



DRAINAGE & UTILITIES STATEMENT FOR

Land off Seven Acre Close
Bishops Tachbrook
Warwickshire
CV33 9SG

INTRODUCTION

The project comprises the proposed development of a 0.85ha of existing overgrown grassland, to provide approximately 25 dwelling with private gardens, communal parking and soft landscaping areas.

This assessment is based on the assumption that the site will be submitted for outline planning permission.

INDEX

Introduction: Page 1

The Development: Page 3

Drainage Strategy: Page 3

Utilities Statement: Page 5

Conclusions: Page 6

Appendices: Page 7

THE DEVELOPMENT

Site Location & Description

The site is located on the western edge of the village of Bishops Tachbrook and the National Grid Reference for the site is SP 3075 6135. The site boundaries are formed by residential properties, fronting on to Seven Acre Close and St Chads Road to the east, a detached property, known as *Knob Hill*, to the west and open fields to the north. To the south of the site is Mallory Road, beyond which is farmland.

Seven Acre Close was constructed by A C Lloyd around 20 years ago.

DRAINAGE STRATEGY

A Development Enquiry has been submitted to Severn Trent Water and the response is included in Appendix B. The adopted sewer record map shows there is a 225 mm dia. public surface water sewer running through eastern side of the site from Seven Acre Close down the Western Boundary of the site (increasing in size to 375mm diameter at the Rear of the properties in Rye Fields.)

There is also a 150mm dia foul sewer running parallel to the surface water sewer, and both of these were constructed at same time as Seven Acre Close.

It is assumed that there are also formerly private sewers serving the existing dwellings in St Chads Road which are now public following the PDaS sewer transfers of October 2011.

The most suitable location for a new foul sewer discharge point for the site is the existing adopted foul sewer manhole in the corner of the site, Ref. 8302.

A Section 106 connection licence would be required from Severn Trent for the proposed new foul connection, and Severn Trent have confirmed that there is capacity within this sewer to accept the foul flows generated by the proposed development.

The Severn Trent consultation also indicates that, should soakways not prove to be viable, a surface water connection to the 225mm storm sewer on the eastern

boundary of the site would be acceptable provided flows are attenuated to the greenfield run off rate of 5 l/s per hectare.

A desk study site investigation for the site was carried out by Crossfield Consulting in March 2014.

Their report concludes that it is considered that a soakaway drainage system will not be feasible for the proposed development, and therefore a Section 106 connection licence would be required from Severn Trent for the proposed surface water sewer connection.

In summary, it is therefore proposed to connect to the existing public sewers within the site, for both surface and foul water drainage.

Environment Agency Flood Map

The Environment Agency (EA) flood zone map shows all of the proposed developed area of the site to lie within Zone 1 (Low Risk).

Strategic Flood Risk Assessment

A Level 1 Strategic Flood Risk Assessment (SFRA) has been carried out by Mouchel on behalf of Warwick District Council in April 2013. This shows the site to lie outside any flood zone with no history of recorded flooding.

In addition a focused internet search was undertaken to identify any significant flooding events within the vicinity of the site and there has been no incidence of any issues recorded.

UTILITIES STATEMENT

Details of the site proposals have been conveyed to the statutory undertakers to establish the position of their existing services, availability of supply and any unforeseen costs in servicing the site. The following informal comments have been received to date:-

The Water Authority (Severn Trent) — there are existing water mains in the area that could be used to service the site. It will be necessary to extend the water distribution main; however, this could easily be accommodated within the main access route.

Electricity (Western Power) — With regard to electricity, there are low and high voltage cables located in Seven Acre Close and also a HV pole mounted cable running through the site. No major problems are envisaged with a supply of electricity to the development although the overhead HV cable will need to be diverted underground as part of the development works. An additional substation site may be required on the site in an agreed position adjacent to the highway infrastructure. This site will typically be 4.5m by 4.5m in size. Appendix C shows Western Powers records for the area.

Gas (National Grid) – We have spoken with National Grid & the existing gas mains are located within 50m of the site boundary. No problems are anticipated in extending these mains into the new site. We await a copy of their record plans for the area.

Telecoms (Open Reach) - have confirmed that they have existing plant located adjacent to the site and no problems are envisaged in providing a service to the site.

A number of other utilities have been consulted and all have no plant in immediate vicinity of the site. A summary of these results are in Appendix D.

CONCLUSIONS

1. Storm & Foul drainage flows from the proposed site can be accommodated within the existing public sewers on site.
2. Telecoms, Gas, Water & Electric mains are all located adjacent to or within the site.

It is clear from the above that the proposed development would have some limited impact on existing infrastructure in the local area. All the issues that have been raised can be addressed, and proposals for their resolution would be incorporated within further detailed applications for the development.

Darren Avern B.Eng (Hons)

Operations Engineer

A C Lloyd Homes Ltd

April 2014

APPENDICES

- **Appendix A - Location plan**
- **Appendix B – Severn Trent Development Enquiry Response**
- **Appendix C – Western Power Record Plan**
- **Appendix D - Linesearch Enquiry**
- **Appendix E - Environment Agency Flood Map**



APPENDIX A

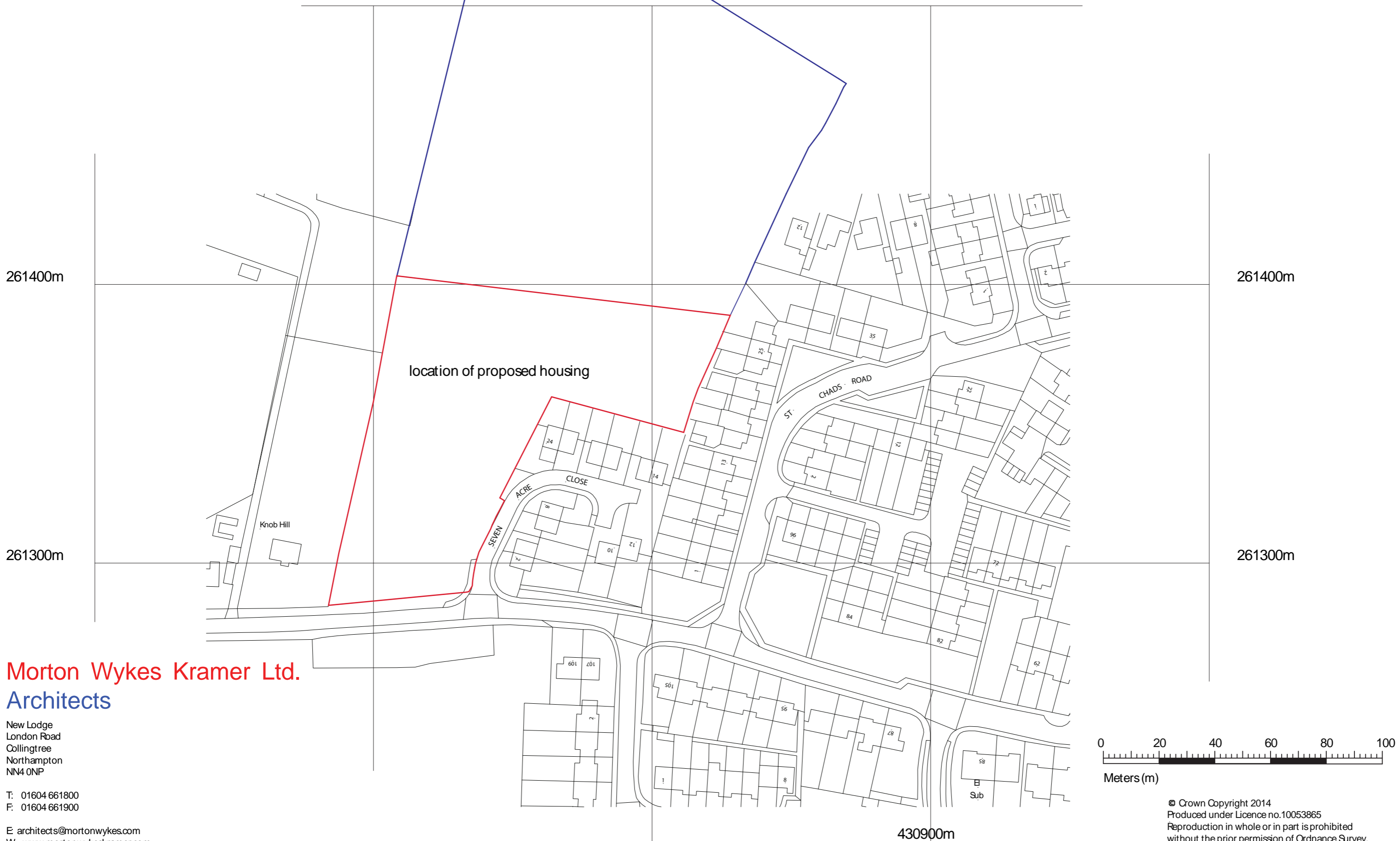
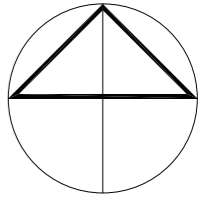
LOCATION PLAN

Project: Housing Development Bishops Tachbrook

Scale: 1:2500 (A3)

Date: April 2014

Drawing No: 5636.002

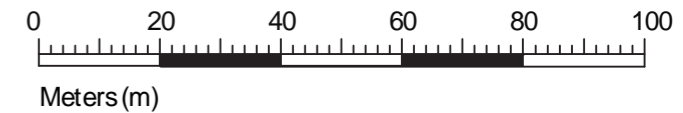


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APPENDIX B



Sewer Node		Sewer Pipe Data								
REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SP30617201	83.79	82.21	81.64	S	VC	C	150	nil	42.40	nil
SP30617301	81.70	80.08	79.82	S	VC	C	225	nil	48.65	nil
SP30617302	82.26	80.71	80.10	S	VC	C	225	nil	48.70	nil
SP30617303	82.63	81.10	80.73	S	VC	C	225	nil	84.41	nil
SP30617304	83.17	81.59	81.12	S	VC	C	225	nil	40.57	nil
SP30617305	81.75	79.82	79.52	F	VC	C	150	nil	41.23	nil
SP30617306	82.29	80.45	79.85	F	VC	C	150	nil	50.10	nil
SP30618301	81.46	79.79	78.82	S	VC	C	225	nil	47.32	nil
SP30618302	81.44	79.50	78.44	F	VC	C	150	nil	52.23	nil
SP30618402	76.45	73.99	71.35	S	CO	C	375	nil	34.02	nil
SP30618403	80.02	78.60	74.13	S	VC	C	225	nil	17.96	nil
SP30618404	76.55	73.80	71.36	F	VC	C	150	nil	36.99	nil
SP30618405	80.02	78.43	73.82	F	VC	C	150	nil	17.38	nil
SP30619200	nil	nil	nil	F	U	U	nil	nil	0.00	nil
SP30619201	76.98	73.56	72.67	S	CO	C	300	nil	38.66	nil
SP30619201	76.98	74.30	73.84	F	VC	C	150	nil	204.76	nil
SP30619405	74.69	72.66	71.18	S	CO	C	300	nil	32.50	nil
nil	nil	nil	nil	F	VC	nil	nil	nil	0.00	nil

Legend

- 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)

Other Symbols

- 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

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

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...

SEVERN TRENT WATER

Sewer Record Management

Asset Data Management
PO Box 5344
Coventry
CV3 9FT
Telephone: 0845 601 6616

SEWER RECORD (Tabular)

O/S Map scale: 1:1750

Date of issue: 08.04.14

Sheet No. 1 of 1

This map is centred upon:
O / S Grid reference:
x: 430760
y: 261360

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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A C Lloyd Homes Ltd
Nicholls House
Homer Close
Tachbrook Park
Warwick
CV34 6TT

FAO: Darren Avern

8th April 2014

Dear Mr Avern,

Proposed Residential Development (22 dwellings) Seven Acre Close, Bishops Tachbrook, Warwickshire CV33 9SG

I refer to your Development Enquiry Request submitted 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 are public sewers crossing your site to its north-east corner as per the enclosed public sewer record. The 150mm foul sewer and the 225mm surface water sewer both require protective strips 5 metres wide (about the centreline of the sewer) which should not be built on by your development. This is to protect the pipe and to maintain our future access to the sewer.

Due to a change in legislation on 1 October 2011 there may also 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.

If located, these sewers would require protective strips of 2.5 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.

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

Tel: 0116 234 3834
Fax: 0116 234 3035

www.stwater.co.uk
net.dev.east@severntrent.co.uk

Contact: Steve Toone
Direct line: 0116 234 3566
Mobile no:

Your ref:
Our ref: WT29928/ 8139981

Foul Water Drainage

The enclosed sewer record extract shows a 150mm diameter public foul sewer crossing the site. A gravity based drainage system for 22 new dwellings connecting at manhole 8302 would be acceptable to the Company subject to formal S106 connection approval (see later). Topographically it appears that a gravity based system will be achievable.

Obviously, if you find a more suitable point of connection to the public sewer in the vicinity of your site then please send the details to us for our review.

If after your site studies you determine that you will need to pump up to the public sewer then please indicate the specifics in your foul water drainage proposals so we can assess the pumped flows.

Please submit foul water drainage proposals based on these comments for review when available.

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 this is not practical and no watercourse is available as an alternative, the use of sewerage should be considered. In addition, other sustainable drainage methods should also be explored before a discharge to the public sewerage system is considered.

The enclosed sewer record indicates that there is a 225mm diameter dedicated surface water sewer crossing the north-east of your site.

In the event that following testing, it is demonstrated that soakaways would not be possible on the site, evidence should be submitted. This would satisfy SGN1 (Supplementary guidance notes enclosed).

In this scenario, a surface water connection to the available public surface water sewer would be acceptable subject to formal S106 approval (see later) with the discharge rate requested to be restricted to 5 litres per second per hectare as per SGN3 (Greenfield site).

Any flows exceeding this would need to be appropriately attenuated on site and discharged at a controlled rate.

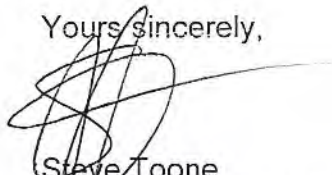
Please submit surface water drainage proposals based on these comments for review when available.

New Connections

For any new connections (including the re-use of existing connections) to the public sewerage system, you will need to submit a Section 106 application form. Our New Connections department are responsible for handling all such enquiries and applications. To contact them for an application form and associated guidance notes please call 0800 707 6600 or download from www.stwater.co.uk.

Please quote WT29928 / SAP8139981 in any future correspondence (including e-mails) with STW Limited. Please note that 'Development Enquiry' responses are only valid for 6 months from the date of this letter.

Yours sincerely,



Steve Toone
Waste Water Services - Asset Protection (East)



APPENDIX C

Contact Us

Mapping Enquiries:
All areas 0121 623 9780

General Enquiries:
Midlands 0845 724 0240
South Wales 0845 601 3341
South West 0845 601 2989

Date Requested: 01/05/2014

Job Reference: 1917796

Site Location: 430791 261370

Requested by: Mr Darren Avern

Your Scheme/Reference: Bishops Tachbrook

1:1250 Area or Circle dig site

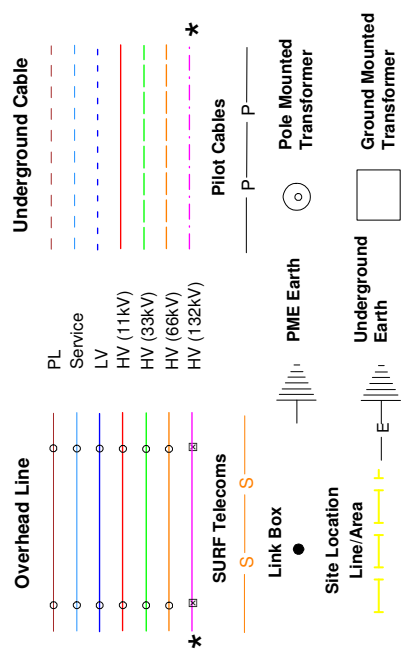
1:500 Line dig site

IMPORTANT NOTICES

- These plans are provided as a general guide only. 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 but will 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.

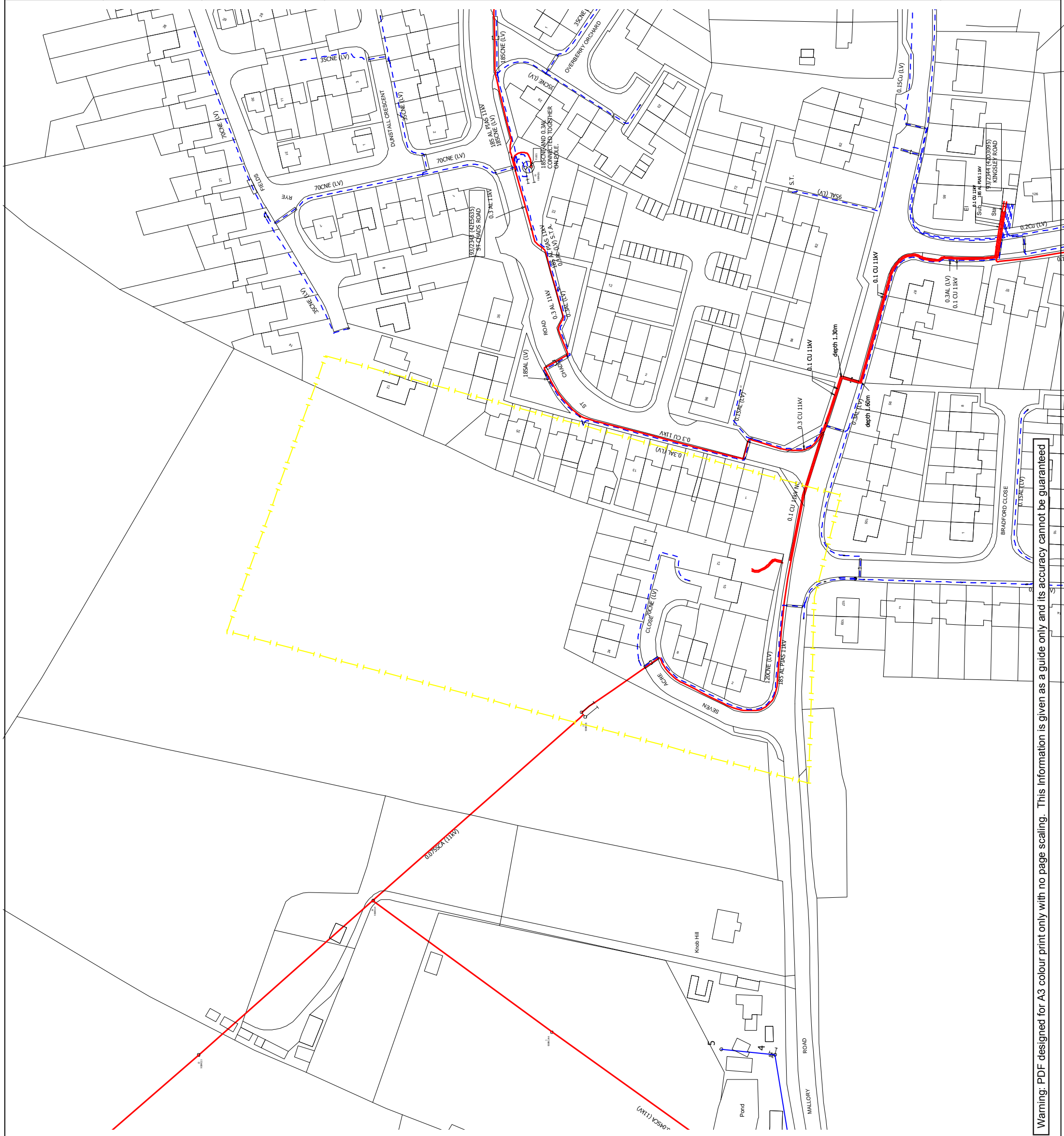
Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA

**East Mids 0800 056 8090 West Mids 0800 328 1111
South Wales 0800 052 0400 South West 0800 365 900**



*Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 132kV underground cables and 132kV overhead lines – 0800 096 3080

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APPENDIX D

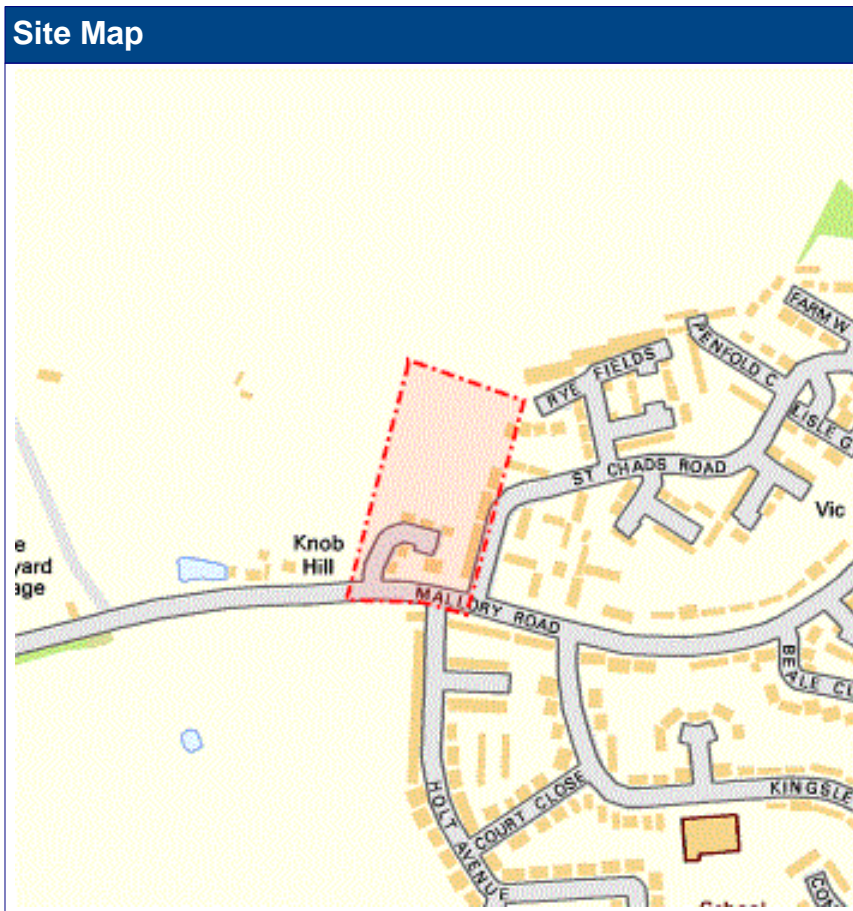
Enquirer

Name	Mr Darren Avern	Phone	01926 421326
Company	A C Lloyd	Mobile	Not Supplied
		Fax	Not Supplied
Address	NICHOLLS HOUSE HOMER CLOSE TACHBROOK PARK WARWICK Warwickshire CV34 6TT		
Email	acloyd.com		
Notes	Asset Owners have been requested to respond to you via these contact details, please ensure they are correct. Where Asset Owners charge for plans they have been requested to send you a quote before proceeding.		

Enquiry Details

Scheme/Reference	Bishops Tachbrook		
Enquiry type	Planned Works	Work category	Development Projects
Start date	05/01/2015	Work type	Housing
End date	06/01/2015	Site size	19112 metres square
Searched location	cv33 9sg	Work type buffer*	25 metres
Confirmed location	430794 261370		

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.



Asset Owners

Subject always to our standard terms and conditions, this enquiry result is valid for 28 days only from the date of enquiry and is based on the confirmed information you entered. If the location of the work changes then a further enquiry must be made. Should the work not be undertaken within 28 days of the enquiry then a further enquiry must be made.

Where applicable listed below are those registered Asset Owners who have been notified, those to whom you need to send further information and those who have no apparatus within your search area. In addition your response will include other non-registered Asset Owners contact details who have NOT been notified, which may be of interest to you.

Please be aware that the lists below are not exhaustive and that not all Asset Owners are registered with this service. In particular please note that the LinesearchbeforeUdig system only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeudig.nationalgrid.com

If you are required to email additional info please note that we need the following: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.

Asset Owners who DO have assets near your proposed work site.

In the Zone of Interest			
Asset Owner	Phone/Email	Emergency Only	Status
Western Power Distribution	0121 623 9780	0121 623 9780	Notified

LinesearchbeforeUdig Asset Owners who DO NOT have assets in the immediate vicinity of your proposed work site.

Not in the Zone of Interest		
AWE Pipeline	FibreSpeed Limited	Oikos Storage Limited
BOC Limited (A Member of the Linde Group)	Gamma	Perenco UK Limited (Purbeck Southampton Pipeline)
BP Midstream Pipelines	Geo Networks Limited	Phillips 66
BPA	Government Pipelines & Storage System	Premier Transmission Ltd (SNIP)
Centrica Energy	Humbly Grove Energy	RWEnpower (Little Barford and South Haven)
Centrica Storage Ltd	HV Cables	SABIC UK Petrochemicals
Concept Solutions People c/o Centara	IGas Energy	Scottish Power Generation
ConocoPhillips (UK) Ltd	Ineos Enterprises Limited	Seabank Power Ltd
Coryton Energy Co Ltd (Gas Pipeline)	INEOS Manufacturing (Scotland and TSEP)	Shell Pipelines
EirGrid	Lark Energy	Spiecapag UK Limited (Carrington)
Electricity North West Limited	Mainline Pipelines Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
E-on UK Plc (Gas Pipelines Only)	Manchester Jetline Limited	Transmission Capital
ESP Utilities Group	Marchwood Power Ltd (Gas Pipeline)	Wingas Storage UK Ltd
ESSAR	National Grid Gas (above2 bar) and National Grid Electricity Transmission	York Potash
Esso Petroleum Company Limited	NPower CHP Pipelines	

The following Asset Owners are NOT currently members of LineSearchbeforeUdig, however you should contact them before proceeding. Please be aware that this list is not exhaustive and that **IT IS YOUR RESPONSIBILITY TO IDENTIFY AND CONTACT ALL ASSET OWNERS WITHIN YOUR SEARCH AREA.**

Not Notified			
Asset Owner	Preferred contact method	Phone	Status
BskyB Telecommunications	nrswa@bskyb.com	02070 323 234	Not Notified
BT	https://www.swns.bt.com/pls/mbe/welcome.home	0800 917 3993	Not Notified
Colt	plantenquiries@catelecomuk.com	01227 768427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698 404 646	Not Notified
Fulcrum	FPLplantprotection@fulcrum.co.uk	01709 844407	Not Notified
GTC	nrswa@gtc-uk.co.uk	01359 240 363	Not Notified
Instalcom	plantenquiries@instalcom.co.uk	02087 314 613	Not Notified
Interoute	interoute.enquiries@plancast.co.uk	02070 259000	Not Notified
National Grid Gas Distribution (below 2 bar)	plantprotection@nationalgrid.com	0800 688 588	Not Notified
Severn Trent Water	http://www.stwater.co.uk/category/118	01214 523306	Not Notified
Tata, KPN (c/- McNicholas)	plantenquiries@mcnicholas.co.uk	0330 0558469	Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293 611 736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708 883 116	Not Notified
Vodafone	osm.enquiries@atkingglobal.com	01454 662 881	Not Notified
Vtesse Networks	plant.enquiries@vtesse.com	01992 532100	Not Notified
Warwickshire CC (St Lighting)	streetlighting@warwickshire.gov.uk	01926 736573	Not Notified
Warwickshire CC (Traffic Signals)	trafficsignals@warwickshire.gov.uk	01926 412810	Not Notified

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APPENDIX E



ENVIRONMENT AGENCY FOOD MAP EXTRACT