

# SERVICE SUPPLY STATEMENT HAVERHILL



GREAT WILSEY PARK



**Land at Haverhill  
Suffolk**

**Service Supply Statement**

**Hallam Land Management Ltd and Mrs Pelly**

# Document Control Sheet

**Document Title:** Service Supply Statement  
**Document Ref:** 10173 SS 01 Rv3  
**Project Name:** Land at Haverhill  
**Project Number:** 10173  
**Client:** Hallam Land Management Ltd and Mrs Pelly

## Document Status

Rev	Issue Status	Prepared / Date	Checked / Date	Approved / Date
0	Draft	AW 13.04.15	LW 17.04.15	PAB 17.04.15
1	Draft	AM 02.07.2015	LW 02.07.2015	PAB 02.07.2015
2	Draft	AM 10.08.15	LW 10.08.15	PAB 10.08.15
3	Final	AM 23.09.15	LW 23.09.15	PAB 23.09.15

## Issue Record

Name / Date & Revision	17.04.15	02.07.15	10.08.15	23.09.15		
Peter Glazebrook – Hallam Land Management Ltd	0	1	2	3		
David Lewis – Commercial Estates Group	0	1	2	3		

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Existing Services Network Plan

10173 / SU / 01

## 1 Introduction

- 1.1 Brookbanks Consulting Limited is appointed by Hallam Land Management Ltd & the landowner to complete a Service Supply Statement for a proposed residential development on land at Haverhill.
- 1.2 The objective of the study is to demonstrate that the development proposals may adequately be provided with service supplies and to identify the outline requirements for any necessary reinforcements to existing networks.
- 1.3 This report summarises the findings of the study and specifically addresses the following issues:
  - Existing network apparatus
  - Supply requirements for the new development
  - Consultations with the incumbent supply network operators
  - Development of outline proposals to supply the proposed development.

## 2 Background Information

### Location & Details

- 2.1 Haverhill is located some 30km to the south-east of Cambridge and lies within the county of Suffolk. The Local Planning Authority is West Suffolk Council, previously identified as St Edmundsbury Borough Council.
- 2.2 The proposed development site lies to the north-east of the urban fringe of Haverhill and is situated adjacent to Great Wilsey Farm. The north-west of the site is bound by Haverhill road (A143), Samuel Ward Academy and Westfield Community Primary School. The south-west of the site is bound by Chalkstone Way and land adjacent to residential properties. Coupals Road bounds the site to the south and Eagle's Farm is situated adjacent to the south-east of the site at Calford Green.
- 2.3 The land is currently undeveloped and is not thought to have been historically subject to any significant built development. The Site location and boundary is shown indicatively on Figure 2a, below:

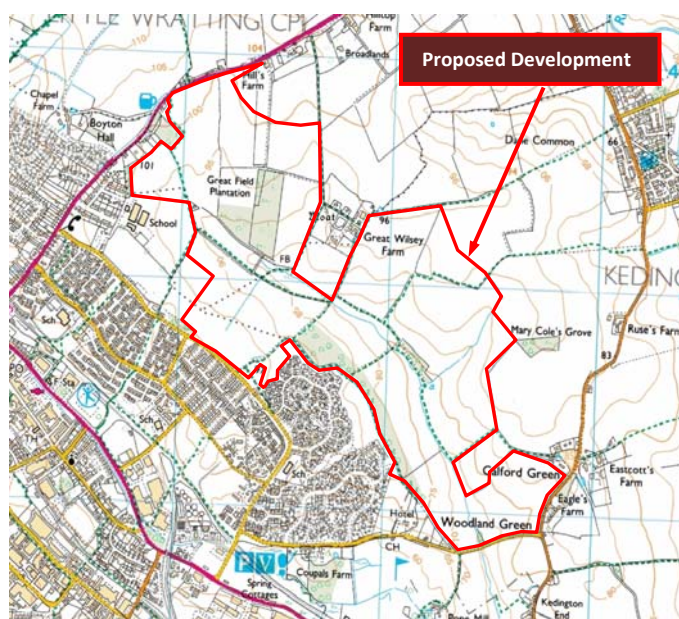


Figure 2a: Site Location

**Development Criteria**

2.4 It is proposed to develop within the circa 168.34 hectare site:

- Upto 2,500 residential units
- 2x Local Centre (0.6Ha and 1.3Ha)
- 2x Primary Schools (2FE at 2.2Ha and 1FE at 1.5Ha)
- Care home (1.5Ha)
- B1 and D1/2 Employment (Upto 5,600m<sup>2</sup>)

**Sources of Information**

2.5 The following bodies have been consulted while completing the study:

- |                              |   |                        |
|------------------------------|---|------------------------|
| • Anglian Water              | - | Potable and Foul Water |
| • UK Power Network (UKPN)    | - | Electricity            |
| • National Grid Distribution | - | Gas                    |
| • BT and Virgin Media        | - | Telecommunications     |

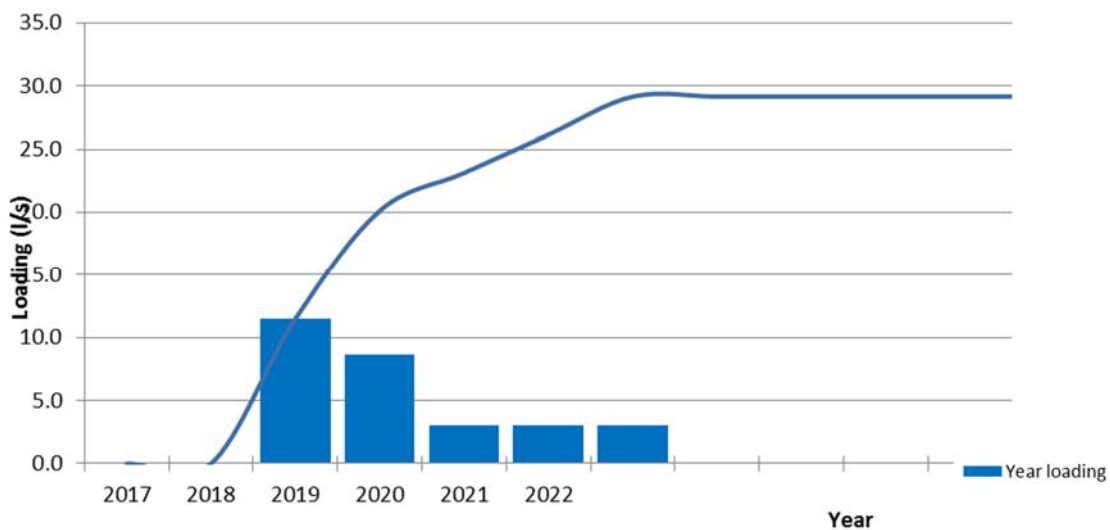
**3 Water Supply**

**Existing Conditions**

3.1 **Anglian Water** has been consulted regarding the location and capacity of their existing network within the vicinity of the site. Limited details of the water supply network have been provided and transferred to a composite existing services plan, which is contained in the Appendix.

**Supply Loading**

3.2 Water supply assessments predict a flow of 29.2 l/s being required for the site. Figure 3a shows the load profile as the development is built out.



**Figure 3a:** Predicted Water Supply Loading

#### Network Requirements – Water Supply

- 3.3 Discussions with Anglian Water have identified that there is insufficient capacity in the current network to supply the development therefore offsite reinforcements are needed.
- 3.4 There will be a requirement to provide a capacity booster of 750m of 280mm diameter HPPE mains to supply the site at a cost of £554,782.00.
- 3.5 Anglian water have confirmed that the point of connection for water supply will be from the existing 21 inch AC water main in Boyton Hall Water Tower, accessed from Witherfield Road, Great Wratting.

#### Network Requirements – Foul Water

- 3.6 Discussions with Anglian Water have identified that a direct connection to the public foul sewerage system is likely to have a detrimental effect on the existing sewerage network.
- 3.7 A solution has been derived to provide a new, direct connection to take foul water from the development into the Haverhill Water Recycling Centre, which is situated approximately 800m due south of the proposed development via a series of new gravity sewers.
- 3.8 Anglian water has stated that, “On-site pumping station rated at 42.4l/s, with a 1.45km long 250mm diameter rising main will be needed”.
- 3.9 The predicted capital scheme cost for the proposed conveyance of flows from the development directly to the Haverhill WRC is £1,119,244. The indicative cost chargeable to the developer following the offsetting of expected future revenue is predicted to be £279,967.
- 3.10 Anglian Water conclude that “the development will cause detriment if a local connection point is made, however a pumped connection direct to the Haverhill WRC will obviate the need for off-site mitigation”.

#### Diversions

- 3.11 The plans do not indicate any adoptable foul sewer pipes causing affect to the plan as they don't cross the development area and therefore diversionary works are not needed.

#### Regulatory Background

- 3.12 The introduction of the Water Act 2003 has:
- Formalised the procedures for developers wishing to complete self-lay schemes through multi-utility businesses.
  - Implemented revised financial procedures, being more developer focused by offsetting capital costs of infrastructure against supply revenue.
- 3.13 The result is that the provision of water and drainage infrastructure for new developments is now cheaper.
- 3.14 Under current regulations, the new off-site and on-site infrastructure can be implemented by multi-utility contractors, with the exception of a small element of non-contestable works where the new supply is connected to the existing network. Alternative asset owning businesses are able to implement and supply a strategic area through an Inset Appointment.

Alternative asset owners normally procure the water supply through a bulk supply contract with the incumbent business or by an alternative means of supply such as a borehole.

3.15 The Water Act 2003 allows two principal options in terms of financial arrangement between the developer and water infrastructure business. Both take into account the revenue earned by the business as a result of the new supplies.

- The Discounted Aggregate Deficit (DAD) / Commuted Sum method calculates the cost of implementing and funding the required infrastructure over a ten year period. The year on year income from new supplies is then offset against the funding, which when brought forward to an equivalent present day cost, identifies the contribution attributed to the developer. The mains are then installed by the water infrastructure company.
- The Asset Value method, whereby the mains may be laid by a multi-utility contractor, calculates the year on year income generated from the water supply, which is then paid back to the developer on the adoption of the mains. As a multi-utility contractor generally completes the work at a lower cost than the water supplying company, the Asset Payment method can often be the most cost effective.

3.16 The procedures outlined in the Water Act 2003 should result in all water businesses (including the incumbent operator) giving similar rebates through either the Asset Value or Commuted Sum procedures. The Asset Value method generally offers a cheaper scheme for site developers wishing to procure services through a multi-utility contract.

## 4 Electricity Supply

### Existing Conditions

4.1 **UK Power Networks (UKPN)** has been consulted regarding their existing network locations and capacities. Limited details of the electricity supply network have been provided and transferred to a composite existing services plan, which is contained in the Appendix.

4.2 UKPN operates a network of both low 11kV and high 33kV voltage electricity that provides a service to the existing residential properties in Haverhill.

### Supply Loading

4.3 Supply assessments predict an electrical demand of circa 10845kW being required for the site. Figure 4a shows the load profile as the development is built out.



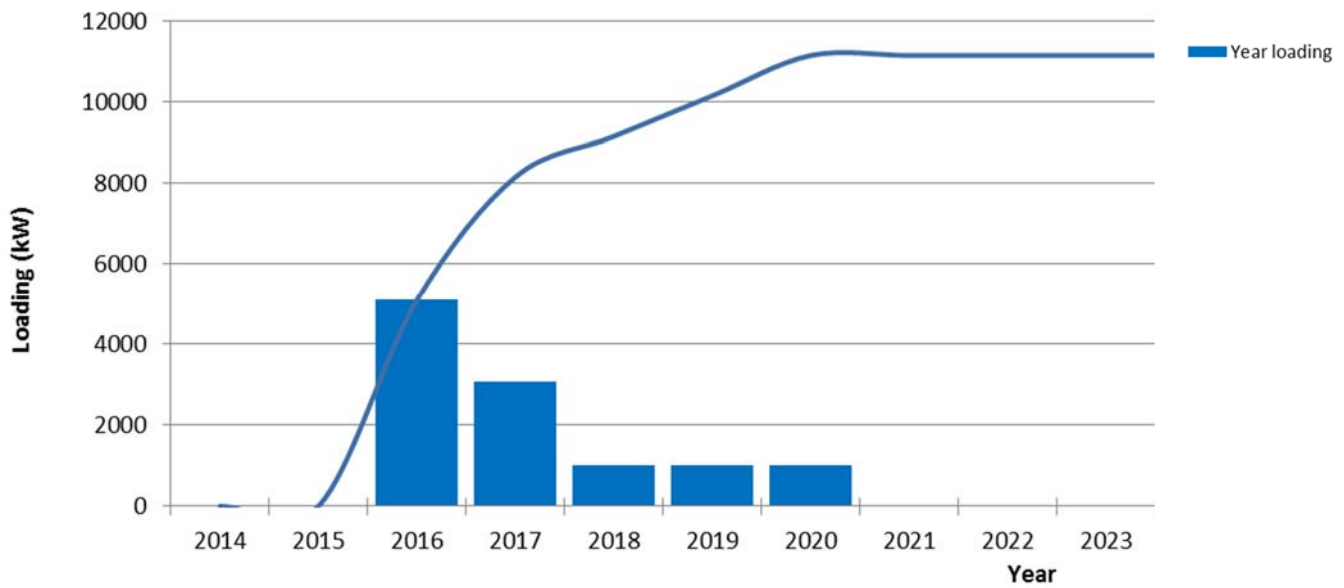


Figure 4a: Predicted Electricity Supply Loading

#### Network Requirements

- 4.4 UK Power Networks has completed a preliminary assessment of the existing network within the vicinity of the development area.
- 4.5 The results of the assessment have confirmed that supply for the site is possible by providing a point of connection at the existing distribution system at Haverhill Primary substation with back feed to Wratting Road Primary substation inclusive of circa 5km of new low voltage cabling.
- 4.6 UK Power Networks has provided a budgetary figure of £1,400,000+VAT to complete these reinforcement works and supply the site.

#### Diversions

- 4.7 UKPN have not identified any diversion requirements in order to facilitate this development.

#### Regulatory Background

- 4.8 Competition in the electrical market is now reasonably mature and a developer is free to procure third party DNOs to provide an embedded network, or indeed multi-utility / third party installations. The likes of Metropolitan and GTC take a holistic view in putting together infrastructure reinforcements, site distribution and supply packages and off-set the costs with anticipated future revenue through the transmission and supply of service to give a better financial arrangement and single point of responsibility for the developer.

## 5 Gas Supply

### Existing Conditions

- 5.1 **National Grid Gas Distribution** has been consulted regarding the location and capacity of their existing network in the vicinity of the site. Limited details of the gas supply network have been provided and transferred to a composite existing services plan, which is contained in Appendix A.
- 5.2 Gas mains operated by National Grid supply the area of Haverhill. A network of low pressure gas mains distribute to individual properties within the developments to east and south of the site. There are also intermediate pressure mains running north about the site boundary.

### Supply Loading

- 5.3 Supply assessments predict a peak gas load of circa 6244m<sup>3</sup>/hr will be required for the site. Figure 5a shows the load profile as the development is built out.

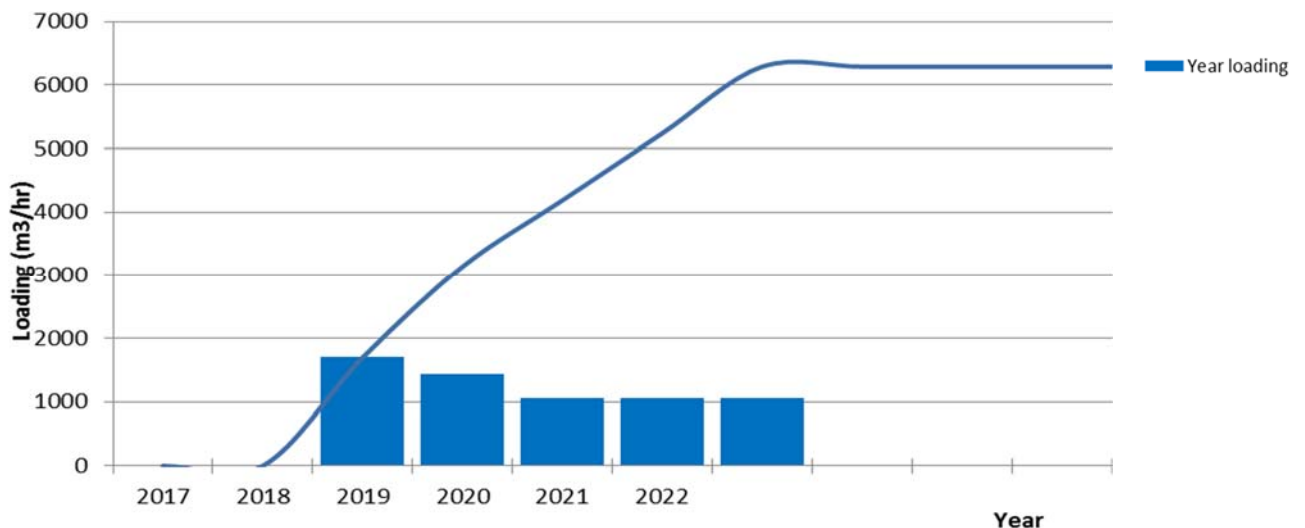


Figure 5a: Predicted Gas Supply Loading

### Network Requirements

- 5.4 National Grid Distribution has completed an assessment of its existing gas network within the vicinity of the development area, this has confirmed that there is sufficient capacity within the existing network to serve the development. National Grid Gas Networks have proposed a point of connection to Haverhill Road.
- 5.5 A budgetary figure of £133,530.40+VAT has been provided.
- 5.6 Previous experience has shown that the incumbent costs for reinforcement works are significantly more expensive when compared to the cost provided by the multi utility companies, with this in mind, the reinforcement strategy and costs will be determined at detailed design stage.

### Diversions

- 5.7 National Grid anticipate that no diversions will be required to facilitate the development.

### Regulatory Background

- 5.8 Early deregulation in the gas infrastructure market has led to a competitive environment. Third party shippers are permitted to offset the capital cost of infrastructure against the income generated from conveying the gas which may reduce future development costs.

## 6 Telecommunications

### Existing Conditions

- 6.1 The incumbent telecommunications provider is **British Telecom (BT)** and basic details of their local infrastructure are shown in the Appendix.
- 6.2 The primary routes for overhead telecommunication ducts are found within Forties Close and Shetland Street overhead connections to the residential area inaccessible by this development.

### Supply Requirements

- 6.3 A development of this nature will require a suite of communication services, typically being:

**Analogue Lines:** Analogue services traditionally is required for applications such as voice communications, fax machines & dial-up internet access, to enable visitors secure internet access, teleconferencing, links to banking facilities and the like.

**ADSL / SDSL:** Broadband services will be required for all internet applications such as e-mail, web access and to enable the transmittal of large amounts of data, particularly between businesses.

**ISDN:** Integrated Services Digital Networks (ISDN) is a digital service offered by many telephone companies to provide data access up to 128 Kbps for residence and small office applications. ISDN services may be required for applications such as frame relays, intruder alarms, & remote CCTV monitoring.

**Cable Television:** Cable television services are ideally required as an option for the proposed domestic dwellings.

**High-Speed Fibre:** High-speed fibre networks are currently being implemented throughout the UK, providing a high speed data connection to residential and commercial properties. BT Openreach is currently investing heavily into a high-speed fibre network, 21<sup>st</sup> Century Networks. It is anticipated that it will cover two thirds of UK premises by 2015, achieving theoretical connection speeds of up to 24Mbps. Third party operators such as Independent Fibre Networks provide fibre to the home services that can provide line speeds up to 100Mbps.

### Network Requirements

- 6.4 BT has been consulted regarding the location and capacity of their existing network in the vicinity of the site. The BT plans show an underground plant south of the Site.

- 6.5 BT has advised that they do not supply information pertaining to the new supply of apparatus to new development that have yet received the minimum of outline, planning consent. The following advice is therefore given as a general critique of what their requirements may entail.
- 6.6 As BT has network infrastructure running near to the site, it will be a straight forward task of providing on-site communication ducts distributing services into the development from the existing infrastructure. Other operators may wish to provide network services although they are likely to connect to a nearby alternative point of presence (POP).
- 6.7 As outlined above, availability of broadband ADSL / SDSL is now an important consideration of residential purchasers. The development will look to incorporate a high speed fibre network on-site to provide superior connection speeds.

#### Diversions

- 6.8 Discussions with BT are ongoing and assessments are currently being carried out to confirm whether any necessary diversions are required. The results of any diversion requirements are determined at the detailed design stage.

#### Regulatory Background

- 6.9 The incumbent national communications business, British Telecommunications was a state owned business prior to privatisation in 1984.
- 6.11 With BT controlling the existing cables feeding residential development, and the exchange (what is known as the 'local loop' or 'last mile'), BT have maintained a dominant position in controlling the communications sector. For example, BT has kept the wholesale access costs for third party broadband providers artificially high, should they wish to provide broadband directly into homes via the existing copper wires entering homes.
- 6.12 Provision of network services for commercial usage is less restrictive and this lead to a plethora of communication business start-ups in the late 1990's and early 2000's.
- 6.13 The industry regulator, Ofcom has completed much work in unbundling the local loop and bringing competition into the residential market. Following this deregulation, Virgin Media (NTL) and TalkTalk are undertaking major investment to place switch equipment into BT's existing exchanges and hence allow direct access to their network. This system, known as Carrier Pre-Selection is becoming increasingly popular, although wholesale line provision down at local loop level, within the residential market, has yet to develop. Accordingly, BT or local cable franchise cable operators are the prime source of network connections on residential sites.

## 7 Multi Utility Companies - GTC

#### Gas Supply

- 7.1 Based on a firm point of connection (CSEP) offer from the upstream Gas Distribution Network Operator (GDNO), GTC have been offered a medium Pressure Connection point to feed the Site.
- 7.2 An area of 6sqm is required to site the gas governor and takes up to 14 weeks to be delivered.

7.3 GTC assume that any existing mains on-site will be abandoned and all mains and services feeding all properties will be in trenches pre-excavated.

7.4 A total cost of £3,636.68 is quoted.

#### Electricity

7.5 Based on a firm point of connection (PoC) offer from the upstream Distribution Network Operator (DNO), diversionary and abandonment works may be required and are excluded from the GTC quote.

7.6 GTC have received an HV connection due to the size of the Site and as such 9 substations will be required and the costs are included in this quote.

7.7 One point of connection will be from the DNO primary on Duddery Hill.

7.8 A total cost of £2,172,313.91 is quoted

#### Total Onsite Costs

7.9 An overall onsite budget estimate for works is quoted at £947,806.02.

## 8 Service Supply Competition

8.1 The traditional procurement route, up until recently, had been to provide service supplies to a new development through a local network operator. With the incumbent companies having somewhat of a monopoly, competition in the market was poor.

8.2 However, following deregulation of the service supply networks, through the likes of Ofgem, Ofcom and Ofwat, independent network operators have been able to enter the market and provide new service supplies to developments.

8.3 Companies such as GTC and Connect take a holistic view in putting together infrastructure reinforcements, site distribution and supply packages and off-set the costs with anticipated future revenue through the transmission and supply of service to give a better financial arrangement and single point of responsibility for the developer.

8.4 These businesses use a multi-utility business to implement the infrastructure. The independent companies are still regulated by the relevant office of regulation and subsequently asset owners must:

- Ensure that the installed network meets regulated standards
- Design to an operating lifetime of 40+ years
- Manage a return on their investment
- Ensure that the existing network performance is not compromised

- 8.5 Throughout this document a review has been completed for the provision of service supply infrastructure at the site through the local network operators. This approach provides a good indication as to the likely upgrading requirements for the local infrastructure, but at this stage, does not demonstrate a competitive cost for services procurement.
- 8.6 Multi-utility companies to provide significant investment to the provision of services at a development based on a whole life financial model, considering revenue from supply conveyance. Due to these investments, large reductions can be achieved to the capital cost for the provision of services at a site.
- 8.7 A development of this size has the potential to benefit a great deal from the financial investment of companies such as Connect and GTC. As such independent companies may be utilised to provide final network supplies for the site.
- 8.8 This report summarises the details relating to the current network conditions outlining the requirements for reinforcements and provision of supply through the existing network.

## 9 Summary

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- 9.1 This Services Statement has demonstrated that the proposed development land at Haverhill can be supplied with normal network service supplies without prohibitive reinforcements to the existing networks.
- 9.2 Some localised, non-prohibitive reinforcements may be necessary together with protections or diversions where existing plant is affected by the proposals.

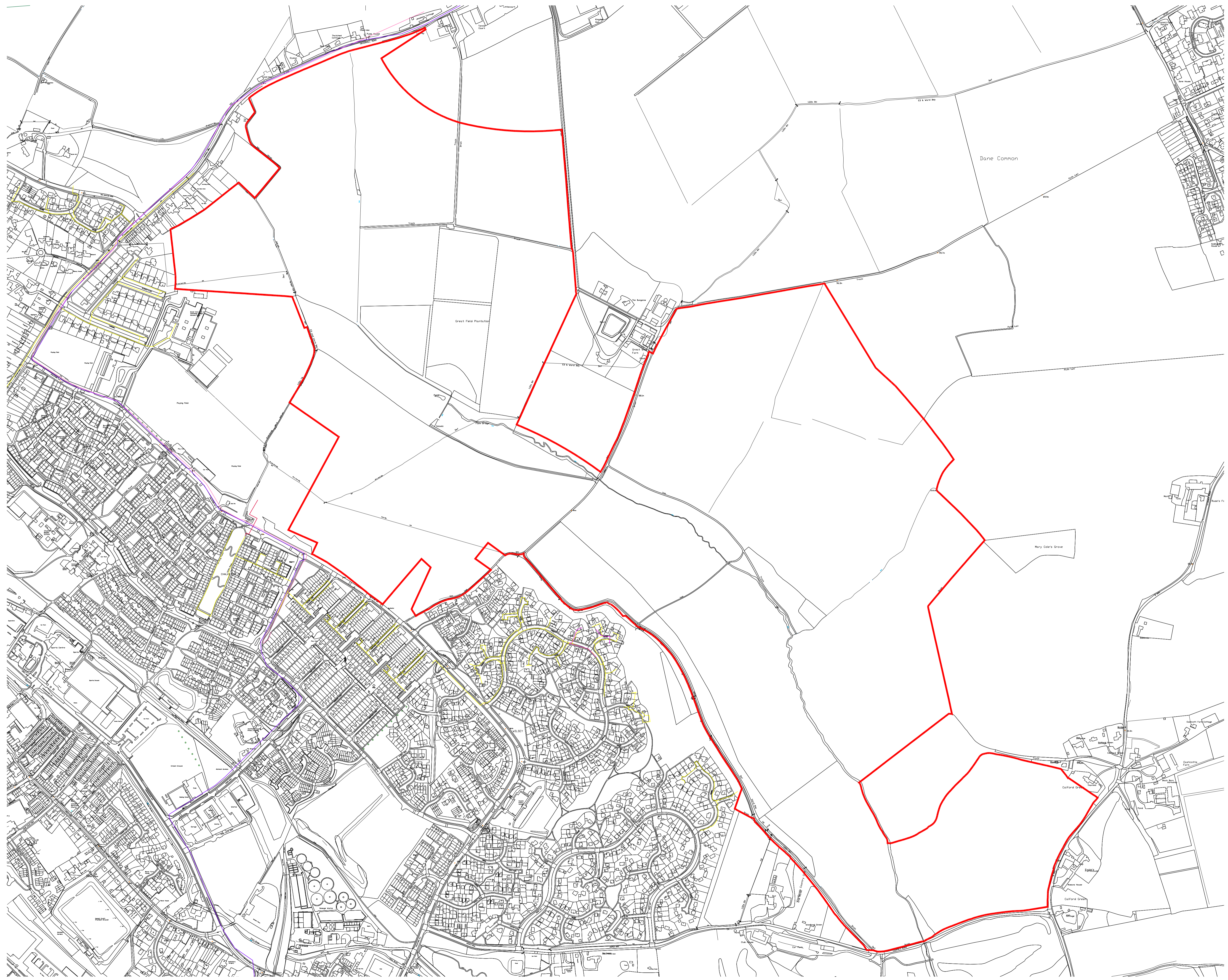
## 10 Limitations

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- 10.1 The conclusions and recommendations contained herein are limited to those given the general availability of background information and the planned usage of the site.
- 10.2 Third party information has been used in the preparation of this report, which Brookbanks Consulting Ltd, by necessity assumes is correct at the time of writing. While all reasonable checks have been made on data sources and the accuracy of data, Brookbanks Consulting Ltd accepts no liability for same.
- 10.3 Existing network appraisals and proposed reinforcements are based on the current infrastructure. Ongoing load growth will occur that may feasibly affect network availability. It is therefore necessary to monitor and review the existing networks capacity regularly.
- 10.4 The benefits of this report are provided solely to Hallam Land Management Ltd & the landowner for the proposed development on land at Haverhill only.
- 10.5 Brookbanks Consulting Ltd excludes third party rights for the information contained in the report.

## Appendix

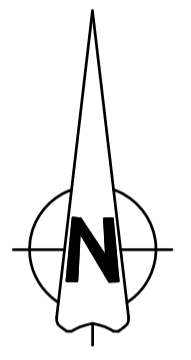
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- NOTES:**
1. Do not scale from this drawing.
  2. All dimensions in metres unless otherwise stated.
  3. This drawing has been produced using survey data provided by a Third Party. Brookbanks Consulting Ltd cannot be held responsible for the accuracy of this data. All discrepancies are to be reported to the Engineer immediately, ahead of work commencing.
  4. The existing services shown are not necessarily complete nor is their location with regard to position and depth precise. It is the Contractor's responsibility to liaise with all relevant services companies to ensure that all services are accurately located, marked out and adequately protected during all site works.

**KEY:**

Site Boundary



Rev.	Revision Details	Drawn	Checked	Approved	Date
	PRELIMINARY				03.12.14
	Issue Status			Approved	Date
Drawn	AA	Checked	LW	Date	Dec 14



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Land at Haverhill

Existing Utilities Layout  
 Boundary



