintained between the substation and nearest residential dwelling in order to mitigate the risk of noise disturbance.

#### **Telecommunications**

Openreach will deploy FTTP, free of charge, into all new housing developments of 20 or more homes. Openreach's FTTP infrastructure is open to all communication service providers to encourage greater adoption and customers can benefit from the faster speeds of up to 1Gbps. Openreach will supply all of the materials such as ducts and joint boxes required to build and install the network free of charge, however, it is the responsibility of the developer or their appointed contractor to install the on-site ducts and joint boxes to Openreach's specification. An asset map showing Openreach infrastructure within the area of the proposed development site is included in **Appendix F**.

#### **Dual Fuel**

3.11 HVSS is an independent connections provider who has supplied a budget cost of £298,750.00 to supply both gas and electricity connections to the proposed development. The HVSS quote allows for a high voltage electricity connection and a medium pressure gas connection which are not assumed to be local to the site. Their budget quote includes allowance for a gas governor located at the site boundary and an electricity substation onsite. A copy of their budget quote included in **Appendix G.** 

#### 4.0 DIVERSIONS AND PROTECTION OF APPARATUS

#### **Clean Water**

4.1 The AW clean water records show a 6" CI/SI main within the verge and carriageway of Chiswell Green Lane. Records indicate that the main is within carriageway in the vicinity of the proposed site access. Although a diversion is not anticipated, extra care should be taken when working in this area. The approximate route is shown on the utilities constraints plan (drawing number 26728\_00\_010\_01) within **Appendix H** of this report.

#### **Electricity**

4.2 UKPN asset plans show a low voltage cable installed within Chiswell Green Lane which enters the boundary of the proposed development in the vicinity of the proposed site access. This appears to supply an existing building within the development site which is proposed for demolition. Disconnection will be required in order to facilitate construction of the new development. Extra care is required when working in this area and all cables should be treated as live until proven dead. The approximate routing of the low voltage cable is shown on the utilities constraints plan within **Appendix H** of this report.

#### **Telecommunications**

- 4.3 Openreach apparatus plans show existing overhead cables within Chiswell Green Lane and an existing support pole within the proposed site entrance. Diversion will be required to facilitate construction of the new site access. Openreach have carried out an initial review and have advised that a budget diversion quote can be provided on receipt of detailed layout plans and payment of an application / survey fee of £7,132.50. Openreach correspondence can be found within **Appendix F**.
- Plans also show overhead cables within the site boundary at the southwest corner and in The Croft.

  No diversions are anticipated but extra care should be taken when working in these areas. The approximate location of the Openreach apparatus is shown on the utilities constraints plan within Appendix H.

#### 5.0 SUMMARY

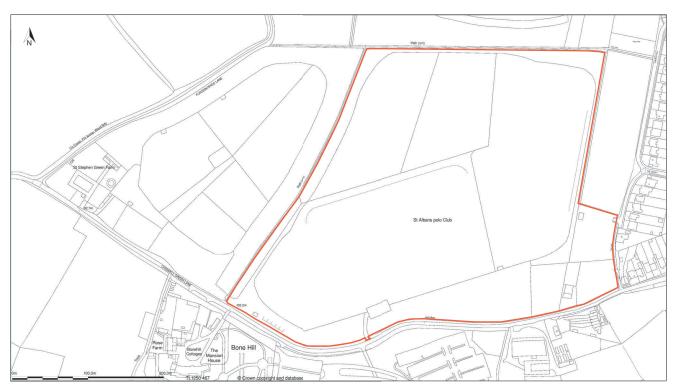
5.1 This report has been produced to support a proposed residential development at Chiswell Green Lane, Chiswell Green, St Albans. A summary of all findings to date is provided in the below table.

Service and/or Provider	Capacity Available?	Point of connection	Budget Costs Provided?	Are Diversions/ Extra Protection Measures Required?	Additional Comments
Foul Drainage (Thames Water)	TBC – sewer modelling required	TBC on completion of sewer modelling.	Developer to construct and offer for adoption.  Infrastructure Charge £120,450.00	No	TW have advised typical timescales of 8 months to complete the modelling work, 6 months for the design work and 6 months to complete construction.
Clean Water (Affinity Water)	Yes	3" CI clean water main in The Croft and 2 connections to 6" CI clean water main in Chiswell Green Lane.	New Mains Connections £204,244.00  New Service Connections £157,057.00  Infrastructure Charge -£45,625.80	Caution required in the vicinity of the existing water main within Chiswell Green Lane.	New connection costs include an allowance for barrier pipe so may be reduced if a ground investigation report confirms no contamination.
Gas (Cadent)	Yes	4" CI low pressure gas main in Chiswell Green Lane c35m east of the site boundary.	Capacity check only.	No	N/A
Electricity (UK Power Networks)	Yes	Underground HV (11kV) cable c400m east of the proposed development in Chiswell Green Lane.	New Connections £840,000.00	Disconnection of the existing LV cable within the site boundary will be required to facilitate the proposed development.	Two substations will be required onsite to serve the development.

#### Chiswell Green Lane, Chiswell Green, St Albans - Utilities Assessment

Service and/or Provider	Capacity Available?	Point of connection	Budget Costs Provided?	Are Diversions/ Extra Protection Measures Required?	Additional Comments
Telecoms (Openreach)	N/A	Openreach apparatus within Chiswell Green Lane.	New Connections £0.00 Diversion Survey £7,132.50	Diversion of existing overhead apparatus in Chiswell Green Lane will be required to facilitate construction of the proposed access.	Openreach will deploy FTTP, free of charge, into all new housing developments of 20 or more homes. No proposals therefore have been sought.
Dual Fuel (HVSS)	Assumed	HV electricity connection and MP gas connection which are not assumed to be local to the site.	New Connections £298,750.00	N/A	The HVSS budget quote includes allowance for a gas governor located at the site boundary and an electricity substation onsite.

# **APPENDIX A**



Land north of Chiswell Green Lane and east of The Croft, Chiswell Green

Client:	Virginia Propert	ties	Project:	SADC Call For	Sites, 2021	ďЭ
Scale:	1:2500	(A3 original)	Drawing:	Location Plan		McPARTLAND PLANNING
Ref:	VP/CFS/lp	Revision:	Date:	23.04.21	By: B Parker	McPartland Planning Limited 10 Orient Close, St Albans, Herts AL1 1AJ E. brian.mpp@outlook.com

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# **APPENDIX B**



# **APPENDIX C**



M-EC
The Old Chapel The Old Chapel

HUGGLESCOTE LE67 2GB

Search address supplied Land at Chiswell Green Lane

Chiswell Green Lane

St Albans AL2 3AJ

Your reference 26728

Our reference ALS/ALS Standard/2021\_4479600

Search date 2 August 2021

## Knowledge of features below the surface is essential for every development

The benefits of this knowledge not only include ensuring due diligence and avoiding risk, but also being able to ascertain the feasibility of any development.

Did you know that Thames Water Property Searches can also provide a variety of utility searches including a more comprehensive view of utility providers' assets (across up to 35-45 different providers), as well as more focused searches relating to specific major utility companies such as National Grid (gas and electric).

Contact us to find out more



Thames Water Utilities Ltd Property Searches, PO Box 3189, Slough SL1 4WW DX 151280 Slough 13



searches@thameswater.co.uk www.thameswater-propertysearches.co.uk



0800 009 4540



**Search address supplied:** Land at Chiswell Green Lane, Chiswell Green Lane, St Albans, AL2 3AJ

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This searchprovides maps showing the position, size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

#### **Contact Us**

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0800 009 4540, or use the address below:

Thames Water Utilities Ltd Property Searches PO Box 3189 Slough SL1 4WW

Email: searches@thameswater.co.uk

Web: www.thameswater-propertysearches.co.uk



#### **Waste Water Services**

Please provide a copy extract from the public sewer map.

The following quartiles have been printed as they fall within Thames' sewerage area:

**TL1304NW** 

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority.

Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners.

This report relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus.

The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

The following quartiles have not been printed as they contain no assets:

TL1204SE TL1204NE

#### For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the developer.

#### **Clean Water Services**

Please provide a copy extract from the public water main map.



Following examination of our statutory maps, Thames Water has been unable to find any plans of water mains within this area. If you require a connection to the public water supply system, please write to:

New Connections / Diversions Thames Water Network Services Business Centre Brentford Middlesex TW8 0EE

Tel: 0845 850 2777

Fax: 0207 713 3858

Email: developer.services@thameswater.co.uk

The following quartiles have not been printed as they are out of Thames' water catchment area. For details of the assets requested please contact the water company indicated below:

TL1204SE Affinity Water
TL1204NE Affinity Water
TL1304NW Affinity Water

Affinity Water Ltd Tamblin Way Hatfield AL10 9EZ

Tel: 0345 3572401

#### For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public
  water mains in the vicinity of the property. It should be possible to estimate the
  likely length and route of any private water supply pipe connecting the property to
  the public water network.

#### **Payment for this Search**

A charge will be added to your suppliers account.



#### **Further contacts:**

## **Waste Water queries**

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. For further information please contact our Customer Centre on Tel: 0845 920 0800. Alternatively, a survey can be arranged, for a fee, through our Customer Centre on the above number.

If you have any questions regarding sewer connections, budget estimates, diversions, building over issues or any other questions regarding operational issues please direct them to our service desk. Which can be contacted by writing to:

Developer Services (Waste Water) Thames Water Clearwater Court Vastern Road Reading RG1 8DB

Tel: 0800 009 3921

Email: developer.services@thameswater.co.uk

# **Clean Water queries**

Should you require any advice concerning clean water operational issues or clean water connections, please contact:

Developer Services (Clean Water) Thames Water Clearwater Court Vastern Road Reading RG1 8DB

Tel: 0800 009 3921

Email: developer.services@thameswater.co.uk

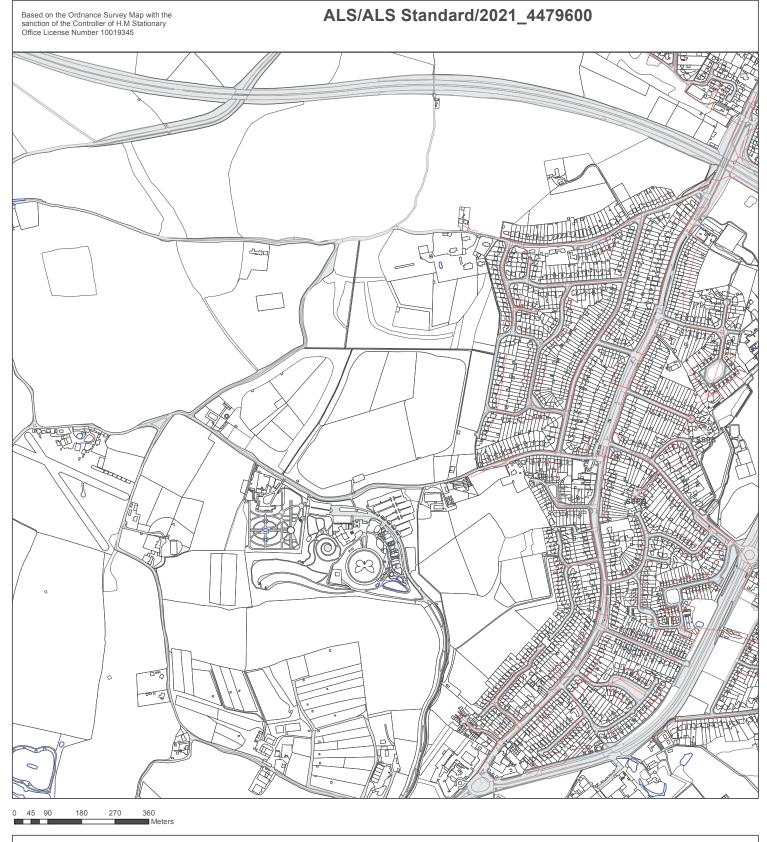


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Manhole Reference	Manhole Cover Level	Manhole Invert Level
2705	104.07	103.12
2706 2709	104.13 n/a	102.88 n/a
2808	104.44	103.82
2806	104.84	103.99
2805	104.86	104.14
2804	105.1	104.38
1851 1601	105.24 104.13	103.48 102.32
1702	104.06	102.25
1701	104.32	102.49
1850	105.03	104.2
1703 1806	104.82	103.23
1700	105.33 104.53	104.17 103.53
1804	104.58	103.75
1803	104.72	103.88
1802	n/a	n/a
1801 1800	105.04	104.14 104.17
1805	104.84 105.24	104.17
1750	103.01	101.88
2803	105.29	104.54
2807	105.45	104.65
2750	103.27	101.98
2700 2703	103.27 104.37	101.96 103.2
2703 2701	102.93	103.2
2851	104.48	103.03
2802	104.44	102.99
271B	n/a	n/a
2702 2751	102.53 102.5	101.28 101.27
2751 2850	102.5	101.27
2801	105.49	103.74
2603	102.16	101.11
2800	105.89	104.55
271A	n/a	n/a
3600 371B	101.49 n/a	99.34 n/a
3704	103.62	102.02
3702	102.7	101.13
3701	103.34	101.61
371A	n/a	n/a
361D 3700	n/a 103.74	n/a 101.9
3700 381C	n/a	n/a
3802	104.04	102.28
3801	103.96	102.36
3803	103.97	102.45
381D 381B	n/a	n/a n/a
381A	n/a n/a	n/a
3800	104.37	102.75
4600	100.82	98.37
4702	103.4	101.75
4650 4705	n/a	n/a
4705 4804	n/a 103.38	n/a 101.91
4802	103.32	n/a
4703	103.59	101.52
461A	n/a	n/a
4803 4804	103.45	102.25
4801 4701	103.33	102.33
461B	n/a	n/a
4700	102.96	100.89
4850	n/a	101.13
471C 471B	n/a n/a	n/a
471B 471A	n/a n/a	n/a n/a
4800	103.29	101.61
0500	101.73	99.91
0600	n/a	n/a
1504 1600	101.73	100.48
1600 1604	103.64	102.59 102.43
1505	101.72	100.27
1506	101.71	100.16
1500	100.91	98.66
1507	101.64	99.94
1502 1614	101.38	99.71
161A 151A	n/a n/a	n/a n/a
151A 1501	n/a 100.98	97.98
1602	103.44	101.93
1550	100.71	99.41
1650	103.46	101.96
		102.45
1605 1603	103.08 102.93	102.33

Manhole Reference	Manhole Cover Level	Manhole Invert Level
1551	100.49	98.99
2600	102.85	102
2601 2604	n/a 102.71	n/a 101.89
2500	99.78	97.03
2502	98.77	97.87
2508	98.71	97.83
2602	102.4	101.83
2550 2503	99.72 98.33	98.27 97.38
2506	98.15	97.25
2504	97.56	96.66
2501	98.09	96.39
2505 251A	95.11 n/a	93.72 n/a
2551	97.98	96.44
2552	98.35	96.75
3551	97.91	96.47
3650 361A	101.52 n/a	99.72 n/a
3500	98.95	95.99
3502	99.24	97.59
3604	99.75	98
3603 3602	100.56 101.4	98.66 99.6
3601	101.4	99.9
3605	n/a	n/a
361C	n/a	n/a
361B 3550	n/a n/a	n/a 97.73
3552	95.28	93.61
3501	96.47	94.22
4550	97.69	95.22
4501	98.57	95.57
451B 451A	n/a n/a	n/a n/a
451H	n/a	93.63
4500	98.46	96.73
4511	n/a	93.89
451D 451G	n/a n/a	93.45 93.8
451C	n/a	93.45
451F	n/a	93.98
1901	104.57	102.69
1951 1904	104.91 104.96	103.73 102.63
1903	104.65	102.75
2902	105.81	104.73
3901	106.12	104.82
2905 291B	106.11 n/a	104.79 n/a
1955	105.26	104.27
2904	106.27	105.02
1911	n/a	n/a
1954 291C	105.4	104.22 n/a
291A	n/a n/a	n/a n/a
191A	n/a	n/a
2903	106.29	105.29
1900 191B	105.24 n/a	103.66 n/a
191C	n/a	n/a n/a
191E	n/a	n/a
191G	n/a	n/a
191F 1953	n/a 105.08	n/a 103.99
1933 191H	n/a	n/a
191D	n/a	n/a
1952	104.87	103.74
2900 2901	105.84 105.58	104.5 104.27
2950	105.92	104.27
3904	105.93	104.96
1902	105.02	102.57
3900 1956	106.05 105.19	104.95 104.09
4901	104.26	103.33
4900	105.03	103.38
461C	n/a	n/a
461D 461E	n/a n/a	n/a n/a
170.2	1174	II/a
The position of the apparatus shown on this plan i	s given without obligation and warranty, and the acc	curacy cannot be guaranteed. Service pipes are not

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.



The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

 Scale:
 1:7158

 Width:
 2000m

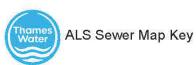
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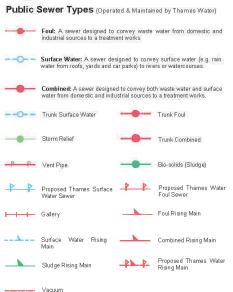
 Print Date:
 02/08/2021

 Map Centre:
 512818,204665

 Grid Reference:
 TL1204NE

C	om	ım	ρı	nts





#### Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

◆ Air Valve
Dam Chase

Fitting

Meter

Vent Column

#### **Operational Controls**

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

Control Valve

Drop Pipe
Arruillary

Weir

#### **End Items**

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

Outfall
Undefined End

#### Other Symbols

Symbols used on maps which do not fall under other general categories

▲ / ▲ Public/Private Pumping Station
 Change of characteristic indicator (C.O.C.I.)

M Invert Level

✓ Summit

Areas

Lines denoting areas of underground surveys, etc.

Agreement

Operational Site

Chamber Chamber

Tunnel

Conduit Bridge

Other Sewer Types (Not Operated or Maintained by Thames Water)



#### Notes

- All levels associated with the plans are to Ordnance Datum Newlyn.
- All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole level indicates that data is unavailable.
- 6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in milimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Searches on 0800 009 4540.

#### **Terms and Conditions**

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

- 1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
- 2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
- 3. All invoices are strictly due for payment 14 days from due date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service, or will be held to be invalid.
- 4. Thames Water does not accept post-dated cheques-any cheques received will be processed for payment on date of receipt.
- 5. In case of dispute TWUL's terms and conditions shall apply.
- Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
- 7. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
- 8. A charge may be made at the discretion of the company for increased administration costs.

A copy of Thames Water's standard terms and conditions are available from the Commercial Billing Team (cashoperations@thameswater.co.uk).

We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 316 9800

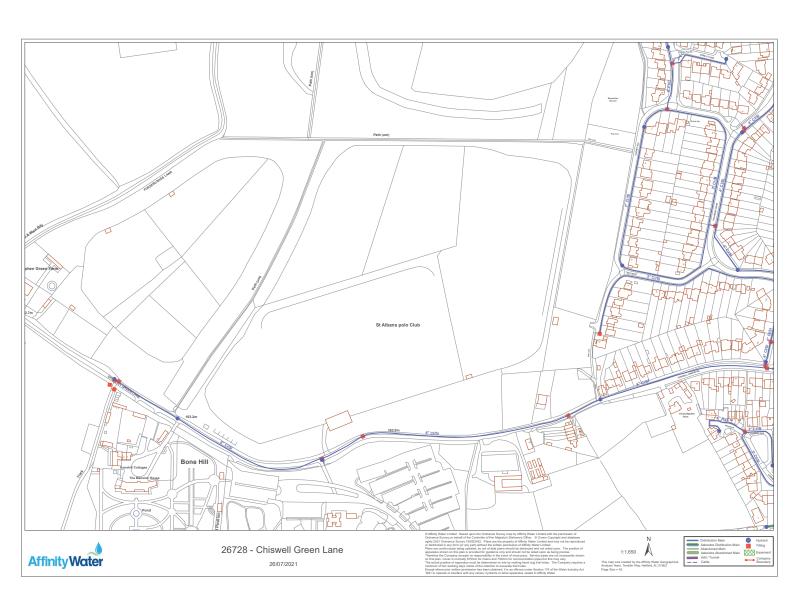
If you are unhappy with our service you can speak to your original goods or customer service provider. If you are not satisfied with the response, your complaint will be reviewed by the Customer Services Director. You can write to her at: Thames Water Utilities Ltd. PO Box 492, Swindon, SN38 8TU.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0121 345 1000 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

#### Ways to pay your bill

Credit Card	BACS Payment	Telephone Banking	Cheque
Call <b>0800 009 4540</b> quoting your invoice number starting CBA or ADS / OSS	Account number 90478703 Sort code 60-00-01 A remittance advice must be sent to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW. or email ps.billing@thameswater. co.uk	By calling your bank and quoting: Account number 90478703 Sort code 60-00-01 and your invoice number	Made payable to 'Thames Water Utilities Ltd' Write your Thames Water account number on the back. Send to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW or by DX to 151280 Slough 13

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.





Mrs Claire Hosford Mewies Engineering Consultants Ltd The Old Chapel Station Road Hugglescote LE67 2GB



12 August 2021

# **Pre-planning enquiry: Capacity concerns**

Site address: Chiswell Green Lane, Chiswell Green, St Albans, AL2 3AJ

Dear Mrs Hosford,

Thank you for providing information on your development for the proposed 327no. residential units on previously Greenfield site. We have based our assessment on the information you provided to us and have copied below for clarity:-

Proposed foul water flows to discharge via gravity into MH 1702 or MH 1500. Proposed surface water flows to discharge via gravity into 300mm SW sewer in Chiswell Green Ln. Flows restricted to 19l/s discharging a total impermeable area of 10Ha.

#### **Foul Water**

We've assessed your foul water proposals and concluded from our initial review, that our sewerage network does not have sufficient capacity to meet your requirements. At this stage we're unable to meet the needs of your full development at this time.

In order to ensure we make the appropriate upgrades – or 'off-site reinforcement' – to serve the remainder of your development, we'll need to carry out modelling work, design a solution and build the necessary improvements. Typical timescales for a development of your size are:

Modelling: 8 months
Design: 6 months
Construction: 6 months

Total: 20 months

If the time you're likely to take from planning and construction through to first occupancy is longer than this, we'll be able to carry out the necessary upgrades in time for your development. If it's shorter, please contact me on the number below to discuss the timing of our activities.

# What do you need to tell us before we start modelling?

We're responsible for funding any modelling and reinforcement work. We need, though, to spend our customers' money wisely, so we'll only carry out modelling once we're confident that your development will proceed.

In order to have this confidence, we'll need to know that you **own the land and have either outline or full planning permission**. Please email this information to us as soon as you have it.

If the modelling shows we need to carry out reinforcement work, then before we start construction, we'll need you to supply us with notification that you've confirmed your 'nominated competent person' (NCP) submission to the Health and Safety Executive.

#### **Surface Water**

Thames Water Planning team would expect the surface water drainage hierarchy to be applied to demonstrate that discharge to the public sewer is the most appropriate discharge route. Once this has been demonstrated we will accept your proposals to discharge surface water runoff restricted at **10.0 litres/second** into the surface water network.

#### Please note

You must keep us informed of any changes to your design – for example, an increase in the number or density of homes or changes to the drainage strategy whereby a pumping station is being proposed. Such changes could mean there is no longer sufficient capacity.

If you have any further questions, please do not hesitate to contact me.

Yours sincerely

Rahim Khan
Thames Water – Adoptions Engineer
rahim.khan@thameswater.co.uk



Developer Services
Tamblin Way
Hatfield
Hertfordshire
AL10 9EZ

Telephone: 0345 357 2428

16/08/2021

## DS0045008 - Chiswell Green Lane

Dear Claire Hosford,

Re: Pre-development report for Chiswell Green Lane, St Albans, Hertfordshire, AL2 3AJ

Further to your recent request, I am pleased to enclose a pre-development report for a new water supply to your development. Please be advised that this is an indicative budget that has been produced based upon the information you have provided at this stage. Where information has not been provided or is vague, assumptions have been made.

# **Estimated Scope of Work**

New development of 330 new properties. An estimated 1200m of 125mm PE main and 1300m of 90mm PE main is required, with 3 points of connection

Please see the diagram attached illustrating the proposed point of connection to your site.



# **Budget Estimate**

All costs below are outlined in our *'New Connections Charging Arrangements 2021/22'* document, published <u>here</u> on our website. Please refer to this document for information regarding these costs.

**New Water Mains and associated apparatus** 

New Water Mains and associated apparatus		
Description	Qty	Charges 2021-22 (£)
8.2 Mains Application Fees		
Application Fee for Mains 100+ Properties (per application)	1	£660.00
0.2 Mains Design Face		(£550.00 + VAT)
8.3 Mains Design Fees	4	04 440 00
Design Fee 101+ properties (per scheme/ phase)	1	£1,440.00
8.4 Mains Administration Fees		(£1,200.00 + VAT)
		64 000 00
Mains Administration Fee 100+ Properties (per application)	1	£1,200.00
Estimated for installation of New Water Mains and associated A	pparatus	
Offsite – Install an estimated 10m of 90mm PE main (excavation	10m	£2,700.00
and reinstatement to be competed by Affinity Water)		
Offsite – Install an estimated 50m of 125mm PE main (excavation	50m	£14,000.00
and reinstatement to be completed by Affinity Water)		
Onsite – Install an estimated 1,290m of 90mm PE main (excavation	1,290m	£76,110.00
and reinstatement to be completed by the sites contractors)		
Onsite – Install an estimated 1,050m of 125mm PE main	1,150m	£71,300.00
(excavation and reinstatement to be completed by the sites contractors)		
Fire Hydrant or Washout ( <u>inline</u> 50-190mm pipe)	12	£10,560.00
Fire Hydrant or Washout (end type 50-190mm pipe)	2	£1,460.00
Under pressure/Branch Connection (50-190mm diameter parent	3	£5,292.00
main)		
11.1 Traffic Management Costs		
To be determined during detailed design. Separate traffic		
management is required for the x3 separate points of connection		
	5 days	£20,244.00
At this time, it is estimated that 2-way lights are required for 5 days	x2	(£16,870.00 + VAT)
at 2 separate locations (POC1 and POC 3)		
	Inc VAT	C204 244 00
Sub Total (£)	IIIC VAI	£204,244.00

## **New Service Connections**

Description	Qty	Charges 2021-22 (£)
9.2 New Connections Application Fees		
Application Fee (per connection)	1	£144.00 (£120.00 + VAT)
Application Fee (each subsequent property)	329	£15,792.00 (£13,160 + VAT)
9.3 New Connections Administration Fees		
Administration Fee (per property)	330	£26,400.00
Estimate for installation of New Service Connections		
Install 3m of 25mm PE service pipe for 228 plots	228	£90,972.00
Install 3m of 63mm PE service for 17 blocks with 6 port manifolds	17	£23,749.00
11.1 Traffic Management Costs		
To be determined during detailed design		
	0	£0.00
All services are onsite, so no traffic management fee apply		
Sub Total (£)	Inc VAT	£157,057.00

*Budget Estimate Total (Inc VAT)	£362,023.00

\*Please be advised that the above values have been provided as an indicative budget and are subject to confirmation during an subsequent connections and mains application.

#### **Assumptions Register**

- All distances are estimated and will be confirmed upon full application & detailed design.
- All onsite works have been priced on the basis that all Excavation and reinstatement will be completed by you. Should you wish Affinity Water to complete this work, please let us know.
- Traffic Management Costs traffic management costs have been included in the above costs. These are estimated costs and will be confirmed during detailed design. For information purposes a list of these costs can be found in section 11 of our 'New Connections Charging Arrangements 2021/22' document
- Services services have been built up using a cost for parent main connection and 5m of service pipe. Actual quantities will be provided during detailed design/ cost.
- "No Excavation" is assumed for all accessories the costs are based upon you completing all the onsite excavation and backfill. Should you wish Affinity Water to complete this work, please let us know.

# Other important information

#### **Appointing a Self-Lay Provider**

One option you may wish to consider is to appoint a WIRS accredited Self-Lay Provider (SLP) to complete some of the works described above, which is known as Self-Lay. You can find more information on this option on our website, <a href="here">here</a>. You may prefer to use a Self-Lay Provider for a number of reasons, such as:

- SLPs may be able to provide a multi-utility option;
- SLPs may offer a more cost-effective solution when constructing your project;
- SLPs may provide greater flexibility in meeting your construction programmes.

If you'd like to explore this option, and would like to find a WIRS accredited self-lay provider, you can do so at the Lloyd's Register website at the following address: <a href="https://www.lr.org/en/utilities/water-industry-registration-scheme-wirs-wirsae/search/">https://www.lr.org/en/utilities/water-industry-registration-scheme-wirs-wirsae/search/</a>.

# **Infrastructure Charges**

The purpose of an infrastructure charge is to enable a charge to be levied to reflect broadly the expected additional load placed on our network by the connection of premises not previously connected to it. The infrastructure charge per domestic property for the 2021-22 charging year is £249.00\*. Where a site is redeveloped or a building is converted, and still has a metered supply a credit will be given for each of these properties. These will be calculated based upon the number of properties and size of the incoming, metered supply. Infrastructure charges will be charged upon request for the plot, and not

\* Where a property is considered to have an abnormally large load, the relevant multiplier calculation will be used. More details of this can be found in section of 16.5 our 'New Connection charging arrangements 2021/22' document.

NB. Infrastructure charges are also applicable for wastewater services. If you are developing within the Anglian Water area, we will collect this on their behalf however if you are within the Thames Water or Southern Water area, they will collect this from you directly.

#### **Income Offset**

An income offset payment under our charging arrangements for all new connections where an infrastructure charge is applicable. The income offset is against the infrastructure charge not the mains requisition cost following the policy change in Ofwat's Charging Rules. We will apply an income offset for each new connection for a supply of water to the premises connected to a water main where an infrastructure charge is applicable. This is £387.26 per property for the 2021-22 charging year. For more information on the value of these payments, when they are due and who they are paid to please refer to section 16.7 of our 'New Connection charging arrangements 2021/22' document.

#### **Water Efficient Development Credits**

- (1) Building Regulations include the requirement for all new dwellings to achieve a water efficiency standard of 125 litres of water per person per day.
- (2) Building Regulations part G include an optional requirement of 110 litres of water per person per day for new residential development, which should be implemented through local policy where there is clear evidence needed.
- (3) We operate in areas of serious water stress and support the inclusion of a water efficiency standard of 110 litres per person per day being included in planning policies.
- (4) To help promote the achievement of this objective, we will apply a discount to the infrastructure charge for new homes where there is evidence of water efficiency design to a standard of 110 litres (or less) per person per day. The discount will be £80 per infrastructure charge.

# **Traffic Management**

Where additional costs are payable as a result of traffic management and highway authority charges, we will provide upfront fixed charges which will be highlighted as a separate item in your cost advice. A list of these costs can be found in section 11 of our 'New Connections Charging Arrangements 2021/22' document

#### **Other Costs**

VAT – will be charged at the applicable rate, however, please note that application and design fees attract the standard rate (20%).

## **Next steps**

Once you are happy to proceed, you will need to proceed with the application by logging onto the portal and progressing this application to a "Connections and Mains" application. To support this application, we will need some additional information from you\*. This includes.

- a CAD site plan that shows your site boundary, road layout, plot information and has some OS background on so our designers can plot the exact location on our system.
- load information (per plot) for the development,
- Soil report (as mentioned above, if this is not provided, we will default to the use of a barrier pipe system). This has been completed already, PE mains and services
- Plumbing Schematic Drawing (only applicable for bulk services see description above)

\*If you intend to submit a design for us to review, you will need to provide this to us, along with all other development information.

Due to the nature of some of the information provided within (ie charges applicable in the 2021-22 charging year) it may not be valid after April 2022. If you would like it updated at anytime after this date, please let us know.

If you need any further advice, please do not hesitate to contact us.

Yours sincerely

Adam Lainson
For, and on behalf of Developer Services **Affinity Water Ltd** 

www.affinitywater.co.uk/developing

# **APPENDIX D**



Claire Hosford
Mewies Engineering Consultants
The Old Chapel
Station Road
Hugglescote
Leicestershire
Leicester
Leicestershire

**Date:** 02/08/2021

Our Ref: EA\_GE4A\_3SWX\_857297

Your Ref: 26728

RE: Proposed Works, Chiswell Green Lane

Thank you for your enquiry which was received on 02/08/2021. Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to Cadent Gas Limited, National Grid Electricity Transmission plc's and National Grid Gas Transmission plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus. For details of Network areas please see the Cadent website (<a href="http://cadentgas.com/Digging-safely/Dial-before-you-dig">http://cadentgas.com/Digging-safely/Dial-before-you-dig</a>) or the enclosed documentation.

As your works are at a "proposed" stage, any maps and guidance provided are for information purposes only. This is not approval to commence work. You must submit a "Scheduled Works" enquiry at the earliest opportunity and failure to do this may lead to disruption to your plans and works. Plant Protection will endeavour to provide an <u>initial</u> assessment within 14 days of receipt of a Scheduled Works enquiry and dependent on the outcome of this, further consultation may be required.

In any event, for safety and legal reasons, works must not be carried out until a Scheduled Works enquiry has been completed and final response received.

Cadent
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA

Plant Protection

E-mail: <u>plantprotection@cadentgas.com</u> Telephone: +44 (0)800 688588

National Gas Emergency Number: 0800 111 999\*

National Grid Electricity Emergency Number: 0800 40 40 90\*

\* Available 24 hours, 7 days/week. Calls may be recorded and monitored.

www.cadentgas.com

# Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near Cadent and/or National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to Cadent Gas Limited, National Grid Electricity Transmission plc (NGET) and National Grid Gas Transmission plc (NGGT) and apparatus. This assessment does **NOT** include:

- Cadent and/or National Grid's legal interest (easements or wayleaves) in the land which restricts
  activity in proximity to Cadent and/or National Grid's assets in private land. You must obtain details of
  any such restrictions from the landowner in the first instance and if in doubt contact Plant Protection.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on either the National Grid or Cadent website.

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to Cadent and/or National Grid's easements or wayleaves nor any planning or building regulations applications.

Cadent Gas Limited, NGGT and NGET 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.

If you require further assistance please contact the Plant Protection team via e-mail (<u>click here</u>) or via the contact details at the top of this response.

Yours faithfully

Plant Protection Team

# **ASSESSMENT**

# **Affected Apparatus**

The apparatus that has been identified as being in the vicinity of your proposed works is:

• Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)

# Requirements

## BEFORE carrying out any work you must:

- Carefully read these requirements including the attached guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent and/or National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near Cadent and/or National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 'Avoiding Danger from Underground Services' and GS6 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at <a href="http://www.hse.gov.uk">http://www.hse.gov.uk</a>
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

# **GUIDANCE**

# Excavating Safely - Avoiding injury when working near gas pipes:

http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe leaflet3e2finalamends061207.pdf

# **Standard Guidance**

#### **Essential Guidance document:**

http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982

#### **General Guidance document:**

http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103

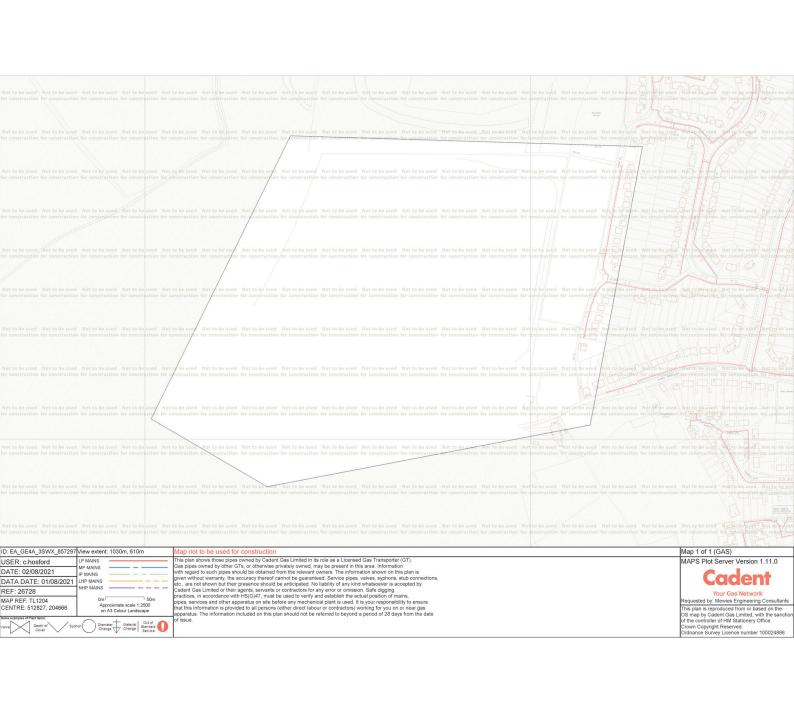
# **Excavating Safely in the vicinity of gas pipes guidance (Credit card):**

http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf

# **Excavating Safely in the vicinity of electricity cables guidance (Credit card):**

http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf

Copies of all the Guidance Documents can also be downloaded from the National Grid and Cadent websites.



# **ENQUIRY SUMMARY**

## Received Date

02/08/2021

## Your Reference

26728

# **Location**

Centre Point: 512826, 204666

X Extent: 638 Y Extent: 455 Postcode: AL2 3AJ

Location Description: Chiswell Green Lane

## **Map Options**

Paper Size: A3

Orientation: LANDSCAPE Requested Scale: 2500 Actual Scale: 1:2500 (GAS)

Real World Extents: 1030m x 610m (GAS)

## Recipients

claire.hosford@m-ec.co.uk

# Enquirer Details

Organisation Name: Mewies Engineering Consultants

Contact Name: Claire Hosford

Email Address: claire.hosford@m-ec.co.uk

Telephone: 01530264753

Address: The Old Chapel, Station Road, Hugglescote, Leicestershire, Leicestershire, Leicestershire, LE67 2GB

## **Description of Works**

desktop survey for proposed new housing development

#### **Enquiry Type**

**Proposed Works** 

## Activity Type

**Development Project** 

### Work Types

Work Type: Plans Only

Network Enquiry No : 180013568 Your Reference : 26728 **Cadent Gas Limited** 

National Gas Emergency Service - 0800 111 999\* (24hrs) \*calls will be recorded and may be monitored

Stephanie Gray
M-EC Consulting Development Engineers
Station Road
The Old Chapel
Hugglescote
LE67 2GB

Date : 2nd August 2021
Contact : Performance and Support

Direct Tel : 0845 3666758
Email : networkdesign@cadentgas.com

www.cadentgas.com

# Dear Stephanie,

Re: Land Enquiry for Proposed Development Site at NEW SUPPLY, CHISWELL GREEN LANE, CHISWELL GREEN, ST. ALBANS, AL2 3AJ.

Thank you for your enquiry which we received on 26th July 2021. I enclose details of Cadent Gas plant in the vicinity of your proposed supply.

The nearest main with sufficient capacity is 35 metres from the site boundary and it is a Low Pressure main.

This Developer Enquiry response is a reflection of the network at the time delivered and is not a guarantee of gas flow or capacity due to the changing dynamics of the gas distribution network. If you wish to secure capacity and connect to the network please submit quotation Connections Request via the official connections route allowing for further analysis to verify the capability of the network again.

Plans attached: Yes

A copy of the Cadent Connections Charging Statement referenced in this letter can be found on Cadent's website:

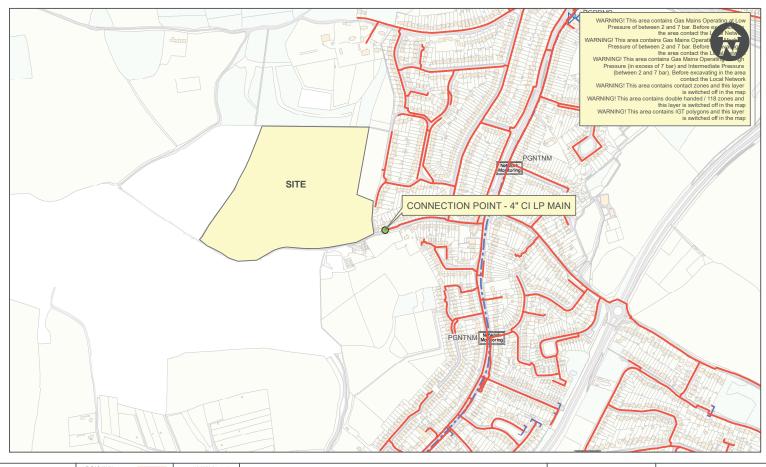
http://cadentgas.com/Get-connected

If you require a printed version please contact us on the details provided above.

I trust this meets with your requirements at this stage. If you have any queries please do not hesitate to contact Performance and Support on the above number.

Yours sincerely.





This plan shows those pipes owned by Cadent in its role as a Licensed Gas Transporter (GT), Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from Revesser.

Revesser

Re

180013568

**Cadent** 

This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationery Office.

Crown Copyright Reserved..

# **APPENDIX E**