

S&J PADFIELD

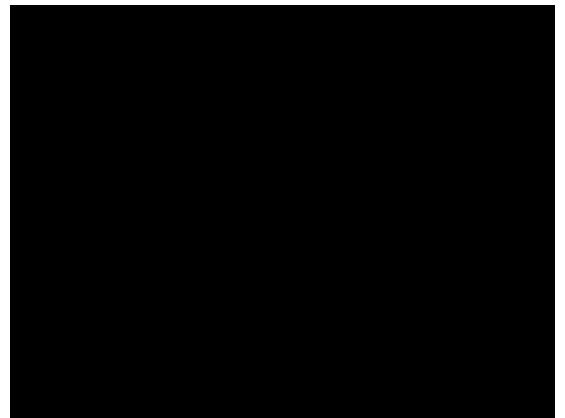
**PROPOSED EMPLOYMENT ALLOCATION:
LAND SOUTH OF CODHAM HALL, GREAT WARLEY,
BRENTWOOD**

**FLOOD RISK, DRAINAGE AND UTILITIES
POSITION STATEMENT**

**REPORT REF. M401-02
PROJECT NO. M401
SEPTEMBER 2013**

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DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft for project team review.	SJB	SJB	ARF	24.09.2013
-	Final version.	SJB	SJB	ARF	30.09.2013

1.0 INTRODUCTION

- 1.1 Ardent Consulting Engineers has been appointed by S&J Padfield to advise of flood risk, drainage and utility supplies associated with the proposed allocation of land to the south of Codham Hall and on the former highway works depot at Great Warley, Brentwood.
- 1.2 This Appraisal has been prepared in support of the allocation of the site to provide 23.5 hectares of employment land in the emerging Brentwood Local Plan.
- 1.3 This position statement sets out the baseline conditions and an assessment of the suitability of the site to deliver the development proposals associated with flood risk, drainage and utilities infrastructure, and outlines opportunities for the site's provision.

2.0 BASELINE PARAMETERS

Existing Site

- 2.1 The site is circa 23.5 hectares in total size and located to the south of the town of Brentwood, as shown at **Figure 1** below. The land is bordered to the north by the A127 dual carriageway, with the M25 running to the west, the two roads intersecting at a fully grade-separated interchange (M25 J29), with the motorway passing above a gyratory, and the A127 below it. The gyratory is partially signalised, with the M25 southbound and A127 westbound off-slips both signal controlled.



Figure 1 – Site's Location

- 2.2 The former M25 widening works site is located in the south eastern corner of the gyratory, being bordered by the A127 and its eastbound off-slip to the north and the M25 southbound on-slip to the west. The site is bordered by fields in agricultural use on the other sides. The B186 Warley Street, which links Brentwood with South Ockendon, runs north-south a distance to the east but does not border the site.

3.0 THE PROPOSED DEVELOPMENT

3.1 An allocation for a total of approximately 23.5 hectares (235,000m²) of employment floor space is sought for the former works site. This would be split between B1(a) office, B1(b) Research & Development, B1(c) light industrial, B2 general industrial and B8 (distribution warehousing) use classes, together with a 116-bedroom budget hotel (use class C1).

3.2 A copy of an indicative masterplan has been illustrated in **Figure 2** below and also appended to this report for further reference:



Figure 2 – Indicative Masterplan Layout

4.0 FLOOD RISK AND DRAINAGE

Flood Risk

- 4.1 From a review of the Environment Agency's mapping, the site is not considered to lie within the indicative undefended floodplain of any designated main river/watercourse and/or tidal estuary, and is therefore considered to be at a low risk of flooding, as defined by the latest legislation (National Planning Policy Framework – NPPF, published in March 2012).
- 4.2 An extract of the Environment Agency's indicative floodplain mapping is shown in **Figure 3** below:



Figure 3 – Indicative Floodplain Mapping

- 4.3 Consultation with the Environment Agency's Eastern Anglian Office has also confirmed that the site is considered to be at a low risk of flooding.
- 4.4 Sites which are considered to be at a low probability of flooding are described as land having less than 1 in 1,000 annual probability of river or tidal flooding and classified as a Flood Risk Zone 1 site.
- 4.5 The NPPF uses the concept of sequential testing and risk based approach to flood risk and development. The sequential test aims to steer new development to areas with the lowest probability of flooding (i.e. Flood Risk Zone 1 areas). Referring to Table 2

contained within the NPPF classifies non-residential schemes as a 'less vulnerable' land class usage, in terms of flood risk:

Less vulnerable

- Police, ambulance and fire stations which are *not* required to be operational during flooding.
- Buildings used for shops, financial, professional and other services, restaurants and cafes, hot food takeaways, offices, general industry, storage and distribution, non-residential institutions not included in "more vulnerable", and assembly and leisure.
- Land and buildings used for agriculture and forestry.
- Waste treatment (except landfill and hazardous waste facilities).
- Minerals working and processing (except for sand and gravel working).
- Water treatment works which do *not* need to remain operational during times of flood.
- Sewage treatment works (if adequate measures to control pollution and manage sewage during flooding events are in place).

4.6 Table 3 within the NPPF, however, determines that an employment scheme within a Flood Risk Zone 1 area is an appropriate form of development in this site's particular location:

Table 3: Flood risk vulnerability and flood zone 'compatibility'

Flood risk vulnerability classification (see table 2)		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood zone (see table 1)	Zone 1	✓	✓	✓	✓	✓
	Zone 2	✓	✓	Exception Test required	✓	✓
	Zone 3a	Exception Test required	✓	*	Exception Test required	✓
	Zone 3b functional floodplain	Exception Test required	✓	*	*	*

Key: ✓ Development is appropriate.
 * Development should not be permitted.

4.7 Should a planning application for the site be forthcoming in the future, the submission will be supported by a site-specific Flood Risk Assessment (FRA), to comply with the requirements of the NPPF and avoid a default objection being raised.

4.8 The FRA Report will be able to confirm that:

- i. The development scheme is at a low risk of flooding;
- ii. The development and its occupants will not be at an increased risk of flooding;

- iii. The development scheme will not increase the risk of flooding elsewhere; and
- iv. The development scheme can be drained in a sustainable manner.

Surface Water Drainage

- 4.9 An ordinary watercourse runs through the centre of the site and conveys flows initially in an east to west direction, before continuing in a southerly direction through the open fields.
- 4.10 The proposed masterplan layout for the site would seek to retain the ordinary watercourse with a buffer provided for future maintenance operations. The requirement to culvert any sections of the watercourse will be limited to access purposes only.
- 4.11 The Drainage Authority for the area is Anglian Water and a copy of the public sewer record plan has been obtained for the immediate area and included within **Appendix B** of this report for further reference.
- 4.12 The record plan illustrates that there are no surface water public sewers which cross the site that would need to be retained or diverted as part of the development proposals.
- 4.13 In devising an appropriate SuDS/surface water drainage strategy, the use of infiltration drainage techniques has also been considered which would seek to convey the surface water run-off to the underlying soil, providing suitable ground conditions exist.
- 4.14 The British Geological Survey record plans for the Great Warley area indicate that the site is underlain by London Clay Formation at depth, as illustrated in **Figure 4** on the following page.
- 4.15 In view of the London Clay's typical low soakage rate, infiltration drainage techniques are considered unlikely to be suitable for this particular site:

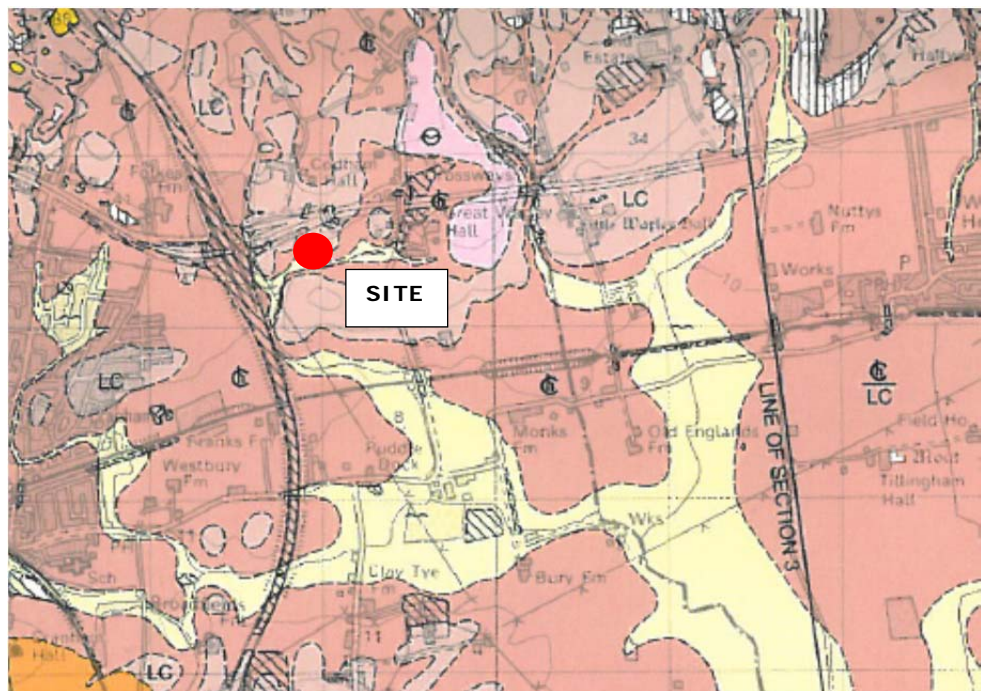


Figure 4 – Extract of Geological Record Plan

4.16 In view of the above assessment, it is anticipated that a SuDS/surface water drainage strategy will seek to adopt the preferred SuDS hierarchy stated within the Environment Agency’s ‘SuDS – A Practical Guide’, as illustrated below:

Table 1. The SuDS Hierarchy

<i>Most Sustainable</i>	SUDS technique	Flood Reduction	Pollution Reduction	Landscape & Wildlife Benefit
	Living roofs	✓	✓	✓
	Basins and ponds - Constructed wetlands - Balancing ponds - Detention basins - Retention ponds	✓	✓	✓
	Filter strips and swales	✓	✓	✓
	Infiltration devices - soakaways - infiltration trenches and basins	✓	✓	✓
	Permeable surfaces and filter drains - gravelled areas - solid paving blocks - porous paviers	✓	✓	
	Least Sustainable	Tanked systems - over-sized pipes/tanks - storms cells	✓	

Figure 5 – Table 1: ‘SuDS – A Practical Guide’

4.17 In view of the Environment Agency's advice and the site's characteristics, it is anticipated that the following SuDS strategy could potentially be adopted and implemented:

1. Surface water run-off will be directed to the ordinary watercourse and limited to a commensurate greenfield rate to reduce the level of flood risk downstream;
2. Attenuated flows will be accommodated up to the 1:100 year rainfall event, plus an additional 20% as an allowance for any potential climate change impact, as required by the NPPF;
3. A strategic 'green' corridor will be provided on-site and include the provision of swales to collect run-off from the adjacent access roads;
4. Off-line detention basins/ponds could also be utilised to accommodate the attenuated volumes of surface water run-off;
5. Permeable paving construction could be used in car parking courtyard areas;
6. Geo-cellular attenuation units/tanks will only be used to address any localised areas of run-off.

4.18 Based on the site's sloping topography, it is anticipated that a gravity draining system can be provided (subject to detailed design) without requiring a site-wide bulk earthworks operation to be carried out specifically to provide the drainage proposals.

4.19 The SuDS strategy is considered preliminary at this stage and outlines the options potentially available. Upon finalisation of the development proposals, the design parameters, catchment areas, attenuation provision etc. the proposals should be reviewed to ensure the details continue to comply with the relevant legislation and guidance.

Foul Water Drainage

4.20 The record plan illustrates that there is a 150mm diameter foul water public sewer located to the east of east of the site (within

Warley Street) which conveys flows in a southerly direction, towards Bury Farm Sewage Works.

- 4.21 The record plan illustrates that there are no foul water public sewers which cross the site that would need to be retained or diverted as part of the development proposals.
- 4.22 Detailed pre-development consultation discussions are being held with Anglian Water to determine that either sufficient capacity exists to accommodate the peak flows generated by the proposed development or the extent of storage/off-site improvement works required.
- 4.23 Discussions are being held with Anglian Water with respect to a suitable outfall location and the connection is anticipated to be made to the public sewer to the east of the site, subject to Anglian Water's consent.
- 4.24 To reach the outfall mentioned above, it is anticipated that the central corridor will be utilised to accommodate the strategic foul water sewers. Depending on the finished ground levels, it is anticipated that a gravity draining system could be provided, subject to survey or alternatively, a pumping station and rising main may be utilised to minimise excavation depths.
- 4.25 All designs and construction works will be carried out in consultation and agreement with Anglian Water.

5.0 UTILITIES

- 5.1 To identify the potential for the site to be served by services and extent of any necessary diversion works, asset record plans have been obtained from a range of utility companies with plant in the area. These supplies cover the provision of gas, potable water supply, electricity and telecommunication/cable networks.
- 5.2 A copy of the asset record plans has been included within **Appendix D** of this report for further reference.
- 5.3 Furthermore, the Linesearch database has also been referred to, which confirms that the following companies are not in the 'Zone of Interest' and remain unaffected by the development proposals:

NOT IN THE ZONE OF INTEREST	
BOC Limited (A Member of the Linde Group)	LinesearchbeforeUdig Asset Owners
BPA	Mainline Pipelines Limited
Centrica Energy	Manchester Jetline Limited
Centrica Storage Ltd	Marchwood Power Ltd (Gas Pipeline)
ConocoPhillips UK Ltd	NPower CHP Pipelines
Coryton Energy Co Ltd (Gas Pipeline)	Oikos Storage Limited
E-on UK Plc (Gas Pipelines Only)	Perenco UK Limited (Purbeck Southampton Pipeline)
ESSAR	Phillips 66
Esso Petroleum Company Limited	Premier Transmission Ltd (SNIP)
FibreSpeed Limited	RWEnpower (Little Barford and South Haven)
Geo Networks Limited	SABIC UK Petrochemicals
Government Pipelines & Storage System	Scottish Power Generation
HV Cables	Shell Pipelines
Humbly Grove Energy	Total (Finaline, Colnbrook & Colwick Pipelines)
IGas Energy	Wingas Storage UK Ltd
INEOS Manufacturing (Scotland and TSEP)	York Potash
Ineos Enterprises Limited	

Not in the Zone of Interest		
AWE Pipeline	Gamma	Seabank Power Ltd
EirGrid	Lark Energy	Transmission Capital
ESP Utilities Group	Sea Fibre Networks	

- 5.4 The search also established that there is the presence of high pressure gas mains and an electricity transmission network in close proximity to the site (refer to the following sections).

Gas Supply

- 5.5 We have consulted with National Grid and confirmed that there is an 18 inch diameter high pressure gas main which crosses the site in the north-west corner together with a 36 inch high pressure gas

main that runs adjacent to the eastern boundary of the site. Furthermore, there is also a medium pressure gas main located to the east of the site within Warley Street, as illustrated in **Figure 6** below:

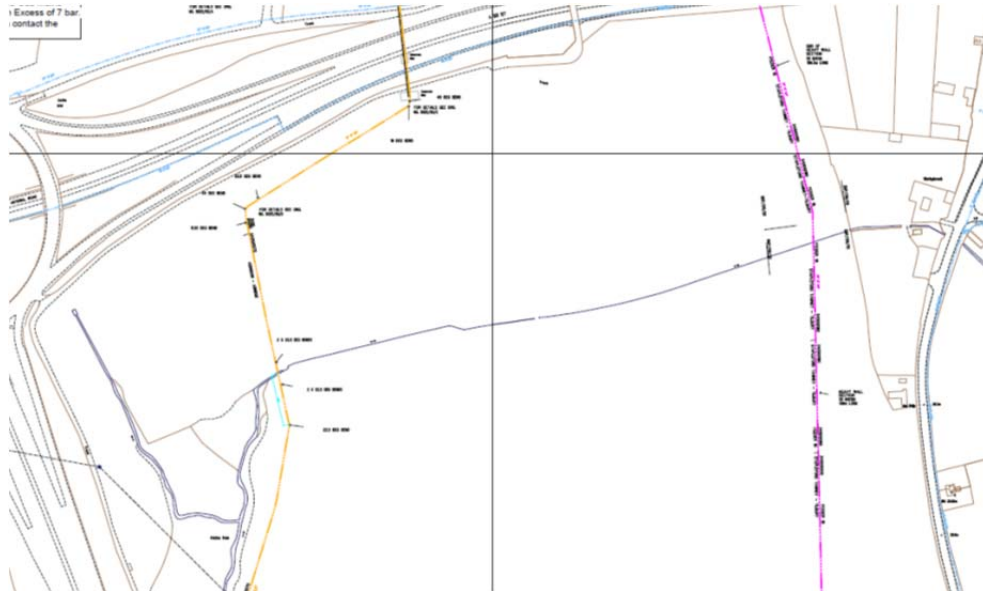


Figure 6 – Extract of Gas Main Record Plan

- 5.6 Upon closer inspection of the record plans, the notes confirm that the 36 inch main present in the east of the site has been upgraded to provide a thicker wall section which will effectively reduce the consultation zones associated with development aspirations.
- 5.7 To facilitate a commercial development, the proposals will be designed to comply with the requirements stated within the PADHI Guidance (Planning Advice for Developments near Hazardous Installations) produced by the Health & Safety Executive.
- 5.8 For example, office space with less than 100 occupants (Level 1) is considered to be appropriate for inclusion in all of the consultation zones with a category of 'Don't Advise Against Development' for such a land class usage. The highest category of land class usage proposed for this site relates to the provision of a 116-room hotel which is deemed to be a Level 3 category and will therefore be strategically located on-site to fall within the Outer Consultation Zone to comply with the PADHI guidance criteria.

- 5.9 Due to the presence of gas infrastructure in the site's vicinity, the provision of gas supply is anticipated to serve the site and will include the provision of gas governors etc.
- 5.10 The easements associated with the gas mains will be accommodated within the development layout so that access can be obtained to carry out any necessary future maintenance works.

Electricity Supply

- 5.11 UK Power Network's asset mapping records illustrate that there are high voltage cables present in the western part of the site which connect to two sub-stations known as 'Monet' and 'Picasso', as illustrated in **Figure 7** below:

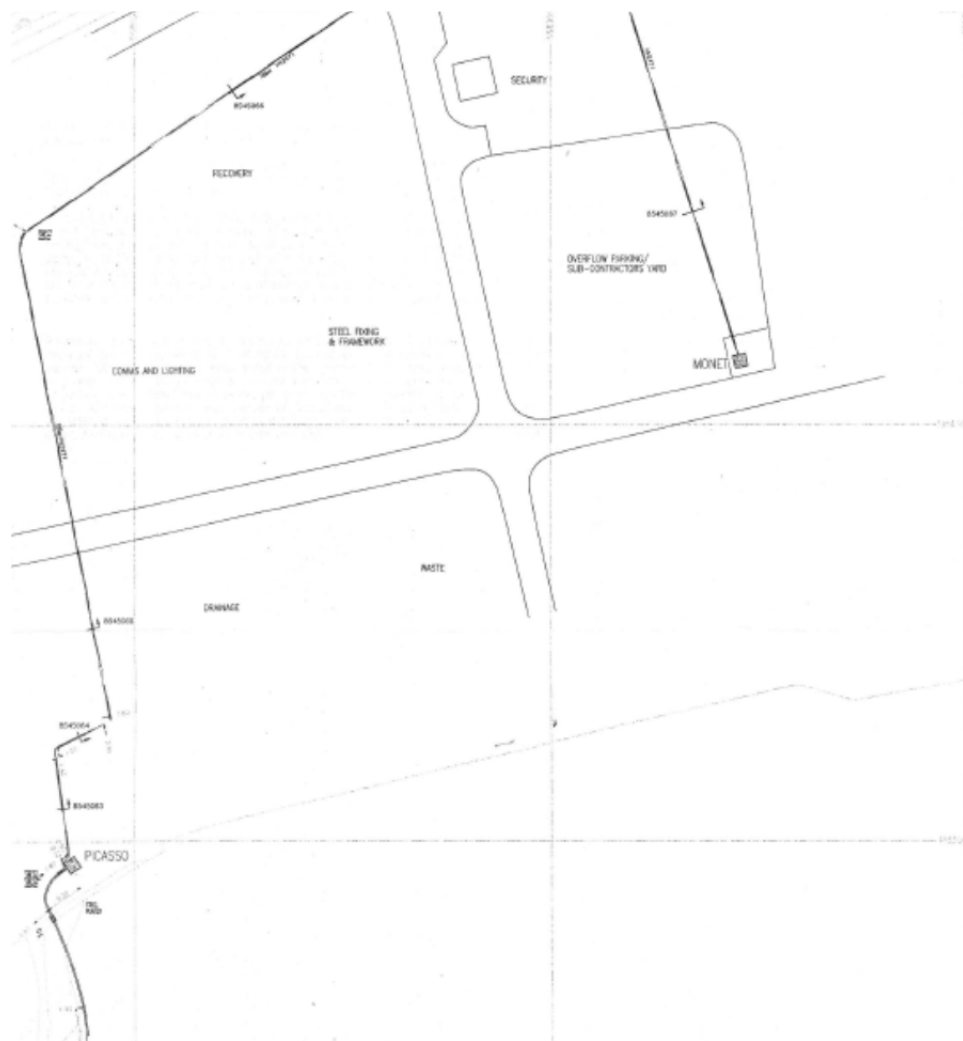


Figure 7 – Extract of Electricity Network

- 5.12 The high voltage cable could be accommodated in the development layout or locally diverted to suit the final aspirations, in consultation with UK Power Networks.
- 5.13 Further discussions are being held with UK Power Networks to establish if the existing sub-stations can be re-utilised or upgraded and whether any additional sub-stations will be required to serve the remainder of the development. Due to the presence of the infrastructure present on-site, a supply to the development can be achieved.
- 5.14 The development proposals will also be designed to ensure that the easement associated with the nearby electricity pylons are respected.

Water Supply

- 5.15 The asset record plans have been received from Essex & Suffolk Water which confirm that there are no water mains in the vicinity of the site. In this respect, no diversion or protection works will be required to accommodate the redevelopment of this site.
- 5.16 Detailed discussions are currently being held with Essex & Suffolk Water regarding the provision of a potable water supply to the site.

Telecommunications Supply

- 5.17 The asset record plans have been obtained from Openreach BT which illustrate that there is a telecommunications network present to the north of the site.
- 5.18 In addition to the above, there is also a network present to the north-east of the site which runs along the A127 Southend Arterial Road to serve the properties off Warley Street, as illustrated in **Figure 8** on the following page:

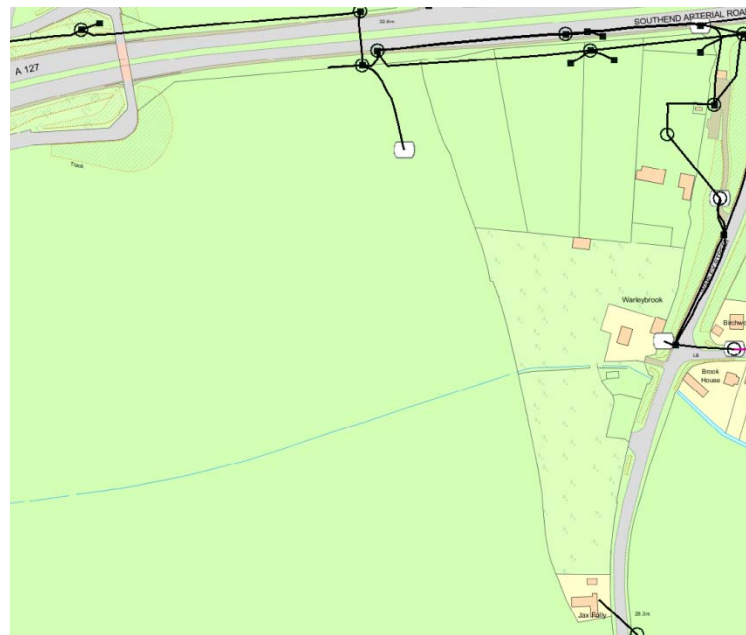


Figure 8 – Extract of Telecommunications Network

5.19 Due to the presence of the plant in close proximity to the site, it is anticipated that the network could be extended to serve the redevelopment site.

5.20 The asset record plans have also been obtained from Vodafone/Cable & Wireless which illustrate that there is a cable network which runs adjacent to the A127 Southend Arterial Road but would be unaffected by the proposals to the south, as illustrated in **Figure 9** below:



Figure 9 – Extract of Cable Network

5.21 Instalcom (on behalf of Level3, Global Crossing (UK), Global Crossing PEC Fibernet UK and Fibrespan) has confirmed that they do not have any apparatus in the area.

Appendix A
Topographical Survey

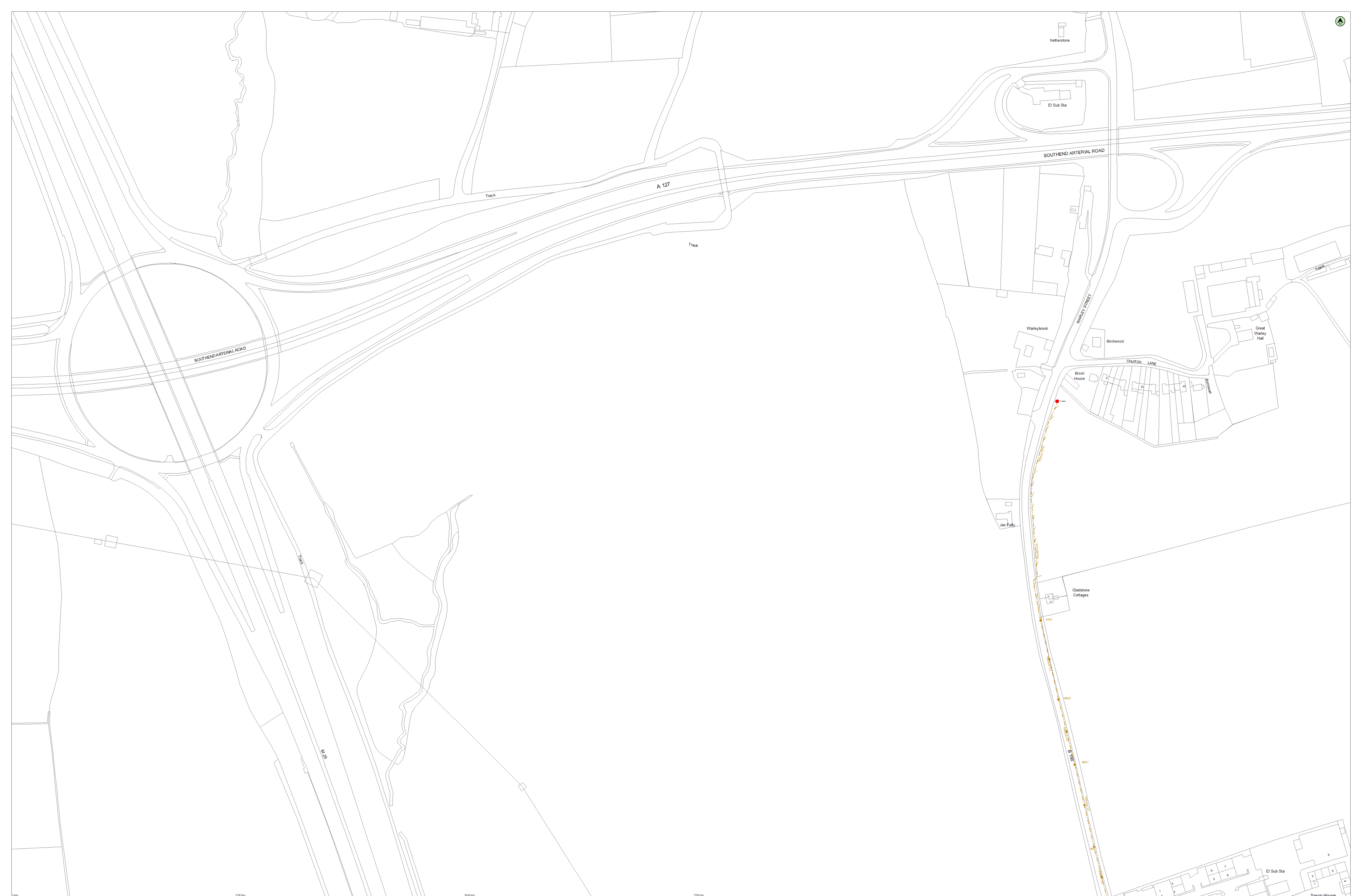
LEGEND :

- Forces Profile
- Wire Fence
- Under Ground Gas
- Power Cables
- French Drain
- Recycled Blumhouse Plaster and granulated Asphalt, crushed gravel
- Tarmac

Scale 1:1000 @A1



Appendix B
Public Sewer Record Plan



Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
4001	559459	188001	F	1.648	17.552	1.648
4002	559442	188072	F	1.078	24.952	1.078
4101	559422	188158	F	2.999	27.438	2.999
4901	559481	187911	F	1.21	13.29	1.21

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
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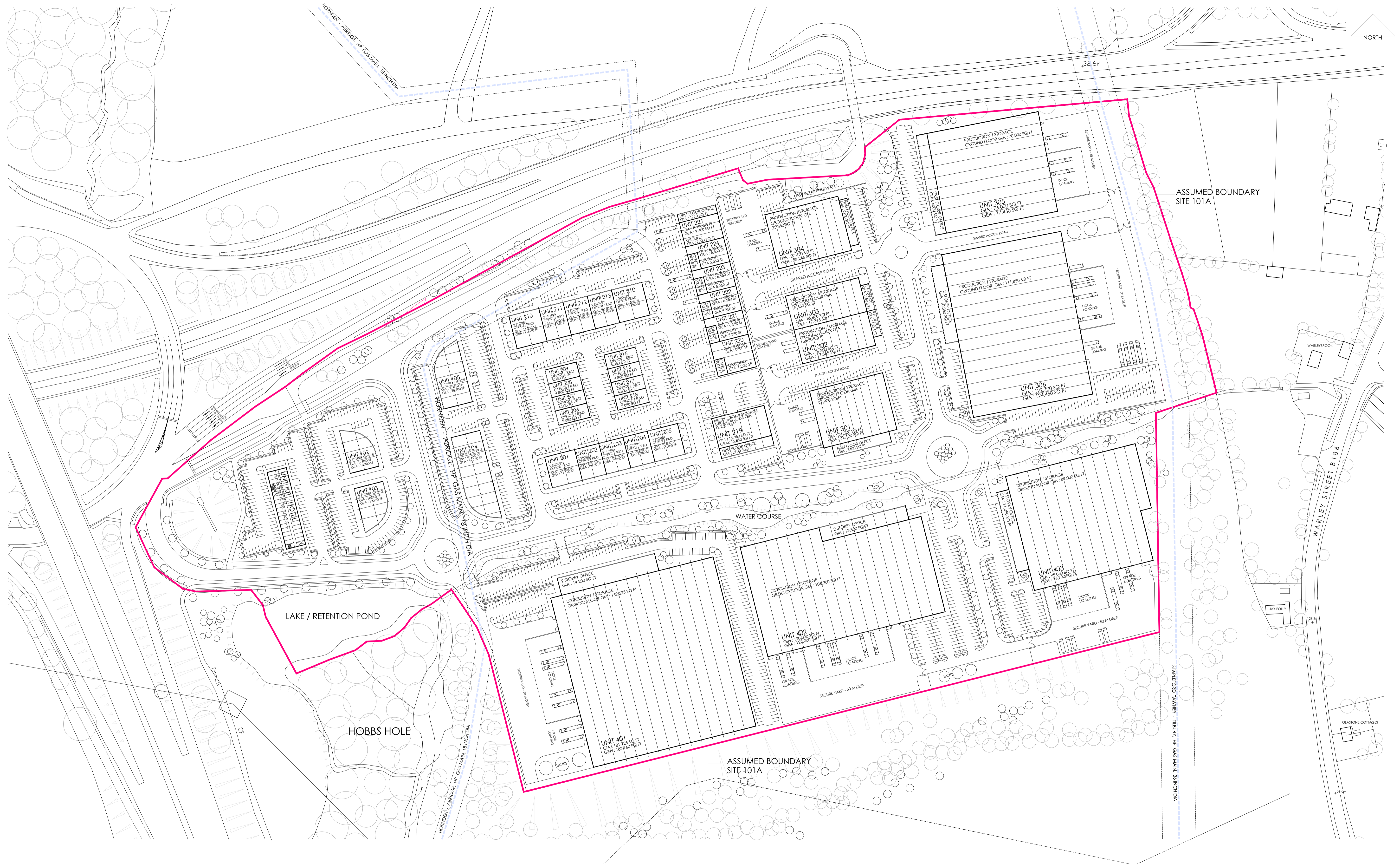
Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
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Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
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Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
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Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
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Appendix C
Indicative Masterplan Layout

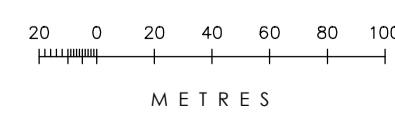


WORK IN PROGRESS - 25092013

BRENTWOOD ENTERPRISE PARK
CODHAM HALL - SITE 101A

DRAWING : INDICATIVE MASTERPLAN

SCALE : 1:1250@A1



GMTW ARCHITECTS

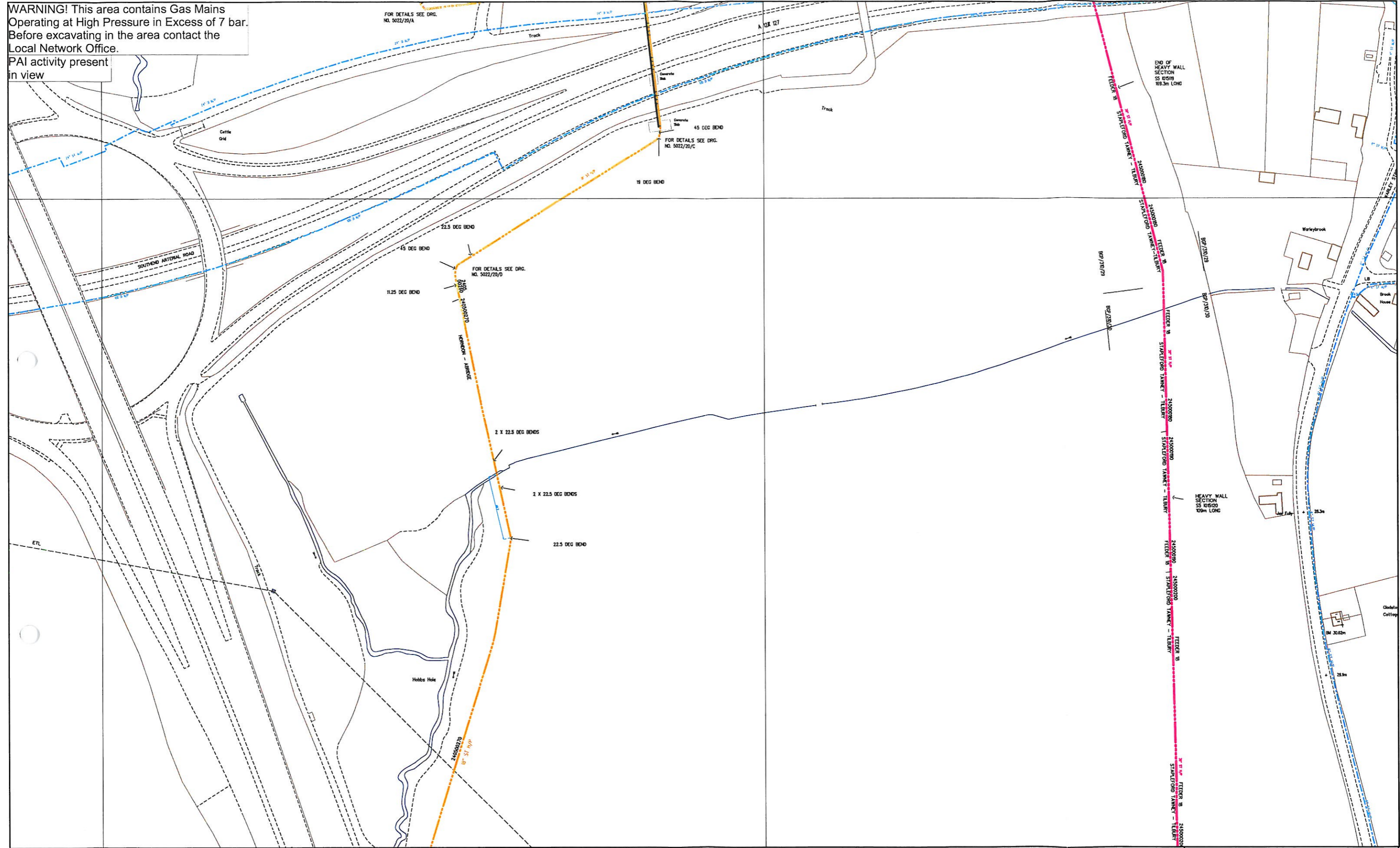
3 EASTON STREET
HIGH WYCOMBE
BUCKINGHAMSHIRE.
HP11 1NJ

T 01494 462330
F 01494 437445

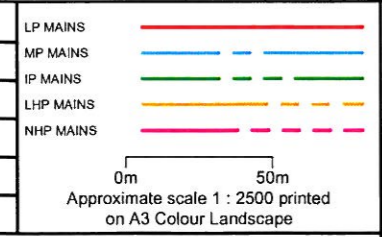
Appendix D
Asset Record Plans

WARNING! This area contains Gas Mains Operating at High Pressure in Excess of 7 bar. Before excavating in the area contact the Local Network Office.

PAI activity present in view



SCALE: 1 : 2500
 USER ID: Robert.Davidson2
 DATE: 03/09/2008
 NRSWA RESPONSE
 MAP REF: TQ5888
 CENTRE: 558954, 188330

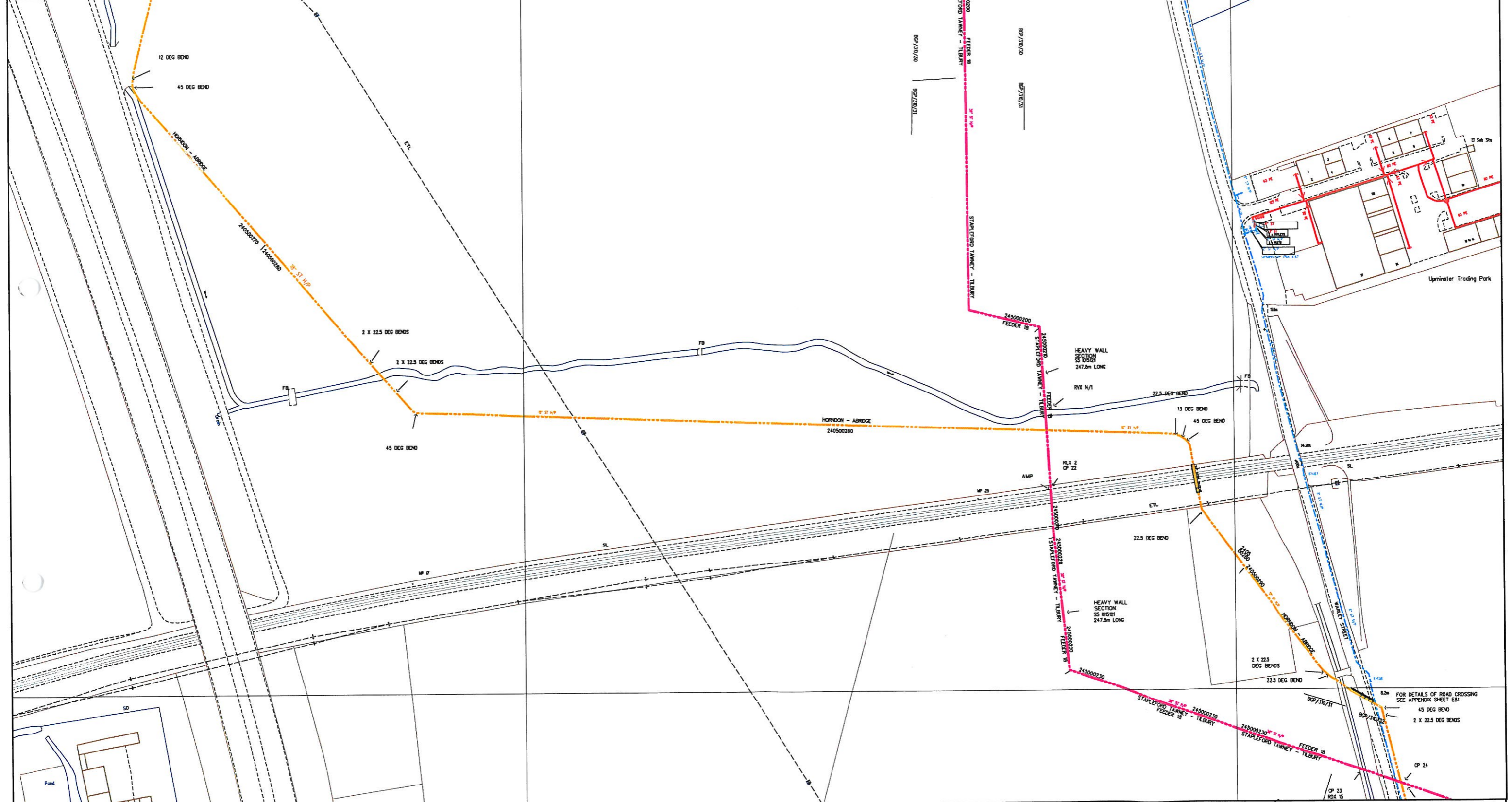


This plan shows those pipes owned by National Grid Gas plc in their role as a Licensed Gas Transporters (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown 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. Safe 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.

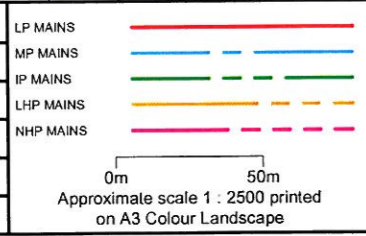
Desktop MAPS Version 5.1.2.0
 East Area
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WARNING! This area contains Gas Mains Operating at High Pressure (in Excess of 7 bar) and Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Local Network Office.

PAI activity present in view



SCALE: 1 : 2500
 USER ID: Robert.Davidson2
 DATE: 03/09/2008
 NRSWA RESPONSE
 MAP REF: TQ5987
 CENTRE: 559164, 187740



This plan shows those pipes owned by National Grid Gas plc in their role as a Licensed Gas Transporters (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. Safe 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.

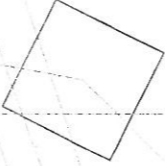
Desktop MAPS Version 5.1.2.0

East Area

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20
/A:27

4110



HOODS HOLE

37.04
1854 N221726
1854 N221726

6545061







1854 N221726
1854 N221726

1854 N221726
1854 N221726

558.00

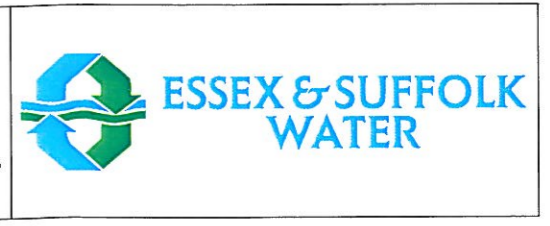




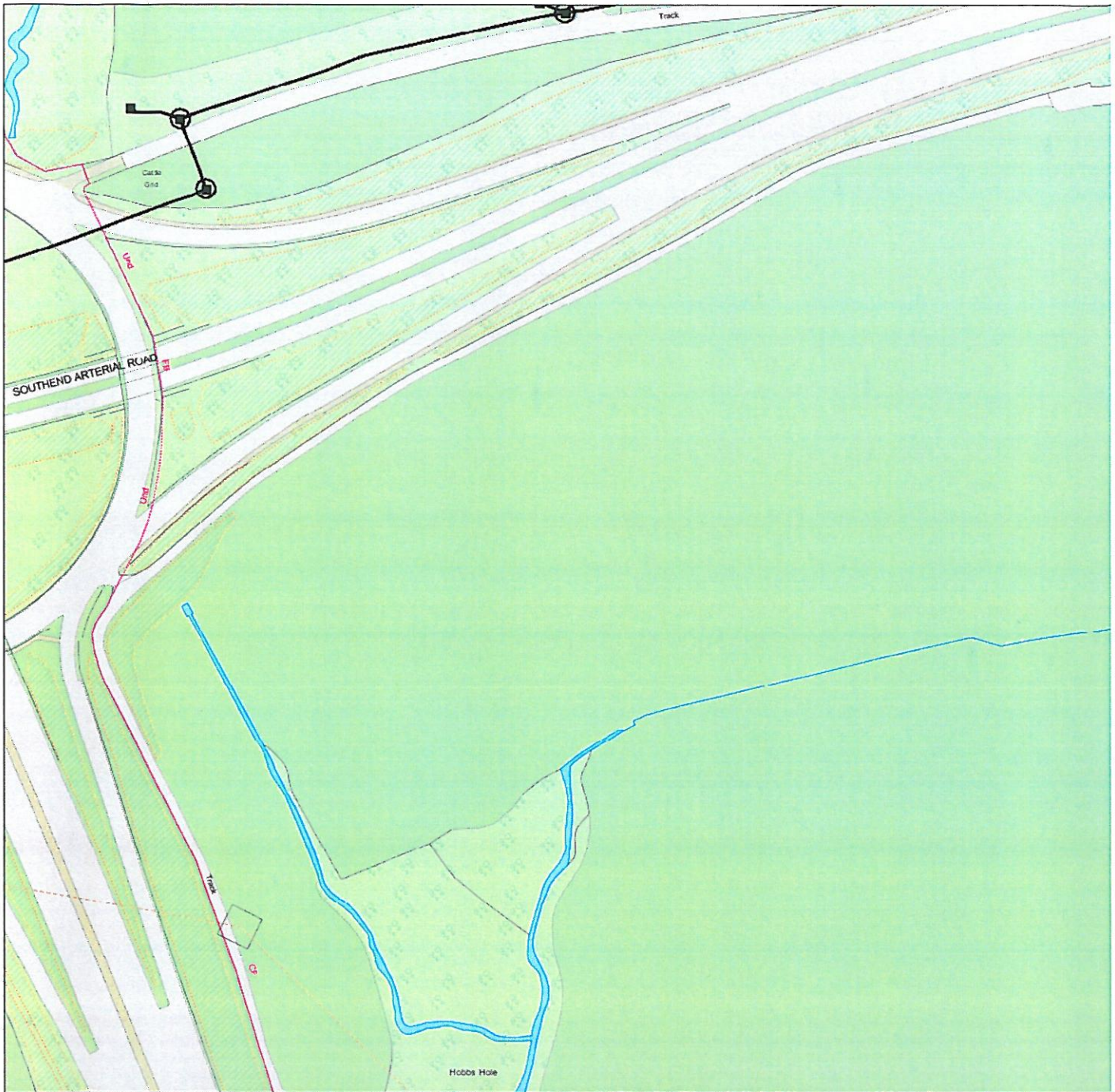
	Distribution Main		Private Main
	Raw Water Main		Out of Commission Main
	Trunk Main		Abandoned Asbestos Main

Author : RBLAKEBR
 Title : 1081301
 Centre Point : 559054,188400
 Date : 19-09-2013
 Sheet : TQ5988SW
 Scale : 1:2500

The material contained on this plot has been reproduced from an Ordnance Survey map with permission of the controller of H.M.S.O. Crown Copyright Reserved. Licence No. WV299022
 The information shown on this plan should be regarded as approximate and is intended for guidance only. No Liability of any kind whatsoever is accepted by Essex & Suffolk Water, its servants or agents for any omission. The actual position of any mains shown on the plan must be established by taking trial holes in all cases. Essex & Suffolk Water must be given two working days notice of their intention to excavate trial holes.
 Private connections are not shown but their presence should be anticipated.
WARNING... Where indicated on the plan there could be abandoned asbestos cement materials or shards of pipe. If excavating in the vicinity of these abandoned asbestos cement materials, the appropriate Health & Safety precautions should be taken. Essex & Suffolk Water accepts no liability in respect of claims, costs, losses or other liabilities which arise as the result of the presence of the pipes or any failure to take adequate precautions.
 Emergency Telephone Number: 0845 782 0999



Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



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KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

openreach
a BT Group business



BT Ref : SEV04322H

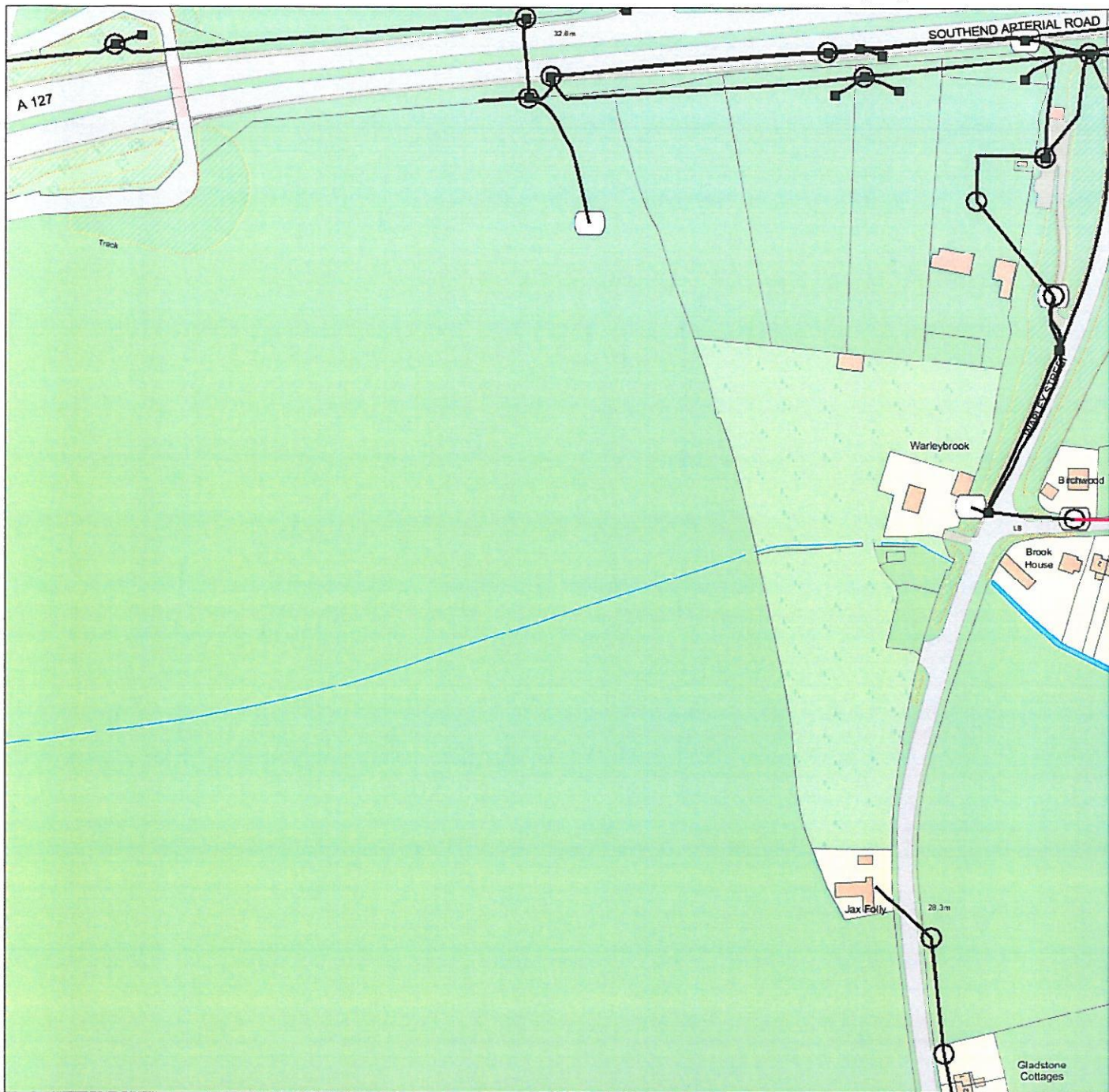
Map Reference : (centre) TQ5877388378

Easting/Northing : (centre) 558773, 18837

Issued : 06/09/2013 16:32:16

FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

Reproduced from the Ordnance Survey map by BT by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office
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openreach
a BT Group business

BT Ref : CGC04326F

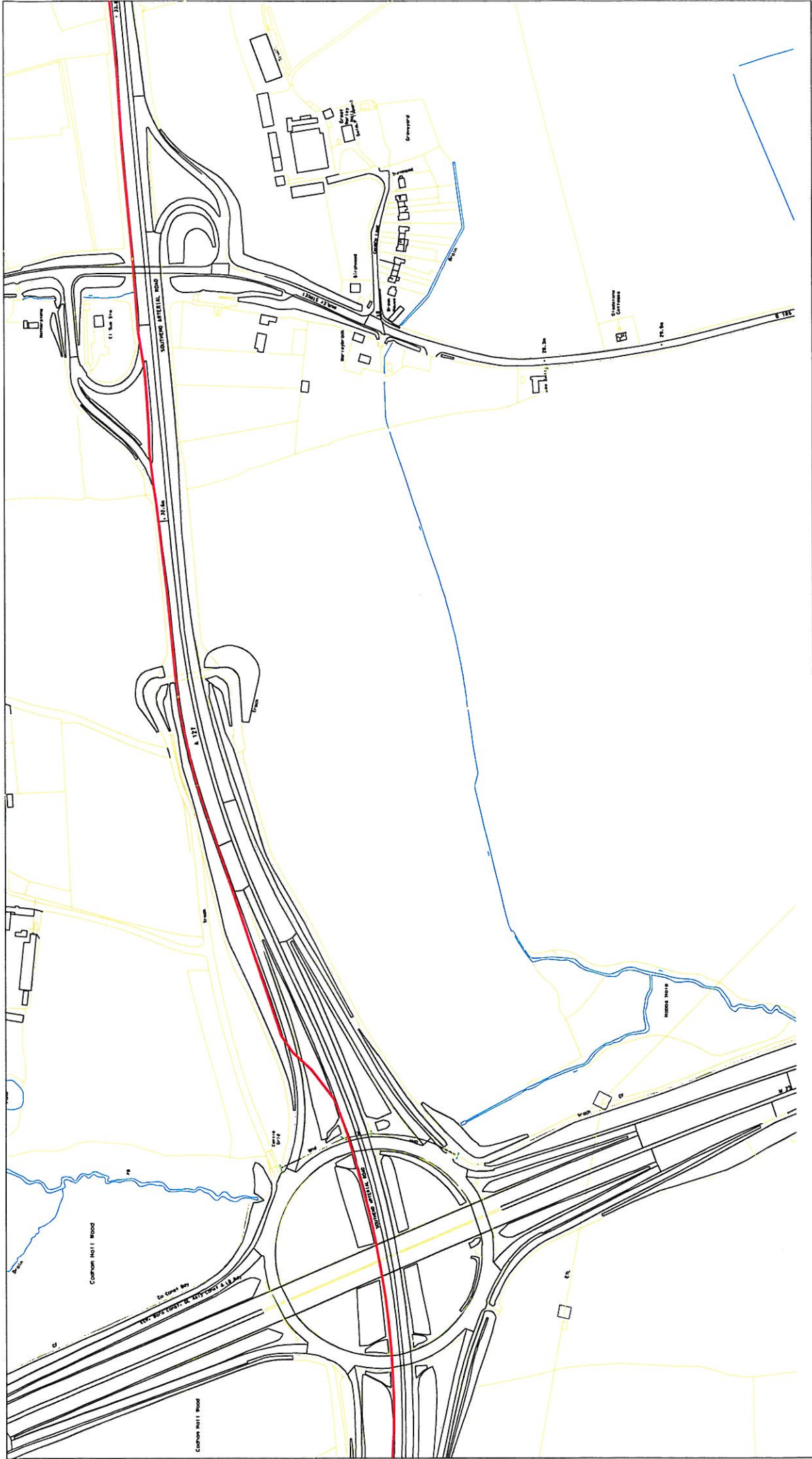
Map Reference : (centre) TQ5924888428

Easting/Northing : (centre) 559248, 18842

Issued : 06/09/2013 16:32:30










FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

VODAFONE





Vodafone Network Colour:

	Ex-Cable&Wireless UK Network (now Vodafone)
	Planned & Approved Route
	Planned Route – Awaiting Approval
	Other Licensed Operator (OLO)
	Ex-Thus Network (now Vodafone)
	Ex-Energis Network (now Vodafone)
	OLO
Other:	
	Overhead Electricity Line (non Vodafone)
	Network Rail

Other Licensed Operator (OLO).

= Ex-Cable&Wireless UK, Energis and Thus fibre-optic cable within an OLO duct. Please contact all other operators for further details of their apparatus within that area.

Fibre Services

Special Requirements relating to the External Plant Network of Vodafone

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1. Introduction

This document sets out the procedure that will apply when Other Parties intend or are undertaking works in the vicinity of Vodafone apparatus.

2. Purpose of document

This document provides a means by which the Vodafone specific special requirements relating to their apparatus, regardless of it being situated in the public highway / road, private street, land or any other areas, is made aware to Other Parties.



3. Scope

This document will be presented to Other Parties or Contractors to encourage those undertaking works within the vicinity of Vodafone apparatus to refer to and comply with. This is in order to protect where necessary the Vodafone apparatus and to avoid damage to the apparatus and loss of service.

A National Joint Utilities Group (NJUG) document NJUG 9 titled "Recommendations for the Exchange of Records of Apparatus between Utilities" provides useful reference material.

It should be noted that, where appropriate, additional information on avoiding danger from underground apparatus is contained within the HSG47 guidance book titled "Avoiding Danger from Underground Services."

4. Vodafone Network and Apparatus

Damage to Vodafone apparatus is extremely disruptive and can be expensive to repair, especially where long lengths of cable have to be replaced.

In order to maintain the network integrity and minimise disruption to service, it is essential that disturbances are absolutely minimal. When working within the vicinity of Vodafone apparatus, extreme care is necessary in order to avoid costly repairs. The Other Parties / Contractor shall make every effort to ensure that disturbance of Vodafone apparatus is no more than is absolutely necessary for the completion of the works in accordance with their contract.

5. Plant records

It is the responsibility of the Other Parties undertaking works which may affect Vodafone apparatus to obtain all relevant Vodafone plant records from our agent Atkins Global prior to works commencing. This may be done by contacting the Atkins Global Plant Enquiries Team listed in Appendix B.

Plant records for such enquiries will generally be provided within 10 working days of receipt and in compliance with the New Roads and Street Works Act 1991 [NRSWA] requirements. If Vodafone plant is affected, the response will contain reference to this document. Other Parties and Contractors are advised to refer to the National Joint Utilities Group [NJUG] 9 Document which outlines recommendations for the exchange of records of apparatus between utilities.

6. Definitions

The following definitions are applicable in this document:

- a) **Apparatus** means all electronic communications apparatus above surface, at the surface or sub-surface apparatus, Cable, Jointing Chamber and plant formerly being apparatus owned or used by the Code Operators Cable & Wireless UK, Energis Communications Limited, Thus Group Holdings Plc and Your Communications Limited including any associated cables or ducts owned, leased or rented by the said Code Operators now owned and used by the Code Operator Vodafone Limited ("Vodafone").
- b) **Cable** means any polythene or other sheath containing optical fibres or metallic conductors.
- c) **Depth of cover** means the depth from the surface to the topmost barrel of the duct nest, in the case of ducts encased in concrete, to the top of the concrete, and in the case of directly buried cable, the top of the cable.
- d) **Jointing chamber** means any manhole, surface box or other chamber giving access to Vodafone apparatus or their network.
- e) **Utility** means an organisation licensed to provide gas, water, electricity, Cable TV or telecommunications services.
- f) **Developer** means an organisation licensed to develop industrial/residential premises or given license to connect to utility apparatus.



- g) **Contractor** means the individual, firm or company contracted to undertake the work for a Utility or Other Parties.
- h) **Other Parties** means the Utilities, Highway Authorities, Developers, Street Authority (Roads Authority - Scotland).
- i) **Site** means the location of, or in the vicinity of, the various works.

7. Requirements

Prior to commencing any work or moving heavy plant or equipment over any portion of the site, the Other Parties or Contractor shall notify Vodafone of their intentions. This may be done by contacting Atkins Global, contact listed in Appendix B.

Upon receipt of this notification, Atkins Global will identify if Vodafone apparatus is affected. If any Vodafone apparatus is affected by the works then Atkins Global will provide necessary records and confirm details of Vodafone apparatus and network operated within the affected area or adjacent to the proposed work site.

7.1 Location of Plant

It is the responsibility of the Other Parties or Contractors to undertake adequate plant location procedures. These may include searches for metallic cables which must be performed by actively inducing a signal in a cable conductor via a transmitter. A passive search is not considered sufficient.

Before applying a tracing signal to the Vodafone apparatus, the Other Parties or Contractors shall seek confirmation from Atkins Global that the Vodafone apparatus will not suffer any disruption to its networks normal workings as a result of the nature of the signal being induced.

7.2 Trial excavations

Optic fibre cables are very susceptible to damage from excavation tools. They are not electrically conductive and cannot be located by radio induction methods. Once an approximate location is known, the exact location must be ascertained by means of hand dug pilot holes. Where the work to be carried out by the Other Party or Contractor involves excavation in the vicinity of our apparatus, the Other Party or Contractor shall, by trial excavation at his own expense, determine the exact location and depth of the Cable & Wireless Worldwide apparatus. All excavations adjacent to the Vodafone apparatus are to be carried out by hand until the extent and /or location of the apparatus is known.

All excavation work shall be executed in accordance with the current issue of Health and Safety series booklet HSG47, Avoiding danger from underground services.

8. Depths of cover

The Other Party or Contractor should note that the minimum depths of cover for Vodafone apparatus shall be maintained together with specified separation requirements. Where the minimum depths of cover specified by Vodafone cannot be maintained, the Other Party or Contractor shall at their own expense, carry out the instructions of Vodafone requirements for the protection or diversion of their apparatus.

The Other Party or Contractor should have particular regard to the possibility of encountering Vodafone apparatus (including ducts and cables), at depths of cover other than that reported.

Surface cables (such as cables on bridges or walls) which are liable to be placed in danger from the Other Parties or Contractors works shall be protected, at the Other Parties expense, as directed by the Vodafone representative.

9. Separation

Reference should be made to HSG47 to ensure that adequate separation is achieved. The following details outline the specific requirements of Vodafone and capture the HSG47 requirements.



Fibre Services

Special Requirements relating to the External Plant Network of Vodafone

9.1 High voltage cables

High voltage single core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 500 mm.

High voltage multi-core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 350 mm.

In exceptional circumstances where the above clearances cannot be maintained, the separating distance may be reduced to a minimum of 175 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the High Voltage cable and the Company Apparatus, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.2 Low voltage cables

Low voltage cables of less than 1000 V shall have a minimum clearance from Company Apparatus of 180 mm. In exceptional circumstances where the above clearance cannot be maintained, the separating distance may be reduced to a minimum of 75 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the services, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.3 Ancillary electrical apparatus

Lamp posts, traffic posts and other such ancillary electrical apparatus shall have a minimum clearance of 150 mm from underground Company Apparatus and 600mm clearance from above ground Company Apparatus.

9.4 High pressure gas mains and other Undertakers plant/equipment

High pressure gas mains shall have a minimum clearance of 450 mm from Company Apparatus. All other undertakers' plant and equipment, when running in parallel with Company Apparatus, shall have a minimum clearance of 200mm. Where gas mains cross Company Apparatus, the minimum clearance shall be 200mm. All other undertakers' plant and equipment, when running across Company Apparatus, shall have a minimum clearance of 100 mm.

9.5 Other Undertakers plant

Other undertakers' plant and equipment which runs in parallel with Company Apparatus shall have a minimum clearance of 200mm. All other undertakers' plant and equipment when running across Company Apparatus shall have a minimum clearance of 100mm.

9.6 Tramways

Each separating distance shall be individually agreed with the Company Representative.



10. Jointing chambers

10.1 Protection

Footway type jointing chambers are not designed to withstand carriageway loadings.

Where such chambers are liable to be placed at risk, either temporarily or permanently, from vehicular traffic or from the movement of plant and/or equipment, they will need to be adequately protected. Alternatively, they may have to be demolished and rebuilt to carriageway standards, at the Other Parties or Contractors expense under supervision of Vodafone representative.

All Vodafone jointing chambers and / or other access points shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and / or any further equipment required by Vodafone for the maintenance of its apparatus, must be maintained at all reasonable times.

10.2 Access

The covers to Vodafone jointing chambers and / or apparatus shall only be lifted by means of the appropriate keys and under the direct supervision of a Cable & Wireless Worldwide representative. Other Parties or Contractors shall not enter any Vodafone jointing chamber and / or apparatus unless under the supervision of a Vodafone representative and in any case not before the mandatory gas test has been carried out in the presence of Vodafone representative and such checks have shown it to be safe to enter the Vodafone chamber and / or apparatus. The Other Parties or Contractors shall be given reasonable access to Vodafone apparatus and chambers when required.

11. Notification periods

Where the Other Parties or Contractors works or the movement of plant or equipment may endanger Vodafone apparatus, the Other Party or Contractor shall give the Vodafone agent Atkins Global [as indicated at Appendix B] at least 7 working days notice in writing of the intended date to commence operations.

No excavation should be made without first consulting the relevant Vodafone apparatus layout drawings, which will be made available from the Vodafone agent Atkins Global on request and allowing 28 working days for processing the relevant drawings. However, should this not be possible, direct contact should be made to the Atkins Global Bristol Plant Enquiries Team as soon as possible to assess the situation.

When excavating, moving or backfilling (including use of Foamed Concrete for Reinstatements – FCR) around Vodafone apparatus, Atkins Global (as agent for Vodafone) shall be given adequate prior written notice of the Other Parties or Contractors intentions, in order that the works may be adequately supervised. Such notice shall not be less than 3 working days.

12. Excavation and backfill

All excavations adjacent to Vodafone apparatus are to be carried out by hand until the extent and or location of the Vodafone apparatus is known.

Use of mechanical borers and / or excavators shall not be used without the supervisory presence of a Vodafone representative or a given exemption.

Shuttering of the excavation or support to Vodafone apparatus, at the Other Parties or Contractors expense, shall be used as directed by the Vodafone representative.

At least 7 working days notice must be given to Vodafone in order that any special protective measures which may be required to protect Vodafone apparatus, at the Other Parties or Contractors expense, when equipment such as pile driving, explosives, laser cutting high powered RF equipment or RF test gear, is to be used in conjunction with the works.

Other Parties or Contractors are advised to refer to the National Joint Utilities Group [NJUG] 4 Document which outlines the identification of small buried mains and services.



13. Foam concrete

If foam concrete is being used as the backfill material, it shall not be used either above or within 500 mm of any Company Apparatus. A suitable material in accordance with the specification for the Reinstatement of Openings in Highways shall be substituted.

14. Attendance of Company Representative

If a situation requires the attendance on site of a Vodafone representative for a continuous period of more than 6 hours, suitable facilities shall be provided by the Other Party or Contractor, at their expense, to meet the office and ablution requirements.

15. Damage reports

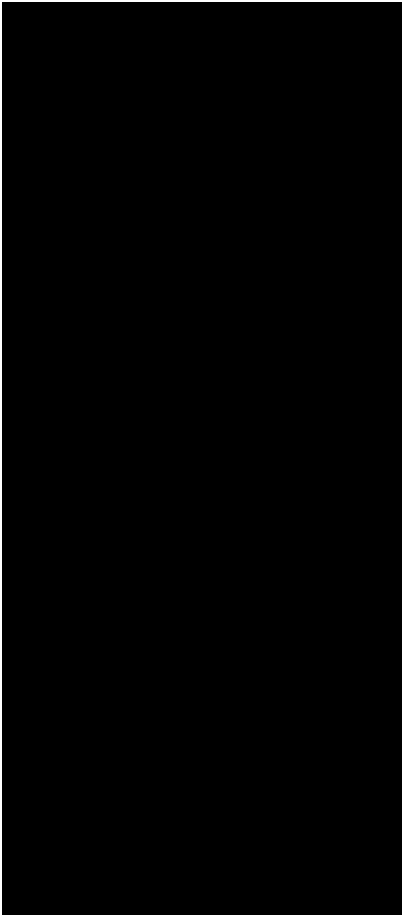
In the event of any damage whatsoever occurring to Vodafone apparatus, the Other Party or Contractor shall immediately inform Vodafone by contacting Julia Burgoyne, (for contact details please refer to Appendix B).

All relevant costs of any subsequent repair and / or removal of the Vodafone apparatus shall be charged to the Other Party or Contractor, irrespective of who affects the repair.

The above requirements do not relieve the Other Party or Contractor of any of their obligations under their contract.



Appendix A - office address details



Appendix B – Street Works Team Contacts for Vodafone

Function	Name	Job Title	Address	Phone	Mobile	Fax	Email Address
Co-ordination	Sandra Sample	National Street Works Manager	Glasgow Office (see above)	0141 303 2857	07775 792133	0141 300 9611	sandra.sample@cw.com
Customer Complaints	CMC	Customer Management Centre	n/a	08456 021585	n/a	n/a	n/a
Liability Claims	Julia Burgoyne	Major Incident Resolution Coordinator	Bristol Office (see above)	01454 895114	07803 259857	n/a	julia.burgoyne@cw.com
Diversionsary Works	Samantha Wilkinson	C3 Diversionsary Works Project Controller	Manchester Office (see above)	0161 423 2740	n/a	n/a	samantha.wilkinson@cw.com
Emergencies (24 Hour)	CMC	Customer Management Centre	n/a	08456 021585	n/a	n/a	n/a
Plant Enquiries- Including Thus Plc, (formerly Scottish Telecom), Your Comms (formerly Norweb), Energis & Mercury Communications	Plant Enquiries Team	n/a	Atkins Global PO Box 290 500 Aztec West, Almondsbury, Bristol, BS32 4RZ	01454 662881	n/a	01454 663330	Osm.Enquiries@atkinglobal.com

16. About this Document

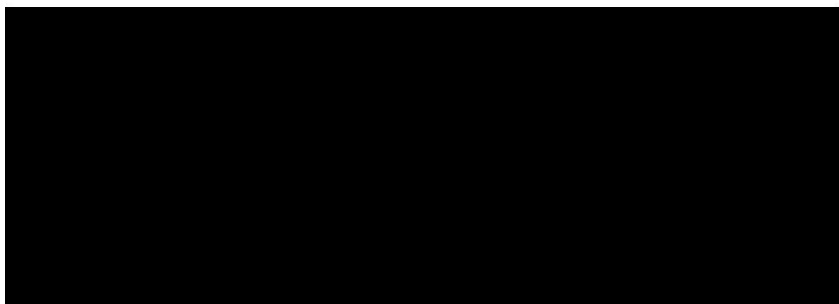
Content Owner

Price, David J

Changes since last version

Reformatted using the current Vodafone template.

End of Document



Neil Chalmers

From: [REDACTED]
Sent: 09 September 2013 16:45
To: Neil Chalmers
Subject: RE: Proposed Development at Codham Hall, South of the A127 at the M25 J29

You'll be pleased to know we can confirm Fulcrum Pipelines Limited do not have any existing pipes or equipment on or around the above site address.

Please note that other gas transporters may have plant in the area which could be affected by your proposed works.

We will always make every effort to help you where we can, but Fulcrum Pipelines Limited will not be held responsible for any incident or accident arising from the use of the information associated with this search. The details provided are given in good faith, but no liability whatsoever can be accepted in respect thereof.

If you need any help or information simply contact Graham Penlington directly on [REDACTED]. Or you can email [REDACTED] at [REDACTED].

GRAHAM PENLINGTON
Process Assistant



Tel: 0845 641 3010 ext: 4175

Direct Dial:

Email: [REDACTED]

Web: [REDACTED]



FULCRUM NEWS

FULCRUM SUPPORTS £30 MILLION CHESTER ZOO EXPANSION

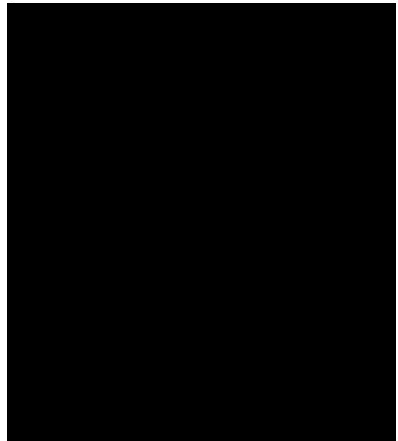
Chester Zoo, the most-visited wildlife attraction in Britain, has again turned to Fulcrum to deliver gas installation works as part of the Zoo's new £30 million Islands project - one of the biggest zoo developments in Europe. [Learn more.](#)

GOLDEN SAFETY RECORD EARNS FULCRUM A PRESIDENT'S AWARD

Our RoSPA President's Award follows 10 consecutive years of achieving a RoSPA Gold award for occupational health and safety. [Learn more.](#)

From: [REDACTED]
Sent: 06 September 2013 15:24
Subject: Proposed Development at Codham Hall, South of the A127 at the M25 J29

Dear Sir/Madam,



Dear Sir/Madam

Teliasonera Line Plant Enquiry.

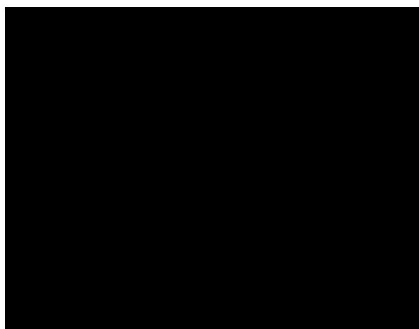
Thank you for your correspondence enclosing details of your proposals as per your reference below:

Codham Hall, South of the A127 at the M25 J29

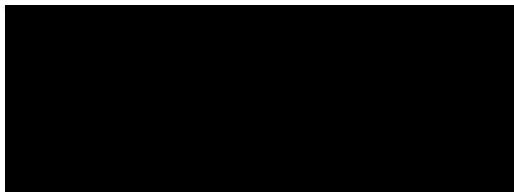
Our client's apparatus, Teliasonera, is not located within the vicinity of the above reference and we therefore have no further interest in this current location.

Please note that all enquiries relating to the Teliasonera line plant should be forwarded to:

By post – to,



By email - to,



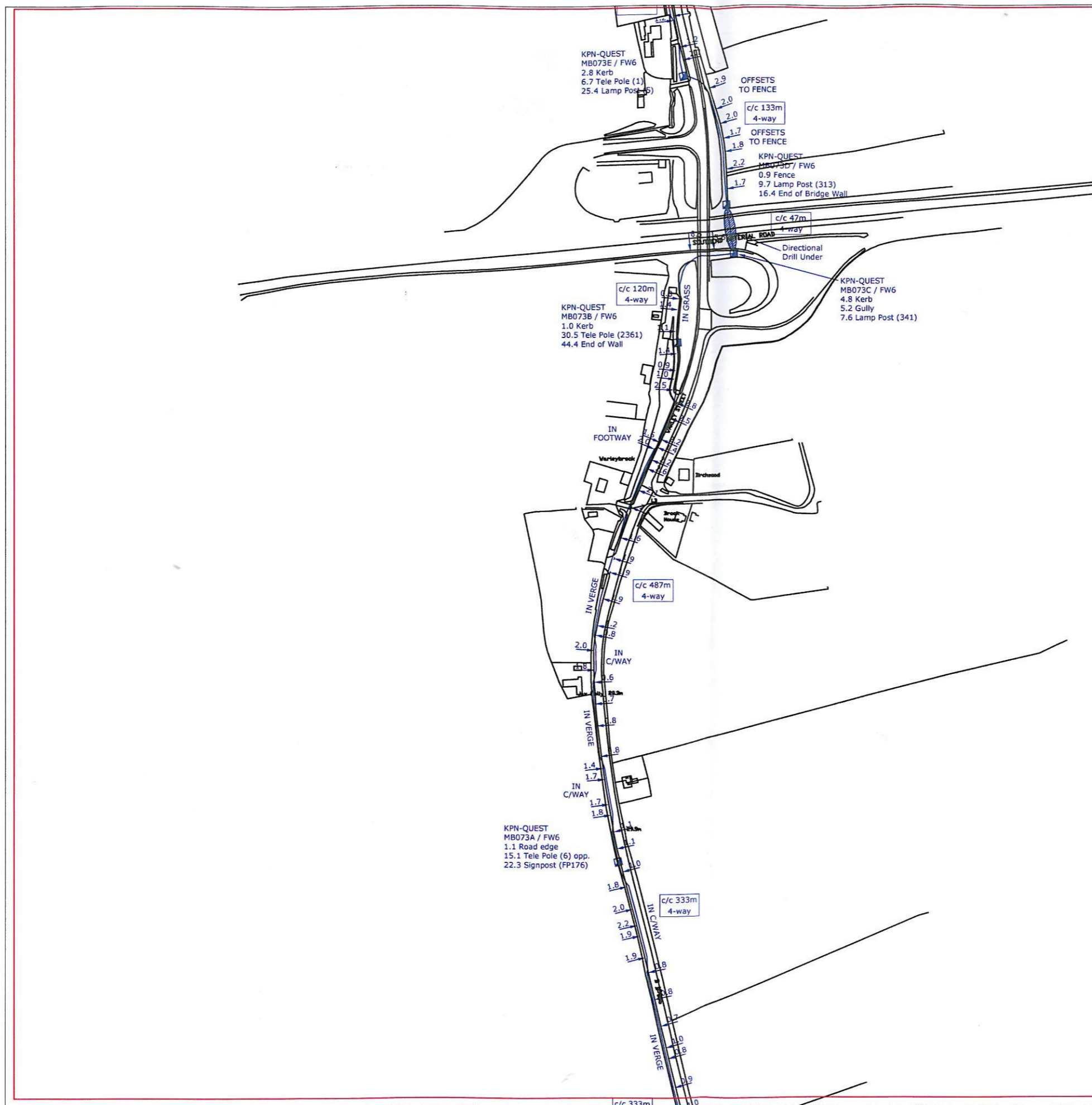
By phone – to,

Yours faithfully

Telent CCO

Basildon



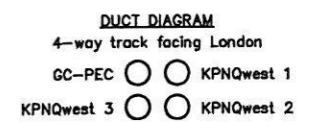


REVISIONS

Rev	Date	Details

Notes:

- Drawing indicates the location of EuroRings Assets UK Limited underground fibre-optic cable ducts.
- Offset measurements of duct location are taken to the nearest kerb or road edge (metres) unless otherwise stated.
- Depth of cover from top of duct can be assumed to be as follows unless otherwise stated:
 350mm in Unmade verge
 350mm in Footway
 600mm in Carriageway



LEGEND

Joint Box number and type. Pull Box indicated by suffix A,B,C etc. KPN-QWEST MB002 / CW12

Fibre-optic cable route and offset measurements from nearest kerb/verge (metres). 2.5

Centre to centre measured between adjacent boxes (metres). Number of ducts. c/c 380m 2-way

CAUTIONARY NOTES

EVERY EFFORT HAS BEEN MADE TO ACCURATELY POSITION THE LOCATION OF THE UNDERGROUND DUCT. THE RESULTS ARE NOT INFALLIBLE AND TRIAL EXCAVATIONS MUST BE CARRIED OUT TO CONFIRM IDENTIFICATION, LOCATION AND DEPTHS.

Client:



Project:

**KPN TRUNK ROUTE
MARGATE TO HAROLD WOOD**

Drawing:

**A227 WROTHAM ROAD
MEOPHAM
AS-BUILT DRAWING (MM)**

CONTRACT NO.		SCALE: 1:1250 @A2
Drawn: DW	Approved: PT	Date: 19/09/13
SHEET NO. 1	DRG NO. MCN/PE/KPN/A0307/13	REV. 1.0

Neil Chalmers

From: [REDACTED]
Sent: 19 September 2013 08:50
To: Neil Chalmers
Subject: Codham Hall, South of the A127 at the M25 J29

Site Ref: Codham Hall, South of the A127 at the M25 J29*ENVOY & GTC*

Date: 19 September 2013

Dear Neil

Re: Codham Hall, South of the A127 at the M25 J29 **APPARATUS NOT AFFECTED**
Thank you for your enquiry concerning apparatus in the vicinity of your proposed work.

We can confirm that we have **no** apparatus in the vicinity but please note that other asset owners may have and that you should ensure that all transporters/ distributors have been consulted.

Please note our assets now include those owned and operated by:

- GTC Pipelines Limited
- Independent Pipelines Limited
- Quadrant Pipelines Limited
- Electricity Network Company Limited
- Independent Power Networks Limited
- Independent Water Networks Limited
- Independent Fibre Networks Limited

All future plant enquiries must contain accurate Easting and Northing references to enable us to process your enquiry efficiently.

Yours sincerely

Kathleen Bullard
Engineering Support Officer

GTC

NOTE:

Neil Chalmers

From: [REDACTED]
Sent: 17 September 2013 15:24
To: Neil Chalmers
Subject: PLANT ENQUIRY RESPONSE

Our Ref 0913/627

I confirm that Vtesse Networks do not have any plant within a 250 meter radius of your given central coordinates.

Plant Enquiry Team
[REDACTED]
[REDACTED]

www.vtesse.com



Any large area enquiries will need to be submitted in 250m areas or alternatively please email for a 'large area' quote.

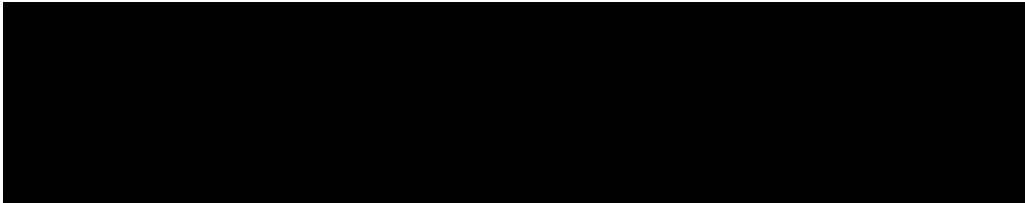
NB: Please note the response above is for a 250metre radius from the central coordinates supplied. Whilst we try to ensure the information we provide is accurate, the information is provided without prejudice and Vtesse Networks Ltd accept no liability for claims arising from any inaccuracy, omissions or errors contained in this response.

=====
Company: Ardent Consulting Engineers
Email: [REDACTED]
First Name: Neil
Last Name: Chalmers
Phone: 0207 680 4088
=====

Reference: M401 - Codham Hall
Address 1: Codham Hall South (2 of 2)
Address 2:
Locality:
Town: Brentwood
County: Essex
Postcode:
Eastings: 559152
Northings: 188428
Reason: New Industrial Development
Reason Other:
Attachment orig file name: M401_-_Draft_Codham_Hall_South_Location_Plan.pdf
Attachment 2: None
Attachment 3: None
Description:

Neil Chalmers

From:
Sent:
To:
Subject:



Dear Sir/Madam,

Thank you for your enquiry for the above reference.

We can confirm that Colt Technology Services do not have apparatus near the above location.

Search is based on Overseeing Organisation Agent data supplied; we do not accept responsibility for O.O. Agent inaccurate data.

If we can be of any further assistance please do not hesitate to contact us.

Kind regards,

Plant Enquiry Team



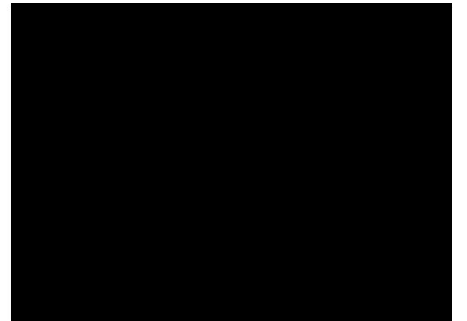
Please consider the environment before printing this email.

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the intended recipient(s). If you are not the intended recipient, you must not copy, distribute or take any action based on this communication. If you have received this communication in error please contact [redacted] and delete this communication and any copies of it. Any views or opinions presented are solely those of the author and do not necessarily represent those of C A Telecom LTD. C A Telecom LTD monitors e-mails to ensure that its systems operate effectively and to minimise the risk of viruses.



Dear Sir/Madam,

Ardent Consulting Engineers has been commissioned to provide engineering consultancy advice in relation to the above-mentioned development. The site is situated off the A127 and M25 J29 at Ordnance Survey grid reference 559047mE, 188456mN, with a location plan attached for your reference. The current proposals include the provision of class B1, B2 and B8 units, with the site layout currently being developed.



Date: 09/09/2013

Our Ref: JSM/PE/ZAYO/13/P4359

Your Ref: South of the A127 at the M25 J29


To Whom It May Concern

ZAYO EUROPE NOT AFFECTED C2 PRELIMINARY PLANT ENQUIRY

Thank you for your enquiry dated 06/09/2013.

We confirm that Zayo Europe (formerly Abovenet Communications UK) do not have any apparatus in the vicinity of your proposed works.

Please note all Zayo Europe plant is located within the M25 except for in the following areas: Basildon District Council, Buckinghamshire County Council, Oxfordshire County Council, Slough Borough Council and Thurrock Council.

For a quicker response please email all plant enquires to 

Please do not hesitate to contact us for further assistance.

