ARMSTRONG STOKES & CLAYTON LIMITED

Civil & Structural Engineering Consultants



Mintondale Developments Ltd

Land North of Radstone Fields Brackley Northamptonshire

Foul Sewerage & Utilities Statement

October 2020

AUTHOR:	JS
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APPROVED:	JS
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1.0 INTRODUCTION

- 1.1 This Foul Sewerage and Utilities Statement has been produced by Armstrong Stokes & Clayton on behalf of Mintondale Developments Ltd in support of the proposed development of land to the north of Radstone Fields, Brackley, Northamptonshire.
- 1.2 The application site has a total gross area of approx. 29.87 ha and lies to the north of the current Radstone Fields development, and to the east of Halse Road, Brackley. The proposed developable area of the residential element equates to 12.86 ha, with sports pitches, recreational areas, open space, and land reserved for biodiversity making up the remaining area of the total site. An OS based location plan and proposed development plan are included within Appendix A.
- 1.3 It is proposed to develop the site to accommodate circa 450 residential dwellings with associated access roads, parking, and open spaces. In addition, sports pitches, recreational land, and biodiversity areas are to be promoted, situated to the northern portion of the site.
- 1.4 The following statement outlines the foul sewerage and utility assessment for the application site. Information on the foul sewer proposals along with a detailed surface water drainage strategy for the development is outlined within Armstrong Stokes & Clayton Limited Flood Risk Assessment & Drainage Strategy Report dated October 2020, which accompanies the planning application.

2.0 FOUL DRAINAGE

2.1 A Pre-Planning Assessment report has been prepared by Anglian Water for the application site. It confirms that there are no public sewers within or adjacent to the site. A copy of the Pre-Planning Assessment report is included within Appendix B. The report states that foul drainage from this development site will fall within the catchment of Brackley (New) Water Recycling Centre (WRC), which currently does not have sufficient capacity to treat flows that would be generated

by this development proposal. Anglian Water, are however, obliged in accordance with the Water Industry Act 1991 to accept foul flows from this site, and would therefore take the necessary steps to ensure that there is sufficient treatment capacity should the site obtain a planning consent.

- 2.2 Based on a proposed residential development of circa 450 residential dwellings @ 4000 l/unit/day, the peak foul discharge from the residential element of the development will be approx. 21.0 l/s.
- 2.3 Anglian Water has confirmed within their Pre-Planning Assessment Report and subsequent correspondence that insufficient capacity currently exists within the WRC to treat this level of foul flow. In addition, it is likely that a 225mm diameter sewer will be required to facilitate a gravity discharge from this development, with the nearest public sewer of equivalent diameter to accept such a connection at Manhole 0503, located at the junction of Humphries Drive / Falcon Way / Nightingale Close, situated less than 1.0km to the south. However, whilst this is currently regarded as a suitable connection point by the water authority, they confirm there is currently insufficient capacity within the network to accommodate the flows generated by the proposed development. Figures 1 and 2 below highlight the possible connection point.



Figure 1 – Foul Connection Point



Figure 2 – Foul Connection Point

- 2.4 Within Anglian Water's report they have suggested that they should undertake a further assessment to establish where capacity needs to be provided within the network, along with the best point of connection.
- 2.5 We understand that the applicant has negotiated a right of connection to a 150mm diameter sewer within the adjoining Radstone Road residential development. However, with consideration of the run-off to be generated by the development, any connection to this sewer would result in a requirement for on-site attenuation, as a 150mm diameter sewer, and the downstream network, will not have sufficient capacity to accept a free discharge generated by the development proposals. In addition, and in the short term, depending on the timing of Anglian Water upgrades, there may also be a requirement to include for on-site attenuation whilst the public sewer network is upgraded sufficiently to accommodate a free flow from this site.
- 2.6 Depending on the phasing of the development, it may be that an initial phase of development could discharge to the 150mm diameter sewer; however this would depend on the plot numbers proposed, measured against available capacity within the existing sewer and downstream network.

- 2.7 As it is apparent that further negotiations are required with the water authority, and that they ultimately need to undertake a detailed assessment of their network capacity when considering the whole development proposals, it serves little purpose, at this juncture, in estimating the potential attenuation required, if ultimately any is necessary. Anglian Water are obliged in accordance with the Water Industry Act 1991 to accept foul flows from this development subject to it gaining a planning permission, and thus, initially it is recommended that further negotiations are undertaken with the water authority to ascertain timelines for network upgrades, acceptable discharge rates and likely connection points. This has been acknowledged by the water authority within their report and subsequent correspondence.
- 2.8 Assessing the topography of the site and adjoining land; and depending on the final location of the connection to the public sewer network, the residential element would appear to drain via gravity towards the existing network. However, at detailed design stage a full assessment of the outfall route will be necessary to ensure it can negotiate existing utilities and other infrastructure that may obstruct a gravity outfall.
- 2.9 It is anticipated that the main on-site foul drainage network that will ultimately serve the development proposals, will be offered to Anglian Water for adoption under Section 104 of the Water Industry Act 1991.
- 2.10 A connection to the public sewer network will be undertaken in accordance with a Section 106 of the Water Industry Act 1991.

3.0 UTILITIES

Electricity

- 3.1 Western Power Distribution (WPD) plans have been sourced which indicate that an overhead 33kV cable crosses the site which includes the area of the proposed residential development. In addition, 132kV overhead lines cross the field parcel to the north and the land reserved for Biodiversity. The Brackley Primary Sub-station also exists to the south east of the development.
- 3.2 The 33kV overhead line that crosses the residential element will require diverting and installing as an underground cable. WPD have highlighted they will install approximately 1km of 33kV cable along the southern site boundary and Halse Road to facilitate this diversion. An offer of £413,284.72 has been previously issued to the applicant by WPD to undertake the aforementioned diversion works.
- 3.3 With regards to a new supply for the residential development, an enquiry has been submitted to WPD to ascertain whether there is sufficient capacity within the local network, along with an initial strategy and point of connection to serve development proposals of 450 residential dwellings. A response from WPD is enclosed within Appendix C and highlights a budget estimate of £1,376,654.64 (incl. VAT) to connect the proposed development.
- 3.4 The budget estimate is broken down as follows:
 - Non-Contestable Connection Works £17,947.13
 - Contestable Connection Works £1,129,265.07
 - VAT £229,442,44

The contestable works can be provided by an independent IDNO.

- 3.5 The point of connection will be from the existing HV (11kV) network adjacent to the Brackley Primary Sub-Station, illustrated as Point of Connection 1 on the WPD plan within Appendix C.
- 3.6 From the connection point WPD will install a new HV (11kV) network through the site and have confirmed that to supply the development their initial estimate is that 4 no. Sub-stations will be required, with locations focused, where possible, near the load centres, but positioned approximately 200m apart. The Sub-stations will be ground mounted situated in an area requiring circa 4.0 x 4.0m.
- 3.7 The estimate assumes that WPD will install the LV cables from the Sub-stations to each plot. The budget estimate assumes that the developer will undertake the civils work i.e. on-site excavation works.

Gas

- 3.8 There exists a medium pressure gas main crossing the residential element of the development. A 6.0m wide no-build easement will need to be established either side of the main prior to any permanent structures being constructed. The proposed development masterplan provides this easement, with the main included within a green corridor.
- 3.9 The applicant does not propose to supply the development with a mains gas supply.

Water

3.10 There exists 280mm HPPE and 6" AC water mains within the eastern footway / verge of Halse Road, with a 6" AC water main within The Worlidge, which turns north and runs along the western boundary of the northern field parcel. A 6.0m wide no-build easement will need to be established either side of the main prior to any permanent structures being constructed. As the northern parcel consists of football pitches and open space sufficient land is available to accommodate the

necessary easements. Further in-situ investigation will be required to ascertain the exact depth and location of the Anglian Water mains to determine the level of protection required at the proposed points of access for the development. However, an initial budget estimate of £75,000.00 for diverting 75.0m of mains has been previously promoted.

- 3.11 Anglian Water have advised that the site benefits from strategic off-site potable water mains highlighted above, however there is insufficient capacity within the localised network to supply the development and therefore off-site local reinforcements will be required.
- 3.12 The local reinforcement works required to restore pressures in the existing Radstone Fields development area are estimated to include 2.3km of 355mm HPPE reinforcement from the outlet of meter GRT2WM at Thorpe Lodge to Marston St Lawrence. In addition, and with consideration of the site topography and to ensure 20m (2bar) on-site pressures at all times, the site will require a local water booster. The water booster will require a lift of 6m at a peak flow of 9.845 l/s. The cost of these works will be included within the infrastructure charge.
- 3.13 Infrastructure charge per dwelling is £340.00, which for 450 dwellings equates to a total of £153,000.00. Infrastructure discount for the development in line with Ofwat's charging rules dated April 2020 is available however at £400.00 per dwelling, which will equate to a discount of £180,000.00 for 450 units.
- 3.14 The estimated cost for the on-site water main supply for the development is £270,000.00. However, a detailed cost breakdown will be provided on receipt of a formal application to Anglian Water. Alternatively, the on-site main can be delivered by a self-lay provider under terms set out in Anglian Water's self-lay agreement.
- 3.15 The connection point for the site will be from the existing water main in Halse Road. The development should be connected to the 280mm HPPE main in Halse Road with a 225mm HPPE SDR17 connection and pipework.

The off-site works will be required at between 50-100 properties, which is likely to be after year 1 build, but is ultimately dependent on the final developer's build schedule. Anglian Water have advised that the reinforcement works could take a minimum of 18 months to complete. A copy of the Anglian Water Pre-Planning Assessment report is included within **Appendix B**.

Telecom

- 3.16 BT Openreach indicate that there is an underground cable and duct within the eastern footway / verge of Halse Road. A diversion or protection of the apparatus may be required to facilitate the development vehicular access points. Further insitu investigation will be required to ascertain the exact depth and location of their plant to determine the level of protection required at the proposed points of access. However, an initial budget estimate of £55,000.00 for diverting 75.0m of cable has been previously promoted.
- 3.17 BT Openreach will provide 'Fibre to the Premises' (FTTP) for the development to enable communication providers to supply consumers. BT Openreach will supply materials such as ducts and joint boxes free of charge sufficient to construct the network, however it is the responsibility of the developer or their appointed contractor to install the ducts and joint boxes in accordance with BT Openreach's specification.

Utility Records

3.18 Within **Appendix D** is a copy of the relevant utility companies record plans.

APPENDIX A





Land North of Radstone Fields, Brackley

Mintondale Developments

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drawing no.	LB01	drawing	Illustrative Masterplan
revision	1	scale	Refer to scale bar
drawn by	CJM	checked by	AR
date	06/11/2020	job no.	462784

Site Boundary

Retained Land

Proposed Residential Development

Proposed Residential Frontages

Proposed Primary Vehicular Access Points

Proposed Secondary Vehicular Access Points

Existing Medium Pressure Gas Main

Existing Bus Route through Radstone Fields

Proposed Bus Route Extension through Radstone Fields

Existing Public Rights of Way

Proposed Pedestrian Connections

Proposed Footpath Along Halse Road

Indicative Footpath / Cycle Network

Proposed Primary Road / Bus Loop

Existing Vegetation

Proposed Open Space

Call Option Recreation Land

Land Reserved for Biodiversity Net Gain

Formal Sports / Recreational Land

Proposed Location of Cemetery / Allotments

Proposed Car Park for associated Formal Sports / Recreational Land

Proposed Children's Play Area

Proposed Location of Attenuation Basins

Urban Design Studio



APPENDIX B

From: Rhodes Mark <<u>mRhodes@anglianwater.co.uk</u>> Sent: 09 November 2020 11:57 To: jonbullock@armstrongstokesclayton.co.uk Subject: PPE-0105595 - Radstone Fields

Hello Jon,

Further to our telephone conversation this morning, there is an alternative 225mm foul sewer that may be more convenient to serve as the connection point for your site.

Manhole 0503 located in Humphries Drive/Falcon Way at NGR SP5803238564.





As per our previous response, we have assessed the impact of connecting the foul flows from the planned development to this point and unfortunately there is insufficient capacity in this sewer to accommodate your site. Consequently, we must consider an alternative foul water drainage strategy. An alternative strategy may involve connecting to a different point on the network or introducing some control on the flow discharged from the development. Anglian Water will reimburse reasonable costs incurred in connecting to the recommended connection point, over and above those required to connect to the nearest point of connection. In order to define a feasible alternative foul water drainage strategy we will need to understand your onsite drainage design in greater detail.

I'll for arrange with you Pre-Planning Report to be revised to reflect the above connection point as your preferred point of connection.

Kind Regards



Mark Rhodes Pre-Development Senior Engineer (West) Telephone: 07980756440

Anglian Water Services Limited Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 6WT





Pre-Planning Assessment Report

Radstone Fields

InFlow Reference: PPE-0105595

Assessment Type: Water & Used Water

Report published: 26/10/2020



Thank you for submitting a pre-planning enquiry.

This has been produced for Armstrong Stokes & Clayton Limited Civil & Structural Engineering Consultants.

Your reference number is **PPE-0105595**.

This report can be submitted as a drainage strategy for the development should it seek planning permission.

If you have any questions upon receipt of this report, you can submit a further question via InFlow. Alternatively, please contact the Planning & Capacity team on **0345 60 66 087**, Option 1 or email planningliaison@anglianwater.co.uk

Section 1 - Proposed development

The response within this report has been based on the following information which was submitted as part of your application:

List of planned developments			
Type of development	No. Of units		
Dwellings	450		

The anticipated residential build rate is:

Year	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
Build rate	80	120	120	130	0	0	0	0	0

Development type:	Greenfield
Planning application status:	Unknown
Site grid reference number:	SP5813139179

The comments contained within this report relate to the public water mains and sewers indicated on our records.

Your attention is drawn to the disclaimer in the useful information section of this report.

Section 2 - Assets affected

Our records indicate that we have the following types of assets within or overlapping the boundary of your development site as listed in the table below.

Additionally, it is highly recommended that you carry out a thorough investigation of your proposed working area to establish whether any unmapped public or private sewers and lateral drains are in existence. We are unable to permit development either over or within the easement strip without our prior consent. The extent of the easement is provided in the table below. Please be aware that the existing water mains/public sewers should be located in highway or open space and not in private gardens. This is to ensure available access for any future maintenance and repair and this should be taken into consideration when planning your site layout.

Water and Used water easement information			
Asset type	Pipe size (mm)	Total easement required (m)	
Water mains	299	6.00 m either side of the centre line	
Water mains	295	6.00 m either side of the centre line	
Water mains	146	4.50 m either side of the centre line	
Water mains	154	6.00 m either side of the centre line	
Water mains	252	6.00 m either side of the centre line	

If it is not possible to avoid our assets then these may need to be diverted in accordance with Section 185 of the Water Industry Act (1991). You will need to make a formal application if you would like a diversion to be considered.

Due to the private sewer transfer in October 2011 many newly adopted public used water assets and their history are not indicated on our records. You also need to be aware that your development site may contain private water mains, drains or other assets not shown on our records. These are private assets and not the responsibility of Anglian Water but that of the landowner.

Section 3 - Water supply

In examining the available capacity for your development site we assess the capacity and costs for two categories of water main. These are:

Strategic

These are the offsite potable water mains which deliver water within an area to a large number of development sites often across a number of towns. The strategic provision of these water mains enables us to provide of the cheapest solution across a large geographical area.

Local reinforcement

These are localised reinforcement mains to enable us to provide water to your development site. On most sites we also have two categories of water mains the Spine Mains and Housing Estate Mains (HEMs). To support your budgeting arrangements we have also examined the estimated cost for delivering the onsite water mains needed for a site of your size.

Water supply network

Your site will benefit from the strategic water main(s) as listed below. This strategic scheme has been designed to cater for the predicted growth in this area. In addition, there is also insufficient capacity in the localised network to supply your site and therefore offsite local reinforcements are needed. Details of the necessary upgrades can be found in the water infrastructure section of this report and the cost of these works are included in the infrastructure charge. If you wish to proceed with the development then you will need to complete an application for a new supply.

This is recommended to be done at the earliest opportunity as it could take a minimum of 18 months months to install any offsite reinforcement works. The connection point for the site will be from the existing water main in Halse Road.

The development should be connected to the 280mm HPPE main in Halse Road with a 225mm HPPE SDR17 connection and pipework.

The offsite works will be required at between 50-100 properties which in relation to the developers build schedule is after year 1 (80 properties).

Connection point(s)

Connection Point	Address	National Grid Reference (NGR)
CP-3370	Halse Road	SP5794338978

Water infrastructure and costs

In order to supply your site, the following upgrades are required:

Strategic Water Mains	Based on
Brownfield	7.529

Estimated Local reinforcement Mains	Based on
Thorpe Lodge to Marston St Lawrence	To restore pressures in the existing Radstone Fields development areas will require 2.3km of 355mm HPPE reinforcement from the outlet of meter GRT2WM at Thorpe Lodge WR. Start grid ref SP5221944292, end grid ref SP5329042254.
Radstone Fields local WB	The site has a high point estimated from contours and spot heights of 153m AOD, and the elevation of the PoC is estimated at 149m AOD. To ensure 20m onsite pressures at all times, the site will require a local water booster. The WB will require a lift of 6m at a peak flow of 9.845 l/s. This will be Site Specific. Based on maintaining 20m at the high point AOD

Your development site will be required to pay an **infrastructure charge** for each new property connecting to the public sewer that benefits from Full planning permission.

You will be required to pay an infrastructure charge upon connection for each new plot on your development site. The infrastructure charge are types of charges set out in Section 146(2) of the Water Industry Act 1991

The charge should be paid by anyone who wishes to build or develop a property and is payable upon request of connection.

Payment of the infrastructure charge must be made before premises are connected to the public sewer.

Infrastructure charge for water	
Anglian Water supply	£ 340.00

The **infrastructure discount** is a new element, introduced to reflect the changes in Ofwat's charging rules from April 2020.

The discount is £400.00 for each connection to the water supply network in the Anglian Water area.

Due to the changes in the charging rules, any discount must now be applied to the infrastructure charge rather than the requisition charge. This has provided us the opportunity to offer the discount (via the infrastructure charge) not just to water main requisitioners, but to those seeking water connections too.

Infrastructure charges are raised on a standard basis of one charge per new connection (one for water and one for sewerage). However, if the new connection is to non-household premises, the Infrastructure charges is calculated according to the number and type of water fittings in the premises. This is called the "relevant multiplier" method of calculating the charge.

Details of the relevant multiplier for each fitting can be found at our website.

The Water Infrastructure charge for your dwellings is:

Infrastructure charge	Number of units	Total
£ 340.00	450	£ 153000.00

The Infrastructure discount for your dwellings is:

Infrastructure discount	Number of units	Total
-£ 400.00	450	-£ 180000.00

The estimated cost for the onsite water main for your development is:

Onsite water main	£
Estimated cost of delivery	£ 270,000.00

Please note, a detailed cost breakdown will be provided on receipt of a formal application for a new water main.

Alternatively, you may wish to have the onsite main delivered by a Self-lay Provider under terms set out in a self-lay agreement.

For more information on water mains and self-lay of water mains, please visit our website

Section 4 - Water recycling services

In examining the used water system we assess the ability for your site to connect to the public sewerage network without causing a detriment to the operation of the system. We also assess the receiving water recycling centre and determine whether the water recycling centre can cope with the increased flow and effluent quality arising from your development.

Water recycling centre

The foul drainage from this development is in the catchment of Brackley (New) Water Recycling Centre, which currently does not have capacity to treat the flows from your development site. Anglian Water are obligated to accept the foul flows from your development with the benefit of planning consent and would therefore take the necessary steps to ensure that there is sufficient treatment capacity should the planning authority grant planning permission.

Used water network

Our assessment has been based on development flows connecting to the nearest accessible foul water sewer of the same size or greater pipe diameter to that required to drain the site. The infrastructure to convey foul water flows to the receiving sewerage network is assumed to be the responsibility of the developer. Conveyance to the connection point is considered as Onsite Work and includes all work carried out upstream from of the point of connection, including making the connection to our existing network. This connection point has been determined in reference to the calculated discharge flow and on this basis, a 225mm internal diameter pipe is required to drain the development site. The nearest network connection point that meets this criteria is at manhole 5904 at SP5855837952, located in Halse Road. Anglian Water has assessed the impact of connecting the foul flows from the planned development to this point and unfortunately there is insufficient capacity in this sewer to accommodate your site. Consequently, we must consider an alternative foul water drainage strategy. An alternative strategy may involve connecting to a different point on the network or introducing some control on the flow discharged from the development. Anglian Water will reimburse reasonable costs incurred in connecting to the recommended connection point, over and above those required to connect to the nearest point of connection. In order to define a feasible alternative foul water drainage strategy we will need to understand your onsite drainage design in greater detail. Therefore, we would like to arrange a meeting to examine the available options and establish an effective strategy. Mark Rhodes, our Pre-Development Senior Engineer for this area and will be responsible for evaluating the foul water drainage strategy. We'd grateful if you could advise Mark of your availability for a meeting and a convenient venue or alternatively a conference call can be arranged if this is more convenient. For your reference, Mark can be contacted at 07980 756440 or mrhodes@anglianwater.co.uk Please note that Anglian Water will request a suitably worded condition at planning application stage to ensure this strategy is implemented to mitigate the risk of flooding.

It is assumed that the developer will provide the necessary infrastructure to convey flows from the site to the network. Consequently, this report does not include any costs for the conveyance of flows.

Surface water disposal

You indicated on the Pre-Planning Application form that a connection to the public surface water sewer network is not required. A new surface water sewer can be used as a mechanism to discharge surface water to a watercourse or as part of a Suds scheme where appropriate. Subject to the sewer being designed in accordance with the current version of Sewers For Adoption, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991. If the outfall is to a watercourse, the applicant will be required to obtain consent to discharge via the appropriate body. Therefore a capacity assessment has not been made on the public surface water network. However, should this situation change and you wish to have a surface water connection assessment on the local network, then we will provide this free of charge if requested within 12 months of this report and you are able to provide the relevant evidence that your original strategy was unviable.

As you may be aware, Anglian Water will consider the adoption of SuDs provided that they meet the criteria outline in our SuDs adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and Lead Local Flood Authority (LLFA), to the criteria within our SuDs adoption manual. Specifically, developers must be able to demonstrate:

- 1. Effective upstream source control,
- 2. Effective exceedance design, and
- 3. Effective maintenance schedule demonstrating than the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDs then an expression of interest form can be found on our website

As the proposed method of surface water disposal is not relevant to Anglian Water; we suggest that you contact the relevant Local Authority, Lead Local Flood Authority, the Environment Agency or the Internal Drainage Board, as appropriate.

Trade Effluent

We note that you do not have any trade effluent requirements. Should this be required in the future you will need our written formal consent. This is in accordance with Section 118 of the Water Industry Act (1991).

Used Water Budget Costs

Your development site will be required to pay an infrastructure charge for each new property connecting to the public sewer that benefits from Full planning permission.

You will be required to pay an infrastructure charge upon connection for each new plot on your development site. The infrastructure charge are types of charges set out in Section 146(2) of the Water Industry Act 1991

The charge should be paid by anyone who wishes to build or develop a property and is payable upon request of connection.

Payment of the infrastructure charge must be made before premises are connected to the public sewer.

Infrastructure charge for water recycling:	£ 570.00
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The Water Recyling Infrastructure charge for your dwellings is:

Infrastructure charge	Number of units	Total
£ 570.00	450	£ 256500

Infrastructure charges are raised on a standard basis of one charge per new connection (one for water and one for sewerage). However, if the new connection is to non-household premises, the fixed element is calculated according to the number and type of water fittings in the premises. This is called the "relevant multiplier" method of calculating the charge.

Details of the relevant multiplier for each fitting can be found at our website.

It has been assumed that the onsite used water network will be provided under Section 104 of the Water Industry Act

It is recommended that you also budget for connection costs.

Please note that we offer alternative types of connections depending on your needs and these costs are available at our website.

Section 5 - Map of Proposed Connection Points

Figure 1:Showing your water point of connection

Section 6 - Useful information

Water Industry Act – Key water sections

Section 41:

This provides you with the right to requisition a new water main for domestic purposes to connect your site to the public water network.

Section 45:

This provides you with the right to have a connection for domestic purposes from a building or part of a building to the public water main.

Section 51A - E:

This provides you with the right to provide the water main or service connection yourself and for us to vest them into our company.

Section 55:

This applies where you request a supply of water for non-domestic purposes.

Section 185:

This provides you with the right to make a reasonable request to have a public water main, sewer or public lateral drain removed or altered, at your expense.

Details on how you can make a formal application for a new water main, new connection or diversion are available on from our Development Services team on **0345 60 66 087** or via our website

If you have any other queries on the rights to requisition or connect your housing to the public water and sewerage infrastructure then please contact our Development Services team at:

Anglian Water PO Box 495 Huntingdon PE29 6YY

Telephone: 0345 60 66 087 Email: developmentservices@anglianwater.co.uk

Water pressure and flow rate

The water pressure and consistency that we must meet for your site is laid out in the Water Industry Act (1991). This states that we must supply a flow rate of 9 litres per minute at a pressure of 10 metres of head to the external stop tap. If your water pressure requirements exceed this then you will need to provide and maintain any booster requirements to the development site.

Self-lay of water mains

A list of accredited self-lay provider organisations can be found on the Lloyds Registrar website

Water Industry Act – Key used water sections Section 98:

This provides you with the right to requisition a new public sewer. The new public sewer can be constructed by Anglian Water on your behalf. Alternatively, you can construct the sewer yourself under section 30 of the Anglian Water Authority Act 1977.

Section 102:

This provides you with the right to have an existing sewerage asset vested by us. It is your responsibility to bring the infrastructure to an adoptable condition ahead of the asset being vested.

Section 104:

This provides you with the right to have a design technically vetted and an agreement reached that will see us adopt your assets following their satisfactory construction and connection to the public sewer.

Section 106:

This provides you with the right to have your constructed sewer connected to the public sewer.

Section 185

This provides you with the right to have a public sewerage asset diverted.

Details on how to make a formal application for a new sewer, new connection or diversion are available on our website or via our Development Services team on **0345 60 66 087**.

Sustainable drainage systems

Many existing urban drainage systems can cause problems of flooding, pollution or damage to the environment and are not resilient to climate change in the long term.

Our preferred method of surface water disposal is through the use of Sustainable Drainage Systems or SuDS.

SuDS are a range of techniques that aim to mimic the way surface water drains in natural systems within urban areas. For more information on SuDS, please visit our website

We recommend that you contact the Local Authority and Lead Local Flood Authority (LLFA) for your site to discuss your application.

Private sewer transfers

Sewers and lateral drains connected to the public sewer on the 1 July 2011 transferred into Water Company ownership on the 1 October 2011. This follows the implementation of the Floods and Water Management Act (FWMA). This included sewers and lateral drains that were subject to an existing Section 104 Adoption Agreement and those that were not. There were exemptions and the main non-transferable assets were as follows:

Surface water sewers and lateral drains that do not discharge to the public sewer, e.g. those that discharged to a watercourse.

Foul sewers and lateral drains that discharged to a privately owned sewage treatment/collection facility.

Pumping stations and rising mains will transfer between 1 October 2011 and 1 October 2016.

The implementation of Section 42 of the FWMA will ensure that future private sewers will not be created. It is anticipated that all new sewer applications will need to have an approved section 104 application ahead of a section 106 connection.

It is anticipated that all new sewer applications will need to have an approved Section104 application ahead of a Section 106 connection

Encroachment

Anglian Water operates a risk based approach to development encroaching close to our used water infrastructure. We assess the issue of encroachment if you are planning to build within 400 metres of a water recycling centre or, within 15 metres to 100 metres of a pumping station. We have more information available on our website

Locating our assets

Maps detailing the location of our water and used water infrastructure including both underground assets and above ground assets such as pumping stations and recycling centres are available from digdat

All requests from members of the public or non-statutory bodies for maps showing the location of our assets will be subject to an appropriate administrative charge.

We have more information on our website

Charging arrangements

Our charging arrangements and summary for this year's water and used water connection and infrastructure charges can be found on our website

Section 7 - Disclaimer

The information provided in this report is based on data currently held by Anglian Water Services Limited ('Anglian Water') or provided by a third party. Accordingly, the information in this report is provided with no guarantee of accuracy, timeliness, completeness and is without indemnity or warranty of any kind (express or implied).

This report should not be considered in isolation and does not nullify the need for the enquirer to make additional appropriate searches, inspections and enquiries. Anglian Water supports the plan led approach to sustainable development that is set out in the National Planning Policy Framework ('NPPF') and any infrastructure needs identified in this report must be considered in the context of current, adopted and/or emerging local plans. Where local plans are absent, silent or have expired these needs should be considered against the definition of sustainability holistically as set out in the NPPF.

Whilst the information in this report is based on the presumption that proposed development obtains planning permission, nothing in this report confirms that planning permission will be granted or that Anglian Water will be bound to carry out the works/proposals contained within this report.

No liability whatsoever, including liability for negligence is accepted by Anglian Water or its partners, employees or agents, for any error or omission, or for the results obtained from the use of this report and/or its content. Furthermore, in no event will any of those parties be liable to the applicant or any third party for any decision made or action taken as a result of reliance on this report.

This report is valid for the date printed and the enquirer is advised to resubmit their request for an up to date report should there be a delay in submitting any subsequent application for water supply/sewer connection(s).

APPENDIX C



Budget Estimate

Armstrong Stokes & Clayton Limited Regus House Herald Way Pegasus Industrial Park DE74 2TZ

Our ref 3799263 Western Power Distribution 5 Kilvey Road Northampton NN4 7BQ

Telephone: 01604 875517 Email: gshill@westernpower.co.uk Date 30/10/2020

Dear Sirs,

Budget Estimate for electricity connection works by Western Power Distribution (East Midlands) plc ("WPD") for a Domestic development at Halse Road, Brackley, NN13 6LA

Thank you for your recent enquiry. I am pleased to provide an indication of WPD's likely costs to carry out the connection works for you ("the Budget Estimate").

Our estimate for this work is based upon the information you have provided and is shown below.

Estimated Connection Charge	Non-Contestable works	£17,947.13
	Contestable works	£1,129,265.07
	VAT at 20 %	£229,442.44
	Total	£1,376,654.64
arge	Contestable works VAT at 20 % Total	£17,947.13 £1,129,265.07 £229,442.44 £1,376,654.64

Non-Contestable works are those works that only WPD can undertake. It is possible for you to get someone else to quote for the contestable part of the works. For further information please visit our website: <u>https://westernpower.co.uk/Connections/Competition-in-Connections.aspx</u>

Your supply will have the following ele	ctrical char	racteristics	
Voltag	e 11kV		
Phase	three		
Agree Capac	d Import ity	2000kVA	
Agree Capac	d Export ity	0kVA	

Please note that the proposed works and estimated connection charge is for **guidance purposes** only and has been derived from a desk-top design exercise. It is non-binding and subject, in particular, to any legal permission, wayleaves and any other consents being successfully obtained. It is based on present day prices. It does not include the cost of any necessary on-site civil works, which should be provided by you at your expense.

Enclosures

Please also find enclosed:

- Our summary document entitled "Your Budget Estimate explained A guide outlining your options for obtaining an offer to connect to WPD's Distribution System"
- A drawing showing the indicative point of connection (POC) of the new assets to our existing distribution system, in relation to the proposed development. (CROWN NUMBER GH3799263)

Competition in Connections

The Budget Estimate is based upon WPD undertaking both the contestable and non-contestable connection works. You are able to seek competitive prices for some or all of the contestable elements.

You have the option to appoint an independent Connection Provider (ICP) or Independent distribution network operator (IDNO) to carry out some of the connection works, referred to as the Contestable Connection Works. Any connection works that can only be undertaken by WPD are referred to as Non-contestable Connection Works. See our enclosed Budget Estimate guide for more information.

Proposed Connection Works

Our estimate of the connection charge is for providing the following works:

Complete connections on existing network and supply and install HV & LV infrastructure The customer will complete all onsite excavation including civils works for substations. Legals will be required for substation positions

Please note that these proposals are based upon a desk top provisional investigation and no site visit or detailed study has been carried out.

The estimate does not include costs for any reinforcement or diversionary work that may be required, or for any environmental, earthing, or stability studies which may also be necessary, although these are generally only required for larger capacity connections.

Progression to Connection Offer stage

This Budget Estimate is not a legally binding contract, but sets out the amount we reasonably estimate we would require you to pay for the connection works under a formal Connection offer.

If you would like us to undertake a more detailed analysis, including an assessment of any network reinforcement required we can provide a formal Connection Offer. Further information regarding how to apply is provided in our enclosed summary guide.

Upon receipt of your application we will carry out detailed network studies to finalise the design of the connection works (and any associated reinforcement works), and provide a Connection Offer detailing the works required, the associated costs, timescales, payment terms and conditions for the connection.

If you have any queries regarding this Budget Estimate please do not hesitate to contact me via the contact details at the top of this letter.

Yours sincerely,

Graeme Hill Planner West Bucks & Milton Keynes

Customer	Connection Offer Breakdown	WESTERN POWER DISTRIBUTION Serving the Midlands, South West and Wales
		Page 1 of 3
Scheme Title: Halse Road Brackley 2MVA		
Enquiry Ref: 3799263 Scheme: 1465571	Version: 1 Date of Estimate: 30/10/2020	Designer: Graeme Hill
Summary		
Fees	£2,059.00	
Non-contestable connection works	£15,888.13	
Contestable connection works	£1,129,265.07	
0.4 7.4		
Sub Tota	al £1,147,212.20	
Total Connection Charge excluding VAT	£1.147.212.20	

Marker Tape (Mtrs)

Fees		Fees Cost
Assessment and Design	Connection greater than 1MVA and up to 3MVA at HV	£1,293.00
Land Rights	Wayleave(s)/easement(s) from third party owner(s)	£766.00
	Fees Sub-Total	£2,059.00

Description of Works	Quantity	Non-Contestable Charges	Contestable Charges
High Voltage Cable			
Earthing - copper conductor (Mtrs)	1200	£0.00	£9,849.93
High Voltage Cable 300mm ² (Mtrs)	3000	£0.00	£85,580.98
Install Cable in Footway/Roadway (Mtrs)	800	£0.00	£100,662.52
Install Cable in Unmade Ground (Mtrs)	100	£0.00	£3,485.39
Joint Hole in Footway/Roadway	4	£0.00	£4,146.24
Lay cable in trench or duct (Mtrs)	2900	£0.00	£39,606.11
Marker Tape (Mtrs)	3000	£0.00	£268.07
	Works Sub-Total	£0.00	£243,599.24
High Voltage Jointing			
Cable Identification	6	£320.26	£0.00
Cable Spiking	6	£320.26	£0.00
High Voltage Branch Joint	1	£1,659.45	£0.00
High Voltage Straight Joint	12	£0.00	£13,567.01
High Voltage Switching (Hrs)	24	£1,281.05	£0.00
High Voltage Termination	9	£959.45	£5,365.90
Parallel Checks (HV)	6	£640.52	£0.00
Phasing Checks	6	£320.26	£0.00
Pressure Testing	6	£1,281.05	£0.00
Travel		£459.40	£1,061.72
	Works Sub-Total	£7,241.70	£19,994.63
Low Voltage Cable			
Earth Rod	40	£0.00	£478.91
Lay cable in trench or duct (Mtrs)	15000	£0.00	£204,859.20
Lay service cable in trench or duct (Mtrs)	7500	£0.00	£58,113.12
Low Voltage Cable 185 mm ² (Mtrs)	15000	£0.00	£258,164.40

15000

£1,340.36

£0.00

	Custome	r Connect	ion Offer Bre	akdown	WES Ser	TERN POWER DISTRIBU
homo Titlo: Halco Bo	ad Brackley 2MVA					Page 2
nquiry Ref: 3799263	Scheme: 1465571	Version: 1	Date of Estimate:	30/10/2020	Designer:Graeme	e Hill
Description of Works	3			Quantity	Non-Contestable Charges	Contestable Charges
Single Phase Service (Cable (Mtrs)			7500	£0.00	£12,333.36
			We	orks Sub-Total	£0.00	£535,289.35
Low Voltage Jointing						
Low Voltage Branch Jo	pint			20	£0.00	£6.917.81
Low Voltage Link Box				5	£0.00	£4,055.58
Low Voltage Service Jo	pint			375	£0.00	£110,560.84
Low Voltage Stop End	Joint			40	£0.00	£13,944.60
Low Voltage Straight Jo	oint			40	£0.00	£12,806.03
Travel					£0.00	£12,583.67
			We	orks Sub-Total	£0.00	£160,868.59
O/H Mains-Additions	11 KV				I	
Dismantle Heavy Singl	e Pole			2	£344.96	£0.00
Erect double pole				2	£7,850.95	£0.00
Travel					£450.52	£0.00
			Wa	orks Sub-Total	£8,646.43	£0.00
Service Termination						
Fused cut-out - single p	ohase			750	£0.00	£42,504.7
Low Voltage CT Panel				1	£0.00	£1,224.21
Travel					£0.00	£2,476.57
			Wa	orks Sub-Total	£0.00	£46,205.49
Substation Plant						
Antenna Installation				2	£0.00	£3,082.48
Automation Package for	or RMU			2	£0.00	£14,414.4
Ground Mounted Trans	former 500kVA			2	£0.00	£23,230.24
Ground Mounted Trans	former 800kVA			2	£0.00	£29,260.0
Low Voltage Fuse Boa	rd/Cabinet			4	£0.00	£21,293.02
RMU Tx Mounted (TLF	= - 200A)			4	£0.00	£31,023.5
Travel					£0.00	£1,004.02
			Wa	orks Sub-Total	£0.00	£123,307.77
				Works Total	£15,888.13	£1,129,265.07

Notes:
Our charges include labour and materials as appropriate
VAT is not included in any costs in the Customer Connection Offer Breakdown
"LV", "HV", or "EHV" described within the Fees section above denotes the highest voltage of assets installed or worked upon including
any associated reinforcement or diversionary works

Glossary	
Extra High Voltage	In relation to this breakdown this is typically equipment operating at nominally 25,000V, 33,000V, 66,000V, and 132,000V
High Voltage (HV)	any voltage exceeding LV. In relation to this breakdown this is typically equipment operating at nominally 6,600V and 11,000V

Customer	Connection	Offer	Breakdown
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ving the Midlands, South West and Wales Page 3 of 3

Scheme Title: Halse Road Brackley 2MVA

Enquiry Ref: 3799263

Scheme: 1465571

Version: 1 Date of Estimate: 30/10/2020

0/10/2020 **Desig**

Designer: Graeme Hill

Low Voltage (LV)	a voltage up to 1000V phase to phase, or 600V phase to earth. In relation to this breakdown and supply voltage this is nominally 400/230V
Contestable	is work that may be carried out by WPD or by an accredited independent connections provider
Non-Contestable	is work that may only be carried out by WPD
Land Rights	is the Non-contestable element of any legal permissions to install and maintain plant or equipment. Where agreed, certain works may be carried out by an ICP.
Travel Time	is the cost associated with travelling to and from site



DRN CH	K'D WESTERN POWER N DISTRIBUTION Serving the Midlands, South West and Wales TITLE •Halse Road •Brackley
LINES 33KV L.V.	DEVELOPER. BUILDER. ARCHITECT Drg. No.
E STREET LTO POLE O STAY	 C.S. MAP. SCALE 1:10000 (a) A3 PARISH. 11kV DIAG. LV. DIAG. PLAN No. GH3799263
	Enq No. 3799263 1 of 1

APPENDIX D



WESTERN POWER						
Serving the Midlands, South West and Wales						
Contact U	<u>5</u>					
Mapping Enquiries:		General Enquiries:	General Enquiries:			
All areas	0121 623 9780	All areas	0800 096 3080			
Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA 0800 6783 105						
Date Requested: 08/05/2019						
Job Reference: 15470948						
Site Location: 457877 239527						
R	Requested by: Mr Shyam Joshi					

Your Scheme/Reference: 22764

IMPORTANT NOTICES

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present and may not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080

Overhead Line	Underground Cable
- 0	PL
- <u>o</u>	Service
- 	
	HV (66kV)
-X	HV (132kV)
SURF Telecoms	Pilot Cables
Link Box	
•	Pole Mounted Transformer
Site Location	
Line/AreaE	Underground Ground Mounted

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Contact Us Mapping Enquiries: All areas

General Enquiries: All areas

Date Requested: 08/05/2019 Job Reference: 15470948 Site Location: 457877 239527 Requested by: Mr Shyam Joshi Your Scheme/Reference: 22764

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. Safe digging practices, in accordance with HS (G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA 0800 111 999

Low Pressure Mains Medium Pressure Mains Intermediate Pressure Mains High Pressure Mains LAs GTs Some Examples Of Plant Items Valve Syphon O Depth of Cover Syphon O Depth of Cover Syphon O Depth of Cover Synthesis Cover Sy	SSSIs			
Linesearch before // dig				
This plan is reproduced from or bas Gas Networks plc, with the sancti Stationery Office. Crown Copyrigh 100044373 and Scotland	sed on the OS map by Scotia ion of the controller of HM nt Reserved. Southern Gas – Gas – 100044366.			



Our Ref: 310605 - 1 Clean Water Plan A0



THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

