Commercial Estates Group, Hallam Land, TW Fields, BDW Trading Limited

Clifton Gate

Utilities Statement

Issue 0 | 10 October 2014

Job number 234737

Admiral House Rose Wharf
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Leeds LS9 8EE
United Kingdom
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ARUP

Document Verification

ARUP

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Contents

1 Introduction

The intention of the document is to outline the utilities required to support the proposed development and the strategy to provide those utilities.

This document provides evidence that the availability of utility services has been examined and that the proposals will not result in undue stress on the delivery of those services to the wider community.

2 Water

With a project spanning 20 years of construction broken into 21 phases, it was important to know the maximum demand at each phase and the total flow rate needed. These calculations are usually made using the *'Plumbing Engineering Services Design Guide'*, however the large number of dwellings for this project made this method insufficient. Using an estimated 19 loading units per dwelling, the design guide could only calculate flow rates of up to 450 dwellings. As such the *'Nine Elms'* project (which included 21,000 properties) was used as an example. This gave the equation and constants needed to make maximum flow rate values using the number of dwellings. This calculation was then compared to the flow rate using the maximum demand. These can be seen in the table below and are roughly similar.

Phase (Year Completed)	No. of Dwellings	Cumulative no. of dwellings	Approx. people	Water Consumption l/person/day	Total Water Max. Demand l/day	Cumulative Flow Rate (Dwellings) l/s	Cumulative Flow Rate (Max. Demand) l/s
1 (2015)	100	100	315	80	25,200	1	0.875
2 (2016)	200	300	945	80	75,600	3	2.625
3 (2017)	200	500	1,575	80	126,000	5	4.375
4 (2018)	200	700	2,205	80	176,400	7	6.125
5 (2019)	200	900	2,835	80	226,800	9	7.875
6 (2020)	200	1,100	3,465	80	277,200	11	9.625
7 (2021)	200	1,300	4,095	80	327,600	13	11.375
8 (2022)	200	1,500	4,725	80	378,000	15	13.125
9 (2023)	200	1,700	5,355	80	428,400	17	14.875
10 (2024)	200	1,900	5,985	80	478,800	19	16.625
11 (2025)	200	2,100	6,615	80	529,200	21	18.375
12 (2026)	200	2,300	7,245	80	579,600	23	20.125
13 (2027)	200	2,500	7,875	80	630,000	25	21.875
14 (2028)	200	2,700	8,505	80	680,400	27	23.625
15 (2029)	200	2,900	9,135	80	730,800	29	25.375
16 (2030)	200	3,100	9,765	80	781,200	31	27.125
17 (2031)	200	3,300	10,395	80	831,600	33	28.875
18 (2032)	200	3,500	11,025	80	882,000	35	30.625
19 (2033)	200	3,700	11,655	80	932,400	37	32.375
20 (2034)	200	3,900	12,285	80	982,800	39	34.125
21 (2035)	120	4,020	12,663	80	1,013,040	40.2	35.175

Since these discussions were undertaken, the number of dwellings has been reduced. With phasing yet to be decided, the above table highlights how each increase in phase will be supplied.

The above table only deals with the residential properties to be built on the site. Flow rates for the retail units, the pub, and the schools also had to be calculated.

These can be seen in the table below and use the equations and constants again gained from the Nine Elms project and the unit's gross internal area (GIA).

Unit	GIA (m2)	Maximum Flow Rate (l/s)
Retail Large	200	0.012
Retail Small	600	0.035
Pub	100	0.006
Primary School	22000	1.528
Primary School	22000	1.528

A budget estimate has been received from Yorkshire Water (reference P520985). The assessment confirms that water is available to supply to the development and can be gravity fed.

In order to supply the development, the local water network will require upgrading. An indicative cost for this work is £250,000. This does not include connections to this main from the properties or on site mainlaying. New mains would be required from the 450mm main in Wiggington Road and from the 250mm main in Hurricane Way.

3 Wastewater (Domestic Foul Sewerage and Sewage Treatment)

Yorkshire Water were consulted in December 2013 on the basis of 4020 dwellings developed over a period of 21 years as shown in the table below.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Properties	100	200	200	200	200	200	200	200	200	200
Cumulative Peak Foul Flow (l/s)	4.63	13.89	23.15	32.41	41.67	50.93	60.19	69.44	78.7	87.96
Cumulative Daily Foul Volume (m^3/day)	67	200	333	467	600	733	867	1000	1133	1267

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Properties	200	200	200	200	200	200	200	200	200	200	120
Cumulative Peak Foul Flow (l/s)	97.22	106.48	115.74	125	134.26	143.52	152.78	162.04	171.3	180.56	186.11
Cumulative Daily Foul Volume (m^3/day)	1400	1533	1667	1800	1933	2067	2200	2333	2467	2600	2680

Peak flows are calculated in accordance with guidance in Sewers For Adoption (7th Edition), at 4000 litres per dwelling per day including a peaking factor of 6. Daily volumes are derived from peak flows with the peaking factor removed.

For the current proposal for 2800 dwellings, the cumulative peak foul flow would be 129.6 l/s, and the total daily volume 1867m^3.

Yorkshire Water has confirmed that they will fund upgrades to the receiving sewage treatment works at Rawcliffe, subject to an agreed phasing plan (number of dwellings per annum). The developer will have to fund a new sewer/rising main and associated pumping station linking the site to Rawcliffe STW. The first step in the Sewer Requisition process is a feasibility study, for which YW have requested £20,000.

The capital cost of the requisitioned sewer is offset by the additional income generated by customers using the new public sewer.

4 Gas

The master plan was given to Northern Gas Networks who provided a budget estimate (reference 2000016755) based on the number of dwellings and type of properties.

The proposal is to extend the existing Medium Pressure mains to the edge of new development before installing a new Medium Pressure/Low Pressure governor. From this new governor 5757m of main will be laid to provide trunk mains for the site. Northern Gas Network has allowed to excavate in public land only, with the customer to provide open trench in all private land.

The cost indication is £825,000 (excl VAT) and this does not represent an offer to carry out the works. As a guide, the price is deemed to be accurate within +/- 10%.

5 Electricity

We have held meetings and had a series of discussions with Dennis Snelgrove from Northern Powergrid (NPG) regarding the power supply to the site. On the advice that a Primary Substation may be required, the load assessment was revised to reflect the reduction in residential dwellings, energy efficiency targets and the above site make up.

The revised site estimate is approximately 7.5MVA. This can be broken down as follows:

Building Type	Area (m^2)	Units	Load per m^2 (kW)	Load per unit (kW)	Load (KW)
Residential	n/a	3200	n/a	1.5	4800
Large Retail	200	n/a	0.125	n/a	25
Small Retail	600	n/a	0.125	n/a	75
School	n/a	2	n/a	1000	2000
Elec. Buses	n/a	2	n/a	120	240
Elec. Cars	n/a	4	n/a	45	180
Pub	100	n/a	0.1	n/a	10

NPG, have advised that as the project has long build out and due to the continuously changing nature of the network, it is unlikely that a Primary Substation would be required.

At this moment in time the closest primary substation has 4.2MVA available, however there is a possibility that existing loads on this substation would be offloaded to other new substations to allow the new connection to Clifton Gate.

Depending on the density of the development, the cost of connecting each plot will vary from approximately £1200.00 + VAT (high density) to approximately £1500.00 + VAT (low density). The position of the substations will have an impact on associated costs. Substation feeders (from substation to dwelling) can be as long as 300m. Based on this rule and subject to the overall layout the site will require between 12 to 15 substations that will be constructed at the developers cost.

Infrastructure will come from the Clifton Moor Retail side of the Ring road and therefore it will require a crossing point into the development unless they can get some smaller loads from the existing high voltage overhead network.

The position of the road crossing will need to take into account the existing retail park on the south side of the ring road. In order to jet track under the road, a distance of up to 25m could be required behind the road to place the equipment, depending on depth of trench.

Failing this it may be possible complete via open cutting with a partial road closure. It would be beneficial to coordinate this with any other authority trenching works.

Since discussions with NPG the development has been revised and the number of dwellings reduced. The estimate above will therefore still be more than enough for the reduced load.

6 Telecommunications

We have not received quotations for the delivery of telecommunications throughout the site.

Current broadband provision for residential properties is reliant on an aging copper telephony network that was never designed for transporting high-speed data. Though technological advances have enabled providers to deliver some reasonable throughput, the limits of the medium are rapidly being reached. Copper networks are provided to new housing developments free of charge, however, to remain at the forefront of digital technology and to future proof the development Fibre to the home or FTTH will become the technology of choice for the delivery of ICT services to homes and should be deployed on this development.

There are several Service Providers, such as Virgin Media, who are willing to provide the infrastructure to a development such as this free of charge. This is based on the assumption that the home owners will utilised their service, hence the provider shall make back any expenditure.

7 Currently Available Utilities

It is important to know before commencing, what services currently exist and how many dwellings could be served without the need for any upgrades to existing off-site infrastructure. This will inform the programme for delivering the upgrades necessary for the development phasing plan. Below is a table of services and their current capacity.

Service	Current Capacity (No. of Dwellings)
Water	
Waste Water (sewerage)	Nil
Waste Water (sewage treatment)	250
Gas	
Electricity	250
Telecoms	n/a

At the moment only the capacity of the electricity provided is known. However discussions are taking with the respective providers to get a figure for all other services.

Appendix A

Water Authority Consultations

YorkshireWater

Miss A Carey
Arup
Admiral House
78 Rose Wharf East Street
Leeds
LS9 8EE

Developer Services
Customer Service & Networks
Yorkshire Water Services
PO Box 52
Bradford
BD3 7YD

T 0345 1 208 482 (Option 2)
Opening hours: 8am-5pm
F 01274 303046
E wbu.service.centre@ yorkshirewater.co.uk
W www.yorkshirewater.com/extra-services

4 September 2014

Our Ref P520985
Your Ref

Dear Miss Carey

Water Availability Assessment for a proposed new development at: Land To The North Of Clifton Moor, Clifton Gate, York

Thank you for your recent development enquiry regarding the above site. Based on the information you have provided regarding the proposed development we have detailed below our assessment of the ability to supply water to the site.

1. **Supplying water to the development site**

   Yes, we are able to provide water to your development site.

2. **Details of any mains reinforcement work or mains diversions**

   In order to supply the demand you require we will be required to reinforce the local water network. This will involve the laying of 2000 metres of main in 250mm HPPE and associated valves and meters. An indicative cost for this reinforcement work is £ 250,000. This does not include any on-site mainlaying, individual connections to this main for the properties or traffic management associated with supplying this development. New mains would be required from the 450mm main in Wiggington Road and also from the 250mm main in Hurricane Way.

3. **Details of whether the development can be fed by gravity or will require pumps/ storage**

   This development can be supplied by gravity.

This assessment is based upon the information available to Yorkshire Water at the present time. The requirements for mains reinforcement work may change between now and your application for a water supply where an application for increased demand on the local water network has been received from other new developments.

I have attached a copy of our mains records local to the site. Please note that our records only show water mains and that individual service pipes and other privately owned apparatus are not shown. Caution should therefore be exercised when carrying out excavation works near to our apparatus.

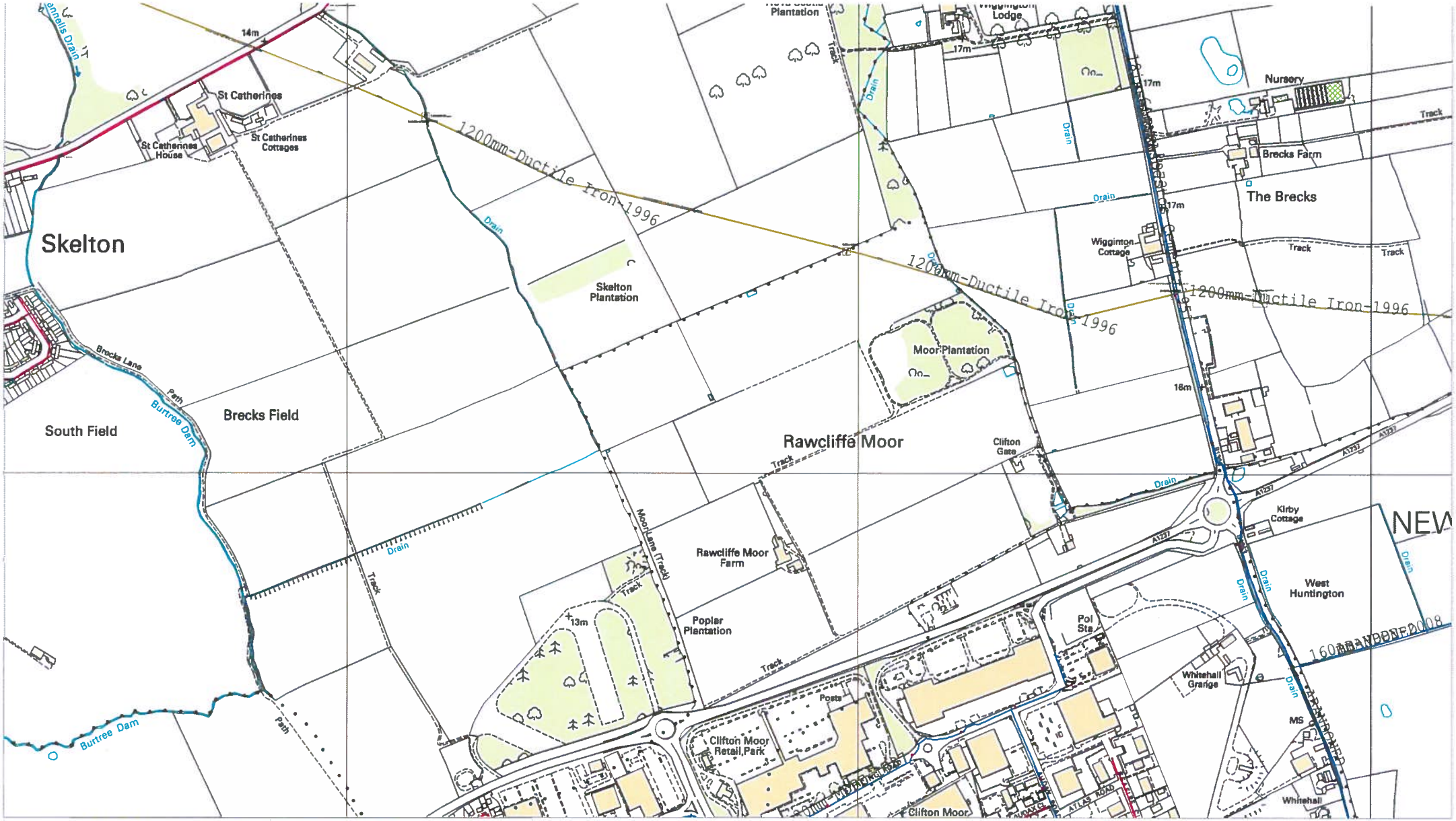
Should you wish to proceed with your application for a water supply, please complete the enclosed Application Form and Contaminated Land Assessment Questionnaire (where applicable). Please note there is a fee of £100.28 + £20.06 VAT = £120.34 payable on application. This is to pay for our costs in surveying the site and providing a quotation for the cost of your connection.

If you require details regarding the hardness/ softness of the water in the area, these can be obtained from the YW internet site at www.yorkshirewater.com.

In the meantime if I can be of any further assistance, please contact me on the above number. When contacting us about this enquiry please quote reference number **P520985** this will enable us to find your enquiry and deal with any queries promptly.

Yours sincerely

Peter Newbould
New Supplies Technician



457072 : 455182

Map Name : SE5755SW

Title

Yorkshire Water,
PO Box 500,
Halifax Road,
Bradford BD6 2LZ
Contact Name :
Peter Newbould
Contact Tel :

Notes

Partial Key

Water mains up to 4" in diameter

Water mains over 4" in diameter

Raw water mains

Private water mains

The position and depths of apparatus shown on this plan are approximate only. The exact positions and depths should be obtained by excavation trial holes.

Scale : 1:10000

Drg No :

Maris No :

Date Req : 04/09/2014, 13:37:59

Date Gen : 04/09/2014, 13:38:07

Source : Water Network Enquiry

UPN: Undefined

Originator: Peter Newbould, ROCC,

Appendix B

Waste Water Consultations

YorkshireWater

Yorkshire Water Services
Developer Services
Sewerage Technical Team
PO BOX 52
Bradford
BD3 7AY

e-mail:
technical.sewerage@yorkshirewater.co.uk

Tel: 0845 120 8482
Fax: 01274 303 047

ARUP Leeds
Admiral House
Rose Wharf
78 East Street
LEEDS
LS9 8EE

For the attention of Nick Ferro

By email to nick.ferro@arup.com

For telephone enquiries ring:
Kevin Leaver on 0845 120 8482

Your Ref:
Our Ref: P017923 /KJL

14th January 2014

Dear Sir,

Clifton Gate, York - Pre-Planning Sewerage Enquiry on P284709

Thank you for your recent enquiry. Our charge of £89.00 (plus VAT) will be added to your account with us, reference ARL050. You will receive an invoice for your account in due course.

Please find enclosed a complimentary extract from the Statutory Sewer Map which indicates the recorded position of the public sewers. Note well that as of October 2011 and the private to public sewer transfer, there are many uncharted Yorkshire Water assets currently not shown on our records. The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site:

The local Waste Water Treatment Works (WWTW) is Rawcliffe. Owing to the significant size of this proposal we have contacted the respective treatment team for more information regarding the impact of proposed development and will contact you when an assessment has been made.

Development of the site should take place with separate systems for foul and surface water drainage. The separate systems should extend to the points of discharge to be agreed.

The local public sewer network does not have adequate capacity available to accommodate the anticipated foul water discharge from this proposal site. Detailed investigation and analysis would be required to identify a point on the public sewer network where the anticipated foul water flows could accepted and/or what improvements works may be necessary to provide capacity. All costs involved would be at the developer's expense. Please contact us further if you would like us to undertake a feasibility study into this matter and we will be happy to provide you with a budget estimate and likely timescales for the study work. It may be prudent to delay any such request until we have received a response concerning the capacity available, if any, at Rawcliife WWTW.

From the information supplied, it is not possible to determine if the whole site will drain by gravity to the public sewer network. If the site, or part of it, will not drain by gravity, then it is likely that a sewage pumping station will be required to facilitate connection to the public sewer network.

The developer's attention is drawn to Requirement H3 of the Building Regulations 2000. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SUDS), for example the use of soakaways and/or permeable

hardstanding etc, may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SUDS in this instance from the appropriate authorities.

The local public sewer network does not have capacity to accept any discharge of surface water from the proposal site. If SUDS is not viable, the developer is advised to contact the Environment Agency/local Land Drainage Authority/Internal Drainage Board with a view to establishing a suitable watercourse for discharge.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site. It is understood that watercourses traverse the site. These appear to be the obvious place for surface water disposal.

Off site sewers may be required which may be provided by the developer and considered for adoption under Section 104 of the Water Industry Act 1991. Alternatively, the developer may in certain circumstances be able to requisition off-site sewers under Section 98 of the Water Industry Act 1991 for which an application must be made in writing. For further information, please telephone 0845 120 84 82.

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the WRc publication "Sewers for Adoption - a design and construction guide for developers" 6th Edition as supplemented by Yorkshire Water's requirements, pursuant to an agreement under Section 104 of the Water Industry Act 1991. An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Developer Services Team (telephone 0845 120 84 82) for further information.

The public sewer network is for domestic sewage purposes. This generally means foul water for domestic purposes and, where a suitable surface water or combined sewer is available, surface water from the roofs of buildings together with surface water from paved areas of land appurtenant to those buildings. Land and highway drainage have no right of connection to the public sewer network. No land drainage to be connected/discharged to public sewer.

As a last resort, highway drainage may be accepted under certain circumstances. If it can be demonstrated, through satisfactory evidence, that SUDS are not a viable option, there are no watercourses or highway drains available and if capacity is available within the public sewer network, highway drainage discharges to the public sewer network may be permitted. In this event, the developer may be required to enter into a formal agreement with Yorkshire Water Services under Section 115 Water Industry Act 1991 to discharge non-domestic flows into the public sewer network.

Any new connection to an existing public sewer will require the prior approval of Yorkshire Water. You may obtain an application form from our website (www.yorkshirewater.com) or by telephoning 0845 120 84 82.

All the above comments are based upon the information and records available at the present time. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours faithfully

Kevin Leaver
for : Developer Services Team

Appendix C

Gas Consultations

Northern Gas Networks Limited
Connections
1st Floor
1 Emperor Way
Doxford International Business Park
Sunderland
SR3 3XR
Customer Care: 0870 300 7677

@NGNgas

Find us on Facebook

Reference Number – 2000016755

Jillian Hardie
Arup
78 Admiral House
East Street
Leeds
LS9 8EE

6th June 2014

Dear Jillian Hardie,

I am pleased to enclose the budget indication you requested for the proposed works at: Wiggington Road, Wigginton, York

Description of works:
Extend existing MP mains to the edge of new development before installing a new MP/LP governor. From this new governor lay 5757m of main to provide trunk mains for the site. NGN to excavate in public land only, customer to provide open trench in all private land.

The cost indication is £825,000 (excl VAT) and this does not represent an offer to carry out the works. Should you request a firm quotation, the cost may differ significantly from this budget indication. As a guide, the price is deemed to be accurate within +/- 10%.

It may be possible to obtain an alternative quotation from other Gas Transporters or Utility Infrastructure Providers (UIPs) for the provision of this work. A list of registered UIPs can be obtained from the Gas Industry Registration Scheme website www.lloydsregister.co.uk/schemes/girs or The Society of British Gas Industries at www.sbgi.org.uk. A list of Gas Transporters can be found on the OFGEM website www.ofgem.gov.uk.

If you have any queries in the meantime or if you require a firm quotation, please contact us on 0870 300 7677 or email gasconnections@northerngas.co.uk and we will be happy to help.

Yours sincerely

John Peacock Connections Programme Manager

Appendix D

Electricity Supply

Jillian Hardie

From: Snelgrove, Dennis <Dennis.Snelgrove@northernpowergrid.com>
Sent: 03 June 2014 13:23
To: Jillian Hardie
Subject: RE: Clifton Gate existing capacity

Jillian
Sorry for the delay in responding.
I have had a look at the nearby primary load and at this moment in time the primary has 4.2MVA available but I cannot guarantee that we would need a new primary on the proposed site.
We may have other options that may offload the primary and allow this connection, but at this stage I cannot say what we would do.
If someone asks for a single 7.5MVA connection then yes we may ask for a new primary site.
I hope this helps
Thanks

Dennis W Snelgrove
Design Team Leader (York)
Lysander Close York
Tel 01132 274361
Mobile 07834 962306

From: Jillian Hardie [mailto:Jillian.Hardie@arup.com]
Sent: 30 May 2014 12:48
To: Snelgrove, Dennis
Subject: RE: Clifton Gate existing capacity

Dennis,

I have rechecked the maximum demand based on the following changes:

- 3200 dwellings, with some 6star flats in the town centre
- 2 supermarkets
- 30 small retail units
- 2 schools
- Small mix of office/leisure

With this in mind I am now at an M.D of 7.5MW. Can you please advise if this would warrant a primary sub?

Can you please give me a call to discuss?

Kind regards,
Jillian

Jillian Hardie
Associate | Buildings Electrical

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From: Snelgrove, Dennis [mailto:Dennis.Snelgrove@northernpowergrid.com]
Sent: 08 May 2014 19:17
To: Jillian Hardie
Subject: RE: Clifton Gate existing capacity

Jillian
Thank you for the email
The 6MW was based on the spare capacity we have on the existing primary substation, so I assumed that we would need a new primary if the load exceeded that. The installation of a primary substation would be the last option as the cost and the area required is very high. If the load is as high as 24MW (I think this very unlikely) then we would have no option but to install a primary substation as this level of load is not available on any of the existing primary substations.
Please remember that our network is continually changing and it could be a different requirement in the future.
I hope this helps
Thanks

Dennis W Snelgrove
Design Team Leader (York)
Lysander Close York
Tel 01132 274361
Mobile 07834 962306

From: Jillian Hardie [mailto:Jillian.Hardie@arup.com]
Sent: 08 May 2014 11:58
To: Snelgrove, Dennis
Subject: RE: Clifton Gate existing capacity

Hi Denis,

I was wondering if it would be able to provide a rough 'tipping point' for requiring a primary substation?

I note from your correspondence on the 30th of January that a primary substation would not be required if the load was 6MW (based on a 1.5kW peak house load) but would be required if the load was 24MW (based on a 6kW peak house load). Obviously this is quite high. Is there a point at which a primary substation would definitely be required?

Kind regards,
Jillian

Jillian Hardie
Associate | Buildings Electrical

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From: Snelgrove, Dennis [mailto:Dennis.Snelgrove@northernpowergrid.com]
Sent: 14 April 2014 12:23
To: Jillian Hardie
Subject: RE: Clifton Gate existing capacity

Jillian
I have added some comments below that I hope will help.
As I have indicated at this high level I do not want to say something that will lead you to believe that connections can be made and then find out that it is very costly so I am sorry if I appear unhelpful.
Thanks

Dennis W Snelgrove
Design Team Leader (York)
Lysander Close York
Tel 01132 274361
Mobile 07834 962306

From: Jillian Hardie [mailto:Jillian.Hardie@arup.com]
Sent: 14 April 2014 11:21
To: Snelgrove, Dennis
Cc: Derek Devereaux; Alastair Gordon
Subject: RE: Clifton Gate existing capacity

Hi Denis,

Thanks for taking my call. I understand at this point you have concerns about providing firm advice without a more developed plan. At this stage we are trying to gauge high level advice that may have an impact on the development. From our conversation, my understanding of current position is as follows:

- There is limited capacity available. At this stage up to 250 dwellings could be supplied without the need for a substation on the site.***[Dennis Snelgrove]*** We will need a substation on the site, but we should not need to reinforce the network back to the primary substation.
- Infrastructure will come from the Clifton Moor Retail side of the Ring road and therefore require a crossing point into the development***[Dennis Snelgrove]*** Correct unless we can get some smaller loads from the existing high voltage overhead network.
- The position of the crossing will need to take into account the existing retail park on the south side of the ring road. In order to jet track under the road, a distance of up to 25m could be required behind the road to place the equipment, depending on depth of trench. ***[Dennis Snelgrove]*** Correct
- Failing this it may be possible complete via open cutting with a partial road closure. It would be beneficial to coordinate this with any other authority trenching works. ***[Dennis Snelgrove]*** Correct
- The makeup of the 'mixed use' will impact on the requirements and hence infrastructure required, as will the size of the schools. ***[Dennis Snelgrove]*** The size and usage of the different customers will impact on the overall capacity required. I have assumed around 2 to 2.5kW per domestic property. This will increase for commercial so the overall numbers that can be connected will reduce.

- The position of the substation will have a impact on associated costs. Can you please confirm the maximum distance from substation to dwelling? ***[Dennis Snelgrove]*** Substation feeders can be as long as 300m however if the dwellings have generation installed, or larger commercial load is connected then this will reduce considerably and may be as low as 100m. Property size, heating load, generation and usage all impact on the overall power required and the design needed to provide that power.

Please let me know if any of the above is incorrect.

Kind regards,
Jillian

Jillian Hardie
Associate | Buildings Electrical

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From: Jillian Hardie
Sent: 14 April 2014 10:41
To: 'Dennis.Snelgrove@northernpowergrid.com'
Cc: Derek Devereaux; Alastair Gordon
Subject: RE: Clifton Gate existing capacity

Morning Denis,

As discussed, please find attached the Masterplan Layout for Clifton Gate.

The Housing is a mixture of medium density in the centre, majority of low density and very low density on the outskirts of the development. The average density will be approximately 35 dwellings per hectare. This will most likely be a mixture of 2-3 storey terrace, semi and detached.

I will give you a call to discuss further.

Kind regards,
Jillian

Jillian Hardie
Associate | Buildings Electrical

Arup
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From: "Snelgrove, Dennis" <Dennis.Snelgrove@northernpowergrid.com>
Date: April 10, 2014 at 8:32:30 GMT+1
To: Derek Devereaux <Derek.Devereaux@arup.com>
Subject: RE: Clifton Gate existing capacity

Derek
This is a difficult one. The amount we can accept will depend upon several things, layout of the site, heating type, size of property and the area that will be initially developed.
Although we may have some capacity available the amount that can usefully be used on a site is the hard part.
I do think we could probably get around 250 dwellings without major reinforcement as we will need to bring cables onto the site from the main area anyway.
If we was looking at just the infrastructure at that site of the road then this will drop to around 100 dwellings (best guess).
As I have indicated the details are everything and if you have them then I will be able to make a better assessment.
I hope this helps
Thanks

Dennis W Snelgrove
Design Team Leader (York)
Lysander Close York
Tel 01132 274361
Mobile 07834 962306

-----Original Message-----
From: Derek Devereaux [mailto:Derek.Devereaux@arup.com]
Sent: 10 April 2014 08:18
To: Snelgrove, Dennis
Cc: Alastair Gordon; Jillian Hardie
Subject: Clifton Gate existing capacity

Hi Dennis,

Our clients have got in touch chasing confirmation of likely scale of development that can be supported without re -inforcement.

It would be great if you could get back to me ASAP so we can progress an update.

Kind Regards

Derek

Sent from my iPhone

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