



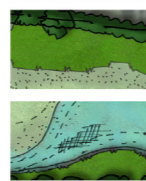
Legend



Proposed housing 3.00 ha (Approx 100 units at 35 dph)

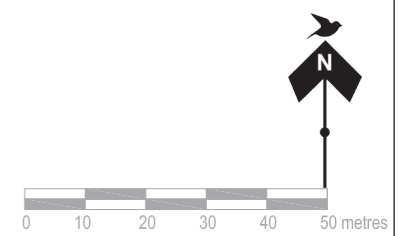
Existing vegetation

Proposed vegetation



Existing boundary vegetation strengthened with new native planting

Swale and balancing pond



APPENDIX J



Rev	Description	Date	Drawn By	Checked By

PRELIMINARY

Written dimensions to be taken Do Not Scale off the drawing
 Any discrepancies, written or scaled, should be brought to the attention of the engineer immediately
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 All relevant information identifying the unavoidable risks has been passed to the planning supervisor for inclusion in the Health and Safety plan
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Wormald Burrows Partnership Limited
 Civil Engineering Consultants
 12a - 18a Hitchin Street, Biggleswade, SG18 8AX
 Tel () Fax () Web: www.wormburp.com
 Email:

Project:
 Land South Hill Dyke Road, Wheathampstead

Drawing Description:
 Indicative Drainage Areas

Drawing Number:
E3090/26

Scale:
 NTS


Client:




Taylor Wimpey UK Ltd Strategic Land
 Stratfield House
 Station Road
 Hook
 Hampshire RG27 9PQ

Drawn By:
 MJL
 Date:
 11.04.13

Checked By:
 TJW
 Date:
 22.04.13



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 MANAGEMENT
 SYSTEMS
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Wormald Burrows Partnership Limited
Civil Engineering Consultants

**LAND SOUTH OF HILL DYKE ROAD
WHEATHAMPSTEAD
UTILITIES ASSESSMENT
NOVEMBER 2014
E3090-UTREPORT-APR2013-REV1**



12a – 18a Hitchin Street Biggleswade, SG18 8AX

Web: <http://www.wormburp.com>

Tel: () 317 244 Fax: () 325 434

Email:

LAND SOUTH OF HILL DYKE ROAD, WHEATHAMPSTEAD

UTILITIES ASSESSMENT

Client: TAYLOR WIMPEY UK LIMITED
Engineer: Wormald, Burrows Partnership Limited
12a – 18a Hitchin Street
Biggleswade
Bedfordshire SG18 8AX
Tel: (01767) 317 244
Fax (01767) 315 434

Original Date: MAY 2013
Original WBP Ref: E3090-UTREPORT-APR2013-REV0

Written By: | Checked By: | Approved By:

Michael Lowiss
Graduate Engineer

Nick Kohli
Director

Tom Wilson
Associate Director

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REGISTRATION OF AMENDMENTS

Revision	Date	Amendment Details	Prepared by	Checked by
0	30.04.13	Original version	Michael Lowiss	Tom Wilson
1	20.11.14	Site information updated	Andrew Chipchase	Tim Burrows

EXECUTIVE SUMMARY

This report summarises the findings of a desk top study undertaken to assess the provision and capacity of existing utility services infrastructure, to support proposals for a development of land located south of Hill Dyke Road, Wheathampstead.

The provisions for disposal of surface and foul water are discussed in the Wormald Burrows Partnership Ltd Flood Risk Assessment Report (Ref: E3090/FRA APR 2013 Rev0).

The site is currently greenfield therefore new connections will need to be provided for the proposed residential development. Utility Companies for the area have been contacted and asset plans obtained.

Based on a review of the information provided, it is evident that there are a number of existing services in close proximity to the site. It is therefore anticipated that the development can be served by these utilities and discussions are ongoing to establish the cost of these provisions. It is recommended that a full services trace be undertaken to confirm the alignment of underground services, and where necessary, trial pitting undertaken to confirm depth, once development details are confirmed. This will allow greater certainty over any associated wayleaves and whether protection measures will be necessary to facilitate construction.

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APPENDIX B	-	Drawing No E3090/25, 'Topographical Survey'
APPENDIX C	-	Drawing No CSa/2067/107 revA, 'Illustrative Masterplan'
APPENDIX D	-	National Grid Gas enquiry response letter
APPENDIX E	-	UK Power Networks budget estimate letter

1 INTRODUCTION

1.1 Overview

- 1.1.1 Wormald Burrows Partnership Limited (WBPL) have been appointed by Taylor Wimpey UK Limited to provide a Utilities Assessment for a proposed residential development comprising approximately 100 residential units at land adjacent to Hill Dyke Road, Wheathampstead.
- 1.1.2 The scheme has now reached the stage where an assessment of utility provision is required to demonstrate that there is sufficient capacity to service proposed residential development. It will also establish if services need to be diverted or protected as a consequence of the development.
- 1.1.3 This desktop study has been undertaken to establish the type and location of existing services and the supply of new services to the proposed development. Consultation has been undertaken with utility companies and asset plans obtained. This information has been overlaid onto a topographical survey to create a combined service plan.
- 1.1.4 It should be noted that this drawing has been compiled using information provided by third parties and that the depths and alignments of services will be subject to confirmation by on site investigations (trial pitting and/or CAT scanning to provide a services trace) prior to any construction works commencing.
- 1.1.5 Utility companies have been requested to comment on the existing capacity available to service the proposed residential development. Indicative budget estimates for servicing the site have been requested.
- 1.1.6 These estimates are thus intended for guidance only and confirmation of costs from the relevant utility company will be required as the detailed design of the development evolves.
- 1.1.7 Details of potential services constraints, together with possible reinforcements required to facilitate residential development, are set out in the following sections.
- 1.1.8 The location of Thames Water's public foul and surface water sewers, together with potential constraints, are discussed in a separate Flood Risk Assessment Report, prepared by WBPL (Ref: E3090/FRA APR 2013 Rev0).

2 EXISTING SERVICES PROVISION

2.1 Site Location and Description

- 2.1.1 The site is located to the south of Hill Dyke Road, Wheathampstead and is centred upon NGR TL 518042 21335.
- 2.1.2 Drawing No E3090/01, 'Location Plan' in **Appendix A** shows the location of the site in relation to the surrounding area.
- 2.1.3 The only vehicle access to the site is an unpaved farm track leading from Dyke Lane across a field south of the site and to the south west corner of the site. Several footpaths are available to access the site.
- 2.1.4 A topographical survey showing the existing site arrangements is included in **Appendix B**.

2.2 Existing Services

British Telecom

- 2.2.1 BT Openreach was contacted and an asset plan showing telecommunications plant in the area obtained
- 2.2.2 It can be seen that there are cables and joint boxes on the majority of the northern side of Hill Dyke Road, where it runs parallel to the northern boundary of the site. Joint boxes, distribution points and underground cables are all present in the cul de sacs that join Hill Dyke Road. Overhead plant runs along the eastern boundary of the site and continues along the length of Dyke Lane. Underground plant is also shown to be present within the western side of Dyke Lane. At present, there is no BT underground plant within the immediate vicinity of the site.

UK Power Networks

- 2.2.3 Two high voltage cables run along Dyke Lane and one of these runs along the eastern edge of Dyke Lane following the same route north for the length of Dyke Lane. The other cable cuts through the eastern edge of the site and continues north for the entire length of Dyke Lane. This cable then links to a sub-station in Smallwood Close from which the low voltage cables for the surrounding area join.

- 2.2.4 Two low voltage underground cables join this sub-station. One cable continues south into Davys Close and then west towards Hill Dyke Road. The other goes west towards Hill Dyke Road and into Housden Close.
- 2.2.5 The low voltage cable from Davys Close continues along the southern footpath in Hill Dyke Road before crossing it and continuing west along the northern side of Hill Dyke Road. This cable then turns north into Wright Close.
- 2.2.6 Further low voltage cables are present along the southern edge of Hill Dyke Road just west of the site. These cables enter the cul de sacs: Beech Crescent, Hewitt Close, Vale Court and Allen Close. These cables join a sub-station in the unnamed cul de sac, just east of Allen Close.
- 2.2.7 A low voltage cable from this sub-station continues east along Hill Dyke Road before entering Wright Close, adjacent to a playground on the northern side of Hill Dyke Road.
- 2.2.8 The two sub-stations mentioned are the closest being within 250m of the site.
- 2.2.9 Private and street lighting cables are not shown on the asset plans and a services trace will be necessary to confirm the location of these and the alignment of all the electrical cables.

National Grid gas

- 2.2.10 It can be seen in correspondence from National Grid Gas that 100mm and 150mm diameter low-pressure mains are located to the north and west of the site in Hill Dyke Road and within the surrounding residential cul de sacs that join Hill Dyke Road.
- 2.2.11 The plans indicate that there are no mains present within the boundary of the site or along Dyke Lane to the east of the site.

Virgin Media

- 2.2.12 Virgin Media were consulted and asset plans obtained. Inspection of the plans indicates that there are ducts to the north of the site in the northern footway of Hill Dyke Road. These ducts enter all the cul de sacs that join Hill Dyke Road.
- 2.2.13 There is no virgin media apparatus within the boundary of the site or to the east along Dyke Lane.
-

Affinity Water

- 2.2.14 Affinity Water was consulted and asset plans obtained showing the location and size of water mains in the area.
- 2.2.15 A review of their asset plans indicates both 100mm and 150mm diameter PVC mains located north of the site in the northern side of Hill Dyke Road that runs parallel to the site. The cul de sacs that join Hill Dyke Road join the same mains servicing them.
- 2.2.16 An asbestos cement main is present in Dyke Lane to the east of the site. This main continues south along Dyke Lane. Northwards it joins the 150mm diameter PVC main mentioned above, where Hill Dyke Road joins Dyke Lane. The asbestos main is shown not to be within the boundary of the site.
- 2.2.17 At present there are no Affinity water mains within the boundary of the site.

3 PROPOSED DEVELOPMENT

- 3.1.1 The site is presently greenfield and used as arable agricultural land.
- 3.1.2 The proposed development will comprise of approximately 100 residential units and will be accessed by vehicles from a proposed link off the southern side of Hill Dyke Road, where it runs parallel to the site. There are also two proposed footpaths that will join Hill Dyke Road and one that joins an existing footpath in the field south of the site. The site is proposed to have a swale and balancing pond along the southern and eastern boundaries. Public open space will be located at the eastern edge of the site.
- 3.1.3 An illustrative proposal of the site layout is shown in drawing number CSa/2067/107 rev A, 'Illustrative Masterplan' in **Appendix C**.

4 PROPOSED SERVICES

4.1 National Grid Gas

- 4.1.1 National Grid Gas has previously confirmed that low-pressure gas is available in the area and the nearest main with sufficient capacity to serve the proposed development is immediately adjacent to the site.
- 4.1.2 It is envisaged that a new connection can be taken from the existing 150mm diameter main that exists just to the north, in Hill Dyke Road. This will supply the proposed residential development of approximately 100 units. The connection point is shown in the National Grid Gas letter shown in **Appendix D**.
- 4.1.3 It is considered likely that protection measures to the gas main will be necessary during construction. The exact details and costs will need to be confirmed with National Grid Gas, once the development design details have been finalised. New services will be located within footpaths and service strips.

4.2 UK Power Networks

- 4.2.1 New connections to the site will be from the existing infrastructure and will be located within proposed footpaths and service strips. Existing electrical connections will be disconnected, where necessary.
- 4.2.2 The development will require a new sub-station and the budget estimate for 100 gas heated units is £75,000.00 (exclusive of VAT). This is assuming the point of connection is to the existing high voltage network along Dyke Lane. For full details of the budget estimate assumptions, refer to the UK Power Networks budget estimate letter in **Appendix E**.

4.3 Affinity Water

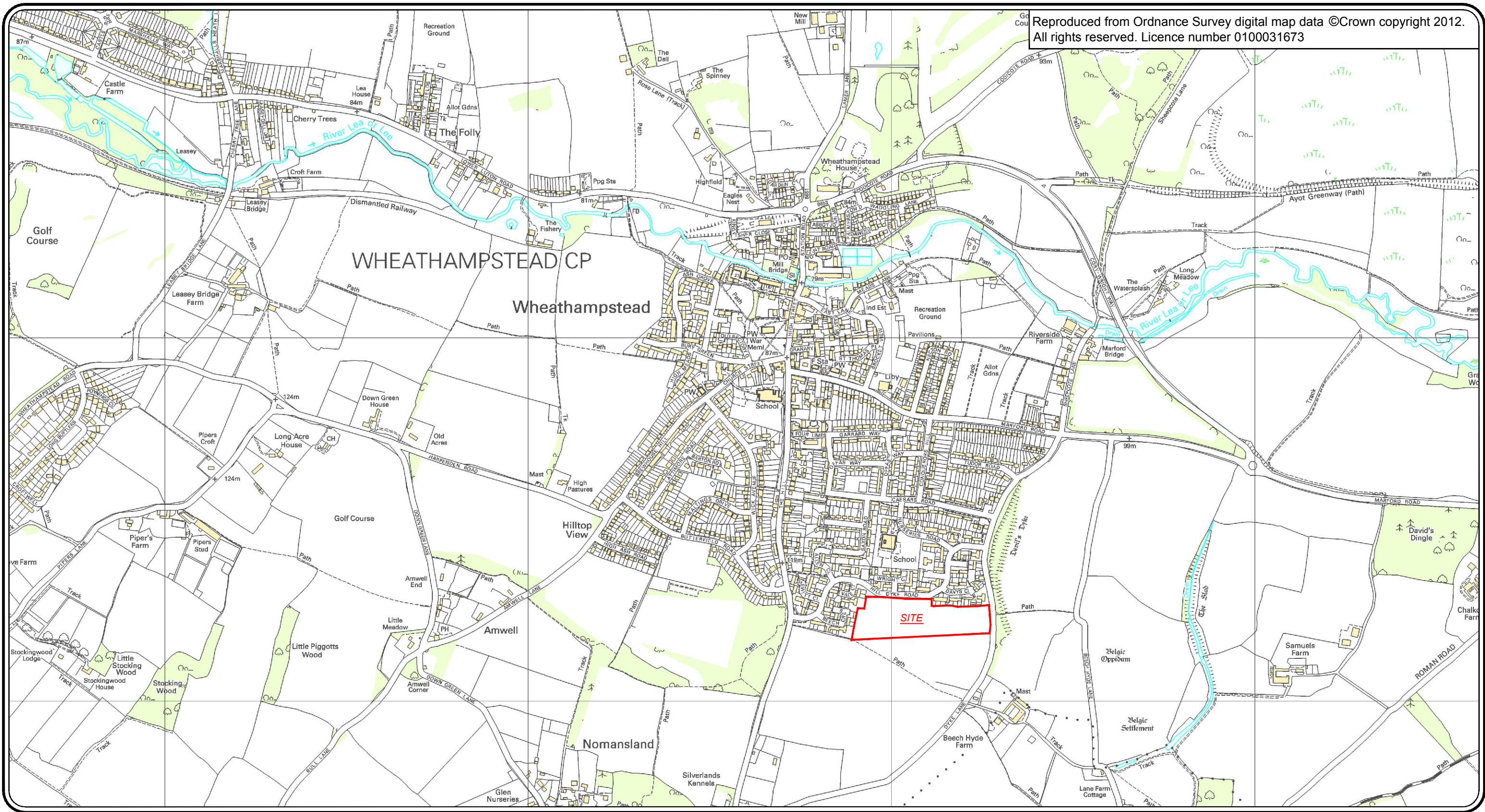
- 4.3.1 We are currently awaiting the cost estimate from Affinity Water.
- 4.3.2 The estimate will include costs for installing new water mains and providing connections to the residential units.

5 CONCLUSIONS

- 5.1.1 The site is greenfield at present and therefore all the service providers will have to install new infrastructure to service the site.
- 5.1.2 The enquiries made were based on a proposed residential development of approximately 100 gas heated units.
- 5.1.3 Budget estimates for Virgin Media and BT are not included however, it is anticipated that there will not be a capacity issue with supplying the proposed development.
- 5.1.4 We are still awaiting budget estimates from Affinity Water and will provide an update as soon as this information is available.
- 5.1.5 Undertaking a services trace, in conjunction with trial pitting, will allow the depth, alignment and easement requirements to be confirmed. Furthermore, this will enable an assessment to be made as to whether services need to be protected or realigned.
- 5.1.6 Cost estimates will need to be confirmed once the detailed development proposals have been finalised.

APPENDICES

APPENDIX A



Rev	Description	Date	Drawn By	Checked By

PRELIMINARY

Written dimensions to be taken Do Not Scale off the drawing
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Wormald Burrows Partnership Limited
Civil Engineering Consultants
12a - 18a Hitchin Street, Biggleswade, SG18 8AX
Tel: () Fax: ()

Web: www.wormburp.com
Email: ()

Project:
Land to South of Hilldyke Road, Wheathampstead

Drawing Description:
Location Plan

Drawing Number:
E3090/1

Client:
CLIENT LOGO

Drawn By:
TJW
Date:
12.11.12

Checked By:

Date:



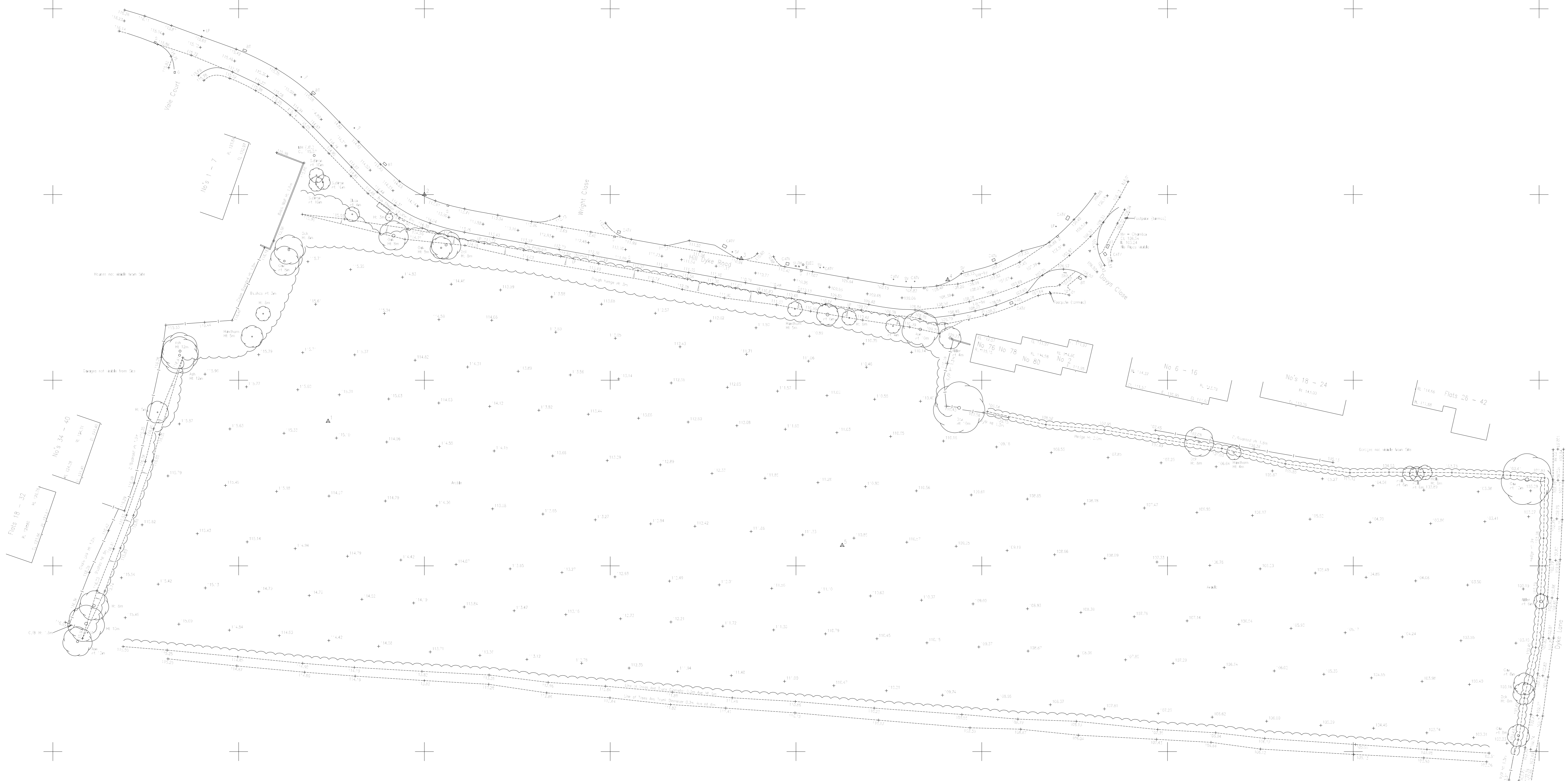
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APPENDIX B



Certified by Afnor UK

Rev	Date	By	Checked	Description
1	15.04.13	M.J.L.	T.J.W.	Issue for approval
2	22.04.13	M.J.L.	T.J.W.	Issue for construction
3	22.04.13	M.J.L.	T.J.W.	Issue for construction
4	22.04.13	M.J.L.	T.J.W.	Issue for construction



Rev	Description	Date	Drawn By	Checked By

PRELIMINARY

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Wormald Burrows Partnership Limited
 Civil Engineering Consultants
 12a - 16a Milton Street, Basingstoke, SO21 8AX
 Tel: 01757 312244 Fax: 01757 315434
 Web: www.wormaldburrows.com
 Email: engineer@wormaldburrows.com

Project:
 Land to South of Hill Dyke Road, Wheathampstead

Drawing Description:
 Topographical Survey

Client: Taylor Wimpey Taylor Wimpey UK Ltd Strategic Land Stratfield House Station Road Hook Hampshire RG27 9PQ	Drawing Number: E3090/25
Scale: 1:500 @ A0	

Drawn By: M.J.L. Date: 15.04.13	Checked By: T.J.W. Date: 22.04.13
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APPENDIX C



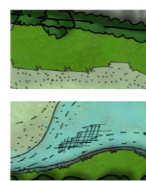
Legend



Proposed housing 3.00 ha (Approx 100 units at 35 dph)

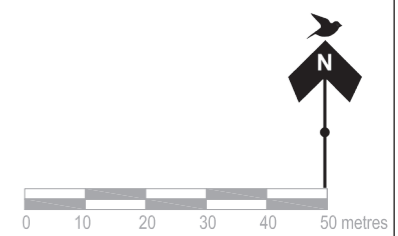
Existing vegetation

Proposed vegetation



Existing boundary vegetation strengthened with new native planting

Swale and balancing pond



APPENDIX D

14 MAR 2013

108545

Network Enquiry No : 180000527
Your Reference : E3090/ml/National Gr

nationalgrid

Brick Kiln Street
Hinckley
LE10 0NA.

National Gas Emergency Service - 0800 111 999* (24hrs)
*calls will be recorded and may be monitored

Michael Lowiss
Wormald Burrows Partnership Ltd
12A-18A
HITCHIN STREET
BIGGLESWADE
SG18 8AX

Date : 13th March 2013
Contact : Bethany Dunster
Direct Tel : 0845 3666758
Direct Fax : 0845 0700868
Email : networkdesign@nationalgrid.com

www.nationalgrid.com

Dear Michael,

Re: Land Enquiry for Proposed Development Site at NEW SUPPLY, LAND SOUTH OF, HILLDYKE ROAD, WHEATHAMPSTEAD, AL4 1ZZ.

Thank you for your enquiry which we received on 7th March 2013. I enclose details of National Grid Gas plant in the vicinity of your proposed supply.

The nearest main with sufficient capacity is 10 metres from the site boundary and it is a Low Pressure main.

Plans attached: Yes

A copy of the National Grid Connections Charging Statement referenced in this letter can be found on National Grid's website:

<http://www.nationalgrid.com/uk/Gas/Charges/statements/connection/publications/>

If you require a printed version please contact us on the details provided above.

I trust this meets with your requirements at this stage. If you have any queries please do not hesitate to contact Bethany Dunster on the above number.

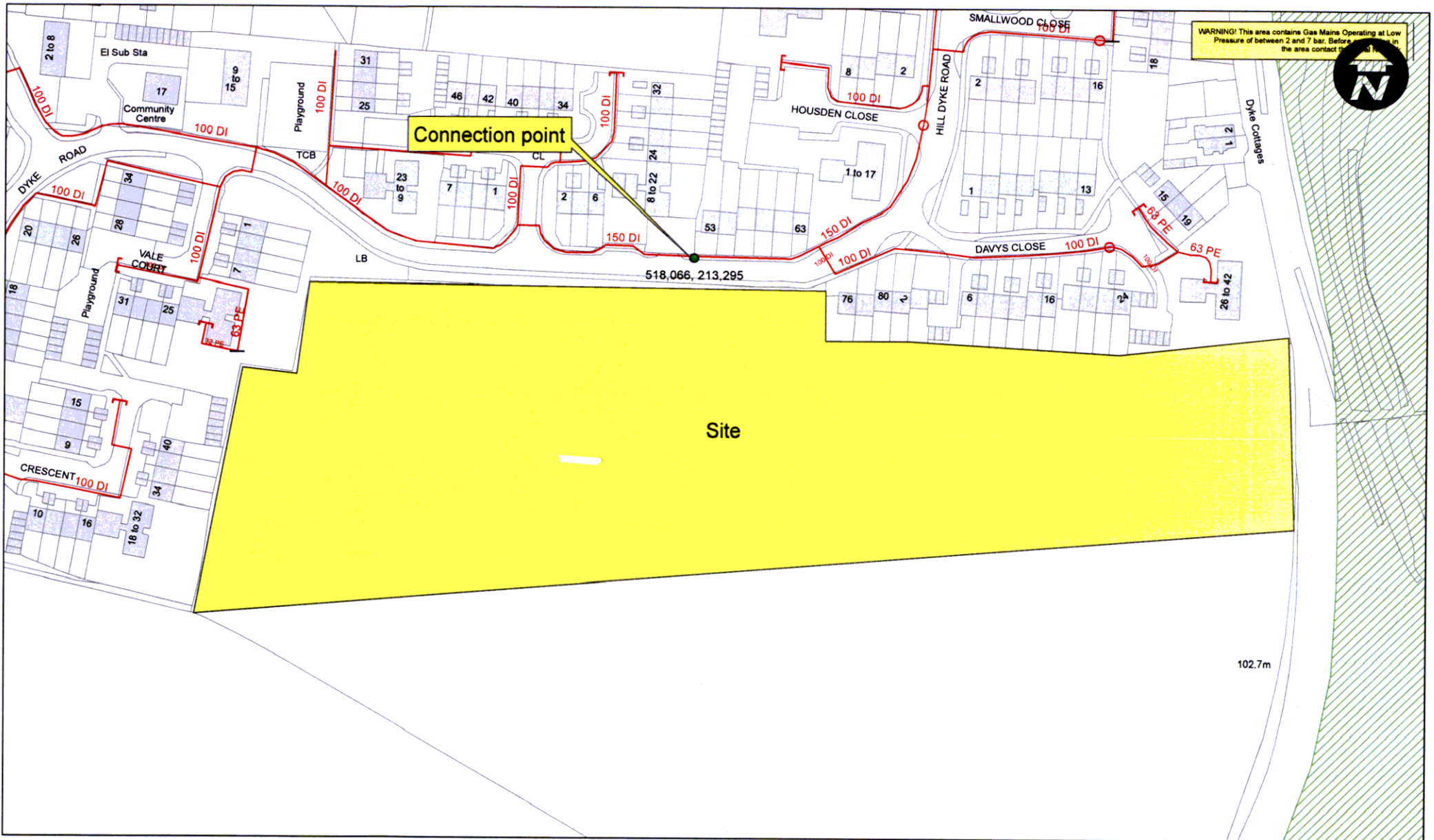
Yours sincerely,

Claire Davies
Design Specialist



National Grid Gas plc
Registered No.2006000
Registered Address 1-3 Strand, London, WC2N 5EH

Letter Id: CRM013
Page 1 of 1



SCALE: 1:1,250 @ A3
 USER ID: bethany.dunster
 DATE: 12-Mar-2013 12:55:03
 INTERNAL USE ONLY
 MAP REF: 518072, 213236
 CENTRE:

L/P GAS MAIN
 M/P GAS MAIN
 I/P GAS MAIN
 H/P GAS MAIN
 N/H/P GAS MAIN
 PROPOSED PIPE - LP
 PROPOSED PIPE - MP
 PROPOSED PIPE - IP
 ABANDON - LP
 ABANDON - MP



SCHEME: <NG GDFO Scheme Name>
 DESIGN: <NG GDFO Design Number>
 REVISION: <NG GDFO Revision>

This plan shows those pipes owned by National Grid in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid 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 any 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.

180000527

nationalgrid

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APPENDIX E

Wormald Burrows Partnership
12a-18a Hitchin Street
Biggleswade
Hertfordshire
SG18 8AX

WORMALD BURROWS PARTNERSHIP
RECEIVED

22 MAR 2013

JOB NO: 3090

20th March 2013
Our Ref: 401281293/QID166980

Dear Mr Lowiss,

Site Address: 200 Gas Heated Houses, South of Hill Dyke Rd Wheathampstead AL4

Thank you for your recent enquiry regarding the above premises. I am writing to you on behalf of Eastern Power Networks PLC the licensed distributor of electricity for the above address trading as UK Power Networks.

I am pleased to be able to provide you with a budget estimate for the work. It is important to note that this budget estimate is intended as a guide only. It may have been prepared without carrying out a site visit or system studies. No enquiry has been made as to the availability of consents or the existence of any ground conditions that may affect the works. It is not an offer to provide the connection and nor does it reserve any capacity on UK Power Networks' electricity distribution system.

1. Budget estimate

The budget estimate for this work is:
£150,000.00 (exclusive of VAT) if the Point Of Connection (POC) is to our High Voltage network along Dyke Lane, A new substation will need to be established on site in order to supply the development which will consist of 200 gas heated houses.

2. Budget estimate assumptions

This budget estimate is based on the following assumptions:

- The most appropriate Point of Connection (POC) is as described above.
- A viable cable or overhead line route exists along the route we have assumed between the Point of Connection (POC) and your site.
- In cases where the Point of Connection (POC) is to be at High Voltage, that a substation can be located on your premises at or close to the position we have assumed.
- Where electric lines are to be installed in private land UK Power Networks will require an easement in perpetuity for its electric lines and in the case of electrical plant the freehold interest in the substation site, on UK Power Networks terms, without charge and before any work commences.
- You will carry out, at no charge to UK Power Networks, all the civil works within the site boundary, including substation bases, substation buildings where applicable and the excavation/reinstatement of cable trenches.

- Unless stated in your application, all loads are assumed to be of a resistive nature. Should you intend to install equipment that may cause disturbances on UK Power Networks' electricity distribution system (e.g. motors; welders; etc.) this may affect the estimate considerably.
- All UK Power Networks' work is to be carried out as a continuous programme of work that can be completed substantially within 12 months from the acceptance of the formal offer.

Please note that if any of the assumptions prove to be incorrect, this may have a significant impact on the price in any subsequent quotation. You should note also that UK Power Networks' formal connection offer may vary considerably from the budget estimate. If you place reliance upon the budget estimate for budgeting or other planning purposes, you do so at your own risk.

If you would like to proceed to a formal offer of connection then you should apply for a quotation, Please refer to our website http://www.ukpowernetworks.co.uk/internet/en/help-and-advice/documents/the_connection_process.pdf for '**The connection process**' which details our application process. To help us progress any future enquiry as quickly as possible please quote the UK Power Networks Reference Number from this letter on all correspondence.

If you have any questions about your budget estimate or need more information, please do not hesitate to contact me. The best time to call is between the hours of 9am and 4pm, Monday to Friday. If the person you need to speak to is unavailable or engaged on another call when you ring, you may like to leave a message or call back later.

Yours sincerely

Andy Dobinson
Project Designer
Tel: 01279 824671
Email: andy.dobinson@ukpowernetworks.co.uk



Wormald Burrows Partnership Limited
Civil Engineering Consultants

**LAND SOUTH OF HILL DYKE ROAD
WHEATHAMPSTEAD
TRANSPORT ASSESSMENT**

November 2014

E3090-hdr-mjl-tareport-0413-rev0



12a – 18a Hitchin Street Biggleswade, SG18 8AX

Web: <http://www.wormburp.com>

Tel: () 317 244 Fax: () 325 434

Email: