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HILTON PARK, M6 J11

PRELIMINARY INFRASTRUCTURE STATEMENT

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Colchester House
40 Peter Street
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M2 5GP*

July 2020



Report Title: Hilton Park, M6 J11
Preliminary Infrastructure Statement

Client: Nurton Developments

Report Status: Version Rev C

Date of First Issue: January 2016

Prepared by: _____

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Checked & Approved: _____

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Version	Date	Initials	Comments
-	Jan 2016	DOR	First Issue
A	Feb 2016	DOR	Further Information added
B	May 2020	EAJ	Updated scheme
C	July 2020	EAJ	Updated



LIMITATIONS

All findings, recommendations and conclusions contained within this report are based on information provided to us during investigations. Shepherd Gilmour Infrastructure Ltd. has created the report based on the assumption that all the information is accurate and accepts no liability should additional information exist or become available.

Unless otherwise requested by the client, Shepherd Gilmour Infrastructure Ltd. is not obliged to and disclaims any obligation to update the report for events taking place after the date noted on the report.

Shepherd Gilmour Infrastructure Ltd. makes no representation whatsoever concerning the legal significance of its findings or the legal matters referred to in the report. The information presented and conclusions drawn are based on statistical data and are for guidance purposes only. The study provides no guarantee against the flooding of the study site or elsewhere, nor of the absolute accuracy of water levels, flow rates and associated probabilities.

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SECTION 1 INTRODUCTION

- 1.1. Nurton Development have commissioned SGi Shepherd Gilmour (**SGi**) to review the constraints associated with the development of their land holding known as Hilton Park and identify how infrastructure can be delivered to overcome such constraints. The statement covers:-
- Flood risk and drainage
 - Utilities
 - Cut and fill
 - Access and bridging.
- 1.2. In addition, this statement has provided an assessment of abnormal costs associated with the development. This assessment is provided in **Appendix F**.

SITE LOCATION

- 1.3. The proposed site is located next to the M6 J11 in Shareshill, Wolverhampton as shown in **Figure 1.1**. The site consists of mainly agricultural fields with associated farm buildings and some small areas of dense vegetation.

Nearest Postcode: WV10 7LZ

OS Coordinates: 395342E, 306105N

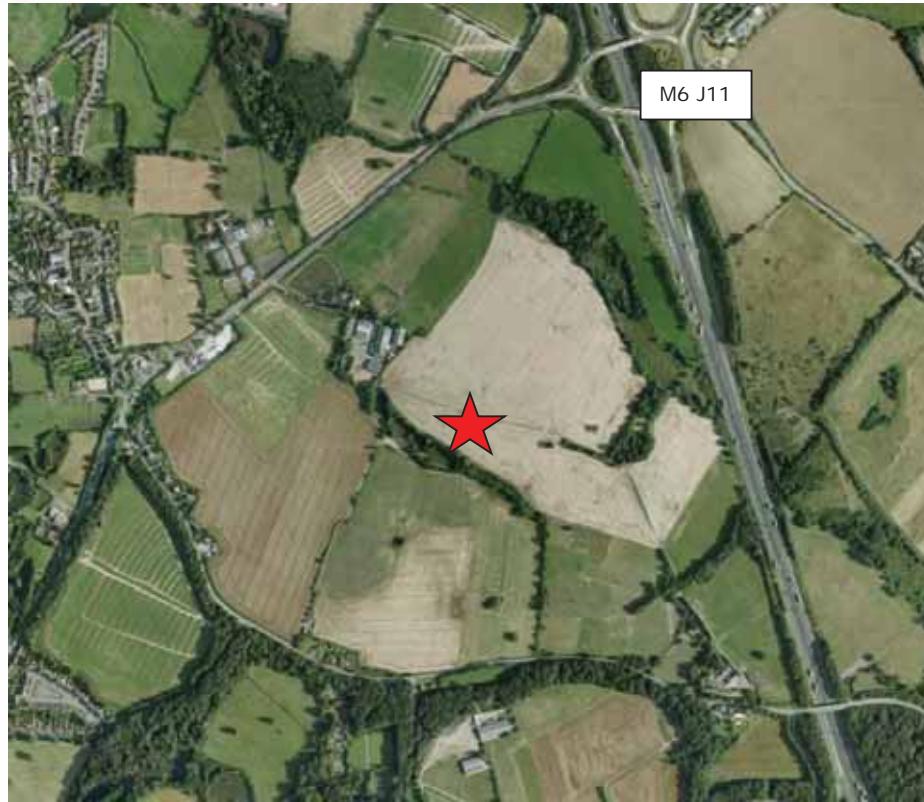


Figure 1.1 Site Plan (Google Map)

SITE PROPOSALS

- 1.4. The client proposes to develop the site into an industrial hub. Preliminary proposals show a number of large commercial units with a new link road from the A460. Due to the significant change in topography and water course in the north of the site this area will remain unchanged.
- 1.5. Preliminary proposals are shown in **Figure 1.2**.



Figure 1.2 Preliminary Site Plan

SECTION 2 PRELIMINARY FLOOD RISK

EA FLOOD RISK

2.1. The Environment Agency Advice Maps are freely available online and are updated regularly. The map for the proposed site has been shown in **Figure 2.1** and highlights that the proposed developments will be located within Flood Zone 1 (Low Probability).

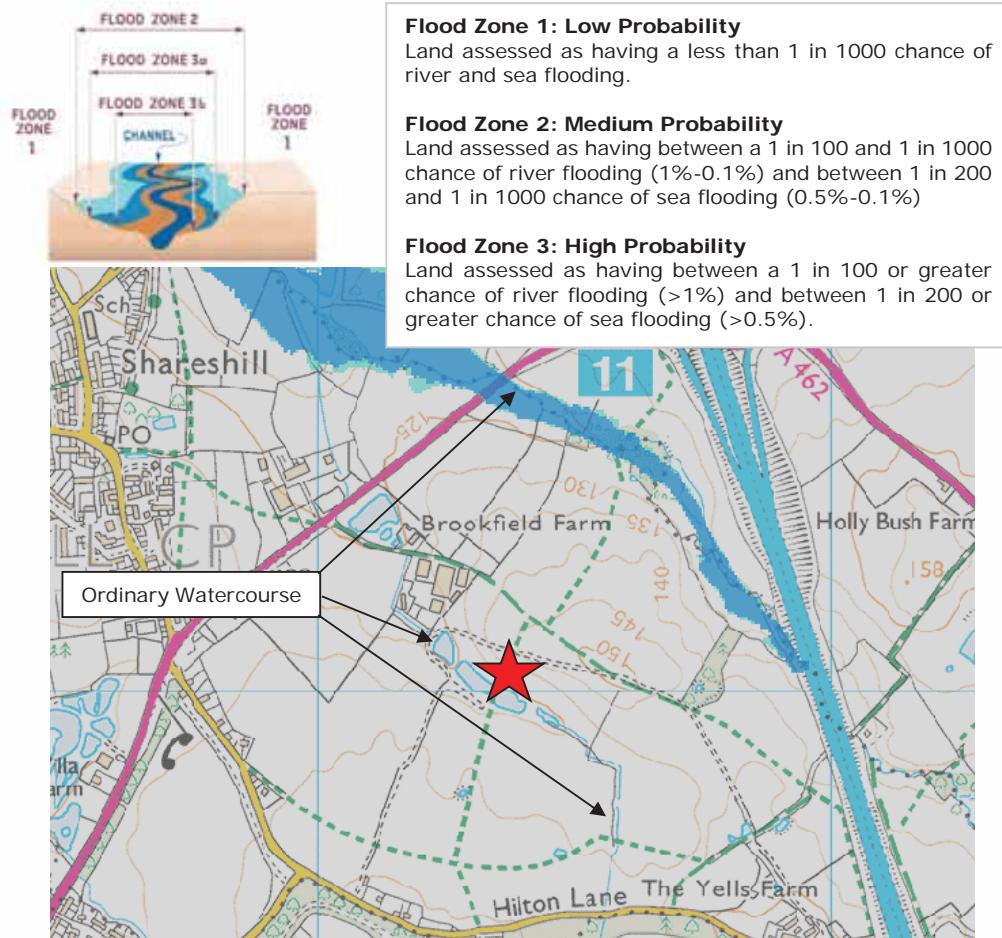


Figure 2.1 Flood Advice Map (Environment Agency)

Ordinary Watercourses

2.2. There are numerous watercourses within the site that are not classed as a Main Rivers by the EA. They are the responsibility of the landowner and are overseen by the Local Authority Internal Drainage Board.

SURFACE WATER STRATEGY

Surface Water Run-off Rate

2.3. The general requirement set out by the NSSDS 2011 and SUDS 2015 technical documents is that "the development must not increase the risk of flooding elsewhere". In practical terms this means that the proposed run-off rate from the development must provide a betterment or be equal to the calculated greenfield rate.

Surface Water Destination

2.4. In accordance with the surface water destination hierarchy within the NSSDS, the proposed run-off from the development should discharge to one or more of the onsite waterbodies. This is proposed.

Water Quality

2.5. Run-off quality is classed as either Low, Medium, or High Hazard depending on its source. The proposed run-off from this development will be classed as follows.

2.6. Run-off from the curtilages and canopies are classed as Low Hazard and where possible should remain separate. Run-off from this source requires no form of treatment (NSSDS).

2.7. Run-off from large car parking and service yard areas is classed as Medium Hazard. This run-off requires one to two forms of treatment (NSSDS) such as:

- Sump outlets on runoff capturing device i.e. gullies and linear channels.
- Bypass/full retention separators as per PPG3 guidelines.
- Catch pit manholes.
- Various SUDs methods.

ATTENUATION

2.8. In **Appendix G** we have included a copy of the masterplan on which we have detailed the proposed wetland area. These wetland areas have sufficient storage capacity to accommodate a greenfield run-off rate of a 1:100 year storm allowing for climate change.

2.9. The attenuation requirement has been calculated using Microdrainage estimating tool, and utilising the hard areas detailed on the architect's site masterplan.

2.10. For the purpose of estimation, the Greenfield run-off has been calculated using The Institute of Hydrology Report 124 Flood Estimation for Small Catchments. This has been used to calculate the mean annual flood flow from the catchment.

All additional flows can be naturally attenuated to replicate the existing Greenfield runoff.

- 2.11. At detailed design stage, the principles of SUDS Manual Cira 753 will be applied and additional SUDS features such as porous car parks will be introduced into the scheme. Such features will reduce the reliance on the wetland areas and will also provide significant additional benefits in terms of water quality.
- 2.12. 40% climate change has been included where sizing the attenuation requirement.
- 2.13. At detailed design phase the use of the following SUDS and source control systems will be reviewed and integrated where possible. This would include: -
 - Infiltration at source via porous surface and sub surface structures.
 - Filtration within the drainage system with the use of French drains.
 - Water quality improvement via engineered solutions (petrol interceptor, etc).
 - Water quality improvements utilising swales, etc.

FOUL WATER STRATEGY

Foul Water Destination

- 2.14. The public sewers in this area are owned by Severn Trent Water (STW) who have provided their local asset records. As shown in Appendix A the nearest foul water sewers to the site are within Church and Hilton Road to the west of the development. These sewers direct effluent towards a pumping station at the Junction of Church and Cannock Road to be then pumped to the south.
- 2.15. It is highly unlikely that the proposed development can drain via gravity. Therefore, two new adoptable pump stations will be located on-site to collect and pump effluent to the off-site sewer network.
- 2.16. The existing sewer records are in locations which allow us to access without the need for third party land.
- 2.17. A copy of these sewer records have been included within **Appendix A**.

Foul Water Run-off Rate

- 2.18. The proposed flow rate allowed to be discharged from the site will be agreed with Severn Trent Water during the detailed design. The proposed pump stations must be designed in accordance with Building Regulations Document H1 and Sewers for Adoption (latest edition).

SECTION 3 UTILITIES

ELECTRICAL SUPPLY

- 3.1. Electricity in the area is supplied by Western Power (WP). Preliminary discussions with WP has confirmed that the existing local services local are not suitable and that a new connection will be required for the proposed development.
- 3.2. A quote has been obtained to undertake these works from WP and comprises of a new 10MVA capacity supply from Four Ashes in the North West to the site and associated substations. A copy of this quote has been included within **Appendix B**.
- 3.3. A revised Point of Connection application has been made and this report will be updated once the quote is received.
- 3.4. As demonstrated by the drawings in **Appendix B**, the existing electric network is located so as to allow connection without the need for third party land.

TELECOMMUNICATION

- 3.5. BT records show existing services on and surrounding the proposed site. It is assumed that connections to these could service the proposed site.
- 3.6. A copy of these records have been included within **Appendix C**.
- 3.7. As demonstrated by the drawings in **Appendix C**, the existing telecommunication network is located so as to allow connection without the need for third party land.

POTABLE WATER SUPPLY

- 3.8. Severn Trent Water records do not show any potable water on-site. The nearest water main to the proposed site serves the residential properties to the west. It is unlikely that this main could serve the proposals and, therefore, early discussions with STW would be recommended to establish a supply.
- 3.9. A copy of these records have been included within **Appendix D**.
- 3.10. As demonstrated by the drawings in Appendix D, the existing potable water network is fully accessible to the site without the need for third party land.

GAS SUPPLY

- 3.11. As above the National Grid records show no existing service on-site but an existing main to the west. It is unlikely that this main could serve the proposals so early discussions with National Grid would be recommended if a supply is required.

- 3.12. A copy of these records have been included within **Appendix E**. A point of connection application has been made and the report will be updated once the quote has been received.
- 3.13. As demonstrated by the drawings in **Appendix E**, the existing gas network is accessible to the site without the need of third party land.

SECTION 4 CUT AND FILL

- 4.1 As part of the general due diligence a course cut and fill exercise has been carried out to volumize the proposed extent of the plateauing works required to make the site suitable for developments.
- 4.2 Each plateau has been designed where possible to minimize the variation in fill beneath the building plateaus, hence reducing the need for specialist ground treatment.
- 4.3 In **Appendix H** we have included the Cut and Fill Assessment in the form of finished ground levels and Isopaches drawings indicating the depths of cut and fill.
- 4.4 The Cut and Fill exercise has been co-ordinated with the Architects proposed layout and demonstrates that the site can be developed into individual plateaus to meet operator requirements.
- 4.5 The exercise demonstrates that no import or export of materials is proposed to create the development plateau as a balanced cut and fill can be achieved. The basic summary of quantities is as follows.
- Cut volume 728,432m³
 - Fill Volumes 728,432m³
 - Topsoil quantity – 197,986m³
- 4.6 An outline budget for this work is provided in **Appendix F**

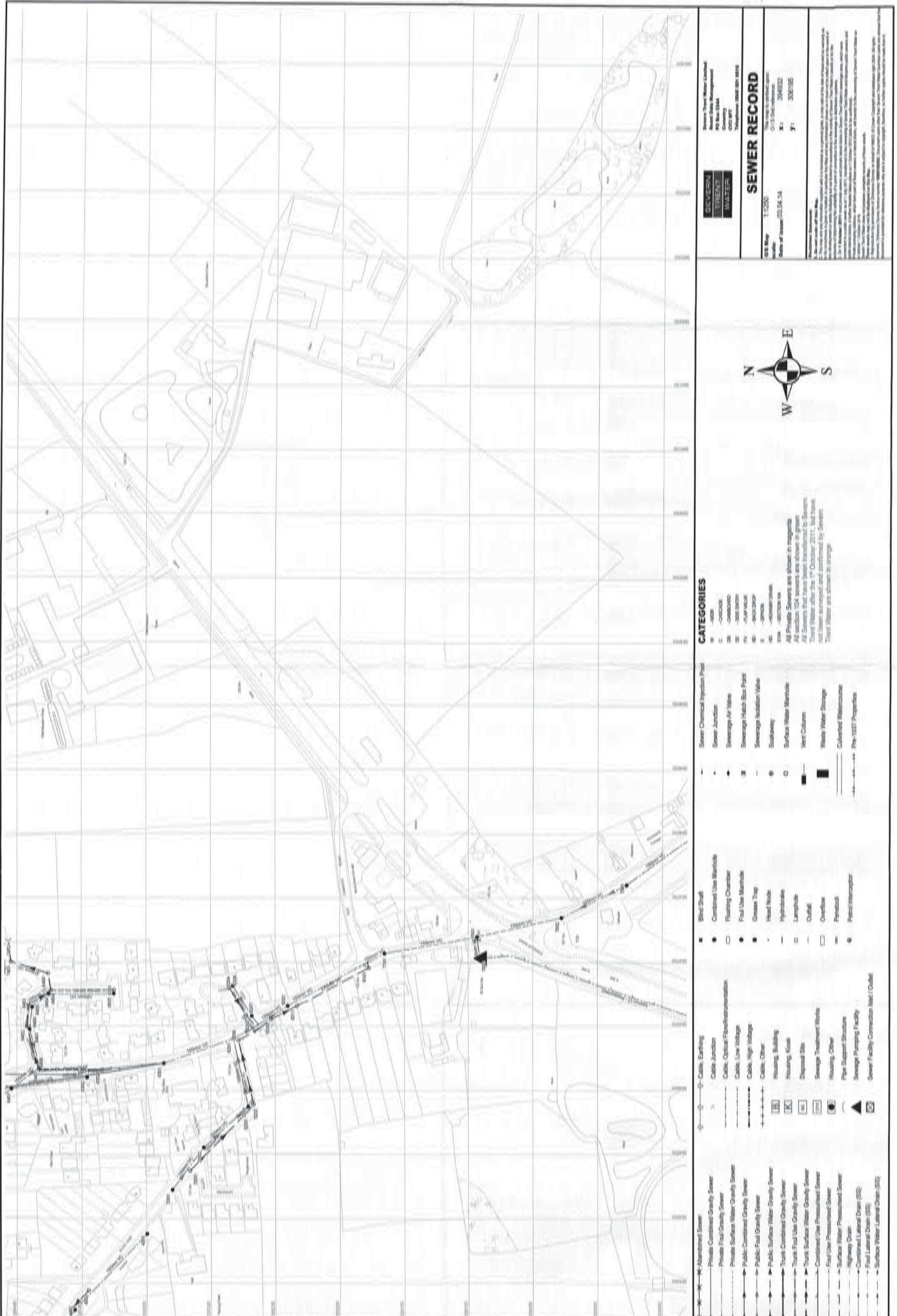
SECTION 5 ACCESS AND BRIDGING

- 5.1 Currently the Masterplan proposes the redirection of the A460 to create the proposed site access.
- 5.2 A range of options can be considered to access the site and an appropriate budget has been allowed in **Appendix F** to assess the viability of the site.
- 5.3 The proposed M54/M6 Link Road presents a further constraint to accessing the eastern half of the site and it is proposed that a new bridge be constructed over this new road.
- 5.4 The new bridge will be constructed to meet the local highway authorities adoptable standards, and will be vested with the local highway authority. However, it has been assumed that the new bridge will 13.3m metres wide, with a two way single carriageway of 3.65m metres, with a 4m metre cycleway and path on one side of the carriageway.
- 5.5 Discussions are ongoing with Highways England, however no objection to the new bridge has been raised.
- 5.6 At this stage we have discussed the likely cost of the new bridge link with a contractor experienced in providing such infrastructure, and an appropriate budget has been made in **Appendix F**.

SECTION 6 CONCLUSION

- 6.1. This preliminary infrastructure statement provides a clear explanation on how the infrastructure for the proposed development can be provided. It looks at all aspects of the infrastructure provision and has demonstrated that in terms of servicing and access the site is readily deliverable. The report goes on to review the likely cost of the provision of the required infrastructure.
- 6.2. A brief summary has been included below:-
- a) The proposed site is located within Flood Zone 1 (low Probability).
 - b) The surface water run-off generated by the proposals will discharge at greenfield run-off to one or more of the ordinary water course located on-site, with flow and storage volumes regulated and controlled by attenuation basins and natural wetland areas.
 - c) Foul water effluent will discharge to the nearby public sewers via an on-site pumping station.
 - d) The site is located close to existing settlement and adjoins main roads with an established utilities network.
 - e) In each case, electricity supply, telecommunications, potable water supply and gas supply will require reinforcement. However, there are no obstacles to gaining connections, with the respective networks fully accessible without the need for 3rd party land.
 - f) The cut and fill exercise, to create development plateaus, is balanced with no import or export of materials necessary.
 - g) A new bridge is required to span the proposed M54/M6 Link Road. The specification of the bridge has been designed to meet Highway England's and the Highway Authority's adoptable standards.

APPENDIX A



APPENDIX B

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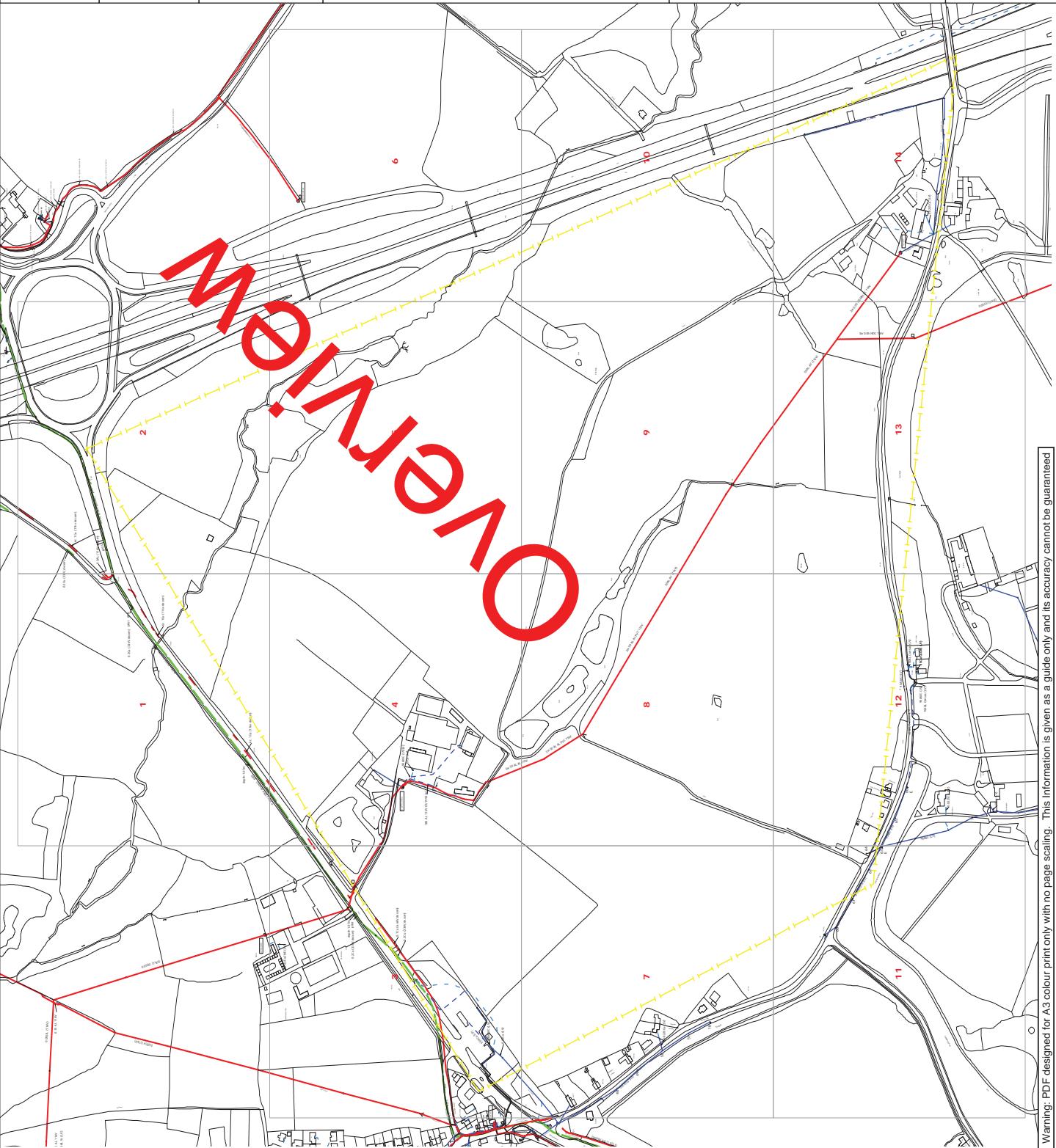
Date Requested: 07/04/2014
 Job Reference: 1148502
 Site Location: 395458 306091
 Requested by: MR Dean O'Reilly
 Your Scheme/Reference: Norton Developments

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- 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 HS(G)47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note G56.
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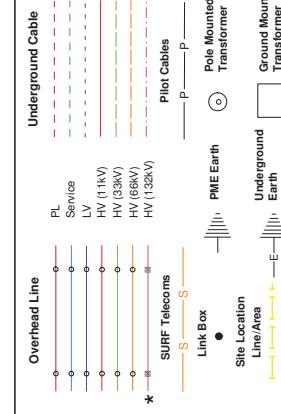
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1:1250 Area or Circle dig site
1:500 Line dig site

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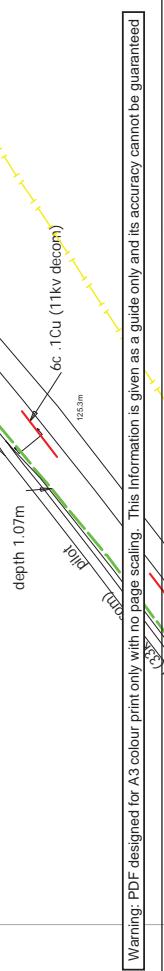
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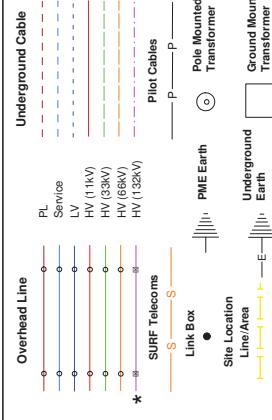
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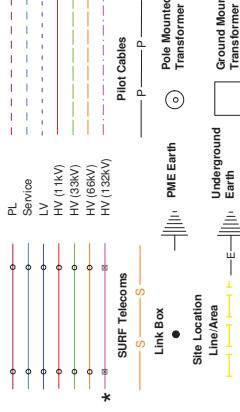
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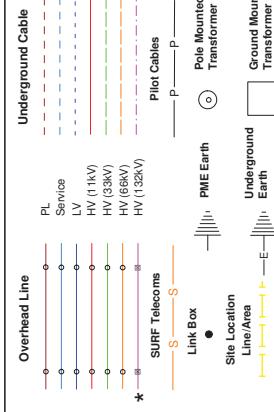
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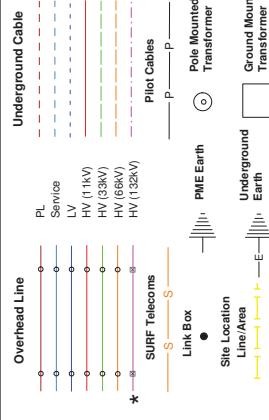
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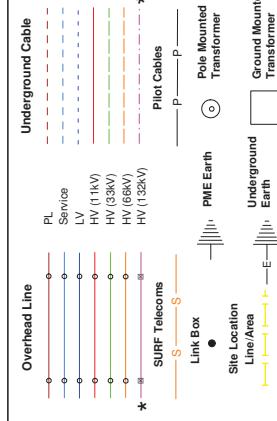
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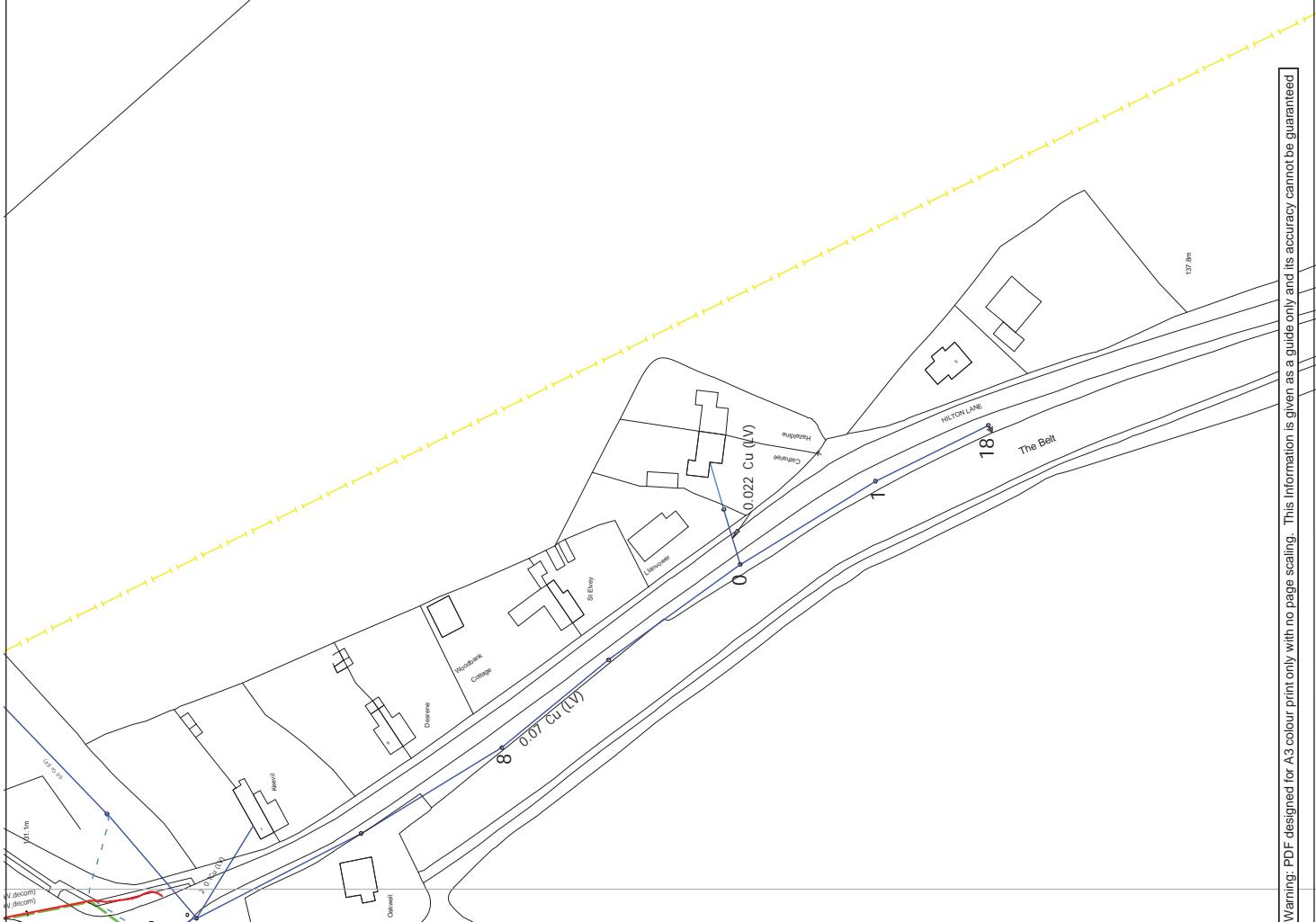
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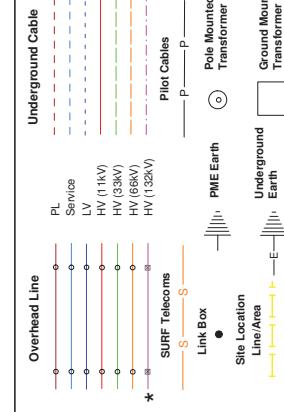
1:1250 Area or Circle dig site
1:500 Line dig site

IMPORTANT NOTICES

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- 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 Midlands 0800 056 8090, West Midlands 0800 328 1111
South Wales 0800 052 9400, South West 0800 365 300**



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 All areas 0121 623 9780

 General Enquiries:
 Midlands 0845 724 0240
 South Wales 0845 801 3341
 South West 0845 601 2989

 Date Requested: 07/04/2014
 Job Reference: 1148502
 Site Location: 395458 306091

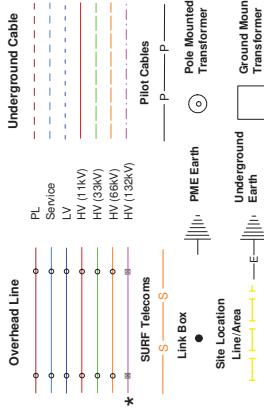
 Requested by: MR Dean O'Reilly
 Your Scheme/Reference: Norton Developments

 1:1250 Area or Circle dig site
 1:500 Line dig site

IMPORTANT NOTICES

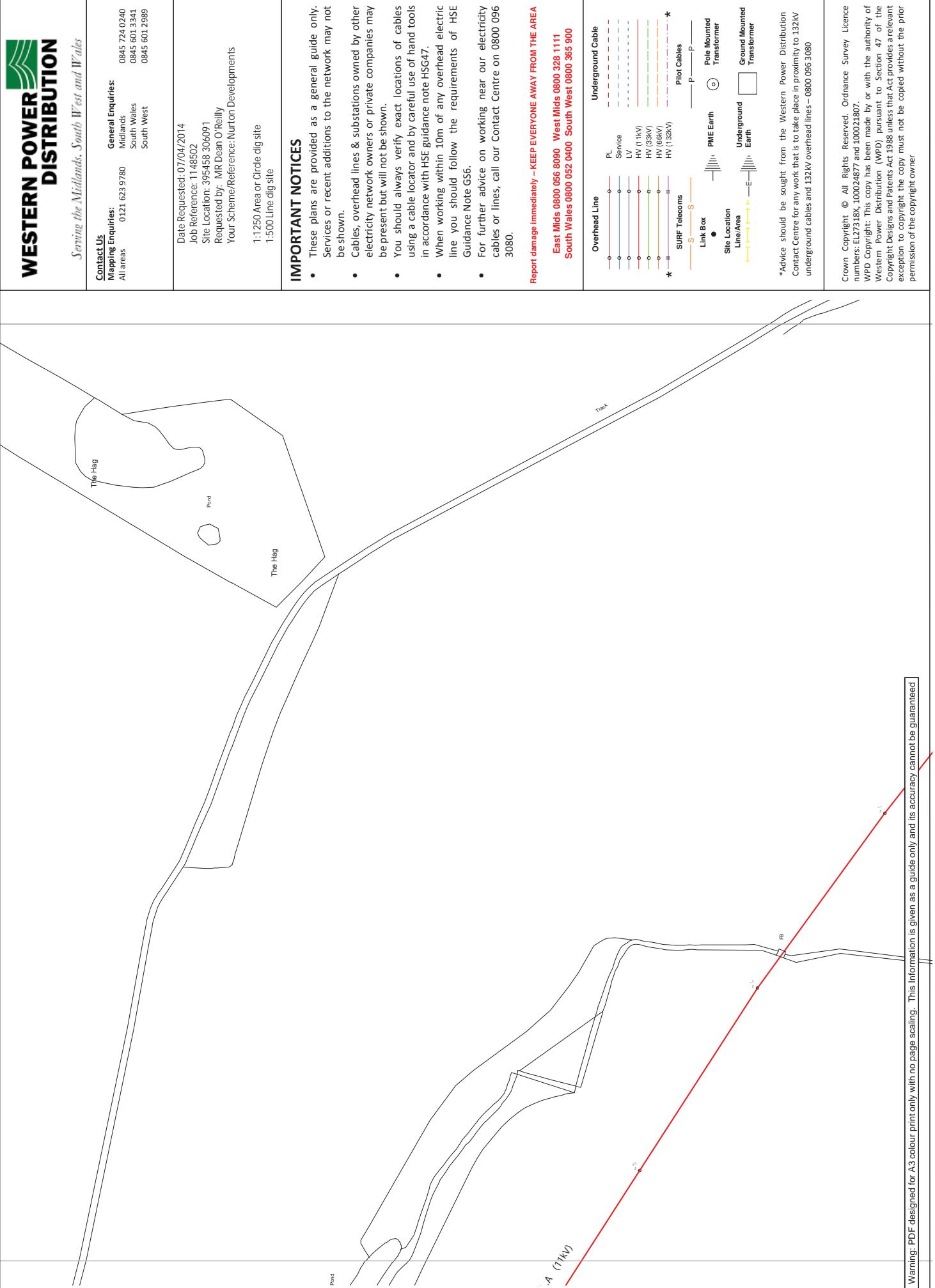
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 South Wales 0800 052 9400 South West 0800 365 900


*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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South West 0845 601 2989

Date Requested: 07/04/2014
Job Reference: 1148502

Site Location: 395458 306091
Requested by: MR Dean O'Reilly
Your Scheme/Reference: Norton Developments

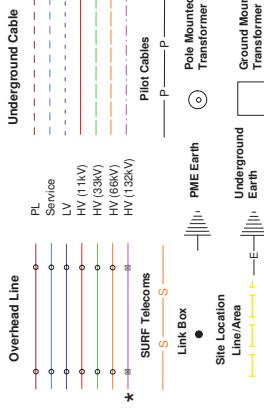
1:1250 Area or Circle dig site
1:500 Line dig site

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South Wales 0800 052 9400, South West 0800 365 3000**



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South Wales 0845 801 3341
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Date Requested: 07/04/2014
Job Reference: 1148502

Site Location: 395458 306091
Requested by: MR Dean O'Reilly
Your Scheme/Reference: Norton Developments

1:1250 Area or Circle dig site
1:500 Line dig site

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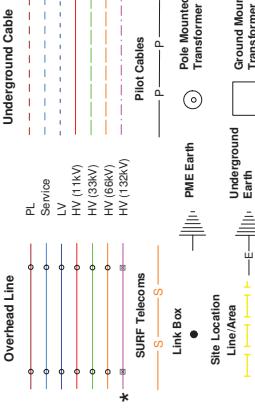
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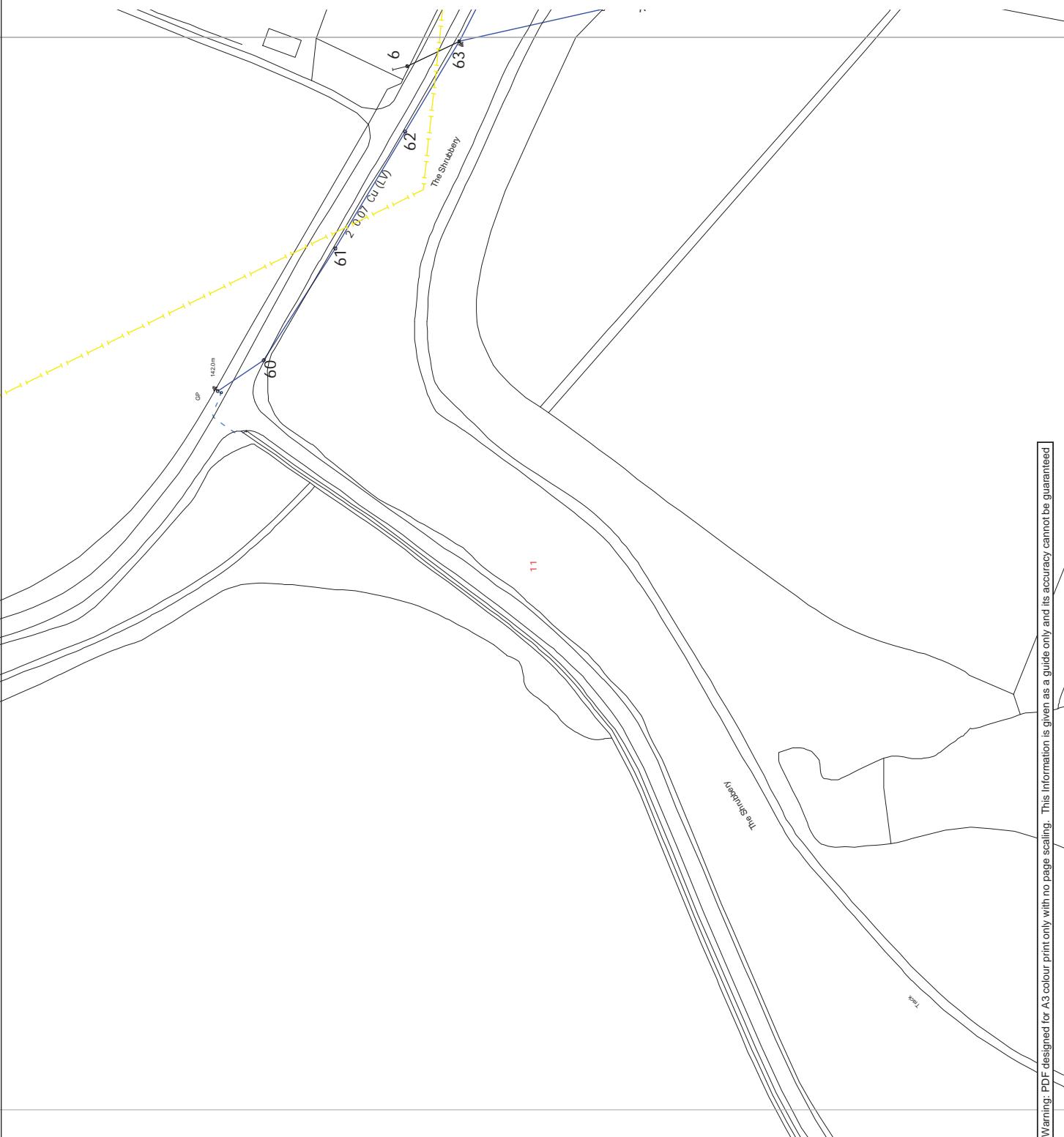
South Wales 0800 052 9400 South West 0800 365 300

Underground Cable



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South Wales 0845 601 3341
South West 0845 601 2989

Date Requested: 07/04/2014
Job Reference: 1148502

Site Location: 395458 306091
Requested by: MR Dean O'Reilly
Your Scheme/Reference: Norton Developments

1:1250 Area or Circle dig site
1:500 Line dig site

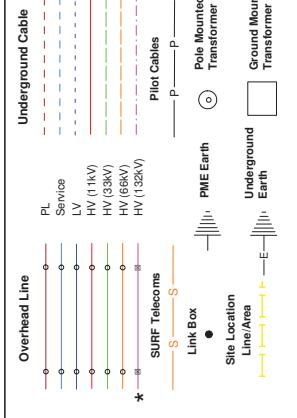
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East Mids 0800 056 8090 West Midlands 0800 328 1111

South Wales 0800 052 0400 South West 0800 365 3000



*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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	South Wales
	0845 601 2989
	South West

Date Requested: 07/04/2014
Job Reference: 1148502

Site Location: 395458 306091

Requested by: MR Dean O'Reilly
Your Scheme/Reference: Nurton Developments

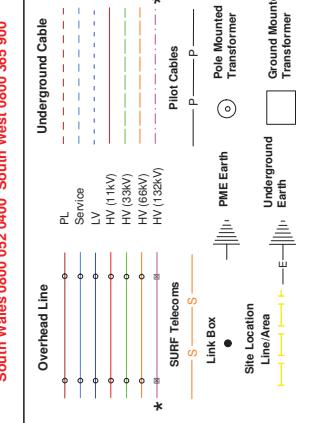
1:1250 Area or Circle dig site
1:500 Line dig site

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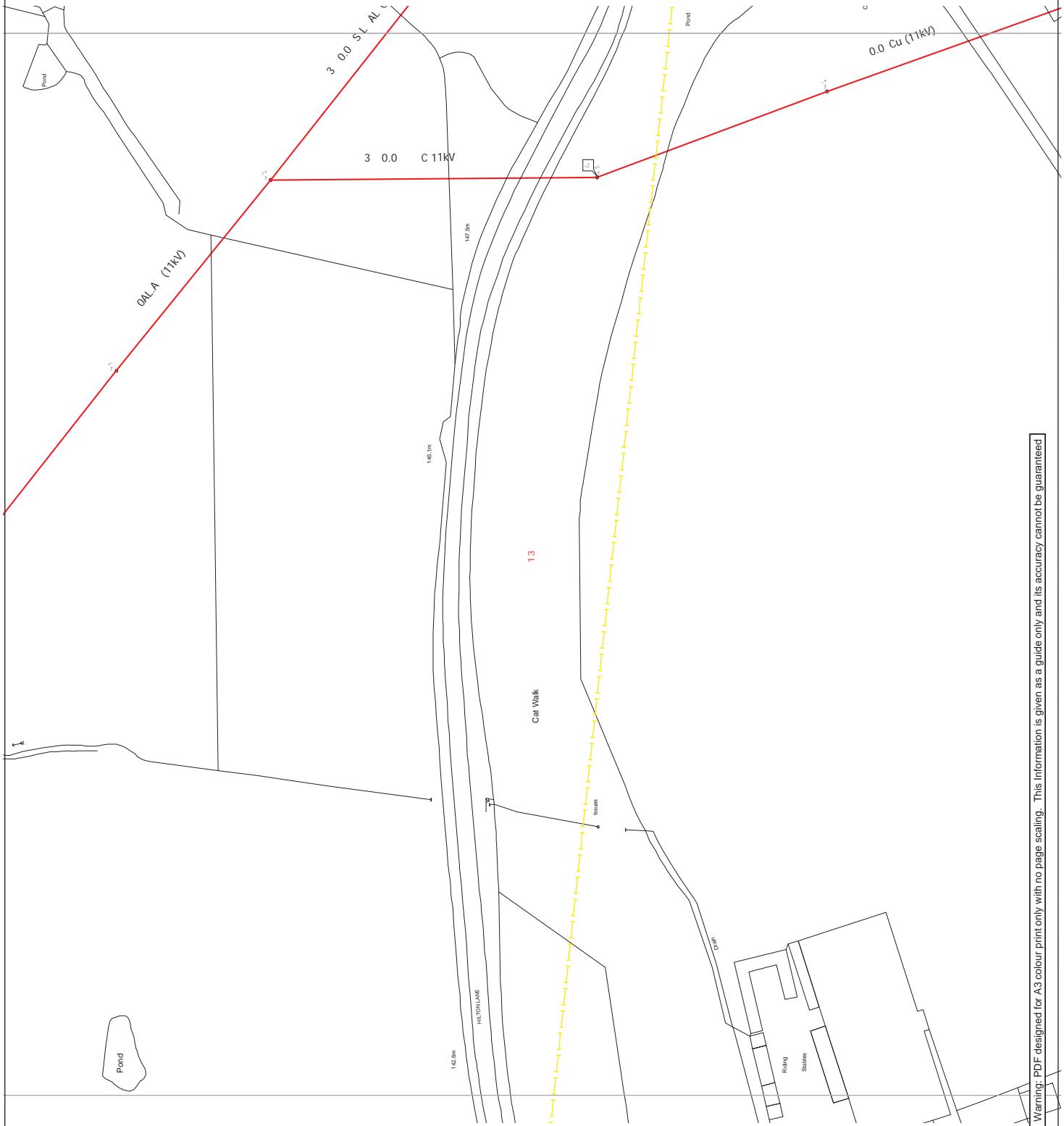
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East Mids 0800 056 8090 West Mids 0800 328 1111



*Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 132kV

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Contact Us	General Enquiries: Midlands 0121 623 9780 South Wales 0845 601 3341 South West 0845 601 2989
Mapping Enquiries: All areas	Job Reference: 1148502 Site Location: 395458 306091 Requested by: MR Dean O'Reilly Your Scheme/Reference: Norton Developments

Date Requested: 07/04/2014

Job Reference: 1148502

Site Location: 395458 306091

Requested by: MR Dean O'Reilly

Your Scheme/Reference: Norton Developments

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1:500 Line dig site

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South Wales 0800 052 0400, South West 0800 365 3000

Underground Cable

Overhead Line

Pilot Cables

PME Earth

Link Box

Site Location

Line/Area

Underground

Earth

Ground Mounted

Transformer

* SURF Telecoms

S

P

PL

Service

LV

HV (11kV)

HV (33kV)

HV (63kV)

HV (132kV)

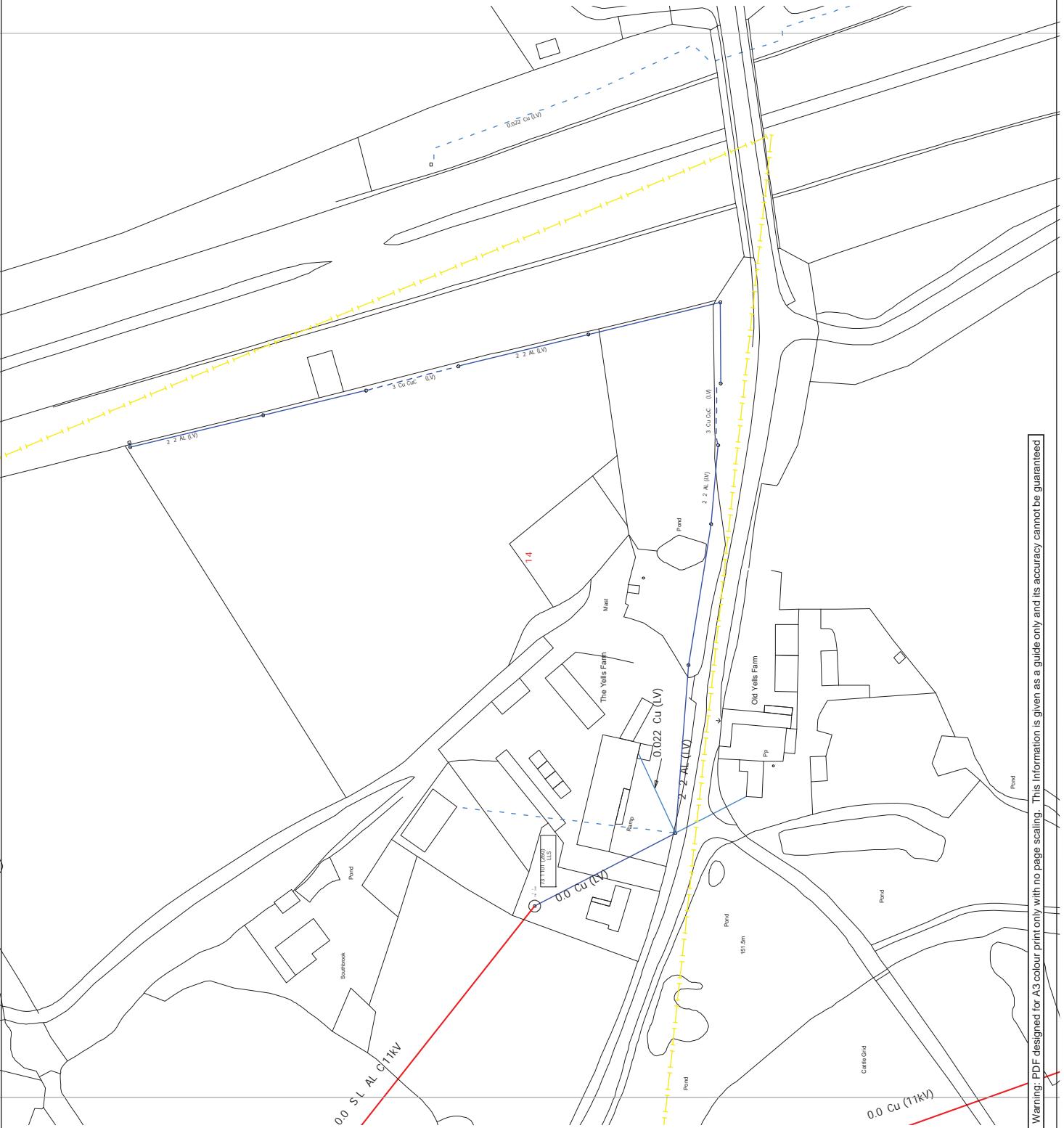
*

P

Pole Mounted

Transformer

Transformer



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Emyr Jones
Shepherd Gilmour Ltd.

Toll End Road
Tipton
West Midlands
DY4 0HH

Tel: 01216239345
Fax: N/A
e-mail: kanand@westernpower.co.uk
Date
2nd December, 2014

For the attention of: Emyr Jones

Dear Sir,

Budget Estimate for electricity connection works by Western Power Distribution (West Midlands) plc ("WPD") at Hilton Park, Of Cannock Road, Featherstone, WV10 7LZ ("the Connection Works"), our enquiry reference 2093608.

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**").

Basis of Information

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

- Your letter dated 04/11/2014

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

- 1 demand connection, with a capacity of 10MVA

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;

- Install two 400mm² Cu cable circuits from Four Ashes 1 and 2 33kV overhead line circuits to new metering substation (circuit 1 – 3700m, circuit 2 – 2100m estimated length)
- Install new metering substation with 2 x incoming feeder circuit breaker, 1 x metering circuit breaker, batteries and chargers, protection, telecontrol and metering panel. All civil and building works by Customer. 1 bus section circuit breaker might be required upon further assessment of the protection requirement.
- Reinforce existing 33kV Four Ashes overhead line from Four Ashes to POC.

Note:

- Customer to construct the 33kV substation building to Western Power Distribution specification, customer to install the incoming LV 230V supply, for protection equipment, with adequate lighting, heating, 13A socket outlet and the fused spur supply adjacent to the battery charger unit.
- No costs have been included for traffic management or motorway/waterway/railway crossings. A basic cable lay throughout the route has been assumed.

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 £2,945,800 inclusive of VAT at 20%. 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.

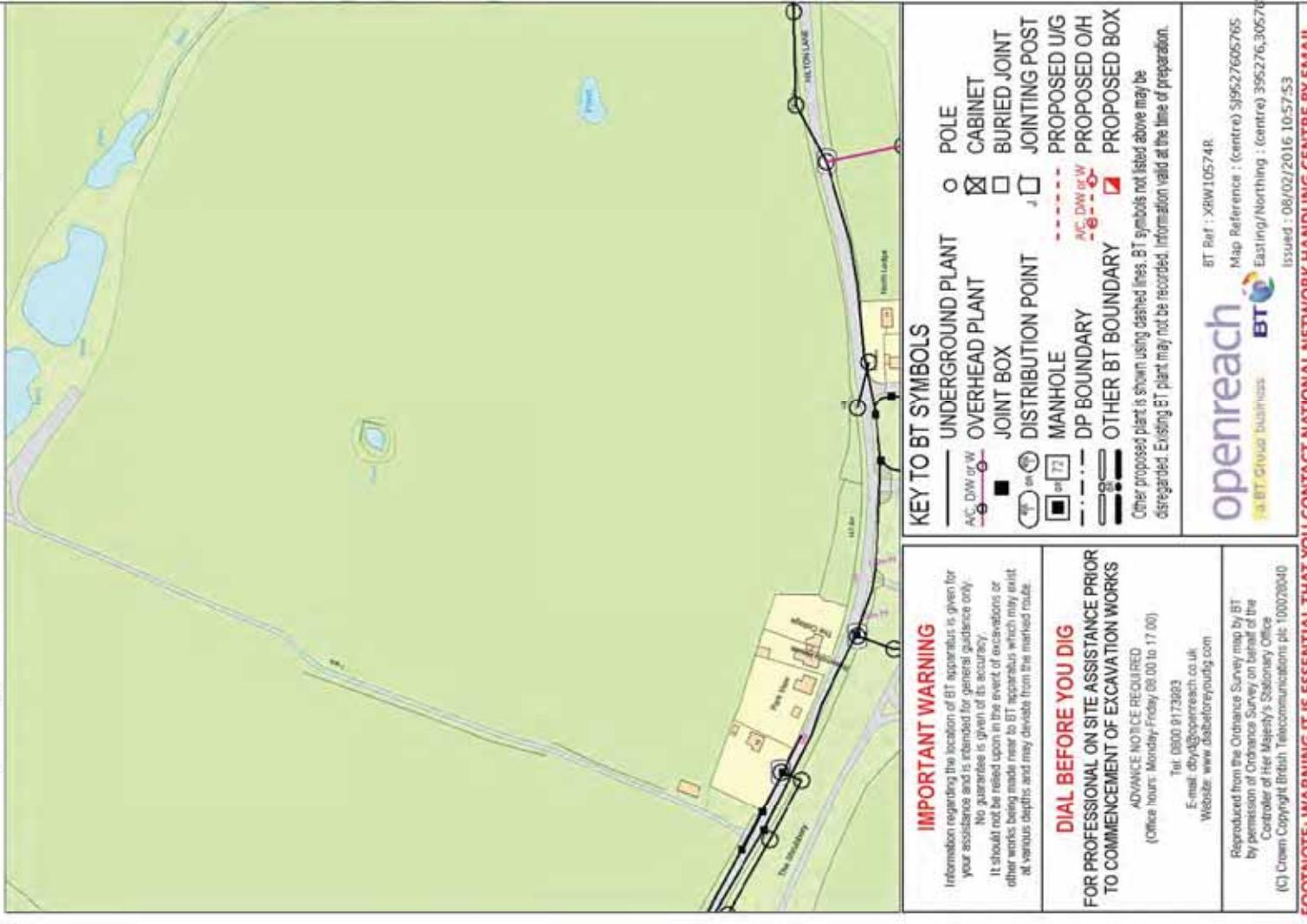
Please note that this letter and attachments are not to be treated as an offer from WPD to carry out the Connection Works.

Yours sincerely,

Konark Anand
Primary System Design Engineer
Primary System Design
West Midlands

APPENDIX C

Maps by email Plant Information Reply



Maps by email Plant Information Reply



KEY TO BT SYMBOLS

AC_DWN or W	UNDERGROUND PLANT	○	POLE
—	OVERHEAD PLANT	☒	CABINET
■	JOINT BOX	□	BURIED JOINT
—	DISTRIBUTION POINT	J	JOINTING POST
—	MANHOLE	—	PROPOSED U/G
—	DP BOUNDARY	—	PROPOSED O/H
—	OTHER BT BOUNDARY	—	AC_DWN or W
—	PROPOSED BOX	☒	PROPOSED BOX

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 the time of preparation.

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.

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR
TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08:00 to 17:00)
Tel 0800 9173803
Email: dby@openreach.co.uk
Website: www.dialbeforeyoudig.com

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nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA**

BT Ref : HEC10555U
Map Reference : (centre) SJ94799065810
Easting/Northing : (centre) 394799,305891
Issued : 08/02/2016 10:55:43



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Maps by email Plant Information Reply



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AC_DWN or W	UNDERGROUND PLANT	○	POLE
AC_DWN or W	OVERHEAD PLANT	☒	CABINET
■	JOINT BOX	□	BURIED JOINT
■	DISTRIBUTION POINT	□	JOINTING POST
■	MANHOLE	- - -	PROPOSED U/G
■	DP BOUNDARY	- - -	PROPOSED O/H
■	OTHER BT BOUNDARY	- - -	PROPOSED BOX

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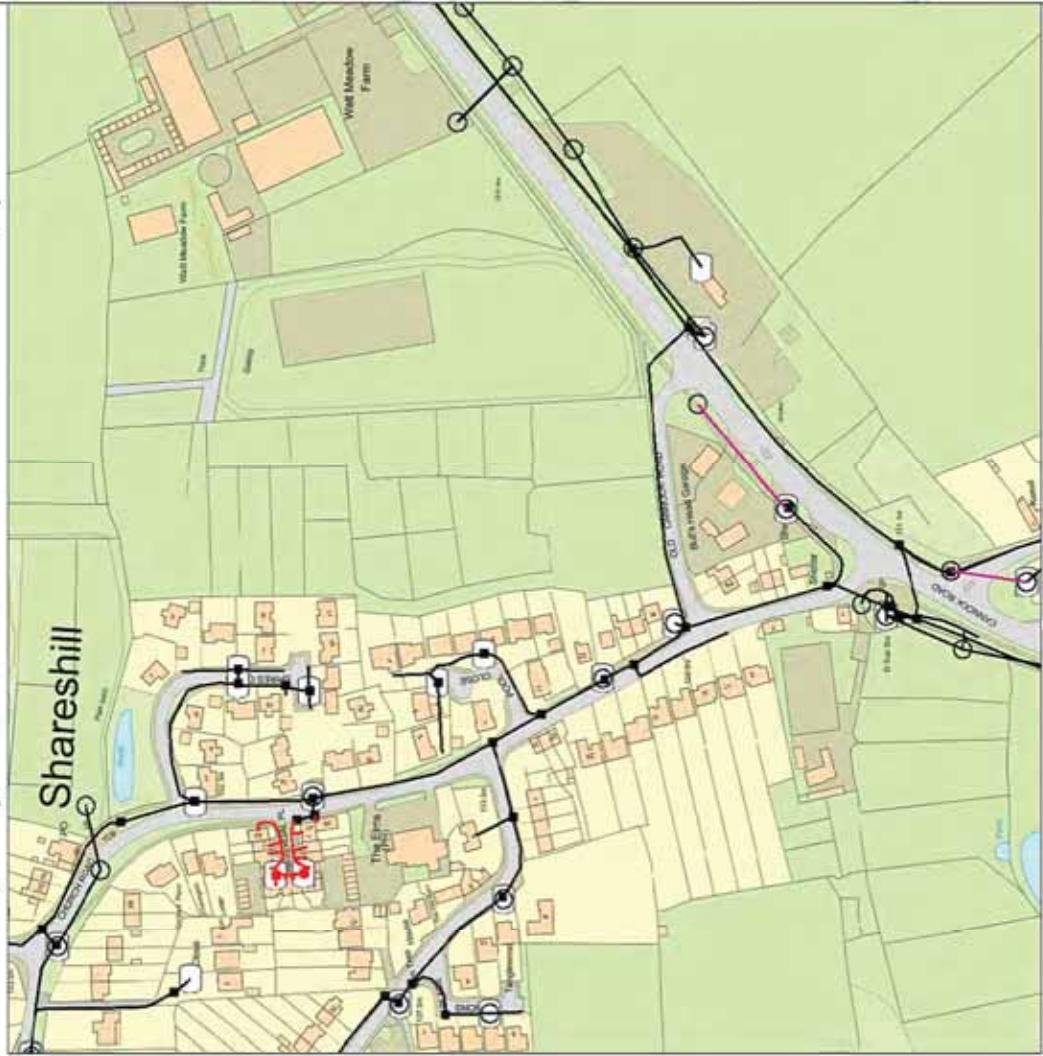
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Map Reference (centre) SJ9525106262
Easting (Northing : (centre) 395251,306263
Issued : 08/02/2016 10:57:33

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BT

NATIONAL NETWORK HANDLING CENTRE BY EMAIL

Maps by email Plant Information Reply



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KEY TO BT SYMBOLS	UNDERGROUND PLANT	POLE CABINET
AC_DWN ur/w	OVERHEAD PLANT	BURIED JOINT
	JOINT BOX	JOINTING POST
	DISTRIBUTION POINT	PROPOSED U/G
	MANHOLE	PROPOSED O/H
	DP BOUNDARY	AC_DWN w
	OTHER BT BOUNDARY	PROPOSED BOX

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BT Ref : ONE10579C
Map Reference : (centre) SJ9474906266
Easting/Northing : (centre) 394749,306264
Issued : 08/02/2016 10:57:15

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BT

Maps by email Plant Information Reply

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It should not be relied upon in the event of inaccuracies or other errors. Technical advice must be sought from the relevant manufacturer.

www.brunnen.de

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KEY TO BT SYMBOLS

	POLE		CABINET
	UNDERGROUND PLANT		BURIED JOINT
	OVERHEAD PLANT		JOINTING POST
	JOINT BOX		PROPOSED U/G
	DISTRIBUTION POINT		PROPOSED OH
	MANHOLE		PROPOSED BOX
	DP BOUNDARY		
	OTHER BT BOUNDARY		

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 the time of preparation.

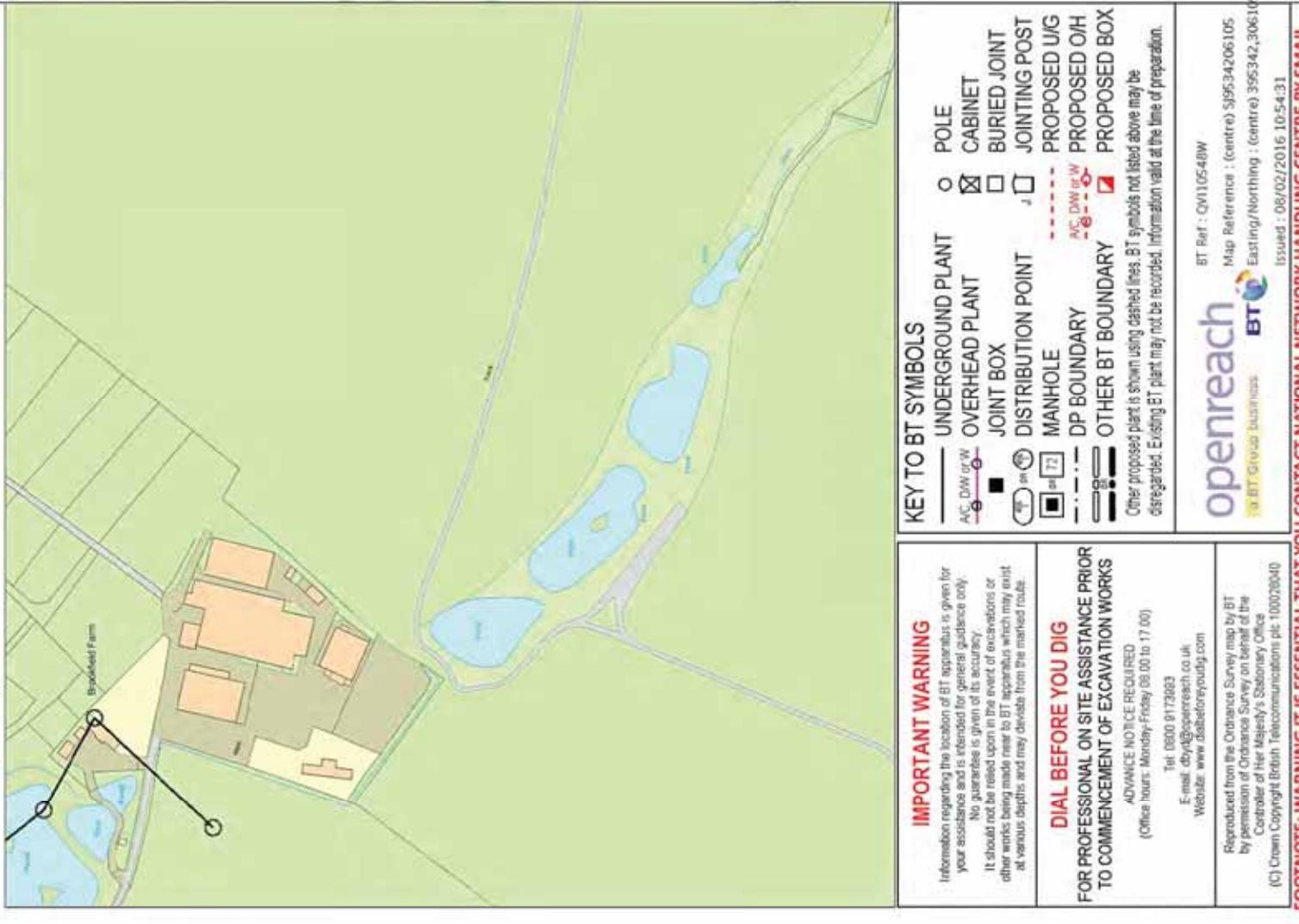
Utah - 15

Map Reference : (centre) 519573606227
Faction/Northing : (centre) 3987376 30627

ISSN 1062-1024 • 08/02/2016 1059:07

MAIL HANDLING CENTRE BY EMAIL AREA

Maps by email Plant Information Reply



Maps by email Plant Information Reply



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KEY TO BT SYMBOLS	
AC_DWN or W	UNDERGROUND PLANT
	OVERHEAD PLANT
	JOINT BOX
	DISTRIBUTION POINT
	MANHOLE
	DP BOUNDARY
	OTHER BT BOUNDARY
	PROPOSED BOX
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 the time of preparation.	

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Easting/Northing : (centre) 395261,306758
Issued : 08/02/2016 10:58:22

BT Group business

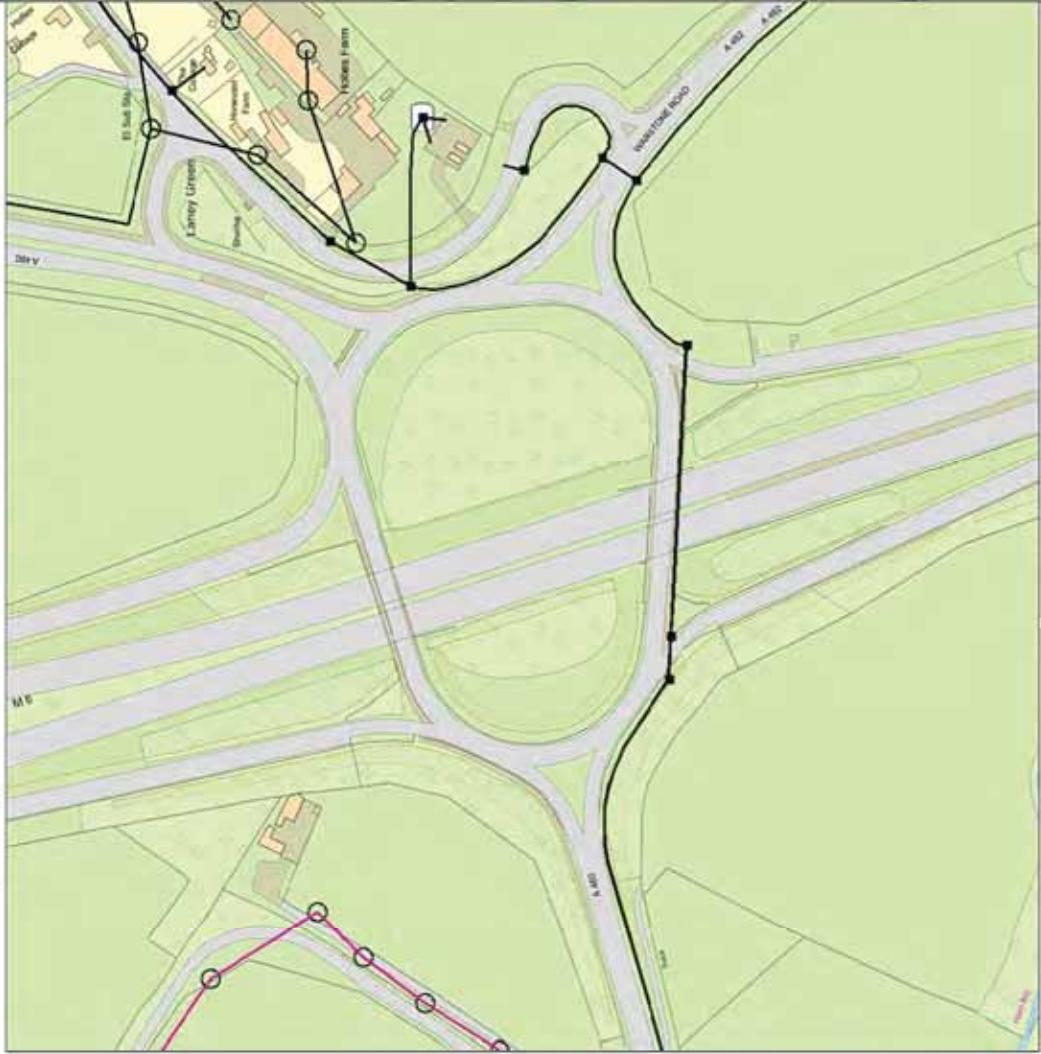


NATIONAL NETWORK HANDLING CENTRE BY EMAIL
nnhc@openreach.co.uk

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Maps by email Plant Information Reply



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DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08:00 to 17:00)
Tel 0800 9173283
Email: dby@openreach.co.uk
Website: www.dialbeforeyoudig.com

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FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL
nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

KEY TO BT SYMBOLS	UNDERGROUND PLANT	POLE CABINET
AC_DWN ur/w	OVERHEAD PLANT	□ BURIED JOINT
AC_DWN ur/w	JOINT BOX	□ JOINING POST
AC_DWN ur/w	DISTRIBUTION POINT	- - - PROPOSED U/G
AC_DWN ur/w	MANHOLE	- - - PROPOSED O/H
AC_DWN ur/w	DP BOUNDARY	— PROPOSED O/H
AC_DWN ur/w	OTHER BT BOUNDARY	■ PROPOSED BOX

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 the time of preparation.

BT Ref : SRS105867

Map Reference : (centre) SJ9576106746

Eastng(Northing) : (centre) 3957951,306742

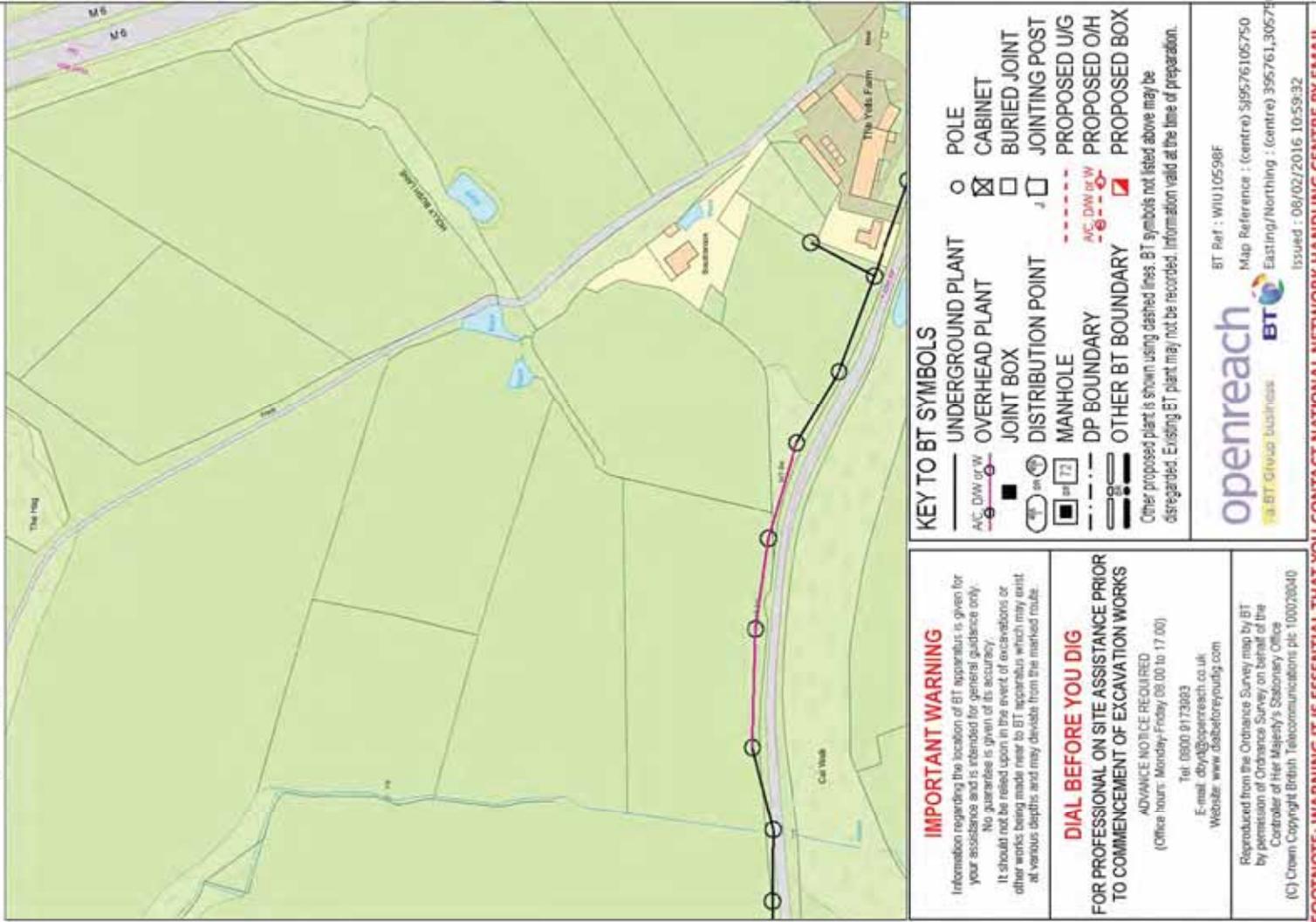
Issued : 08/02/2016 10:58:42

openreach
An BT Group business

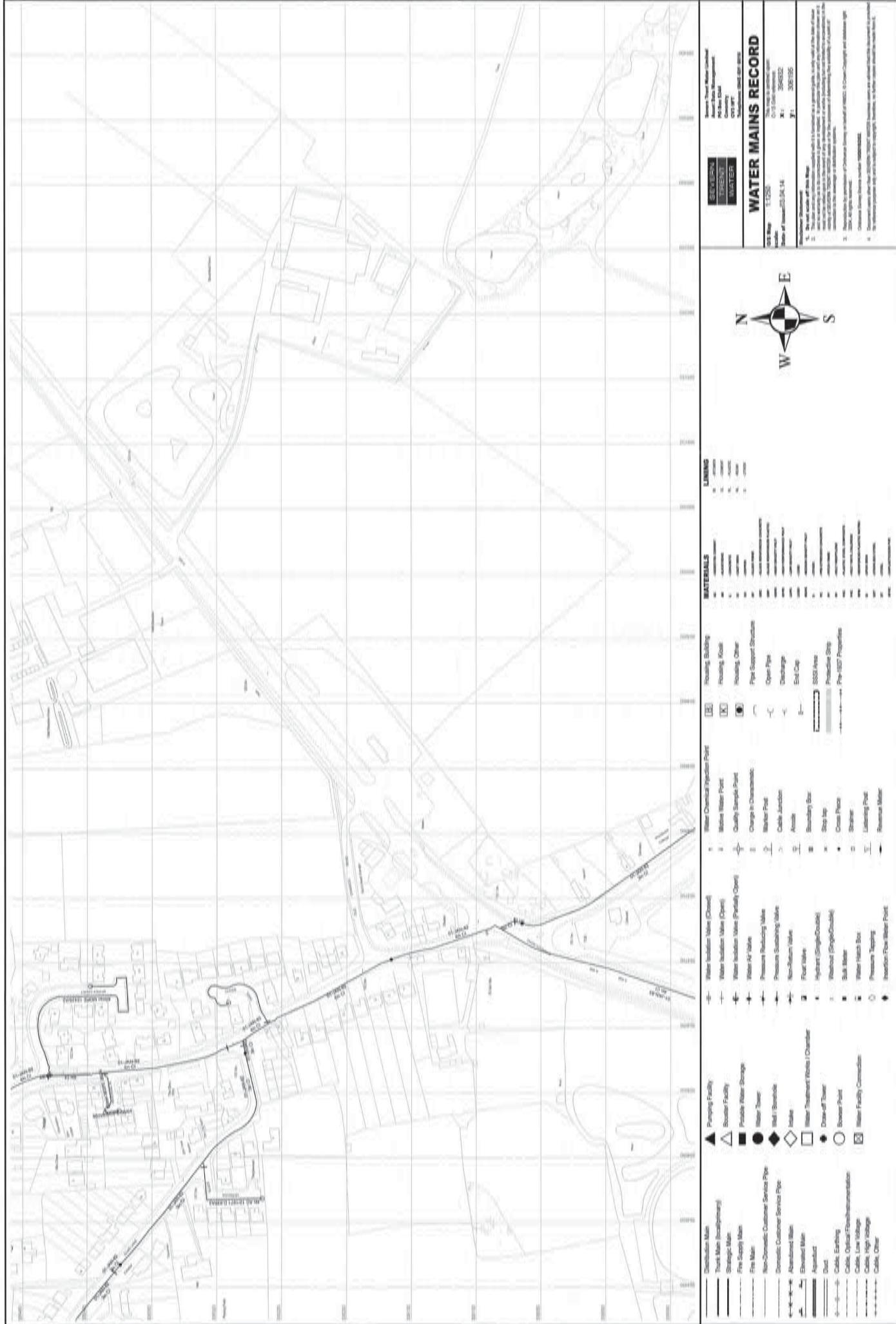
BT

NATIONAL NETWORK HANDLING CENTRE BY EMAIL

Maps by email Plant Information Reply



APPENDIX D



APPENDIX E



Andrew Mulligan
Shepherd Gilmour Infrastructure Ltd
Castlefield House
29 Ellesmere Street
Manchester
M15 4LZ

Plant Protection
National Grid
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA
E-mail: plantprotection@nationalgrid.com
Telephone: +44 (0)800 688588

National Grid Electricity Emergency Number:
0800 40 40 90*

National Gas Emergency Number:
0800 111 999*
* Available 24 hours, 7 days/week.
Calls may be recorded and monitored.

www.nationalgrid.com

Date: 12/04/2014

Our Ref: WM_TW_Z2_3SW_073470

Your Ref: Land around Brookfield Farm (MB) DB

RE: Proposed Works, WV10 7LZ, Land around Brookfield Farm, Shareshill, Wolverhampton, Staffordshire

Thank you for your enquiry which was received on 07/04/2014.

Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to National Grid Electricity Transmission plc's and National Grid Gas plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.

For details of National Grid's network areas please see the National Grid website
(<http://www.nationalgrid.com/uk/Gas/Safety/work/>) or the enclosed documentation.

As your works are at a "proposed" stage, any maps and guidance provided are for information purposes only. This is not approval to commence work. You must submit a "Scheduled Works" enquiry at the earliest opportunity and failure to do this may lead to disruption to your plans and works. National Grid will endeavour to provide an initial assessment within 14 days of receipt of a Scheduled Works enquiry and dependent on the outcome of this, further consultation may be required.

In any event, for safety and legal reasons, works must not be carried out until a Scheduled Works enquiry has been completed and final response received.

Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG) apparatus. This assessment does **NOT** include:

- National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact National Grid.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on the National Grid Website (<http://www.nationalgrid.com/NR/rdonlyres/6D6525F9-59EB-4825-BA89-DBD7E68882C7/51319/EssentialGuidance.pdf>).

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to National Grid's easements or wayleaves nor any planning or building regulations applications.

NGG and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

If you require further assistance please contact the National Grid Plant Protection team via e-mail ([click here](#)) or via the contact details at the top of this response.

Yours faithfully

National Grid Plant Protection Team

ASSESSMENT

Affected Apparatus

The National Grid apparatus that has been identified as being in the vicinity of your proposed works is:

- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)

Requirements

BEFORE carrying out any work you must:

- Carefully read these requirements including the attached guidance documents and maps showing the location of National Grid apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 - 'Avoiding Danger from Underground Services' and GS6 – 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at <http://www.hse.gov.uk>
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

GUIDANCE

Excavating Safely - Avoiding injury when working near gas pipes:

http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe_leaflet3e2finalamends061207.pdf

Standard Guidance

Essential Guidance document:

<http://www.nationalgrid.com/NR/rdonlyres/6D6525F9-59EB-4825-BA89-DBD7E68882C7/51319/EssentialGuidance.pdf>

General Guidance document:

<http://www.nationalgrid.com/NR/rdonlyres/55C13C4D-A1AA-4B13-BFDA-1CF59F88B326/51318/GeneralGuidance.pdf>

Excavating Safely in the vicinity of gas pipes guidance (Credit card):

<http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf>

Excavating Safely in the vicinity of electricity cables guidance (Credit card):

<http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf>

Copies of all the Guidance Documents can also be downloaded from the National Grid Website:

<http://www.nationalgrid.com/uk/Gas/Safety/work/downloads/>



ID: WM_TW_Z2_3SW_073470 View extent: 4120m, 2440m

Map not to be used for construction

Map 1 of 1 (GAS)

MAPS Plot Server Version 1.7.6

nationalgrid

Requested by: Shepherd Gilmour Infrastructure Ltd
This plan is reproduced from or based on the Ordnance Survey map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024880

USER: Megan.Branlard	UP MAINS
DATE: 12/04/2014	IP MAINS
DATA DATE: 09/04/2014	UHP MAINS
REF: Land around Brookside Farm (d)	NHP MAINS
MAP REF: SJ9506	Grid Ref: SJ9506
CENTRE: 395466, 306126	Scale: 1:20000
	Approximate scale 1:10000
	on A3 Colour Landscape
Valve	Depth of Cover
	✓ Syphon
	○ Diameter Change
	Material Change

ENQUIRY SUMMARY

Received Date

07/04/2014

Your Reference

Land around Brookfield Farm (MB) DB

Location

Centre Point: 395466, 306126

X Extent: 1272

Y Extent: 1180

Postcode: WV10 7LZ

Location Description: WV10 7LZ, Land around Brookfield Farm, Shareshill, Wolverhampton, Staffordshire

Map Options

Paper Size: A3

Orientation: LANDSCAPE

Requested Scale: 10000

Actual Scale: 1:10000 (GAS)

Real World Extents: 4120m x 2440m (GAS)

Recipients

pprsteam@nationalgrid.com

Enquirer Details

Organisation Name: Shepherd Gilmour Infrastructure Ltd

Contact Name: Andrew Mulligan

Email Address: amulligan@shepherd-gilmour.co.uk

Telephone: 0161 837 1500 ext 117

Address: Castlefield House , 29 Ellesmere Street , Manchester , M15 4LZ

Description of Works

Requesting plans. DB

Enquiry Type

Proposed Works

Activity Type

Development Project

Work Types

Work Type: Plans Only

APPENDIX F

Abnormal Assessment - Hilton Park

	Number	Budget Cost	TOTAL
1. New Access (Suggested Budget from DTA)	1	£750,000.00	£750,000
2. Bridge Over Toll Road (Advice provided by Contractor building Junction 10 of M6 in Walsall)	1	£3.5 million	£3,500,000.00
3. Site Cut & Fill	728,432m3	£5m/3	£3,642,160.00
4. Onsite Access Road	1372m (Scaled of Plan)	£2000/m	£2,744,000.00
5 Foul Water Pump Station	2 number	£500,000/pump station	£1,000,000.00
6 Offsite Rising Main	Sum	£500,000 (Budget)	£500,000.00
7.Attenuation	33,550.00m3	£50/m3 (all open ponds)	£1,677,500.00
8. Service Costs *	£106.7/ acres	£50,000 (Budget per acre)	£5,335,000.00
			£ 19,148,660.00

* POC enquiries to be reviewed once timescales agreed.

APPENDIX G

APPENDIX H



NOTE
PLATEAU LEVEL IS
FFL -450mm



卷之三

MURTON DEVELOPMENTS LTD

HILTON PARK • MIAMI BEACH 41

ARCHITECT DRAWING 9317-648
PRELIMINARY EARTHWORKS

C1053-111



Cut/Fill Summary

Name	Cut/Fill 2d Area Factors (sq.m.)	Cut (cu.m.)	Fill (cu.m.)	Nett (cu.m.)
VS South East	1.000	22777.18	371902.483	36130.941
VS North East	1.000	35466.09	177641.7	13718.228
VS North West	1.000	5541.900	45580.05	45677.403
VS South West	1.000	37022.753	18313.494	18345.258
Totals		565675.880	728432.799	917645.871
Top Soil Strip (Assumed 350m)		565675.880	197986.458	197986.558<Cut>



NOTE:
Isopachites without numbers indicate regions with no new construction.
All areas are considered dry weight only and no drainage.