



Land at Willington

SERVICE SUPPLY ASSESSMENT

Central England Co-operative





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SERVICE SUPPLY ASSESSMENT (RV2) PUBLIC

PROJECT NO. 70055040

OUR REF. NO. 70055040-SSA-001

DATE: AUGUST 2019

Land at Willington

SERVICE SUPPLY ASSESSMENT

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft for Comment	Updated after Client Comments	Amended to be unsigned for public review	
Date	August 2019	October 2019	April 2020	
Prepared by	Marcus Woodward	Aimee Durkin	Piriyasha Jeyanayagam	
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UTILITY LOAD ANALYSIS

1. INTRODUCTION

1.1. BACKGROUND

- 1.1.1. WSP has been appointed by Central England Co-operative to prepare a Service Supply Assessment to support the outline planning application at Land at Willington, Derbyshire (Post Code: DE65 6BU).
- 1.1.2. This report will outline the strategy for providing; gas, electricity and water supplies to the development, while also confirming the associated confirmed and potential costs.
- 1.1.3. Furthermore, this report summaries the findings of the study and addresses the following issues:
 - Existing network apparatus,
 - Supply requirements for the new development; and,
 - Consultations with the incumbent supply network operators

2. CONSULTATION

2.1.1. Ahead of production of this report, initial pre-application consultation requests were issued to the relevant stakeholders.

2.1.2. The following bodies have been consulted while completing the study:

Table 1 - Utility Suppliers

Utility	Supplier
Water Supply	South Staffs Water
Electricity	Western Power Distribution
Gas	Cadent Gas (formerly known as National Grid)

2.1.3. Each incumbent operator has been asked to provide written confirmation that the surrounding network has sufficient capacity to accommodate the development coupled with any reinforcements necessary.

2.1.4. The information received from the network operators is contained in Appendix B, and summarised in Table 2.

Table 2 - Supplier Correspondence

Stakeholder	Date Received	Comments
Western Power Distribution	14.03.19	Provided a Budget Letter confirming connection plan, capacity and cost; also an indicative connection point map; and a further Characteristics and Charge Statement of Costs.
Cadent	18.03.19	Gas plant mapping identifying possible connection point and associated confirmation of capacity. Provided a link to standard connection charges.
South Staffs Water	28.03.19	Provided a letter containing an indicative budget/costing for connection to the water network, confirming capacity and suggesting connection points.

3. SITE SETTING

LOCATION

- 3.1.1. The site is an undeveloped plot of greenfield agricultural land, located off of the Castle Way (A5132), Willington, South Derbyshire, DE65 6BU.
- 3.1.2. The site is bounded to the north by The Castle Way (A5132); to the south and east by the Trent and Mersey Canal; and to the west residential dwellings and a further agricultural field.
- 3.1.3. The site location plan is shown in **Figure 1**.

Figure 1 – Site Location



3.2. DEVELOPMENT PROPOSALS

- 3.2.1. The development proposal is for the construction of up to 40 dwellings on 0.76 hectares of land within the site boundary.

4. WATER SUPPLY

4.1. EXISTING CONDITIONS

- 4.1.1. South Staffs Water have been consulted regarding the location and capacity of the development area. Details of the water supply network have been purchased.
- 4.1.2. The plans identify three South Staffs Water mains within The Castle Way (A5132), to the north of the site. There is a 200mm Ductile Iron (DI) pipe network, a 6" Cast Iron (CI) pipe network and a 4" CI pipe network.
- 4.1.3. An extract of South Staffs Water asset mapping is shown by Figure 2.

Figure 2 - Extract of South Staffs Water asset mapping



4.2. NETWORK REQUIREMENTS

- 4.2.1. A Utility Load Analysis was performed for the Masterplan in regard to peak portable water estimates, as shown in Table 3, and Appendix C.

Table 3 - Utility Load Analysis for Peak Potable Water

Land Use	No of Units	Peak Portable Water (l/s)
C3 Residential	40	0.72
TOTAL	40	0.72

- 4.2.2. South Staffs Water confirmed through the aforementioned pre-development enquiry, that the network at the time of writing had capacity for the proposed development without the need for any off-site works, as they anticipate that the site mains can be connected into the existing 6" CI or 4" CI main in The Castle Way (A5132).

4.3. DIVERSIONS

- 4.3.1. The existing water mains, along The Castle Way (A5132) may need some diversionary work and/or protection works, should they be affected by the final site access proposals. These works will be scheduled in line with on-site proposals and represent non-prohibitive constraints to the delivery of the development.

4.4. REGULATORY BACKGROUND

- 4.4.1. Until relatively recently, water companies had near monopolies in the supply and transmission of water, as well as providing the infrastructure that is required. The introduction of the Water Act 2003 has:

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

- 4.4.2. The result is that the provision of water and drainage infrastructure for new development is now cheaper.

- 4.4.3. 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.

- 4.4.4. 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 twelve year period. The year-on-year income from new supplies is offset against the funding, which when brought forward to an equivalent present day cost, identifies the contribution 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 effective.

- 4.4.5. 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.

4.5. INCUMBENT SUPPLIER PROPOSAL

4.5.1. As the incumbent supplier, South Staffs Water, has been contacted and has provided a budget quotation for the provision of water supply to the site.

4.5.2. The quotation received from South Staffs Water estimates on the limited information we could provide them with at this stage, at a 'worst case scenario' the following costs, subject to contract:

- Mainlaying – Domestic – Developer could expect to pay £167.00 per plot towards the main laying costs.
- Connection onto the site from existing Mains – The developer should budget approximately £3,000.
- Branch Connections – The developer should budget approximately £675.00 for each branch connection within the confines of the site.
- Other fittings – there would be a need for the installation of end hydrants which would be used to wash-out the mains at regular intervals to ensure a continuous high quality water supply. It may be that the Fire Authorities request the use of these hydrants for fire-fighting purposes when necessary. Each end hydrant will be installed at an estimated cost of £531.00
- Easements – It is advised that where new roads are created and they remain in the ownership of the developer or subsequent owners, easements may have to be entered into at the expense of the developer. The cost of arranging such easements can range from £1,500 - £3,000 each depending on the complexity of the arrangements to be made.
- Water Service Connection Charges – South Staffs will (in accordance with S.64 of the Water Industry Act 1991) insist on separately metered water service connections to each separately occupiable premises, which will terminate at the boundary of the public highway with a stop tap and meter box assembly, where applicable. These charges vary significantly.
- Infrastructure Charges - these charges are applicable for every new property/premises requiring a new connection into the Company's distribution system and are charged at £325.00 for water.

4.5.3. South Staffs Water pre-development clean water enquiry is contained within Appendix B.

- 5.2.3. Western Power Distribution estimated a load of 40 connections, each with an After Diversity Maximum Demand (ADMD) of 15 kVA.
- 5.2.4. Western Power Distribution provided an outline of proposed connection works:
- Connect 2No 11kV cables onto existing network and install onto site to a substation position.
 - Establish new package substation with GRP housing, and terminate 11kV cables into substation.
 - Connect and install LV mains cables from substation and distribute throughout site.
 - Connect individual service cables onto mains cables and terminate at each property into external meter boxes.
 - WPD to excavate trenches off site. Traffic management required.
 - 3rd party wayleave consents would be required to achieve the proposed point of connection onto the 11kV network.
- 5.2.5. Western Power Distribution has provided a budget quotation for the provision of electricity supplies to the site. The quotation received indicates a cost of £98,917.92 (inc VAT), subject to contract, for on-site and off-site works.

5.3. DIVERSIONS

- 5.3.1. Western Power Distribution have not mentioned the need for any diversionary works in their correspondence. However, the existing power cables, along The Castle Way (A5132) may need some diversionary work and/or protection works, should they be affected by the final site access proposals. These works will be scheduled in line with on-site proposals and represent non-prohibitive constraints to the delivery of the development.

5.4. REGULATORY BACKGROUND

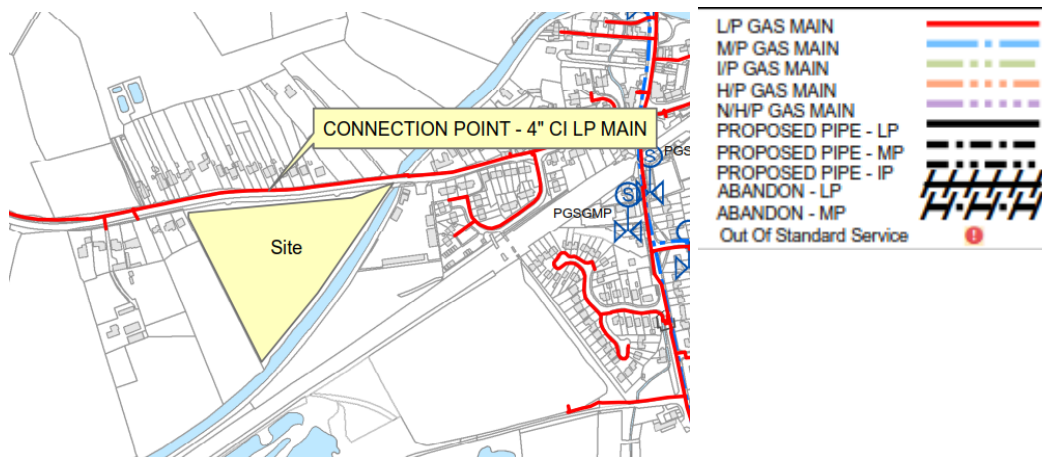
- 5.4.1. Competition in the electrical market is now reasonably mature and a developer is able to procure third party Distribution Network Operators (DNO's) to provide an embedded network, or indeed multi-utility/third party installations. DNO's are required by law to offer a network to anyone who requires a network. The creation, maintenance and operation of electricity networks is a matter for network companies and overseen by the independent regulator, the Office of the Gas and Electricity Markets (Ofgem).

6. GAS SUPPLY

6.1. EXISTING CONDITIONS

- 6.1.1. Cadent Gas has been consulted regarding the location and capacity of their existing network in the vicinity of the site. Details of the gas supply network have been provided.
- 6.1.2. The assets plans identify a 4inch CI low-pressure gas main running along The Castle Way (A5132) to the north of the proposed site, an extract is shown by Figure 4.

Figure 4 - An extract of Cadent asset mapping



- 6.1.3. The low-pressure main connects to the medium-pressure main that runs through Willington along the B5008, and to a medium-pressure main that runs along the A38/Derby Road.

6.2. NETWORK REQUIREMENTS

- 6.2.1. A Utility Load Analysis was performed for the site in regard to peak gas load estimates, as shown in Table 5, and Appendix C.

Table 5 - Utility Load Analysis for Peak Gas Load

Land Use	No of Units	Peak Gas Load (kVA)
C3 Residential	40	365
TOTAL	40	365

- 6.2.2. Cadent Gas have completed their assessment of the existing network within the vicinity of the development area, a confirmed that the nearest main with sufficient capacity is approximately 17 metres from the site boundary and is a Low Pressure main.

- 6.2.3. At this stage no cost information has been provided. However, Cadent have not identified a significant need for off site reinforcement.
- 6.2.4. This Cadent Gas enquiry and response is contained within Appendix B.

6.3. DIVERSIONS

- 6.3.1. Cadent Gas have not mentioned the need for any diversionary works in their correspondence.

6.4. REGULATORY BACKGROUND

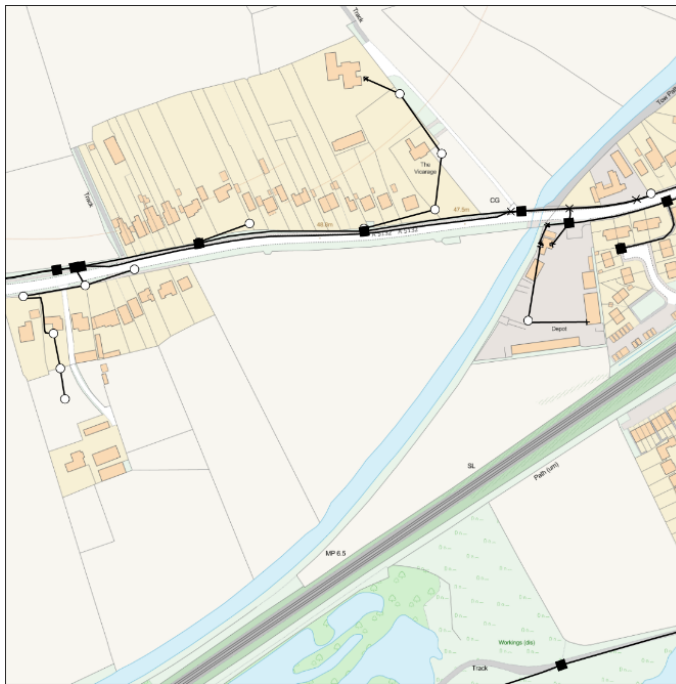
- 6.4.1. Since its introduction in 2000 of competition for connections, Utility Infrastructure Suppliers (UIPs) can compete with Gas Distribution Networks (GDNs) to complete some connection activities, with over half of new and modified gas connections now being undertaken by non-GDNs. UIPs are permitted to offset the capital cost of infrastructure against the income generated from conveying the gas which may reduce the future development costs.

7. TELECOMMUNICATIONS

7.1. EXISTING CONDITIONS

- 7.1.1. The incumbent telecommunication provider is British Telecom (BT) and basic details of their infrastructure can be seen in Appendix B.
- 7.1.2. The primary routes for telecommunication cables within the area are within the road, in The Castle Way/A5132 to the north of the site. An extract of the supplied mapping is shown by Figure 5.

Figure 5 - An extract of BT Openreach mapping



- 7.1.3. A review of the available data reveals that the nearest telephone exchange is Repton, which currently serves 3,068 residential and 97 non-residential premises.
- 7.1.4. A review of available broadband data reveals that ADSL and LLU services (with Sky and TalkTalk) may be available to the site.
- 7.1.5. Fibre to the Cabinet is identified for the area, but currently there is no fibre to properties.

7.2. SUPPLY REQUIREMENTS

- 7.2.1. Although the proposed development is relatively small a range of communication services will be required, these would typically be:
 - Analogue Lines Analogue services traditionally are required for applications such as voice communications; fax machines & dial-up internet access, to enable visitors secure internet access, teleconferencing and links to banking facilities.
 - ADSL/SDSL Broadband services will be required for all internet applications such as e-mail, web access and to enable the transmittal of large amounts of data. ISDN: Integrated

Services Design Networks (ISDN) is a digital service offered by many telephone companies to provide data access up to 128 Kbps for residence and small office applications. ISDN services may be required for applications such as frame relays, intruder alarms and remote CCTV monitoring.

- Cable Television Cable television services are ideally required as an option for the proposed domestic dwellings.
- High-Speed Fibre High-speed fibre networks are currently being implemented throughout the UK, providing a high-speed data connection to residential and commercial properties. BT Openreach is currently investing heavily into a high-speed fibre network, 21st Century Networks.

7.3. NETWORK REQUIREMENTS

- 7.3.1. As BT has network infrastructure running within the existing highway adjacent to the site, it will be straightforward to provide on-site communication ducts distributing services into the development from the existing infrastructure. Other operators may wish to provide networks services although they are likely to connect to an alternative point of presence (POP).
- 7.3.2. As outlined above, availability of broadband ADSL/SDSL is now an important consideration of residential purchasers. The development will look to incorporate a high-speed fibre network on-site to provide superior connection speeds.

7.4. DIVERSIONS

- 7.4.1. The existing BT cables, along The Castle Way (A5132) may need some diversionary work and/or protection works, should they be affected by the final site access proposals. These works will be scheduled in line with on-site proposals and represent non-prohibitive constraints to the delivery of the development.

7.5. REGULATORY BACKGROUND

- 7.5.1. The incumbent national communication business, British Telecommunications was a state-owned business prior to privatisation in 1984.
- 7.5.2. With BT controlling the existing cables feeding residential development, and the exchange (what is known as the 'local loop' or 'last mile'), BT have maintained a dominant position in controlling the communications sector.
- 7.5.3. Provision of network services for commercial usage is less restrictive and this lead to a multitude of communication business start-ups in the late 1990's and early 2000's.
- 7.5.4. The industry regulator, Ofcom has completed much work in "unbundling" the local loop and bringing competition into the residential market. Following this deregulation, Virgin and TalkTalk 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. Accordingly, BT or local cable franchise operators are the prime source of network connections on residential sites.
- 7.5.5. Previously British Telecommunications have offered a Service on Demand payment of £140 per house and £50 per flat. Considering the site is to hold 25 residential units, all of which are houses, this would

then provide a rebate from BT for providing an on-site network of £3,500, payable by BT to the developer.

- 7.5.6. Openreach now offer free fibre to the premises for new developments of more than 30 homes, meaning that 9 out of 10 new properties could have free access to the fibre to the premises infrastructure. This requires developers to register their scheme, once a forecast is known for planning approval, with Openreach and will be open to all service providers.
- 7.5.7. BT has yet to provide a final cost for the provision of their service to the site and is unable to do so until full planning permission is granted.

8. SUMMARY

- 8.1.1. This report summarises the details relating to the current network conditions outlining the requirements for reinforcements and provision of supply through the existing network as well as the associated costs.
- 8.1.2. Discussions with incumbent suppliers do not identify any assets to be constraints to developments and therefore it is considered that provisions of service supply are not prohibitive.
- 8.1.3. The approximate costings identified are summaries in Table 6.

Table 6 - Approximate Costings

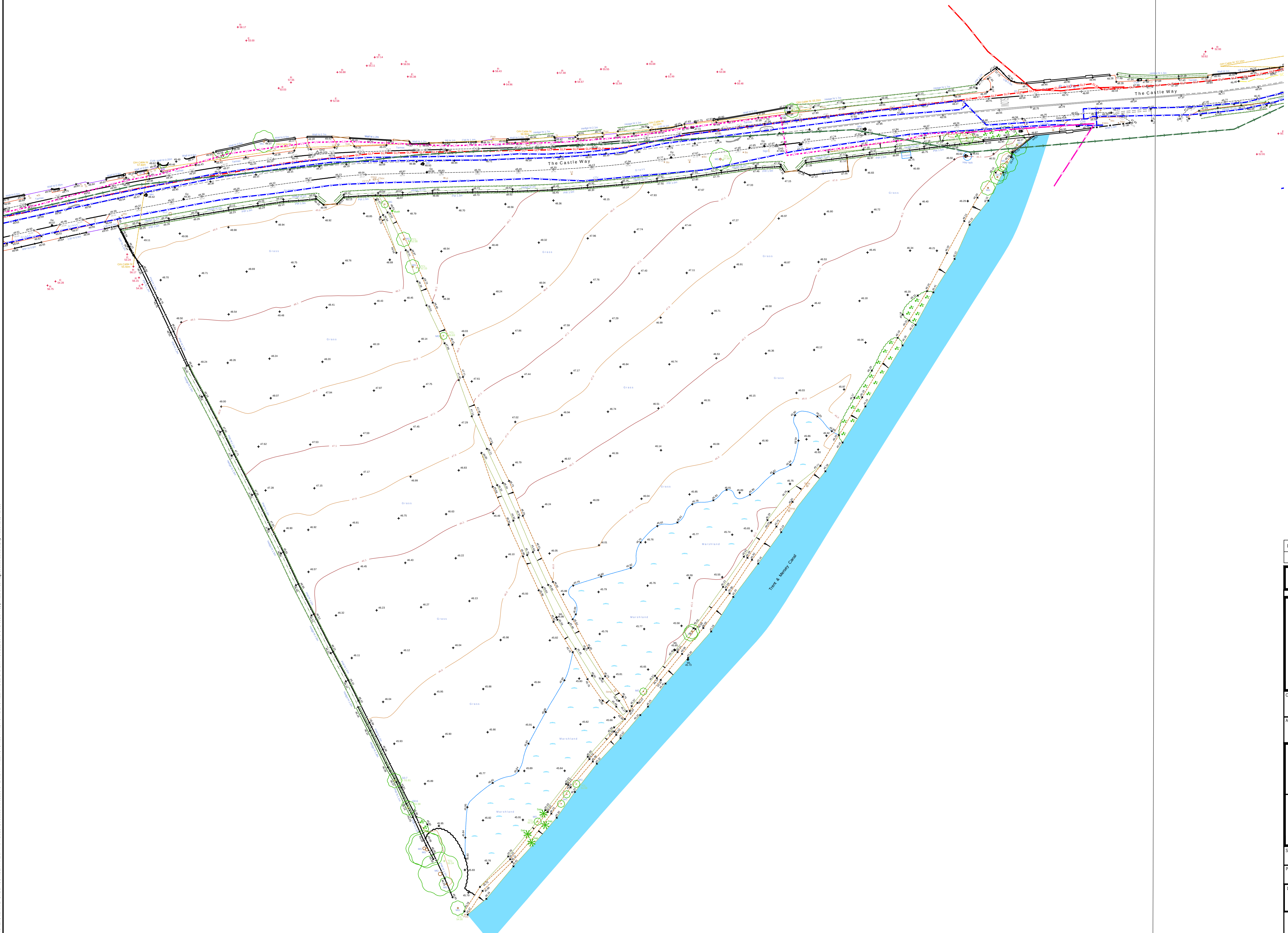
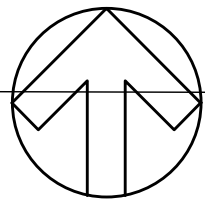
Supply	Company	Approximate Quoted Total Cost
Water	South Staffs Water	£1,563,602.82
Electricity	UK Power Networks	£98,917.92
Gas	Cadent	Quotation will be given 'Following the submission of a quotation request from your preferred connection provider the reinforcement costs will be subject to the economic test to determine the amount of Cadent and / or Customer contribution in line with Cadent's Connections Charging Statement'
Telecoms	BT	-£3,000

- 8.1.4. All information and costings contained within this report have been provided by the incumbent operators as part of a high-level review exercise and should be updated and revisited as the detailed site design progresses as these are subject to change. WSP accept no responsibility for the cost information contained herein.

Appendix A

DRAWINGS

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DO NOT SCALE

NOTES

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3. DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT SCHEME DRAWINGS.
4. GAS CONSTRAINTS RECEIVED FROM CADENT GAS
5. WATER SUPPLY CONSTRAINTS RECEIVED FROM SOUTH STAFFS WATER.
6. FOUL WATER CONSTRAINTS RECEIVED FROM SEVERN TRENT WATER.
7. ELECTRICITY CONSTRAINTS RECEIVED FROM WESTERN POWER DISTRIBUTION.
8. TELECOMMS CONSTRAINTS RECEIVED FROM OPEN REACH.

KEY

— SITE BOUNDARY

ELECTRICAL SERVICES

— ELECTRICAL HIGH VOLTAGE (OVER 230/400V UP TO 11kV)

— ELECTRICAL LOW VOLTAGE (230/400V)

— UNDERGROUND ELECTRICAL LOW VOLTAGE (230/400V)

— POTABLE WATER (ASSUMED 3M EASEMENT)

— FOUL WATER SEWER (ASSUMED 3M EASEMENT)

GAS SERVICES

— LOW PRESSURE GAS MAIN (EASEMENT TBC)

WATER SERVICES

— POTABLE WATER (ASSUMED 3M EASEMENT)

— FOUL WATER SEWER (ASSUMED 3M EASEMENT)

PO.01	10/04/2019	MTLW	FIRST ISSUE	CSB	DW
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: S2 - FOR INFORMATION



The Mailbox, Level 2, 100 Wharfedale Street, Birmingham, B1 1RT, UK
T+ 44 (0) 121 352 4700, F+ 44 (0) 121 352 4701
wsp.com

CLIENT: CENTRAL MIDLANDS ESTATES LTD

ARCHITECT: BHB ARCHITECTS

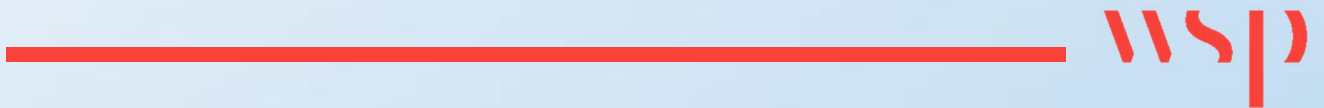
SITE/PROJECT: LAND AT WILLINGTON

TITLE: UTILITIES PLAN

SCALE @ A1: 1:500	CHECKED: CSB	APPROVED: DW
PROJECT NO: 70055040	DESIGNED: MTLW	DRAWN: MTLW
DATE: August 19	REV: P01	
DRAWING NO: 5040-CNS-001		
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Appendix B

CORRESPONDENCE



Network Enquiry No : 180010855
Your Reference : DE65 6BU

Cadent Gas Limited

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

Marcus Woodward
WSP
100 THE MAILBOX, LEVEL 2
WHARFSIDE STREET
BIRMINGHAM
B1 1RT

Date : 18th March 2019
Contact : Performance and Support
Direct Tel : 0845 3666758
Email : networkdesign@cadentgas.com

www.cadentgas.com

Dear Marcus,

Re: Land Enquiry for Proposed Development Site at NEW SUPPLY, LAND AT, WILLINGTON, SOUTH DERBYSHIRE, DE65 6BU.

Thank you for your enquiry which we received on 11th March 2019. I enclose details of Cadent Gas plant in the vicinity of your proposed supply.

The nearest main with sufficient capacity is 17 metres from the site boundary and it is a Low Pressure main.

Standard design pressures have been used. Refer to www.Cadentgas.com

This Developer Enquiry response is a reflection of the network at the time delivered and is not a guarantee of gas flow or capacity due to the changing dynamics of the gas distribution network. If you wish to secure capacity and connect to the network please submit quotation Connections Request via the official connections route allowing for further analysis to verify the capability of the network again.

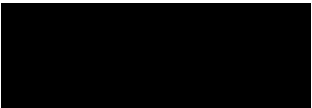
Plans attached: Yes

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

<http://cadentgas.com/Get-connected>

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

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


Claire Wilcox
Design Specialist



Cadent Gas Limited
Registered No.10080864
Registered Address Ashbrook Court, Prologis Park, Coventry, CV7 8PE

Letter Id: CRM013
Page 1 of 1

Repton Exchange

Broadband and Cable Availability in Repton

UK Broadband Availability

[Broadband Checker](#)[Exchange Search](#)[Exchange Mapping](#)[Statistics and Analysis](#)[BT Wholesale](#)[LLU Operators](#)[Cable Operators](#)

General Information

Exchange name:	Repton
Exchange code:	EMRPTON
Location:	Derbyshire East Midlands
Postcode:	DE656FH
Maps:	Our map Multimap Streetmap
Serves (approx):	3,068 residential premises 97 non-residential premises.

Broadband availability overview

ADSL:	✓	Yes
SDSL:	✗	No
LLU services:	✓	Yes
Cable:	✗	No
Wireless:	✗	No

BT Wholesale information

ADSL status:	✓	Enabled as of 29/10/2003
ADSL Max status:	✓	Enabled as of 31/03/2006
SDSL status:	✗	Not available
21CN WBC status:	✓	Enabled
FTTC status:	✓	Available in some areas
FTTP status:	✗	Not available

Wireless broadband availability

Please use broadband checker section for Wireless availability

Cable Broadband Availability

Virgin Media:	✗	Not available
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? Who are all of these providers?

🗨 Spotted an error? Let us know

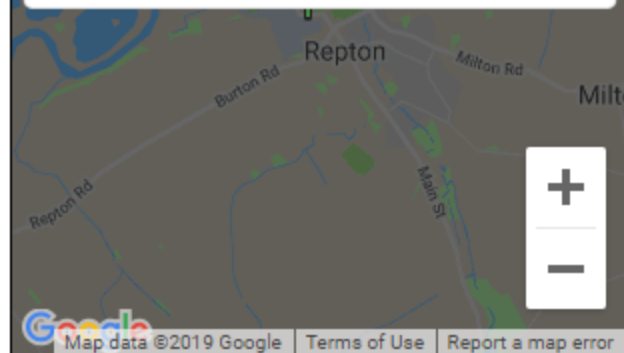
Location Map

Google

This page can't load Google Maps correctly.

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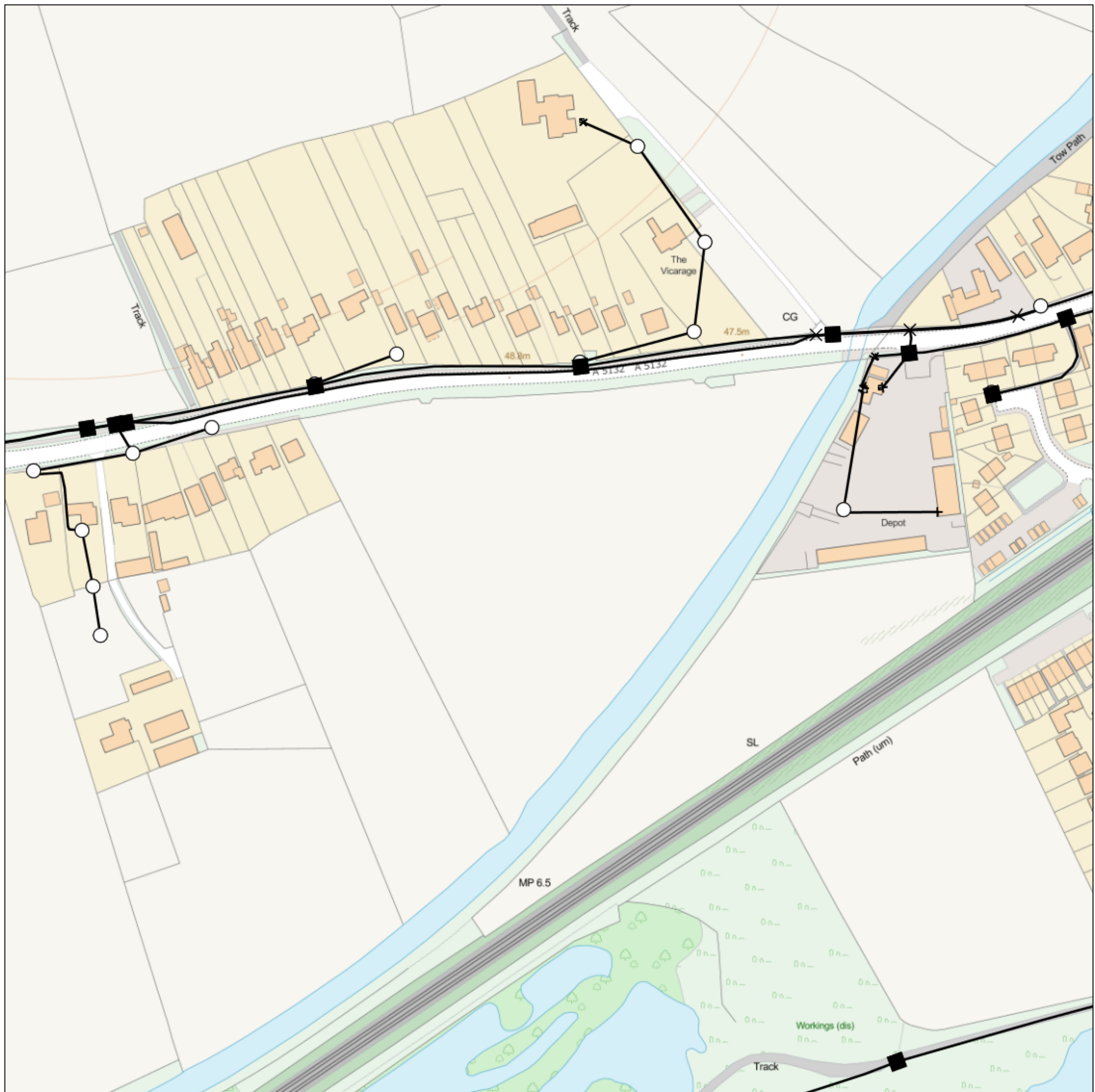


[Zoom Map](#)

LLU operator presence

Edge Telecom:	✗	Not available
Entanet:	✗	Not available
Fluency:	✗	Not available
KC (Kingston):	✗	Not available
Timico Partners:	✗	Not available
Node4:	✗	Not available
Orbital:	✗	Not available
Origin Broadband:	✗	Not available
Redcentric:	✗	Not available
Rutland Telecom:	✗	Not available
Sky:	✓	Enabled
Spectrum:	✗	Not available
TalkTalk (CPW):	✓	Enabled
Vodafone:	✗	Not available
WB Internet:	✗	Not available
Zen Internet:	✗	Not available

Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy.

It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



openreach

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www.openreach.co.uk/cbyd

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : NOT09224T

Map Reference : (centre) SK2896528358

Easting/Northing : (centre) 428965,328358

Issued : 03/04/2019 09:22:14

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Characteristics and Charge Statement

Offer - Customer Copy (Please retain)

Printed 14/03/2019

Enquiry: 3326930 Scheme: 1260151 Ver: 1

Offer for Electricity Connection Works by Western Power Distribution ("WPD") at :

Site located Off A5132, Willington, Derbyshire, DE65 6BU

("the Works")

Characteristics of Supply

40 Connections

The supply to each connection will be 230 volts, Single phase, 50 Hz with a Maximum Agreed Capacity of 15 kVA

Earthing provided by WPD for customer's Use

PME / TN-C-S

External earth loop impedance

Not Exceeding 0.47 Ohms

Maximum Prospective Short Circuit Current at the exit point 16 kA

Connection Charge

Non-Contestable

£4,046.45

Contestable work undertaken by WPD *

£94,871.47

Charge sub-total

£98,917.92

Connection Charge excluding VAT

£98,917.92

VAT on £98,917.92 @ 0%

£0.00

Total payable before test & connect**£98,917.92**

* See explanatory guide for new connections to WPD's electricity distribution system

New connections to domestic premises are zero rated for VAT. Other connections and all alterations are subject to VAT at the standard rate.

The Connection Charge above assumes that all connections will be made at the same time and that the work is carried out in accordance with the design. Any changes made at your request may vary the final charge payable.

Interim connection charges on staged developments will be based upon actual WPD expenditure to date.

Acceptance (Do not detach)

I accept the terms and conditions set out in this Characteristics and Charge Statement, the Offer Letter and accompanying Specific and General Conditions for Connection Works.

I acknowledge that where there is no Housing Agreement, the Characteristics and Charge Statement assumes the number of premises indicated will all be connected at the same time, under the same Test and Connection. If this is not the case I will advise you in advance so that the offer can be adjusted to incorporate any additional test and connections required.

I accept responsibility for any reasonable costs that WPD has incurred if I cancel this acceptance after construction work has commenced.

I understand that the new electricity connections cannot be used until an electricity supplier has been appointed in each case and that a meter has been installed.

My supplier for each connection will be
 (WPD will use this information for internal purposes only. The customer **must** contact their nominated Supplier directly in order to register the connection).

Print Name.....

Signature Date

Designation(if signing for a company)

For and on behalf of (company name)

Characteristics and Charge Statement

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Signature Date

Designation(if signing for a company)

For and on behalf of (company name)



Severn Trent Water Ltd
Leicester Water Centre
Gorse Hill
Anstey
Leicester
LE7 7GU

Tel: 02477 716843
www.stwater.co.uk
net.dev.east@severntrent.co.uk

Contact: Belal Ali

Our ref 8350830

WSP
The Mailbox
Level 2
100 Wharfside Street
Birmingham
B1 1RT

F.A.O: Marcus Woodward

12th April 2019

Dear Sir/Madam,

**Proposed Development: (40 Dwellings) – Land at Willington,
Castle Way, Willington, DE65 6BU**

I refer to your Development Enquiry Request in respect of the above site. Please find enclosed the sewer records that are included in the fee together with the Supplementary Guidance Notes (SGN) referred to below.

Public Sewers in Site – Required Protection

There is a small section of foul sewer to the eastern corner of site boundary. This public sewer will require a 5m protection strip, 2.5m on each side from the centreline.

Due to a change in legislation on 1 October 2011 there may be former private sewers on the site which have transferred to the responsibility of Severn Trent Water Ltd, which are not shown on the statutory sewer records, but are located in your client's land. These sewers would require protective strips of 3 metres either side of the sewer's centreline that we will not allow to be built over. If such sewers are identified to be present on the site, please contact us for further guidance.

Foul Water Drainage

Sewer records show the 225 foul sewer, MH0402 is the most suitable connection point for your development. Subject to site survey and levels, it may be possible to achieve gravity connection here.

Foul flows from your development anticipated to be less than 1. l/s will have little impact to the public network. A gravity connection is therefore acceptable to the Company subject to formal S106 approval (see later).

Note any pump discharge to the public sewers will be subject to modelling to understand the impact on downstream network.

Surface Water Drainage

Under the terms of Section H of the Building Regulations 2000, the disposal of surface water by means of soakaways should be considered as the primary method.

If these are found to be unsuitable, satisfactory evidence will need to be submitted. The evidence should be either percolation test results or by the submission of a statement from the SI consultant (extract or a supplementary letter).

In presence of watercourse not surface water will discharge to the public sewers.

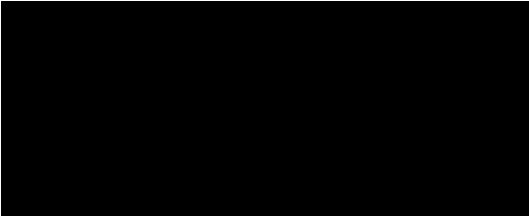
Subject to the above, Severn Trent Water expects all surface water from the development to be drained in a sustainable way to the nearest watercourse or land drainage channel, subject to the developer discussing all aspects of the developments surface water drainage with the Local Lead Flood Authority (LLFA). Any discharge rate to a watercourse or drainage ditch will be determined by the LLFA / EA.

Connections

For any new connections (including the re-use of existing connections) to the public sewerage system, the developer will need to submit a Section 106 application form. Our Developer Services department are responsible for handling all new connections enquiries and applications. To contact them for an application form and associated guidance notes please call 0800 7076600 or download from www.stwater.co.uk.

Please quote the above reference in any future correspondence (including e-mails) with STW Limited. Please note that Developer Enquiry responses are only valid for 6 months from the date of this letter.

Yours sincerely



Belal Ali
Asset Protection Waste Water East
Wholesale Network Control and Asset Management

SUPPLEMENTARY GUIDANCE NOTES

RELATING TO DISPOSAL OF

SURFACE WATER



Introduction

The purpose of this guidance note is to provide advice to applicants when completing the surface water drainage design for a new development, both for Greenfield and Brownfield sites. This does not affect foul drainage disposal which should be discussed with Severn Trent as early as possible to ensure additional flows can be accommodated without undue delay to the development.

Lead Local Flood Authority (LLFA) Consultation

Since April 2015, the LLFA have assumed the role of being a statutory consultee in the planning process for developments of 10 dwellings or more; or equivalent non-residential and/or mixed development. The LLFAs role is vital to ensure that surface water disposal on new development is adequately assessed so that the local planning authority can satisfy themselves that drainage proposals are satisfactory and to make sure, through the use of planning conditions or planning obligations, that there are clear arrangements in place for future maintenance of sustainable drainage systems (SuDS) over the lifetime of the development. This will also ensure surface water disposal aligns with local planning policies, flood risk strategies and national policies, such as the National Planning Policy Framework (NPPF).

It is strongly recommend that the LLFA are involved in early pre-application discussions when the development of a site is initially being considered. Pre-application discussions will help to ensure that SuDS are appropriately considered ahead of or as part of preliminary development layouts, and that they are fully integrated into the final development layout. Whilst Severn Trent are willing to advise on sewerage availability this does to negate the planning requirement relating to adequacy of SuDS on new development.

SuDS Hierarchy

Severn Trent is fully supportive of the fundamental SuDS principle that priority should be given to managing surface water as close to source as possible. In accordance with national standards and guidance a sequential series of checks should be undertaken to ensure the relevant SuDS features are being proposed whereby (in order of priority) rainwater re-use, infiltration to ground and controlled discharge to a water body are properly considered ahead of any controlled connection to a culverted watercourse/other drainage system or public surface water sewer.

A controlled connection to a public combined/foul sewer would only be considered under rare exceptional circumstances where all other options have been completely exhausted. Acceptance of surface water into a combined sewer is not only unsustainable because of the need to convey/treat rainwater but is also takes away existing capacity which could constraint the connection of foul flows on future development. It is also possible that connection of additional surface water flows will require capacity upgrades to the existing sewerage system which may delay development.

Connection to a Public Sewer

Whilst Severn Trent will be able to provide advice on potential public surface water sewer connection options, it is essential that a developer contacts the LLFA as early as possible to discuss surface water disposal as they will be able to provide guidance on surface water flood risk policy which may influence SuDS requirements. It is strongly recommended that LLFA discussions take place before contacting Severn Trent. Where the outcome of LLFA discussions concludes that a controlled discharge to the public sewerage system is the only viable option then Severn Trent would be pleased to discuss sewer connection options, satisfied that the LLFA have been consulted in line with their surface water management role and in their capacity as statutory consultee.

Evidence must be provided to demonstrate why the sequential SuDS checks have concluded that a connection to the public sewer is required. This must include a Site Investigation Report including percolation test data/graphs/calculations/results together with relevant correspondence with the LLFA.

Design Standards

Surface water disposal design should consider the interactions between the adoptable sewer design criteria based on a 30 year design storm (outlined in 'Sewers For Adoption') and the "Non-statutory technical standards for SuDS" requirement to restrict discharge from a site up to and including the 1 in 100 year critical storm event plus an allowance for climate change as required by the LLFA.

For Greenfield development, the peak runoff rate should never exceed the peak pre-development run-off rates/volumes for the same rainfall event irrespective of the design storm duration consistent with the national non-statutory technical standards. For developments which were previously developed (Brownfield), the peak runoff rate must be as close as reasonably practicable to the greenfield runoff rate from the development for the same rainfall event, but should never exceed the rate of discharge from the development prior to redevelopment again for the same rainfall event. This requirement to remove pre-development surface water discharges to the sewerage system will help remove capacity constraints and aid future development.

To establish the pre-development run-off rates a detailed existing drainage survey will be required indicating pipe locations including sizes and levels, impermeable area connectivity to each pipe and topographical information to support existing drainage assumptions. Photographs of the existing buildings and surface features should be provided and where necessary a CCTV sewer survey should be provided to support the drainage survey to demonstrate connectivity.

In line with 'Sewers for Adoption', the drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur on any part of the site for a 1 in 30 year rainfall event. For higher storm return periods the drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur during a 1 in 100 year rainfall event in any part of: a building (including a basement); or in any utility plant susceptible to water (e.g. pumping station, electricity substation, water booster station) within the development.

Small Developments

Whilst developments of fewer than 10 dwellings (or their equivalent) are excluded from the post April 2015 planning requirements the underlying principles regarding sustainable surface water management are still valid. The collective impacts of surface water discharges from smaller developments can have an adverse impact on flood risk, especially in smaller rural catchments where smaller sewerage systems are more susceptible to increases in surface water inflow. On small developments infiltration to ground and peak flow attenuation must be considered to mitigate flood risk in the community but where a sewer connection is envisaged then the developer is recommended to discuss surface water disposal options with Severn Trent as early as possible.

Contact

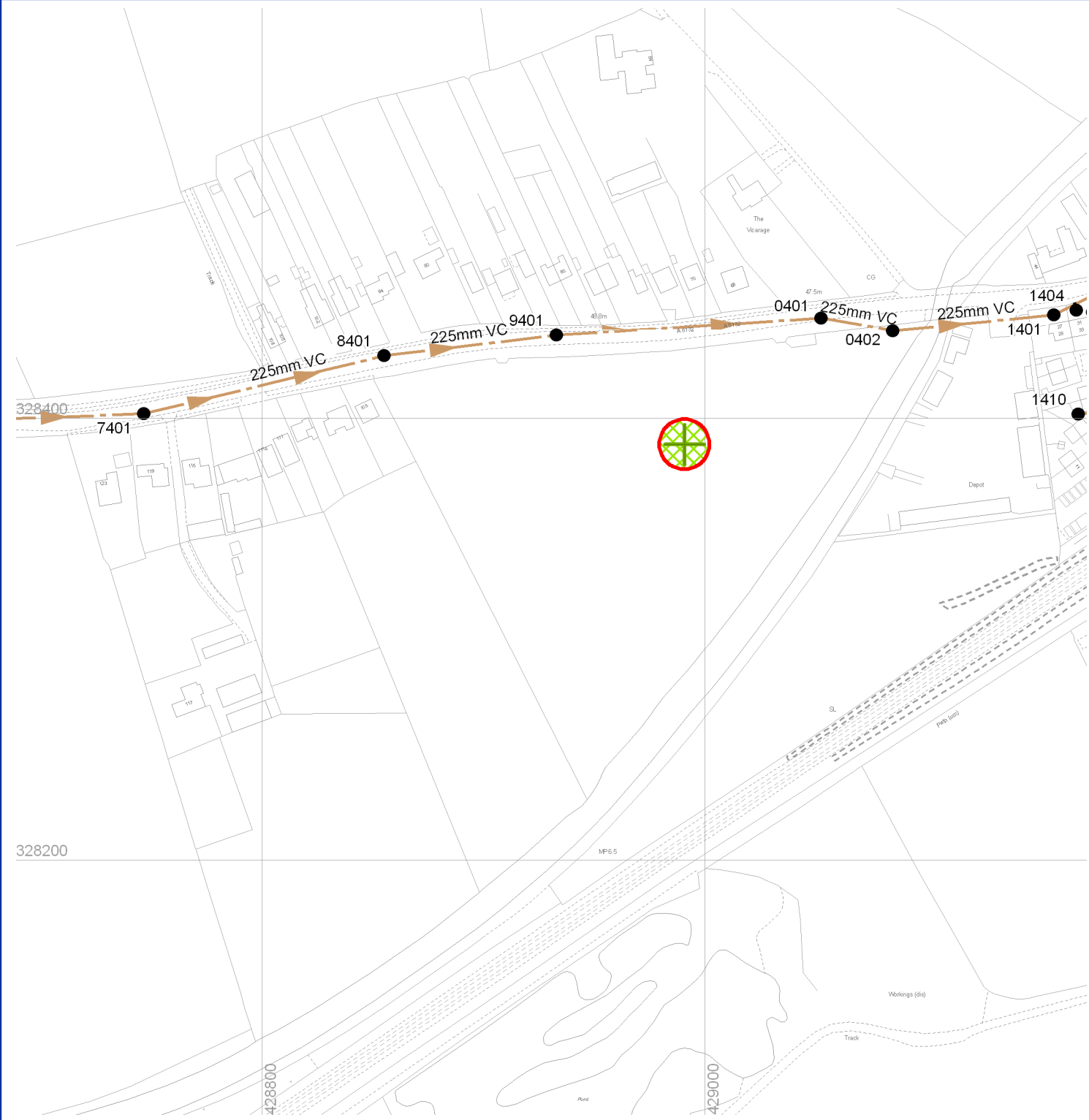
For further assistance please contact our Asset Protection teams via:

net.dev.west@severntrent.co.uk

(Birmingham & Black Country, Staffordshire, Shropshire, Worcestershire, Gloucestershire, Herefordshire, Powys)

net.dev.east@severntrent.co.uk

(Derbyshire, Leicestershire, Nottinghamshire, Warwickshire, Coventry)



Sewer NodeSewer Pipe Data

REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SK28287401	49.84	47.96	47.45	F	VC	C	225	nil	217.82	nill
SK28288401	49.49	47.43	nil	F	VC	C	225	nil	0.00	nill
SK28289401	49.01	nil	45.69	F	nil	nil	nil	nil	0.00	nill
SK29280401	47.91	45.67	44.90	F	VC	C	225	nil	42.29	nill
SK29280402	46.65	43.67	43.05	F	VC	C	225	nil	121.50	nill
SK29281401	45.78	43.05	nil	F	VC	C	225	nil	0.00	nill
SK29281404	45.59	44.35	nil	F	VC	C	150	nil	0.00	nill
SK29281410	nil	nil	43.31	F	nil	nil	nil	nil	0.00	nill

Abandoned Gravity Sewer

Private Combined Gravity Sewer

Private Foul Gravity Sewer

Private Surface Water Gravity Sewer

Public Combined Gravity Sewer

Public Foul Gravity Sewer

Public Surface Water Gravity Sewer

Trunk Combined Gravity Sewer

Trunk Foul Use Gravity Sewer

Trunk Surface Water Gravity Sewer

Combined Use Pressurised Sewer

Foul Use Pressurised Sewer

Surface Water Pressurised Sewer

Highway Drain

Combined Lateral Drain (SS)

Foul Lateral Drain (SS)

Surface Water Lateral Drain (SS)

Culverted Watercourse

Cable, Earthing

Cable Junction

Cable, Optical Fibre/Instrumentation

Cable, Low Voltage

Cable, High Voltage

Cable, Other

Housing, Building

Housing, Kiosk

Disposal Site

Sewage Treatment Works

Housing, Other

Pipe Support Structure

Sewage Pumping Facility

Sewer Facility Connection Inlet / Outlet

Blind Shaft

Combined Use Manhole

Flushing Chamber

Foul Use Manhole

Grease Trap

Head Node

Hydrobrake

Lamphole

Outfall

Overflow

Penstock

Petrol Interceptor

Sewer Chemical Injection Point

Sewer Junction

Sewerage Air Valve

Sewerage Hatch Box Point

Sewerage Isolation Valve

Soakaway

Surface Water Manhole

Vent Column

Waste Water Storage

Pre-1937 Properties

TABULAR KEY

Sewer pipe data refers to downstream sewer pipe.

Where the node bifurcates (splits) X and Y indicates downstream sewer pipe.

Gradient is stated a 1 in...

MATERIALS

- NONE

AC - ASBESTOS CEMENT

BR - BRICK

CC - CONCRETE BOX CULVERT

CI - CAST IRON

CO - CONCRETE

CSB - CONCRETE SEGMENTS (BOLTED)

CSU - CONCRETE SEGMENTS (UNBOLTED)

DI - DUCTILE IRON

GRC - GLASS REINFORCED CONCRETE

GRP - GLASS REINFORCED PLASTIC

MAC - MASONRY IN REGULAR COURSES

MAR - MASONRY RANDOMLY COURSED

PE - POLYETHYLENE

PF - PITCH

PP - POLYPROPYLENE

PSC - PLASTIC STEEL COMPOSITE

PVC - POLYVINYL CHLORIDE

RPM - REINFORCED PLASTIC MATRIX

SI - SPUN (GREY) IRON

ST - STEEL

U - UNKNOWN

VC - VITRIFIED CLAY

XXX - OTHER

SHAPE

C - CIRCULAR

E - EGG SHAPED

O - OTHER

R - RECTANGLE

S - SQUARE

T - TRAPEZOIDAL

U - UNKNOWN

PURPOSE

C - COMBINED

E - FINAL EFFLUENT

F - FOUL

L - SLUDGE

S - SURFACE WATER

CATEGORIES

W - WEIR

C - CASCADE

DB - DAMBOARD

SE - SIDE ENTRY

FV - FLAP VALVE

BD - BACK DROP

S - SIPHON

HD - HIGHWAY DRAIN

S104 - SECTION 104

SEVERN

TRENT

WATER

Sewern Trent Water Limited

Asset Data Management

PO Box 5344

Coventry

CV3 9FT

Telephone: 0845 601 6616

SEWER RECORD (Tabular)

O/S Map scale:

1:2500

This map is centred upon:

O / S Grid reference:

Date of issue:

12.04.19

x :

428930

Sheet No.

1 of 1

y :

328335

Disclaimer Statement:

1. Do not scale off this Map.

2. This map and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this Map and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of Severn Trent Water's assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.

3. On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012 (date to be confirmed). Private pumping stations, which form part of these sewers or lateral drains, will transfer to the ownership of Severn Trent Water on or before 1 October 2016. Severn Trent Water does not possess complete records of these assets. These assets may not be displayed on this Map.

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Additional Guidance Notes

If you experience difficulty in the provision of off-site sewers to serve your proposed development, an application for requisition sewers under Section 98 Water Act 2003 may be appropriate on request to this office.

If there are existing public sewers within the curtilage of the development site that may affect the proposed development, the option to divert them under Section 185 Water Act 2003 may be available. All costs incurred would lay with the Applicant.

All potentially adoptable sewers must be designed and constructed in accordance with the guidelines in Sewers for Adoption (6th Edition), after 1st May 2006. A Severn Trent Water Addendum for Foul Sewage Pumping Stations will be available at www.wrcplc.co.uk/sfa.

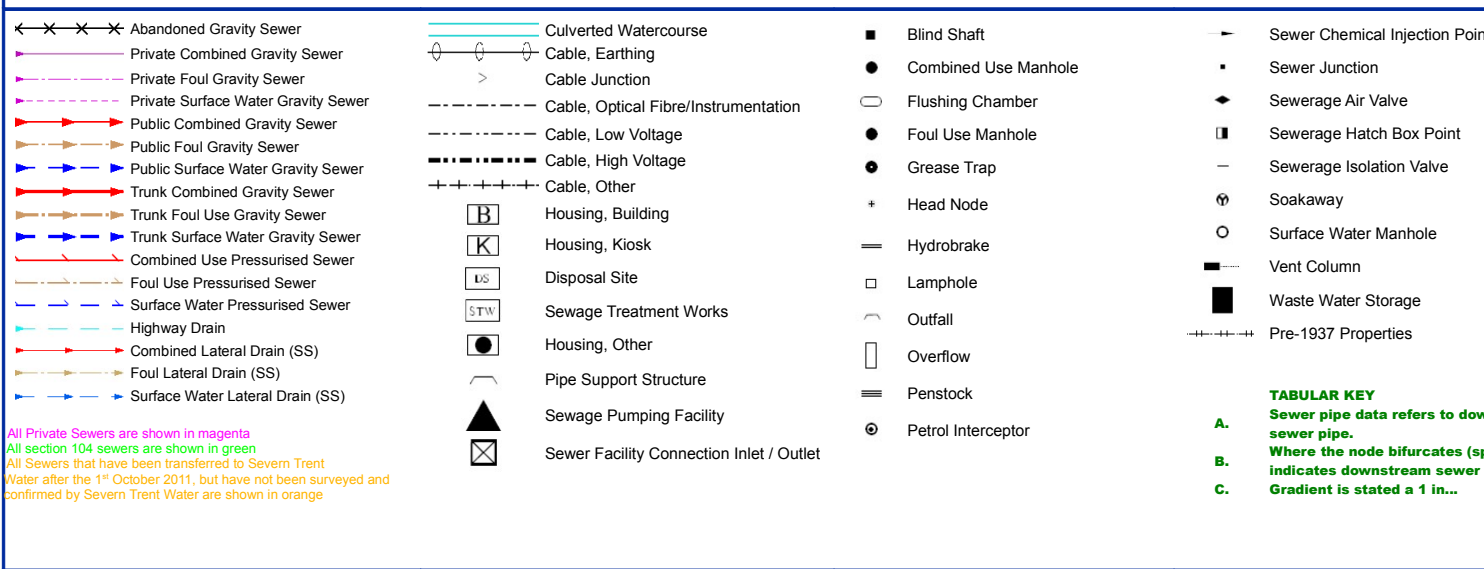
If the sewers are to be offered for adoption or if the development works could affect the public sewerage system, the Developer should approach Severn Trent Water Ltd to discuss their proposals in detail. This is to ensure the Developer is aware of the Company's requirements which could affect the development design and/or programme.

In cases where the complexity of both the existing receiving sewerage system and the proposed additional sewerage necessitates the construction of a suitable computer model, Severn Trent Water can offer this service. Enquiries should be addressed to Bob Garrington in our Infrastructure Strategy Team who can be contacted on Tues - Thurs only by email to: sewer.capacity@severntrent.co.uk

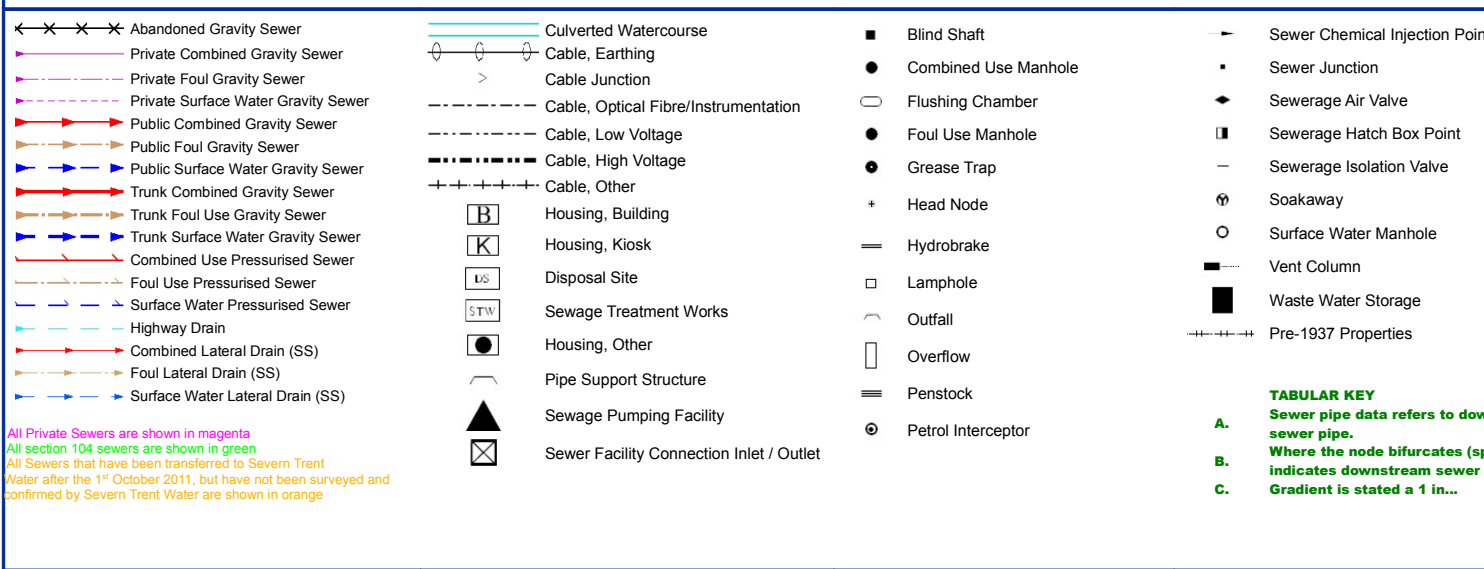
Severn Trent Water has no knowledge of any specific land drainage issues involving this site. The Developer is to contact and seek approval of The Environment Agency, Local Authority etc. regarding any means of surface water disposal to the land drainage system, required attenuation, discharge consent etc.

All enquiries with respect to the supply of sewer records only should be directed to Severn Trent Water Limited, Asset Data Management, PO Box 5344, Coventry. CV3 9FT (Tel. 0845 601 6616).

Asset Protection
Waste Water East



LS CATEGORIES OS CEMENT TE BOX CULVERT TE TE SEGMENTS (BOLTED) TE SEGMENTS (UNBOLTED) IRON EINFORCED CONCRETE EINFORCED PLASTIC EY IN REGULAR COURSES EY RANDOMLY COURSED ELENE OPYLENE STEEL COMPOSITE YL CHLORIDE ANCED PLASTIC MATRIX REY) IRON IN D CLAY W - WEIR C - CASCADE DB - DAMBOARD SE - SIDE ENTRY FV - FLAP VALVE BD - BACK DROP S - SIPHON HD - HIGHWAY DRAIN S104 - SECTION 104 PURPOSE C - COMBINED E - FINAL EFFLUENT F - FOUL L - SLUDGE S - SURFACE WATER	SEVERN TRENT WATER Severn Trent Water Limited Asset Data Management PO Box 5344 Coventry CV3 9FT Telephone: 0845 601 6616	SEWER RECORD (Tabular) O/S Map scale: 1:2500 This map is centred upon: O / S Grid reference: x : 429111 y : 328419



LS

CATEGORIES

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TE BOX CULVERT

TE

TE SEGMENTS (BOLTED)

TE SEGMENTS (UNBOLTED)

IRON

EINFORCED CONCRETE

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S104

- WEIR

- CASCADE

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- SIDE ENTRY

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- SECTION 104

PURPOSE

C - COMBINED

E - FINAL EFFLUENT

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S - SURFACE WATER

SEVERN

TRENT

WATER

Severn Trent Water Limited

Asset Data Management

PO Box 5344

Coventry

CV3 9FT

Telephone: 0845 601 6616

SEWER RECORD (Tabular)

O/S Map scale:

Date of issue:

Sheet No.

1:2500

03.05.19

2 of 2

This map is centred upon:

O / S Grid reference:

x : 429111

y : 328419

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OUR REF: ds.spec.18/19/3765
YOUR REF:

FAO: Marcus Woodward
The Mailbox
Level 2
100 Wharfside Street
Birmingham
B1 1RT

Date: 28/03/2019

Dear Sirs,

Provision of Information Re: Willington Off A5132.

Further to your recent enquiry regarding water mains requirements to supply your proposed development above, I can confirm the likely costs implications as follows:-

- Diversionary Works
- New Site Mains
 - Off-Site Mains
 - On-Site Mains
- Easement Costs
- Water Service Connection Charges
- Infrastructure Charges

Diversionary Works

No abnormal costs relating to diversion or lowering of any existing services and/or apparatus are anticipated. Enclosed for your guidance is a copy of the Company's "Special Requirements" clauses for works in the vicinity of Company apparatus and these should be incorporated within your Contract documents.

New Site Mains - This information is speculative only and is subject to change once a firm application is made and is reviewed in more depth.

Off-Site

There will not be a requirement for additional off-site mains, as we anticipate that the site mains can be connected into our existing 6"CI or 4"CI main in The Castle Way A5132.

On-Site

Given that we have been unable to carry out full Network Analysis of your proposal due to the limited amount of information available and/or the expediency of the response required, I can only provide an indication of mains sizes and costs based on the "worst case scenario" for this proposal. Likewise, the absence of a site history and soil analysis report means we are unable to assess the likelihood of there being any contamination present. Thus, we cannot be certain whether we will install HDPE or Ductile Iron mains. The schedule of costs given below are based on ductile iron mains and barrier service pipes being installed to ensure the integrity of the pipes laid can be assured. Where there is no risk of contamination, we will likely install HDPE.

The total estimated cost of mains for your proposal are made up as follows:-

Mainlaying – Domestic

On all Domestic sites, the final mains contribution will be calculated in accordance with the new schedule of charges. This is dependant on the number of houses being developed, the Developer can expect to pay £167.00 per plot towards the main laying costs.

Mainlaying – Commercial

The rates given assuming machine mainlaying at reduced cover on site in infill ground using all imported backfill materials (sand & stone), all labour costs, materials (pipework, bends, blocks and infill materials) have been included, as has plant hire). As already indicated we have been unable to carry out a full Network Analysis and as such we cannot specify the size of the mains that are likely to be installed within the confines of the site - below is a list of sizes we currently use and the relevant rates per metre - which do not include any costs for permanent surface reinstatement and are for your guidance only.

90mm	@£6.00/m
90mm Barrier system	@£71.00/m
110mm	@£65.00/m
110mm Barrier system	@£74.00/m
160mm	@£68.00/m
160mm Barrier system	@£80.00/m
225mm	@£175.00/m
225mm Barrier system	@£229.00/m

Connection onto the Site from Existing Mains - Commercial

You should budget for approximately £3000.00 for a connection onto your site.

The connection cost has assumed that excavation will be by machine with hand-assistance in class "B" specification roadway (minor made roads & estate roads). All labour costs, materials (flange adaptors, joint rings, SV, Tees), plant hire and an amount to cover the likely permanent reinstatement charges are included).

Branch Connections – Commercial

You should budget for approximately £675.00 for each branch connection within the confines of your site.

This cost assumes the branches can be installed during the course of on-site mainlaying (i.e. ground is unmade and open). All excavation and backfilling has already been included in the mainlaying rates above. Therefore, the branch connection cost includes all labour costs, materials (flange adaptors, joint rings, SV, Tees) and plant hire.

Other Fittings

With new site mains, it will be necessary to install end hydrants which will be used to wash-out the mains at regular intervals to ensure we continue to provide a continuous high quality water supply. In addition, it may be that the Fire Authorities request the use of these hydrants for fire-fighting purposes when necessary). Each end hydrant will be installed at an estimated cost of £531.00.

Easement Costs

I would like to draw your attention to where new roads are created and they remain in the ownership of the developer or subsequent owners, easements may have to be entered into at the expense of the developer. The cost of arranging such easements can range from £1,500 - £3000 each depending on the complexity of the arrangements to be made.

As indicated, the above is for guidance only, firm costs will only be provided upon receipt of all your proposals.

Water Service Connection Charges

I can also confirm that the Company will (in accordance with S.64 of the Water Industry Act 1991) insist on separately metered water service connections to each separately occupiable premises, which will terminate at the boundary of the public highway with a stop tap and meter box assembly, where applicable.

Please note that if you are installing three-storey properties you will need to ensure that adequate pump/storage facilities are installed to supply the third floor as the Company can only guarantee 10 metres head pressure (one bar) at the boundary.

For your information, the Company's current connection charges for up the provision of 25mm water connections are as follows:-

	PE	BARRIER
Single Connection in unmade/site conditions up to 2 metres	£430.50	£509.50
Additional metres in unmade/site conditions – Per metre	£25.00	£27.00
Single Connection in made reinstatable Footpath up to 2 metres from	£660.50	£740.00
Additional metres in made reinstatable Footpath – Per metre from	£50.00	£59.00
Single Connection in made road	£805.50	£846.21
Additional metre in made road	£85.00	£92.00
Water Infrastructure Charge	£325.00	£325.00
Sewerage Infrastructure Charge	£229.44	£229.44

These charges are valid up to 31 March 2019.

Please note that where the connection falls outside the fixed price scheme (i.e.greater than 12 metres in length, larger than 25mm in size or where the connection has to be made in difficult conditions or out of normal working hours) an individual estimate will be prepared.

The Company must be informed, before the quotation can be issued, where new water connections are laid in the same trench, otherwise the full rate of a separate supply will be charged.

Please note that with effect from 17 February 2003, we introduced charges for providing detailed costings of connection charges for new developments.

These charges are required for processing new supplies applications, assessing demand, specific site requirements and where applicable, mains scheme design for new developments. The charge is £70 plus VAT if applicable. Further details on the fees are available to view on our website south-staffs-water.co.uk.

You must be aware that in accordance with the Company's published "Scheme of Charging" for 2018/2019, these charges are applicable up to 31 March 2019.

Infrastructure Charges

These charges are applicable for every new property/premises requiring a new connection into the Company's distribution system and are charged at £325.00 for water and £229.44 for sewerage for a standard domestic dwelling. Where the premises are deemed non-standard, the charging will be a multiple (Relevant Multiplier "RM") of the standard charge based on the type and number of water fittings installed for domestic purposes. The "RM" is calculated by reference to loading units attributable to the water fittings to be installed, using the table overleaf.

Yours faithfully

Developer Services

Assessment Sheet for Infrastructure Charges

WATER FITTING (Incl. reference to plumbing, outlet, dedicated space or planning for such fittings)	LOADING UNITS (L.U.s) (i)	Nr. OF EACH FITTING (ii)	TOTAL (i) x (ii)
WC Flushing Cistern	2		
Wash Basin in House	1.5		
Wash Basin Elsewhere	3		
Bath (tap nominal size 20mm)	10		
Bath (tap nominal size larger than 20mm)	22		
Shower	3		
Sink (tap nominal size 15mm)	3		
Sink (tap nominal size larger than 15mm)	5		
Spray Tap (e.g. spring-loaded tap, lever-operated tap & any similar tap designed for economy of flow)	0.5		
Domestic Appliance (e.g. dishwasher, washing machine & waste disposal in a house)	3		
Bidet	1.5		
Communal / Commercial Appliance (e.g. dishwasher, washing machine & waste disposal elsewhere than in a house)	10		
Any other water fitting or outlet (incl. a tap, but excluding a urinal or water softener)	3		

TOTAL LOADING UNITS : _____ (A)

RELEVANT MULTIPLIER (RM) (A) / 24 _____ (B)

WATER INFRASTRUCTURE CHARGE (B) X £325.00 £_____ (C)

SEWERAGE INFRASTRUCTURE CHARGE (B) X £229.44 £_____ (D)

No Infrastructure Charges are applicable to fire supplies.

Once the final proposals are available, you must contact Developer Services at the above address, forwarding your application form and fee and the information below:-

- 2 copies of the site layout (preferably to 1:500 scale), indicating:-
 - road layouts,
 - position of new premises,
 - plot numbers,
 - service entry points,
 - landscaping proposals,
 - anticipated build programme and phasing of the work.

- Site history details and a Soil Analysis including chemical analyses

When you send in your application, we will need to know the previous site history details and about any possible risk of contamination on site for health and safety reasons. This will enable us to choose the most appropriate pipe materials. Consequently, it is a pre-requisite of providing costs for new developments that a detailed soil analysis is provided at the application stage.

The report must contain concise information and should incorporate the following:-

- (A) Information on site history and proposed use of the site.
Any remedial actions.
Maps indicating:-
- (i) Location of proposed buildings
 - (ii) Location of trial pits and boreholes including an explanation if any parts of the sites are not sampled.
 - (iii) The proposed entry positions for new water services.
- (B) List of determinants units: Mg Kg-1 on air dried soil except Ph.
- | | | | |
|-----|----------|-----------------------|---------------------|
| (1) | pH | Acid Soluble Sulphate | Magnesium |
| (2) | Sulphide | Elemental Sulphur | Total Cyanide |
| (3) | Phenols | Toluene Extract | Coal Tar |
| | | Organic Chlorine | Cyclohexand Extract |
- (C) Information on ground water levels in soil profiles in order to assess the potential for backsiphonage.
- Purpose of the water supply.
 - Domestic (washing, drinking, cooking, central heating &/or sanitary use)
 - Industrial (manufacturing/industrial process)
 - Agricultural (animals and irrigation purposes)
 - Fire-Fighting (sprinkler systems and hose reels)
 - Anticipated water consumption & maximum flow rate
 - if non-domestic use of water is expected as shown above.
 - size of supply required for each unit/plot
 - Details of any privately owned land
 - through which an easement will need to be negotiated with the land owner to allow future access to repair and maintain the mains and apparatus.

Details of previous and new water fittings for each plot/unit

On receipt of this information together with your fee and the appropriate application form which can be downloaded from www.south-staffs-water.co.uk , we shall be able to assess the mains and services required to supply your proposals and the likely costs.

Developer Services will then be responsible for progressing the application for new/replacement water supply connections and will also be able to assess more accurately the capability of our distribution system to cope with the additional demand from the development and decisions can be made of the actual size and type of mains to be installed. Ultimately, therefore we shall be able to provide a quotation for the mainlaying costs and quotations for each service connection you require.

Consequently, contact should be made with us at the earliest opportunity to minimise any cost difference that may occur in the meantime.

All of the costs quoted are for guidance only, as a quotation for the actual costs will be provided based on your firm proposals when they become available and as such our costings may be subject to change.

SPECIAL REQUIREMENTS IN RELATION TO SOUTH STAFFS WATER PLC

Definitions

For the purpose of this Schedule the following terms shall have the meanings assigned:

‘Company’ means South Staffs Water Plc

‘Company Representatives’ means duly authorised engineer representative and/or agent appointed for the time being to act on behalf of the said ‘Company’. All company representatives will have a photo identity card.

‘Mains’ means any water mains, pipes, cables and ducts and all apparatus connected thereto, which may be found on the site and belong to, or which is under the control of the company.

‘Apparatus’ means any other water services, associated apparatus, fire hydrants or equipment, belonging to, or which is under the control of the Company.

1. New Roads and Streetworks Act or Traffic Management Act.

Where the works or any part thereof are the subject to a New Roads and Streetworks Act Notice (NRSWA) or Traffic Management Act Notice the contractor shall give the legal notice period to the Company before commencing any individual excavations which are in close proximity to our mains and apparatus. Where the works are NOT subject to a NRSWA Notice or a Traffic Management Act Notice, a minimum of 5 working days notice shall be required.

2. Diversion or Removal of Mains

Where mains and/or apparatus are required to be diverted or removed by the Company, the Contractor must prepare a Programme of Works in conjunction with the Company for carrying out this work. The Company reserves the right to change or defer the Programme of Works dependant on the water supply situation at the time.

3. Bridge Works Requirements

Where the proposed works involve bridge works, special attention should be given to the following requirements (in addition to all others included in the Schedule).

- The design and/or works involve bridge structure shall incorporate an adequate channel or duct for the inclusion of the Company’s mains and associated apparatus.
- Where the channel is deemed necessary, a clearance for the installation and future servicing MUST be maintained or provided for within any new or refurbishment bridge works.

The area around and above the main or apparatus, to surface level, shall be unimpeded by any other Utility apparatus.

4. Excavation Requirements

All excavation adjacent to Company mains and apparatus shall be carried out by hand until the exact position of the apparatus is known

Mechanical borers and/or excavators shall not be used within 3 metres of Company Mains without the presence of a Company Representative. To prevent any movement of the mains and apparatus during excavation, complete shuttering shall be used in the following cases:

- a) Where excavation is deeper than the depth of cover of adjacent mains.
- b) Where excavation is within 3 metres of Company mains.
- c) Where excavation is within 8 metres of Company mains in unstable soil.

and where the contractor intends using:

- a) Pile driving equipment within 15 metres of Company mains
- b) Explosives within 200 metres of Company mains
- c) Any hot work (welding etc) within 6 metres of any Company mains.

5. Accessibility

The Contractor shall ensure that at all times of day or night the Company's apparatus is fully accessible for operation and/or maintenance or repair of Company Representatives and is not anyway impeded by the storage of materials or plant.

6. Apparatus Location and Depth of Cover

Under normal circumstances the mains would be an approximate depth of 760-900mm, however, this may vary due to local conditions. It is, therefore, recommended that the Contractor hand dig trial holes within the area of the works to establish the exact location of our main. The Company should be notified, prior to commencement of this work, in order that a Company Representative may be present at the time, to assess what protection/alteration works may be necessary (if any). Alternatively, the Company may request photographic detail in order to make any assessments.

7. Surface Boxes

All existing surface boxes (sluice valves, hydrants etc) MUST remain visible and accessible at all times, both during and after proposed works. No foreign fill must be allowed to enter any chamber to restrict access. Arrangements should be made in advance for any surface boxes, indicator posts or other apparatus which becomes disturbed or lost during the course of the works to be reset or replaced at his expense, and to the satisfaction of the Company.

8. Apparatus Support

Care should be exercised at all times when excavating in the vicinity of the Company's mains/services and should any apparatus become exposed during the course of the works, temporary or if necessary, permanent supports MUST be provided. All exposed apparatus must be surrounded with at least 100mm thick layer of consolidated fine-fill prior to normal backfilling.

9. Trunk Mains

Any works on large diameter trunk mains (isolation, capping off etc) will only be undertaken if supply conditions in the area concerned are normal at the time the works are programmed to be done. It is unlikely that the Company would permit more than one trunk main to be isolated at any one time.

10. Service strips/ Easements

Where services strips or easements are to be provided, these should be a minimum of 1.8 metres wide and clearly and permanently identified. All valves and stop tap boxes will be installed within the strips/easements: including any permanent right of access. The restrictions of any building / landscaping (e.g. tree planting) works within the confines of the strips/ easements, must be included in the Deeds of Property.

11. Heavy Traffic

Where heavy traffic is likely to utilise the roadway, it may also be necessary for additional protection to be afforded, in order to prevent damage to the Company's apparatus.

12. Protection of Mains

The Contractor and / or any sub-contractor shall take all necessary precautions to ensure that any Company mains/ apparatus are fully protected from accidental falls or flows of liquid and/ or materials, which by themselves would damage or in combination with any existing materials and/ or liquids could cause or aggravate pollution, create poisonous substances and/ or toxic substances or fumes and/ or could cause harm to persons or property and/ or impede any operations of the Company.

Any such occurrence shall be notified to the Company immediately.

13. Ground Conditions/ Contamination

It is normal practise for diverted mains and services to be laid using DI, HPPE Barrier Pipe systems or HPPE material respectively. However, if there are any doubts as to the ground conditions in the vicinity of the works, the Company MUST be notified immediately.

A 'Schedule of Contaminants Affecting Water Quality' is available from the Company, detailing which contaminants may necessitate the use of other types of pipes and therefore will have an effect on costing on the Company's work. The water Quality Manager will require soil analysis prior to any costing of works or works proceeding.

14. Delivery Time/ Lead Times

At times, the Company can experience delays of up to 6 months on the delivery of some materials and, in view of the effects this may have on the planning of any diversionary works, you are advised to forward your remittance to the Company as soon as possible - on receipt of which the necessary paperwork will be raised to obtain the required materials and programme the diversion works.

15. Legal Requirements and Possible Delays

In addition to item 1, under the New Roads and Streetworks Act, it is necessary for us to give a minimum of 28 days notice to the Local Fire Service and other utilities of all main-laying. Therefore, we would appreciate early discussions to determine likely start date (s).

16. Additional Works

Where additional works are requested or required due to unforeseen circumstances, written confirmation would be appreciated, in order that these costs can be accounted for in the final invoice. A variation order document shall be signed by both parties prior to commencement of work.

17. Damage to Apparatus and/ or Personnel

In event of damage to any of the Company's apparatus, the Contractor MUST advise the Company immediately by telephone and confirm in writing.

The Contractor shall reimburse the Company and make full recompense to any of its customers or other interested parties in respect of all costs arising from the Contractors failure to take adequate measures or precautions or from any act of neglect or default by or on behalf of the Contractor resulting in injury to persons, damage to Company apparatus, interruption to any supply or delay any provision of service.

The Contractor shall indemnify the Company against all claims for damage to mains and/ or apparatus together with any consequential loss to other parties arising there from caused through their negligence.

18. Standpipe Hire

The Contractor is required to contact Central Stores at Green Lane Walsall to obtain payment methods and relevant standpipes. On NO ACCOUNT shall the Contractor make connections using their own standpipes on hydrants connected to the Company's mains.

19. Costings

Costs quoted include all Company overheads and supervision charges.

Enquiries:

All enquiries and general correspondence should be directed to:

Mr Phil Bagnall
Technical Services Manager
South Staffs Water Plc
Green Lane
Walsall
WS2 7PD
Tel. 01922 638282 ext 2307
Fax. 01922 631779

To arrange for a mains identification on site, contact the Company's Call Centre on Free phone 0800 3891011.

To arrange programming, please contact Mr Clive Ferneyhough on 01922 638282 ext 2309.

The arrange/ discuss requirements for possible site supervision by the Company of your excavation works, where they are in close proximity to the Company's mains/ apparatus, contact:-

Mike Morris, Networks Performance Manager on 0845 4561109.

DEVELOPER SERVICES

Schedule of Contaminants Affecting Water Quality

When you send in your application, we will need to know the previous site history details and about any possible risk of contamination on site for both health and safety reasons. This will enable us to choose the most appropriate pipe materials. Consequently, it is a pre-requisite of providing costs for new developments that a detailed soil analysis is provided at the application stage. The report must contain concise information and should include:-

- (A) Information on site history and proposed use of the site.
Any remedial actions.
Maps indicating:-
(i) location of proposed buildings
(ii) location of trial pits and boreholes including an explanation if any parts of the sites are not sampled.
(iii) the proposed entry positions for new water services.
- (B) List of determinants units: Mg Kg-1 on air dried soil except Ph.
(1) pH Acid Soluble Sulphate Magnesium
(2) Sulphide Elemental Sulphur Total Cyanide
(3) Phenols Toluene Extract Coal Tar
Organic Chlorine Cyclohexane Extract
- (C) Information on ground water levels in soil profiles in order to assess the potential for backsiphonage.

It may also be necessary to carry out additional analysis for more contaminants dependant on land use history. This will be determined by the Company's Water Quality Department and notified to yourselves on receipt of the land use history details.

Failure to submit the above will delay the quotation and costs will undoubtedly be incurred by your Company for any additional work or precautionary measures that will arise as a consequence.

On greenfield sites where previous land use history indicates that soil analysis may not be required, a "Letter of Indemnity" will be required from yourselves - preferably from your geological consultants or other similar "expert" body.

Further guidelines are laid down in:-

"The Effect of Soil Contaminants on material Used for Distribution of Water" - WRC 2222

"The Effect of Organic Chemicals in Contaminated Land on Buried Services" - WRC 2982

Both publications are available from the Water Research Centre, 660 Ajax Avenue, Slough, Berkshire S11 4BG.



428781, 328175



Green Lane, Walsall
WS2 7PD
Telephone : (01922) 638282

Scale - 1:1000
Centre Coordinates - 428991, 328388
Plot date - 14/03/2019

Plot name: Willington Off A5132
Comments: WSP

- | | |
|-------------------------------|--------------------|
| — Main - Existing | ■ Meter |
| - - - Main - DecommissionedAC | ● Hydrant |
| — Service - Existing | — Sluice Valve |
| — Company Boundary | ⊖ Closed Valve |
| | ▶ PRV |
| | ◆ Air Valve |
| | ▶ Non-Return Valve |
| | ✕ Stop Tap |

The Company have no statutory obligation to give information about the position of their mains and other underground apparatus, but it is offered willingly for general guidance only on the understanding that it is based on the best information at present available to the Company and no warranty to its correctness is given or implied. The plan must not be relied upon in the event of excavations or other works made in the vicinity of the Company's apparatus and any onus of locating the apparatus before using a mechanical excavator or other plant rests entirely upon your authority/Company. It must be understood that the furnishing of this information is without prejudice to the provisions of the New Roads and Street Works Act 1991, and of the Company's right to be compensated for any damage to the Company's apparatus.

Based upon the Ordnance Survey map by South Staffordshire Water by permission of the Controller of Her Majesty's Stationery Office. © Crown copyright and database rights Ordnance Survey 100022432

Mr M Woodward
WSP
100 Wharfside Street
Birmingham
B1 1RT

Unit 11
Victory Park
Victory Road
Derby
Derbyshire DE24 8EP

Tel: 01332 276640

Fax: -

e-mail: ckelly@westernpower.co.uk

Date

14 March 2019

Our Ref:
3326930

Dear Mr Woodward,

Budget Estimate for electricity connection works by Western Power Distribution (East Midlands) plc ("WPD") at Development off A5132, Willington, Derby DE65 6BU ("the Connection Works").

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

I also enclose:

- a WPD guide explaining how the charge for the Connection Works is calculated:
- a drawing showing the expected point of connection to our distribution system (Number(s) 3326930 dated 14/03/19)

Basis of Information

WPD's proposals are based on the information provided, as summarised below:-

- Your enquiry dated 11/03/19

WPD's proposals are based on the following design criteria:-

- 40 connections, each with an After Diversity Maximum Demand (ADMD) of 15 **kVA**

Proposed Connection Works

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

elements. The enclosed guide provides further explanation on competition in new connections works. An outline of the proposed Connection Works is provided below;

- **Connect 2No 11kV cables onto existing network and install onto site to a substation position.**
- **Establish new package substation with GRP housing, and terminate 11kV cables into substation.**
- **Connect and install LV mains cables from substation and distribute throughout site.**
- **Connect individual service cables onto mains cables and terminate at each property into external meter boxes.**
- **WPD to excavate trenches off site. Traffic management required.**
- **3rd party wayleave consents would be required to achieve the proposed point of connection onto the 11kV network.**

Please note that these proposals are based upon a provisional investigation and no site visit or detailed study has been carried out. Unless otherwise stated it 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.

Estimated connection charge

The estimated connection charge for the provision of the Connection Works is **£98,917.92 inclusive of VAT at 0%**. Payment terms will be stipulated in any subsequent connection offer.

Please note that the estimated connection charge is for **guidance purposes** only and subject, in particular, to any wayleaves and other consents being successfully obtained. It is based on present day prices and includes a 10% contingency to allow for changes in labour and material costs. It does not include the costs of any necessary civil works, which should be provided by you at your expense.

Progression to Offer stage

This Budget Estimate is not legally binding, but sets out the amount we reasonably estimate we would require you to pay for the Connection Works under a formal connection offer (including the more detailed studies we would need to carry out). If you would like WPD to provide a formal offer for connection please forward your application to the address given below together with any supporting information that will allow us to carry out a detailed study.

Western Power Distribution
Records Team
6th Floor
Toll End Road
Tipton
DY4 0HH

E-mail: wpdnewsuppliesmids@westernpower.co.uk

Upon receipt of the application WPD will finalise the design of the Connection Works and firm up the connection charge. Once this has been done WPD will send you an offer, which

will reflect any contestable work you wish to carry out and include payment terms and conditions for connection.

If you have any queries regarding this budget estimate please do not hesitate to contact me at the address or telephone number given at the top of this letter.

Please note that this letter and attachments are not to be treated as an offer from WPD to carry out the Connection Works.

Yours sincerely,



Chris Kelly

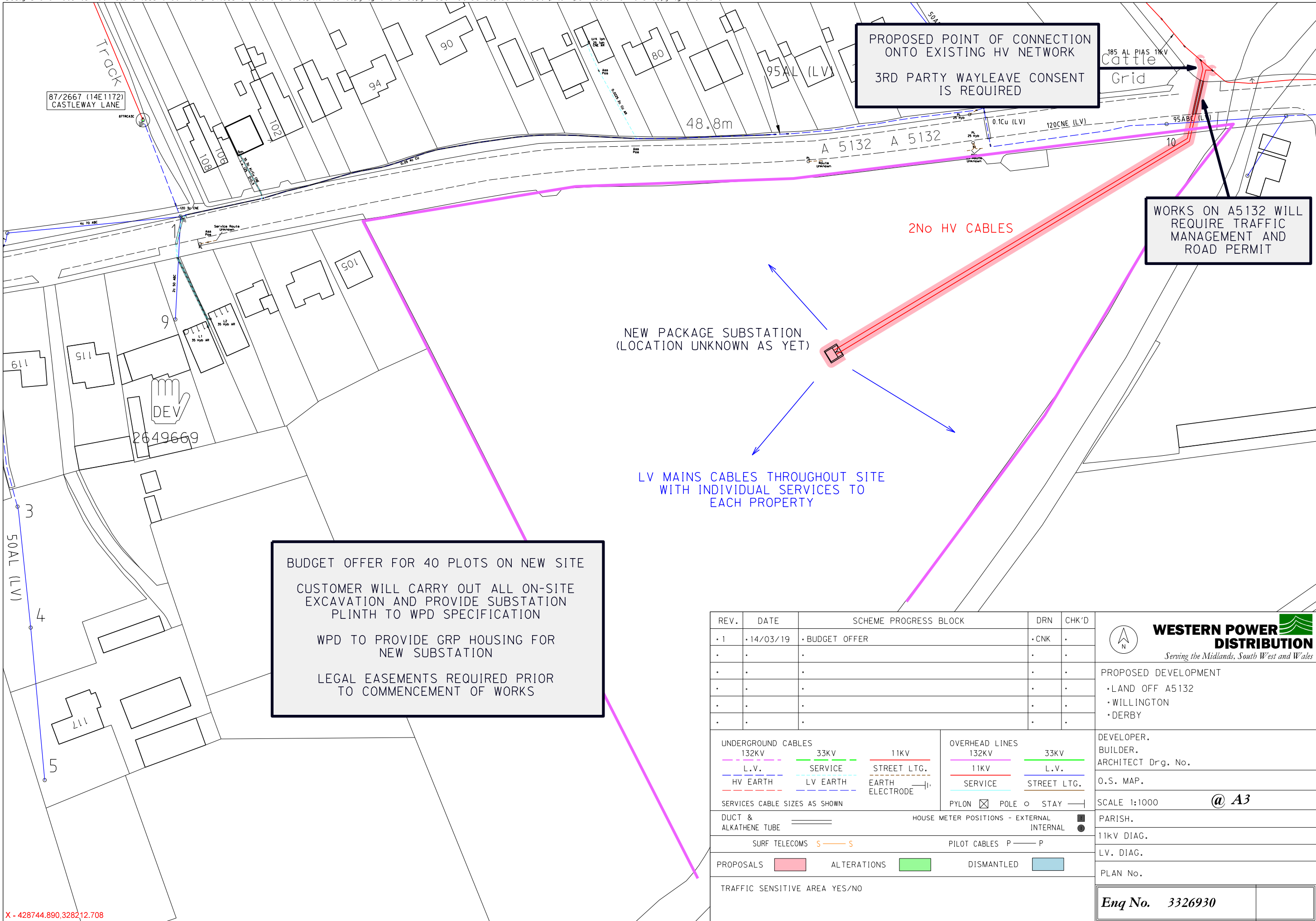
Planner

Burton on Trent team

Derby

Information is given as a guide only
and its accuracy cannot be guaranteed.

PLEASE NOTE: This plan ONLY shows assets owned by Western Power Distribution.
Electricity assets owned by IDNO's (Independent Network Operators)
MAY be present in this area.



REV.	DATE	SCHEME PROGRESS BLOCK	DRN	CHK'D
• 1	• 14/03/19	• BUDGET OFFER	• CNK	•
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•

UNDERGROUND CABLES

132KV

33KV

11KV

L.V.

SERVICE

STREET LTG.

HV EARTH

LV EARTH

EARTH ELECTRODE

OVERHEAD LINES

132KV

33KV

11KV

L.V.

SERVICE

STREET LTG.

SERVICES CABLE SIZES AS SHOWN

DUCT & ALKATHENE TUBE

SURF TELECOMS

PILOT CABLES

PROPOSALS

ALTERATIONS

DISMANTLED

TRAFFIC SENSITIVE AREA YES/NO

HOUSE METER POSITIONS - EXTERNAL

INTERNAL

TRAF

PILOT CABLES

PROPOSALS

ALTERATIONS

DISMANTLED

TRAFFIC SENSITIVE AREA YES/NO

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

PROPOSED DEVELOPMENT

• LAND OFF A5132

• WILLINGTON

• DERBY

DEVELOPER.

BUILDER.

ARCHITECT Drg. No.

O.S. MAP.

SCALE 1:1000

PARISH.

11KV DIAG.

LV. DIAG.

PLAN No.

Enq No. 3326930

X - 428744.890,328212.708

Characteristics and Charge Statement

Offer - Customer Copy (Please retain)

Printed 14/03/2019

Enquiry: 3326930 Scheme: 1260151 Ver: 1

Offer for Electricity Connection Works by Western Power Distribution ("WPD") at :

Site located Off A5132, Willington, Derbyshire, DE65 6BU

("the Works")

Characteristics of Supply

40 Connections

The supply to each connection will be 230 volts, Single phase, 50 Hz with a Maximum Agreed Capacity of 15 kVA

Earthing provided by WPD for customer's Use

PME / TN-C-S

External earth loop impedance

Not Exceeding 0.47 Ohms

Maximum Prospective Short Circuit Current at the exit point 16 kA

Connection Charge

Non-Contestable

£4,046.45

Contestable work undertaken by WPD *

£94,871.47

Charge sub-total

£98,917.92

Connection Charge excluding VAT

£98,917.92

VAT on £98,917.92 @ 0%

£0.00

Total payable before test & connect

£98,917.92

* See explanatory guide for new connections to WPD's electricity distribution system

New connections to domestic premises are zero rated for VAT. Other connections and all alterations are subject to VAT at the standard rate.

The Connection Charge above assumes that all connections will be made at the same time and that the work is carried out in accordance with the design. Any changes made at your request may vary the final charge payable.

Interim connection charges on staged developments will be based upon actual WPD expenditure to date.

Acceptance (Do not detach)

I accept the terms and conditions set out in this Characteristics and Charge Statement, the Offer Letter and accompanying Specific and General Conditions for Connection Works.

I acknowledge that where there is no Housing Agreement, the Characteristics and Charge Statement assumes the number of premises indicated will all be connected at the same time, under the same Test and Connection. If this is not the case I will advise you in advance so that the offer can be adjusted to incorporate any additional test and connections required.

I accept responsibility for any reasonable costs that WPD has incurred if I cancel this acceptance after construction work has commenced.

I understand that the new electricity connections cannot be used until an electricity supplier has been appointed in each case and that a meter has been installed.

My supplier for each connection will be
 (WPD will use this information for internal purposes only. The customer **must** contact their nominated Supplier directly in order to register the connection).

Print Name.....

Signature Date

Designation(if signing for a company)

For and on behalf of (company name)

Characteristics and Charge Statement

Offer - Customer Copy (Please return)

Printed 14/03/2019

Enquiry: 3326930 Scheme: 1260151 Ver: 1

Offer for Electricity Connection Works by Western Power Distribution ("WPD") at :

Site located Off A5132, Willington, Derbyshire, DE65 6BU

("the Works")

Characteristics of Supply

40 Connections

The supply to each connection will be 230 volts, Single phase, 50 Hz with a Maximum Agreed Capacity of 15 kVA

Earthing provided by WPD for customer's Use

PME / TN-C-S

External earth loop impedance

Not Exceeding 0.47 Ohms

Maximum Prospective Short Circuit Current at the exit point 16 kA

Connection Charge

Non-Contestable

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£98,917.92

VAT on £98,917.92 @ 0%

£0.00

Total payable before test & connect

£98,917.92

* See explanatory guide for new connections to WPD's electricity distribution system

New connections to domestic premises are zero rated for VAT. Other connections and all alterations are subject to VAT at the standard rate.

The Connection Charge above assumes that all connections will be made at the same time and that the work is carried out in accordance with the design. Any changes made at your request may vary the final charge payable.

Interim connection charges on staged developments will be based upon actual WPD expenditure to date.

Acceptance (Do not detach)

I accept the terms and conditions set out in this Characteristics and Charge Statement, the Offer Letter and accompanying Specific and General Conditions for Connection Works.

I acknowledge that where there is no Housing Agreement, the Characteristics and Charge Statement assumes the number of premises indicated will all be connected at the same time, under the same Test and Connection. If this is not the case I will advise you in advance so that the offer can be adjusted to incorporate any additional test and connections required.

I accept responsibility for any reasonable costs that WPD has incurred if I cancel this acceptance after construction work has commenced.

I understand that the new electricity connections cannot be used until an electricity supplier has been appointed in each case and that a meter has been installed.

My supplier for each connection will be
 (WPD will use this information for internal purposes only. The customer **must** contact their nominated Supplier directly in order to register the connection).

Print Name.....

Signature Date

Designation(if signing for a company)

For and on behalf of (company name)

Characteristics and Charge Statement

Offer - Office Copy

Printed 14/03/2019

Enquiry: 3326930 Scheme: 1260151 Ver: 1

Offer for Electricity Connection Works by Western Power Distribution ("WPD") at :

Site located Off A5132, Willington, Derbyshire, DE65 6BU

("the Works")

Characteristics of Supply

40 Connections

The supply to each connection will be 230 volts, Single phase, 50 Hz with a Maximum Agreed Capacity of 15 kVA

Earthing provided by WPD for customer's Use

PME / TN-C-S

External earth loop impedance

Not Exceeding 0.47 Ohms

Maximum Prospective Short Circuit Current at the exit point 16 kA

Connection Charge

Non-Contestable

£4,046.45

Contestable work undertaken by WPD *

£94,871.47

Charge sub-total

£98,917.92

Connection Charge excluding VAT

£98,917.92

VAT on £98,917.92 @ 0%

£0.00

Total payable before test & connect

£98,917.92

* See explanatory guide for new connections to WPD's electricity distribution system

New connections to domestic premises are zero rated for VAT. Other connections and all alterations are subject to VAT at the standard rate.

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Print Name.....

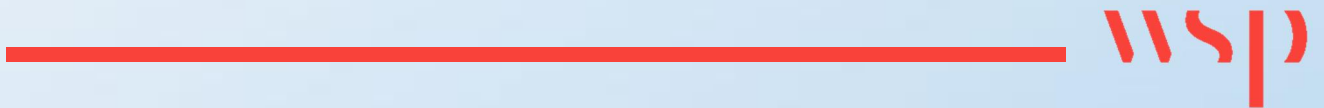
Signature Date

Designation(if signing for a company)

For and on behalf of (company name)

Appendix C

UTILITY LOAD ANALYSIS



WSP Utility Load Analysis

Project: Land at Willington
Project Number: 70055040
Date: 11/03/2019
Rev: 00
Rev Date:
Rev comments:
Prepared by: AS
Checked by:



Development Zone	Land Use	No. of Units	Peak Electrical Load (kVA)	Peak Gas Load (kWh)	Annual Gas Load (kWh/annum)	Peak Potable Water (l/s)	Fire Fighting Requirement (l/s)		Comments/Assumptions/Clarifications
Site Wide	C3 Residential	40	80	365	503,000	0.72	8.00	35.00	The C3 residential development loadings are based on a mixture of 2 bedded, 3 Bedded and 4 Bedded Semi detached and detached homes. If the development profile alters from the assumptions the loading figures will need to be re-evaluated. The electrical figures presented assume an ADMD 2.00kW/unit which excludes external lighting/open space lighting at this stage. Gas heating and hot water are assumed at this stage and is to be provided directly from the gas network. Diversified peak gas load presented is based on guidance provided in IGE/GL/1 Edition 2. If heating and hot water is derived from an Energy Centre making use of CHP the gas loads will need to be re-evaluated. If heating and hot water is derived from electrical sources the electrical loads will need to be re-evaluated. Peak potable water load provided is the anticipated morning peak based on houses using 450l/day and 50% on-site storage and also satisfying the storage requirements of BS EN 806. Peak potable water demand excludes any associated irrigation/firefighting requirements. Fire Fighting requirements TBC for development by Fire Engineer. Figures provided for guidance only - high risk units may require greater flows. Fire requirement will not be based on sum of the anticipated flows, typically the largest of the requirements will apply.



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