



LSBUD & USAG

May 2023

Safe Digging for All

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USAG

About Us

LSBUD (Linesearch BeforeUdig)

LSBUD exists to reduce the risk of deaths, injuries, damage and disruption caused by asset strikes

3.75 million enquiries in 2022



Free to use portal for multiple utility plans

Over 250,000 registered Users growing by 3000+ every month

120+ Members with 1,000,000 km of assets

LSBUD Benefits

LSBUD exists to **reduce the risk of deaths, injuries, damage and disruption** caused by asset strikes

Collaboration between asset owners = easier access to utility plans

Reduced network interruptions
=
improved customer satisfaction



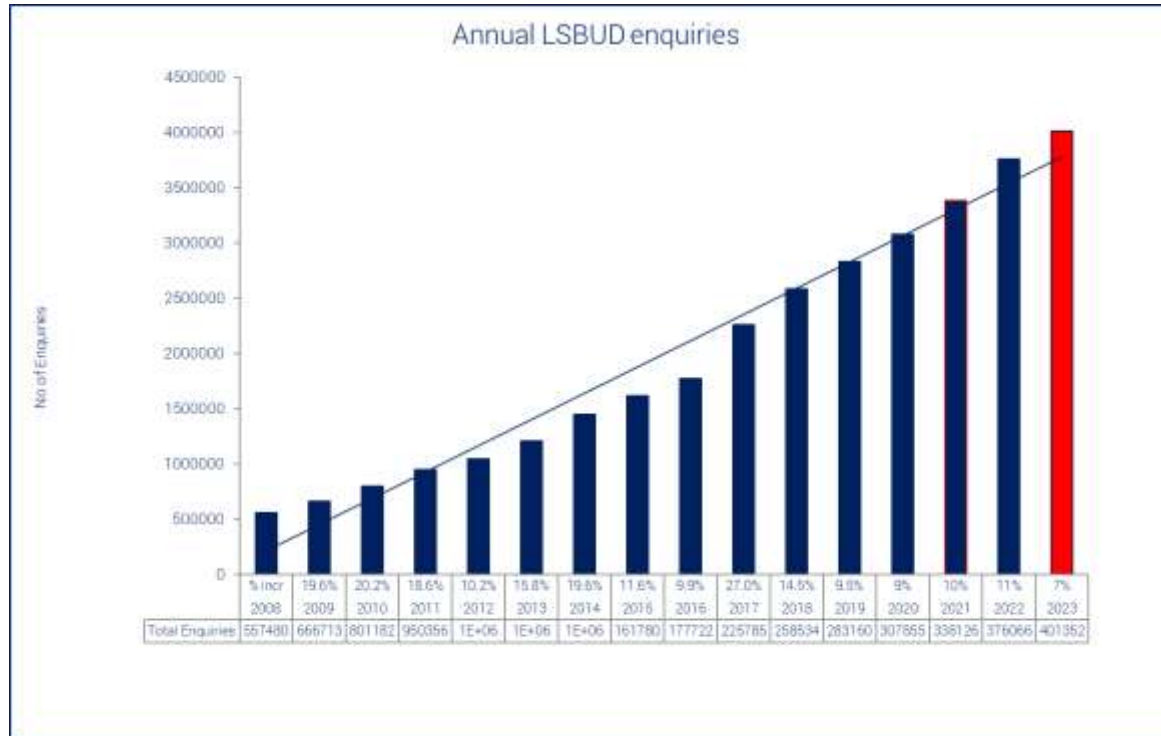
Easier access to utility plans =
more people reviewing asset locations prior to digging

Fewer third party strikes =
reduced network interruptions

More people reviewing asset locations = **fewer third party strikes**

LSBUD Introduction

- National safe digging service
- Free to use, online, instant, 24/7
- Over 1,000,000 km of assets covered



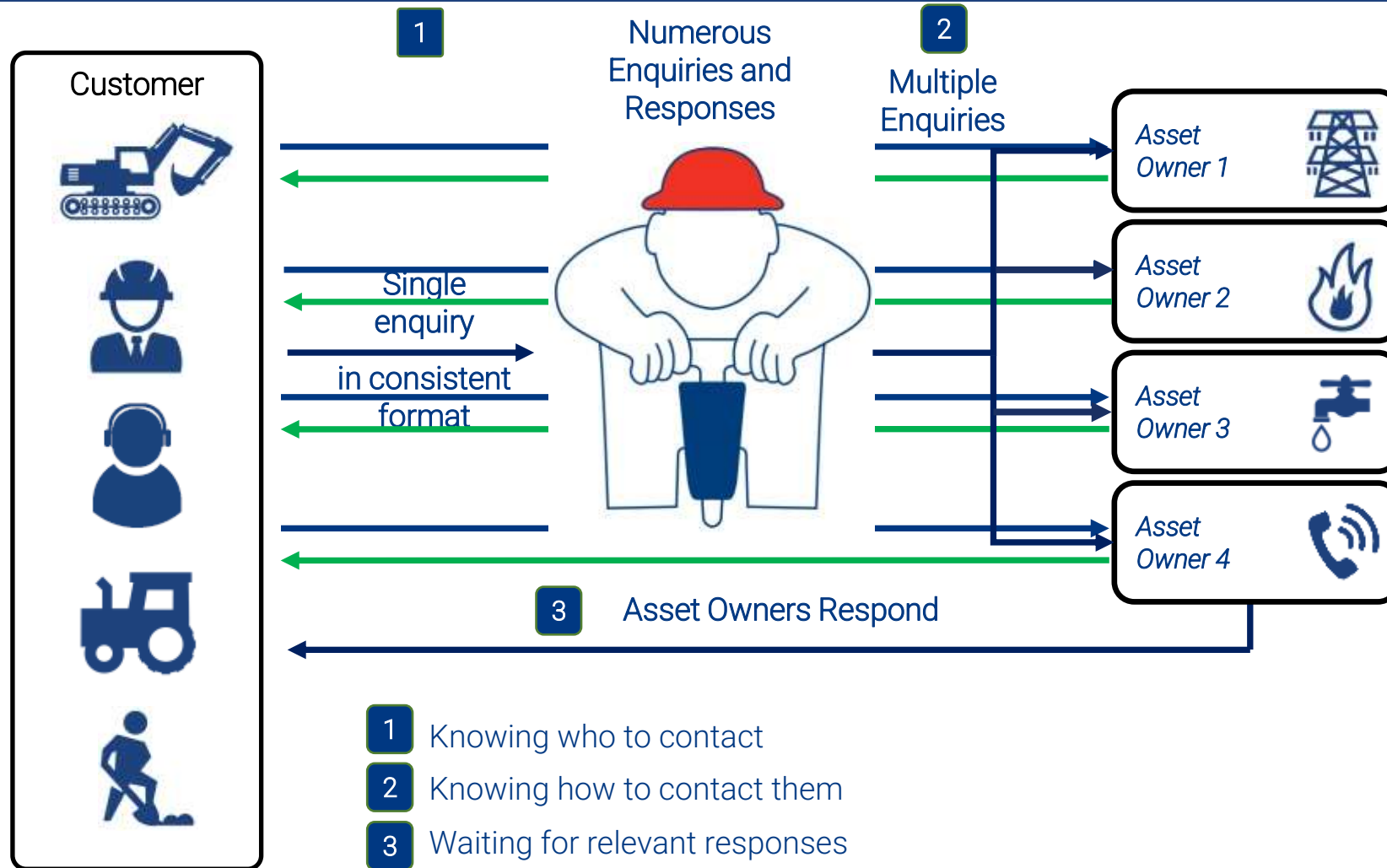
Over 250,000 Users including:



Safe Digging for All



LSBUD Collaboration



Our Members Include...

2003



2012

Our Members Include...

2012



2017



Our Members Include...

2017




















2020

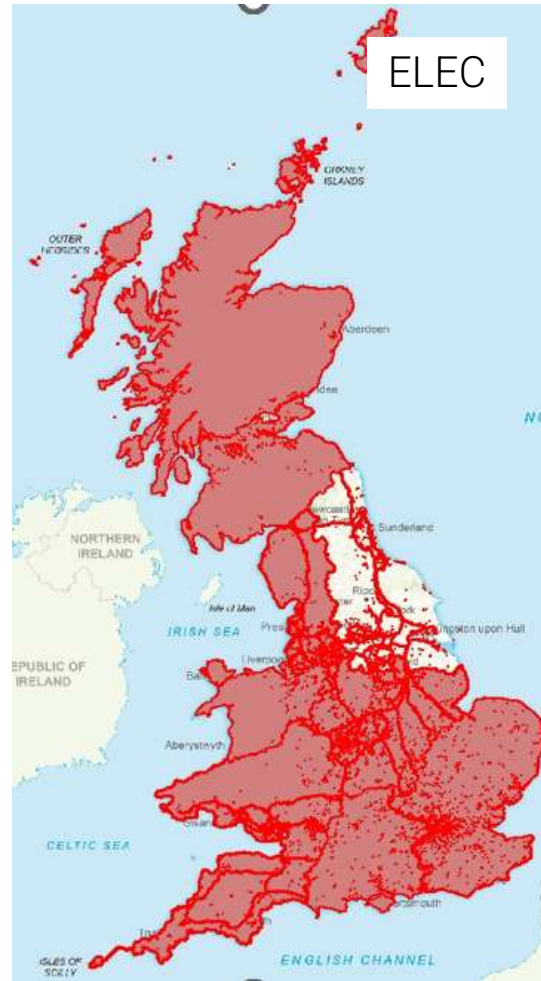
Our Members Include...

2021

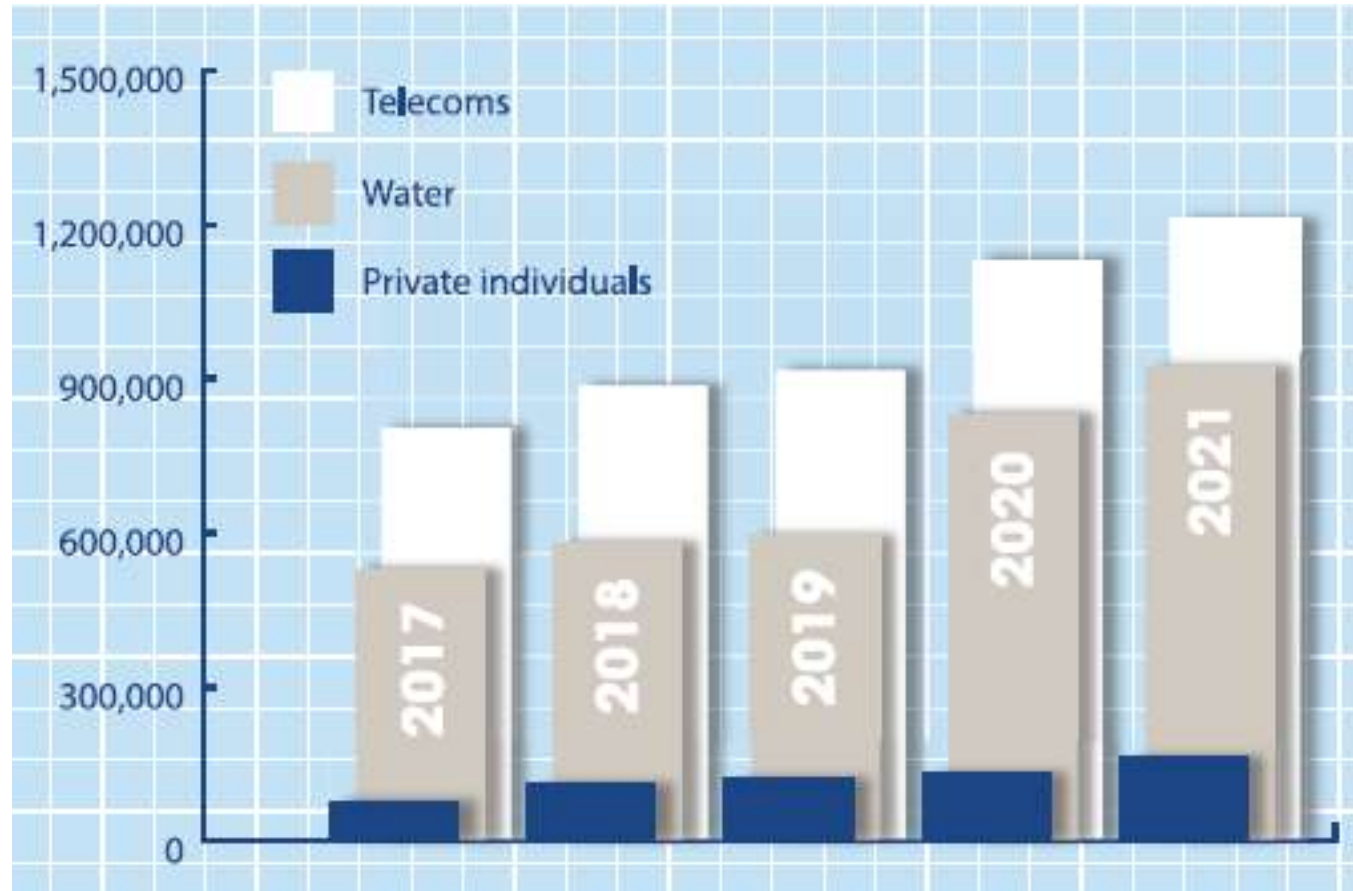


				
				
				
				
			*New Memberships Underway	

LSBUD Members by Sector



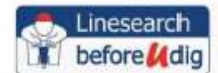
LSBUD Searches by Sector



DIGGING UP BRITAIN 2022



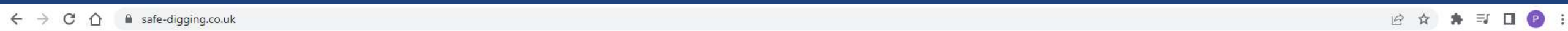
The industry's annual
review by LSBUD



Industry awareness



Free E-Learning



[ALL COURSES](#)

[SIGN IN](#)

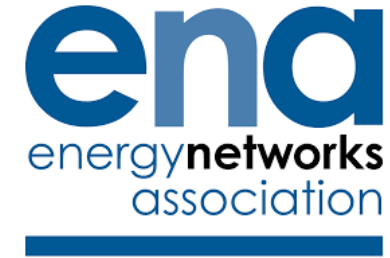
Welcome to the Safe Digging E-Learning Portal



Safe Digging for All



Industry Partnerships





How the service works

Making a Search on LSBUD – Data Collection

New enquiry

Enquiry details

Information about the work site, and the type of work involved

Enquiry type*
Information Only

Work category*
Development Projects

Work type*
Demolition (with explosives)

Start work date*
23 May 2023

End work date*
23 May 2023

Your reference*
LSBUD TEST JOB ONLY

Preferred plan reader size*
A4

Preferred plan scale*
1:250

Working on behalf of*
Other

Name of utility company
Select one

Site contact name
LSBUD TEST JOB ONLY

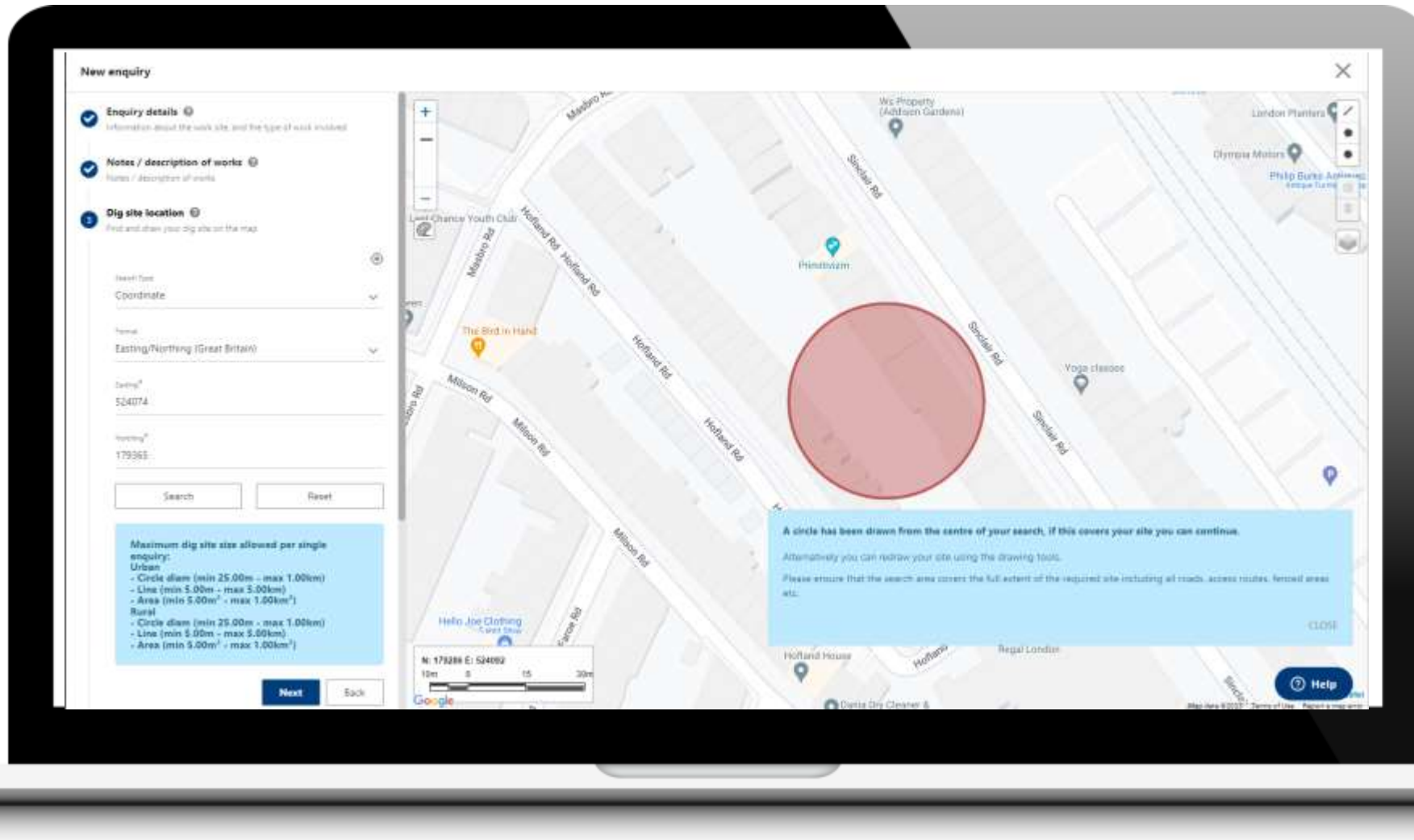
Site contact telephone (in)

Site contact email (in)

Next Back Help

Provide details about your enquiry

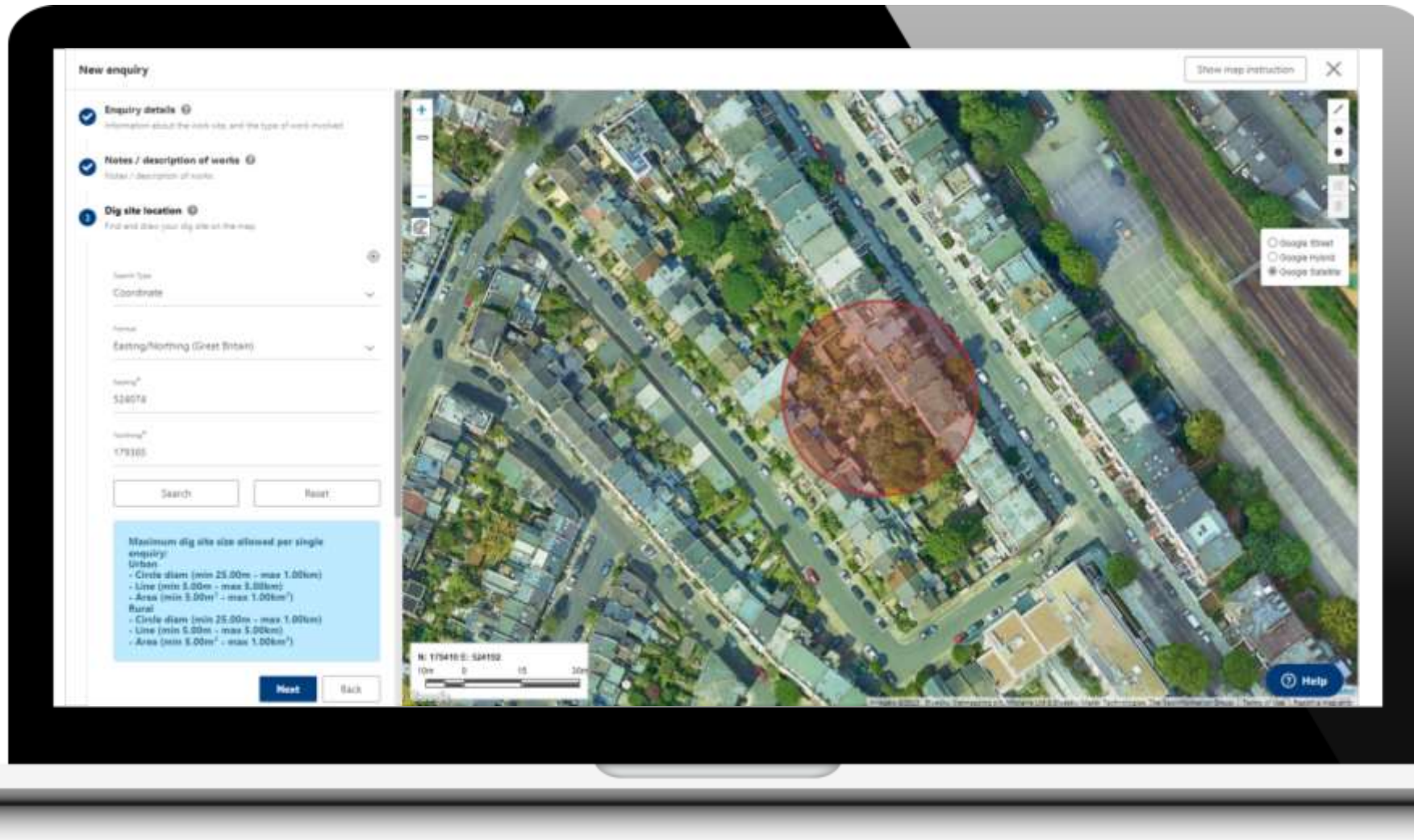
Making a Search on LSBUD – Work Site



Define your work area



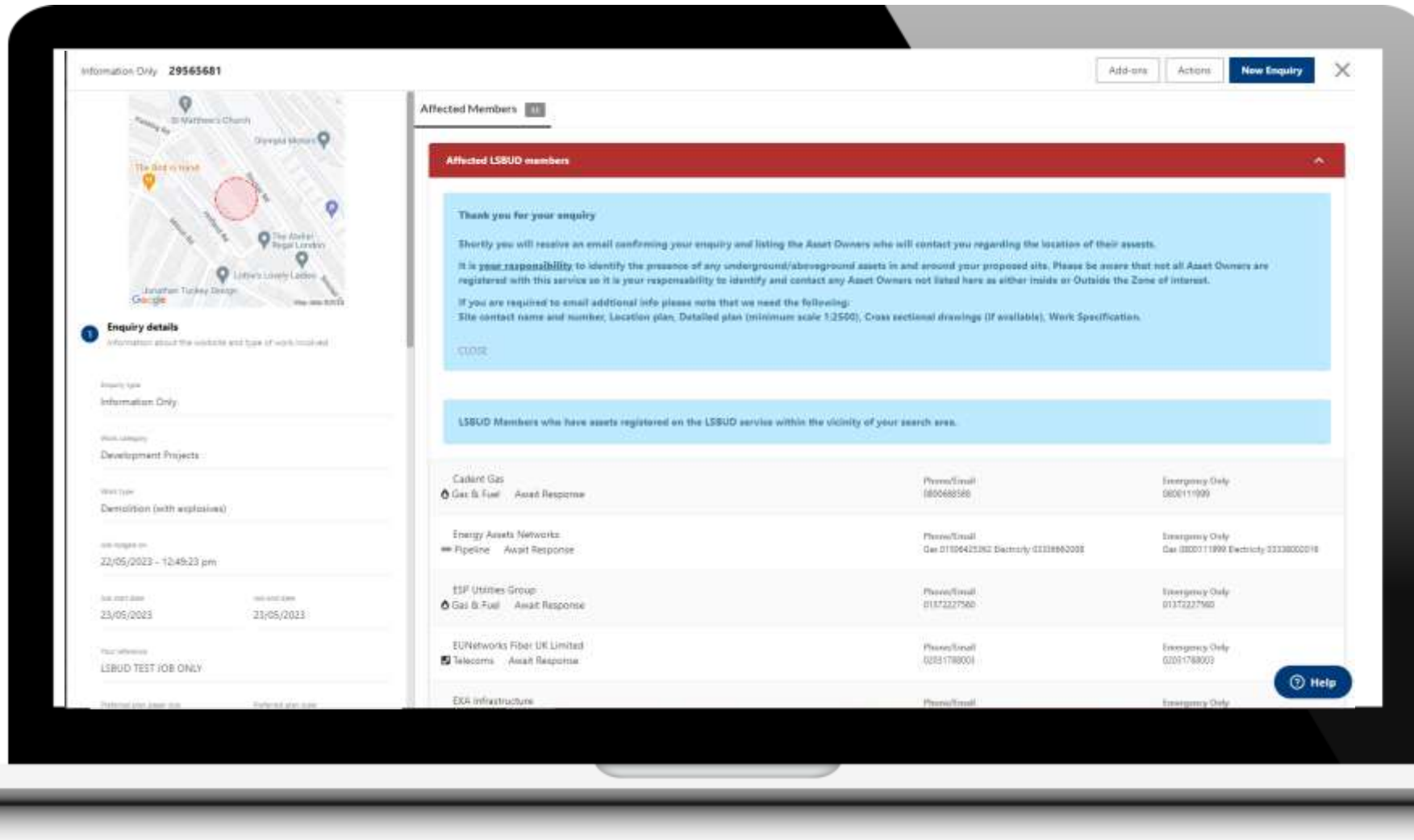
Making a Search on LSBUD – Work Site



Define your
work area



Making a Search on LSBUD – Affected / Not Affected



The screenshot displays the LSBUD website interface. On the left, a map shows a search area in London. The sidebar on the left contains the following details:

- Information Only** 29563681
- Enquiry details**
 - Enquiry type: Information Only
 - Work category: Development Projects
 - Work type: Demolition (with explosives)
 - Site register on: 22/05/2023 - 12:49:23 pm
 - Site start date: 23/05/2023
 - Site end date: 23/05/2023
 - Your reference: LSBUD TEST JOB ONLY

The main content area on the right is titled "Affected Members" and shows a list of affected LSBUD members. A red banner at the top of this section reads "Affected LSBUD members". Below this, a blue box contains a thank you message and instructions. The list of affected members is as follows:

Company	Phone/Email	Emergency Only
Cadent Gas Gas & Fuel - Await Response	Phone/Email: 0800688586	Emergency Only: 0800111999
Energy Assets Networks Pipeline - Await Response	Phone/Email: Gas 01106423382 Electricity 01118962008	Emergency Only: Gas 0800111999 Electricity 01118962008
TSF Utilities Group Gas & Fuel - Await Response	Phone/Email: 01372227560	Emergency Only: 01372227560
EON Networks Fiber UK Limited Telecoms - Await Response	Phone/Email: 02031780001	Emergency Only: 02031780001
EKA Infrastructure	Phone/Email:	Emergency Only:

Immediate results shown



Making a Search on LSBUD – Non Members

The screenshot shows the LSBUD Non-Members search interface. On the left, a map displays a search area in London, with a red circle highlighting a specific location. Below the map, the 'Enquiry details' section shows the enquiry type as 'Information Only', the status as 'Development Projects', and the location as 'Derivation (with explosives)'. The enquiry was made on 22/05/2023 at 12:49:23 pm. The enquiry details also show the enquiry date as 23/05/2023 and the enquiry status as 'LSBUD TEST JOB ONLY'.

On the right, the 'Affected Members' section displays a list of non-affected LSBUD members. The list includes the following members:

Member Name	Preferred Contact Method	Phone	Status
Arelion UK Ltd	check-network@arelion.com	0800526015	Not Notified
BT	https://www.bt.com/signals/uk/home	08000230023	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 1232	Not Notified
Coft	patrick.parks@coft.co.uk	01227796427	Not Notified
Equans	emma.ah@equans.com	0800 120 1800	Not Notified
GTC	https://pe.gtc-uk.co.uk/PartEngMembers.asp	01358340066	Not Notified
Kensington and Chelsea Royal Borough Council	charline@rbc.gov.uk	02073813001	Not Notified

A red speech bubble points to the 'Affected Members' section, containing the text 'Including non Members'. A small icon of a person wearing a red hard hat and holding a blue cup is located below the speech bubble.

Making a search on LSBUD – Confirmation Documents



Enquiry Confirmation
LSBUD Ref: 29565681

Date of enquiry: 22/05/2023
Time of enquiry: 12:49

Enquirer			
Name	Mr David Gerrard	Phone	03454377365
Company	LSBUD	Mobile	Not Supplied
Address	Eliot Park Innovation Centre, 4 Barling Way Nuneaton, Warwickshire Warwickshire CV10 7RH		
Email	david.gerrard@lsbud.co.uk		

Enquiry Details		Site Map
Enquiry type	Initial Enquiry	
Work category	Development Projects	
Work type	Demolition (with explosives)	
Work type buffer*	750 metres	
Start date	23/05/2023	
End date	23/05/2023	
Scheme/Reference	LSBUD TEST JOB ONLY	
Search location	XY= 524074, 179365	
Confirmed location	524074 179365	
Site size	50 metres diameter	
Site Contact Name	LSBUD TEST JOB ONLY	
Site Phone No.	Not Supplied	
Description of Works		

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

Affected LSBUD members (LSBUD Members who have assets registered on LSBUD within the vicinity of your search area.)			
Asset Owner	Phone/Email	Emergency Only	Status
Cardent Gas	0800688588	0800111999	Await response
Energy Assets Networks	Gas 01506425362 Electricity 03336662008	Gas 0800111999 Electricity 03338002016	Await response
ESP Utilities Group	01372227560	01372227560	Await response
EUNetworks Fiber UK Limited	02031788003	02031788003	Await response
EXA Infrastructure	07970775310	02070259650	Await response
Fulcrum Pipelines Limited	03330146455	0800111999	Await response
National Grid Electricity Transmission	08000014282	0800404090	Await response
Neos Networks	03453053337	03453053337	Await response
SSE Utility Solutions Limited	03450707386	Gas 0800111999 Enterprise Water and Electric 0345 078 3268	Await response
UK Power Networks	08000565866	08000565866	Await response
Zayo Group UK Ltd c/o JSM Group Ltd	01992 655 919	0800 169 1648	Await response

Status explanation



Enquiry Confirmation
LSBUD Ref: 29565681

Date of enquiry: 22/05/2023
Time of enquiry: 12:49

Await Response means that the asset owner will contact you. This is typically by sending the plan response but they may ask for further information before being able to do so, particularly if any payments or authorisations are required.

Email Additional Info means that the asset owner needs further information about your works to assess your enquiry before providing a response. Please provide any details you have available including plans, method statements etc. if available.

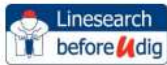
Confirmation advice
arrives in minutes



Safe Digging for All



Making a Search on LSBUD – Confirmation Documents



Enquiry Confirmation LSBUD Ref: 29565681

Date of enquiry: 22/05/2023
Time of enquiry: 12:49

Important notices

It is very important that you correctly understand what the service does and the procedures in order for you to work safely. Please refer to the LSBUD Support Page (www.lsbud.co.uk/lineasearchbeforeudig-support) for further guidance. This information includes how to provide additional information to the LSBUD Members who request it to provide a response to your enquiry.

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date and time of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig (LSBUD) accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lsbud.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

List of not affected LSBUD members

(LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area.)

Angus Energy	AIWE Pipeline	B & D Energy Limited
Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)	Box Broadband
BP Exploration Operating Company Limited	BPA	Cambridgeshire County Council Climate Change and Energy Services
Carrington Gas Pipeline	CATS Pipeline c/o Wood Group PSN	Cemex
Cemfrica Storage Ltd	CNG Services Ltd	Concept Solutions People Ltd
ConocoPhillips (UK) Teesside Operator Ltd	D.S. Smith	Diamond Transmission Corporation
DIO (MOD Abandoned Pipelines)	DIO (MOD Live Pipelines)	E.ON UK CHP Limited
EDF Energy Renewables Ltd	EirGrid	Electrik Limited
Electricity North West Limited	ENI & Himor c/o Penspen Ltd	EnQuest NNS Limited
EP Langage Limited	ESSAR	Eso Petroleum Company Limited
Exolum Pipeline System	Fulcrum Electricity Assets Limited	Gamma
Gas Networks Ireland (UK)	Galeshead Energy Company	Gigaclear Ltd
Harbour Energy	Heathrow Airport LTD	Humbly Grove Energy
IGas Energy	INEOS FPS Pipelines	INEOS Manufacturing (Scotland and TSEP)
INOVM ChlorVinyls Limited	INOVM Enterprises Limited	Interger (Corydon Energy or Spalding Energy)
Jurassic Fibre Ltd	Last Mile	Mainline Pipelines Limited
Manchester Jetline Limited	Manx Cable Company	Marchwood Power Ltd (Gas Pipeline)
Merbourn Solar Limited	Moray East Offshore Windfarm	MUA Group Limited
National Gas Transmission	National Grid Electricity Distribution	Northern Gas Networks Limited
Northumbrian Water Group	NPower CHP Pipelines	NTT Global Data Centers EMEA UK Ltd
NYnet Ltd	Ogi	Oikos Storage Limited
Orsted	Palm Paper Ltd	Perenco UK Limited (Purbeck Southampton Pipeline)
Petroliners	Phillips 66	Portsmouth Water
Premier Transmission Ltd (SNIP)	Redundant Pipelines - LPDA	RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)
RWEEnpower (Little Barford and South Haven)	SABIC UK Petrochemicals	SAS Utility Services Ltd
Scottish and Southern Electricity Networks	Scottish Power Generation	Seabank Power Ltd
SES Water	SGN	Shell
Shell NOP	SP Energy Networks	Squire Energy Networks
SSE Generation Ltd	SSE Transmission	Storergy
Tata Communications (c/o JSM Construction Ltd)	Total Colnbrook Pipelines	Total Finaline Pipelines
Transmission Capital	Uniper UK Ltd	University of Cambridge Grants Backbone Network



Enquiry Confirmation LSBUD Ref: 29565681

Date of enquiry: 22/05/2023
Time of enquiry: 12:49

Vattenfall	Veolia ES SELCHP Limited	Veolia ES Sheffield Ltd
Voneus Limited	VPI Power Limited	Wales and West Utilities
West of Duddon Sands Transmission Ltd	Westminster City Council	

Non-LSBUD members (Asset owners not registered on LSBUD)

(The following Non-LSBUD Members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding.)

Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.)

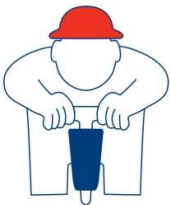
Asset Owner	Preferred contact method	Phone	Status
Arelion UK Ltd	check-network@arelion.com	0800526015	Not Notified
BT	https://www.swins.bt.com/pls/mbe/welcome.home	08000232023	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Coit	plantenquiries@catelecomuk.com	01227768427	Not Notified
Equans	nswa.uk@equans.com	0800 130 3600	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEngMembership	01359240363	Not Notified
Kensington and Chelsea Royal Borough Council	streetline@rbkc.gov.uk	02073613001	Not Notified
London Underground	lulcedip@tube.lf.gov.uk	02071261542	Not Notified
Lumen Technologies	plantenquiries@instalcom.co.uk	02067314613	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
Network Rail	OPBuriedServicesEnquiries@networkrail.co.uk	01904523401	Not Notified
Sky UK Limited	nswa@sky.uk	02070323234	Not Notified
Sota	SOTA.plantenquiries@instalcom.co.uk		Not Notified
Thames Water	http://www.digdat.co.uk	08450709145	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	esp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified

Disclaimer

Please refer to LSBUD's Terms of Use for full terms of use available at www.lsbud.co.uk

The results of this Enquiry are personal to the Enquirer and shall not be shared with or relied upon by any other party. The asset information on which the Enquiry results are based has been provided by LSBUD Members, therefore LSBUD will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There may also be asset owners which do not participate in the enquiry service operated by LSBUD, including but not exclusively those set out above. Therefore, LSBUD cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results or accept any responsibility for the accuracy of the mapping images used. LSBUD and its employees, agents and consultants accept no liability (save that nothing in this Enquiry Confirmation excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by English law) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.

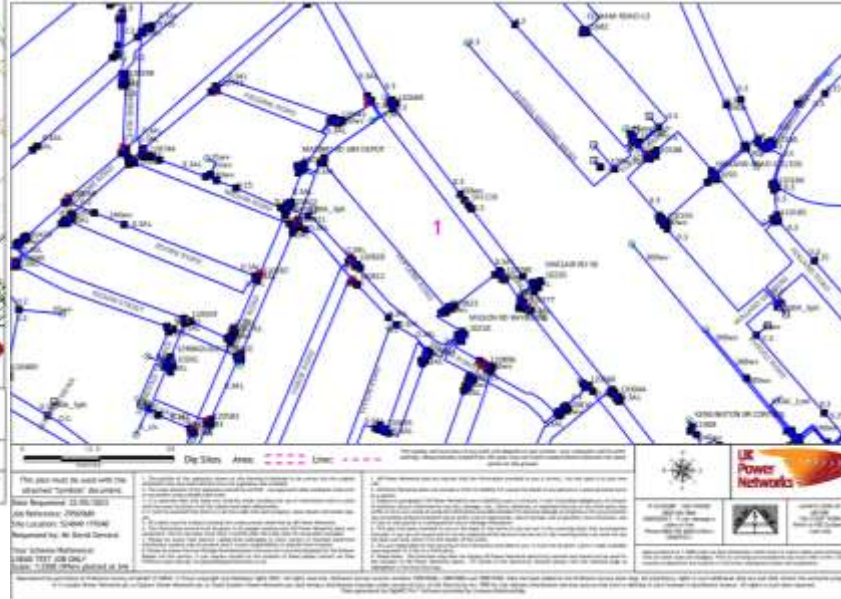
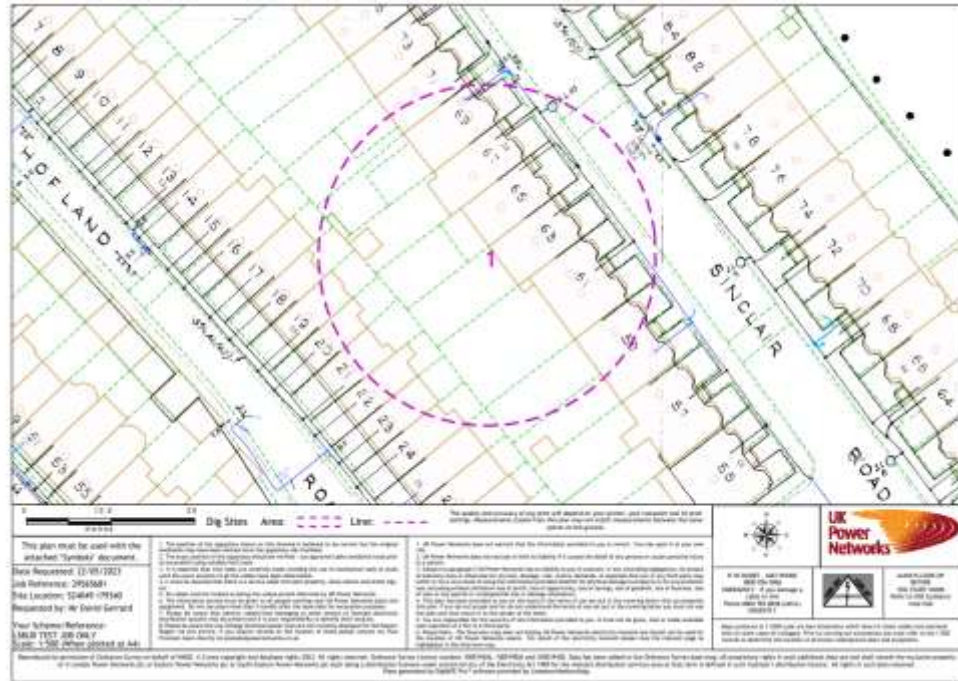
Clear results showing which assets are and aren't covered by the service



Safe Digging for All



Making a Search on LSBUD – Plan Responses



UK Power Networks
Delivering your electricity

Registered Office:
Warwickshire House
137 Leamington Road
Leamington Spa
CV32 5PP
Registered in England and Wales No: 1017120

Company:
UK Power Networks (Operations) Limited

Our Ref: 29505883 Your Ref: LSBUD TEST JOB ONLY

Monday, 22 May 2023

David Gerrard
East Park Innovation Centre, 4 Baring Way East Park Innovation Centre, 4 Baring Way
Nuneaton, Warwickshire
CV18 1TH

Dear David Gerrard

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 (33 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 256 5886

Full plan response within minutes containing maps, safe digging advice, information and contacts

Safe Digging for All



WINNER
2022

INVESTORS
IN PEOPLE
Gold



Benefits

Global Best Practice for Damage Prevention

Canada

Canadian CGA-
80% of strikes could be
avoided by using a
OneCall system

UK

SGN instantly reduces risk
of damages to its network
with a 1600% increase in
responses

USA

No.1 recommendation for
reducing asset strike risk
(US DIRT Report (>250,000
stikes)).

OneCall asset owners
reduced risk of strikes to
<0.16%

New Zealand

Chorus Telecoms
reduces \$1.6m of
damages by 30%
within a year



Understanding Risk Around the Networks

Mitigate the risk of third party works and intercept damage events before they happen:

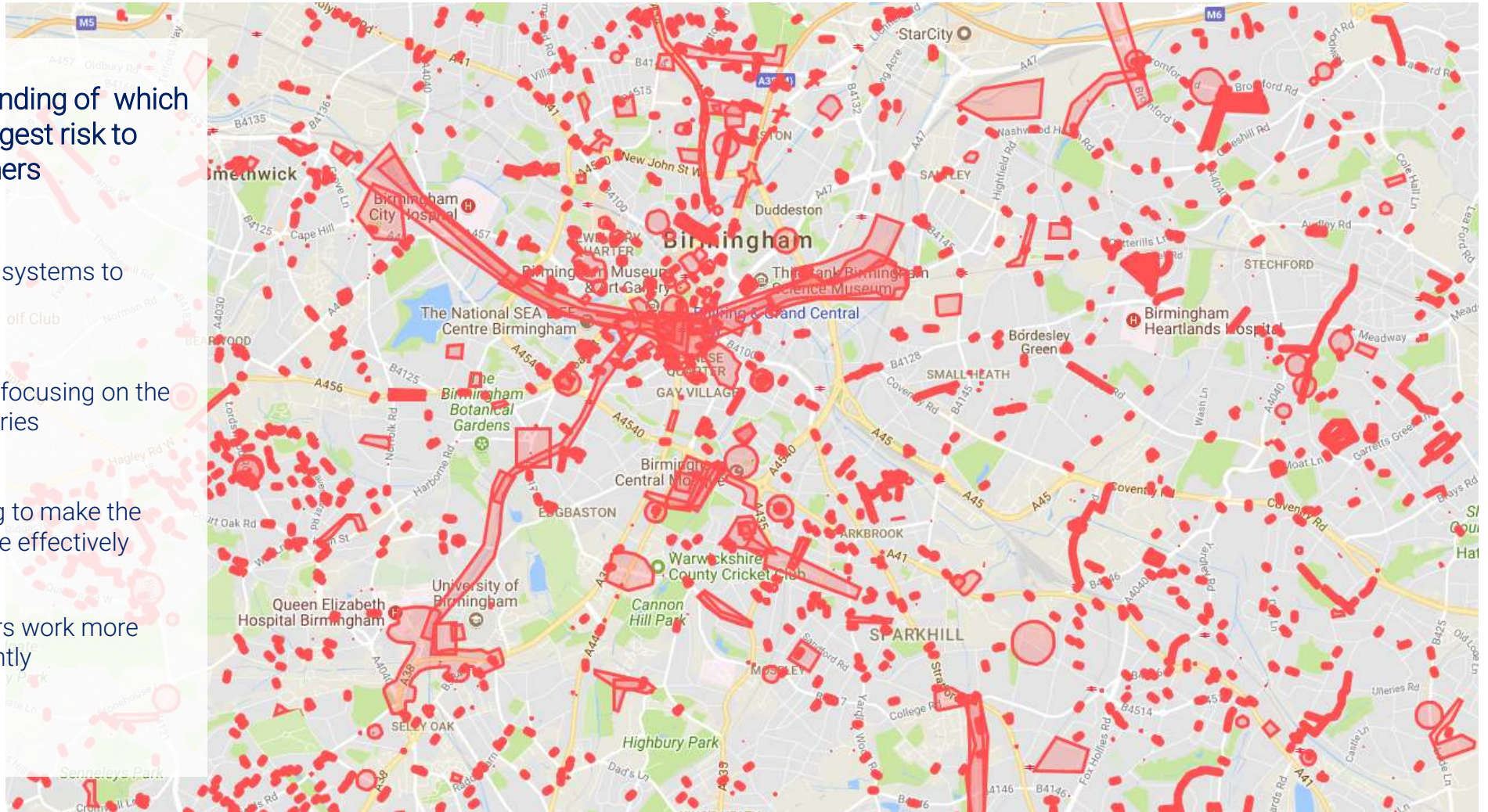
- Use LSBUD data to:
 - Understand **work near your network**
 - **Who** is planning work?
 - **What** are they planning to do?
 - **Where** are they planning to dig?
 - **When** are they planning to do it?
 - Apply **escalation** procedures and **alerts** triggered by:
 - Asset type
 - Nature of work
 - Location of work
 - **Respond automatically** with appropriate plans and guidance
 - **Intervene** when high risk activities are planned
 - **Protect the highest risk assets**, such as trunk mains



Understanding Risk Around the Networks

Providing understanding of which works pose the biggest risk to assets and customers

- Using automated systems to understand risk
- Mitigating risk by focusing on the highest risk enquiries
- Continual learning to make the system work more effectively
- Helping customers work more safely and efficiently



Supporting info

LSBUD Members – Before and After Joining

Company	Search numbers before joining LSBUD	Search numbers after joining LSBUD	Time taken to provide asset plans before joining LSBUD	Time taken to provide asset plans after joining LSBUD
	2,500 p/month	60,000+ p/month	15 days	5 minutes
	1,900 p/month	50,000+ p/month	5 days	2 minutes
	210 p/month	2,000 p/month	10 days	5 minutes

Case Study – Portsmouth Water

Highlights:

- 10 X more searches since joining LSBUD in April 2020
- Response time has fallen from several days to a few minutes
- **Third party damages reduced by 26% after 1st year of LSBUD Membership**
- Helping Portsmouth Water to meet the challenges of PR19:
 - *Reduced third party damage*
 - *Reduced leakage*
 - *Reduced customer lost minutes*



"We're delighted with the way that LSBUD has transformed our whole process of managing asset data requests. We now have a faster and more reactive solution that gives utilities, developers and local authorities unrivalled access to our asset data online, whilst at the same time, protecting our intellectual property rights. Most importantly, in making our data more widely available, we are dramatically reducing the likelihood of asset strikes helping everyone to work more safely and efficiently, leaving us more time to do what we do best – managing our network on behalf of our customers."

Mary Horsted, Network Planning & Administration Supervisor, Portsmouth Water

Enhancing Workflow Connectivity through an API



The benefits of an API



Workflow optimisation

Trigger LSBUD enquiry submissions at pre-defined points in existing workflows based upon your business rules.



Automation

Remove manual data entry through full automation of the process.



Cost reduction

Eliminate the effort required for submitting enquiries, resulting in significant cost reduction.



Integration

Seamlessly integrate the source of your digging/planning enquiries directly with LSBUD.



Security

API utilizes per-user enquiry based authentication via an encrypted channel.



Data Integrity

Maintain data integrity by capturing data once to remove manual re-keying.

USAG

Who

- Collaborative cross industry group of more than 600 stakeholders:
 - Utilities
 - Industry groups
 - Contractors
 - Service Providers
 - Regulators



Why



To

- Improve safety standards
- Reduce harm
- Reduce volume and severity of strikes

Through

- Industry collaboration
- Sharing of best practice guides
- Data Reporting



What



We, as signatories to the USAG Charter, will endeavour to:

1. **Properly plan all work** carried out by us or on our behalf. Those carrying out the work to be aware of their responsibilities.
2. **Assess all people working on our behalf**, to ensure they are competent and capable of carrying out the task given to them and that at least one person in each work team is competent in the use of cable detection equipment to its full potential.
3. **Carry out excavations**, including those undertaken by anyone excavating on our behalf, **in accordance with safe systems of work**, company or USAG guidance.
4. **Provide equipment** for the detection and avoidance of services that is **inspected, calibrated and tested** in accordance with the manufacturer's requirements and that records are kept, including a daily check that the equipment continues to operate as expected.
5. Provide suitable and sufficient **personal protective equipment** to all those working, including those working on our behalf, and have systems in place to monitor its correct provision, use and maintenance.
6. Provide relevant, **up to date utility asset drawings** to people excavating, carry out assurance checks, such as inspections and audits and keep records of those activities, including action taken.
7. Conduct a suitable and sufficient **investigation where damage** to an asset occurs in order to identify the cause and corrective actions and share the significant findings with USAG.
8. **Provide utility strike information** in the format requested by USAG as part of the annual report into utility damage.
9. Provide the best advice to our clients regarding **utility asset identification**, including the appropriate type of asset investigation for their needs, promoting the process identified in PAS 128 - Specification for underground utility detection, verification and location.

Balfour Beatty

MORRISON
Water Services
A part of MWH Services

amey

SKANSKA

clancydocwra

BTU

RL FREEMANTLE ELECTRICAL LTD

MURPHY

DYER & BUTLER
A part of MWH Services

GPL
CIVIL ENGINEERING LTD.

Schneider
Electric

MOUNTSTONE
GROUP

carillion
telent

Barhale

Kelly Group

bam
nuttall

ferrovial
agroman

cpccivils
Civil Engineering Contractors

John Henry
Group

triiio
Strategic Partnership

optimise

Lagan
CONSTRUCTION GROUP

Toureen Group
Solving complex challenges since 2003

DURKIN
and Sons Limited

Transform
Infrastructure Services

forefront Utilities
Infrastructure Group, 200 Progress Road, Loughborough, Leics, LE11 3QJ
Tel: 01509 244444 Fax: 01509 244444

Lanes
Group Plc

CIVIL ENGINEERING LIMITED
PMK

SCD

How

- Cross industry participants
- An agreed, consistent format
- Ability to benchmark & measure performance
- Provides direction on where to focus efforts

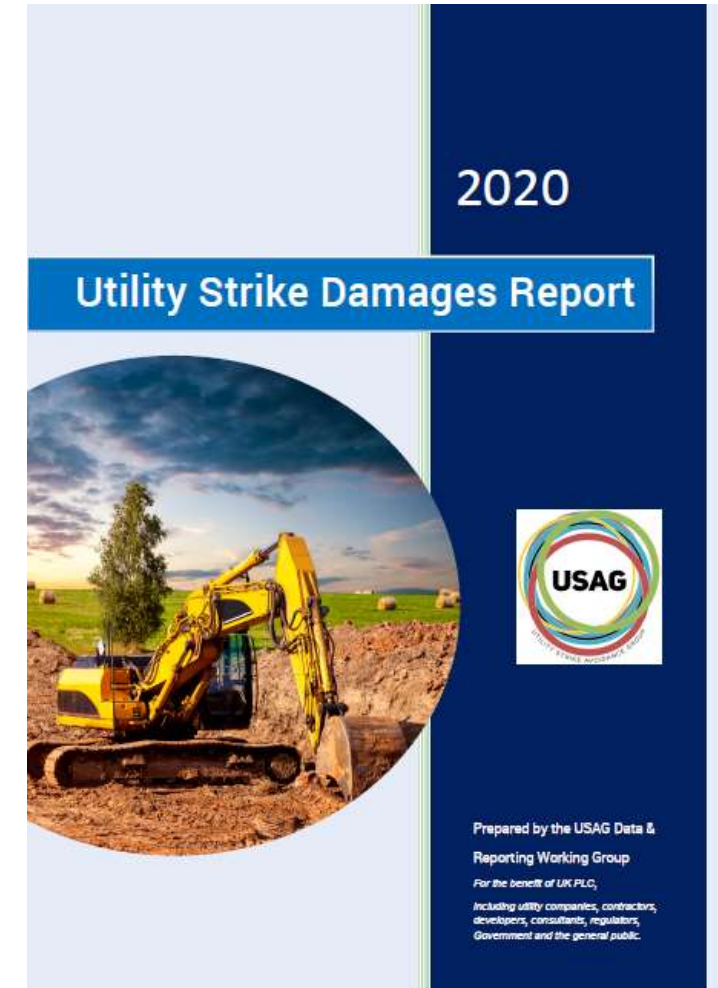
When?

Where?

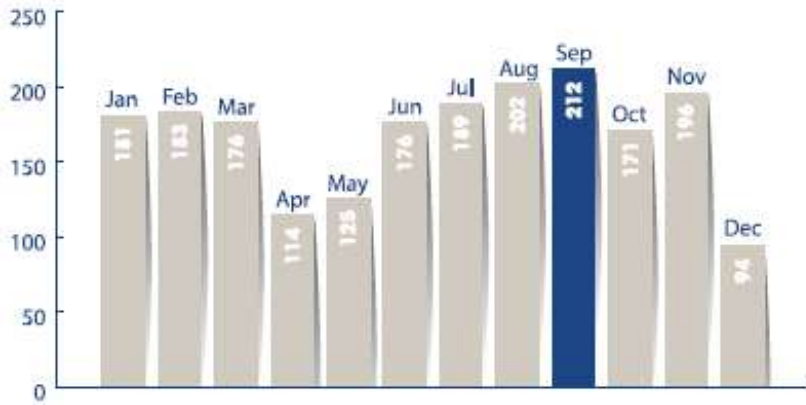
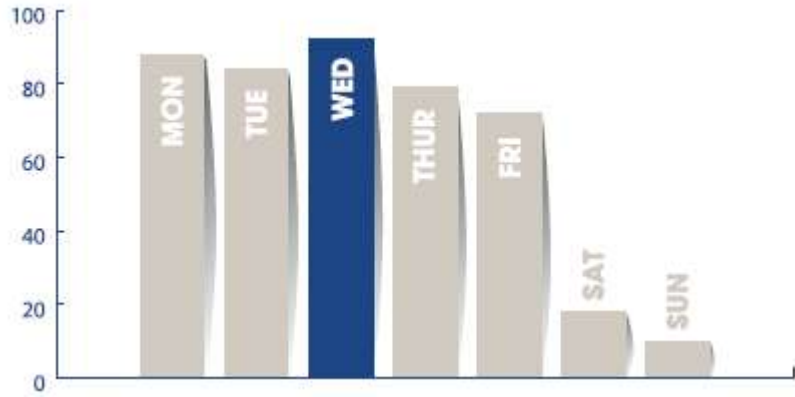
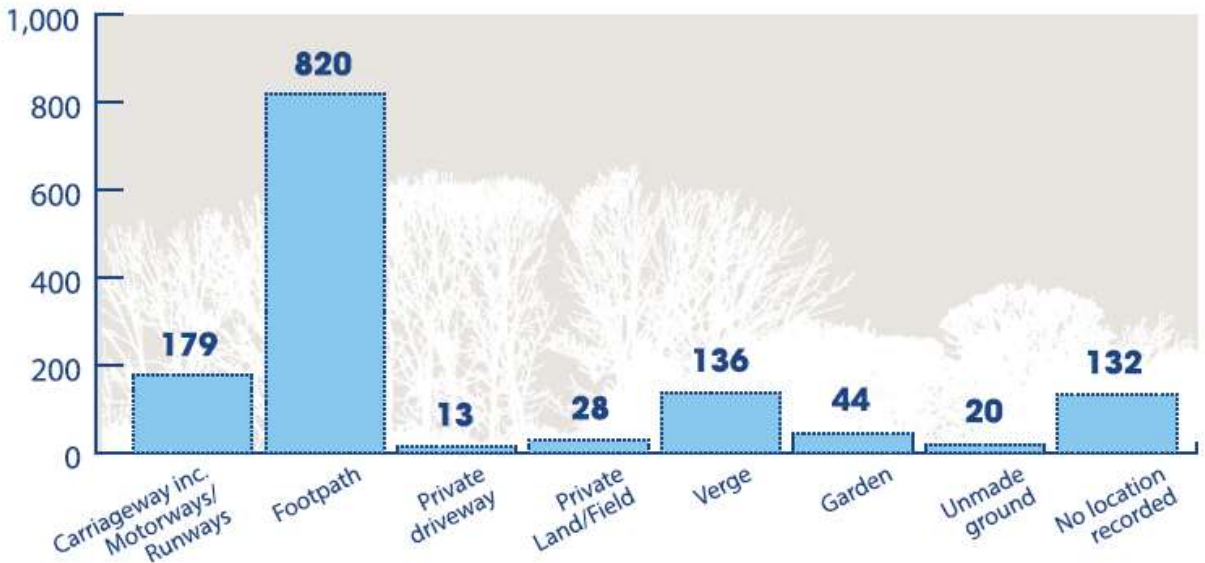
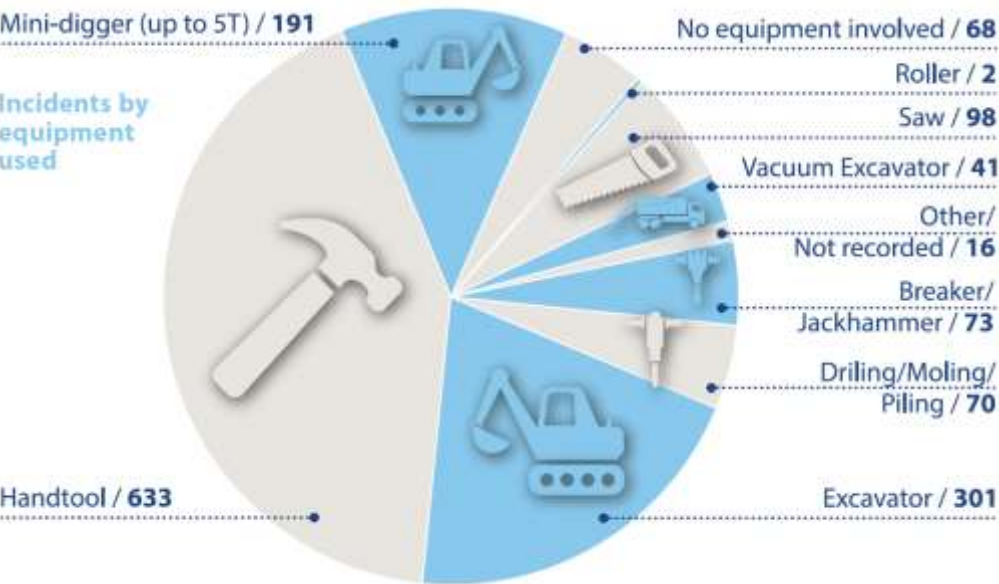
What?

How?

Why?



Third Party Damage – Reported Statistics and Causes



How



What if you could identify the 10% that led to 50% of damages?

Need to consider that requesting safe digging information is not a one-way process.

3 dependencies

- Getting data from the user
- Understanding damages
- Putting rules in place



How



Some progressive asset owners currently take into account the following:

- Type of asset (e.g. Low – Extra High Voltage)
- Type of works (e.g. Minor works – Mining works)
- Works promoter (history)

Which can affect

- Safety information & guidance provided
- Interaction with plant protection personnel
- Supervision on site.

But there is much more we can do.

INFORMATION



How



We need the damages data and industry buy-in to understand, using machine learning and AI:

- What caused the strike
- What the user did before searching
- What they are likely to do next time.



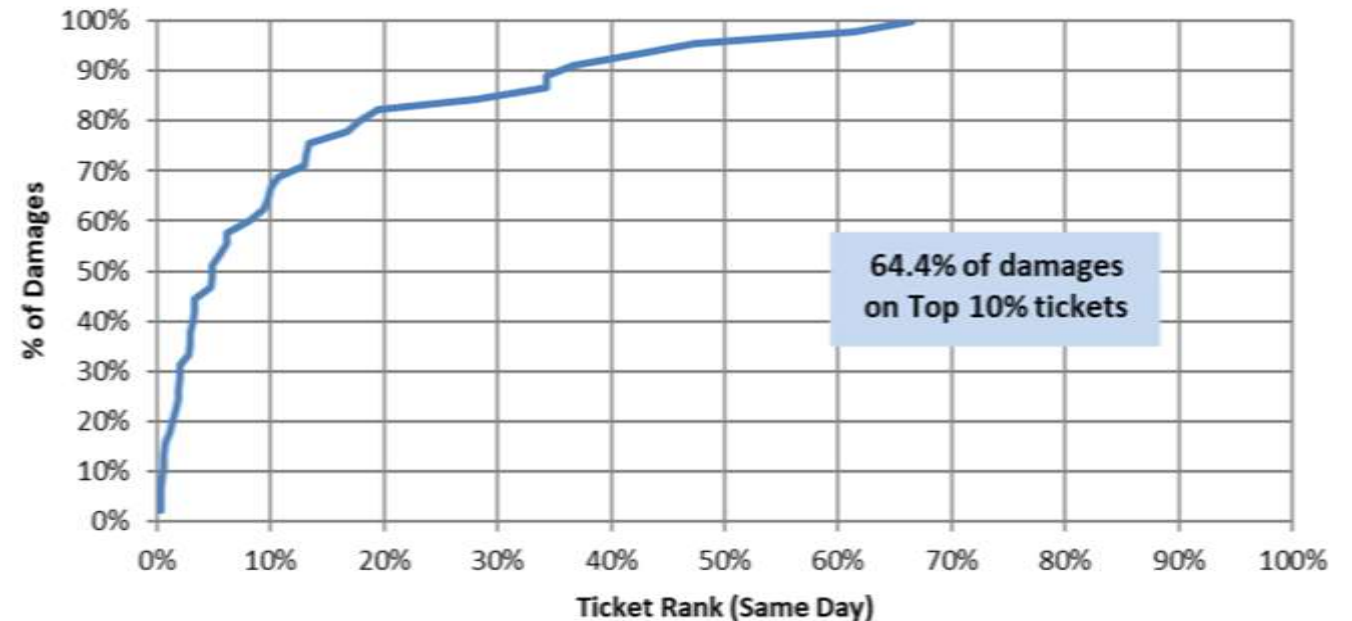
How



The US is leading with this technology; screenshots from a leading US software provider showing the following:

- **12.8 damages per 1000** 'enquiries' for the top 10%
- **1.6 damages per 1000** 'enquiries' for the remaining 90%

The Canadians are benefitting too; 44% damages from the top 1% for a major utility.



Conclusions



- As many data sources as possible must be used to reduce the risk
- The provision of safe digging plans is not a one-way mechanism; it is a two way data exchange
- Utility strike data needs:
 - Improvement across the industry
 - More consistency
 - More appreciation of the value that the data can provide.
- We can learn from international colleagues
- This would reduce how many people get seriously injured.



Questions

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