APPENDIX D SUPPORTING DESK STUDY INFORMATION

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Express Preliminary UXO Risk Assessment

Client	RSK
Project	Ditton Edge
Site Address	Kiln Barn Road, Ditton, East Malling
Report Reference	EP12400-00
Date	07/12/20
Originator	CJ

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Ditton Edge, Kild Barn Road site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.

Background

This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1st Line Defence's extensive historical archives, library and unique geo-databases, as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1st Line Defence at the time this report was produced. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.

Risk Assessment Considerations	
Site location and description/current use	 The site is located in the village of Ditton, in civil parish in the borough of Tonbridge and Malling, Kent. The site primarily comprises a large area of undeveloped agricultural land. A large farm structure is located in the south-west border of the site. A hard-ground pathway intersects the site south-west to north-east in the western section of the site. The site is bordered to the north by residential properties with attached gardens, to the east by Kind Barn Road, to the south by a hard-ground roadway, and to the west by a hard-ground roadway. The site is located approximately 1.3km south-west of the Aylesford Railway Station. The site is approximately centred on the OS grid reference: **TQ 70980 57679**
Are there any indicators of current/historical military activity on/close to the site?	In-house records do not indicate that the site footprint had any former military use. No features such as WWII defensive positions, encampments or firing ranges are recorded to have been located at or in the immediate vicinity of the site. In addition, no information of ordnance being stored, produced, or disposed of within the proposed site boundary could be found. The closest recorded Heavy Anti-Aircraft (HAA) battery was situated approximately 2km to the south-west of the site. The conditions in which unexploded anti-aircraft ordnance may have fallen unrecorded within the proposed site are analogous to that of aerially delivered Luftwaffe bombs. For a discussion on these conditions, see the relevant sections below.
What was the pre- and post-WWII history of the site?	Pre-WWII OS mapping dated 1936 indicates the site comprised several allotted sections of undeveloped open land, comprised largely of dense foliage. The site was surrounded to the north, south and west of the site by further undeveloped open land, with Kiln Barn Road to the east of the site. Several residential properties are in close proximity north of the site. Post-WWII OS mapping dated 1962 shows no major structural developments to have occurred on-site. Several allotted areas of undeveloped land in the east of the site have been amalgamated into one large field.
Was the area subject to bombing during WWII?	During WWII, the site was located within the Rural District of Malling. According to Home Office statistics, Malling was subject to an overall low-moderate density of bombing, with an average of 43.9 items of ordnance recorded per 1,000 acres. This comprised 1,812 high explosive (HE) bombs, 16 parachute mines, 39 oil bombs, 32 phosphorous bombs, 99 V1 pilotless aircraft and five V2 rockets. This resulted in a total of 2,003 items of ordnance over 45,665 acres. Kent daily bomb mapping records several HE bomb strikes within the wider area of the site. Due to the large scale of these bomb maps, it has not been possible to precisely plot where these bombs fell in relation to the site boundary.

Is there any evidence of bomb damage on/close to the site?	As the site was comprised of open, undeveloped land for the duration of the war, it has not been possible to accurately determine the degree to which the site may have suffered bomb damage.
To what degree would the site have been subject to access?	As the site comprised undeveloped open land for the duration of the war with no on-site structures, the site is not expected to have experienced a high degree of inspection. However, given the site's proximity to residential structures and roadway, it may have been more frequently accessed then the average agricultural land in a rural area.
To what degree has the site been developed post-WWII?	The site has been minimally developed post-war, with a large farm structure being built in the south-west section of the site
What is the nature and extent of the intrusive works proposed?	The nature and extent of works proposed was not available at the time of writing.

Summary and Conclusions

During WWII, the site was located within the Rural District of Malling. According to Home Office statistics, Malling was subject to an overall low-moderate density of bombing, with an average of 43.9 items of ordnance recorded per 1,000 acres. This comprised 1,812 high explosive (HE) bombs, 16 parachute mines, 39 oil bombs, 32 phosphorous bombs, 99 V1 pilotless aircraft and five V2 rockets. This resulted in a total of 2,003 items of ordnance over 45,665 acres.

Kent daily bomb mapping records several HE bomb strikes within the wider area of the site. Due to the large scale of these bomb maps, it has not been possible to precisely plot where these bombs fell in relation to the site boundary.

Moreover, as the site was comprised of open, undeveloped land for the duration of the war, it has not been possible to accurately determine the degree to which the site may have suffered bomb damage.

As the site comprised undeveloped open land for the duration of the war with no on-site structures, the site is also not expected to have experienced a high degree of inspection. However, given the site's proximity to residential structures and roadway, it may have been more frequently accessed then the average agricultural land in a rural area.

Recommendations

In accordance with CIRA guidelines, it is recommended that a **Detailed UXO Risk Assessment** should be undertaken to account for the location/damage caused by bomb strikes and confirm the exact wartime conditions present on site. Further investigation would entail the analysis of data such as any WWII-era aerial photography, available written records. The report would also outline work specific UXO risk mitigation measures.

Depending on the quality and quantity of information available, it may be possible to negate the perceived risk from UXO across the site, if it can be confirmed that the site was not significantly affected by wartime bombing.

Prior to or in lieu of a Detailed Assessment, it is recommended that appropriate UXO Risk Mitigation Measures are provided for intrusive works proposed.

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1st Line Defence.

It should be noted that although the risk from unexploded ordnance on this site has been assessed as low/minimal, this does not mean there is 'no' risk of encountering UXO. This preliminary report has been undertaken with due diligence, and all reasonable care has been taken to access and analyse relevant historical information. By necessity, when dealing historical evidence, and when making assessments of UXO risk, various assumptions have to be made which we have discussed and justified within this report. Our reports take a common-sense and practical approach to the assessment of UXO risk, and we strive to be reasonable and pragmatic in our conclusions. As referenced, it would be possible to undertake further research into this site, but based on the evidence to hand, this is not deemed strictly necessary, and no reasonably justifiable requirement for proactive on-site mitigation has been identified.

It should however be stressed that if any suspect items are encountered during the proposed works, 1st Line Defence should be contacted for advice/assistance, and to re-assess the risk as necessary. Furthermore, we would recommend that ground personnel are always made aware of the potential for encountering UXO, what to look out for and what to do in the unlikely event that a suspect item is encountered, and that a UXO Risk Management Plan is put together for the proposed works. We would be happy to provide a template and guidance for this – contact us on 01992 245020. Should the scope of works change or additional works be proposed, 1st Line Defence should be contacted to re-evaluate the risk.

~~CONFIDENTIAL~~ Not Notifiable 288 TQ75/7 /158

Copy: De classified

~~COMMERCIAL IN CONFIDENCE~~ Le Grand, Sutcliff & Gell Ltd.

~~CONFIDENTIAL~~

Record of Test Boring No. 1 at Aylesford. (DITTON COURT QUARRY MESSRS DIAMOND TREAD CO (1938) LTD)

For Albert E. Reed & Company. Ltd., Larkfield, Nr. Maidstone, Kent.

O/No. 8227 Boring Completed on 30.8.56

Boring Lined to a Depth of Diameter 7"

	Boring Foreman's Strata Record	Thickness		Depth		Water Observations			
		Ft.	Ins.	Ft.	Ins.	Date	Time	W.S.	S.W.L.
Drift	Brown Sandy Clay	1	0	1	0			7'	1'
	Black Stone	3	0	4	0			22'	
	Sand stone	4	6	8	6				
	Stone	3	0	11	6				
HB	Sandstone	3	0	14	6				
32	Blue Clay	1	6	16	0				
	Stone	5	6	21	6				
	Blue Clay	2	6	24	0				
	Stone	2	0	26	0				
	Undescribed	5	0	31	0				
	Blue Clay	1	0	32	0				
	Stone	1	0	33	0				
AC 17	Blue Clay	17	0	50	0				
	Total Depth			50	0				

ACB 24/4/68

(See also 288/49)

Ground Level (vaprob in quarry bottom) 49.7 O.D (Liverpool)

Ground level ~~outside~~ quarry prob c. 65' O.D.)

N.B "Treat information as confidential & do not disclose to third parties without written permission of Messrs Diamond Tread Co(1938) Ltd."

From Albert E. Reed. Aylesford Paper Mills Larkfield Kent.

T. Waldmeyer.

Sited by ⊙ on 6" Kent 31 SW/W.

30-x-56

8/11/56

In Mr. Waldmeyer's paper 'Rates of flow of Underground Water and the Choice of Tracers to determine them,' (Journ. I.W.E. Vol. 12 No. 6. Oct. 1958), the surface level is given as +51 ft. O.D. Newlyn. (Level in record, of +49.7 ft O.D. Liverpool converts to +48.6 ft approx. O.D. Newlyn) The top of the Atherfield Clay is said to have been encountered at +18 ft. The ground level at the top of the quarry (probably after removal of overburden) is given as +77 ft.

Information from Kent River Authority, 22/1/74.

MH.

APPENDIX E UTILITY SERVICE PLANS

UK Power Networks
Delivering your electricity

ukpowernetworks.co.uk

Every year, people are killed or seriously injured when they come into contact with high voltage electricity.

This can have a far-reaching and devastating effect on family, friends and colleagues.

Distractions, working long hours, rushing to get the job done, can all impact on how we work and our safety.

Taking time to plan, being prepared and focusing on the way we work can help keep us safe.

WOODEN POLES CAN CARRY TELEPHONE AND ELECTRICITY WIRES. **NEVER ASSUME** THE WIRE IS A TELEPHONE WIRE

LINES CAN BE **RE-ENERGISED** AT ANY TIME

400,000 VOLTS

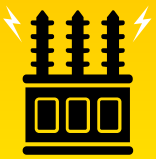
ELECTRICITY SYSTEMS CARRY VOLTAGE UP TO 400,000 VOLTS. **EVEN 230 VOLTS (DOMESTIC VOLTAGE) CAN BE LETHAL**

Be Bright Stay Safe

UK Power Networks
Delivering your electricity

RUBBER BOOTS
WILL NOT PROTECT YOU!

OUR NETWORK DISTRIBUTES ELECTRICITY THROUGH UNDERGROUND CABLES, PYLONS, OVERHEAD POWER LINES, SUBSTATIONS AND OTHER EQUIPMENT



National power cut helpline

POWER CUT? CALL 105

OR CALL US 24 HOURS A DAY ON
0800 31 63 105

TAKE NOTICE

OF ANY YELLOW '**DANGER OF DEATH**' WARNING SIGNS. AND STAY WELL AWAY!

REMEMBER ELECTRICITY **CAN JUMP GAPS**

OVERHEAD POWER LINES ARE OFTEN UNINSULATED (BARE)

CABLES ARE OUT OF SIGHT ALWAYS REQUEST CABLE PLANS BEFORE STARTING WORK

CARRY OBJECTS AND EQUIPMENT **HORIZONTALLY AND AT LOW LEVEL TO THE GROUND**

TOUCHING ANYTHING IN CONTACT WITH ELECTRICAL EQUIPMENT, EVEN THE LOWEST OF VOLTAGES, CAN BE FATAL

The electricity network is designed to keep you safe. But how safe are you when you are working?

UK Power Networks is the country's biggest electricity distributor, making sure the lights stay on for more than eight million homes and businesses across London, the South East and the East of England.

The safety of our customers and staff is our top priority.

Underground cables carry a powerful electrical charge which can be conducted through machinery and equipment with fatal consequences. Anyone working close to live underground cables should take the time to read this simple leaflet and identify the precautions they should be taking.

WATCH OUR EXCAVATION ANIMATION BY SCANNING THE QR CODE WITH YOUR PHONE CAMERA.

Keep well away - Electricity can kill

Remember:

- The depth and location of cables and services shown on the plans may have changed because of subsequent site alterations
- Be aware that not all cables and services may be shown on the plans
- Cables do not run in straight lines. Underground cables may be deflected around underground obstacles and can change depth
- Wear Personal Protective Equipment to minimise the harm of electric shock and burns

How can we help?

If you work or live in the UK Power Networks area contact us or look on our website. We provide free information and advice about the precautions and safe working practices to be followed when working close to electrical equipment.

Further advice and guidance is available from the Health and Safety Executive (HSE):
HSG85 - Electricity at Work – Safe Working Practices
GS6 - Avoiding Danger from Overhead Power Lines
HSG47 - Avoiding Danger from Underground Services

What to do in an emergency

If a mains electricity cable is damaged:

- **STOP WORK IMMEDIATELY**
- Notify UK Power Networks: Dial 105
- If you damage a cable, stay calm, keep clear, and call for help
- Call the emergency services if anyone is injured or there is a fire. Anyone who has received an electric shock should go to hospital as damage may have occurred to the heart
- Always treat the cable(s) as live even if they are not sparking
- Never remove anything that is stuck or in contact with the cable
- Stay clear - keep everyone away until assistance arrives

To request your **FREE** vehicle cab stickers visit **www.ukpowernetworks.co.uk/internet/en/safety/**

If you are unsure who your network operator is then please visit **www.energynetworks.org**

Be Bright Stay Safe

You could be in danger when carrying out your everyday trades activities such as digging, construction and demolition.

- Contact UK Power Networks or Line Search Before U Dig (LSBUD) in advance of the works to obtain relevant cable plans or to request disconnections. The cable plans will only show the indicative route and not the route into the property
- Ensure the cable plans are shown to and understood by those on site BEFORE starting work
- Confirm the cable location by using a Cable Avoidance Tool (CAT) before digging commences. Once found, mark cable positions with spray paint or similar

For cable plans visit www.linesearchbeforeudig.co.uk or www.ukpowernetworks.co.uk

- Complete a risk assessment and ensure it covers electrical hazards
- Use spades and shovels with insulated handles in preference to forks and picks
- Look around for anything in the vicinity that would have an electricity service such as street lights, CCTV cameras, or meter boxes and identify where the cables are
- Look for electrical wires, cables and equipment near to where you are going to work and check for warning signs and any other hazards
- Contact UK Power Networks to agree a safe method of work if there is a cable encased in concrete, DO NOT BREAK OPEN
- Make sure everyone on site is aware of the presence and location of electrical cables
- Before demolishing a building make sure supplies are disconnected, preferably well clear of the work area. For guidance on how to arrange a disconnection visit www.ukpowernetworks.co.uk

NATIONAL POWER CUT HELPLINE

POWER CUT? CALL 105

ADD THIS NUMBER TO YOUR TELEPHONE CONTACTS LIST

Be Bright Stay Safe

Stop! Think before you dig!

#bebrightstaysafe

@UKPowerNetworks /ukpowernetworks

National power cut helpline

POWER CUT? CALL 105

Or call us
24 hours a day on
0800 31 63 105

For safety advice about overhead power lines, disconnections and general enquiries, go to:
www.ukpowernetworks.co.uk

To request your **FREE** vehicle cab stickers visit
www.ukpowernetworks.co.uk/internet/en/safety/

If you are unsure who your network operator is then please visit
www.energynetworks.org

what3words

Scan the QR code on your phone to get the app

To report broken or damaged electrical equipment or in an emergency call 0800 31 63 105 or 105 and use what3words to help us locate you faster.

Linesearch before dig

UK Power Networks
Delivering your electricity

Network Records NetMAP Symbols Booklet - South East England

Version 1.2

Released October 2010

Always check with your local Network Records office or the UK Power Networks server to ensure that you are using the most up to date copy of this booklet - Tel: 08000 565866

Index:-

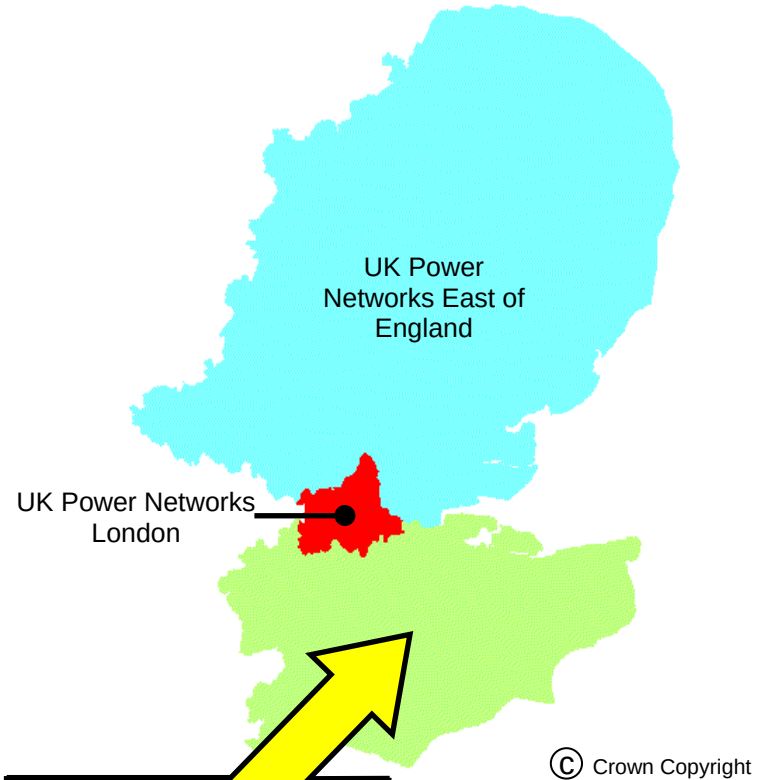
Guidance notes.

Important notice:
If you do not understand the NetMAP record that you are using, please contact the UK Power Networks Network Records team for guidance on **Tel: 08000 565866.**

- The position of apparatus shown on NetMAP is believed to be correct, but the original landmarks may have altered since the apparatus was installed.
- It must be assumed that there is at least one service to each property, lamp column, street sign etc.
- Third party cables are not usually shown.
- When viewed in black and white, the line-style indicates the voltage.
- All LV cables are 4 core and all HV cables are 3 core – unless otherwise stated.
- All cables are copper – unless otherwise stated.

Plan Provision Team
and CableWatch
Fore Hamlet
Ipswich
Suffolk IP3 8AA
Tel: 08000 565866

The area covered by this guide:



UK Power Networks South East England. This is the only area where this booklet applies

1:500 (& 1:1250) view

Scenery

NetMAP system	Description
	Secondary buildings and fence lines
	Building line
	Kerb line
	UK Power Networks / SPN licence boundary (not visible unless selected)

Scenery for UK Power Networks use only - boxed in red

NetMAP system	Description
 Inset Network – Contact xxxx IDNO for further information	Area of inset network - not the asset of UK Power Networks (only visible to UK Power Networks and their immediate contractors)
	Proposed Cross Rail route (only visible to UK Power Networks and their immediate contractors)
	High pressure pipelines in the general vicinity (only visible to UK Power Networks and their immediate contractors)

Note: Pipelines are only viewable on NetMAP by UK Power Networks staff and their immediate contractors. Do not carry out any excavation without consent from the relevant agency - legally protected high pressure petroleum products pipeline route in the general vicinity - consult www.linewatch.co.uk for contacts and guidance. Pipeline contact numbers can also be found on the intranet – out of hours, contact our Control Centre.

	Water - surface water (only visible to UK Power Networks and their immediate contractors)
	Water - Source Protection Zone 1 (only visible to UK Power Networks and their immediate contractors)
	Water - Source Protection Zone 2 (only visible to UK Power Networks and their immediate contractors)
	Water - Source Protection Zone 3 (only visible to UK Power Networks and their immediate contractors)

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Scenery for UK Power Networks use only - boxed in red

NetMAP system	Description
	Historical - Scheduled Monuments (only visible to UK Power Networks and their immediate contractors)
	Historical - Parks and Gardens (only visible to UK Power Networks and their immediate contractors)
	Historical - Areas of Archaeological Potential (AAP) (only visible to UK Power Networks and their Immediate contractors)
	Nature - Ramsar Wetlands of International Importance (only visible to UK Power Networks and their immediate contractors)
	Nature - Special Area of Conservation (SAC) (only visible to UK Power Networks and their immediate contractors)
	Nature - Special Protected Area (SPA) (only visible to UK Power Networks and their immediate contractors)
	Nature - Site of Special and Scientific Interest (SSSI) (only visible to UK Power Networks and their immediate contractors)

section continued on next page

Scenery for UK Power Networks use only - boxed in red

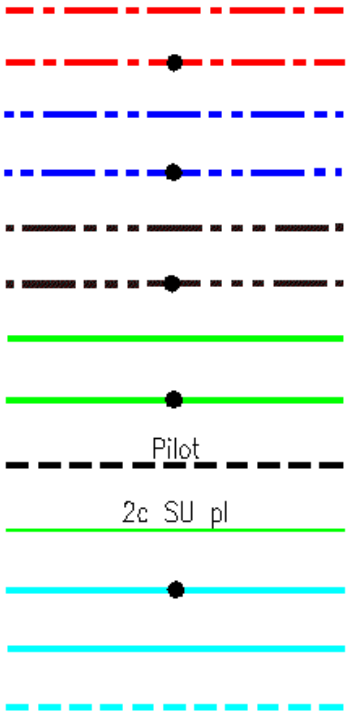
NetMAP system	Description
	Nature - Local Nature Reserve (only visible to UK Power Networks and their immediate contractors)
	Nature - National Nature Reserve (only visible to UK Power Networks and their immediate contractors)
	Nature - Area of Outstanding Natural Beauty (AONB) (only visible to UK Power Networks and their immediate contractors)
	Nature - National Park (only visible to UK Power Networks and their immediate contractors)
	Fluid filled cables - very high sensitivity (only visible to UK Power Networks and their immediate contractors)
	Fluid filled cables - high sensitivity (only visible to UK Power Networks and their immediate contractors)
	Fluid filled cables - medium sensitivity (only visible to UK Power Networks and their immediate contractors)
	Fluid filled cables - low sensitivity (only visible to UK Power Networks and their immediate contractors)

Primary distribution line route (1:500 view)

NetMAP system	Description
	275–400kV National Grid route 132kV cable route 33kV cable route

Approximate routes only – see seperate record

Secondary distribution cables (1:500 view)

NetMAP system	Description
	11kV underground cable 11kV overhead line 6.6kV underground cable 6.6kV overhead line <6.6kV underground cable <6.6kV overhead line LV underground cable LV overhead line Pilot cable LV street lighting (pl) Service overhead line Service underground Logical service connection

Secondary distribution cable terminology (1:500 view)

HV underground

sta	PILCSTA (paper insulated lead covered steel tape armour)
(no text)	PILCSWA (paper insulated lead covered steel wire armour)
XLPE	XLPE (cross linked polyethylene) insulation
bcs	CAS (corrugated aluminium sheath) belted construction
scs	CAS (corrugated aluminium sheath) with screened cores
ua	PILC (paper insulated lead covered) unarmoured
c/c	Concentric cores
Poly	Poly (polyethylene) insulation
BOTES	BOTES – Board of Trade earth screen
of	Oil filled
33 kV design	Constructed to 33 kV specification
ax	Triplex with aluminium conductor
cx	Triplex with copper conductor

HV overhead

(no text)	Bare open wire
pvc	Open wire PVC covered
cat	ABC (aerial bundled or bunched conductor) with supporting strain wire
+ew	Open wire with extra earth conductor
ccc	Compact covered conductor

Overhead line materials

sca	Steel cored aluminium
cc	Cadmium copper
st	Steel
sil	Silmalec
ccs	Copper covered steel
cpl	Compactal

section continued on next page

Secondary distribution cable terminology continued

(1:500 view)

LV underground mains and services

W	Waveform
We	Waveform with seperate earth wire
H	Hybrid – copper neutral with aluminium phase conductor
He	Hybrid with seperate earth wire
ua	PILC (paper insulated lead covered) unarmoured
(no text)	PILC (paper insulated lead covered) with/without armour
XLPE	XLPE (cross linked polyethylene) insulation
DISTRI	PISTA (paper insulated steel tape armour) 4c SAC (solid aluminium core) with lead covered neutral
c/c	Concentric cores
s/c	Split concentric with seperated neutral and earth wires
CONSAC	Paper insulated aluminium sheathed 3 core with solid aluminium cores
vb	Vulcanised bitumen/rubber insulation
Capothene	Capothene core insulation
tby	Tape braid and yarn
swa	PILSWA (paper insulated lead steel wire armour)
sac	PILSTA (paper insulated steel tape armour) solid aluminium core
Solidal	4 sector SAC with solid aluminium cores
LSF	Low smoke and fume (orange cable)
Trough	Cable laid in filled trough

LV overhead mains and services

(no text)	Bare open wire
ABC	Aerial bundled (or bunched) conductor
cat	ABC (aerial bundled or bunched conductor) with supporting strain wire
pvc	PVC covered open wire
c/c	Concentric cores
H	Hybrid – copper neutral with aluminium phase conductor
ue	Under eaves – hessian covered lead cable
vir	Vulcanised India rubber insulation

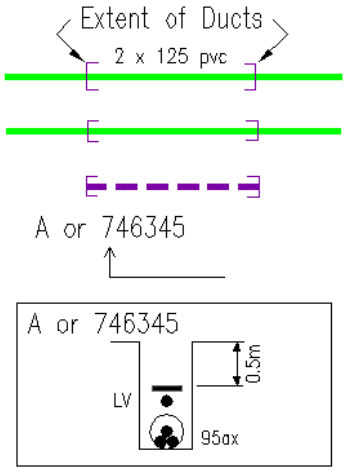
section continued on next page

Secondary distribution cable terminology continued
(1:500 view)

Various annotation

.1	Cable size (sq. inches)
185	Cable size (sq. millimetres)
a	Aluminium
ITC	Instrument traced cable or ITC - cable traced electronically using Cable Avoidance Tool (CAT) or similar

Cable ducts **(1:500 view)**

NetMAP system	Description
	Duct 2 way Duct 1 way (no text) Spare duct Cross section arrow Cross section showing: duct, tile depth, tile, single LV cable and HV Triplex cable

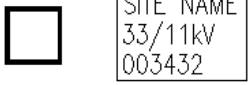
Duct materials

(no text)	Earthenware
pvc	PVC
st	Steel
asb	Asbestos
fbr	Fibre
wi	Iron
cp	Concrete pipe
t/e	Trenchless excavation

Poles (1:500 view)

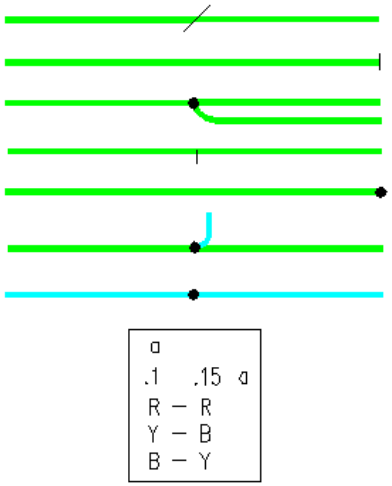
NetMAP system	Description
(S) 999999	Section pole Pole number (unique)
	Single leg
	H pole
	3 member
	4 member
	Strut
	Pole support (stay)
	Flying stay
	Tower 33kV to 400kV

EHV, HV and LV sites (1:500 view)

NetMAP system	Description
Note: EHV and HV sites are identified by a unique 6 digit number (SPENS)	
	Ground mounted primary substation showing name, transformer voltage and SPENS number
	Pole mounted substation showing name and SPENS number
	Ground mounted substation showing name and SPENS number
	2 way link box
	4 way link box
	Link box without busbar
	(options similar to 1:2500 view) LV distribution pillar
	Voltage regulator
	Voltage balancer
	Open point
	Open point – out of phase
	Overhead open point

Note: For LV linking, use the 1:2500 view

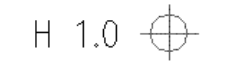
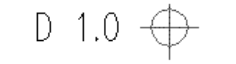
Joints (1:500 view)

NetMAP system	Description
	Straight (same for HV) Pot end (same for HV) Branch (same for HV) Sleeve repair Capped end Service to LV main Under eaves service Jointing phase drawing

Street furniture (1:500 view)

NetMAP system	Description
    	Pole mounted street light Street light Zebra crossing Road sign Bollard Pelican crossing Traffic controller Advertising sign Amplifier station Control cubicle Text displayed/description Pay and display Bus shelter TBS Kiosk Water meter PL pillar TCB Unknown

Miscellaneous (1:500 view)

NetMAP system	Description
	Underground chamber or draw pit
	Earth conductor
	Earth pin
	Height marker
	Depth marker
	Supply point
	Missing data in or near this location
	Contaminated land reference

Connectivity (1:500 view)

NetMAP system	Description
	Edge node
	Node
	Connector Pole termination (nothing visible unless selected)

Edge nodes, nodes, connectors and pole termination joints may not appear on screen unless turned on and selected.

Abbreviations (1:500 view)

NetMAP system	Description
NR	No record
SU	Size unknown
AB	Abandoned
(M)	PME available
VO5	Year LV linking verified
MS	Milestone
MP	Marker post
pmt	Pole mounted transformer
pl	Public lighting
TBS	Temporary builder's supply
TCB	Telephone call box
CET	Cable electronically traced
IT	Instrument traced (same as CET)
CAT	Cable avoidance tool (same as CET)
+sl	Street lighting
+sw	Switch wire
2c	2 core
PESL	Public Electricity Supply License
Added	Supplied by SPN
Excluded	Not supplied by SPN
IIP	Assumed open point
VSxxxx	Vacant site
CB	Callender box

Cable phasing (1:500 view)

Old core colours	Shown on map		New core colours
Neutral	Neutral	Neutral	Blue
Red	R	L1	Brown
Yellow	Y	L2	Black
Blue	B	L3	Grey

Note:- Scott is a different phasing system

Operational status colours (1:500 view)

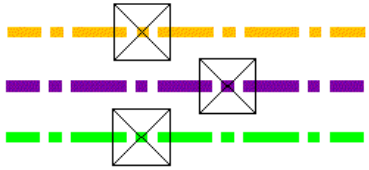
PROPOSAL	Symbols and cables appear in ORANGE
OUT OF SERVICE	Cable and joints appear in BLACK
ABANDONED	Cables and joints appear in GREY

1:2500 view - for UK Power Networks use only - boxed red

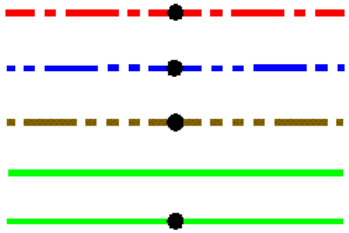
Notes

1. No underground HV cables are shown on the 1:2500 view
2. Poles and joint details are similar to the 1:500 view
3. For cable/line information refer to the 1:500 view

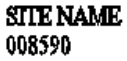
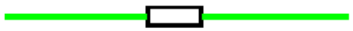
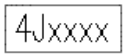
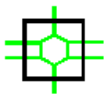
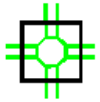
Primary distribution line route (1:2500 view)

NetMAP system	Description
	275–400kV National Grid route 132kV cable route 33kV cable route

Secondary distribution cables (1:2500 view)

NetMAP system	Description
	11kV overhead line 6.6kV overhead line <6.6kV overhead line LV underground cable LV overhead line

Primary and secondary sites (1:2500 view)

NetMAP system	Description
Note: EHV and HV sites are identified by a unique 6 digit number (SPENS)	
	Ground mounted substation showing capacity, phase, name and SPENS number
	Pole mounted substation showing capacity, phase, name and SPENS number
	Primary substation showing name and SPENS number (no site shown)
	2 way link box
	4 way link box
	Link box identifier
	4 way link box without busbar
	6 way link box without busbar
	8 way link box without busbar

section continued on next page

Primary and secondary sites continued (1:2500 view)

NetMAP system	Description
	LV distribution pillar
	Voltage regulator
	Voltage balancer
	Open point
	Open point – out of phase
	Earth pin

Switch types (1:2500 view)

NetMAP system	Description
ABSD	Air brake switch disconnector
A/R	Auto recloser
A/S	Sectionaliser
FUSE	Fuse
S/D	Surge diverter
PF	Pathfinder
ASL	Automatic sectionalising links
PMR	Pole mounted recloser
PMS	Pole mounted sectionaliser
GVR	Gas vacuum recloser

1:10000 view - for UK Power Networks use only - boxed red

Notes

1. No EHV cables/overhead lines shown on 1:10000 view.
2. For congested areas print at 1:5000.
3. HV site used instead of branch joint on 1:10000 for connectivity purposes. The site is not displayed until it is selected.

Secondary distribution cables (1:10000 view)

NetMAP system	Description
	11kV underground cable
	6.6kV underground cable
	<6.6kV underground cable
	11kV overhead line
	6.6kV overhead line
	<6.6kV overhead line

Primary and secondary sites (1:10000 view)

NetMAP system	Description
Note: EHV and HV sites are identified by a unique 6 digit number (SPENS)	
SITE NAME 008590	Primary substation showing name and SPENS number
SITE NAME 521234	11kV ground mounted substation showing name and SPENS number
SITE NAME 524514	6.6kV ground mounted substation showing name and SPENS number
SITE NAME 523634	<6.6kV ground mounted substation showing name and SPENS number
SITE NAME pmt 527522	11kV pole mounted substation showing name and SPENS number
SITE NAME pmt 525743	6.6kV pole mounted substation showing name and SPENS number
SITE NAME pmt 526543	<6.6kV pole mounted substation showing name and SPENS number
SITE NAME 527238	Pole mounted switching substation showing name and SPENS number

Registered Office:
Newington House
237 Southwark Bridge Road
London SE1 6NP

Registered in England and Wales No: 3870728

Company:
UK Power Networks (Operations) Limited

Our Ref: 20713347 Your Ref: 52254

Thursday, 03 December 2020

Monique Elsom
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Dear Monique Elsom

Thank you for contacting us regarding UK Power Networks equipment at the above site. I have enclosed a copy of our records which show the electrical lines and/or electrical plant. I hope you find the information useful.

I have also enclosed a fact sheet which contains important information regarding the use of our plans and working around our equipment. Safety around our equipment is our number one priority so please ensure you have completed all workplace risk assessments before you begin any works.

Should your excavation affect our Extra High Voltage equipment (6.6 KV, 22 KV, 33 KV or 132 KV), please contact us to obtain a copy of the primary route drawings and associated cross sections.

If you have any further queries do not hesitate to contact us.

Plan Provision
0800 056 5866

Registered Office:
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London SE1 6NP

Registered in England and Wales No: 3870728

Company:
UK Power Networks (Operations) Limited

This information is made available to you on the terms set out below. If you do not accept the terms of use set out in this fact sheet please do not use the plans and return them to UK Power Networks.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.

2. 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.

3. 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 how for any loss, damage, costs, 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.

4. The information about UK Power Networks electrical plant and/or electric lines provided to you belongs to and remains the property of UK Power Networks. You must not alter it in any respect.

5. The information provided to you about the electrical plant and/or electric lines depicted on the plans may NOT be a complete record of such apparatus belonging to UK Power Networks. The information provided relates to electric lines and/or electrical plant belonging to UK Power Networks that it believes to be present but the plans are not definitive: other electric lines and/or electrical plant may be present and that may or may not belong to UK Power Networks.

6. Other apparatus not belonging to UK Power Networks is not shown on the plan. It is your responsibility to make your own enquiries elsewhere to discover whether apparatus belonging to others is present. It would be prudent to assume that other apparatus is present.

7. You are responsible for ensuring that the information made available to you is passed to those acting on your behalf and that all such persons are made aware of the contents of this letter.

8. Because the information provided to you may not be accurate, you are recommended to ascertain the presence of UK Power Networks electric lines and/or electrical plant by the digging of trial holes. Trial holes should be dug by hand only.

   Excavations must be carried out in line with the Health and Safety Executive guidance document HSG 47. We will not undertake this work. A copy of HSG 47 can be obtained from the Health and Safety Executives website.

   All electric lines discovered must be considered LIVE and DANGEROUS at all times and must not be cut, resited, suspended, bent or interfered with unless specially authorised by UK Power Networks.

   The electric line and electrical plant belonging to UK Power Networks remains so even when made dead and abandoned and any such electric line and/or electrical plant exposed shall be reported to UK Power Networks.

   Where your works are likely to affect our electric lines and/or electrical plant an estimate of the price of any protective /diversionary works can be prepared by UK Power Networks Branch at Metropolitan House, Darkes Lane, Potters Bar, Herts. , EN6 1AG, telephone no. 0845 2340040

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9 Any work near to any overhead electricity lines must be carried out by you in accordance with the Health and Safety Executive guidance document GS6 and the Electricity at Work Regulations.

The GS6 Recommendations may be purchased from HSE Books or downloaded from the Energy Networks Association's website.

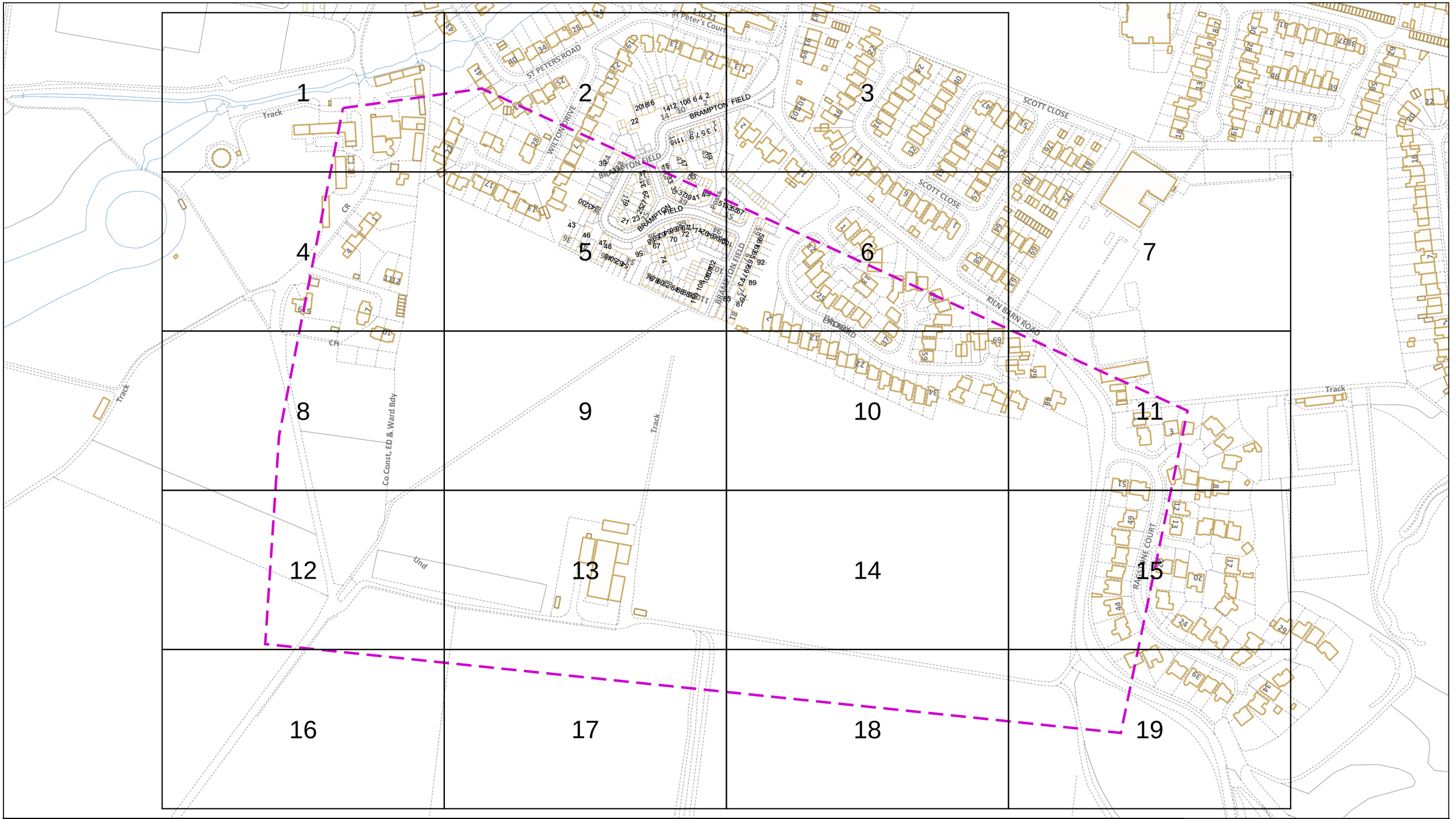
If given a reasonable period of prior notice UK Power Networks will attend on site without charge to advise how and where "goal posts" should be erected. If you wish to use this service, in the first instance please telephone: 0845 6014516 between 08:30 and 17:00 Monday to Friday.

10. 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.

11. If in carrying out work on land in, on, under or over which is installed an electric line and/or electrical plant that belongs to UK Power Networks you and/or anyone working on your behalf damages (however slightly) that apparatus you must inform immediately UK Power Networks by our emergency 24 hour three digit telephone number **105** providing;

- your name, address and telephone number;
- the date, time and place at which such damage was caused;
- a description of the electric line and/or electrical plant to which damage was caused;
- the name of the person whom it appears to you is responsible for that damage;
- the nature of the damage.

12. The expression "UK Power Networks" includes UK Power Networks (EPN) plc, UK Power Networks (LPN) plc, UK Power Networks (SEPN) plc, UK Power Networks and any of their successors and predecessors in title.



Dig Sites Area: Line:

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.

This plan must be used with the attached 'Symbols' document.

Date Requested: 03/12/2020
Job Reference: 20713347
Site Location: 570510 157362
Requested by:
Miss Monique Elsom
Your Scheme/Reference: 52254

Scale: 1:2563 (When plotted at A3)

1. 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.
2. The exact position of the apparatus should be verified – use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information proved must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. 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.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. 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.
4. 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 must return it to the sender of the letter.
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N W E S

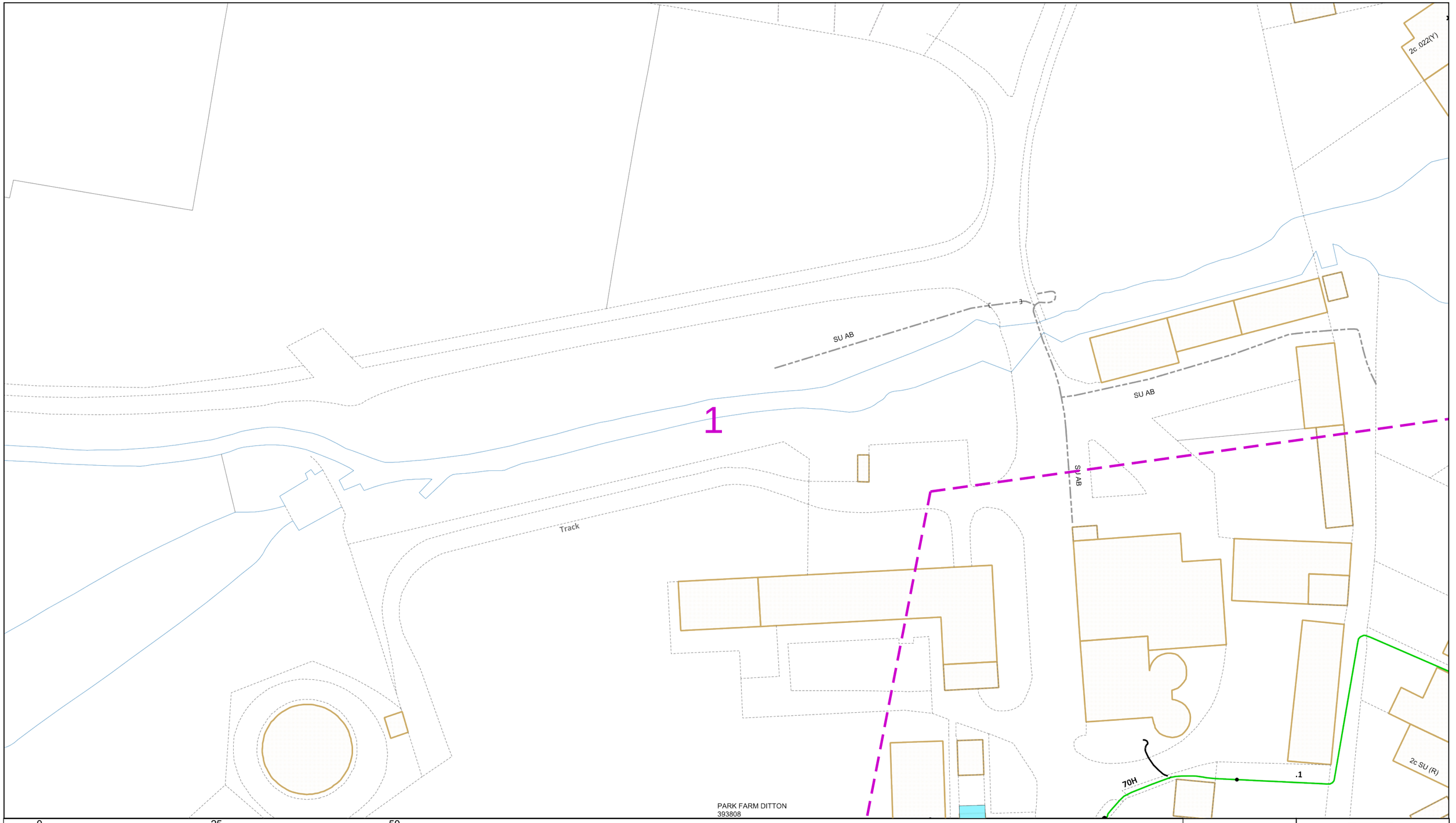
UK Power Networks

IF IN DOUBT – ASK!
PHONE 0800 056 5866
EMERGENCY – If you damage a cable or line Phone 0800 783 8838 (24hrs) URGENTLY

LOOK OUT LOOK UP

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

Maps produced at 1:2500 scale are 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.



0 25 50
metres

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Date Requested: 03/12/2020
Job Reference: 20713347
Site Location: 570510 157362
Requested by:
Miss Monique Elsom
Your Scheme/Reference: 52254

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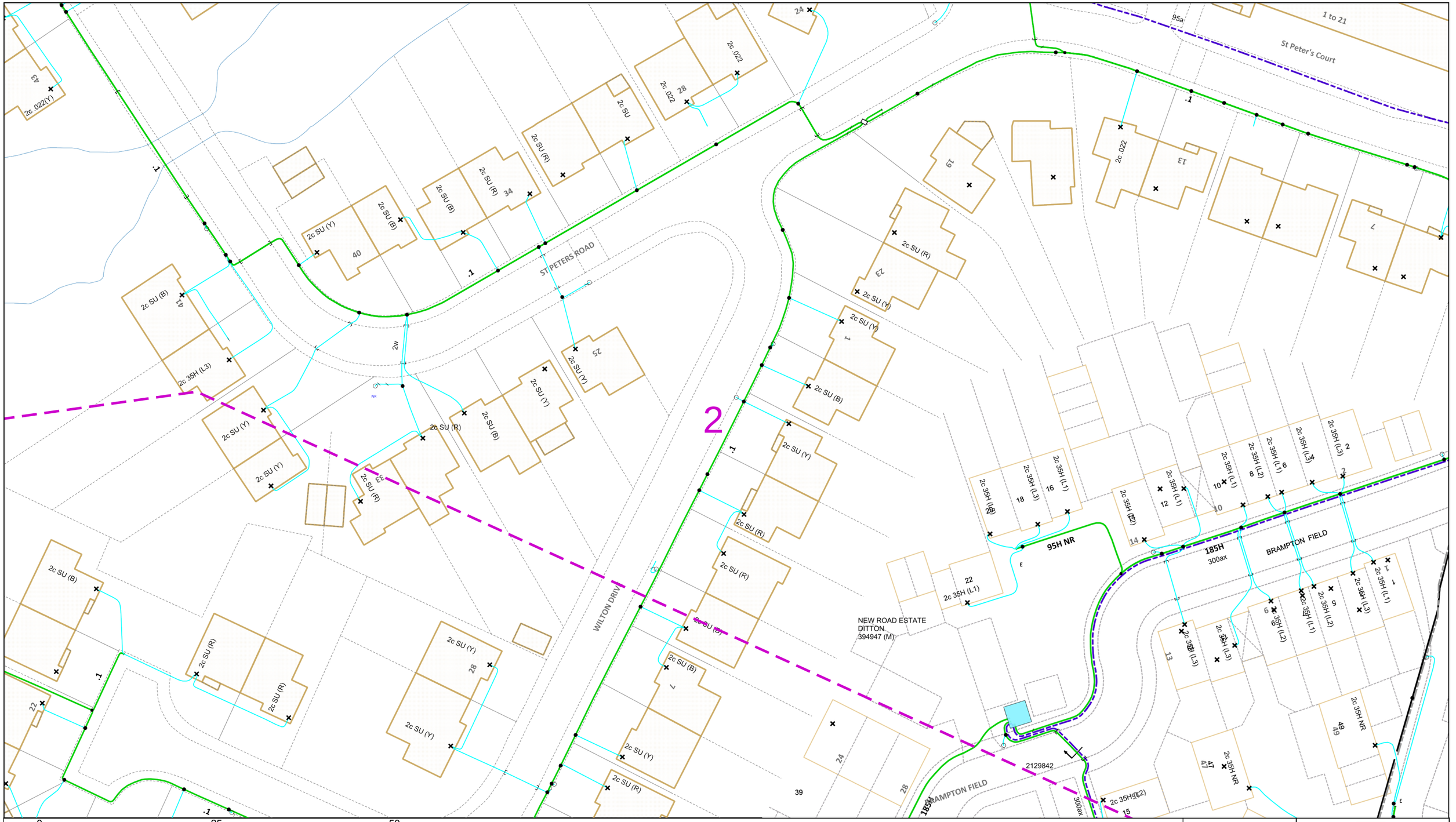

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