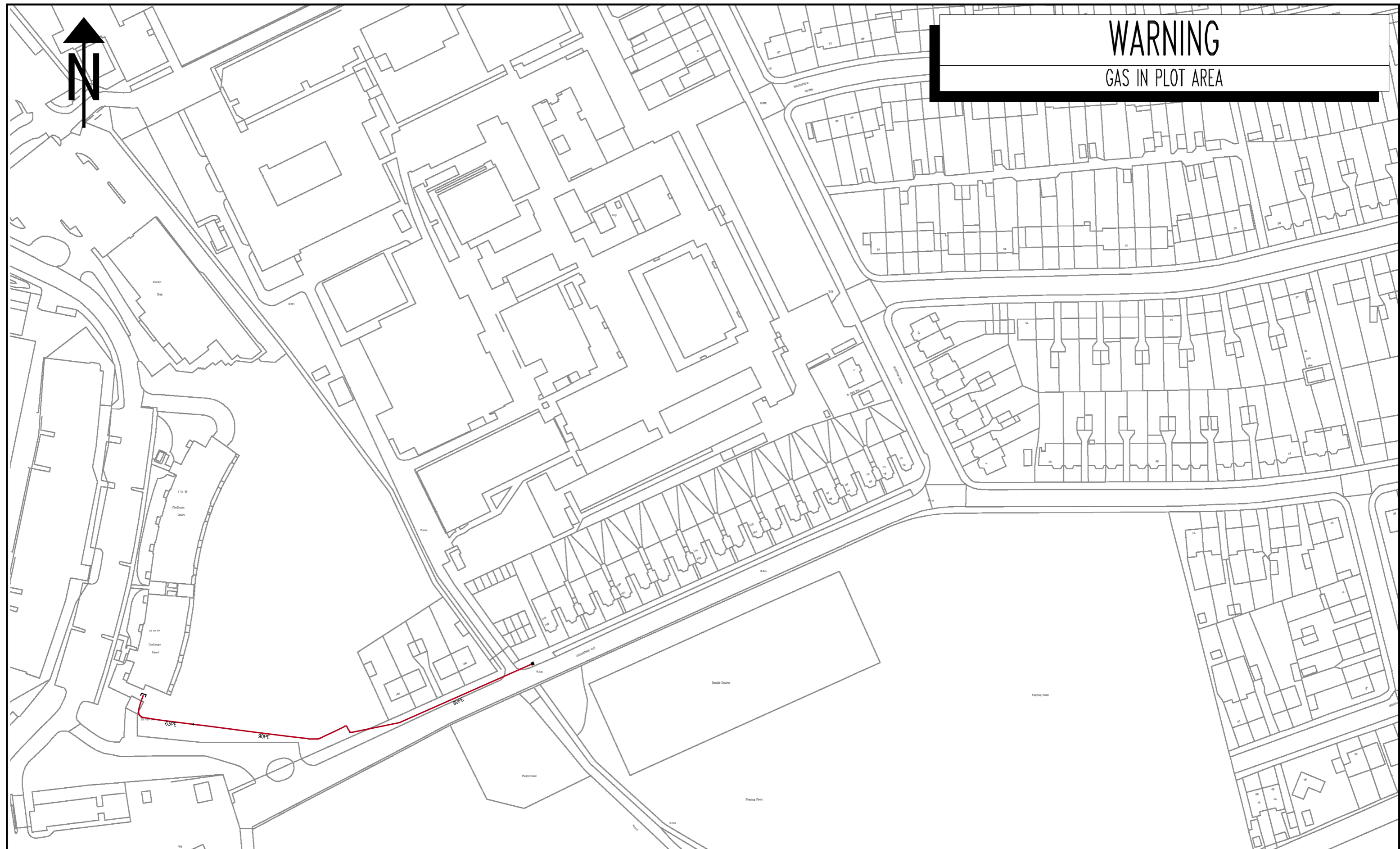




WARNING
GAS IN PLOT AREA



NORMAL DEPTH TO THE TOP OF THE PIPE WHEN LAID

MAINS		SERVICES	
FOOTPATH	0.60m	PRIVATE	0.375m
VERGE	0.75m	PUBLIC	0.45m
ROAD	0.75m		

WARNING

There may have been subsequent alterations to the surface levels. Trial holes must be taken to determine positions and depth of cables. HS (G) 47 Booklet from the Health and Safety Executive - Avoiding Danger from Buried Cables - should be consulted before commencing excavation work. (available from HMSO)

WHEN WORKING IN THE VICINITY OF OVERHEAD LINES THE HEALTH AND SAFETY GUIDANCE NOTE G56 SHOULD BE CONSULTED. (AVAILABLE FROM HMSO)

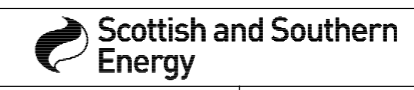
BASED UPON THE ORDNANCE SURVEY MAP WITH THE SANCTION OF THE CONTROLLER OF H.M. STATIONERY OFFICE. CROWN COPYRIGHT RESERVED.

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Template: S1AS NRSWA COL A3 plot GAS

Scottish and Southern Energy plc
Registered in Scotland No 117119.
Registered Office: Inverlmond House
200 Dunkeld Road,
Perth, PH1 3AQ.

UNCONTROLLED COPY
Subject to Revision Master held at



GAS Record
Mapping Services Unit
01256 337294

Grid Ref: TQ15447370

Scale: 1:1250

Date: 16/04/2015

Watch it!

Safety advice brought to you by Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution Ltd

These notes are intended to help all those who have to work in the vicinity of electrical apparatus. Employers have a legal obligation to ensure that their operatives are fully instructed in the correct procedures.

The Electricity at Work Regulations 1989 impose health and safety requirements upon employers, employees and self-employed persons with respect to electricity at work. The regulations impose restrictions on persons being engaged in work activities on or near live conductors.

Regulation 14 requires that: "No person shall be engaged in any work activity on or near any live conductor (other than one suitably covered with insulating material so as to prevent danger) that danger may arise unless:

- ◆ it is **unreasonable** in all circumstances for it to be dead; and
- ◆ it is **reasonable** in all circumstances for him to be at work on or near it while it is live; and
- ◆ suitable precautions (including where necessary the provision of suitable protective equipment) are taken to prevent injury."

The purpose of the regulations is to require precautions to be taken against the risk of death or personal injury from electricity in work activities.

Publications

The Health and Safety Executive have produced a document entitled 'Avoiding Danger from Underground Services', and the Appendix 1 deals specifically with electric cables. Copies are available from HMSO's Accredited Agents and good booksellers, Ref. HS (G) 47.

Copies of Health and Safety Guidance note GS 6 relating to safe working in proximity to overhead lines, are available from HMSO Head Offices of the Federation of Civil Engineering Contractors and the National Federation of Building Trades Employers.

Note

In situations of emergency or danger, or where the advice contained in these notes cannot be followed, you must consult Scottish and Southern Energy plc immediately. Tel. 08457 708090 for southern England or 0800 300999 for Scotland.

Additional copies of these "Watch it!" leaflets can be obtained from our Mapping Services office upon request. Tel. 01256 337294, or Fax 01256 337295.

You must read and accept the following safety notes as part of the contract to receive our network plans. You will have the option to print these and issue them to site staff.

Watch it! - Working in the vicinity of underground cables.

Our plans show the positions and normal depths for the buried cables and pipes at the time when they were installed. However, alterations to road alignments surface levels and buildings may have occurred subsequently without our knowledge. If you discover plant or cables that are not marked or incorrectly marked, then you are required to contact us as soon as possible to give us the opportunity to amend our plans.

These plans show the equipment owned by Scottish and Southern Energy plc. There may be other privately owned plant in the area, which is outside of our control. You should always check with the Local Authority, National Grid Company, Department of the Environment, other Electricity Companies and other utilities before proceeding.

It is not intended that the issue of these plans will absolve either party from their obligation under any of the acts that control digging in the public highways.

Supplies To Properties, etc.

The location of cables supplying individual properties, street lighting, traffic signs, telephone kiosks etc. are not always shown on the plans. You should assume that each property, streetlight etc. will have its own supply cable.

Major Circuits

Where our plans indicate the presence of cables with a voltage exceeding 11,000 volts, you are advised to contact our local depot (telephone number is on the plans), before commencing any excavations within the vicinity of these cables. These major transmission circuits form an extremely important link in Scottish and Southern Energy's network, and damaging or modifying these circuits is a major and costly undertaking. Any development should therefore be designed to allow these circuits to remain undisturbed and accessible in their present location.

For your own and your workmates' safety, please follow the **do's** and **don'ts** listed below:

- ✓ **do** make sure you have plans of the underground cables in the area **before** any excavation work starts. Remember that some cables may not be shown on plans. If carrying out emergency work, excavate as though there are buried live cables in the vicinity.
- ✓ **do** use a cable locator to determine the position of existing cables in the work area. The positions should be marked and tests made as work proceeds. **If in doubt, get advice from your supervisor.**
- ✓ **do** ask for a cable to be made dead if it is buried in concrete.
- ✓ **do** watch for signs of cables as work progresses. Note any marker-tape or cable-cover, which may be exposed.

- ✓ **do** backfill carefully, using stone-free soil around the cables, replacing marker-tapes and / or covers.
- ✓ **do** notify us immediately if you accidentally damage our cables. Arrange to keep people well clear of a cable that has been damaged until we have confirmed it has been made safe.
- ✓ **do** make sure before starting to demolish a building that all cables have been disconnected. We welcome prior notice of the intention to demolish buildings. This enables us to ensure that the site has been made safe electrically.
- ✓ **don't** operate a bulldozer, scraper, dragline or excavator; unless you are satisfied that there are no buried cables in the working area.
- ✓ **don't** use picks, pins, forks or pointed instruments in soft clay or soil when cables are present. Exercise extreme caution where such instruments are used to free lumps of stone, or break up firmly compacted ground. **Never** throw a fork or sharp instrument into the ground.
- ✓ **don't** dig trial holes over the indicated route of the cable. Excavate alongside instead.
- ✓ **don't** use exposed cables as a convenient step or handhold.
- ✓ **don't** handle or attempt to alter the position of any cable.

Remember that a damaged cable may cause extensive loss of supplies, make expensive repairs necessary and cause serious or even fatal injury.

If effective measures are not adopted to protect our equipment, we will take steps to recover the cost of any damage caused. Persons causing damage resulting in loss of supply to customers can be held legally responsible for any claims made by those customers. Promptness in reporting an incident will minimise costs.

In most cases it is not practicable to make cables dead without interrupting supplies to our customers. But given adequate notice, we will wherever possible, give advice regarding special precautions which may be necessary on any site where particular problems are likely to be encountered. The right is reserved to make a charge for this service.

Electricity cables can exist anywhere - under paths or roads, in gardens or driveways, on new housing or industrial development sites or even farmland.

Watch it! - Working in the vicinity of overhead lines

For your own and your workmates' safety, please follow the **do's** and **don'ts** listed below

- ✓ **do** carefully note the position of all overhead lines before commencing work.
- ✓ **do** co-operate with us during planning and sitework stages.
- ✓ **do** follow the advice given in HSE Guidance Note GS 6 when siting barriers, goal posts, bunting etc.
- ✓ **do** keep overhead lines in view when moving scaffolding or machinery and take special care when felling or lopping trees.
- ✓ **do** remember that the raising or slewing of a crane or excavator jib may cause danger when operating near an overhead line.
- ✓ **do** avoid any machinery that is in contact with an overhead line until we confirm that conditions are safe.
- ✓ **do** warn others to keep well clear.

- ✓ **don't** drive a high vehicle below an overhead line when an alternative route is available.
- ✓ **don't** raise the bed of a tipper lorry beneath an overhead line or drive under the line with the body of the vehicle raised.
- ✓ **don't** steady any suspended load until you are satisfied that there is no danger from overhead lines.
- ✓ **don't** handle or use scaffold platforms, poles, pipes or ladders unless they are at a safe distance from overhead lines.
- ✓ **don't** transport long objects beneath overhead lines, unless they are carried in a horizontal position.
- ✓ **don't** approach or touch any broken or fallen overhead lines.

Always remember that:

- Electricity can jump gaps.
- Contact or near contact with a crane jib, scaffold or ladder can cause a discharge of electricity with a risk of fatal or severe shock and burns to any person in the vicinity.

If effective measures are not adopted to protect our equipment, we will take steps to recover the cost of any damage caused. Persons causing damage resulting in loss of supply to customers can be held legally responsible for any claims made by those customers. Promptness in reporting an incident will minimise costs.

In most cases it is not practicable to make overhead lines dead without interrupting supplies to customers. However, provided adequate notice is given, then we will, whenever possible, give advice regarding special precautions which may be necessary on site where specific problems may be encountered. The right is reserved to make a charge for this service.



GIS ELECTRIC SYMBOLS (SOUTH)

	LV UNDERGROUND SERVICE CABLE		POLE
	LV UNDERGROUND MAINS CABLE		POLE MOUNTED TRANSFORMER
	2KV-3.3KV UNDERGROUND CABLE		SUBSTATION
	6.6KV UNDERGROUND CABLE		LINK BOX
	11KV UNDERGROUND CABLE		PILLAR
	22KV UNDERGROUND CABLE		MAJOR PIPELINE
	33KV UNDERGROUND CABLE		ASSUMED ROUTE
	66KV UNDERGROUND CABLE		CROSS SECTION
	132KV UNDERGROUND CABLE		DUCTING
	LV OVERHEAD LINE		FLYING STAY
	2-3.3KV OVERHEAD LINE		PME EARTH
	6.6KV OVERHEAD LINE		NEUTRAL EARTH
	11KV OVERHEAD LINE		OIL/GAS GAUGE
	22KV OVERHEAD LINE		OIL/GAS TANK
	33KV OVERHEAD LINE		BALANCER
	66KV OVERHEAD LINE		REGULATOR
	132KV OVERHEAD LINE		PIT
	FIBRE OPTIC CABLE		SCHEMATIC CONNECTOR
	PILOT CABLE		SUPPLY LOCATION-PROPERTY
	CIRCUIT BREAKER		SUPPLY LOCATION-OTHER
	SWITCH DISCONNECTOR		SUPPLY LOCATION-STREET FURNITURE
	POLE BOX		
	STRAIGHT JOINT		
	TEE JOINT		
	TRIFURCATING JOINT		
	POT END JOINT		
	CAPPED END JOINT		
	SEALING END JOINT		
	SERVICE CONNECTOR JOINT		
	O/H CONNECTOR JOINT		
	WALL BOX JOINT		

DATE:	18/09/2006
SCALE:	1:500

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Appendix E. Correspondence

UKPN Correspondence

Atkins Ltd
Floor 1A
Woodcote Grove
Ashley Road
Epsom
Surrey
KT18 5BW

Our Ref / SPN / 401750660

Date 11/3/2015

For Attention Of: Mr P Barnard

Dear Mr Barnard

Re: Egerton Road, Twickenham, TW2 7SJ

Thank you for your recent enquiry regarding the above premises. I am writing to you on behalf of South Eastern Power Networks PLC the licensed distributor of electricity for the above address trading as UK Power Networks.

I am pleased to be able to provide you with a budget estimate for the work. It is important to note that this budget estimate is intended as a guide only. It has been prepared without carrying out a site visit. No enquiry has been made as to the availability of consents or the existence of any ground conditions that may affect the works. It is not an offer to provide the connection and nor does it reserve any capacity on UK Power Networks' electricity distribution system.

1. Budget estimate

The budget estimate for this work (supply 1625 kVA @ 400 V) is:

£190,000.00 (exclusive of VAT) if the Point Of Connection (POC) is to our High Voltage network to the north of the site Please see the attached plan.

2. Budget estimate assumptions

This budget estimate is based on the following assumptions:

- The most appropriate Point of Connection (POC) is as described above.
- A viable cable route exists along the route we have assumed between the Point of Connection (POC) and the substations required on your site.
- In cases where the Point of Connection (POC) is to be at High Voltage, that substations can be located on your premises at or close to the position we have [drawn on the attached plan](#).


- Where electric lines are to be installed in private land UK Power Networks will require an easement in perpetuity for its electric lines and in the case of electrical plant the freehold interest in the substation site, on UK Power Networks terms, without charge and before any work commences.
- You will carry out, at no charge to UK Power Networks, all the civil works within the site boundary, including substation bases, substation buildings where applicable and the excavation/reinstatement of cable trenches , including the supply and laying of cable ducts.
- Unless stated in your application, all loads are assumed to be of a resistive nature. Should you intend to install equipment that may cause disturbances on UK Power Networks' electricity distribution system (e.g. motors; welders; etc.) this may affect the estimate considerably.
- All UK Power Networks' work is to be carried out as a continuous programme of work that can be completed substantially within 12 months from the acceptance of the formal offer.

Please note that if any of the assumptions prove to be incorrect, this may have a significant impact on the price in any subsequent quotation. You should note also that UK Power Networks' formal connection offer may vary considerably from the budget estimate. If you place reliance upon the budget estimate for budgeting or other planning purposes, you do so at your own risk.

If you would like to proceed to a formal offer of connection then you should apply for a quotation, Please refer to our website http://www.ukpowernetworks.co.uk/internet/en/help-and-advice/documents/the_connection_process.pdf for '**The connection process**' which details our application process. To help us progress any future enquiry as quickly as possible please quote the UK Power Networks Reference Number from this letter on all correspondence.

If you have any questions about your budget estimate or need more information, please do not hesitate to contact me. The best time to call is between the hours of 9am and 4pm, Monday to Friday. If the person you need to speak to is unavailable or engaged on another call when you ring, you may like to leave a message or call back later.

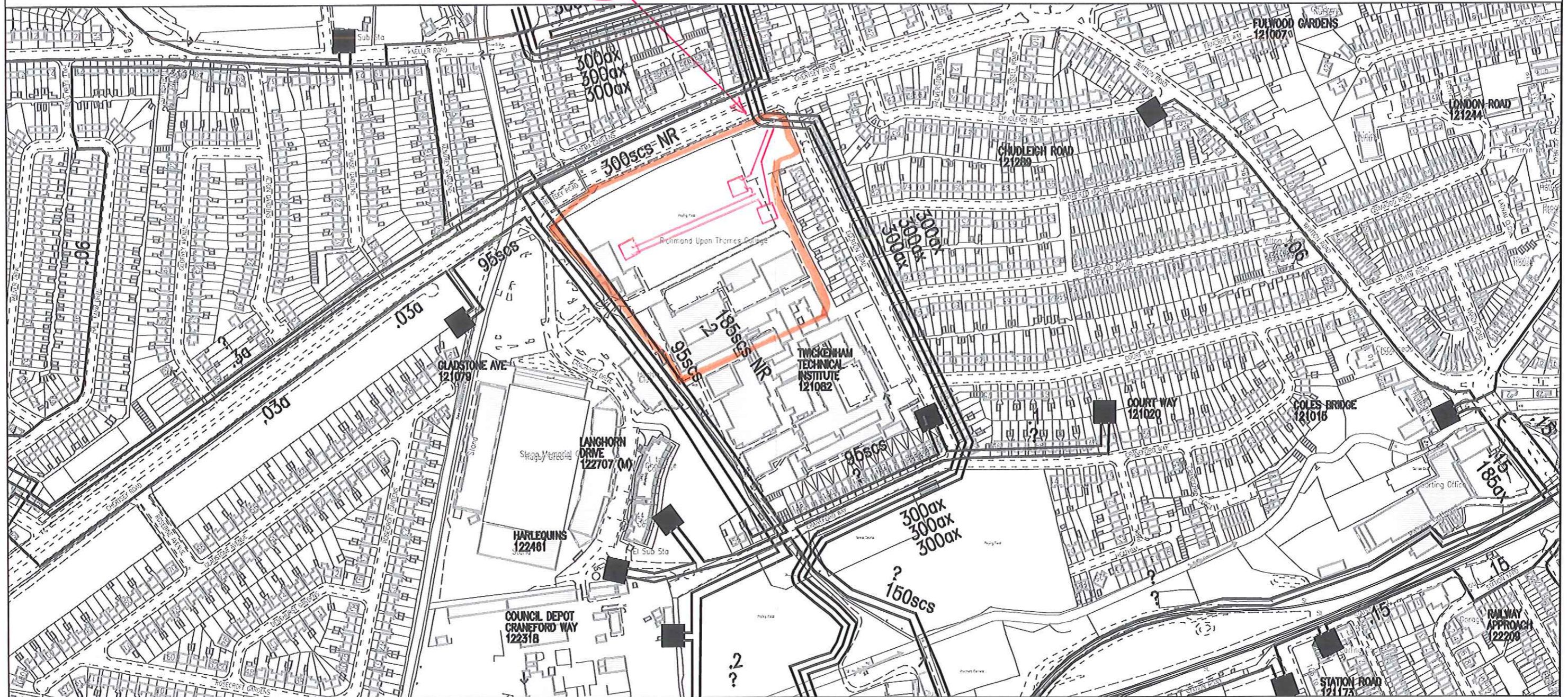
Yours sincerely



R.Alexander
Senior Designer
Tel: 01 622 352 172
Email: .robert.alexander@ukpowernetworks.co.uk

11kV

Poc



The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

LV Cable or Line	
HV Cable or Line	
EHV Cable or Line	
Approx. position	
Ductline	
Pole & Street Furniture	
Substation & Link Box	

- The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
- The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.
- It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all cables have been determined.
- It must be assumed that each property and item of street furniture has an electricity supply. Service cables shown only where known.
- All cables must be treated as being live unless proved otherwise by UK Power Networks.
- The information provided must be given to all people working near UK Power Networks plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
- Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

VISITING AN OPEN POINT? Please mark on this plan all locations visited and open points as found, then return updated map to your Business Unit - Thank You.

- UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
- UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.
- Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
- This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
- You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

Contact UK Power Networks on 0800 056 5866 for details of EHV Cable routes before commencing work.

Grid Ref: TQ 15380 73778

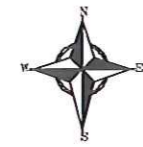
Scale: 1:5000

(When Plotted at A4)

Plotted on: 27/02/2015

Plotted by: Bob, Alexander

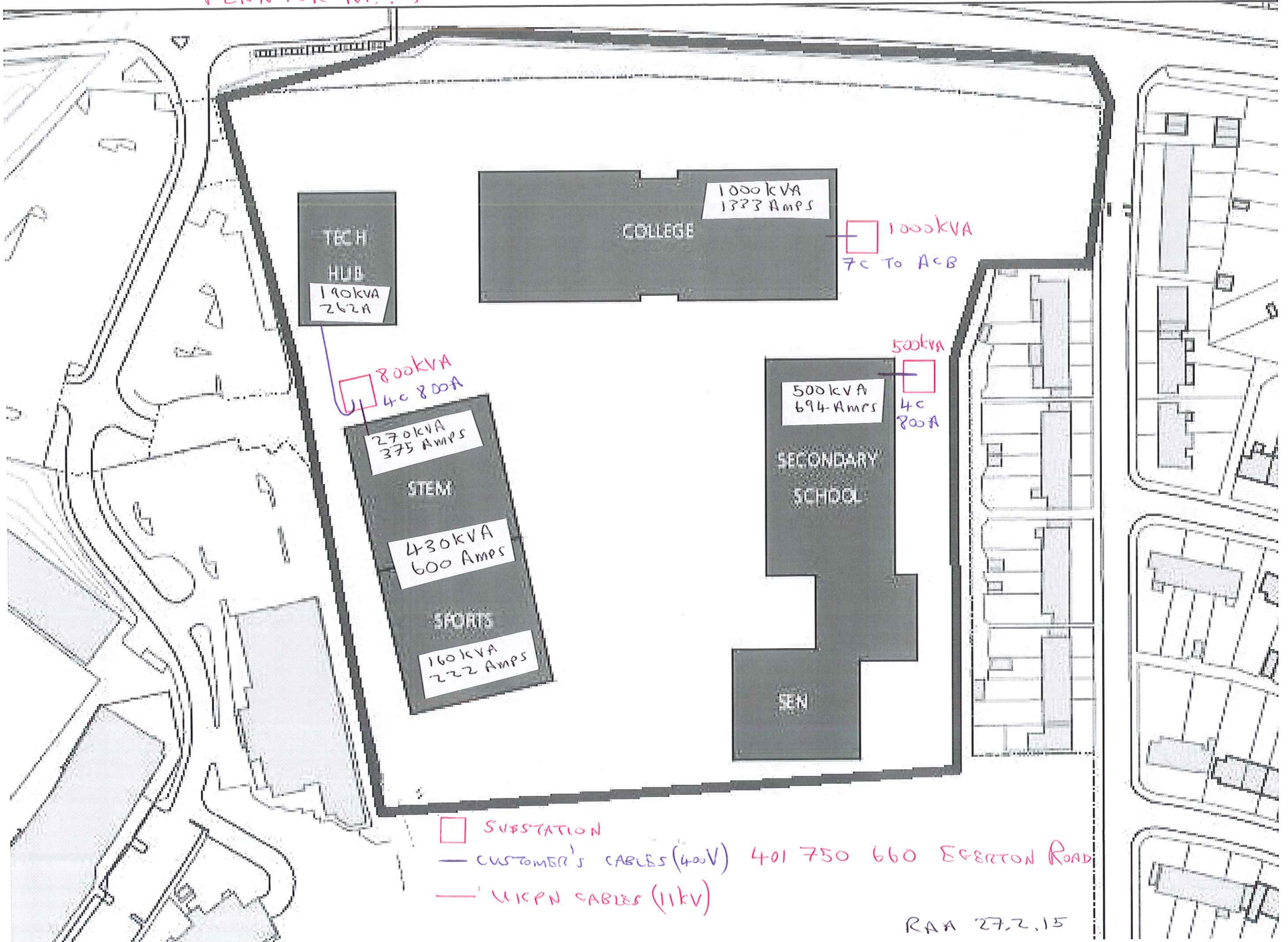
Plan Provision
 CHECK IT OUT BEFORE YOU DIG IT OUT
 CALL 0800 056 5866
 EMERGENCY- If you damage a cable or line
 Phone 0800 096 3766 (24hrs) URGENTLY



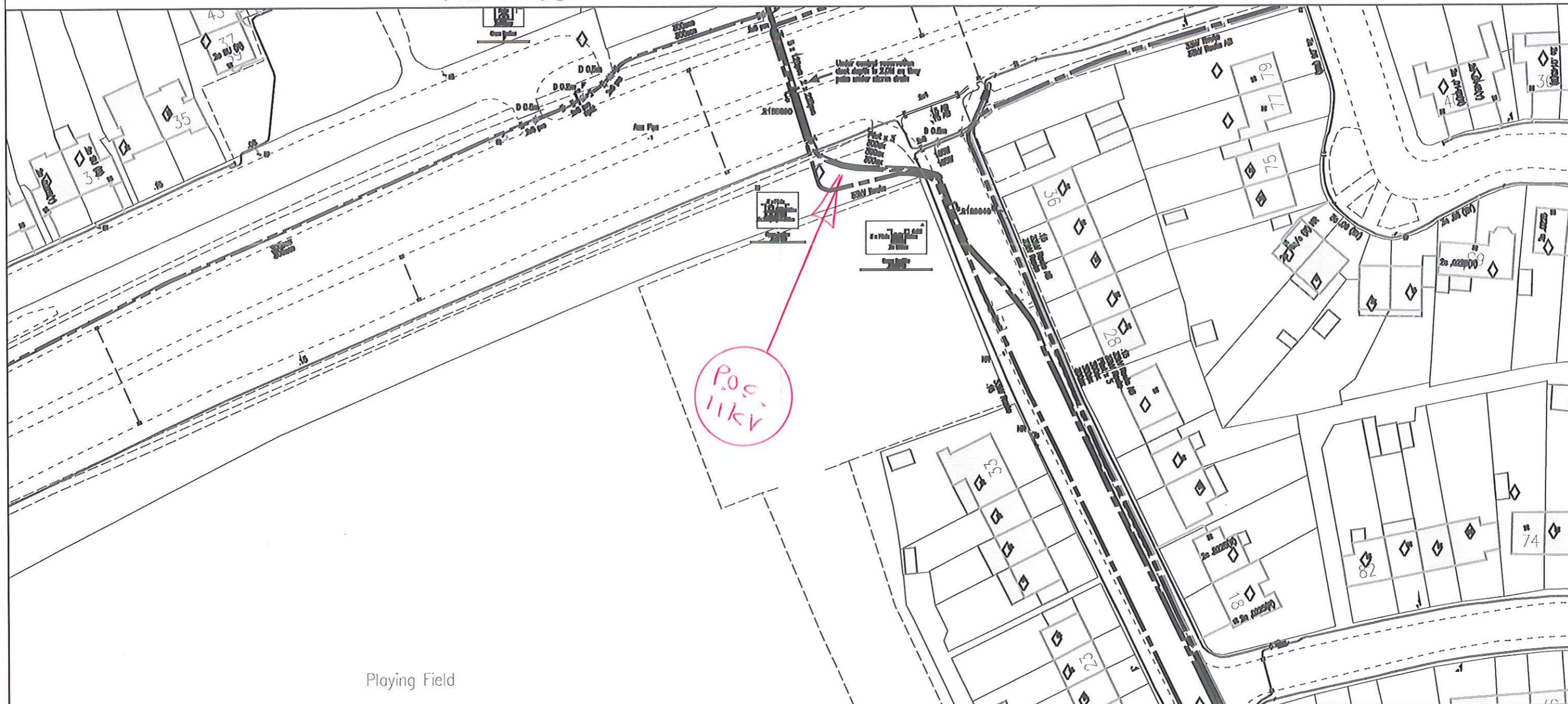
ALWAYS LOOK UP BEFORE YOU START WORK
 Refer to HSE Guidance note GS6

Maps produced at 1:2600 scale are LV Geo-Schematics which show LV mains cables and overhead lines (In some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

PLAN FOR M.T.O.



RAA 27.2.15



The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

LV Cable or Line	
HV Cable or Line	
EHV Cable or Line	
Approx. position	
Ductline	
Pole & Street Furniture	
Substation & Link Box	

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- Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
- This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and you must return it to the sender of the letter.
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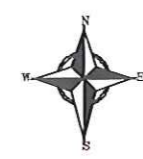
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Scale: 1:1000

(When Plotted at A4)

Plotted on: 27/02/2015

Plotted by: Bob, Alexander



Plan Provision
 CHECK IT OUT BEFORE YOU DIG IT OUT
 CALL 0800 056 5866
 EMERGENCY- If you damage a cable or line
 Phone 0800 096 3766 (24hrs) URGENTLY



ALWAYS LOOK UP BEFORE YOU START WORK
 Refer to HSE Guidance note GS6