



FOUL DRAINAGE & UTILITY ASSESSMENT

Land south of Chiswell Green Lane

Prepared for: Alban Developments Ltd and Alban Peter Pearson,
CALA Homes (Chiltern) Ltd and Redington Capital Ltd
Ref: 016_8210856_AQ_FoulWater&UtilityAssessment
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Glanville

Glanville Consultants is a multi-disciplinary engineering, design and surveying consultancy with the following expertise:

Structural Engineering | Transport and Highways
Civil Engineering | Geomatics | Building Surveying

Cornerstone House
62 Foxhall Road
Didcot
Oxfordshire OX11 7AD

Offices also at:

3 Grovelands Business Centre
Boundary Way
Hemel Hempstead
Hertfordshire HP2 7TE

Telephone: 01235 515550

Telephone: 01442 835999

postbox@glanvillegroup.com
www.glanvillegroup.com

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1.0 Introduction

- 1.1 This Foul Drainage & Utility Assessment has been prepared by Glanville Consultants on behalf of Alban Developments Ltd and Alban Peter Pearson, CALA Homes (Chiltern) Ltd and Redington Capital Ltd to accompany an outline planning application associated with development on land to the south of Chiswell Green Lane, near St Albans. The proposals include the provision of up to 391 dwellings and a 2 Form Entry (2FE) primary school with a capacity for 420 pupils.
- 1.2 The site had been identified Draft Local Plan for St Albans City and District as one of the “Broad Locations” for development to contribute towards addressing housing, infrastructure and other development needs over the period 2020 to 2036. Through the plan making process, it was recognised as a suitable Broad Location for release from the Green Belt, with the expectation that it would deliver a minimum of 365 dwellings. Following the withdrawal of the Draft Local Plan from the Examination process, the City and District Council is preparing a new Local Plan and this site is being promoted once again for development.
- 1.3 The purpose of this document is to assess the feasibility of servicing the proposed development with all necessary utility and foul water infrastructure.
- 1.4 This assessment has been prepared in accordance with Policy 84A (Drainage Infrastructure) from the City and District of St Albans District Local Plan Review 1994 – Saved Policies, July 2020.
- 1.5 This assessment examines all existing utility services known to be located within the vicinity of the site. It considers the feasibility of providing new connections to the site and any potential diversionary work. The utility services examined include:
- Gas;
 - Electricity;
 - Potable water;
 - Telecommunications; and
 - Foul water.
- 1.6 Detailed proposals are yet to be received for the provision of new supplies from service providers. However, initial assessments have been made where possible based on the size and prevalence of existing supplies.
- 1.7 Surface water drainage is covered within a Flood Risk Assessment, which has been prepared as a separate document and is submitted as part of the planning application.

2.0 Site Description and Proposed Development

Site Location and Description

- 2.1 The site comprises of agricultural land, a farmyard with stables and equine facilities, and a derelict farmhouse and outbuildings. The agricultural land is divided into four distinct fields separated by mature trees. The fields in the northern part are intensively grazed by horses whilst the fields in the south are currently unmanaged grassland.
- 2.2 The site is located adjacent to the village of Chiswell Green and is approximately 1.1km southeast of the cathedral city of St Albans. The northern boundary is formed by Chiswell Green Lane. The eastern and south-eastern boundaries are directly adjacent to the residential area of Chiswell Green with the site bordered by the gardens of the residential properties.
- 2.3 The site is located within the St Albans City and District Council authority area. The approximate centre of the site is located at Ordnance Survey National Grid reference TL 13104 04286 and the postcode is AL2 3EQ. The plan showing the extent of the site is included in Appendix A.
- 2.4 There is a small woodland area to the east of the site which is not included within the site boundary and sits between the site and residential area. Beyond the western boundary of the Site, a car park separates Miriam Lane from the western site boundary. Lying adjacent to Miriam Lane approximately 25m to the east is the site of the former 'Butterfly World' visitor attraction.
- 2.5 St Albans Polo Club is approximately 80m northeast of the site with Chiswell Green Lane lying between the two areas. The M1 is 1.4km to the east and meets the M25 1.5km southeast of the site. The wider surrounding area comprises residential areas to the east and agricultural land to the west.
- 2.6 The site does not benefit from any planning history of relevance to the current proposals.

Development Proposals

- 2.7 The proposal comprises the demolition of existing structures and construction of up to 391 dwellings (Use Class C3), the provision of land for a new 2FE Primary School, open space provision and associated landscaping and new access arrangements.
- 2.8 The key components of the scheme comprise:
- up to 391 homes (of which 40% will be affordable and 60% private plots);
 - land to construct a 2FE primary school;
 - publicly accessible open space;
 - publicly accessible children's play space;
- 2.9 The development will be split into two residential parcels separated by a Green Core at its centre.

- 2.10 It is currently proposed to provide three vehicular accesses into the site. Two of these will be on Chiswell Green Lane and will serve the northern parcel residential development and the future primary school.
- 2.11 The access to the southern parcel will connect with the northern end of the existing Forge End cul-de-sac which in turn will provide access to Watford Road. A secondary pedestrian / cycle / emergency access will be provided on Long Fallow.
- 2.12 An illustrative masterplan for the proposed development is provided in Appendix B.

3.0 Utilities Assessment

3.1 This section of the assessment identifies the existing utility supply infrastructure within the vicinity of the site and establishes potential points of connection.

3.2 Service records have been obtained from the following utility companies which have apparatus within the vicinity of the site:

- National Grid (gas);
- GTC (gas);
- UK Power Networks (electricity);
- Affinity Water (potable water);
- BT Openreach (telecommunications);
- Virgin Media (telecommunications); and
- Thames Water (sewerage).

3.3 Copies of the relevant service records obtained are included in the appendices stated below.

3.4 A LineSearch enquiry was also conducted to ascertain the presence of strategic apparatus, such as apparatus belonging to oil companies or the Government. No apparatus was indicated to be within the zone of interest. The results of the LineSearch enquiry are included in Appendix C for reference.

Gas – National Grid

3.5 The records obtained from National Grid are included in Appendix D. The records indicate a medium pressure main along Watford Road and the North Orbital Road. A number of low pressure networks are indicated in the vicinity of the site, including low pressure mains serving properties to the north, east and south of the site, along Watford Road, Chiswell Green Lane, Woodleaf, Hammers Gate, Rosedene End, Forge End, Long Fallow and Belvedere Gardens.

3.6 Given that there is no National Grid gas apparatus indicated within the site boundary it is expected that diversionary works would not be required to facilitate development of the site.

3.7 National Grid has not provided a detailed quotation for provision of new supplies to the development but given the prevalence and size of existing infrastructure in the vicinity of the site, there are no significant issues expected in providing new gas supplies to the development.

Gas – GTC

3.8 The records obtained from GTC are included in Appendix E. The records indicate a low pressure network serving residential properties along Forge End. This network connects to National Grid apparatus outside No. 23 Forge End.

3.9 Given that there is no GTC gas apparatus indicated within the site boundary it is expected that diversionary works would not be required to facilitate development of the site.

Electricity – UK Power Networks

- 3.10 The records obtained from UK Power Networks are included in Appendix F. The records indicate a number of low voltage underground networks in the vicinity of the site, including low voltage cables serving properties to the north, east and south of the site, along Watford Road, Chiswell Green Lane, Woodleaf, Hammers Gate, Rosedene End, Forge End, Long Fallow and Belvedere Gardens. The records also indicate a high voltage underground cable along Miriam Lane to the west of the site serving Butterfly World.
- 3.11 Given that there is no electricity apparatus indicated within the site boundary it is expected that diversionary works would not be required to facilitate development of the site.
- 3.12 UK Power Networks has not provided a detailed quotation for provision of new supplies to the development but given the prevalence and size of existing infrastructure in the vicinity of the site, there are no significant issues expected in providing new electricity supplies to the development.

Potable Water – Affinity Water

- 3.13 The records obtained from Affinity Water are included in Appendix G. The records indicate a number of potable water distribution mains in the vicinity of the site, including distribution mains along Watford Road, Chiswell Green Lane, Woodleaf, Hammers Gate, Rosedene End, Forge End and Long Fallow. No potable water apparatus was found to be within the site boundary.
- 3.14 Given that no Affinity Water apparatus is shown to be located within the boundary of the site it is anticipated that no potable water apparatus will need to be diverted to facilitate the development of the site.
- 3.15 Affinity Water has not provided a detailed quotation for provision of new supplies to the development but given the prevalence and size of existing infrastructure in the vicinity of the site, there are no significant issues expected in providing new water supplies to the development.

Telecommunications – BT Openreach (BT)

- 3.16 The records obtained from BT are included in Appendix H. The records indicate overhead lines along Chiswell Green Lane to the north of the site, as well as some small sections of overhead line along Hammers Gate and Watford Road. Underground plant is indicated to the north, east and south of the site, including apparatus serving properties along Watford Road, Chiswell Green Lane, Woodleaf, Hammers Gate, Rosedene End, Forge End and Long Fallow.
- 3.17 Given that no BT apparatus is shown to be located within the boundary of the site it is anticipated that no BT apparatus will need to be diverted to facilitate the development of the site.
- 3.18 BT has not provided a detailed quotation for provision of new supplies to the development but given the prevalence and size of existing infrastructure in the vicinity of the site, no significant issues are expected in providing new supplies to the development.

Telecommunications – Virgin Media

- 3.19 The records obtained from Virgin Media are included in Appendix I. The records indicate a number of ducts to the north, east and south of the site, including apparatus serving properties along Watford Road, Chiswell Green Lane, Woodleaf, Hammers Gate, Forge End and Long Fallow.
- 3.20 Given that no Virgin Media apparatus is shown to be located within the boundary of the site it is anticipated that no Virgin Media apparatus will need to be diverted to facilitate the development of the site.
- 3.21 Virgin Media has not provided a detailed quotation for provision of new supplies to the development but given the prevalence and size of existing infrastructure in the vicinity of the site, no significant issues are expected in providing new supplies to the development.

Diversions, Easements and Protection

- 3.22 No utility apparatus is indicated to be located within the site boundary and therefore it is not anticipated that any diversions or easements will need to be provided in order to facilitate the development of the site.

Conclusion

- 3.23 Gas, electricity, potable water and telecommunications infrastructure all exist in the vicinity of the site within established residential areas.
- 3.24 Utility providers have not yet provided detailed proposals for service provision. However, given the size and prevalence of existing infrastructure in the vicinity of the site, it is not anticipated that there should be significant problems with supply, although some off-site reinforcement may be required.
- 3.25 Detailed proposals and associated quotations for new supplies will be obtained from each service provider at the detailed design stage.

4.0 Foul Water Drainage

Existing Foul Water Drainage Infrastructure

- 4.1 Sewer records obtained from Thames Water are included in Appendix J. The records indicate a 150mm diameter public foul water sewer along Chiswell Green Lane. A short section of this sewer is indicated to lie within the site boundary. The records also indicate 150mm diameter public foul water sewers serving properties to the east and south of the site, along Hammers Gate, Watford Road, Forge End and Long Fallow. No other public foul water sewers were indicated within the application site boundary.
- 4.2 The records show only those sewers that are known to be maintained by Thames Water. Foul water sewers not shown on Thames Water Asset plans are also known to exist in Long Fallow and Forge End. These sewers serve residential properties on the aforementioned roads and were constructed under a Combined Drainage Order. It is believed that these sewers may have since been adopted, having been transferred to Thames Water in 2011 under the Private Sewerage Transfer regulations.

Diversions, Easements and Protection

- 4.3 A short section of public foul water sewer is indicated to be located within the site boundary in the north of the site. It is anticipated that an easement will need to be provided in order to facilitate the development of the site.

Proposed Foul Water Drainage Strategy

- 4.4 It is proposed to provide a new foul water drainage system to serve the proposed residential development and to connect this to the existing public foul water sewer network.
- 4.5 The on-site foul water sewer network will discharge all flows via two separate outfalls to the foul water sewers located in Forge End (Outfall A) and Long Fallow (Outfall B). These sewers are anticipated to discharge all flows to the Thames Water foul water sewer network. The Proposed Foul Drainage Strategy included in Appendix K indicates the approximate locations of these sewers, and of their connections to the Thames Water foul water sewer network, according to information provided by Alban Developments.
- 4.6 The peak flow from the circa 391 proposed residential dwellings has been calculated at 18.6 l/s in accordance with the methodology provided within Sewers for Adoption (SfA), using a peak flow per dwelling of 0.047 l/s. A number of 324 residential units will be allocated to the existing foul water sewers in Long Fallow (Outfall B) and 67 residential units will be allocated to Forge End (Outfall A).
- 4.7 As such it is anticipated that there will be a peak flow of 3.1 l/s at Outfall A and 15.2 l/s at Outfall B. Foul water from the proposed development will be collected via lateral drains to a new foul water sewer of 150mm internal diameter that will discharge under gravity to the existing foul water sewers in Long Fallow and Forge End. MicroDrainage software has been used to confirm the feasibility for the collection and removal of foul water from the development site through the proposed drainage network. The hydraulic calculations are included in Appendix L.

- 4.8 Due to local topography and the shallow nature of the local sewers in Long Fallow (Outfall B), foul effluent from those properties located to the south-western corner of the site (i.e. approximately 33 properties) will need to be pumped and discharged into the proposed foul water manhole located in the vicinity of the internal road junction to the north-east. Therefore, it will be necessary to construct a pumping station, located in the south-western corner of the development site. The proposed pumping station would be designed in accordance with Thames Water and WRc 'Sewers for Adoption' specifications and be offered for adoption under a Section 104 Agreement. The indicative location of the proposed pumping station and foul rising main is presented in Appendix K.
- 4.9 Thames Water, as local sewerage undertaker, is obliged to accept foul water flows generated by development and fund any network improvements that may be required to provide the necessary capacity via infrastructure charges payable by the developer. As such, foul capacity will not be a constraint to development, although the timing of any network improvements may ultimately influence the development programme.

Future Maintenance

- 4.10 All new foul water infrastructure constructed to serve the site will be designed in accordance with Sewers for Adoption with the intention that it would be offered for adoption by Thames Water. The Building Regulations Part H and current best practice would also be followed where appropriate.

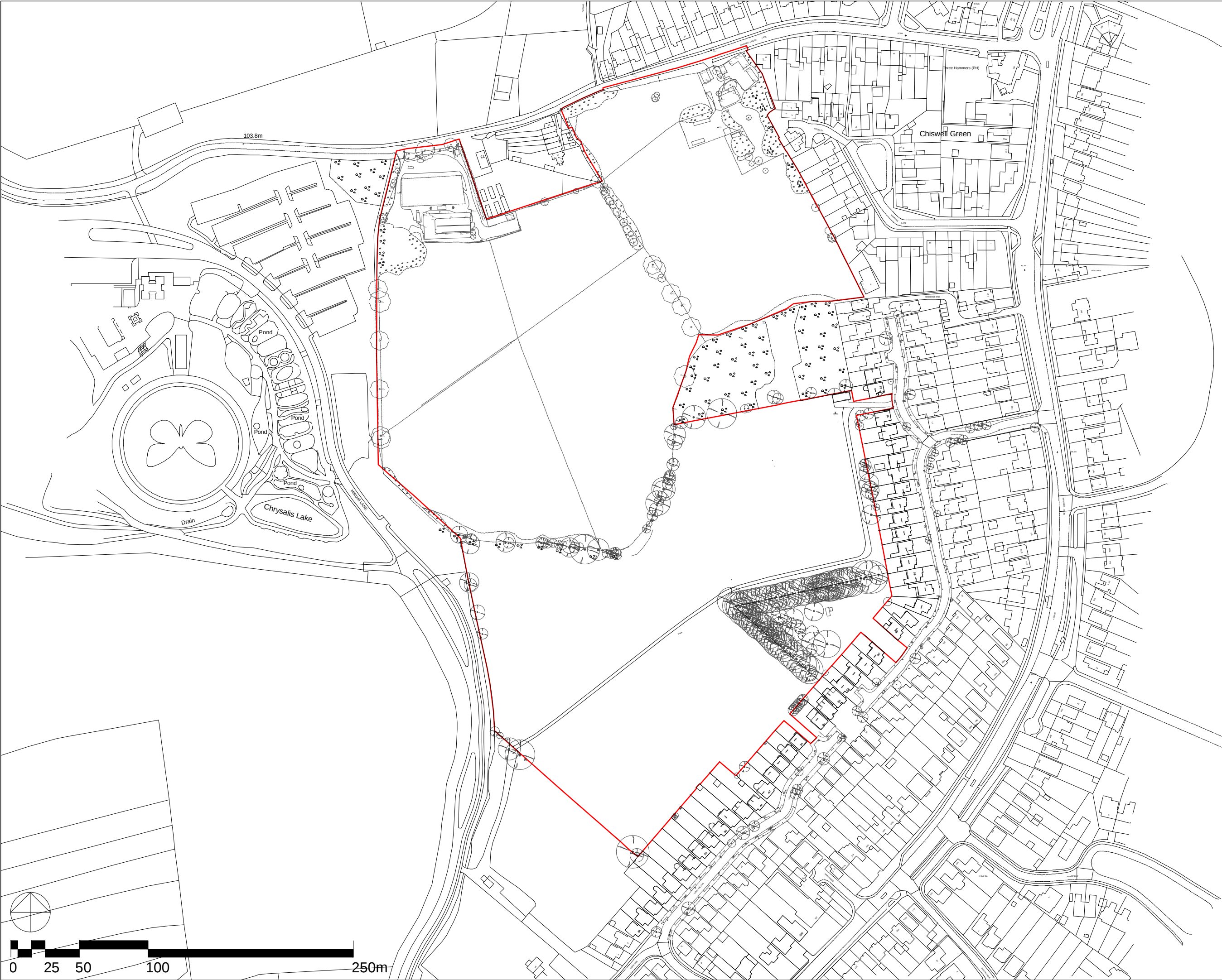
5.0 Summary & Conclusion

- 5.1 The purpose of this report is to assess the feasibility of providing the proposed residential development with all necessary utilities and foul water infrastructure.
- 5.2 This assessment has been prepared in accordance with Policy 84A (Drainage Infrastructure) from the City and District of St Albans District Local Plan Review 1994 – Saved Policies, July 2020.
- 5.3 Existing gas, electricity, potable water, telecommunications and foul water infrastructure all exist in the vicinity of the development site.
- 5.4 Given the size and prevalence of existing infrastructure in the vicinity of the site, it is not anticipated that there should be significant problems with provision of new supplies to the site.
- 5.5 Once planning approval is granted, detailed plans and service loadings will be submitted to each supplier so that detailed proposals can be obtained for the provision of new supplies.
- 5.6 According to Thames Water records a public foul water sewer is located within the site boundary in the north of the site. This sewer may be required to be diverted or an easement provided in order to develop the site.
- 5.7 No other utilities apparatus was indicated to be located within the site boundary.
- 5.8 It is proposed to provide a new foul water drainage system to serve the proposed residential development and connect to the existing public foul water sewer network via two outfalls.
- 5.9 Thames Water, as local sewerage undertaker, is obliged to accept foul water flows generated by development and fund any network improvements that may be required to provide the necessary capacity via infrastructure charges payable by the developer
- 5.10 In conclusion, it is considered that there should be no particular difficulty in providing new foul drainage and utilities infrastructure to serve the proposed development.

Appendices

Appendix A

Site Location Plan



Notes:
The contractor must verify all dimensions on site before commencing any work
on shop drawings, do not scale from this drawing
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beyond those originally intended by McBains Ltd. Please refer to our standard
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KEY:
— Planning Application Boundary

P5	Issued for planning approval	30.03.2022
P5d	Issued for comments	30.03.2022
P4	Issued for comments	28.03.2022
P3	Issued for comments	18.03.2022
P2	Issued for comments	08.03.2022

Revision	Amendment	Date
CA	ES	FC
Drawn by	Reviewed by	Approved by
61860	MAR. 22	1:2500@ A3
MCB Number	Date created	Scale

McBains
McBains Ltd
5th Fl, 26 Finsbury Square London EC2A 1DS
+44 (0)20 7796 7900
mcbains.co.uk

Client



Project
Land South of Chiswell Green Lane
St. Albans

Drawing Title
SITE LOCATION PLAN

ARCHITECTURE

Redline	Document Reference	Status
REDC01	MCB · ZZ · ZZ · DR · A · 0201	D5 · P5
Project Idn	Originator	Zone
	Level	Type
	Discipline	Number
	Suitability	Revision

Appendix B

Illustrative Framework Plan



Key:

- 1. Drainage strategy: SUDS/Swale
- 2. Children Play Areas
- 3. General Amenity Areas

Illustrative Masterplan
Land South of Chiswell Green Lane
St Albans

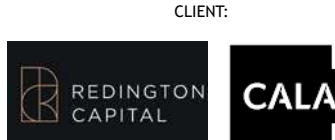
A1

JOB N°: LHC61860
DATE: 30.03.2022
SCALE: 1:1000
DRAWING N°: REDC01-MCB-22-22-DR-A-0210-05-P1
Illustrative masterplan

DRAWN BY: CA/ES
REVIEWED BY: POR
APPROVED BY: POR
REVISION:
29.03.2021/P1d issued for comments
30.03.2022/P1 issued for planning approval



Note: This drawing and schedule is based on the information supplied by others. The accuracy of which we cannot guarantee. No consultation has taken place with the planning authority. By and as such the above proposal should not be used as a basis for financial or commercial transactions.



CLIENT:
McBains Ltd
5th Fl, 26 Finsbury Square London EC2A 1DE
+44 (0)20 7786 1900
mcBains.co.uk

Appendix C

LineSearch Enquiry

Enquirer

Name	Ms Debbie Wigston	Phone	██████████
Company	Glanville Consultants	Mobile	Not Supplied
		Fax	██████████
Address	Cornerstone House 62 Foxhall Road Didcot Oxfordshire OX11 7AD		
Email	████████████████████		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

Enquiry Details

Scheme/Reference	TR8151408		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	06/01/2016	Work type	Housing
End date	31/08/2016	Site size	225 metres diameter
Searched location	XY= 513091, 204437 Easting/Northing	Work type buffer*	25 metres
Confirmed location	513138 204459		

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

Site Map


Asset Owners

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lineasearchbeforeudig.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

Asset Owners & Responses. Please note the enquiry results include the following:

1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

1. **LSBUD Members who have assets registered within your search area. ("Affected")**
 - a. **These LSBUD Members will either:**
 - i. **Ask for further information ("Email Additional Info" noted in status).** The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
 - ii. **Respond directly to you ("Await Response").** In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
2. **LSBUD Members who do not have assets registered within your search area. ("Not Affected")**
3. **Non LSBUD Members who may have assets within your search area.** Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

National Grid. Please note that the LSBUD service only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeyoudig.nationalgrid.com

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

List of affected LSBUD members

No LineasearchbeforeUdig Asset Owners within the Zone of Interest

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.

List of not affected LSBUD members

AWE Pipeline	FibreSpeed Limited	Perenco UK Limited (Purbeck Southampton Pipeline)
BOC Limited (A Member of the Linde Group)	Gamma	PetrolNeos
BP Midstream Pipelines	Humbly Grove Energy	Phillips 66
BPA	HV Cables	Premier Transmission Ltd (SNIP)
Carrington Gas Pipeline	IGas Energy	Redundant Pipelines - LPDA
Centrica Energy	Ineos Enterprises Limited	RWEnpower (Little Barford and South Haven)
Centrica Storage Ltd	INEOS Manufacturing (Scotland and TSEP)	SABIC UK Petrochemicals
CLH Pipeline System Ltd	Lark Energy	Scottish Power Generation
ConocoPhillips (UK) Ltd	Lightsource SPV Limited	Seabank Power Ltd
Coryton Energy Co Ltd (Gas Pipeline)	Mainline Pipelines Limited	Shell Pipelines
CSP Fibre c/o Centara	Manchester Jetline Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
EirGrid	Manx Cable Company	Transmission Capital
Electricity North West Limited	Marchwood Power Ltd (Gas Pipeline)	Vattenfall
E-on UK Plc (Gas Pipelines Only)	National Grid Gas (above 2 bar) and National Grid Electricity Transmission	Western Power Distribution
ESP Utilities Group	Northumbrian Water Group	Wingas Storage UK Ltd
ESSAR	NPower CHP Pipelines	Zayo Group UK Ltd c/o JSM Group Ltd
Esso Petroleum Company Limited	Oikos Storage Limited	

The following non-LSBUD members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding. Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
Affinity Water			Not Notified
BskyB Telecommunications			Not Notified
BT			Not Notified
CityFibre			Not Notified
Cofely District Energy			Not Notified
Colt			Not Notified
Energetics Electricity			Not Notified
Fulcrum			Not Notified
GTC			Not Notified
Hertfordshire County Council			Not Notified
Hibernia Networks			Not Notified
Instalcom			Not Notified
Interoute			Not Notified
Mobile Broadband Network Limited			Not Notified
National Grid Gas Distribution (below 2 bar)			Not Notified
Redcentric plc			Not Notified
Tata, KPN (c/- McNicholas)			Not Notified
Thames Water			Not Notified
UK Power Networks			Not Notified
Utility assets Ltd			Not Notified
Verizon Business			Not Notified
Virgin Media			Not Notified
Vodafone			Not Notified
Vtesse Networks			Not Notified

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Appendix D

National Grid Records



Debbie Wigston
Glanville Group
Cornerstone House
62
Foxhall Road
Didcot
Oxfordshire
OX11 7AD

Plant Protection
National Grid
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA
E-mail: plantprotection@nationalgrid.com
Telephone: +44 (0)800 688588

National Grid Electricity Emergency Number:
0800 40 40 90*

National Gas Emergency Number:
0800 111 999*

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

www.nationalgrid.com

Date: 06/01/2016

Our Ref: EA_TE_Z5_3SWP_208006

Your Ref: (WS) TR8151408

RE: Proposed Works, AL2 3AL, LAND AT CHISWELL GREEN, ST ALBANS, HERTFORDSHIRE

Thank you for your enquiry which was received on 05/01/2016.
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to National Grid Electricity Transmission plc's and National Grid Gas 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 National Grid's network areas please see the National Grid website
(<http://www.nationalgrid.com/uk/Gas/Safety/work/>) 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. National Grid will endeavour to provide an initial 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.

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 National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

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

- National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to 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 National Grid.
- 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 the National Grid Website (<http://www.nationalgrid.com/NR/rdonlyres/6D6525F9-59EB-4825-BA89-DBD7E68882C7/51319/EssentialGuidance.pdf>).

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

NGG 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 National Grid Plant Protection team via e-mail ([click here](#)) or via the contact details at the top of this response.

Yours faithfully

National Grid Plant Protection Team

ASSESSMENT

Affected Apparatus

The National Grid 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 National Grid apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe 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 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 <http://www.hse.gov.uk>
- 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://www.nationalgrid.com/NR/rdonlyres/6D6525F9-59EB-4825-BA89-DBD7E68882C7/51319/EssentialGuidance.pdf>

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):

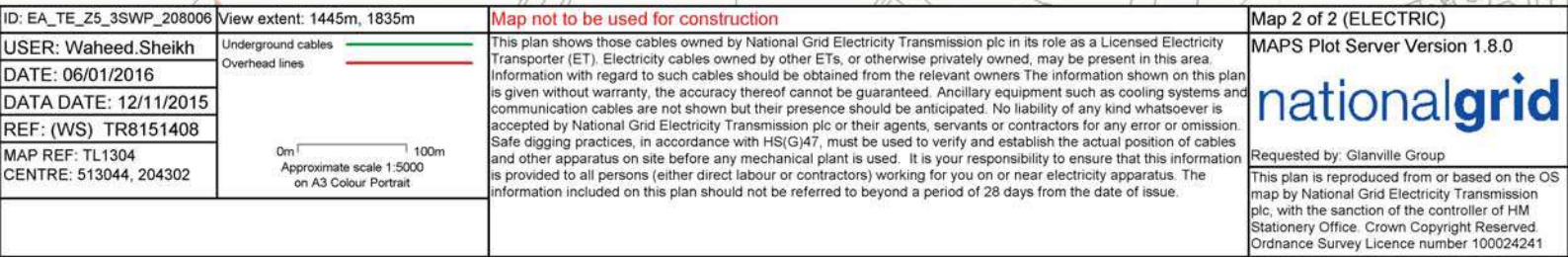
<http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf>

Copies of all the Guidance Documents can also be downloaded from the National Grid Website:

<http://www.nationalgrid.com/uk/Gas/Safety/work/downloads/>



ID: EA_TE_Z5_3SWP_208006		View extent: 1445m, 1835m	Map not to be used for construction	Map 1 of 2 (GAS)
USER: Waheed.Sheikh		LP MAINS	This plan shows those pipes owned by National Grid Gas plc 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 the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Gas plc or their agents, servants or contractors for any error or omission. Site digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.	MAPS Plot Server Version 1.8.0
DATE: 06/01/2016		MP MAINS		
DATA DATE: 05/01/2016		IP MAINS		
REF: (WS) TR8151408		LHP MAINS		
MAP REF: TL1304		NHP MAINS		
CENTRE: 513044, 204302		0m 100m Approximate scale 1:5000 on A3 Colour Portrait		Requested by: Glanville Group
Valve  Depth of Cover  Syphon  Diameter Change  Material Change 		This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886		



ENQUIRY SUMMARY

Received Date

05/01/2016

Your Reference

(WS) TR8151408

Location

Centre Point: 513044, 204302

X Extent: 645

Y Extent: 715

Postcode: AL2 3AL

Location Description: AL2 3AL, LAND AT CHISWELL GREEN, ST ALBANS, HERTFORDSHIRE

Map Options

Paper Size: A3

Orientation: PORTRAIT

Requested Scale: 2500

Actual Scale: 1:5000 (GAS), 1:5000 (ELECTRIC)

Real World Extents: 1445m x 1835m (GAS), 1445m x 1835m (ELECTRIC)

Recipients

pprsteam@nationalgrid.com

Enquirer Details

Organisation Name: Glanville Group

Contact Name: Debbie Wigston

Email Address: [REDACTED]

Telephone: [REDACTED]

Address: Cornerstone House, 62 , Foxhall Road, Didcot, Oxfordshire, OX11 7AD

Description of Works

Service Records Request

Enquiry Type

Proposed Works

Activity Type

General Excavation

Work Types

Work Type: Plans Only

Appendix E

GTC Records

This plan must be available on site when excavation is taking place. The information shown on this plan is given without obligation or warranty. The accuracy thereof cannot be guaranteed. Where service cables and apparatus etc., are shown on this plan, they are shown to the best of our knowledge and belief, but we do not accept any liability for any loss or damage, whatsoever (including liability for negligence), is accepted by us or our agents or servants for any error or omission. The actual position of apparatus must be verified and excavation should not be made until it has been ascertained that the apparatus shown on this plan is not in the way of any excavation. The information provided relates only to plant previously owned by companies within the Infraco group. It is advised that other utilities may have apparatus in the area and therefore must be contacted before any excavation is made. This drawing may not include gas services.

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Legend

- Gas Pipe
 - LP Pipe
 - MP Pipe
 - IF or Service Pipe
- Gas Node
- Conversion Point
- Reducer
- Depend
- Gas PRI
- PA

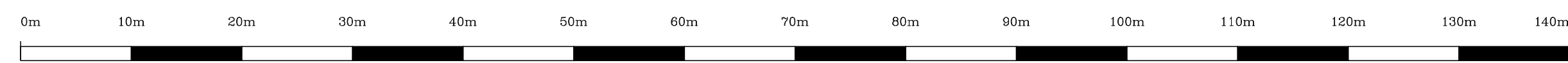
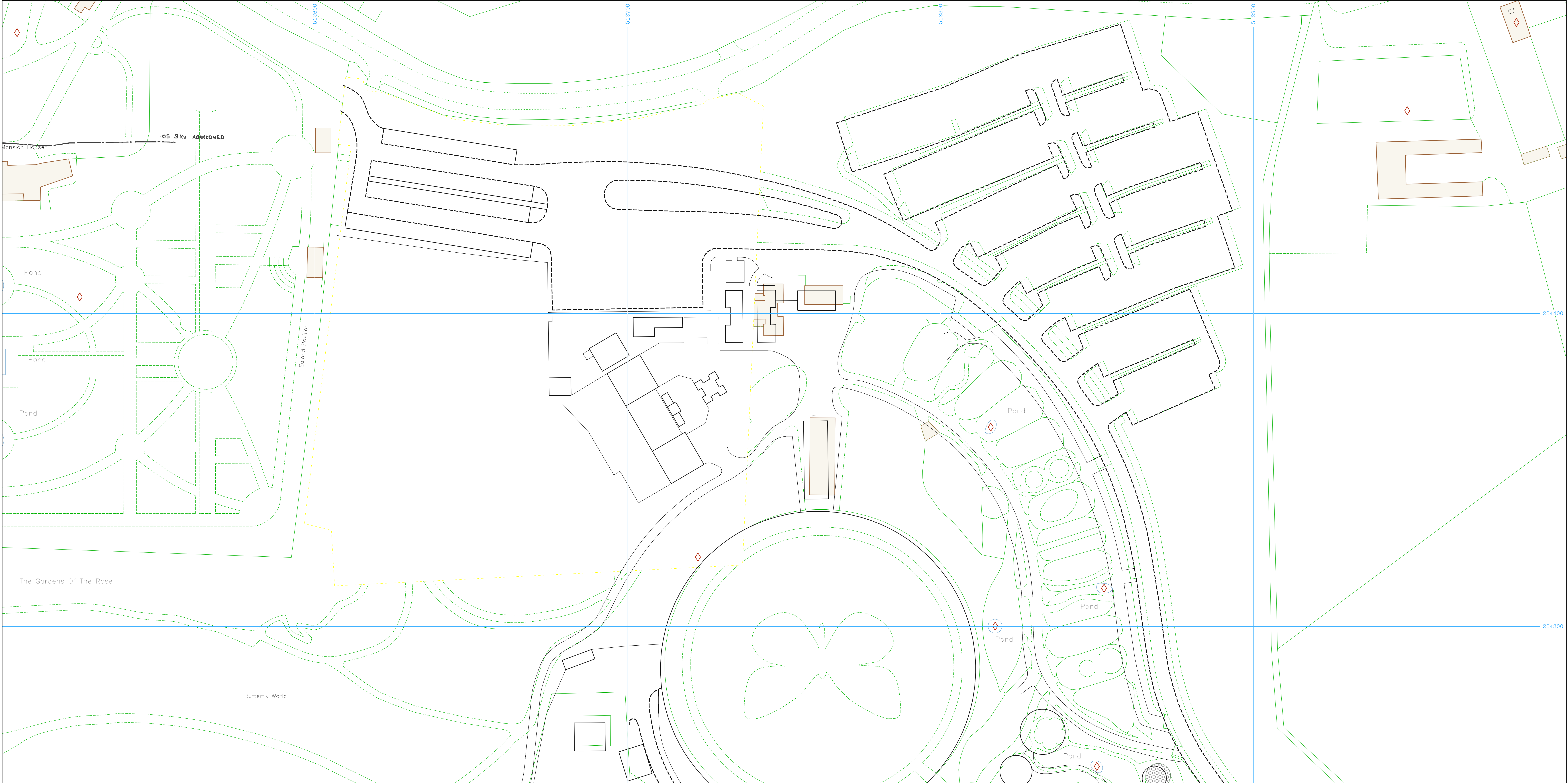
0 38.4m

SCALE: 1:880
O.S. REF: 513291.204168
N7008233 1 of 3 Gas
Date: 02-08-2014

A group member of
Bristol Gas Group
Bristol Gas Group plc
Woodville Business Park
Woodville
gfc
...leading utility networks

Appendix F

UK Power Network Records



Plotted On : 05/01/2016

Plotted By : Mark Ellis

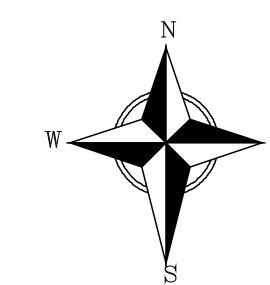
Plot Description: LAND AT CHISWELL GREEN, ST ALBANS,
HERTFORDSHIRE AL2 3AL

2016/2209461/ug_mains

Map Centre : TL1204SE



UK Power Networks
Plan Provision
Fore Hamlet
IPSWICH
Suffolk
IP3 8AA
Tel 0800 0565 866
Fax 08701 963782



For details of the symbology please refer to
<http://www.ukpowernetworks.co.uk/safety-emergencies/in-the-workplace/understanding-safety-symbols.shtml>

PRIMARY CABLES
EXTRA HIGH VOLTAGE CABLES (EHV) 22,000 TO 132,000 Volts

Depth normally 750mm cover in carriageway & 600mm cover in footway.

Before digging within one metre of these cable routes
Telephone 0800 056 5866 in order that the Company's apparatus may be located
on site and any necessary protection works agreed.

N.B. THRUST BORERS OR MOLES MUST NOT BE USED WITHIN THE VICINITY OF ANY
CABLES BELONGING TO UK POWER NETWORKS WITHOUT FIRST CONTACTING THIS
COMPANY.

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

1. UK Power Networks Ltd does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks Ltd does not exclude or limit its liability if it causes the death of a person or causes personal injury to a person where such death or personal injury is caused by its negligence.
3. Subject to paragraph 2, UK Power Networks Ltd has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise howsoever for any loss, damage, costs, claims, demands or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.

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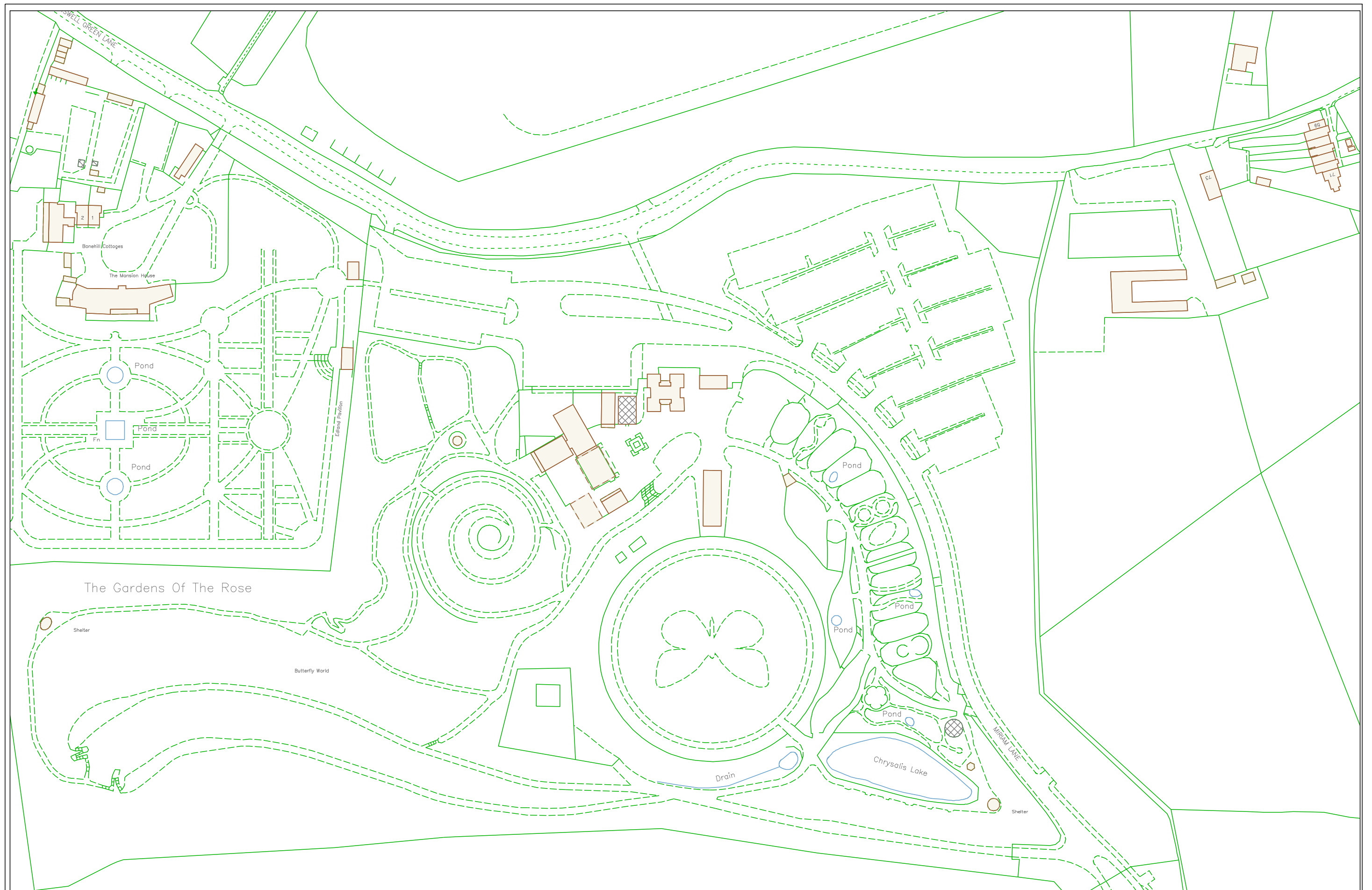
ADVICE TO CONTRACTORS ON AVOIDING DANGER FROM BURIED ELECTRICITY CABLES.

- 1) Do have cable drawings with you on site and check them before you start the excavation.
- 2) Do have a cable locator tool on site and use it to help you.
- 3) Mark out the location of electricity cables.
- 4) Do not use a mechanical excavator within 0.5m of electricity cables.
- 5) Use spades and shovels in preference to other tools.
- 6) Never disturb electricity cables and joints or their protective covers.

IF IN DOUBT – ASK! PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line
Phone 0800 780 0780 (24hrs) URGENTLY

These basic safety precautions are explained in detail in the HSE booklet, HS(G)47 – Avoiding Danger from Underground Services, a copy of which may be obtained from your supervisor or HMSO.

Please be aware that electric lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.



Plotted By: Mark Ellis

2016/2209461

Plotted On 05/01/2016

TL1204SEA

