

**Land at Sandford Park,
Newbury**

Service Supply Statement

Bloor Homes Ltd & Sandford Farm Partnership

Document Control Sheet

Document Title: Service Supply Statement
Document Ref: 10309 SS 05 Rv0
Project Name: Land at Sandlesford Park, Newbury
Project Number: 10309
Client: Bloor Homes Ltd & Sandlesford Farm Partnership

Document Status

Rev	Issue Status	Prepared / Date	Checked / Date	Approved / Date
0	DRAFT	AM 21.11.18	AA 19.12.18	LW 20.12.18

Issue Record

Name / Date & Revision	20.12.18				
Bloor Homes Ltd & Sandlesford Farm Partnership	0				

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Existing Utilities Plan

10309-SU-02 B

Executive Summary

The proposed development lies to the south of Newbury. The north of the Site is bounded by Monks Lane, with residential developments beyond Monks Lane and the east of the Site is bounded by Newtown Road (A339). The south-west of the Site is bounded by open fields and the south-east is bounded by the River Enborne. The west is bounded by Kendrick Road and residential dwellings.

A 6" potable water main (as shown on **Thames Water (TW)** plans) is shown to cross the proposed development, along the south off Warren Road.

Along Monks Lane to the north of the proposed development, **SGN** operate Medium Pressure (MP) and Low Pressure (LP) gas mains, **SSE** operate High Voltage (HV) and Low Voltage (LV) electricity cables, **TW** operate a 250mm, 335mm and 6" potable water mains. In addition, **BT Openreach**, **Virgin Media** and **Vodafone** all operate assets which are shown along Monks Lane. Along Andover Road to the west of the Site, SGN operate LP gas mains, SSE operate LV electricity cables and TW operate 4"/6" potable water mains, surface water mains and foul water mains. In addition, BT Openreach and Virgin Media operate assets along Andover Road. Along Newtown Road to the east of the Site, SGN operate LP and MP gas mains, TW operate 4"/6" potable water mains and 225mm foul water main. In addition, BT Openreach, Virgin Media and Vodafone operate assets along Newtown Road.

Each incumbent company, along with the multi-utility company GTC, have been consulted in regards to supplying the proposed development. A summary of their indicative costings is provided in Table 1a.

This statement demonstrates that the Proposed Development has the potential to be supplied with normal network service supplies. Some localised, non-prohibitive reinforcements may be necessary together with protections or diversions where existing plant is affected by the proposals. This will be confirmed once all enquiries have been completed by each respective utility company

Utility Company	Service	Budget Estimate
Thames Water *	Potable Water	<p>Confirmed that they will require additional network modelling. It was confirmed that the development is located within Thames Water's Wash Common Tower Zone/ The modelling would require all mains detailed model of this zone was build and calibrated in 2010 and therefore verification/update of the model configuration and re-assessment of the current and future demands is required. Also the aim of the study would need to assess the impact of the development on the supply system and zone. The impact of the new development in relation to the overall Supply/Demand balance and reservoir capacity review is also required as part of this study.</p> <p>Ofwat has recently instigated significant changes into the charging regimes of the water companies. Whereas prior to April 2018, the water companies would charge developers for any reinforcement works to the existing network directly attributable to the new demand, under the new charging rules the developer has to only fund infrastructure works to the nearest practicable point of connection (defined as network of an equal or greater size to the infrastructure supplying the site). As such, any reinforcement works are covered by the Infrastructure Charge, payable per plot for all new connections.</p>
Thames Water *	Foul Sewerage	<p>Undertaken a Sewer Impact Study which confirmed that the foul network does not have available capacity in the network downstream of the proposed connection manhole (north-east of the Site off the Newtown Road roundabout) to accept the proposed development flows. Improvement works will be required and include for:</p> <ul style="list-style-type: none"> • Connect development flows to manhole SU47653301 at a pumped rate of 44.1l/s. • Offline Storage at London Road SPS • Local sewer upsize outside of the development at Newtown Road. • Local sewer upsize at Newbury Train Station at Station Road <p>Due to the size of the proposed development Thames Water has confirmed that they will require 2 permanent depth loggers to be installed to monitor the flows at the downstream point of the development site and also at the proposed connection point.</p> <p>Ofwat changes are also applicable to foul water companies.</p>
SSE *	Electricity	<p>Budget estimate for the proposed development of between £2,200,000 and £2,500,000 to supply the proposed development. SSE has assumed that the proposed development can be connected into the local 11kV network and that there may be no need for reinforcement works.</p>
SGN *	Gas	<p>SGN has provided a budget estimate of £1,322,000.00 to supply the proposed development. The estimate included for the installation of appropriately sized gas infrastructure to suitable locations.</p>
GTC (Multi Utility) **	Electricity, Gas	<p>Provided a budget estimate to supply the proposed development with electricity and gas at £793,303.20, with onsite costs of £376, 469.23 and offsite costs of £420,833.97</p> <p>GTC has confirmed two HV Points of Connection from St John's Primary and Rupert Road, with 4 substations being required.</p> <p>GTC have been offered a Medium Pressure Point of Connection along Monks Lane.</p>

Table 1a: Summary of Supply Budget Estimates from 2016

*based on larger 2000 dwelling quantum

**based on 1,100 dwelling quantum

1 Introduction

- 1.1 Brookbanks Consulting Limited is appointed by Bloor Homes Ltd and Sandford Farm Properties to complete a Service Supply Statement for a proposed residential and mixed-use development on land at Sandford Park in Newbury, West Berkshire.
- 1.2 The objective of the study is to demonstrate that the development proposals may adequately be provided with service supplies and to identify the outline requirement for any necessary reinforcements to existing networks.
- 1.3 This report presents the findings of the study and specifically addresses the following issues:
- Existing network apparatus
 - Supply requirements for the Proposed Development
 - Consultations with the incumbent supply network operators
 - Development of outline proposals to supply the Proposed Development.
- 1.4 At the time of consultation with the incumbent utility companies in 2016, the maximum quantum was set at 2,000 residential dwellings, two 2 Form Entry Primary Schools, Local Centre (2,150m²), D1 Community Facility and an 80 Bed Care Home. Evolution of the masterplan has derived that a lower quantum, as detailed in the Development Criteria section, is viable. The following report outlines the capacity requirements for the larger 2016 requirements; although it has been judged that the decrease in quantum would remain deliverable and robust in line with the supply data received.
- 1.5 However, consultation with the multi-utility company GTC assessed 1,100 residential dwellings, two 2 Form Entry Primary Schools, Local Centre (2,150m²), D1 Community Facility and an 80 Bed Care Home. As with the consultation with the incumbent utility companies, it has been judged that the decrease in quantum would remain deliverable and robust in line with the supply data received.
- 1.6 Supply consultation with the utility companies was undertaken in 2016. Therefore all costs referred to within this Service Supply Statement reflect those provided in 2016 and the existing asset location plans for the proposed development reflect those obtained in 2014.

2 Background Information

Location & Details

- 2.1 The proposed development lies to the south of Newbury. The north of the Site is bounded by Monks Lane, with residential developments beyond Monks Lane and the east of the Site is bounded by Newtown Road (A339). The south-west of the Site is bounded by open fields and the south-east is bounded by the River Enborne. The west is bounded by Kendrick Road and residential dwellings.
- 2.2 The land is currently undeveloped and is not thought to have been historically subject to any significant built development. The proposed development area location is shown on Figure 2a:

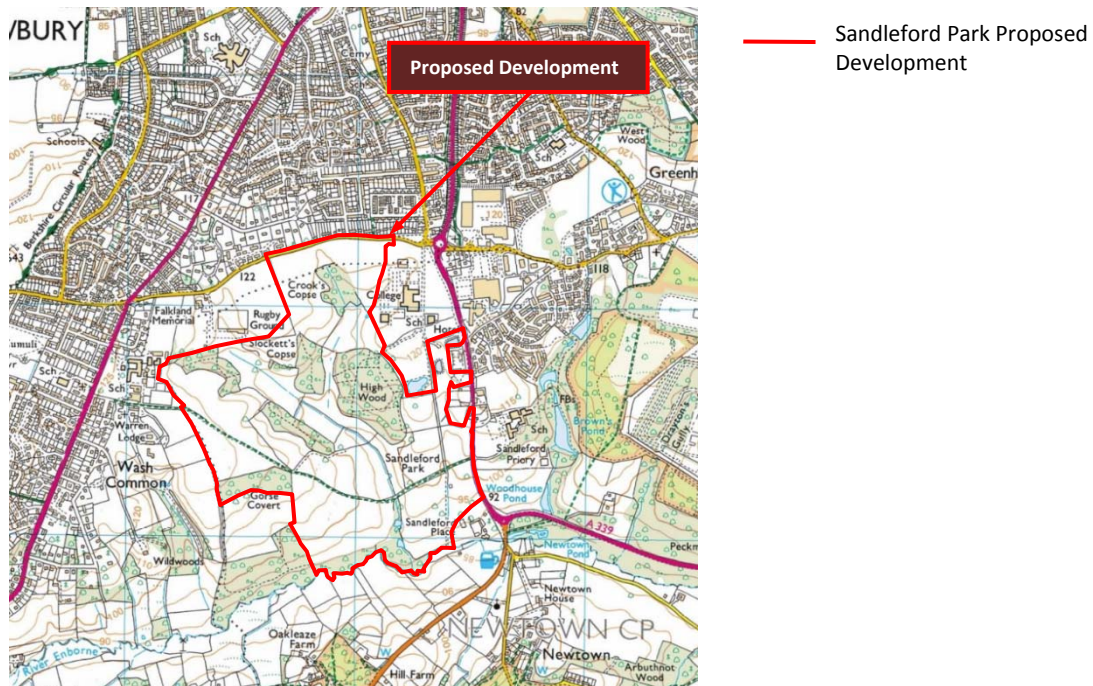


Figure 2a: Site Location

Development Criteria

2.3 Sandford Park is a Strategic Site Allocation in Policy CS3 of West Berkshire Core Strategy (2006-2026) identified for a sustainable and high quality mixed use development for up to 2,000 dwellings with associated infrastructure. The site has been allocated to contribute towards meeting West Berkshire's future housing requirements. The development will also provide education, community uses, public open space and new highways infrastructure. The development proposals have been conceived in the context of this Policy.

2.4 In this instance, the planning application therefore seeks outline permission with all matters reserved (except for access) for the following development, which forms the majority of the allocation:

'Outline planning permission for up to 1,000 new homes; an extra care facility as part of the C3 provision; a new 2 form entry primary school (D1); a local centre to comprise flexible commercial floorspace (A1-A5 up to 2,150 sq m, B1a up to 200 sq m) and D1 use (up to 500m); the formation of new means of access onto Monks Lane; new open space including the laying out of a new country park; drainage infrastructure; walking and cycling infrastructure and other associated infrastructure works.'

Supply Loading

2.5 The following loading assumptions (as detailed in Table 2b), have been made to determine the Supply loadings to provide to the incumbent potable water, foul water, electricity and gas suppliers.

Development Type	Potable Water Assumptions	Foul Water Assumptions	Electricity Assumptions	Peak Gas Assumptions	Annual Gas Assumptions
Up to 2,000 Residential Dwellings / Up to 1,100 Residential Dwellings	Daily Water Demand of 125l/person/day over an 18 hour day Peaking Factor 3	Using Sewers for Adoption	2KW/Dwelling	23kW/Dwelling	17,000kW/Dwelling
Two, 2 Form Entry Primary Schools	Daily Water Demand of 15l/person/day over an 8 hour day for each school. Peaking Factor 3	Using Sewers for Adoption (each)	50W/m ² (each)	87W/m ² (each)	150kW/m ² (each)
Local Centre: (2,150m²) A3 Restaurants (710m ²) - A1 Shops (1440m ²)	Daily Water Demand for A3 of 7l/person/day over a 10 hour day Daily Water Demand for A1 of 45l/person/day over a 12 hour day Peaking Factor 3	Using Sewers for Adoption	225W/m ² for A3 160W/m ² for A1	250Whr/m ² for A3 100Whr/m ² for A1	370kWh/ m ² for A3 105kWh/ m ² for A1
B1 Business (200m²)	Daily Water Demand for B1 of 45l/person/day over an 8 hour day Peaking Factor 3	Using Sewers for Adoption	87W/m ²	70W/m ²	120kW/m ²
D1 Community Facility	Daily Water Demand of 15l/person/day over a 8 hour day Peaking Factor 3	Using Sewers for Adoption	50W/m ²	87W/m ²	150kW/m ²
80 Bed Care Home	Daily Water Demand of 350l/person/day over an 24 hour day Peaking Factor 3	Using Sewers for Adoption	65W/m ²	60W/m ²	420kW/m ²

Table 2b: Supply Loading Assumptions

- 2.6 Following the assumptions made above, Table 2c below outlines the supply loadings which have been provided to each incumbent utility company (Thames Water, SSE and SGN) in order for them to confirm whether they have capacity in their existing network to supply the proposed development.

Development Type (Area)	Peak Potable Water Demand (l/s)	Peak Foul Water Demand (l/s)	Electricity Demand (kVA)	Peak Gas Demand (kWh)	Annual Gas Demand (kWh)
Up to 2,000 Residential Dwellings	26.62		4,000	46,000	34,000,000
/	/	Total Provided	/	/	/
Up to 1,100 Residential Dwellings	14.64		2,200	25,300	18,700,000
Two, 2 Form Entry Primary Schools	1.73 (Total)	Total Provided	227 (Total)	395 (Total)	681,000 (Total)
Local Centre: (2,150m²)	1.50	Total Provided	390	321	413,900
B1 Business (200m²)	0.08	Total Provided	17	14	24,000
D1 Community Facility	0.04	Total Provided	25	44	75,000
80 Bed Care Home	0.98	Total Provided	189	174	1,218,000
Total	30.95 / 18.97	93.19	4,848 / 3,048	46,948 / 26,248	36,411,900 / 21,111,900

Table 2c: Supply Loadings

Sources of Information

2.7 The following bodies have been consulted whilst completing this study:

- Thames Water - Potable Water
- Thames Water - Foul Water Sewerage
- SSE - Electricity
- SGN - Gas
- BT Openreach - Telecommunications
- Sam Knows Website - Broadband Availability
- Multi Utility Company – GTC - Electricity and Gas

3 Water Supply

Existing Conditions

- 3.1 **Thames Water (TW)** has been consulted regarding the location and capacity of their existing network within the vicinity of the Site. Existing details of their water supply network has been provided and transferred to a composite existing services plan, which is contained in the Appendix.
- 3.2 TW operates an existing distribution networks to the north of the Site along Monks Lane (355mm HPPE, 250mm POL and 6”), to the west of the Site along Andover Road (4” and 6”) and to the east of the Site along Newton Road (4” and 6”).

3.3 In addition, a 6" potable water main is shown along Warren Road to the west of the Site off Andover Road which continues crossing the south of the Site from west to east.

3.4 Additional assets are shown to the north, west and east of the Site along individual roads supplying the adjacent developments.

Supply Loading

3.5 To assist Thames Water in their capacity assessment of their existing network, a total Peak Clean Water Demand of 30.95l/s was provided. Further details of the supply loadings and assumptions are outlined in Tables 2b and 2c.

Network Requirements

3.6 Following a pre-development enquiry into the capacity of the existing water mains within the vicinity of the Site, TW confirmed from their consultations in 2016 that they will require additional network modelling.

3.7 TW confirmed that the development is located within Thames Water's Wash Common Tower zone.

3.8 At the time of consultation in 2016, TW confirmed that an all mains detailed model of this zone was build and calibrated in 2010 and therefore verification/update of the model configuration and re-assessment of the current and future demands is required. Also the aim of the study would need to assess the impact of the development on the supply system and zone. The impact of the new development in relation to the overall Supply/Demand balance and reservoir capacity review is also required as part of this study.

3.9 Ofwat has recently instigated significant changes into the charging regimes of the water companies. Whereas prior to April 2018, the water companies would charge developers for any reinforcement works to the existing network directly attributable to the new demand, under the new charging rules the developer has to only fund infrastructure works to the nearest practicable point of connection (defined as network of an equal or greater size to the infrastructure supplying the site). As such any reinforcement works are covered by the Infrastructure Charge, payable per plot for all new connections.

3.10 At present, Thames Water has not provided any further details on their requirements and strategy to supply the proposed development, but have confirmed, though discussions, that this is currently being progressed.

3.11 If there is reinforcement works required, there may be some capacity within the local network to supply an initial development for the Site. The size of this would be confirmed and quantified via Thames Water. To aid Thames Water in their potable water assessment and strategy to supply the proposed development, a program of works will be provided.

Diversions

3.12 Please refer to Section 9 for further details.

Regulatory Background

3.13 The introduction of the Water Act 2003 has:

- Formalised the procedures for developers wishing to complete self-lay schemes through multi-utility businesses.
- Implemented revised financial procedures, being more developer focused by offsetting capital costs of infrastructure against supply revenue.

3.14 Under current regulations, the new off-site and on-site infrastructure can be implemented by multi-utility contractors, with the exception of a small element of non-contestable works where the new supply is connected to the existing

network. Alternative asset owning businesses are able to implement and supply a strategic area through an Inset Appointment. Alternative asset owners normally procure the water supply through a bulk supply contract with the incumbent business or by an alternative means of supply such as a borehole.

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

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

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

3.17 Ofwat has recently instigated significant changes into the charging regimes of the water companies. Whereas prior to April 2018, the water companies would charge developers for any reinforcement works to the existing network directly attributable to the new demand, under the new charging rules the developer has to only fund infrastructure works to the nearest practicable point of connection (defined as network of an equal or greater size to the infrastructure supplying the site). As such any reinforcement works are covered by the Infrastructure Charge, payable per plot for all new connections.

4 Foul Water Sewerage and Storm Water Drainage

Existing Conditions

- 4.1 **Thames Water (TW)** has been consulted regarding the location and capacity of their existing sewerage network within the vicinity of the Site. Details of their existing foul sewerage network has been provided and transferred to a composite existing services plan, which is contained in the Appendix.
- 4.2 TW operate a Foul Water, Surface Water and Rising Main Sewers within the vicinity of the proposed development.
- 4.3 A 225mm Foul Water sewer and 450/525/600mm Surface Water sewer are shown to the west of the Site along Andover Road. Along Warren Road to the west of the Site, a 150mm Foul Water sewer and a 150mm Surface Water sewer are identified.
- 4.4 Adjacent to Newton Road to the east of the Site, a Foul Water (225mm) and a 180mm Foul Water Rising main are identified on TW asset plans.
- 4.5 In addition, a 375mm Surface Water sewer is shown to cross the east of the Site off Newton Road and a 300mm Surface Water Rising Main is identified on TW asset plans shown to cross the north of the Site off Monks Lane.

Supply Loading

- 4.6 To assist Thames Water in their capacity assessment of their existing foul network, a total Foul Water demand for the site of 93.19l/s was provided. Further details of the supply loading and assumptions are outlined in Tables 2b and 2c.

Network Requirements

- 4.7 Thames Water have completed a detailed Sewer Impact Study for the development, which at the time of consultation was based on a larger site quantum (2,000 new residential properties, 2,850m² of commercial space, two schools with a total of 1,108 pupils and an 80 bed care home). Thames water undertook the assessment using a pumped rate of 44.1l/s.
- 4.8 The hydraulic model indicates that the foul network does not have available capacity in the network downstream of the proposed connection manhole to accept the proposed development flows. On inclusion of the additional flows from the development site, a decrease in the levels of service at multiple locations is predicted to occur.
- 4.9 One indicative option has been developed by Thames Water to prevent the detrimental impact on the existing system. This option has been developed during a preliminary desktop investigation, using the hydraulic model only. The solution identified is intended to indicate the likely extent and magnitude and the network enhancement required to mitigate the predicted detriment.
- 4.10 From the development site, flows would be pumped to the connection point manhole SU47653301 and from here flows would gravitate in a northerly direction towards London Road (Newbury) Sewage Pumping Station (SPS). The solution identified, to improve the existing foul network and accommodate the development, is to provide offline storage and local online upsizing. The new offline foul water storage will be provided at London Road (Newbury) SPS and local sewer upsizing outside of the development at Newton Road and Newbury Train Station at Station Road.
- 4.11 Due to the size of the proposed development Thames Water require 2 permanent depth loggers to be installed to monitor the flows at the downstream point of the development site and also at the proposed connection point.
- 4.12 Based on this Planning Application, plus the addition of the proposed Sandford Park West, this Thames Water assessment provides a mitigation solution which is over and above that which will be required. Therefore the Thames Water assessment is considered sufficiently robust for the purposes of Outline validation.
- 4.13 The onsite strategy for foul water comprises a series of new sewers which will service each phase of development and link to one another via strategic Trunk sewers. As the offsite connection point is proposed as being on London Road, which is higher in level than the site, a series of pumping stations will be required to convey foul water from the site to the connection point.
- 4.14 Thames Water have been provided with updated details for the Site quantum and as such further discussions are with ongoing, to understand how the proposed strategy can be incorporated onsite to mitigate offsite works.
- 4.15 Ofwat has recently instigated significant changes into the charging regimes of the water companies. Whereas prior to April 2018, the water companies would charge developers for any reinforcement works to the existing network directly attributable to the new demand, under the new charging rules the developer has to only fund infrastructure works to the nearest practicable point of connection (defined as network of an equal or greater size to the infrastructure supplying the site). As such, any reinforcement works are covered by the Infrastructure Charge, payable per plot for all new connections.

4.16 Thames Water is therefore responsible for the upgrade work, which Thames Water caveated as it will take circa. 24 months to complete the required works, following receipt of approval and payment for the connection of the proposed development. The 24 month period is for the full upgrades of works. However, there may be some local capacity within the existing network, in advance of reinforcement works, but this capacity, and the number of dwellings which could be supplied, is still to be confirmed from Thames Water.

4.17 A formal program and build routes will be provided to Thames Water, to assist with their works.

Diversions

4.18 Please refer to Section 9 for further details.

Storm Drainage

4.19 The means to discharge storm water drainage on site will be dealt with via Sustainable Drainage Systems (SuDS) and therefore no connection to Thames Water storm water drainage is proposed. Further information can be provided within the Flood Risk Assessment report.

5 Electricity Supply

Existing Conditions

5.1 SSE has been consulted regarding their existing network locations. Existing details of the electricity supply network have been provided and transferred to a composite existing services plan, which is contained in the Appendix.

5.2 SSE operates existing High Voltage (HV) networks within close proximity to the proposed development along Monks Lane to the north of the Site and Andover Road to the west of the Site.

5.3 In addition, SSE operates Low Voltage (LV) networks to the north along Monks Lane, and to the west along Andover Road and Warren Road. An overhead LV network is shown off Newtown Road to the east of the Site.

5.4 Additional HV and LV assets are shown to the north, west and east of the Site along individual roads supplying the adjacent developments.

Supply Loading

5.5 To assist SSE in their capacity assessment of their existing network, a total Electricity Demand for the Site of 4,848kVA was provided. Further details of the supply loading and assumptions are outlined in Tables 2b and 2c.

Network Requirements

5.6 SSE provided a budget estimate (February 2016) for the proposed development between £2,200,000 and £2,500,000 to supply the proposed development.

5.7 SSE has assumed that the proposed development can be connected into the local 11kV network and that there may be no need for reinforcement works. Confirmation of the connection point and the requirement for reinforcement contribution costs can be provided following payment of a feasibility study or requested at the firm quotation stage.

- 5.8 SSE assume that all on site excavation and reinstatement will be provided by the developer, as well all internal containment for rising mains cables. It has also been assumed that SSE will need to install several new Distribution Substations each on a 4m x 4m plot.
- 5.9 No charge for 'Lane Rental Charges', which some Highway Authorities are proposing to be introduced has been provided within the quotation

Diversions

- 5.10 Please refer to Section 9 for further details.

Regulatory Background

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

6 Gas Supply

Existing Conditions

- 6.1 SGN has been consulted regarding the location of their existing network in the vicinity of the Site. Existing details of the gas supply network have been provided and transferred to composite existing services plan, which is contained in the Appendix.
- 6.2 SGN operate a Medium Pressure (MP) gas network to the north of the Site along Monks Lane and to the east of the Site along Newtown Road.
- 6.3 SGN also operate Low Pressure (LP) gas networks within the vicinity of the proposed development. LP gas mains are shown to the north of the Site along Monks Lane, to the west of the Site along Andover Road and Warren Road and to the north-east of the Site along Newtown Road.
- 6.4 SGN operates further MP gas mains to the north-west and north-east of the Site and LP gas mains to the north, west and east of the Site along individual roads supplying the adjacent residential developments.
- 6.5 In addition to the SGN assets, **SSE**, **ES Pipelines** and **GTC** operate assets within close proximity to the proposed development.
- 6.6 SSE operate 90mm PE LP gas mains to the north of the along Heather Gardens off Monks Lane.
- 6.7 ES Pipelines also operate 63/90mm LP gas mains along The Oaks north-east of the proposed development, 63mm LP mains off Warren Road to the west of the Site, and an additional network north-west of the Site off Andover Road.
- 6.8 GTC operate 63mm LP gas mains to the east of the Site along Deadmans Lane and to the north-east of the Site off Monks Lane.

Supply Loading

- 6.9 To assist SGN in their capacity assessment of their existing network, a Total Peak Gas Demand for the Site of 46,948Wh and an annual gas demand of 36,411,900kWh were provided. Further details of the supply loading and assumptions are outlined in Tables 2b and 2c.

Network Requirements

- 6.10 SGN provided a budget estimate (January 2016) to supply the proposed development at £1,322,000.00
- 6.11 SGN will install appropriately sized gas infrastructure to suitable locations. SGN will also carry out all necessary excavation and reinstatement work up to the proposed development boundary.
- 6.12 SGN has provided no costing for meter/meter housing.
- 6.13 Once at the detail design stage, a firm quotation (which includes a fee) can be submitted to SGN, where they are able to provide a more accurate quotation.

Diversions

- 6.14 Please refer to Section 9 for further details.

Regulatory Background

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

7 Telecommunications

Existing Conditions

- 7.1 The main incumbent telecommunications provider is **BT Openreach**. An extract from their asset plans is shown within the Appendix, which shows existing BT Openreach networks along Monks Lane to the north, Andover Road and Warren Road to the east and Newtown Road to the east.
- 7.2 Also, existing BT Openreach apparatus is shown to north, east and west of the proposed development, along individual roads, supplying the adjacent developments.
- 7.3 **Virgin Media** also operate assets within the vicinity of the proposed development. Existing Virgin Media apparatus are shown to the north along Monks Lane, west along Andover Road and Warren Road and to the east of the Site along Newtown Road.
- 7.4 Virgin Media operate additional assets to the west, north-west and east of the proposed development, along individual roads, supplying the adjacent developments.
- 7.5 In addition to BT Openreach and Virgin Media, **Vodafone** operate assets along Newtown Road to the east of the Site and along Monks Lane to the north of the Site.

Supply Requirements

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

FTTP: Fibre to the Premises (FTTP) technology, where the fibre runs all the way to the home or business, from the local exchange is being deployed in certain areas. FTTP will offer the top current download speed of 330Mbps for residential properties and 1Gbps for commercial properties. This is labelled 'Ultrafast Broadband' by BT Openreach.

ADSL: Asymmetric Digital Subscriber Line (ADSL) is the basic broadband service delivered over the traditional copper network and predominately in use in rural areas offering up to 24Mbps downloads, and up to 2.5Mbps upstream. This is adversely affected by distance from the exchange.

Cable Television: Cable television services provide an option for the proposed domestic dwellings to replace the need for satellite dishes. Cable Television is provided by Virgin Media, BT (BT Vision) and GTC.

FTTC: Fibre to the Cabinet (FTTC) relies on the existing copper network between the telephone cabinets but is then fed by fibre optic cables to the local exchange. This reduces the loss experienced over the copper network. Download speeds offered can be up to 80Mbps.

LLU: Local Loop Unbundling (LLU) is the process of opening up a telephone exchange so that it can be used by a number of different broadband providers. These broadband providers are then able to use connections from the telephone exchange through to the customer's homes to deliver home broadband.

ISP: Internet Service Providers (ISP) supplies the end user with internet access services over the telecom network. The speeds offered by the ISP are restricted by the physical network. The available ISPs delivering services over FTTP are currently limited but will increase as it is rolled out to more customers to increase the market.

Network Requirements

7.7 A Connectivity Assessment can be applied for through BT Openreach to confirm supply requirements for the proposed development. BT Openreach advise the ideal time for this request is at land purchase stage. The proposed development is covered by the Newbury exchange. In addition to the Newbury exchange area, the Highclere exchange covers the west of the Site

7.8 In addition to BT Openreach, ADSL, and Virgin Media an initial review has identified the following LLU operators are present in the Newbury exchange: Sky, Talk Talk (CPW), Vodafone and Zen Internet. Within the Highclere exchange, BT Openreach, ADSL, Sky and Talk Talk (CPW) are present

7.9 The Newbury exchange (approximately 1.8km north of the proposed development) and the Highclere exchange (approximately 3.8km south west of the proposed development) can offer FTTC and FTTP in some areas.

Diversions

7.10 Please refer to Section 9 for further details.

Regulatory Background

- 7.11 BT Openreach is the incumbent national communications business throughout most of the country, with the exception of K-Com in the Hull area. They own and operate the majority of fibre and copper telecoms networks in the country.
- 7.12 With BT Openreach controlling the existing cables feeding residential development, and the exchange (what is known as the 'local loop' or 'last mile'), they have maintained a dominant position in controlling the communications sector.
- 7.13 The industry regulator, Ofcom has completed much work in unbundling the local loop and bringing competition into the residential market. Following this deregulation, Virgin Media, TalkTalk and Vodafone are undertaking major investment to place switch equipment into BT's existing exchanges and hence allow direct access to their network. This system, known as Carrier Pre-Selection is becoming increasingly popular, although wholesale line provision down at local loop level, within the residential market, has yet to develop. Accordingly, BT or local cable franchise cable operators are the prime source of network connections on residential sites.
- 7.14 Virgin Media and GTC offer rival options to supply telecoms to residential developments, although the choice of alternative ISPs is more restricted than via the BT Openreach network.

8 Multi Utility Companies

- 8.1 The Multi Utility Companies **GTC** has been consulted to provide a budget estimate for supplying the proposed development with gas and electricity.

Supply Loading

- 8.2 Electrical loading assumptions and gas loading assumptions for 1,110 dwellings and commercial development, as outlined in Tables 2b and 2c have been provided to GTC in order for them to provide their connection budget estimate costs. However, GTC have used their own loadings and these are as follows:

- Total Estimated Electrical Loading = **2,632kVA**
- Total Estimated Peak Hourly Gas Loading = **7,874kWh**
- Total Estimate Annual Gas Loading = **15,706,172kWh**

Network Requirements

GTC

Electricity and Gas

- 8.3 GTC provided a budget estimate (March 2016) to supply electricity and gas at **£793,303.20**, with £420,833.97 offsite costs and £376,469.23 onsite costs.

Electricity

- 8.4 GTC has confirmed two HV Points of Connection from St John's Primary and Rupert Road, with 4 substations being required and these costs are included within the budget estimate. The quotation also includes the 300m road and 1490m footpath excavation and reinstatement costs in the public highway.
- 8.5 The developer is responsible for all onsite excavation and reinstatement. The developer is also responsible for carrying out all civil works associated with the substations at their own cost and for the construction of the brick-built housing for the substation.

8.6 The quotation excludes meter boxes and hockey sticks, these can be supplied at an additional charge of £20.60 each for a standard box. GTC's quotation also excludes any potential diversionary or abandonment works.

Gas

8.7 GTC have been offered a firm Medium Pressure Point of Connection along Monks Lane and GTC have allowed for 5m of offsite works. The quotation includes the supply of a governor and its installation costs (land area required 6m²).

8.8 The quotation only includes the excavation and reinstatement costs in public highway, which will be carried out by GTC.

8.9 The developer is responsible for all on-site excavation and reinstatement. GTC have stated that it will be the responsibility of the developer to arrange the abandonment of the existing mains onsite

9 Diversions

9.1 As part of the 2016 enquiries, a number of diversionary requests were issued for the proposed access off Monks Lane to the north of the Site and off Newtown Road to the east of the Site.

9.2 In addition to the Site access diversion enquiries, a number of diversionary enquiries were issued for the offsite improvement works. These included:

- Pinchington Lane Roundabout
- Andover Road, Monks Lane, Essex Street Roundabout
- Greenham Road Roundabout
- S339, Bear Lane Roundabout
- Andover Road, St Johns Lane, Derby Road Roundabout.

9.3 A summary of the responses received are detailed further below:

Diversions – Site Access

BskyB

9.4 BskyB provided a C3 budget estimate for the diversions of their fibre optic cables at £394,696.24 for both the Site Access and for the proposed Offsite Works.

9.5 BskyB confirmed that for the Site Access works near the A339/Deadmans Lane to the east of the Site, diversionary works will be required. The cost for this diversion is included within the overall C3 budget estimate.

9.6 BskyB also stated that they can provide a C4 estimate before any works are agreed upon.

BT Openreach

9.7 BT Openreach confirmed that they would not provide a C3 budget estimate, but will require a C4 detailed estimate.

SSE

9.8 SSE provided a C3 diversionary estimate for the proposed site access works at £11,000 (plus VAT) and is based upon a 'self-dig' basis.

9.9 SSE outlined that for the new roundabout near No.20 Heather Gardens, approximately 150m of cable from the single 11kV HV cable within the footpath of Monks Lane will require diverting around the proposed roundabout. Also

approximately 160m of cable from the single LV service cable within the footway of Monks Lane will require diverting around the proposed roundabout.

9.10 SSE confirmed that they have no apparatus which will be affected by the proposed new road entrance near No.29 Monks Lane.

SGN

9.11 SGN confirmed that they do not anticipate any diversionary work for their apparatus. SGN do outline that they reserve the right to divert any affected apparatus if proved necessary during the course of the works.

9.12 SGN also outlined that trial holes should be taken out, prior to commencement of your works to locate the exact position and depth of the Company's plant.

Thames Water

9.13 Thames Water confirmed that the proposed Site Access works could affect their apparatus, however outline that as long as the following conditions below can be met, they do not envisage any diversionary works:

- *“Depth of excavation above sewers and water mains must not exceed 0.6 metres unless the actual depth of apparatus has been checked in advance (by trial holes). In any event there should be at least 300mm clear between top of our apparatus and underside of any excavation. Where below 300 mm clear margin between top of our apparatus and underside of any excavation then machine excavation should cease. Any excavation below that to be hand-dug to expose the pipe at its crown but no further than waist – level.*
- *Unless empirical evidence suggests that our pipework is not at a recommended depth in general accordance with HAUC recommendations, the presumption is that diversionary works are not warranted. Specific for water mains, if road reconstruction extends to below this, along straight lengths only, the main can be undermined in short lengths only (exposing only one joint at a time and without destroying any thrust blocks) so that a concrete haunching can be placed in stages to support the pipe.*
- *Extra care should be taken at all times when excavating to avoid damaging our mains, service pipes, stop valve boxes, hydrant frames and covers, sewers, manhole covers and frames, vent covers, etc.*
- *If road or footway levels are to be altered, apparatus (including Manhole covers and frames) must be adjusted to the new surrounding levels, this can be undertaken by your contractors. We do not allow infill covers for various reasons; we only permit the use of ductile iron or hinged steel. (“These manhole covers are of sufficient strength to withstand the weight of a vehicle”). These include hydrants, outside stop valves and manhole covers. As the actual position of mains and services must be verified and established on site before any works are undertaken, it is imperative that you undertake a comprehensive survey of all utility plant beforehand, perhaps by ground penetrating radar survey and/or trial hole methods. Should you need to access a manhole that is in the road, please call your Local Authority to check if traffic management is necessary. Site visits from engineers can only be made where the need for unavoidable diversionary works have been identified and then only once the C4 estimating stage has been reached and the design fee, as notified at the C3 stage, has been paid.*
- *New kerb-lines should not be positioned directly above the line of our mains. The exact position of mains should be determined on site by hand dug trial holes. Similarly, existing valves, manholes or other apparatus should not end up on the new kerb-line.*
- *Trial holes should be dug by hand at locations where you intend to erect signal posts, bollards, columns or other street furniture. Please ensure that posts, guard-railing and bollards are not erected directly over, or within close proximity to, our mains and that they are not placed so as to restrict access to valves/hydrant boxes and/or manholes/covers, etc. for maintenance.*

- *If onsite inspection shows that your proposals may/will directly affect a fire hydrant, you will need to consult us for further information.*
- *Where Thames Water manholes will/may end up in the carriageway as a result of your proposed works, we will request where necessary that the current structure is reinforced with heavy-duty covers, which will enable the support of future loads.*
- *Thames Water recognizes the environmental benefits of trees and encourages the planting of them. However, the indiscriminate planting of trees and shrubs can cause serious damage to the public sewerage system. In order for these public sewers to operate satisfactorily trees and shrubs should not be planted over the route of the sewers."*

Virgin Media

9.14 Virgin Media confirmed that they do not provide C3 Budget Estimates and will require a C4 enquiry.

Vodafone

9.15 Vodafone provided a C3 budget estimate for carrying out diversionary/protective works of their apparatus affected by the proposed site access works at £27,078 (plus VAT).

9.16 The C3 estimate includes the lowering of approximately 140m of existing Vodafone area.

Diversions – Offsite

BskyB

9.17 BskyB provided a C3 budget estimate for the diversions of their fibre optic cables at £394,696.24 (Inclusive of VAT) for both the Site Access and for the proposed Offsite Works.

9.18 BskyB confirmed that for the offsite works at the A339 Roundabout at Kings Road/Bear Lane and for the A339 Pinchington Lane Roundabout, no diversions will be required, but protection of their apparatus is required.

9.19 BskyB also confirmed that for the offsite works along Monks Lane, diversions will be required.

9.20 BskyB also stated that they can provide a C4 estimate before any works are agreed upon.

BT Openreach

9.21 BT Openreach confirmed that they do not provide C3 budget estimates but will provide a C4 detailed estimate.

9.22 BT Openreach confirmed that no diversionary works will be required at the Bear Lane Roundabout Improvements.

Instalcom

9.23 Instalcom confirmed that they do have Level 3 Plant running along and to the north of the railway. They indicated that the apparatus should be below the level of any excavation required for the realignments proposed. There should therefore be no need for a C3 budget estimate.

Network Rail

9.24 No response has been provided by Network Rail, however having reviewed their network plans, Network Rail should not be affected by the proposed offsite works.

SSE

9.25 SSE provided a C3 diversionary estimate for the proposed site access works at £34,000 (plus VAT) and is based upon a 'self-dig' basis.

- 9.26 SSE outlined that for the alteration to the roundabouts near Kingdom Hall, two sections of 11kV HV cable near Kingdom Hall will require diverting around the widened roundabout (approximately 115m and 50m of cable). Also two sections of LV cable near Sandlesford Parade and Sandlesford Grove may require diverting (approximately 40m and 35m of cable).
- 9.27 SSE outlined that for the alteration to the roundabouts near Monument Close, one section of 11kV HV cable may require diverting around the widened roundabout (approximately 85m of cable). Also four sections of LV cable may require diverting (approximately 60m, 70m, 85m and 85m of cable).
- 9.28 SSE outlined that for the alteration to the roundabouts near Greenham House, one section of 11kV HV cable may require diverting where the western roundabout is widened (approximately 15m of cable). Also one section of LV cable may require diverting where the western roundabout is widened (approximately 15m of cable).
- 9.29 SSE confirmed that they have no apparatus proposed alterations to the roundabout near Kings Road West or at the alterations near the roundabout near St Johns Church.

SGN

- 9.30 SGN confirmed that they do not anticipate any diversionary work for their apparatus. SGN did outline that they reserve the right to divert any affected apparatus if proved necessary during the course of the works.
- 9.31 SGN also outlined that trial holes should be taken out, prior to commencement of your works to locate the exact position and depth of the Company's plant.

Thames Water

- 9.32 Thames Water confirmed that the proposed offsite works could affect their apparatus, however outline that as long as the following conditions below can be met, they do not envisage any diversionary works:
- *“Depth of excavation above sewers and water mains must not exceed 0.6 metres unless the actual depth of apparatus has been checked in advance (by trial holes). In any event there should be at least 300mm clear between top of our apparatus and underside of any excavation. Where below 300 mm clear margin between top of our apparatus and underside of any excavation then machine excavation should cease. Any excavation below that to be hand-dug to expose the pipe at its crown but no further than waist – level.*
 - *Unless empirical evidence suggests that our pipework is not at a recommended depth in general accordance with HAUC recommendations, the presumption is that diversionary works are not warranted. Specific for water mains, if road reconstruction extends to below this, along straight lengths only, the main can be undermined in short lengths only (exposing only one joint at a time and without destroying any thrust blocks) so that a concrete haunching can be placed in stages to support the pipe.*
 - *Extra care should be taken at all times when excavating to avoid damaging our mains, service pipes, stop valve boxes, hydrant frames and covers, sewers, manhole covers and frames, vent covers, etc.*
 - *If road or footway levels are to be altered, apparatus (including Manhole covers and frames) must be adjusted to the new surrounding levels, this can be undertaken by your contractors. We do not allow infill covers for various reasons; we only permit the use of ductile iron or hinged steel. (“These manhole covers are of sufficient strength to withstand the weight of a vehicle”). These include hydrants, outside stop valves and manhole covers. As the actual position of mains and services must be verified and established on site before any works are undertaken, it is imperative that you undertake a comprehensive survey of all utility plant beforehand, perhaps by ground penetrating radar survey and/or trial hole methods. Should you need to access a manhole that is in the road, please call your Local Authority to check if traffic management is necessary. Site visits from engineers can only be made where the need for unavoidable diversionary works have been identified and then only once the C4 estimating stage has been reached and the design fee, as notified at the C3 stage, has been paid.*

- *New kerb-lines should not be positioned directly above the line of our mains. The exact position of mains should be determined on site by hand dug trial holes. Similarly, existing valves, manholes or other apparatus should not end up on the new kerb-line.*
- *Trial holes should be dug by hand at locations where you intend to erect signal posts, bollards, columns or other street furniture. Please ensure that posts, guard-railing and bollards are not erected directly over, or within close proximity to, our mains and that they are not placed so as to restrict access to valves/hydrant boxes and/or manholes/covers, etc for maintenance.*
- *If onsite inspection shows that your proposals may/will directly affect a fire hydrant, you will need to consult us for further information.*
- *Where Thames Water manholes will/may end up in the carriageway as a result of your proposed works, we will request where necessary that the current structure is reinforced with heavy-duty covers, which will enable the support of future loads.*
- *Thames Water recognizes the environmental benefits of trees and encourages the planting of them. However, the indiscriminate planting of trees and shrubs can cause serious damage to the public sewerage system. In order for these public sewers to operate satisfactorily trees and shrubs should not be planted over the route of the sewers."*

Trafficmaster

- 9.33 Trafficmaster stated that they may need to move their apparatus back a few meters and would require power and orientation of site to be maintained. They confirmed they would like to arrange a meeting at the Site to determine what diversionary works are required.

Verizon

- 9.34 Verizon provided a budget estimate for carrying out at £41,948.12 (plus VAT). The estimate included for the lowering of existing live Verizon ducts where the pedestrian island south of Bear Lane roundabout is narrowing, also moving the existing footway chamber west to avoid changing kerb lines.

Virgin Media

- 9.35 Virgin Media confirmed that they do not provide C3 Budget Estimates and will require a C4 enquiry.

Vodafone

- 9.36 Vodafone provided a C3 budget estimate for carrying out diversionary/protective works of their apparatus affected by the proposed offsite works at £149,328 (plus VAT).
- 9.37 The C3 estimate included the full cable diversion of approximately 330m of the existing Vodafone ducts and fibre optic cables away from the proposed work area. Due to the complexity of the scheme, the route of the new duct and fibre cables has been assumed at this stage, but will require confirmation via site survey at the C4 stage.

West Berkshire County Council

- 9.38 It had been confirmed that they are unable to provide a diversionary estimate until more detailed plans of each individual works are provided. They will provide an estimate once these have been supplied.

10 Service Supply Competition

- 10.1 The traditional procurement route, up until recently, had been to provide service supplies to a new development through a local network operator. With the incumbent companies having somewhat of a monopoly, competition in the market was poor.
- 10.2 However, following deregulation of the service supply networks, through the likes of Ofgem, Ofcom and Ofwat, independent network operators have been able to enter the market and provide new service supplies to developments.
- 10.3 Companies such as GTC and Connect take a holistic view in putting together infrastructure reinforcements, site distribution and supply packages and off-set the costs with anticipated future revenue through the transmission and supply of service to give a better financial arrangement and single point of responsibility for the developer.
- 10.4 These businesses use a multi-utility approach to implement the infrastructure. The independent companies are still regulated by the relevant office of regulation and subsequently asset owners must:
- Ensure that the installed network meets regulated standards
 - Design to an operating lifetime of 40+ years
 - Manage a return on their investment
 - Ensure that the existing network performance is not compromised
- 10.5 Throughout this document a review has been completed for the provision of service supply infrastructure at the site through the local network operators. This approach provides a good indication as to the likely upgrading requirements for the local infrastructure, but at this stage, does not demonstrate a competitive cost for services procurement.
- 10.6 Multi-utility companies provide significant investment to the provision of services at a development based on a whole life financial model, considering revenue from supply conveyance. Due to these investments, large reductions can be achieved to the capital cost for the provision of services at a site.
- 10.7 A development of this size has the potential to benefit a great deal from the financial investment of companies such as Connect and GTC. As such independent companies may be utilised to provide final network supplies for the Site.
- 10.8 This report summarises the details relating to the current network conditions outlining the requirements for reinforcements and provision of supply through the existing network.

11 Summary

- 11.1 This Services Statement has indicated that the proposed development on the Site, at the time of consultation, had the potential to be supplied with normal network service supplies, potentially without prohibitive reinforcements to the existing networks.
- 11.2 Some localised, non-prohibitive reinforcements may be necessary together with protections or diversions where existing plant is affected by the proposals. This will be confirmed once all enquiries have been completed by each respective utility company.

11.3 Table 10a outlines the supply requirements for each incumbent company, along with the multi-utility company:

Utility Company	Service	Budget Estimate
Thames Water *	Potable Water	<p>Confirmed that they will require additional network modelling. It was confirmed that the development is located within Thames Water's Wash Common Tower Zone/ The modelling would require all mains detailed model of this zone was build and calibrated in 2010 and therefore verification/update of the model configuration and re-assessment of the current and future demands is required. Also the aim of the study would need to assess the impact of the development on the supply system and zone. The impact of the new development in relation to the overall Supply/Demand balance and reservoir capacity review is also required as part of this study.</p> <p>Ofwat has recently instigated significant changes into the charging regimes of the water companies. Whereas prior to April 2018, the water companies would charge developers for any reinforcement works to the existing network directly attributable to the new demand, under the new charging rules the developer has to only fund infrastructure works to the nearest practicable point of connection (defined as network of an equal or greater size to the infrastructure supplying the site). As such, any reinforcement works are covered by the Infrastructure Charge, payable per plot for all new connections.</p>
Thames Water *	Foul Sewerage	<p>Undertaken a Sewer Impact Study which confirmed that the foul network does not have available capacity in the network downstream of the proposed connection manhole (north-east of the Site off the Newtown Road roundabout) to accept the proposed development flows. Improvement works will be required and include for:</p> <ul style="list-style-type: none"> • Connect development flows to manhole SU47653301 at a pumped rate of 44.1l/s. • Offline Storage at London Road SPS • Local sewer upsize outside of the development at Newtown Road. • Local sewer upsize at Newbury Train Station at Station Road <p>Due to the size of the proposed development Thames Water has confirmed that they will require 2 permanent depth loggers to be installed to monitor the flows at the downstream point of the development site and also at the proposed connection point.</p> <p>Ofwat changes are also applicable to foul water companies.</p>

Table 10a: Summary of Supply Budget Estimates from 2016

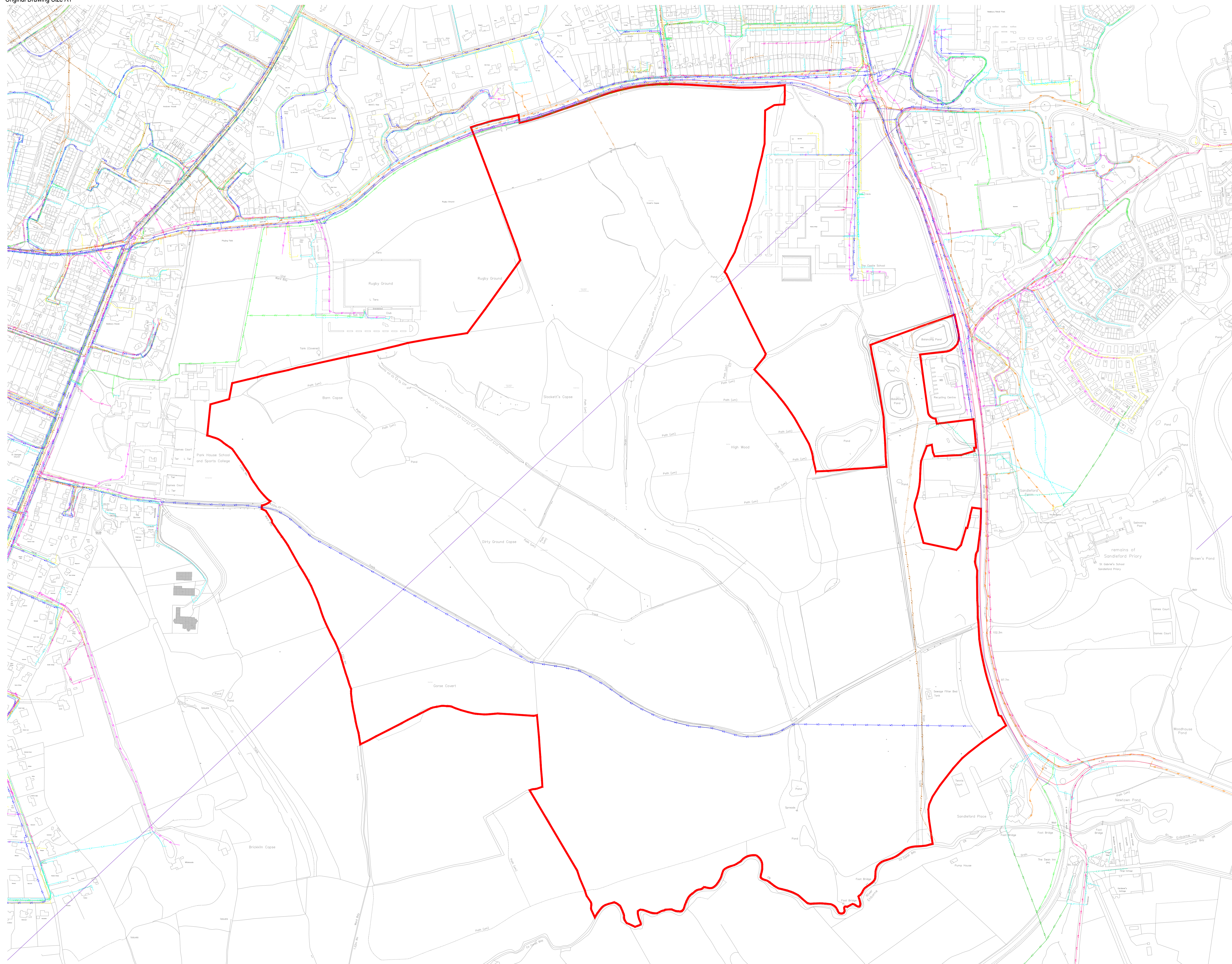
Utility Company	Service	Budget Estimate
SSE *	Electricity	Budget estimate for the proposed development of between £2,200,000 and £2,500,000 to supply the proposed development. SSE has assumed that the proposed development can be connected into the local 11kV network and that there may be no need for reinforcement works.
SGN *	Gas	SGN has provided a budget estimate of £1,322,000.00 to supply the proposed development. The estimate included for the installation of appropriately sized gas infrastructure to suitable locations.
GTC (Multi Utility) *	Electricity and Gas	<p>Provided a budget estimate to supply the proposed development with electricity and gas at £793,303.20, with onsite costs of £376, 469.23 and offsite costs of £420,833.97</p> <p>GTC has confirmed two HV Points of Connection from St John’s Primary and Rupert Road, with 4 substations being required.</p> <p>GTC have been offered a Medium Pressure Point of Connection along Monks Lane.</p>

Table 10a (continued): Summary of Supply Budget Estimates from 2016

12 Limitations

- 12.1 The conclusions and recommendations contained herein are limited to those given the general availability of background information and the planned usage of the Site.
- 12.2 Third Party information has been used in the preparation this report, which Brookbanks Consulting Ltd, by necessity assumes is correct at the time of writing. While all reasonable checks have been made on data sources and the accuracy of data, Brookbanks Consulting Ltd accepts no liability for the same.
- 12.3 Existing network appraisals and proposed reinforcements are based on current infrastructure. Ongoing load growth will occur that may feasibly affect network availability. It is therefore necessary to monitor and review the existing networks capacity regularly.
- 12.4 The benefits of this report are provided solely to Bloor Homes Ltd and Sandlesford Farm Partnership for the proposed development on the land at Sandlesford Park Site only.
- 12.5 Brookbanks Consulting Ltd excludes third party rights for the information contained in the report.

Appendix



Construction Design and Management (CDM) Key Residual Risks
 Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific Key Risks associated with the project.

- 1) Overhead and underground services
- 2) Street Lighting Cables
- 3) Working adjacent to water courses and flood plain
- 4) Soft ground conditions
- 5) Working adjacent to live highways and railway line
- 6) Uncharted services
- 7) Existing buildings with potential asbestos hazards

NOTES:

1. Do not scale from this drawing
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting.

- KEY:**
- Site Boundary
 - Potable Water (Thames Water)
 - Foul Water Sewer (Thames Water)
 - Surface Water Sewer (Thames Water)
 - Foul Water Rising Main (Thames Water)
 - Surface Water Rising Main (Thames Water)
 - High Voltage Cable (SSE)
 - High Voltage Overhead Line (SSE)
 - Low Voltage Cable (SSE)
 - Low Voltage Overhead Line (SSE)
 - Medium Pressure Gas Main (SGN)
 - Low Pressure Gas Main (SGN)
 - Low Pressure Gas Main (ESP Utilities)
 - Low Pressure Gas Main (GTC)
 - Low Pressure Gas Main (SSE)
 - BT Openreach Underground
 - BT Openreach Overhead
 - Virgin Media
 - Vodafone
 - Sky
- *Asset Plan Locations from 2014

B Redline Boundary Amendment AM LW 20.12.2018
 - Second Issue - amended site & client name AA AA LW 17.01.2018
 - First Issue AM AA LW 15.12.2017

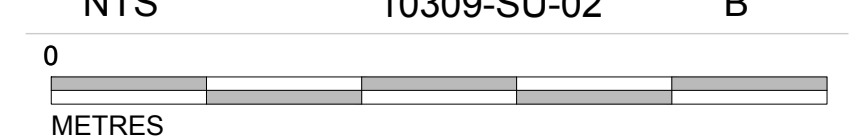
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Blor Homes Ltd & Sandford Farm Partnership

Land at Sandford Park Newbury

Existing Services Location Plan

Status	Drawn	Checked	Date	Status Date
DRAFT	AM	AA	14.12.2017	December 2017
Scale	NTS	Number	10309-SU-02	Rev B



UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

