Planning Application Submission – February 2014

Utilities Assessment

Consultant: DBK LLP

Latchmere House – Scheme 2

Berkeley Homes (Central London) Ltd

Berkeley
Designed for life

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Contribution to Developer

- **BT**
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Estimated Programming Requirements

- **6-10 weeks for formal quotations**
- **8-12 weeks lead from formal acceptance**
- **2-3 weeks to lay services**
- **2-4 weeks for metering**
- **8 weeks for works in the public highway**
- **6-8 weeks for completion of water off site works**

Development Utility Risks

- **Other local developments taking up the available network capacities**

SECTION 2 Introduction and Purpose

Berkeley Homes requested that DBK provide a Utility Strategy & Site Appraisal Report for the proposed development at Former Latchmere Prison, Ham**.**

The development comprises of:

- 55 no. houses
- 34 no. flats

We have for the purposes of this report included for the impact and cost of any Utility diversionary works necessary, as a **worse case** scenario basis. Any actual Utility diversionary works required here will be subject to the assessment of the detailed design for the civils works required at this location.

The purpose of the report is to identify the following:

1. *Existing Mains and Services which require diverting, disconnecting or abandonment.*
2. *The anticipated available capacity of the local networks to serve the new development.*
3. *Provide programme durations for the new utility infrastructure.*
4. *Provide recommendation on the optimum solution to proceed.*

This report includes the Electrical, Potable Water, Gas, and Telecommunications services.

For your information Utility companies were provided with the following documents included in Appendix F:-

- High level Masterplan
- High level accommodation schedule (On Masterplan dwg)

SECTION 3 Existing Utility Infrastructure

Utility ordnance record plans have been requested and received for Electricity, Gas, Water, Drainage and Telecommunications infrastructure located within the immediate vicinity of the *Target Development Zone* – (TDZ)

Section 3 details the likely work in respect of disconnections, apparatus to be abandoned or maintained and diversionary works to utility infrastructure.

From our investigations, our understanding of the local networks is as follows:

Electricity – UK Power Networks (UKPN)

UKPN is the licensed Distribution Network Operator (DNO) for the area.

The existing utility plans have identified a substation within the TDZ located on the western boundary by 26 Latchmere Close & 8 Anne Boleyns Walk. The substation is known as *Latchmere House*, Holding Asset Ref no. *121370*. This is a Network Substation and serves both the former prison and other UKPN customers in the immediate vicinity.

UKPN have confirmed that the size of this substation is 1MVA. The desktop information indicates there is sufficient capacity to support the proposed development. However, a site visit by UKPN would be needed in order to formally clarify loading capabilities. This would only take place upon requesting a formal quotation. (Please refer to Appendix E for their response).

The Masteplan of the proposed development indicates that it may be possible for the substation to remain in situ. However, further investigations would be required to ascertain how the feeder cables necessary to feed the site would pass the corner plot.

There are a number of Low-Voltage (LV) underground cables that extend from the substation named above to serve the existing buildings on the west and south of the site. The other half of the site is then supplied by 2no. mains that tee'd off Church Road. We would like to bring to your attention that one of the mains crosses the site to serve 7-14 Latchmere Close which is affected by the proposed development and will ultimately require diverting.

Gas – National Grid (NG)

NG is the Incumbent Gas Transporter (IGT) for the area. The utility plans indicate the following mains within the TDZ area;

- A 90 PE main runs on the footpath of Garth Road to serve the buildings currently located on the south of Latchmere House Prison.
- A 125 PE main that extends from the 180PE main running on the carriageway of Church Road crosses the site to serve the buildings currently located on the north and west of Latchmere House Prison. This main then Tee'd off to serve the properties located on Latchmere Close.

Please note that the existing services vary in size from 2"/63mm to 90mm.

Water –Thames Water (TW)

Thames Water is the licensed Water Undertaker for the area.

The ordnance plans provided by Thames Water indicate a 3'' fire supply located to the north east entering the site via Church Road. Thames Water has confirmed that there are 2no. metered customer supplies that serve the site. They are as follows;

1. 1no. ½" supply located to the South West of the site.
2. 1no. ½" supply located to the North East of the site

The presence of the above supplies is supported by the H.M.R.C Underground Water Services Plan provided by Berkeley Homes.

Drainage plans are included in the Thames Water Asset Location Search document found in Appendix A for your information only.

Telecommunications

BT Openreach

The existing utility plan shows copper and fibre networks running both underground and overground within the TDZ.

It would be necessary to instruct BT Openreach to recover the redundant apparatus.
It will also be necessary to divert the underground plant that crosses the site entering on the northern boundary via Church Road to serve the properties located on Latchmere Close. A detailed survey is required to confirm the anticipated alterations.

Others (Not Affected)

All other communications companies / Statutory Undertakers we have approached have confirmed not affected responses, stating they do not have plant within the vicinity of the site. Copies of these responses are included within the appendices of this report, included in Appendix B.

- Energetics UK
- Envoy
- ES Pipelines
- GTC
- Fulcrum
- Virgin Media
- Atkins inc. Cable & Wireless
- BskyB Telecommunication Services
- Instalcom
- Fibrespan
- Maygurney
- Gamma Telecom
- Kcom Group
- Level 3 Communications
- McNicholas inc. Colt, Tata, KPN

- Redstone Communications Ltd
- Arqiva
- Verizon
- Vtesse Networks
- Telisonera/ Telent
- Sitefinder
- LinesearchbeforeUdig
- AboveNet Communications
- EU Networks
- Plancast
- Cityfibre Holdings
- Traffic Master
- Environment Agency
- Network Rail
- Thames Water Ring
- London Streets

Linesearch

Linesearch have confirmed that the following is 'Not in the Zone of Interest'

- BOC Limited (A Member of the Linde Group)
- BP Midstream Pipelines
- BPA
- Centrica Energy
- ConocoPhillips UK Ltd
- Coryton Energy Co Ltd (Gas Pipeline)
- E-on UK Plc (Gas Pipelines Only)
- Electricity North West Limited
- ESSAR
- Esso Petroleum Company Limited
- FibreSpeed Limited
- Geo Networks Limited
- Government Pipelines & Storage System
- Humbly Grove Energy
- HV Cables
- IGas Energy
- INEOS Manufacturing (Scotland and TSEP)
- Ineos Enterprises Limited
- Mainline Pipelines Limited
- Manchester Jetline Limited
- Marchwood Power Ltd (Gas Pipeline)
- NPower CHP Pipelines
- National Grid Gas and Electricity Transmission
- Oikos Storage Limited
- Perenco UK Limited (Purbeck Southampton Pipeline)
- Phillips 66
- Premier Transmission Ltd (SNIP)

- RWEnpower (Little Barford and South Haven)
- SABIC UK Petrochemicals
- Scottish Power Generation
- Sea Fibre Networks
- Seabank Power Ltd
- Shell Pipelines
- Total UK (Finaline, Colnbrook & Colwick Pipelines)
- Transmission Capital
- Wingas Storage UK Ltd
- Western Power Distribution

Diversionary / Disconnection Works – Budget Costs and Programme

Description	***Provide Quotation***	***Lead in***	***Works Duration***
UK Power Networks – LV only	6 weeks	8 weeks	2 weeks
UK Power Networks – LV and substation	6 weeks	13 weeks	13 weeks
Only one of the above tabled UKPN costs is to be accepted. (Not both)			
National Grid	8 weeks	16-20 weeks	2-4 weeks
Thames Water	8 weeks *(To arrange free disconnection)*	16-20 weeks	2-4 weeks
BT Openreach Recovery	6 weeks	8 weeks	3 days
BT Openreach Alterations	TBC	TBC	TBC

This excludes the meter removal costs which can be confirmed with the incumbent supplier.

It is advisable to confirm matters at the detailed design.

SECTION 4 **New Utility Infrastructure**

Electricity – UK Power Networks

Point Of Connection (POC) is at their local substation within your premises. (This is based on all dwellings being gas heated).

Requirement to lay new main cables onto site and to provide new services into each new service position.

The Masteplan of the proposed development indicates that it may be possible for the existing substation to remain in situ. However, further investigations would be required to ascertain how the feeder cables necessary to feed the site would pass the corner plot adjacent to the substation.

Gas – National Grid

National Grid is the incumbent Gas Distribution Network, whilst offering an engineering proposal. It is not the most commercially attractive offer – they will not include their future revenue streams from transportation within their offer. Their costs will be a full construction cost only. In contrast competing Gas Distribution Networks will use future revenue streams, typically over a 25 year period to discount and subsidise the installation and construction costs (see Dual Fuel).

National Grid has confirmed that their nearest main is 1 meter from the site boundary and it is a Low Pressure main. This main has **insufficient** capacity and will require **reinforcement** to serve the proposed development. For the National Grid land enquiry please refer to the Appendix E. We are investigating this further however it is anticipated that any reinforcement would be at the expense of National Grid because they will upgrade their network at no charge. Please expect the next update in the next 5 working days.

For your information National Grid is obliged to carry out an Economic Test in order to derive if any contribution is required. Should the transportation revenue to be generated over a period of time cover the reinforcement cost then the work is carried out at no cost to you. However if there is a shortfall then they would expect you to make a contribution.

Dual Fuel (Gas & Electric Independent Connection Provider)

Competition In Connections - Independent Distribution Network Operators (IDNO's) & Independent Connection Providers (ICP's)

In the open market place a number of IDNO's are competing for 'embedded' networks for new development sites. IDNO asset owners such as BG, GTC and Morland Utilities take a more commercial view to new customers, than the incumbent DNO operators. IDNO's take into account future revenue streams they will receive and use this revenue to discount and subsidise the construction costs of new networks.

In order to proceed with procuring formal offers we will require the following documents;

Information Required:

1. Proposed Site Layout Drawing, (incorporating Ground Floor Layouts) in AutoCAD DWG. format.
2. Proposed Drainage Layout in AutoCAD DWG. format.
3. Proposed Landscape Layout in AutoCAD DWG. format.
4. Confirmation of any renewable technologies being utilised/considered on the site, i.e. Solar Thermal, PV etc.
5. Confirmation on whether the residential units will be heated using gas or electricity – We are working on the basis gas will be used throughout.
6. Copy of an up to date Accommodation Schedule.
7. Copy of an up to date Construction Programme.

The appointment of an ICP to undertake the construction works, will provide the Client with additional security of costs (total transparency) and programme – as the ICP can be engaged in LAD's for failure to deliver power on the requested date under traditional contract conditions.

Water – Thames Water

Thames Water would apply 2no. infrastructure credits therefore you will only be chargeable for 66 no. Infrastructure Charges instead of 68no.

It is proposed to use the 1½" supply located to the North East of the site as the Point of Connection for the proposed development. At this stage it is unknown whether specific reinforcement is anticipated and clarity can only be obtained once a formal quotation is submitted.

A seven day pressure trend Investigation should be undertaken if pressure-sensitive fittings, such as combination boilers, are to be installed.
This means that a pressure logging device is fitted to a nearby hydrant for seven days and records pressure levels every 15 minutes. Thames Water then use this to confirm whether there is sufficient pressure for the internal plumbing at the development boundary.

In view of the scale of the development it is not deemed appropriate to consider the outsourcing of the water and sewerage network to a 3rd party owner/operator, via an Inset appointment from Ofwat.

Telecommunications

BT Openreach

Openreach will provide free issue ducts and materials for the clients' contractor to install.

BT will undertake all necessary works in the public highway and reinforcement works outside of the site boundary and in the public highway at their cost. Any off site works greater than this figure, will presented to the developer for full payment. It is not possible to assess the local BT network capacity at this stage.

Following formal design application to their 'newSites' department and acceptance of their proposals, it is only then that they will confirm the extent of any off site works.

Virgin Media

Virgin Media do not have infrastructure within the vicinity of the site.

Programme for New Supply Infrastructure

The table below identifies the off site works programme associated with each service.

Description	*Electricity*	*Water*	*Gas*
Provide Quotation	8 weeks	6 weeks	6 weeks
Accept Quotation	2 weeks	2 weeks	2 weeks
Initiate Works	Within 12 months	Within 6 months	Within 12 months
Lead-in Period	12 weeks	12 weeks	8 weeks
Undertake Works*	6 weeks	6 weeks	6 weeks
Total	**40 weeks**	**38 weeks**	**23 weeks**

Notes:
*. This assumes all mains will be constructed in 1no mobilisation, additional costs will be incurred for phased utility works.
1. The above timescales are based upon the maximum time permissible as agreed with the regulator, OFGEM and OFWAT.
2. The initiate works period is the maximum duration between client payment of the quotation and when the works can be undertaken. If longer re-quoting with additional cost time delays will be incurred, this has been excluded in the Total columns.

Metering

We would like to make you aware that we can assist with setting up domestic metering national agreements. The fee is dependent on the number of connections being made per year with higher connection numbers attracting higher rebates.

We are also pleased to assist with the negotiation of commercial supply contracts for which a separate fee is applicable.

Risks

1. Other developments in the vicinity may have made applications for supplies that may take up the current available spare capacity.

2. Protracted legal work to conclude the electricity connection agreement and easements required for the appointed provider.

3. No available cost certainty at this stage, until formal applications are procured and accepted.

Recommendations

1. In order to gain confirmation of available capacities, it is advised that formal applications for all utilities (incumbent and those in the open marketplace) are made as soon as possible, in order to confirm any spare capacity and to allow the Client to secure this capacity at the earliest opportunity.

2. At the minimum a formal Point of Connection from UK Power Networks should be procured and paid to secure the capacity and minimise the risk of reinforcement.

Procurement Options

DBK would advise that the following options should be fully investigated and competitively bid to the open provider and asset owner marketplace

Competition should be introduced in order to:

1. Realise the most effective cost solution
2. Obtain a more preferable and suitable programme
3. Gain improved contract conditions with surety
4. Mitigate the risk by procuring the majority of the works under traditional contract conditions

Option 1 – Incumbent Distribution Network Operator (DNO) – this is the provision of a statutory quotation from the incumbent network owner and operator i.e. for a project in London EDF Energy, National Grid Gas and Thames Water.

Key issues:

- No legal obligation to meet programme dates
- Difficult to interrogate charges levied
- Track record of poor performance
- Standard Connection Agreements with little in favour of client

Option 2 – Independent Connection Providers (ICP) - A Point of Connection to the existing network is provided by the incumbent DNO. The ICP will design and install the extension to the existing network, and this will be adopted by the DNO upon completion. The DNO will be responsible for the ongoing operation and maintenance of the new network.

Benefits:

- Reduced costs, with total transparency
- More suitable programme
- More traditional Contract Conditions with Surety provided

Key issues:

- The design and installation of the works will need to be approved by the incumbent DNO prior to adoption and energisation
- The non-contestable works will still need to be completed by the incumbent DNO.

Option 3 – Independent Distribution Network Operators (IDNO) – This option is where an IDNO designs, constructs and operates and maintains their own network. Again, a POC will need to be obtained from the incumbent DNO.

Benefits:

- Reduced costs, with total transparency
- More suitable programme
- More traditional Contract Conditions with Surety provided
- IDNO will make a contribution to the capital costs
- IDNO can offer flexible financial business models
- IDNO will calculate more accurate loads resulting in optimum scheme and costs

Key issues:

- The non-contestable works will still need to be completed by the incumbent DNO

Option 4 - Independent Connection Providers (ICP) & Independent Distribution Network Operator (IDNO) – This is the same principle as option 3, but the network will be constructed by an ICP and adopted by the IDNO as option 2. This provides the benefits of option 3, but competition can be introduced for the installation works. The new networks can be competitively bid and sold to IDNO's to ensure the maximum financial contribution.

Benefits:

- Reduced costs, with total transparency
- More suitable programme
- More traditional Contract Conditions with surety provided
- IDNO will make a contribution to the capital costs
- IDNO can offer flexible financial business models
- IDNO will calculate more accurate loads resulting in optimum scheme and costs

Key issues:

- The design and installation of the works will need to be approved by the IDNO prior to adoption and energisation
- The non-contestable works will still need to be completed by the incumbent DNO

APPENDIX A Utility Ordnance Plans and Affected Responses

APPENDIX B Utility Not Affected Responses

APPENDIX C **Utility Company Budgetary Costs for Disconnections / Diversions**

APPENDIX D Utility Budgetary Cost Information

APPENDIX E **National Grid Capacity Response**
UK Power Networks Capacity Response

APPENDIX F Drawings/Information Provided to Utility Companies

APPENDIX G **Church Road- weight restrictions- Responses from Utility Companies**

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