
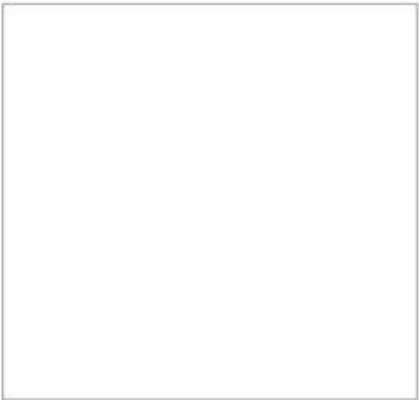




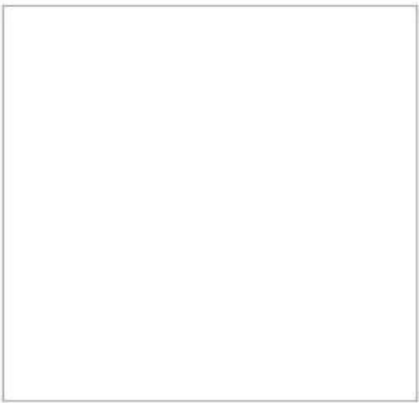
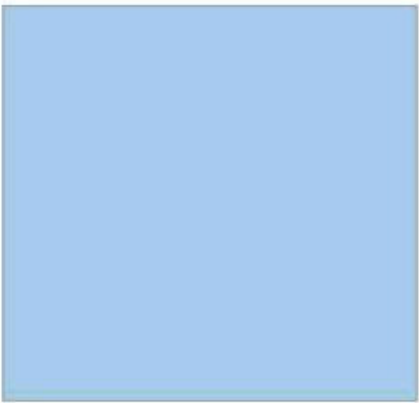
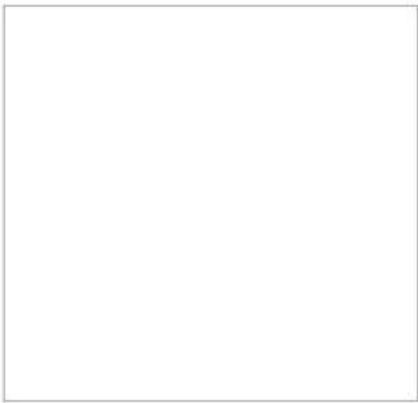




# Mill Road, Hertford

## Utilities Report

January 2012



**RPS PROJECT No: JKK7067**

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## **PREFACE**

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## EXECUTIVE SUMMARY

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This report contains the results of the investigation and appraisal of the Statutory Utility Authorities for Gas, Water, Electricity, Telecommunications and drainage for the site at Mill Road, Hertford. This report is an overview assessment as requested by the client.

In order to provide commercial budgets relating to infrastructure upgrades to the existing utilities and for the installation of new utility services to serve the new development, enquires should be made to each of the utility to ascertain their costs.

Any existing utility services not notified on the service drawings would need to be diverted or if redundant removed from the site. Diverted services from the site would require new wayleaves to enable the utility companies to relocate their service.

The inclusion of energy efficient and renewable technologies could help to reduce the demand on the Electricity, Water and Gas services.

It should be noted that when the detailed applications are made to the service providers, there may also be costs involved to address any wayleave considerations.

Across the proposed development area at Mill Road, Hertford, the maps we have been provided with show that there are some utilities located within the ground. Two services of note running below ground within the site is the following:

- 11kv HV cabling running through across the East side of the site from Mead Lane. This is detailed on drawings provided by UK Power networks and a survey will need to be carried out in order to determine the exact location of this cabling.
- 10" Low pressure Gas main running through the Eastern side of the site joining a supply that travels along Railway Street.

Not all information showing services is on the drawings provided by the utility companies. Further onsite investigations and surveys should show up any additional services not shown on the drawings. These investigations would also show a more accurate position of services shown on the drawings.

On review of information received, we would point out that;

- There is no specific gas supply into the site. However a 6" Medium Pressure gas main runs along the Northern side of the site along Mead Lane. A capacity check would need to be carried out of this gas main to ascertain if there is sufficient capacity to supply the proposed development.
- There is no specific large capacity water supply into the site. A 300mm water main by Veolia Water travels along the West site of the site via Mill Road and reduces to a 100mm supply along Mead Lane.
- Additional drainage from the site would need to be discharged in to the local sewer either by direct connection or connecting to existing drains onsite. The capacity of these drains would need to be checked to determine their suitability.
- The communications companies would need to be approached to determine whether they have the capability of supplying the additional required needs of the development.
- Other utility supplies have apparatus in the area and care should be taken to avoid their equipment where possible.

Services located on the development area or immediately adjacent are owned by the following service companies:

- UK Power Networks
- National Grid UK Gas Distribution
- Envoy Gas and Electricity
- Gas Transportation Company
- Network Rail
- Virgin Media
- British Telecommunications Plc
- Veolia Water
- Thames Water Utilities Ltd. (Sewer Only).

As these services are located in and around the site it is possible that they will need to be disturbed in order to divert, disconnect or connect to meet any new development requirements. Road closures and traffic controls may need to be implemented in order to reach services for alterations to these networks, this can incur additional costs.

Detailed capacity investigations need to be carried out in order to ascertain the suitability of the existing networks in the area to ensure that it is capable of serving any new development. If the current infrastructure is not capable of serving the new development then network capacity will have to be increased to meet the new demand. Quotations for such work should be obtained from the utility services providers.

## I INTRODUCTION

---

### I.1 General

I.1.1 RPS Planning & Development have been commissioned to assess and advise on the utilities for Mill Road, Hertford, Hertfordshire.

I.1.2 The report advises on the existing services; the information contained within this report has been provided by the utility suppliers. These utility details are to be read in conjunction with this report.

I.1.3 The information used and contained in this report has been received from the various utilities. Each utility must be approached to obtain quotations for disconnections, diversions and connections.

**1.2 Sources of information**

1.2.1 For the purposes of this report we have relied upon information from the following sources.

**Statutory Contacts**

<p><b>UK Power Networks</b></p> <p>Atkins  Stats Enquiries Team  The Hub 500 Park Avenue,  Aztec West, Almondsbury  Bristol, BS32 4RZ</p>	<p><b>National Grid Gas Plc</b></p> <p>Lakeside House  The Lakes  Northampton  NN4 7HD  0845 605 6677</p>
<p><b>Veolia Water</b></p> <p>0845 769 7982</p>	<p><b>GTC</b></p> <p>Energy House  Woolpit Business park  Woolpit, Bury St. Edmunds  Suffolk IP30 9UP  01359 240363</p>
<p><b>Thames Water</b></p> <p>Thames Water Property Searches  PO Box 3189  Slough  SL1 4WW</p>	<p><b>BT Openreach</b></p> <p>08007314815</p>
<p><b>Envoy Asset Management Ltd.</b></p> <p>Driscoll 2  Ellen Street  Cardiff  CF10 4BP</p>	<p><b>Network Rail</b></p> <p>Buried Services Team  5C Hudson House  Toft Green  York YO1 6HP  01904384980</p>
<p><b>Virgin Media</b></p> <p>08708 883116</p>	

1.2.2 Other service suppliers were contacted. Confirmation from these suppliers that no services are located within the area identified and has been received; these are listed in the appendices.

## 2 ELECTRICITY

---

### 2.1 Distribution Network Operator (DNO)

2.1.1 The DNO in this area is UK Power Networks.

### 2.2 Summary

2.2.1 Information obtained from UK Power Networks is reproduced in the appendices. This information shows that there are services running both around and through the development area. Connection to the existing sites supply (if adequate) or a new LV connection to the mains in the road will be required in order to supply the new buildings with power.

### 2.3 Existing Electrical Mains

2.3.1 The Existing UK Power Networks drawings show that there are electrical HV and LV services running through the site. These are not only isolated to the local road infrastructure, but travel through the site to serve existing buildings outside the sites boundary. This HV and LV cabling can be seen running through the Eastern side of the site on drawings provided by UK Power Networks.

2.3.2 The existing buildings located within the site will be supplied with LV electrical supplies that are not necessarily identified on the maps provided by UK Power Networks. These existing supplies would need to be located by on site by survey, made safe and removed as they do not have the capability to serve the proposed development.

### 2.4 Proposed Electrical Mains

2.4.1 Any new LV electrical supply services required to serve the new development will be provided by UK Power Networks as they are the main electrical supply company around the site.

2.4.2 On Receipt of the application for new connections issued to UK Power Networks they will assess the existing LV network infrastructure to assess the most suitable point for the new electrical connections. (Non contestable works may be done by the other providers).

2.4.3 The location of services as recognised by UK Power Networks is shown in the drawings attached in Appendix 3.

2.4.4 Easements for UK Power Network property is shown in Appendix 3.

## 3 COMMUNICATIONS

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### 3.1 Communication providers

3.1.1 There are two main communications providers with apparatus located near to or on the development area. These are: BT Openreach and Virgin Media.

### 3.2 Summary

3.2.1 Communication systems to the site will be required; Both BT and Virgin Media have the capability of providing telephone and broadband connections through their systems as both skirt sites perimeter.

### 3.3 BT Openreach and Virgin Media

3.3.1 Both BT Openreach and Virgin Media have a large communications network located around the area, mainly located in the roads which form the sites boundary. Drawings in Appendix 3 show the locations of these services. The areas to be aware of are located in Mead Lane and Mill Road. There are a number of joint boxes located around the site boundary. Individual branches to buildings may not be shown on these drawings; on site investigations will be necessary to reveal where these unidentified cables are located.

3.3.2 New developments will require service cables installed by either BT Openreach or Virgin Media. These new network services will then serve each building as required.

3.3.3 In general BT Openreach and Virgin Media do not charge for the installation of new services to new properties; however they will have some plant costs associated with their network infrastructure and also for any cable diversions necessary to maintain the telephone and communication network service.

## 4 WATER SERVICES

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### 4.1 Network Supplier

- 4.1.1 The water network supplier in this area is Veolia Water.
- 4.1.2 The information obtained from the utility company is shown on map records in the water Appendices.

### 4.2 Summary

- 4.2.1 It is not clear if the existing buildings on site have a water connection to them. However, if they do, it is probable that this supply is not capable of carrying the additional load required by the new development. Further investigation and capacity inquiries with Veolia Water will be required to determine the current on-site supply and capacity within the local water mains.

### 4.3 Infrastructure to site

- 4.3.1 The network within and surrounding the area is served by mains of varying sizes. A 300mm water supply travels along Mill Road and a 100mm supply along Mead Lane. A detailed loading assessment should be carried out during the detailed design phase to establish the water capacity requirements of the new development. At the junction of Railway St. and Mill Road, and again at Mead Lane and Mill Road there are multiple water mains, all by Veolia Water that converge and interact with each other. As there are two water mains in the area of Mill Road and Mead Lane, care must be taken to identify which is which if they are to be excavated and connected to.

### 4.4 Existing Infrastructure within site

- 4.4.1 As there are existing buildings located within the site, these buildings may have been provided with a number of water services which are not identified on the Veolia Water record drawings. These existing services will need to be located as to connect to, upgrade or avoid when building any new development.
- 4.4.2 Diversions may well be required where the development clashes with existing pipe work. There will be a charge to relocate or lay any new main pipes.
- 4.4.3 The water supply system may require an upgrade where the existing supply service is deemed to be inadequate. Where this occurs the developer will need to liaise with Veolia Water to find out their costs for increasing capacity. Charges will also apply to obtain existing main capacity.
- 4.4.4 The Veolia Water records are included in Appendix 3.

## 4.5 Proposed

- 4.5.1 A detailed loading assessment should be carried out during the detail design stage to establish the clean water capacity requirements. Liaising with Veolia Water will then determine the suitability of the existing water supply systems and whether any reinforcement or on site storage is required.

## 5 DRAINAGE

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### 5.1 Network Supplier

5.1.1 The drainage network in the area is adopted by Thames Water.

### 5.2 Summary

5.2.1 It is unlikely that the existing buildings on-site have any foul water or surface water drainage connecting from them to the main sewer. There are no connections shown in the record drawings provided by Thames Water. The new development on site will need to discharge into the main sewer located on Mill Road. The capacity of this main sewer will need to be assessed in order to confirm its suitability of carrying the additional load.

### 5.3 Foul and Surface Water services

5.3.1 Thames Water record maps show a separate foul and surface water sewer located within Mill Road. There is a 225mm surface water main flowing North Easterly on Mill Road increasing to a 750mm main in the area North of Mead Lane. A foul water sewer also exists within Mill Road but runs in the opposite direction travelling in a Southerly direction connecting to 1000mm main at the junction with Railway street. This 1000mm foul main travels along the Railway Street in an Easterly direction. At the Northern end of the site there is also a foul drain running almost parallel with the surface water sewer. The size of this foul water sewer is 150mm increasing to 225mm. Further onsite investigation is required to determine the sewer layout within this undefined area. Connections to other buildings within the development area and non adopted drainage are not shown on these records, further onsite surveys will be required to determine the location of these services. The Drainage record drawings are attached in the appendices.

### 5.4 Proposed

5.4.1 A detailed loading assessment should be carried out during the detail design stage, to establish the drainage capacity requirements. Liaising with Thames Water will then determine the suitability of the existing drainage systems and whether any reinforcement or on site storage is required.

## 6 GAS

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### 6.1 National Grid

- 6.1.1 The main network transporter in the area is National Grid Gas.
- 6.1.2 The information obtained from the utility company is shown on map records in Appendix 3.

### 6.2 Summary

- 6.2.1 To ensure there is sufficient supply for the new development a more detailed loading assessment should be carried out in order to determine the sites actual requirement for a gas supply.

### 6.3 Existing Gas Supply – Infrastructure to site

- 6.3.1 The surrounding area has a range of Medium and Low Pressure gas mains of different pipe sizes and materials. The largest capacity Gas main is a 150mm Medium Pressure Polyethylene main located in Mill Road and turning at the junction onto Mead Lane. There is also a 200mm Low Pressure Cast Iron main on Railway Street side of the site which connects to a 250mm Low Pressure Main running in the direction of Marshgate Drive. It must be noted that this Low Pressure Main travels through the site.
- 6.3.2 The only gas supply evident on the map connecting to a building on site is a connection to the 'Speedy Hire Centres' building on the Western side of the site. This gas supply, if it can not be re-used should be disconnected and made safe prior to any commencement of site work.

### 6.4 Existing Gas Supply Infrastructure within the site

- 6.4.1 Existing supplies within the site should be reused if possible subject to condition and suitable size of pipework.
- 6.4.2 Diversions will be required where the re-development clashes with any existing pipework.

### 6.5 New development Connections

- 6.5.1 It is likely to serve the additional requirements of the new development on the site a connection will be made to the 10" Low Pressure main on site.
- 6.5.2 A detailed formal application should be submitted to the gas company National Grid Gas in order to assess if the existing mains capacity is adequate to serve the new development and obtain their quotation for any diversions and new connections.
- 6.5.3 Attention should be drawn to the easements detailed within the appendices. This gives requirements for digging near National Grids systems.

## 7 APPENDIX I - EASEMENTS

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### 7.1 UK Power Networks

- 7.1.1 UK Power Networks require that no works are carried out within a radial distance of 1.5 metres for supplies rated 11kV and 33kV
- 7.1.2 Where works are to be carried out in the vicinity of network supplies rated at 66kV and 132kV, UK Power Networks must be consulted for further guidance.
- 7.1.3 It would be recommended to consult with UK Power Networks on all matters concerning the development of an existing site or development of a new site.

### 7.2 BT Openreach

- 7.2.1 All excavations adjacent to apparatus are to be carried out by hand until the exact extent and/or location of apparatus is known. Mechanical borers and/or excavators shall not be used within 1 metre of Apparatus or 2 metres of any pole without the supervisory presence of a BT representative. To prevent any movement of apparatus during excavation, complete shuttering shall be used as directed by the engineer if:
- Excavation is deeper than the depth of cover of adjacent apparatus
  - Excavation is within 1.0 metre of apparatus in stable soil
  - Excavation is within 5.0 metres of apparatus in unstable soil
- 7.2.2 If, for completion of the works, the contractor intends using any of the following:
- Pile driving equipment within 10.0 metres of apparatus
  - Explosives within 20.0 metres of apparatus
  - Laser equipment within 10.0 metres of apparatus
- 7.2.3 The contractor shall advise the BT representative, in writing, in order that any special protective measures for the apparatus affected may be arranged.

### 7.3 Thames Water

- 7.3.1 The search provides maps showing the position, size of Thames Water assets close to the proposed development, and also manhole cover and invert levels – where available. Customers should be aware that the information contained on these plans is current only on the day that the plans were issued. The plans should only be used for the duration of the work that is being carried out at the present time.
- 7.3.2 Thames Water advises that customers should not build over any Thames Water apparatus. In the event of a burst, Thames Water need to have unrestricted access at all times, in order to comply with their statutory duties.
- 7.3.3 Thames Water advises that customers should avoid any Thames Water sewers, so that buildings are at least 3 metres away from the sewer. If a sewer has to be diverted, this work would be carried out by Thames Water at the customer's expense.

7.3.4

## **7.4 National Grid**

- 7.4.1 Protective measures must be taken when excavating in the vicinity of National Grid gas apparatus up to 7 bar pressure. Reference should be made to the HSE Guidance Note HSG 47 “Avoiding Danger from Underground Services” and to “Utilities Guideline on Positioning and Colour Coding Apparatus”.
- 7.4.2 National Grid surface boxes must not be buried or moved. Access must be maintained both during and after works have been carried out. National Grid reserve the right to locate and/or realign any boxes not left in such condition upon completion of works and at the expense of the contractor and/or client. No manhole cover or other structure is to be built over, around, or under a gas pipe and no work is to be carried out which results in the reduction or increase in cover protection without agreement.
- 7.4.3 No apparatus is to be laid directly above the line of existing gas pipes irrespective of clearance. Where new plant crosses over, or is laid alongside, an existing gas pipe, a minimum clearance of 250 millimetres (or 1.5 times the external diameter of the gas pipe if this is greater) between the gas pipes and new plant should be provided to allow future repair or maintenance. Where the minimum clearances cannot be met, if the work is close to a pipe operating above 2 bar (intermediate pressure), site discussions should be held with National Grid to agree a suitable clearance.
- 7.4.4 Mechanical excavators (including breaker attachments) must not be used within 0.5 metres from low pressure and medium pressure gas mains, and 3 metres from high pressure gas mains.
- 7.4.5 The presence of low/medium pressure gas has been identified within the vicinity of the site.
- 7.4.6 In addition, no works or crossings of the intermediate pressure pipeline(s) are to be carried out until a detailed consultation has taken place with National Grid.
- 7.4.7 National Grid should be consulted on all matters concerning the re-development of an existing site or development of a new site.

## 8 APPENDIX 2 – CONTACTED UTILITIES

Utility	Category	Status	Response	Notes
UK Power Networks	Electric	Received	Affected	
Hertfordshire County Council	Council	See Notes	Affected	See Letter
Envoy	Gas & Electricity	Received	Affected	
Gas Transportation Company	Gas & Electricity	Received	Affected	
Environment Agency	Other	See Notes	Affected	See Letter
Network Rail	Rail	Received	Affected	
Virgin Media	Telecom	Received	Affected	
Thames Water	Water and/or Sewer	Received	Affected	Sewer Only
British Telecommunications Plc	Telecom	Received	Affected	
Veolia Water	Water	Received	Affected	
Energetics Electricity	Electric	Received	Not Affected	
British Gas C/O ES pipelines	Gas	Received	Not Affected	
Traffic Master PLC	Other	See Notes	Not Affected	Website used
Fulcrum Pipelines	Pipeline	Received	Not Affected	
Affiniti (KCOM)	Telecom	Received	Not Affected	
BSkyB (Easynet)	Telecom	Received	Not Affected	
FibreSpan	Telecom	Received	Not Affected	
Gamma Telecommunications	Telecom	Received	Not Affected	
Global Crossing	Telecom	Received	Not Affected	
Interoute	Telecom	Received	Not Affected	

# RPS

May Gurney Ltd (Fujitsu)	Telecom	Received	Not Affected	
McNicholas (Colt Networks)	Telecom	Received	Not Affected	
McNicholas (KPN Networks)	Telecom	Received	Not Affected	
McNicholas (TATA Networks)	Telecom	Received	Not Affected	
SSE	Telecom	See Notes	Not Affected	
Telent on behalf of Teliasonera	Telecom	Received	Not Affected	
Verizon Business	Telecom	Received	Not Affected	

