




**APPENDIX A  
JBA CONSULTING DRAWINGS**

**General Notes**

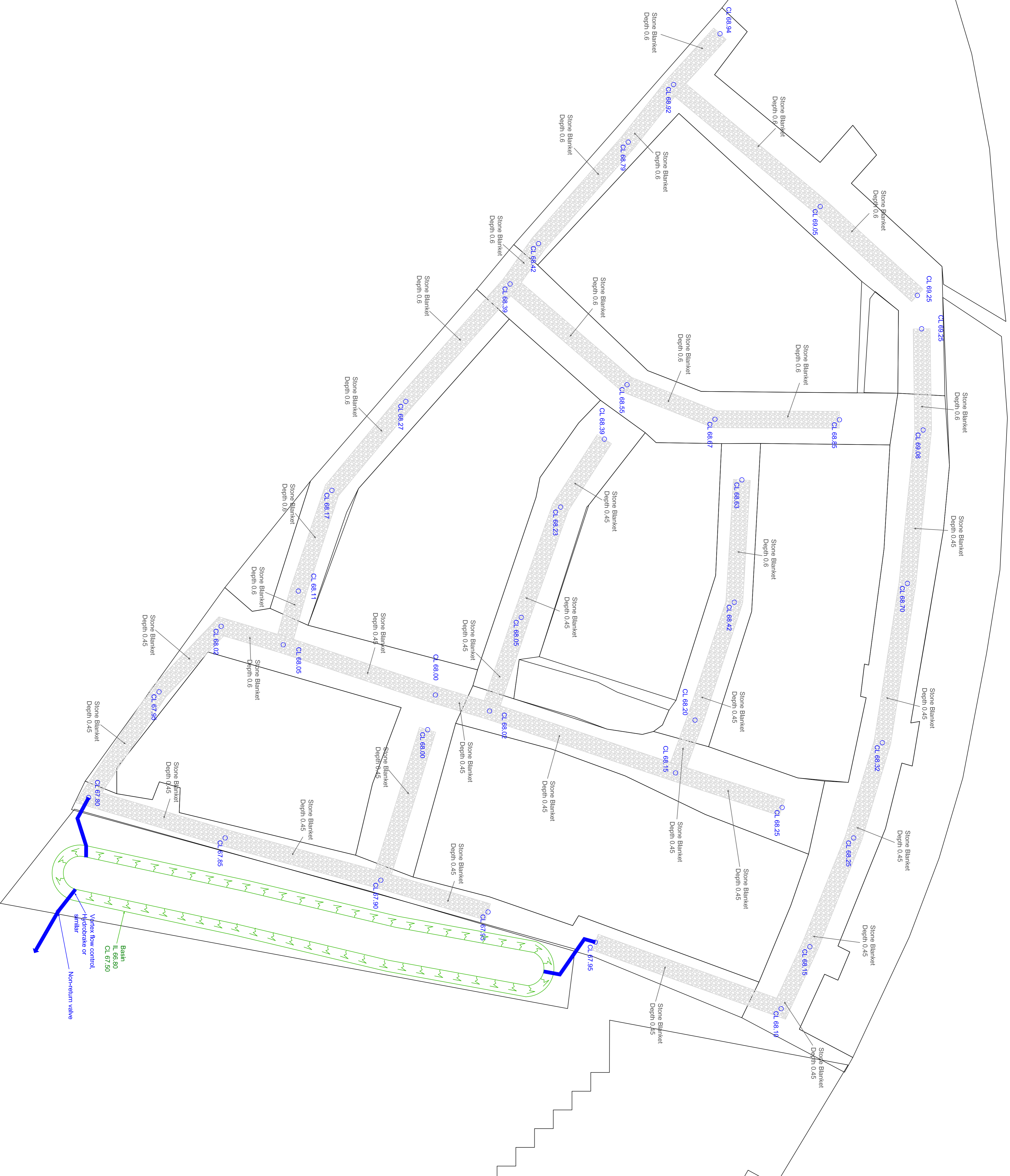
1. All dimensions shown are in metres unless otherwise stated and levels in metres to Ordnance Datum.
2. Do not scale from this drawing. Indicative layout only - THIS DRAWING IS NOT FOR CONSTRUCTION.

**Key**

	Stone blanket
	Pipe
	Swale

**Notes**

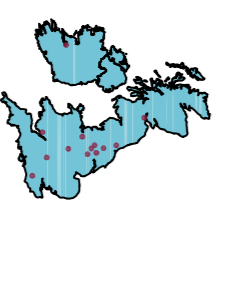
- Stone blankets assumed to be at least 4.5m wide in all locations
- Stone blankets to be laid at a gradient of at least 1:500
- Cover levels represent footway level - road level assumed to be 100mm below footway to allow overflows in extreme rainfall events to be contained in roads
- Road surface construction has been assumed to have 300mm depth
- Overflows into swale from road on site's eastern boundary in extreme rainfall events



Rev.	Description	Date	By	Check	Status
A	Minor alterations to ground levels following review	08/10/14	RH	RH	OS

**JBA CONSULTING**

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Office: at Central Discovery, Edinburgh, Cardiff, Glasgow, Liverpool, Newcastle upon Tyne, Newport, Salford, Solihull, Telford, Thirsk, Walsingham and Warrington

for \_\_\_\_\_

**GALLAGHER ESTATES**  
**GAWAYR DRIVE WEST SITE**  
**SURFACE WATER DRAINAGE STRATEGY**  
**INDICATIVE GROUND LEVELS AND LAYOUT**







**LAND AT GAVRAY DRIVE, BICESTER, OXFORDSHIRE**

**SERVICES APPRAISAL**  
**(On behalf of Gallagher Estates)**

**Report No. 14-033-03**  
**November 2014**

**LAND AT GAVRAY DRIVE, BICESTER, OXFORDSHIRE**

**SERVICES APPRAISAL**

**Client: Gallagher Estates**

**Odyssey Markides  
Elizabeth House  
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London  
SE1 7NQ  
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**Report No. 14-033-03  
November 2014**

## DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	REVIEWED	APPROVED	DATE
	Draft for Comment	MP	JM	SR	AM	12-12-2014

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<b>CONTENTS</b>	<b>Page</b>
Executive Summary	(iii)
1.0 Introduction	1
2.0 Gas Supply	2
3.0 Electricity Supply	3
4.0 Water Supply	4
5.0 Surface and Foul Water Drainage	6
6.0 Telecommunications	8
7.0 Other Apparatus	9
8.0 Conclusions and Recommendations	10

## **APPENDICES**

- Appendix A Southern Gas Networks Utility Plans and correspondence
- Appendix B Scottish & Southern Energy Utility Plans and correspondence
- Appendix C Thames Water Utility Plans and correspondence
- Appendix D British Telecommunications Asset Plans and correspondence
- Appendix E Virgin Media Asset Plans and correspondence



## **EXECUTIVE SUMMARY**

Odyssey Markides has been commissioned by Gallagher Estates to undertake a services appraisal considering existing and proposed services on the site at Gavray Drive, Bicester, Oxfordshire. Development proposals allow for up to approximately 171 residential units (120 market dwellings and 51 affordable houses) on the western side of the existing land.

The site is located within the authoritative boundaries of Cherwell District Council (CDC) and Oxfordshire County Council (OCC).

### **Gas Supply**

- Southern Gas Networks plan shows low pressure gas main along Gavray Drive and the A4421 Charbridge Lane.
- Southern Gas Networks Connections have provided a budget estimate of £112,000 (including VAT) to complete gas supply works to the site.

### **Electricity Supply**

- Scottish & Southern Energy records show HV (11kV) underground cable along Gavray Drive and the A4421 Charbridge Lane.
- Scottish & Southern Energy have provided a budget estimate of £160,000/£180,000 (excluding VAT) to complete works to supply electricity to the site.

### **Water Supply**

- Thames Water operates the water supply to this area and Utilities records show existing strategic trunk main across the eastern side of the land along the A4421 Charbridge Lane and water distribution main located along Gavray Drive.

- A budget estimate from Thames Water shows a charge of approximately £296,000 for the water supply to the site. This includes 1520 metres of on-site development water mains.

### **Foul Drainage and Surface Water Drainage**

- Thames Water utility records show separate foul and surface water sewers along Gavray Drive and the A4421 Charbridge Lane.
- The discharge of foul flows only can be accommodated within the public sewerage system.
- Connection fee to Thames Water public sewer (including lateral drain) is £485.
- All sewer connections that connect a property to the public sewer for the first time are subject to a sewerage infrastructure charge of £347.00, giving total of £59,337 for 171 units.
- Surface water flows will be disposed to the proposed attenuation basin and then discharged to the existing Langford Brook located in the open space area in the east of the site.

### **Telecommunications**

- There are telecommunication underground cables owned by BT along Gavray Drive and the A4421 Charbridge Lane.
- BT (Openreach) plant records show connection points required to serve the new development.
- BT (Openreach) has a licence obligation to provide service to any end customer requiring a connection.
- BT (Openreach) confirmed, Developer would not normally be charged for provision of service and connection charges would apply to the end user when orders are placed with the communication provider of choice.

- There is also Virgin Media telecommunication infrastructure at the existing development to the south of the site.

## 1.0 INTRODUCTION

1.1 Odyssey Markides has been commissioned by Gallagher Estates to undertake a services appraisal considering existing and proposed services on the site at Gavray Drive, Bicester, Oxfordshire to serve a new development comprising of approximately 171 new residential units (120 market dwellings and 51 affordable houses) on the western side of the existing land.

1.2 The location of the site is represented in Figure 1.



**Figure 1 – Site Location**

1.3 The existing site is located off Gavray Drive, Bicester, Oxfordshire.

1.4 The topographic survey shows the site to be generally flat with levels varying from approximately 66.0m to 69.0m AOD.

1.5 Preliminary letters of enquiry were sent to the relevant utility providers and statutory undertakers requesting information on the location of existing services, the need for diversionary measures, capacities of existing networks to supply the new development and details of related broad-brush costs.

## 2.0 GAS SUPPLY

### *Existing Gas Supply*

2.1 Southern Gas Networks was contacted and have confirmed there is gas apparatus in a proximate location of the site.

2.2 Southern Gas Networks plan shows Low Pressure (LP) 250mm Polyethylene (PE) gas main pipe along Gavray Drive and the A4421 Charbridge Lane.

2.3 Refer to **Appendix A** for the Southern Gas Networks utility plans.

### *Diversions*

2.4 It is anticipated that no diversions will be required.

### *Proposed Gas Supply*

2.5 Southern Gas Networks Connections have provided a budget estimate of £112,000 (including VAT) to complete gas supply works to the site.

2.6 No meters or meter works are included in this quotation.

2.7 Southern Gas Networks Connections works will consist of connection to the existing 250mm LP PE main in Gavray Drive and installation of new LP PE mains and services to serve 171 new dwellings. This will terminate with ¾" capped control valves in 171 x external meter boxes to suit.

2.8 Southern Gas Networks Connections will provide all excavation and reinstatement of the trenches up to the site boundary.

2.9 Developer will need to provide all the pre-excavation, back-fill and reinstatement within the site boundary.

2.10 Refer to **Appendix A** for correspondence from the Southern Gas Networks Connections.

### 3.0 ELECTRICITY SUPPLY

#### *Existing Electricity Supply*

3.1 Records received from Scottish & Southern Energy show HV (11kV 185x3C Al CAS) underground cable along Gavray Drive and two HV (11kV 300x3C Al CAS and 240x3C Al XLPE) underground cables along the A4421 Charbridge Lane.

3.2 Refer to **Appendix B** for the Scottish & Southern Energy utility plans.

#### *Diversions*

3.3 It is anticipated that no diversions will be required.

#### *Proposed Electricity Supply*

3.4 Scottish & Southern Energy have provided a budget estimate of £160,000 / £180,000 (excluding VAT) to complete works to supply electricity to the site.

3.5 Scottish & Southern Energy have confirmed that this budget estimate does not constitute an offer of terms and is purely for guidance only.

3.6 This estimates have been calculated on the assumption that the developer will carry out all of the excavation and backfilling of the cable trenches required, within the developer's ownership.

3.7 Refer to **Appendix B** for correspondence from the Scottish & Southern Energy.

## 4.0 WATER SUPPLY

### *Existing Water Supply*

4.1 Thames Water utility records shows the water supply system within the vicinity of the site.

4.2 A 200mm water main pipe is located along Gavray Drive.

4.3 A 350mm (15 inch) Asbestos Cement (AC) Strategic trunk main runs across the eastern side of the existing land along the A4421 Charbridge Lane.

4.4 Refer to **Appendix C** for Thames Water utility plans.

### *Diversions*

4.5 It is anticipated that no diversions will be required.

### *Proposed Water Supply*

4.6 A budget estimate from Thames Water shows a charge of approximately £296,000 for the water supply to the proposed development. This includes:

- £132,000 (Lump sum contribution payable £15,770.41) for 520 metres of 180mm diameter High Pressure Polyethylene (HPPE) and 1000 metres of 125mm HPPE onsite water mains.
- £104,652 for 171 units x 25mm metered individual supplies service connections
- £59,337 for 171 units x £347.00 for Water Infrastructure Charges

4.7 A charge is made for water used for building purposes where an existing unmetered supply is used. The charge will be based upon the amount of water used or as a percentage of the contract value, which is currently 0.17%.

4.8 Thames Water are currently undertaking a flow & pressure test on the distribution mains to which it will be connected. This will demonstrate if the existing

network has sufficient capacity to provide the additional demand without unduly affecting existing customers.

4.9 Refer to **Appendix C** for correspondence from Thames Water.



## 5.0 SURFACE AND FOUL WATER DRAINAGE

### *Existing Surface and Foul Water Network*

5.1 Thames Water utility records show separate foul and surface water sewers within the vicinity of the site.

5.2 A 150mm diameter foul water main is shown running alongside Gavray Drive which connects to a 450mm sewer along Wretchwick Way, outfalling to a foul pump station located on Peregrine Way.

5.3 A 450mm to 675mm diameter surface water main runs along Gavray Drive.

5.4 Refer to **Appendix C** for Thames Water utility plans.

### *Diversions*

5.5 It is anticipated that no diversions will be required.

### *Proposed Surface and Foul Water Drainage*

5.6 The connection fee to a Thames Water public sewer (including lateral drain) is £485.

5.7 These charges do not include any construction works.

5.8 All sewer connections that connect a property to the public sewer for the first time are subject to a sewerage infrastructure charge of £347.00, giving total of £59,337 for 171 units.

5.9 Thames Water have stated that an Impact Study will be required to assess the capacity within the existing foul network and as such, Thames Water have been commissioned to undertake the impact assessment. It is anticipated that this assessment will be completed in early 2015.

5.10 Refer to **Appendix C** for correspondence from Thames Water.

5.11 Based on a flow rate of 450 l/s per household and a peak flow of 6DWF + 10%, development foul flows will be 5.88 l/s.

5.12 It is anticipated that the development will discharge into the 150mm sewer in Gavray Drive, outfalling to the pump station in Peregrine Way.

5.13 It is anticipated that the existing 150mm sewer will require upsizing to accommodate the development flows.

5.14 Previous enquires to Thames Water undertaken by JBA Consulting in 2009 indicated that the existing foul pumping station in Peregrine Way had sufficient capacity to cater for a total additional flow of approximately 25 l/s.

5.15 The results of the Thames Water capacity study however will confirm the extent (if any) of required offsite reinforcement works to both sewers and the pump station.

## 6.0 TELECOMMUNICATIONS

### *Existing Supply*

6.1 BT (Openreach) apparatus plans show telecommunication underground cables owned by BT along Gavray Drive and the A4421 Charbridge Lane.

6.2 Virgin Media was also contacted and have confirmed they have telecommunication infrastructure at the existing development to the south of the site.

6.3 BT (Openreach) asset plans are provided in **Appendix D**.

6.4 Refer to **Appendix E** for Virgin Media utility plans.

### *Diversions*

6.5 Based upon records, it would appear that diversion of existing BT plant are not anticipated.

### *Proposed Supply*

6.6 BT (Openreach) has a licence obligation to provide a service to any end customer requiring a connection.

6.7 BT (Openreach) confirmed, that the Developer would not normally be charged for provision of service and connections. Charges would apply however to the end user when orders are placed with the communication provider of choice.

6.8 BT (Openreach) have confirmed that all off-site works will be carried out free of charge.

6.9 BT (Openreach) provides £3,400 per plot for on-site works, which gives total of £581,400 for 171 residential units.

6.10 Refer to **Appendix D** for correspondence from Openreach (BT).

## 7.0 OTHER APPARATUS

### *Existing Supply*

7.1 Using the Linesearch facility, the following utility providers were identified as not containing apparatus within the site boundary.

Not in the Zone of Interest		
AWE Pipeline	FibreSpeed Limited	Oikos Storage Limited
BOC Limited (A Member of the Linde Group)	Gamma	Perenco UK Limited (Purbeck Southampton Pipeline)
BP Midstream Pipelines	Geo Networks Limited	Phillips 66
BPA	Government Pipelines & Storage System	Premier Transmission Ltd (SNIP)
Centrica Energy	Humbly Grove Energy	RWEnpower (Little Barford and South Haven)
Centrica Storage Ltd	HV Cables	SABIC UK Petrochemicals
ConocoPhillips (UK) Ltd	IGas Energy	Scottish Power Generation
Coryton Energy Co Ltd (Gas Pipeline)	Ineos Enterprises Limited	Seabank Power Ltd
CSP Fibre c/o Centara	INEOS Manufacturing (Scotland and TSEP)	Shell Pipelines
EirGrid	Lark Energy	Spiecapag UK Limited (Carrington)
Electricity North West Limited	Mainline Pipelines Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
E-on UK Plc (Gas Pipelines Only)	Manchester Jetline Limited	Transmission Capital
ESP Utilities Group	Marchwood Power Ltd (Gas Pipeline)	Western Power Distribution
ESSAR	National Grid Gas (above 2 bar) and National Grid Electricity Transmission	Wingas Storage UK Ltd
Esso Petroleum Company Limited	NPower CHP Pipelines	

**Figure 2 - Linesearch results**

7.2 In addition to the above, the following providers were also consulted and found not to maintain any apparatus within the development site.

**Table 1: Unaffected Service Providers**

BskyB (Easynet)	Interoute (Ringway /Beach/ 51 degrees/ Plancast)	May Gurney Ltd (Fujitsu)
CityFibre Holdings Ltd	GTC [includes Envoy]	Vodafone
Energetics Electricity	McNicholas	TfL Tram Network
Fulcrum Pipelines	KCOM Group PLC	TrafficMaster Plc
Verizon Business	Colt Technology Services	C.A. Telecom UK Ltd

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 Southern Gas Networks utility plans show gas apparatus in a proximate location of the site and Southern Gas Networks Connections have provided a budget estimate of £112,000 (including VAT) to complete gas supply works to the site.

8.2 Scottish & Southern Energy asset map shows an existing 11kV underground cables along Gavray Drive and the A4421 Charbridge Lane.

8.3 Scottish & Southern Energy have provided a budget estimate of £160,000 / £180,000 (excluding VAT) to complete works to supply electricity to the site.

8.4 Thames Water map shows a distribution main running along Gavray Drive.

8.5 Thames Water have confirmed that the development can be served by the existing water supply system. The estimated costs for the service connections (for 171 residential units) are total of approximately £296,000.

8.6 Thames Water utility records show separate foul and surface water sewers within the vicinity of the site.

8.7 Connection fee to Thames Water public sewer (including lateral drain) is £485.

8.8 A sewerage infrastructure charge of £347.00 for each unit, giving total of £59,337 for 171 units.

8.9 For Surface Water Drainage Strategy please Refer to Odyssey Markides Flood Risk Assessment and Drainage Strategy Report (14-033-02).

8.10 BT have confirmed that all installation and rental charges will apply to the end user from their chosen service provider.

8.11 BT (Openreach) provides £3,400 per plot for on-site works, which gives total of £581,400 for 171 residential units.

8.12 Based upon the responses received and existence of apparatus in the local area, it would appear that the proposed development can be provided (subject to utility provider fees) with all essential infrastructure required to meet residential living standards.

## **APPENDIX A**

Our Ref: 852907  
Your Ref: 14-033



Marcin Pachwicewicz  
Odessey Markides  
The Hub  
500 Park Avenue  
Aztec West  
Bristol  
BS32 4RZ

SGN Connections Limited  
St. Lawrence House  
Station Approach  
Horley  
Surrey  
RH6 9HJ  
Tel: 0845 070 1431

21/10/2014

Dear Marcin Pachwicewicz,

**RE: New connection(s): Development at Gavray Drive, Bicester, Oxfordshire OX26 6XU**

Further to your request dated 06/10/2014 regarding the new connections at the above site, please find a budget indication quote detailed below.

**Works to be carried out:** SGN Connections to connect to the existing 250mm LP PE main in Gavray Drive & install new LP PE mains & services to serve 340 new dwellings. Terminate with 3/4" capped control valves in 340 x external meter boxes to suit. No meters or meter works are included in this quotation.

SGN Connections will provide all excavation and reinstatement of the trenches up to your site boundary.

You are to provide all the pre-excavation, back-fill and reinstatement within the site boundary.

**Your Budget Indication is: £221,000 (inc.VAT)**

Please note that this figure is a budget indication only and does not represent an offer to carry out the work. This budget cost is based on the information we have been provided with by you.

We will not be able to complete a firm quotation until a full design study has been carried out. There is a charge to carry out a design study that will provide a more accurate cost for work to be done. Upon receipt of a firm request, we will advise you of the cost for this design study.

Reinforcement of the existing network will be required to accommodate this development. Additional lead times for the reinforcement are approximately 240 days. Reinforcement costs will be met by Southern Gas Networks. This is based upon current network model data which is subject to change. Upon receipt of a firm request, we will evaluate the actual work required and let you know if reinforcement is required and what the associated costs are.

It is assumed that no easements or third party permissions are required to carry out all works.

Please note that this budget indication does not take into account for any existing Southern Gas Networks infrastructure that may require diverting. Details of these can be obtained from **Southern Gas Networks Diversions/Isolations – 0845 070 3497, or at the following email address: [planning&design\\_diversions@sgn.co.uk](mailto:planning&design_diversions@sgn.co.uk)**

If you have any further queries relating to this budget indication, please feel free to contact me on the telephone number at the top of this letter.

Yours sincerely,

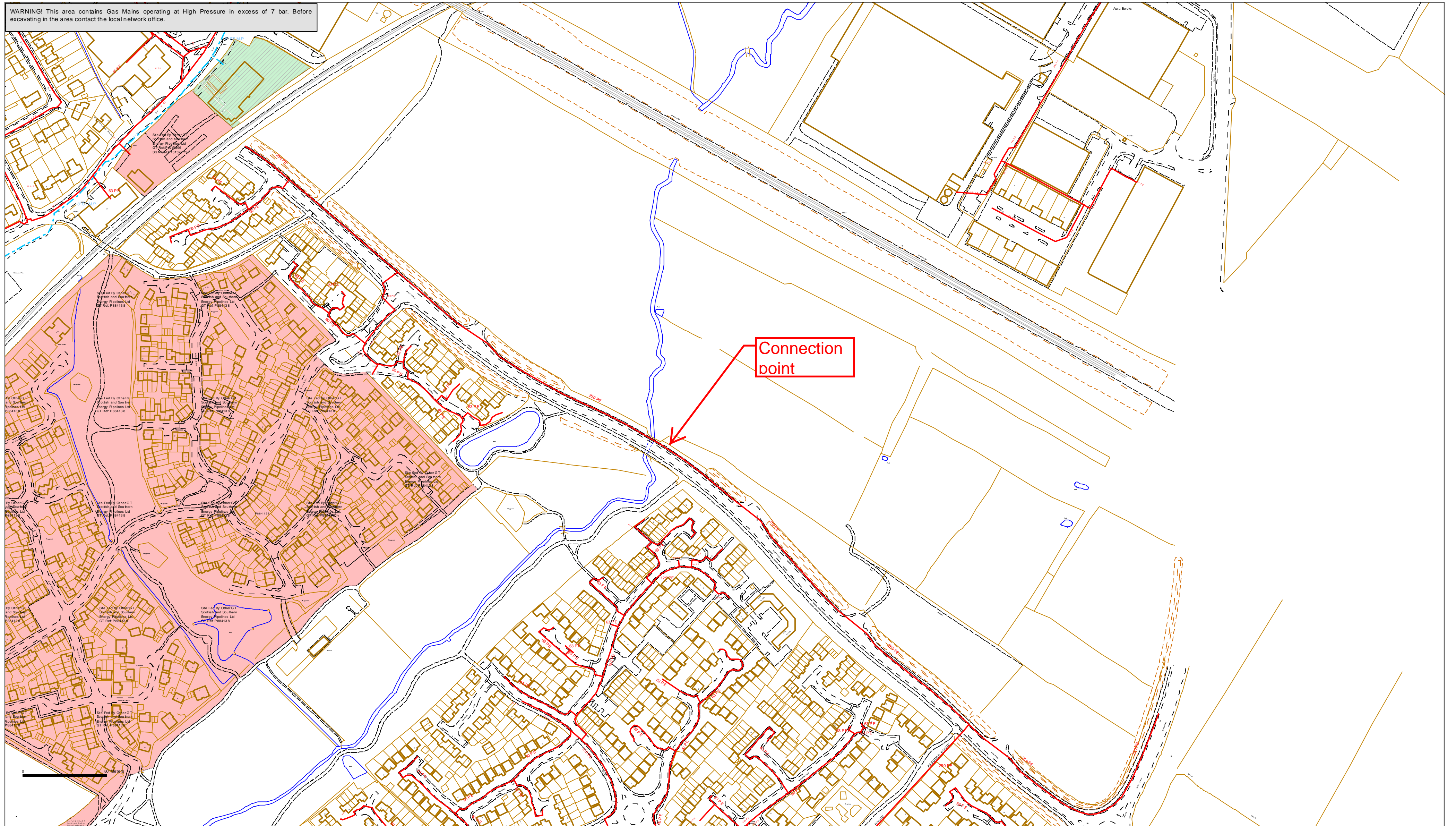
Kevin Wort  
Design Assistant

24 hour gas escape number 0800 111 999\*  
\*Calls will be recorded and may be monitored

SGN Connections is part of Scotia Gas Networks  
Registered in England No. 05618886  
Registered Office: St. Lawrence House, Station Approach, Horley, Surrey, RH  
9HJ  
[www.sgn.co.uk](http://www.sgn.co.uk)



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.



SCALE 1: 2500

USER ID: kw61873

DATE: 13/10/2014

INTERNAL USE ONLY

GRID REFERENCE:

E459652,N222266,SP 59 22

Some examples of Plant items:

Valve Depth of Cover Syphon Diameter Change Material Change

LP MAINS

MP MAINS

IP MAINS

LHP MAINS

HISTORY DATA

LAs

GTs

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Plant Protection Team on 08450703497 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. 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 plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

INTRANET MAP VERSION 2.1

Oxfordshire County Area

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ATKINS CHECKED

MG

Our Ref: SO/0042448  
Your Ref: LM33243/PC

Date: 09/09/2014



Stacy-Ann Thomas, .  
Atkins  
The Hub  
500 Park Avenue  
Aztec West  
Almondsbury

Plant Location  
95 Kilbirnie Street  
Glasgow  
G5 8JD  
Phone: 0141 418 4093  
Phone: 0845 070 3497  
Fax: 0141 429 6432  
Email: plantlocation@sgn.co.uk

Dear Customer,

**Re: Enquiry at: Launton Road, Bicester, Oxfordshire OX26 6XU.**

### Searches - Important Information

Thank you for your enquiry regarding the above location. If your client plans to carry out any on site works they **must** contact ourselves directly so that a full safety and engineering risk assessment can be carried out **prior** to any work starting.

Listed below is the **minimum** information we would require from your client and our contact details:

- Full contact details (name, company name, address, telephone number and e-mail address)
- Full site address, post code and easting/northing grid reference.
- Plan showing the site boundary.
- Details of the work to be carried out.
- The proposed start date (please specify if work is at the planning stage).

Our contact information is:

Address - Scotia Gas Networks, Plant Location Dept, 95 Kilbirnie Street, Glasgow, G5 8JD.

E Mail - plantlocation@sgn.co.uk

Fax - 0141 429 6432

It must be stressed that both direct and consequential damage to gas plant can be dangerous both for your client's employees and the general public, repairs to any such damage will incur a charge. Your client's works should be carried out in such a manner that we are able to gain access to our apparatus throughout the duration of your client's operations.

**24 hour gas escape number 0800 111 999\***  
**\*Calls will be recorded and may be monitored**

Southern Gas Networks plc is part of the Scotia Gas Networks Group  
Registered Office: St Lawrence House Station Approach Horley  
Surrey RH6 9HJ  
Registered in England & Wales No. 05167021  
<http://www.sgn.co.uk>

**Please note that the information supplied by Scotia Gas Networks is given without warranty. Whilst we understand the information supplied to be correct, no reliance should be given in respect of the location of our apparatus. We can locate apparatus on site at your client's request prior to any development works to be carried out in the vicinity of our pipelines.**

If you require any further information please contact the number below.

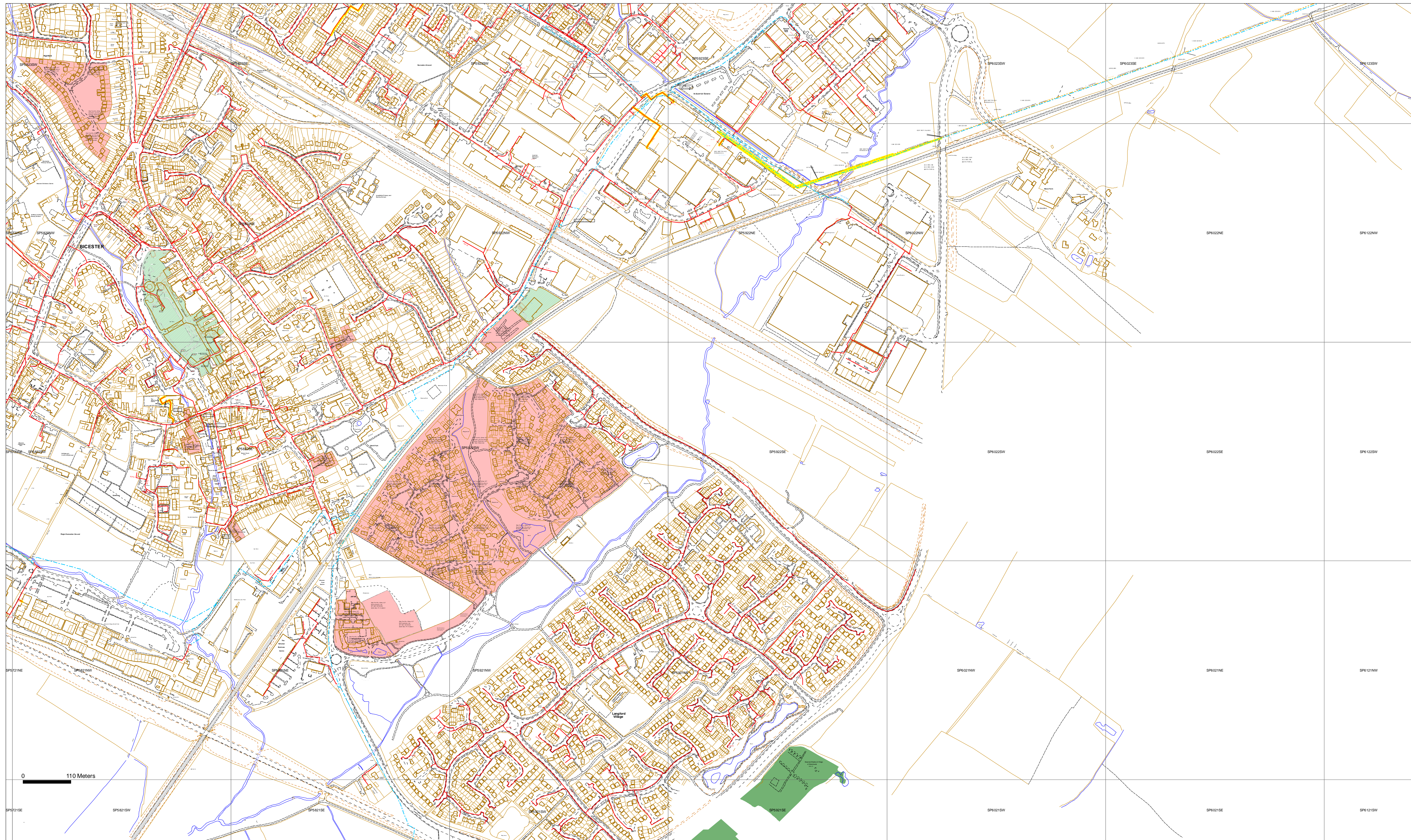
Yours faithfully,

Jim McCabe

**24 hour gas escape number 0800 111 999\***  
**\*Calls will be recorded and may be monitored**

Southern Gas Networks plc is part of the Scotia Gas Networks Group  
Registered Office: St Lawrence House Station Approach Horley  
Surrey RH6 9HJ  
Registered in England & Wales No. 05167021  
<http://www.sgn.co.uk>





SCALE 1:2803	LP MAINS	
USER ID: jm55327	MP MAINS	
DATE: 09/09/2014	IP MAINS	
INTERNAL USE ONLY	LHP MAINS	
GRID REFERENCE: E459594,N222317,SP 59 22	HISTORY DATA	
Some examples of Plant items:	LAs	
Valve	GTs	
Depth of Cover	SSSIs	
Syphon		
Diameter Change		
Material Change		

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Plant Protection Team on 08450703497 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. 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 plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

**INTRANET MAP VERSION 2.1**


Oxfordshire County Area

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**Caution.**

For safety reasons reproduction of the maps attached should be printed by a coloured printer at a legible scale.



**General safety  
measures to avoid  
injury and damage  
to gas plant**



**Southern  
Gas Networks**  
A Scotia Gas Networks Company

# The following protective and precautionary measures **MUST** be taken when working/excavating in the vicinity of our plant.

To avoid injury to yourself, your employees, colleagues and the general public you **MUST** verify the details provided on our plans by tracing, hand-digging, trial holes and suitably marking its position on site.

You **MUST** ensure current full colour copies of our plans are issued and the presence and location of our plant, prior to excavation, is understood by all relevant personnel on site.

## In an emergency

If you cause a gas leak or suspect a pipe or equipment is leaking, you **MUST** take the following emergency actions immediately:

- a. Get everyone away from the immediate vicinity of the gas escape;
- b. Inform us immediately by calling the National Gas Emergency Number on **0800 111 999\***;
- c. Do not attempt to repair the escape or stop the leakage;
- d. Ask occupants of buildings adjacent to the escape to leave until it is safe for them to return;
- e. Damage to a service supplying a building may result in gas entering the building. Do not attempt to operate any valves;
- f. Prevent any approach to the immediate vicinity of the gas escape;
- g. Prohibit smoking and extinguish all naked flames. Do not use mobile phones or other sources of ignition within 15m from the leakage; and
- h. Assist our representatives, and other emergency services for example police, fire and ambulance as requested.

### Additional reference material;

- HSE Guidance Note; HSG47 “Avoiding Danger from Underground Services” at [www.hse.gov.uk](http://www.hse.gov.uk) and
- NJUG “Utilities Guidance on Positioning and Colour Coding of Apparatus” at [www.njug.org.uk](http://www.njug.org.uk)









## Safe System of Work

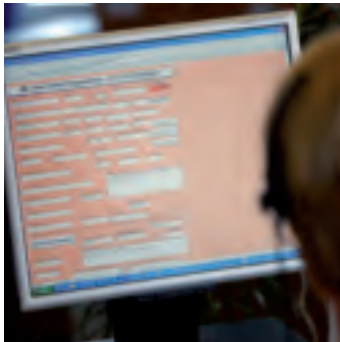
We may request the production of Risk Assessments and Method Statements for any works deemed to have the potential to affect, cause risk to or pose a hazard to the safety and/or integrity of our plant. Where CDM legislation applies reference MUST be made to our plant within the site 'Health and Safety File'.

## Financial

Every reasonable precaution MUST be taken to avoid personal injury or damage to our plant during the progress of the planned works. Any cost incurred by us for the repair of direct or consequential damage and the diversion of any affected plant will be recharged in full.

## HSE

Any damage to our apparatus will be subject to legislative reporting responsibilities to the Health and Safety Executive under Reporting of Injuries, Diseases & Dangerous Occurrences Regulations (RIDDOR) and Gas Safety Management Regulations (GSMR).









## Minimum safe working distances

If you are carrying out explosions, piling, splitting, boring and deep excavations, please contact us for further guidance. Trial holes **MUST** be dug by hand to determine the exact location of mains and service pipes in advance of mechanical excavation or thrust boring. Be aware of the potential for the presence of protruding objects from gas plant in the form of standpipes, test points and valve bodies.

## Mechanical excavation

Mechanical excavators (including breaker attachments) **MUST NOT** be used within the following distances from the confirmed location of our gas mains and services (as depicted on our gas maps), without prior agreement:



Type of Mains and Services	GAS MAP Identification	Hand Excavation required inside	Pipe pressure indication shown on MAP
Low Pressure (LP)	0 – 75mbar	0.5 metres	
Medium Pressure (MP)	75mbar to 2 bar	0.5 metres	
Intermediate Pressure (IP)	2 – 7 bar	3.0 metres	
High Pressure (HP)	Above 7 bar	3.0 metres	

Note: We MUST be consulted prior to any planned excavation works within 10m of Pressure Reduction Equipment and may consider issuing a Permit to Work, if appropriate.

## High pressures

In addition to receiving a copy of our 'Safe working in the vicinity of Southern Gas Networks high pressure pipelines and associated installations', if any activities proposed are closer than the minimum distances listed below you MUST discuss with us to agree your site specific requirements.

Power Excavators in easements	>3 metres
Power Excavators in highway	>3 metres
Pressure testing	>8 metres
Piling	>15 metres
Demolition	>150 metres
Blasting	>250 metres
No-dig techniques	Method Statement required
Crossing easement with plant	Written Consent required

## Clearance requirements

No plant is to be laid over and along the line of a gas pipe irrespective of clearance. To allow the future repair and maintenance of gas plant, a minimum clearance of 250mm for low and medium pressure pipelines and 600mm for intermediate and high pressure pipelines, or 1.5 times the external diameter of the gas pipe, whichever is the greater, should be maintained between the gas plant and any new plant. Where this minimum clearance cannot be achieved, site discussions should be held with us or our representatives to agree a suitable clearance. Explosives shall not be used within 30m of our plant (400m for Pressure Reduction Equipment) without prior agreement. No piling or boring shall be carried out within 15m of our plant without prior consultation and agreement.











## Surface boxes/Manholes

Do not bury or move our surface boxes. Access **MUST** be maintained both during and after your works. 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 a reduction or increase in cover or protection without prior written agreement.

## Deep excavations

Where excavations adjacent to any of our potentially affects its security and integrity, adequate protection (approved by us) **MUST** be applied to such plant. Ground movement around gas **MUST** be prevented. If a sewer trench or any other water authority is to be constructed at greater than 1.5 metres deep near to a buried gas main or service pipe, we **MUST** be contacted. We should be provided with detailed drawings showing the line and width of the proposed sewer or other trench, together with the soil group classifications of the area concerned.

## Crossing our plant

The placing of heavy construction plant, equipment, materials or the passage of heavy vehicles over our plant is prohibited unless specially agreed protective measures (i.e. the construction of reinforced crossing points) have been carried out. This is particularly important where reductions in side support or ground cover are planned.

Working in easements should not be undertaken without our prior written consent.

## Exposed plant

Where excavations adjacent to gas plant affect its support, the plant **MUST** be adequately supported and protected in consultation with us and to our satisfaction. It **MUST** be protected from impact and restraints, thrust blocks and supports **MUST** not be removed without our agreement.



## Hot works

The potential exists for heat damage to plastic pipelines/coatings. Where welding or other hot works involving naked flames is to be carried out in proximity to our plant, our representative should be present.

## Backfilling

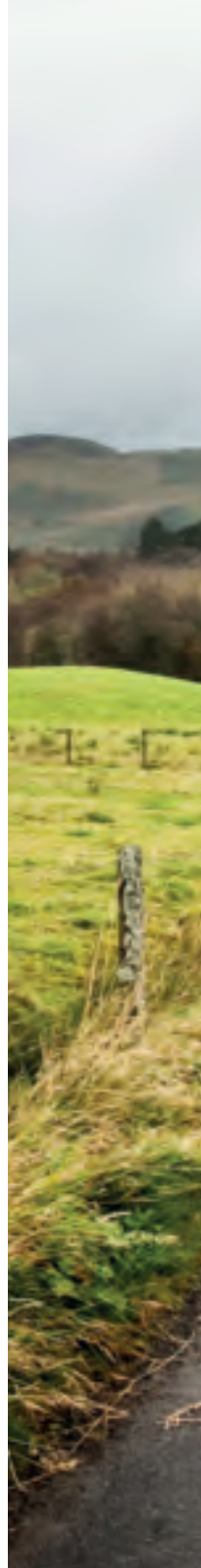
Concrete backfill should not be placed closer than 300mm to our plant. No concrete or hard material should be placed under or adjacent to any of our plant. Shuttering **MUST** be constructed so as to prevent fresh concrete encasing our plant and to maintain the stated clearances. Material used for the surround backfill of our plant **MUST** conform to the following requirements:

- If sand, it **MUST** be well-graded in accordance with BS EN 12620: 2002;
- It **MUST** not contain any sharp particles; stones, bricks, lumps or corrosive materials;
- Foamed concrete should not be used; and
- It **MUST** be laid to a minimum depth of 250mm above the crown of the plant.

**Note:** Power ramming should not take place until a 300mm hand rammed layer has been completed over the crown of the pipe.

## Access

Access to sites and our plant **MUST** be provided at all times. This includes temporary structures and spoil heaps over our pipes.









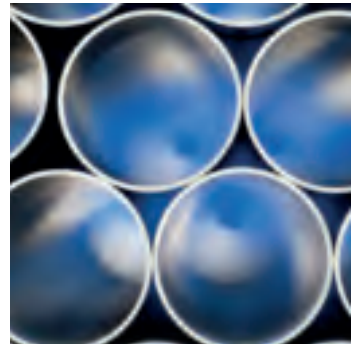
## Tree planting

If trees or shrubs are to be planted adjacent to our plant, the selection of the type of tree or shrub and its planting **MUST** be considered so that root damage to buried mains or services will be avoided and that damage to trees or shrubs will not be caused by any subsequent excavations for repair and maintenance.

Before any tree planting is carried out on the easement, our written approval **MUST** be obtained. Any approval we grant to plant trees on the easement shall be subjecting to retaining the rights to remove, at any time in the future, all trees which in our opinion might become a danger to the pipe.

The written consent to plant trees will state what area may be planted and also the type of tree.

See over for specific species and the distances they **MUST** be planted from the pipeline.



The following trees and those of similar size, which may be deciduous or evergreen, shall not be planted within six metres of the centre line of the pipe e.g. Ash, Beech, Birch, most Conifers, Elm, Maple, Lime, Horse Chestnut, Oak, and Sycamore. Apple and Pear trees are also included in this category.

Dwarf Apple Stocks may be planted up to three metres of the centre line of the pipe.



In cases where screening is required, the following are shallow rooting and may be planted close to the pipeline; Blackthorn, Broom, Cottoneaster, Elder, Hazel, Laurel, Quickthorn, Privet, Snowberry and most ornamental shrubs.

## PIPELINE CENTRE

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Raspberries, Gooseberries and Blackcurrants may be planted on the pipe, but a four metre strip, centred on the pipe, **MUST** be left clear at all times.

Poplar and Willow trees shall not be planted within 10 metres of the centre line of the pipe.



10m

6m - 9m



These types of trees may only be planted as individual specimens or as a single row in the area between six and 10 metres of the pipe.

**Dense mass planting may only be carried out at distances greater than 10 metres from the pipe.**

3m - 6m

0m - 3m



Christmas Trees (Picea Abies) may be planted up to three metres of the pipeline. However, permission is given on the strict understanding that Christmas trees are clear-felled at intervals not exceeding seven years.

## PIPELINE CENTRE

The only hardwood plants which can be planted directly across a pipe are hedge plants such as Quickthorn, Blackthorn etc and these shall only be planted where hedge is necessary either for screening purposes or to indicate a field boundary.

**Note: For further guidance refer to NJUG 10.**







**Southern Gas Networks provides a  
free plant location enquiry service  
during office hours.**

**Contact:**

**Tel: 0845 0703 497 or 0141 418 4093**

**Fax: 0141 429 6432**

**Email: [plantlocation@sgn.co.uk](mailto:plantlocation@sgn.co.uk)**

**Southern Gas Networks, Plant Location Team,  
Tradeston, 95 Kilbirnie Street, Glasgow, G5 8JD**

**[www.sgn.co.uk](http://www.sgn.co.uk)**

We regret that information cannot be supplied by telephone. Requests **MUST** be made in writing (via letter, email or fax). For ALL enquiries please include the following information:

1. Full contact details (name, company name, address, telephone number and e-mail address).
2. Full site address, postcode and easting/northing grid reference.
3. Plan showing the site boundary.
4. Details of the work to be carried out.
5. The proposed start date (please specify if work is planning only).

## **APPENDIX B**

Poole Depot  
P O Box 2004  
Branksome  
Poole  
BH12 1YT



01202784600



01202784651



gary.corbin@sse.com



www.ssepd.co.uk

13 October 2014

**Our reference: ECD817/2**

**Your reference:**

Andreas Markides  
Odyssey Markides  
Elizabeth House  
39 York Road  
London  
SE1 7NQ

Dear Sirs,

### **Budget estimate East Side Land @ Gavray Dr Bicester**

Thank you for your recent enquiry. I am pleased to provide you with my quotation for the new electricity connections at the above development. My proposals are subject to our obtaining all necessary legal consents to carry out the work as planned, including any consent required from third parties.



**140/£160k +  
Vat**



I have calculated this quotation on the assumption that you will carry out all of the excavation and backfilling of the cable trenches required, on the land in your or your clients' ownership.

This budget estimate does not constitute an offer of terms and is purely for guidance only.  
You may find answers to any questions you may have on our web site [www.ssepd.co.uk](http://www.ssepd.co.uk)  
Yours sincerely,

G Corbin  
Network Connections Designer