

Meeting Record

Date	29 th June 2020 (Mon), 16:30-18:00
Venue	Video conference using Microsoft Teams
Chair	Paul Bussey
Author	-

Attendees	Name	Initial	Organisation
1	Paul Bussey (chair)	PB	AHMM
2	Phil Cornforth (speaker 1)	PC	USAG
3	Richard Broome (speaker 2)	RB	USAG
4	Aamir Shahzad	AS	Currie Brown
5	David Mulligan	DM	Network
6	Gary Burden	GB	PRP Architects
7	Jeffrey Tribich	JT	Tribich Consultancy
8	Roland Reinardy	RR	Hawkins Brown
9	Graham Boyce	BG	Barton Willmore
10	Peter Hegarty	PH	Hawkins Brown
11	Mark Skinner	MS	Hawkins Brown
12	Michael Stowell	MS	SDM Services
13	Steve Copping	SC	Arcadis
14	Joshua Ovenden	JO	AHMM
15	Erica Chan	EC	AHMM
16	Goh Ong	GO	AHMM

NOTE ON COVID-19: Since the UK government impose nationwide lockdown on 23rd March 2020, all meetings will take place over video conference.

Speaker Richard Broome and Phil Cornforth

Details Our guest speakers are Richard Broome and Phil Cornforth from the [Utility Strike Avoidance Group](#) (USAG). They will be discussion utility identification and avoidance strategy. More details below:

Richard Broome is the Managing Director of the LSBUD (Linesearch BeforeUdig) service in Great Britain helping protect over 90 asset owners' networks by managing over 2.8 million third party enquiries per annum.

His role includes consultation and networking with a wide variety of utility asset owners as well as all types of third parties from Statutory Undertakers to private individuals and Government organisations.

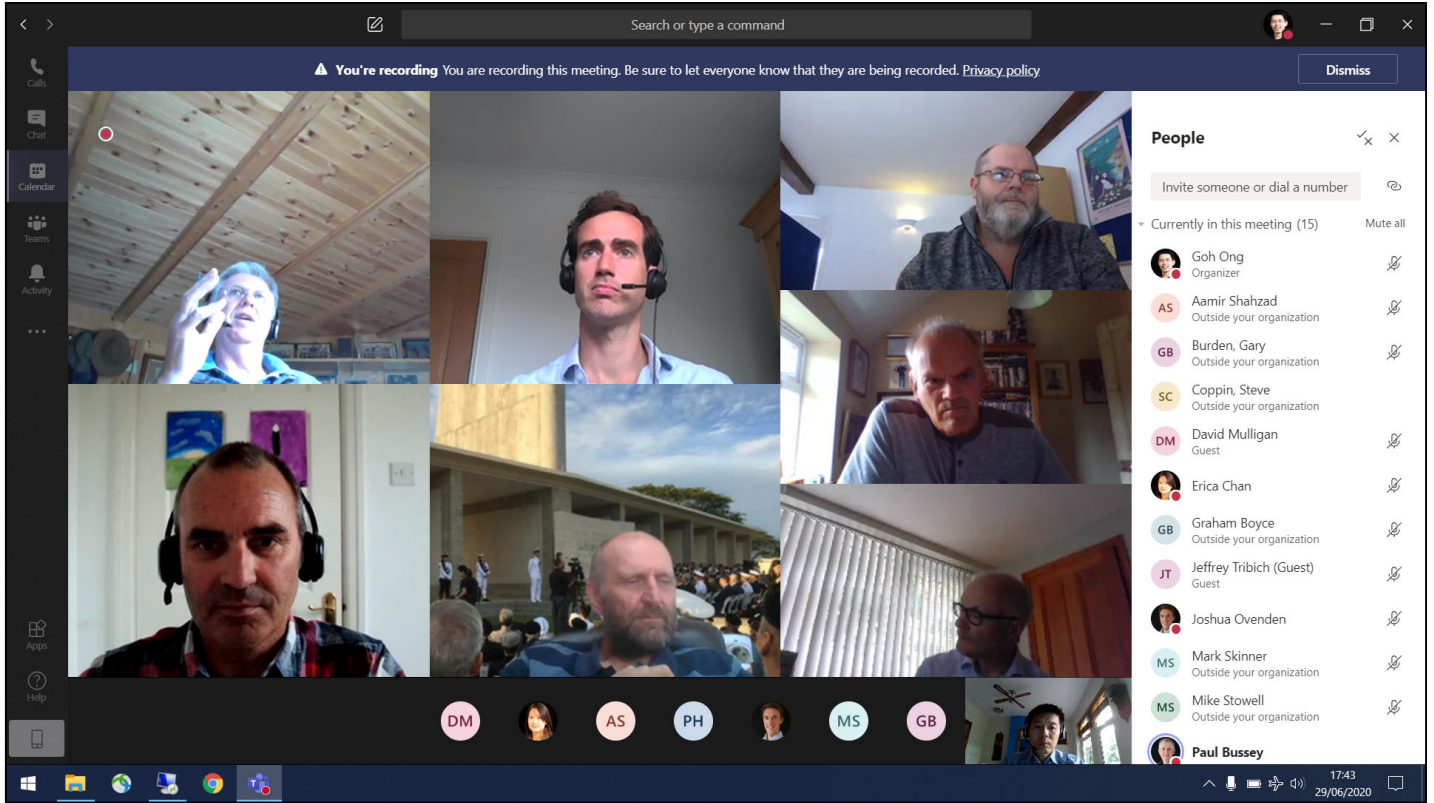
Richard is a qualified Chartered Surveyor, with experience across a variety of utility and property projects. He leads the Data & Reporting Group of the Utility Strike Avoidance Group, producing the annual Utility Strike Report and increasing awareness of utility strikes across the UK.

Phil Cornforth is a damage prevention specialist who has worked in the utility sector in the UK, Ireland, Australia, and New Zealand for more than 25 years. Phil has extensive experience with the physical implications of unwanted third-party damage to cables and pipes by excavation which can cause serious disruption and loss to the utility owner, customers and also serious harm to persons who cause damage. Phil has been with PelicanCorp for five years ensuring that users and utility members of their global 'dial before you dig' services are well aware of the health, safety and asset protection benefits of the service.

Phil sits on the USAG steering committee and is responsible for public relations to raise awareness of the group and website. This is a highly helpful free resource which includes industry best practices and procedures for safety in design and excavation to those planning and working near utility cables and pipes.

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Links to the recording of the meeting: <https://web.microsoftstream.com/video/8d9cf785-9646-4619-80f8-1357ce7aad0b>

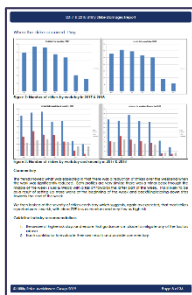
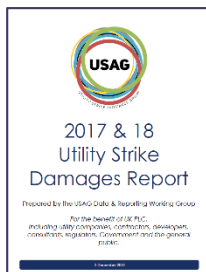
The Utility Strike Avoidance Group (USAG)

The established body within the utility, excavation and construction industries to reduce the number and severity of underground utility strikes arising from work activities in proximity to such services



What do we do?

We provide a forum for employers and industry partners to influence and promote improved standards of health and safety within the utility sector. It has become the leading provider of industry knowledge for safe excavation around utilities and as such has been endorsed by both the HSE and IOSH. It was the winner of the Innovation award for the NJUG (Streetworks) Awards in 2012 and the USAG Charter currently has over 200 signatories.



To keep improving safety in the pursuit of eliminating strikes, the industry needs a collaborative effort to ensure effective and sustainable change. The strike damage report builds on the findings of the 215/16 report. The data was collected from 34 USAG Members which includes over 3000 utility strikes. USAG has worked with EUSR to agree the essential training criteria to enable safe excavations near underground services. The training requirements are contained in EUSR safe excavation modules and learning outcomes and a list of knowledge criteria that must be assessed as part of any training. Courses can be assessed for compliance by the Energy & Efficient Independent Assessment Service.

Aims and Objectives

- To manage and oversee all information published within the USAG framework of committees;
- To ensure duties under health and safety legislation are implemented consistently by all partners and to discuss and assess the impact of and application of draft legislation;
- To promote health and safety practice throughout the utility sector via an agreed programme of work, to be kept under regular review;
- To share and exchange any other relevant information affecting the utility sector;
- To provide a forum for HSE to raise issues of operational policy that may impact on the represented industries.

To deliver these aims USAG has established a Steering Group and a number of Working Groups in order to progress its programme of work and help develop outputs in specific areas of expertise, as well as providing the opportunity to promote the principles of good health & safety management of all work activities associated with underground utility services.

- Data & Reporting
- Training & Competence
- Toolkit Development
- Web site Development
- Membership



Our terms of reference

Terms of reference for the Steering Group set out:

- The development of a consistent approach by all members to ensure that legal duties are complied with as an absolute minimum;
- The sharing and promotion of good practice in all work activities carried out in proximity of utility services;
- The support of industry initiatives and campaigns designed to reduce the incidence of utility strikes;
- The promotion of the reporting and analysis of data to identify any industry trends with a view to developing responsive actions;
- Raising awareness amongst other parties including designers, training providers and equipment manufacturers of their responsibilities for and influence on the provision of utility services;
- The development and promotion of industry wide programmes and initiatives and relevant guidance as necessary to promote training and skills related issues.

How can you get involved?

USAG is always looking for additional members so if you would like to become involved please visit:

www.utilitystrikeavoidancegroup.org

or contact us via email:

info@utilitystrikeavoidancegroup.org

On the website you can:

- Download the USAG Charter – the Charter is designed to help change the way we all work around utilities and to set a minimum standard for adoption across the industry;
- View and download our Toolkit on Planning, Training and Key Risk Guidance;
- View previous strike reports and related information.



Utility Strike Avoidance Group

Resources to help industry prevent damages to utility infrastructure

Phil Cornforth – Damage Prevention Specialist

Phil Cornforth – Damage Prevention Specialist



- 25 Years operations third party damage utility experience, UK, Ireland, Australia and New Zealand
- Operations manager beforeUdig, New Zealand
- Damage Prevention Specialist for PelicanCorp UK
- Assisting USAG to promote utility strike avoidance



PelicanCorp



beforeUdig™

geolantis 360

Who - Members

- Collaborative cross industry group of more than 220 stakeholders:

- Utilities
- Industry groups
- Contractors
- Service Providers
- Regulators



Membership – The 'Safe Dig' Charter

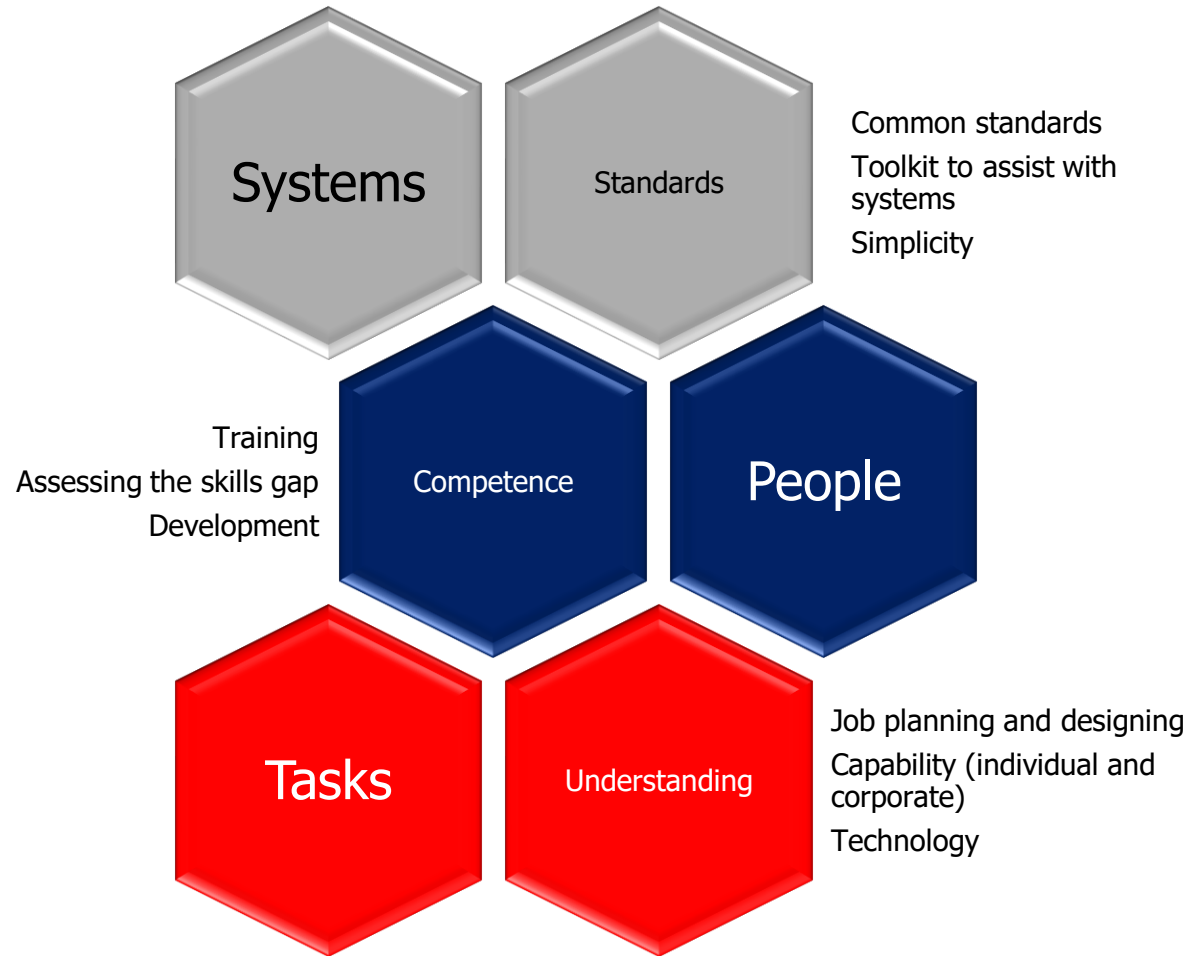
We, as signatories to the USAG Charter, will commit to:

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.

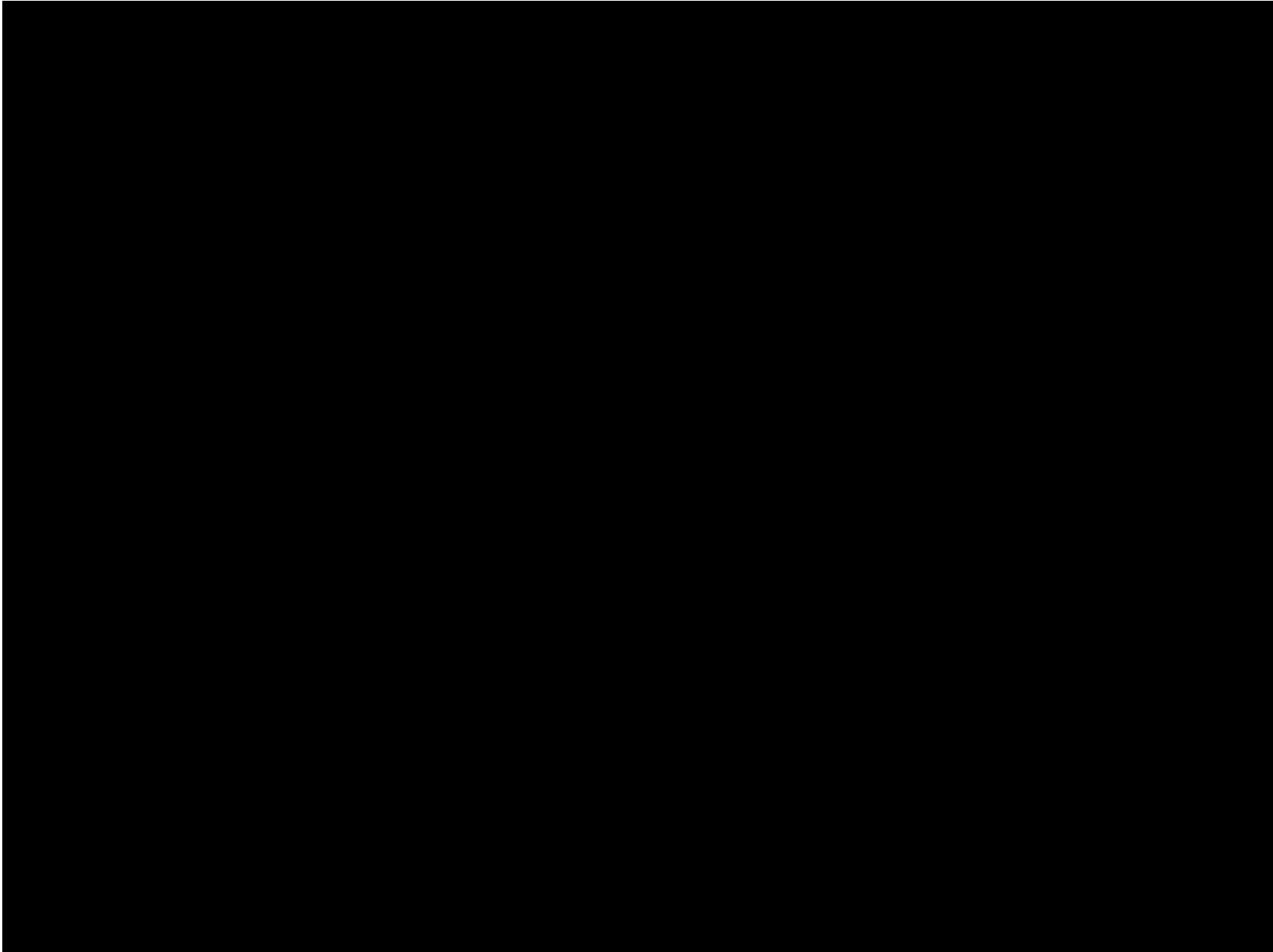


What is USAG

- Promote best practice and safety
- Forum for all
- The leading provider of industry knowledge
- Free of charge



Why



Why



Why

- Improve safety standards
- Reduce harm
- Reduce volume and severity of strikes
- Reduce unnecessary service outages
- Reduce consequential losses and damage



Why

News Bristol News South Western Ambulance Service

Two people suffer burns to face and hands after McDonald's incident

Two patients are currently at Bristol Royal Infirmary



BBC

Sign in

News

NEWS

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England Local News Regions Birmingham & Bla

Birmingham Broad Street workers damage pipe

September 2019



© twitter: @CucumberTonic

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EXPRESS

Bournville evacuation: 800 people evacuated near Cadbury factory after gas leak

HUNDREDS of people have been evacuated after a gas leak in Bournville in South Birmingham near the famous site of the Cadbury factory.



Why – HSG47 – Duties as a Designer

- Designers have a duty to reduce or 'design out' the risks arising from damage to underground services.
- You will need to know if there are underground services present so that you can amend the design to avoid them where possible.
- Use www.linesearchbeforeudig.co.uk to find asset owners.
- For building work, re-siting the services away from the work is often a reasonably practicable means of avoiding the risk.
- Permanent structures such as buildings should generally not be built over services, nor should services be encased in concrete.



Avoiding danger from underground services



Why

- ***An investigation by the Health and Safety Executive (HSE) found that G&R Groundworks (South East) Ltd failed to source and refer to the underground services plans prior to breaking the ground to determine the location of any cables within the planned working area.***
- ***They also failed to provide their operatives with cable identification equipment to further locate any cables within that area'***



[Media Centre home](#) [Contacts](#)

[Return to press releases](#)

Groundworks contractor fined for cable strike

11th November 2019



A groundworks contractor, G&R Groundworks (South East) Ltd, has been fined after an operative struck an underground electricity cable resulting in multiple serious burn injuries.

Folkestone Magistrates' Court heard that, on 15th October 2018, G&R Groundworks (South East) Ltd operatives were using an electric ground breaker to dig fence post holes for a car park perimeter fence at a Cummins Power Generation site in Ramsgate, Kent.



USAG Website

- Data & Reporting
- Training & Competence
- Best Practice Toolkit
- Engagement
- Newsgroup
- Social Media
- Safe Dig Charter
- Videos
- Safety Alerts

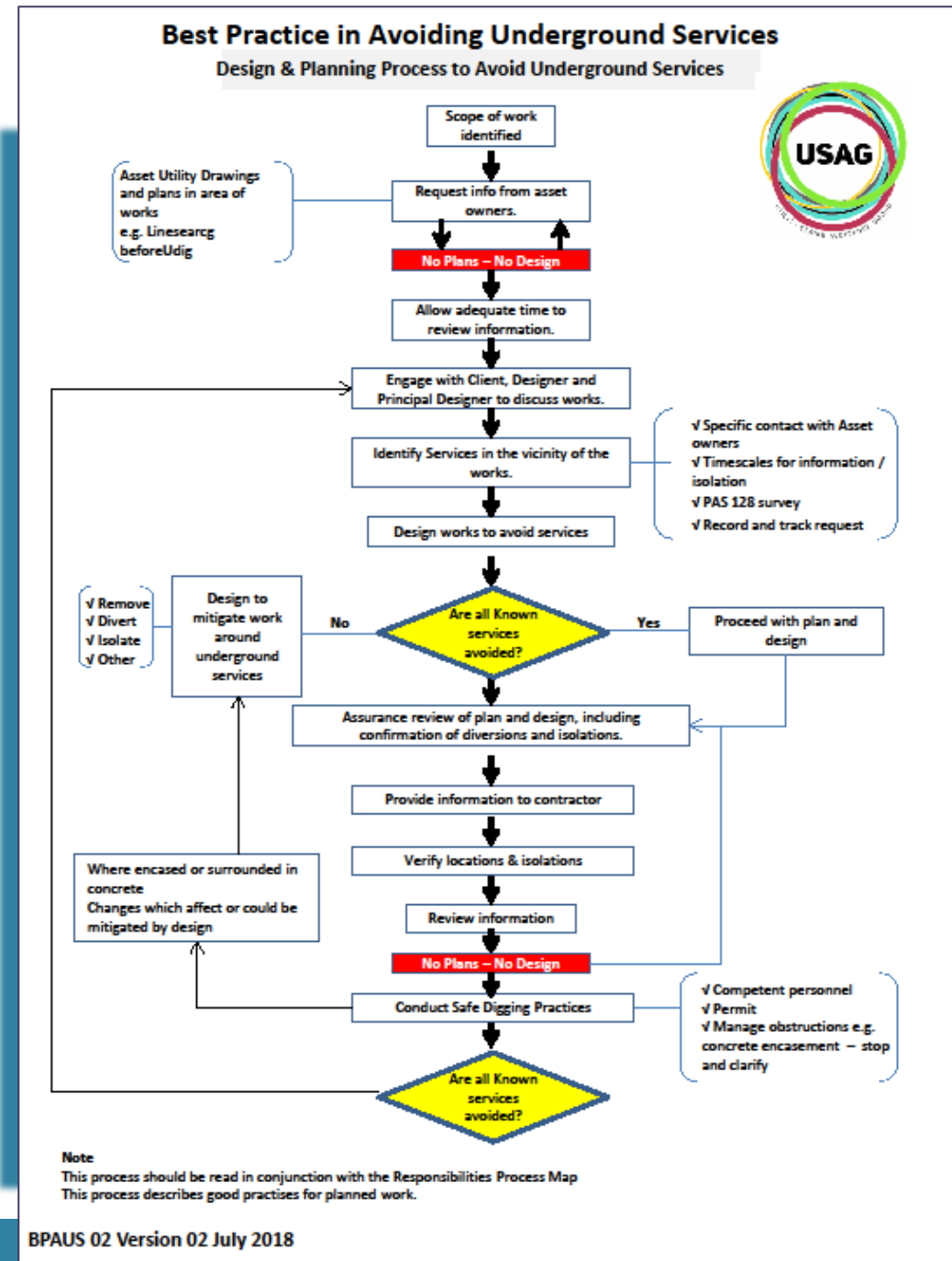


A screenshot of the USAG website homepage. At the top, an orange banner reads 'Available Now - Safety Alerts and Lessons Learned' with a 'Click Here' button and a 'Share' button with a LinkedIn icon. Below this is the USAG logo and the text 'Utility Strike Avoidance Group'. A search bar is located to the right. A left-hand navigation menu lists various resources such as 'Home', 'News and Comment', 'USAG Business Plan', 'Safe Dig Charter', 'Charter Signatories', 'Sign Up for the Charter', 'Toolkit', 'Strike Damages Report', 'Strike Process and Record Forms', 'Steering Group Meetings', 'Press Releases and Endorsements', 'Definitions of terms Used:', 'Safety Alerts', 'Video Resources', 'Reference Guides', 'Links', 'Join the Newsgroup', and 'Contact Us'. The main content area features a large, colorful rainbow graphic. Below the graphic, there is a paragraph of text describing the USAG as a collaborative group of over 200 utilities, asset owners, industry groups, and contractors. To the right of this text is the 'ceca' logo with the tagline 'Working for Infrastructure'. Below the text, there is a photograph of a utility worker using a power tool to dig a hole in the ground, with a red shovel nearby. A final paragraph of text below the photo states that the USAG is free to join and provides information on how to get tickets for the National Damage Prevention Day 2019.

Best Practice Toolkit

- Free online guidance, forms and best practice to ensure that contractors planners, designers and excavators have access to materials on:

- Planning your work
- Responsibilities
- Training
- Permits' calibration and daily inspection
- Key Risks Guidance
- Personal Protection
- Investigation and Process Record



Video Resources Page



- Safety Information
- Procedural Guides
- Please liaise with your teams to provide content that may be relevant

USAG Utility Strike Avoidance Group

Home USAG Video Resources

UK Power Networks - Be Bright/Stay Safe
USAG member UK Power Networks have an excellent new video and Be Bright/Stay Safe campaign promoting safe working around their network and underground cables. Use this video to promote safe working practices to your workers, the general public and anyone who intends on digging. A big thanks to UK Power Networks for producing this animation

LinesearchbeforeUdig - How to Submit an Enquiry
Follow this guide to find out how to submit an enquiry and receive information and plans on the utility assets to be found within your worksite.

How to Submit an Enquiry

Using the tools to the left of the map, draw your works area

LinkedIn Page



- Damage Prevention News and Advice
- Promote Utility Safety Campaigns
- 2700+ Followers
- Please encourage your organisation to follow us and share posts so we can increase coverage and the message of working safely around utilities.

Utility Strike Avoidance Group (USAG)
865 followers
1mo

#expect the #unexpected the originally installed position of utilities may alter over time due to ground movement, landscaping or moved by another set of works. Never #assume that utilities are in the position shown on plans and for th ...see more

ORIGINAL POSITION **MOVEMENT OVER TIME**

Posted by Phil Cornforth · 4/29/2019 · Sponsor now

Utility Strike Avoidance Group (USAG)
865 followers
1mo

One of our large utility construction and maintenance contractor members [Amey](#) has produced a handy video training guide to their locating services process. They are happy to share this guide with the rest of USAG and you can view the ...see more

75 · 1 Comment
Like Comment

KNOW WHAT'S BELOW
LOCATE
MARK
AVOID

Zero Code
LOCATING UTILITIES ON THE SURFACE AND UNDERGROUND

amey

United Utilities - Know What's Below
youtube.com

News & Safety Alerts



- Database of safety alerts/lessons learned provided by USAG members or freely available.
- Relates specifically to Utility Service Strikes
- Please provide safety alerts documents for publication

info@utilitystrikeavoidancegroup.org

The screenshot displays the USAG website interface. At the top left is the USAG logo. The main header reads "Utility Strike Avoidance Group". A left-hand navigation menu includes links for Home, USAG Business Plan, Charter Signatories, Sign Up for the Charter, Charter, Toolkit, Strike Damages Report, Strike Process and Record Forms, Links, Meetings and Other Documents, Press Releases and Endorsements, News and Comment, Join the Newsgroup, Definitions of terms used, National Damage Prevention Day 2019, Safety Alerts, and Video Resources. The main content area features a "Case Study: High Voltage Cable Strike With Excavator" by SP Energy Networks. The case study includes a photograph of a damaged red high-voltage cable with a jagged hole. Text describes the incident at Sellafield, where an excavator struck an underground ScottishPower cable. It notes that no records or locators were on site, and the contractor's task was to ascertain ground conditions. The text concludes that the high voltage cable was running through the site and that professional planning could have prevented the strike. A "HIGH VOLTAGE" warning icon is present. On the right side, there are contact details for SP Energy Networks (North and South) for cable record enquiries, deviation requests, and emergency contact. A map of the UK shows the locations of SP Energy Networks North, Central & Southern Scotland, and South (Cheshire, Merseyside).

Regular Email Newsletters

- Contain important news & updates
- Requests for information
- Damage spotlight
- Always looking for content
- Also published on website and LinkedIn
- Sign up today



Utility Strike Avoidance Group



Welcome to the USAG Newsletter - Feb 2020

The Utility Strike Avoidance Group (USAG) is a collaborative group of more than 220 utility asset owners, contractors and industry stakeholders that seek to ensure the highest standards of safety and best practice when working near vital utility assets.

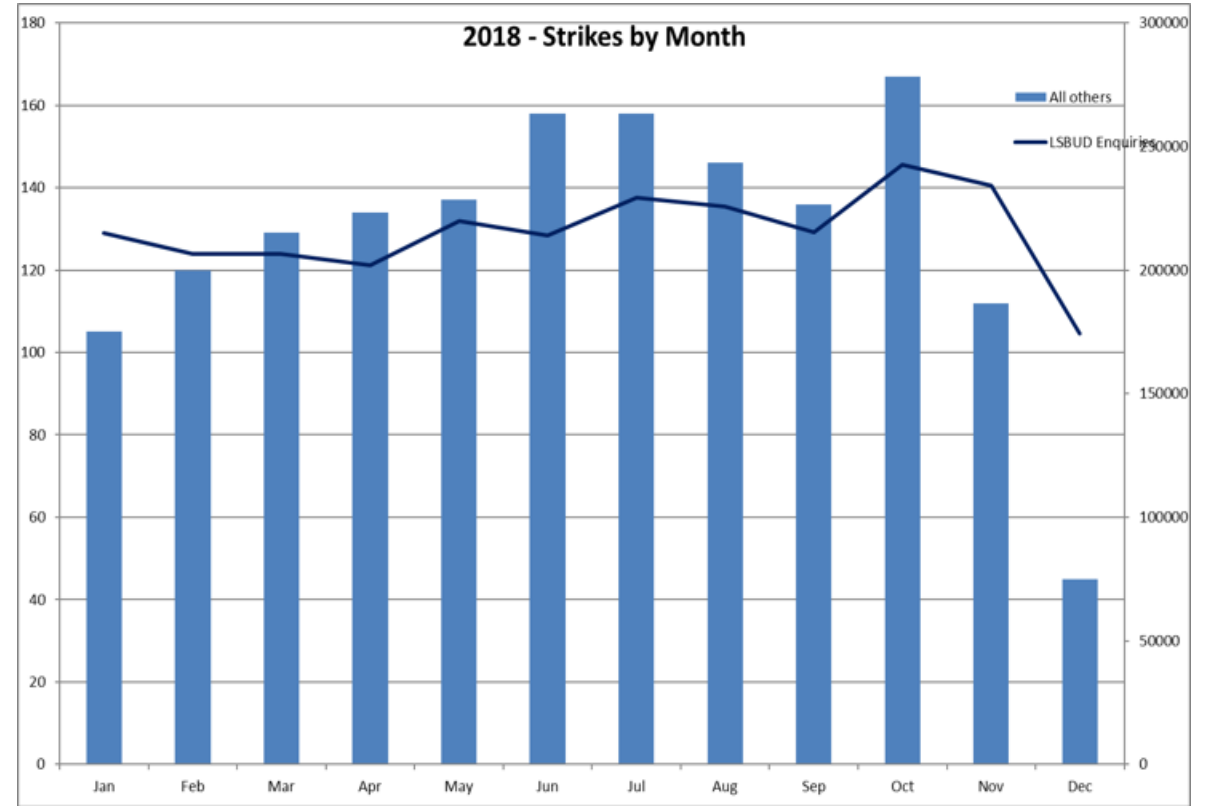
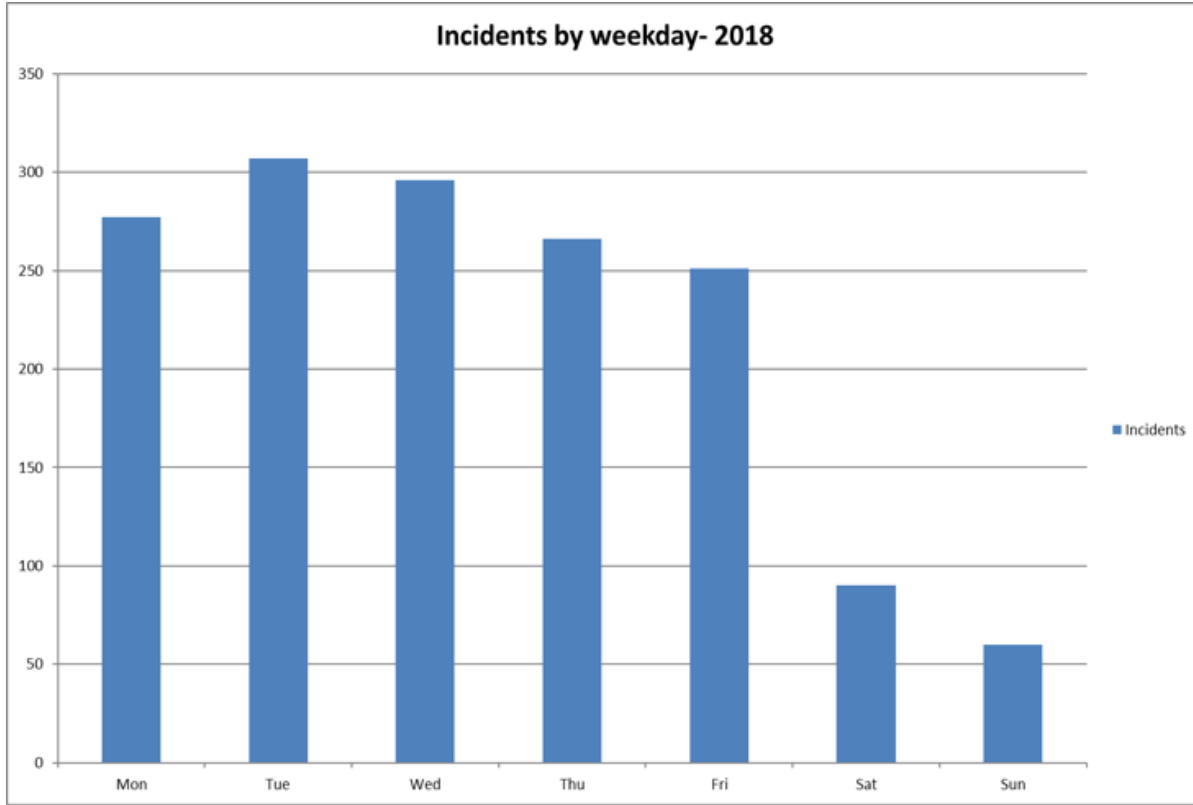
Utility Strike Damages Report



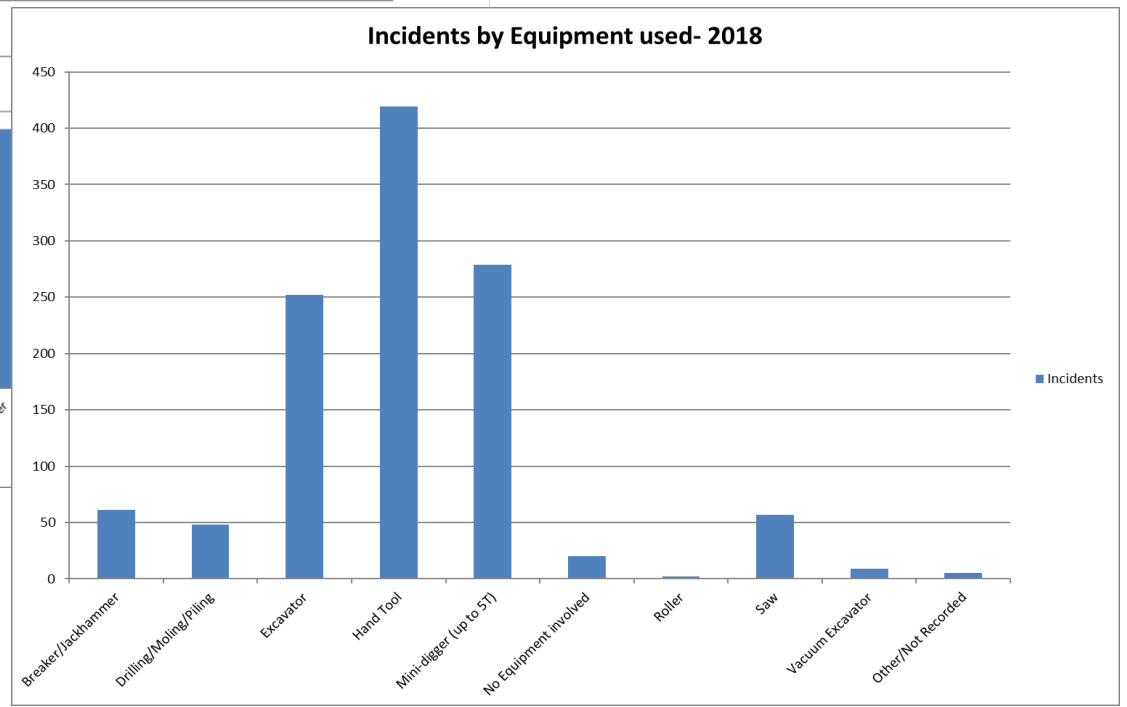
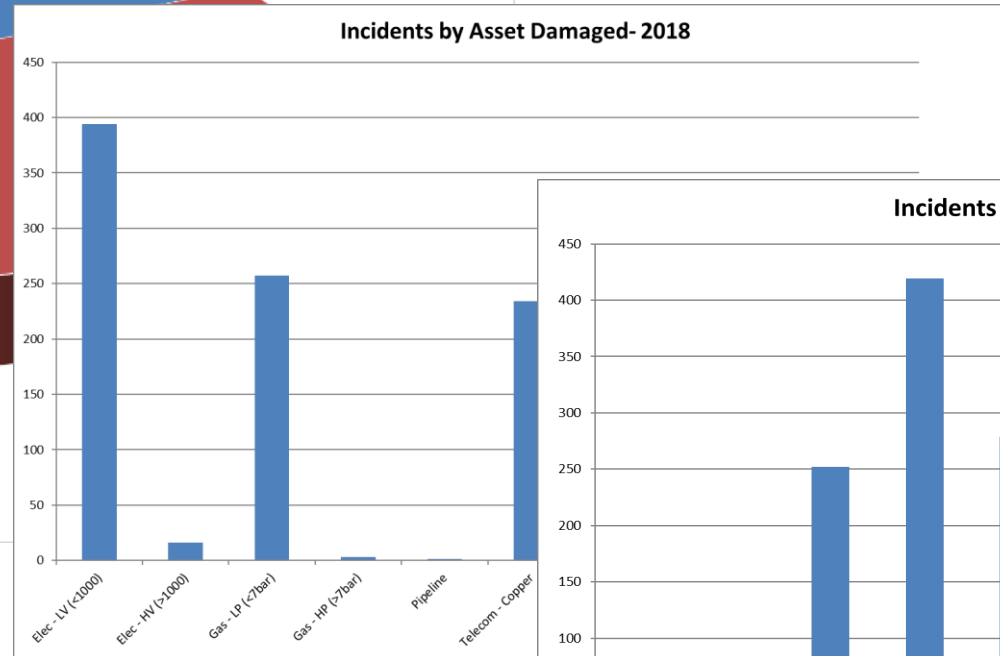
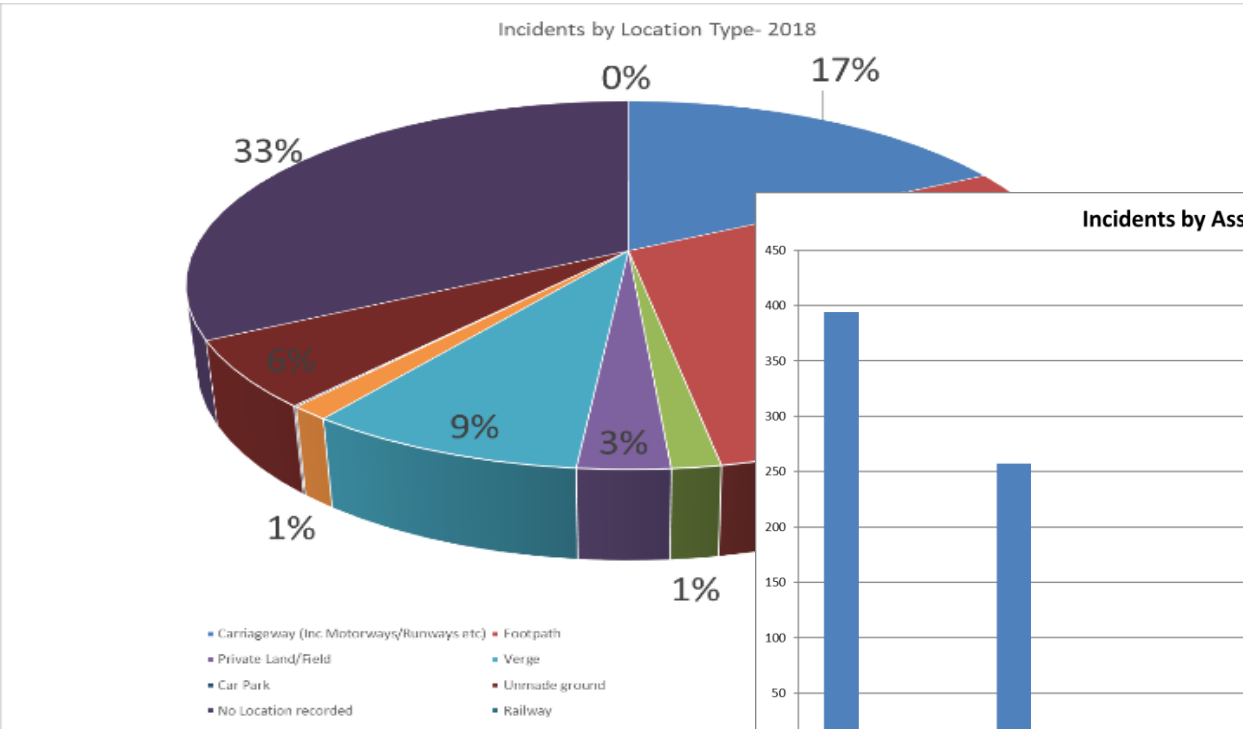
- Cross industry participants
- An agreed, consistent format
- Ability to benchmark & measure performance
- Provides direction on where to focus efforts



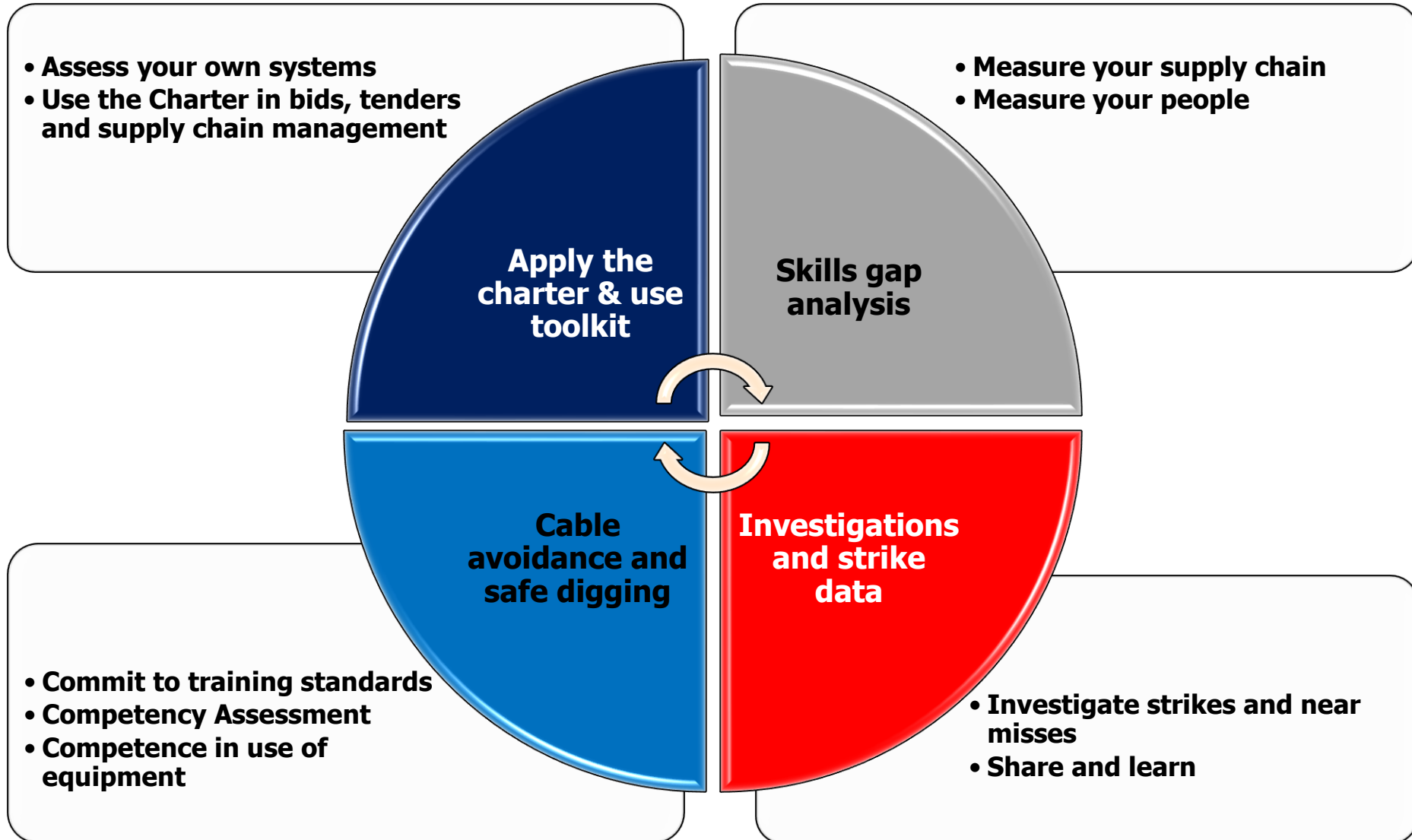
What does the data tell us?



What does the data tell us?



What we ask you to do



Conclusions



- USAG exists to reduce utility strikes
- Collaborative across industry approach
- It is free to join and support
- It needs content from all to share best practice
- Sharing damages data is key
- We can learn from international colleagues that have the same issues
- We can reduce how many people get seriously injured.

Questions?

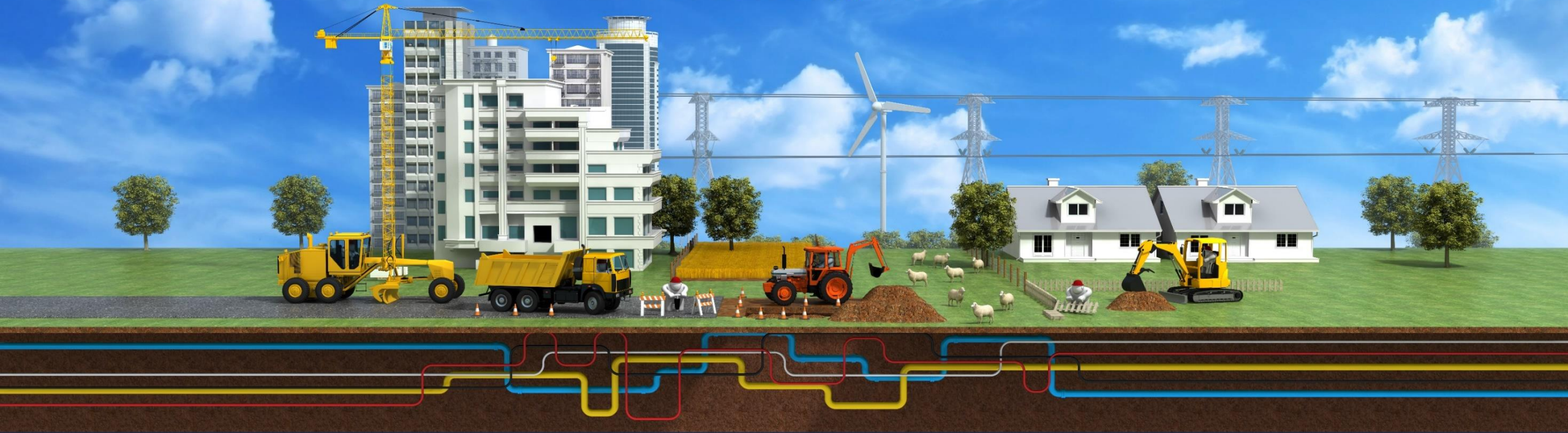


Sign Up Here

www.utilitystrikeavoidancegroup.org



The free to use safe digging service



Protecting Lives, Cables & Pipes

www.lsbud.co.uk

Contents

LSBUD overview

How the service works

Benefits

Case studies

Questions



LSBUD (Linesearch BeforeUdig)

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

Over 2.8 million enquiries per annum



Free to use portal for multiple utility plans

Over 120,000 registered Users growing by 2000 every month

90+ Members with 800,000 km of assets



LSBUD key 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

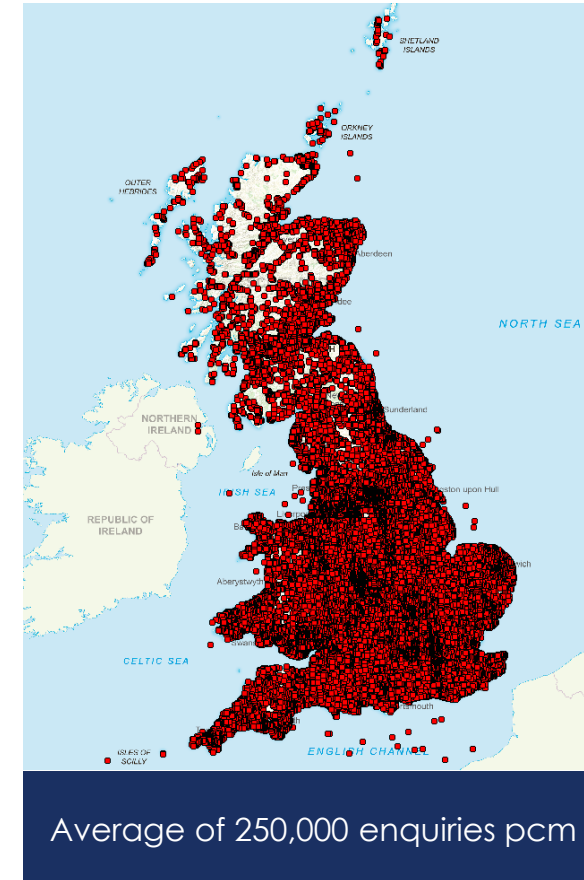
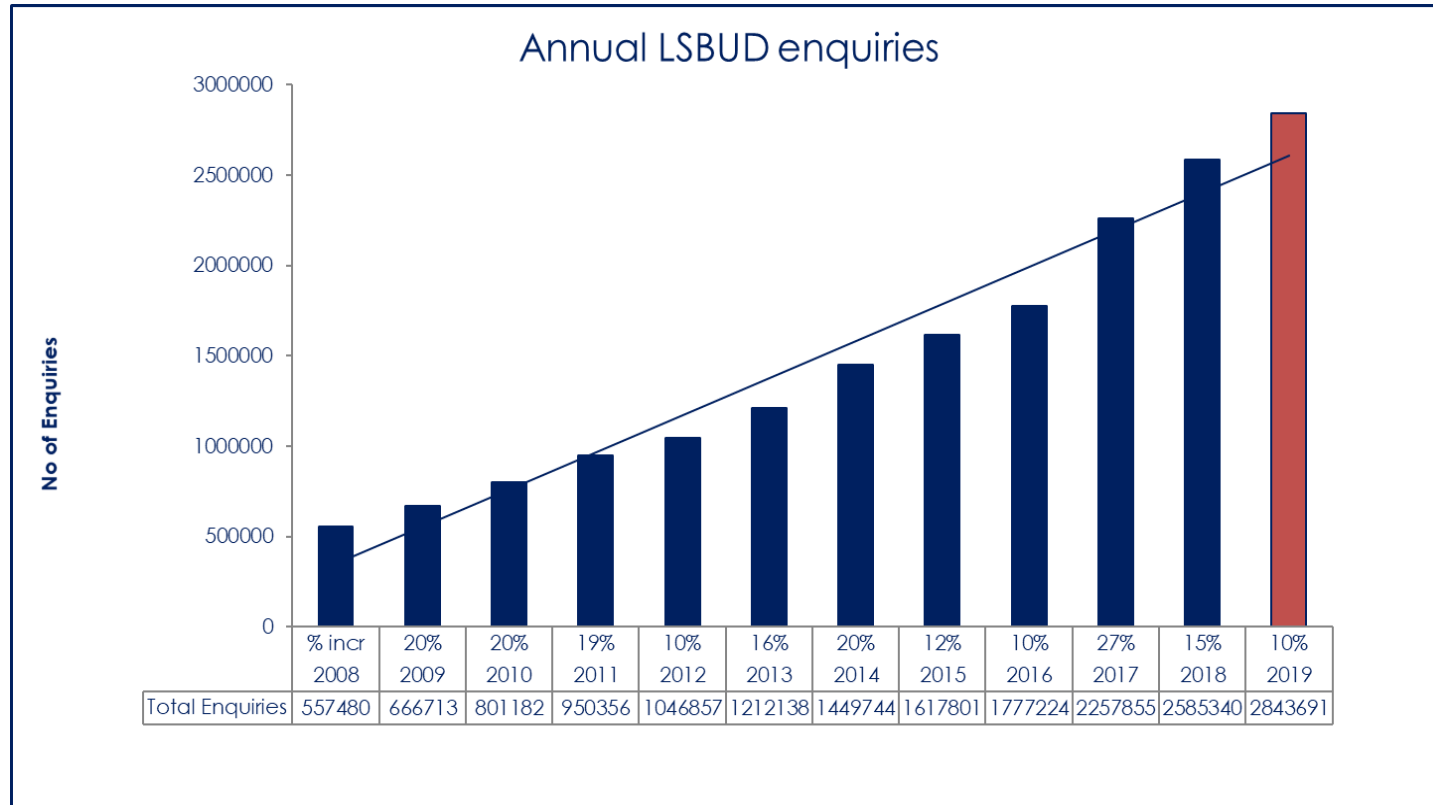


LSBUD explanation

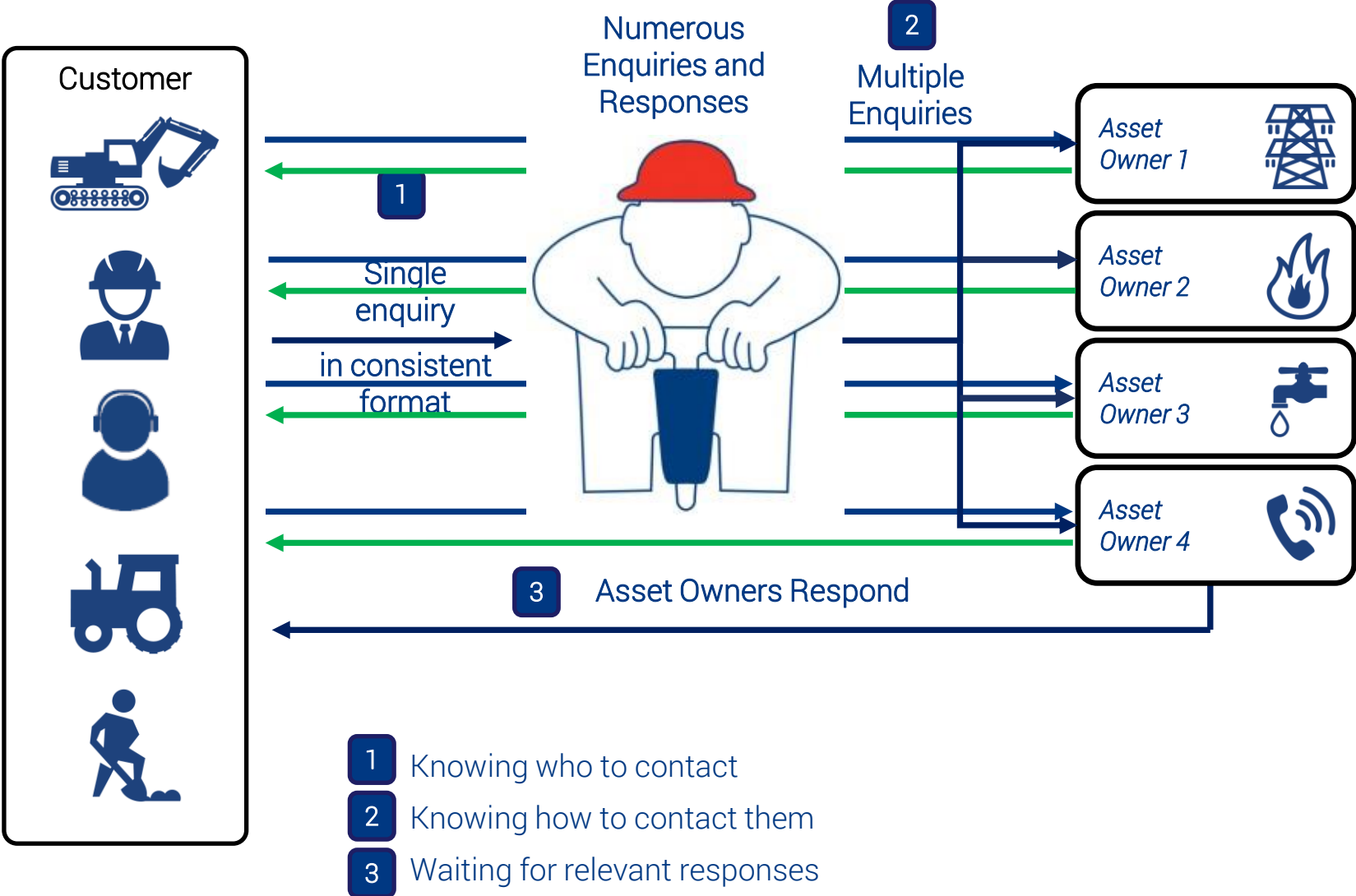
- National safe digging service
- Free to use, online, instant, 24/7
- Over 850,000 km of assets covered



Over 120,000 Users including:



The typical and 'One Call' approaches



Our Members include...

2003



2012



Our Members include...

2012



2017



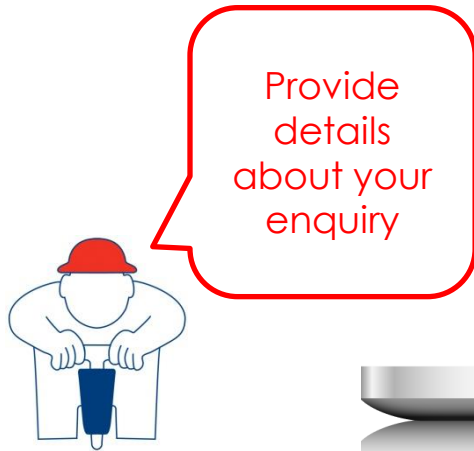
Our Members include...

2017





The request process – step 1



LineSearch before Udig

Welcome to LineSearchbeforeUdig
Protecting Lives, Cables and Pipes

marcus.edwards@pelicancorp.com, Marcus Edwards - PelicanCorp (UK) Limited

Enquiry Details Location Summary

New Settings Account Home

Enquiry Details

Enquiry Type: Initial Enquiry

Work Category: Utility Works

Work Type: Multiple excavations site

Job Start Date: 11/09/2013

Job End Date: 18/09/2013

Scheme/Reference: Cross Heath

Characters Available: 89

Preferred Plan Size: A3 - Landscape

Working on Behalf of: Utility

Name of Utility/Authority: Western Power Distribution

Confirmation

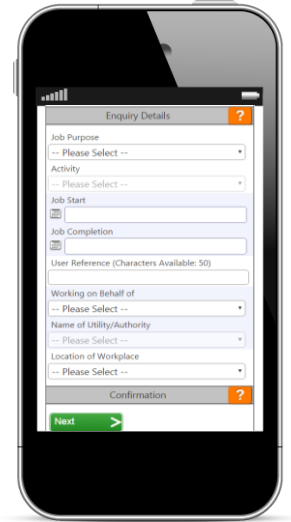
Next >

Scheme/Reference

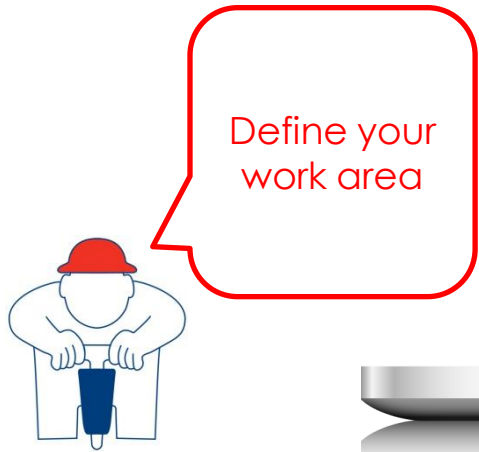
Required

Enter your own Scheme/Reference. Text Max characters:100

Privacy Policy | Powered By PelicanCorp OneCall | Copyright © 2001-2013 All Rights Reserved | Product By PelicanCorp | Website | W2 4.0



The request process – step 2



Welcome to LinesearchbeforeUdig
Protecting Lives, Cables and Pipes

Step 1: Search for dig site location

Search Type: Coordinate
Format: Easting/Northing
Easting: 421574
Northing: 290715

Step 2: Draw your dig site

A circle has been drawn from the centre of your search, if this covers your site you can continue. Alternatively you can redraw your site using the drawing tools provided.
Circle diam (min 25m - max 1.13km), Line (max 5km), Area (max 1km²).

Step 3: Confirm your entered details are correct

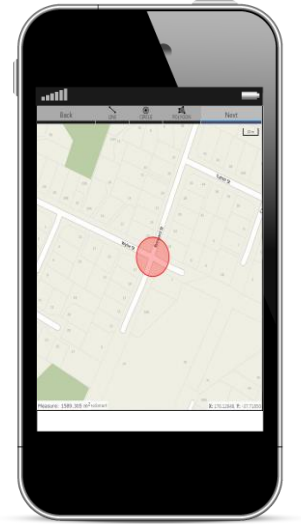
Drag the circle out to the size you require.

310 m

Measure: 75036.377 m² E: 421654, N: 290545

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The request process – step 3



Immediate
results
shown

Linesearch beforeUdig
Welcome to LinesearchbeforeUdig
Protecting Lives, Cables and Pipes

ibudsupport, Richard Broome - LSBUD

Enquiry Details Location Summary

New Settings Account Home Log Out

Enquiry Lodging Details

LSBUD Ref: **8394559**

Job lodged on: 26/04/2016 - 11:43:20 am

Enquiry Details

Enquiry Type: Initial Enquiry

Work Category: Excavations Non Utility

Work Type: Single excavation site

Job Start Date: 27/04/2016

Job End Date: 27/04/2016

Scheme/Reference: TEST- PLEASE IGNORE

Preferred Plan Size: A4 - Portrait

Working on Behalf of: Private

Searched Location: XY= 421574, 290715 Easting/Northing

Confirmed Location: 421596 290746

Search Type: Area

Thank you for your enquiry

Shortly you will receive an email confirming your enquiry and listing the Asset Owners who will contact you regarding the location of their assets.

It is **your responsibility** to identify the presence of any underground/aboveground assets in and around your proposed site. Please be aware that not all Asset Owners are registered with this service so it is **your responsibility** to identify and contact any Asset Owners not listed here as either Inside or Outside the Zone of Interest.

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

List of affected LSBUD members

LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area:

Asset Owner	Phone/Email	Emergency Only	Status
BPA	01442218911 lands@bpa.co.uk	01442218911	Email Additional Info
National Grid Gas (above 2 bar) and National Grid Electricity Transmission	0800688588	Gas 0800111999 Electricity 0800404090	Await response
Western Power Distribution	08000963080	08006783105	Await response
Zayo Group UK Ltd c/o JSM Group Ltd	01992 655 919	0800 169 1646	Await response

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. Please be aware that LSBUD members make regular changes to their assets.

Asset Owner	Asset Owner	Asset Owner
AWE Pipeline	Eso Petroleum Company Limited	Perenco UK Limited (Purbeck Southampton Pipeline)
BOC Limited (A Member of the Linde Group)	FibreSpeed Limited	Petroineos
BP Midstream Pipelines	Gamma	Phillips 66
Carrington Gas Pipeline	Humbly Grove Energy	Premier Transmission Ltd (SNIP)
CATS Pipeline c/o Wood Group PSN	HV Cables	Redundant Pipelines - LPDA
Centrica Energy	IGas Energy	RWEnpower (Little Barford and South Haven)
Centrica Storage Ltd	Ineos Enterprises Limited	SABIC UK Petrochemicals

Terms & Conditions Powered by PelicanCorp OneCall Copyright © 2001-2016 All Rights Reserved Product by PelicanCorp Website (PCP v4.6.2) Feedback and error reporting e-mail

Email Affected Operators
Print View



The request process – step 3



Terms and Conditions

We are delighted to offer LSBUD Users fantastic preferential rates for a full range of Ordnance Survey products, thanks to our partnership with Emapsite. Click here to transfer your enquiry details directly into Emapsite's website. Please note that LSBUD will share the following details about you with Emapsite:

- First Name
- Last Name
- Email
- Enquiry Site Area
- Company Name
- Who you are working on behalf of (so that contractor rates can be applied when appropriate)

First Name	Fionn
Last Name	Wardrop
Email	fionn.wardrop@lsbud.co.uk
Company	LinesearchbeforeUdig
Working on Behalf of	Private

I agree to [Terms and Conditions](#).

[Back](#) [Continue](#)

Linesearch before Udig



Enquiry confirmation- pages 1 & 2



Enquiry Confirmation

LSBUD Ref: 8394559

Date of enquiry: 28/04/2016
Time of enquiry: 11:43

Enquirer			
Name	Mr Richard Broome	Phone	02476 796561
Company	LSBUD	Mobile	07918 628986
		Fax	Not Supplied
Address	Eliot Park Innovation Centre 4 Baring Way Nuneaton Warwickshire CV10 7RH		
Email	support@lsbud.co.uk		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

Enquiry Details			
Scheme/Reference	TEST- PLEASE IGNORE		
Enquiry type	Initial Enquiry	Work category	Excavations Non Utility
Start date	27/04/2016	Work type	Single excavation site
End date	27/04/2016	Site size	69090 metres square
Searched location	XY= 421574, 290715 Easting/Northing	Work type buffer*	25 metres
Confirmed location	421596 290746		

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



V3.3.1

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Enquiry Confirmation

LSBUD Ref: 8394559

Date of enquiry: 28/04/2016
Time of enquiry: 11:43

Asset Owners

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lineasearchbeforeudig.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.

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 of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig 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.

Asset Owners & Responses. Please note the enquiry results include the following:

1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

1. LSBUD Members who have assets registered within your search area. ("Affected")
 - a. These LSBUD Members will either:
 - i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
 - ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
2. LSBUD Members who do not have assets registered within your search area. ("Not Affected")
3. Non LSBUD Members who may have assets within your search area. Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

National Grid. Please note that the LSBUD service only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeudig.nationalgrid.com



Confirmation advice arrives in minutes

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Enquiry confirmation- pages 3 & 4



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LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

List of affected LSBUD members			
Asset Owner	Phone/Email	Emergency Only	Status
BPA	01442218911 lands@bpa.co.uk	01442218911	Email Additional Info
National Grid Gas (above 2 bar) and National Grid Electricity Transmission	0800688588	Gas 0800111999 Electricity 0800404090	Await response
Western Power Distribution	08000603080	08006783105	Await response
Zayo Group UK Ltd o/o JSM Group Ltd	01992 655 919	0800 189 1646	Await response

LSBUD members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD members make regular changes to their assets.

List of not affected LSBUD members		
AWE Pipeline	Esso Petroleum Company Limited	Perenco UK Limited (Purbeck Southampton Pipeline)
BOC Limited (A Member of the Linde Group)	FibreSpeed Limited	Petroineos
BP Midstream Pipelines	Gamma	Phillips 66
Carrington Gas Pipeline	Humbly Grove Energy	Premier Transmission Ltd (SNIP)
CATS Pipeline o/o Wood Group PSN	HV Cables	Redundant Pipelines - LPDA
Centrica Energy	IGas Energy	RWEnpower (Little Barford and South Haven)
Centrica Storage Ltd	Ineos Enterprises Limited	SABIC UK Petrochemicals
CLH Pipeline System Ltd	INEOS Manufacturing (Sootland and TSEP)	Scottish Power Generation
ConocoPhillips (UK) Ltd	Lark Energy	Seabank Power Ltd
Coryton Energy Co Ltd (Gas Pipeline)	Lightsource SPV Limited	Shell (St Fergus to Mossman)
CSP Fibre o/o Centara	Mainline Pipelines Limited	Shell Pipelines
EirGrid	Manchester Jetline Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
Electricity North West Limited	Manx Cable Company	Transmission Capital
ENI & Himor o/o Penspen Ltd	Marchwood Power Ltd (Gas Pipeline)	Vattenfall
E-on UK Plc (Gas Pipelines Only)	Northumbrian Water Group	Wingas Storage UK Ltd
ESP Utilities Group	NPower CHP Pipelines	
ESSAR	Oikos Storage Limited	



Clear results for which assets are covered by the service

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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.

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
BT	https://www.sws.bt.com/pls/mbel/welcome.home	08000173903	Not Notified
CityFibre	asset.team@cityfibre.com	033 3153 7282	Not Notified
Coft	plantenquiries@catelecornuk.com	01227769427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified
ENGIE	nrswa@cofely-gdf-suez.com	01293 549944	Not Notified
Fulcrum	FPL.plantprotection@fulcrum.co.uk	03330149455	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembershp	01356240363	Not Notified
Hibernia Networks	info@hibernianetworks.com	01704 322 300	Not Notified
Instalcom	plantenquiries@instalcom.co.uk	02087314613	Not Notified
Interoute	interoute.enquiries@planacast.co.uk	02070269000	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
National Grid Gas Distribution (below 2 bar)	plantprotection@nationalgrid.com	0800688588	Not Notified
Redoentric plc	plant-enquiries@redoentricplc.com	0845 200 2200	Not Notified
Severn Trent Water	https://www.stwater.co.uk/developers/request-a-water/sewer-map/	01214523306	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Tata, KPN (-/ MoNicholas)	plantenquiries@monicholas.co.uk	03300558469	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611739	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified
Vespe Networks	https://vtplant.vespe.com	01902532100	Not Notified
Warwickshire CC (St Lighting)	streetlighting@warwickshire.gov.uk	01926736673	Not Notified
Warwickshire CC (Traffic Signals)	signals@warwickshire.gov.uk	01926412810	Not Notified

Disclaimer

The results of this Enquiry have been provided for the sole use of the Enquirer and no other party. The asset information on which the Enquiry results are based has been provided by LinesearchbeforeUdig members. LinesearchbeforeUdig 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 are also asset owners which do not participate in the enquiry service operated by LinesearchbeforeUdig, including but not exclusively those set out above. Therefore, LinesearchbeforeUdig cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results. LinesearchbeforeUdig and its employees, agents and consultants accept no liability (except insofar as liability under any statute that cannot be excluded) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence. Please refer to LinesearchbeforeUdig's Terms of Use for full terms of use available at www.linesearchbeforeudig.co.uk

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Further benefits of the LSBUD 'OneCall' approach



- i. Safety & asset strike avoidance



- i. Financial benefits of Membership



- i. Data Access
- ii. Data Security



- i. Escalations and data analysis



- i. Providing the best user experience



- i. Making it easier to search via an API, adhering to Quality Assurance Processes



Global best practice for damage prevention

Canada

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

Click Before You Dig

811

Know what's Below. Call before you dig.

USA

No.1 recommendation for reducing asset strike risk (US DIRT Report 2019 (>400,000 stikes)). OneCall asset owners reduced risk of strikes to <0.16%

Linesearch before u dig

UK

SGN instantly reduces damages to its network with a 1600% increase in responses and 43% reduction in unplanned interruptions

before u dig

DIAL BEFORE YOU DIG
www.1100.com.au

before u dig .co.nz

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



Avoiding damage to underground assets

NJUG

National Joint Utilities Group

CASE STUDY NUMBER 92: LinesearchbeforeUdig – Increasing the Accessibility and Visibility of Utility Assets Through a Single Portal

WINNER OF THE NJUG AVOIDING DAMAGE TO UNDERGROUND ASSETS AWARD 2016



Digging Up Britain:

How Vulnerable is our Utility Infrastructure?



The financial benefits

1. Reducing costs of damages and near misses

a. Including downstream costs* such as: 

2. Automating processes

3. Collaborative industry engagement, including exhibitions and working with trade bodies

- Back office support
- Lost production as work stops for repairs
- Contractual penalty clauses invoked
- Compensation to injured operatives
- Legal costs
- Increased insurance premiums
- Reputational damage
- Additional materials
- Programme implications
- Fines from regulators
- Payment of replacement labour
- Loss of business
- Reduced chances of future work
- Loss of shareholder value



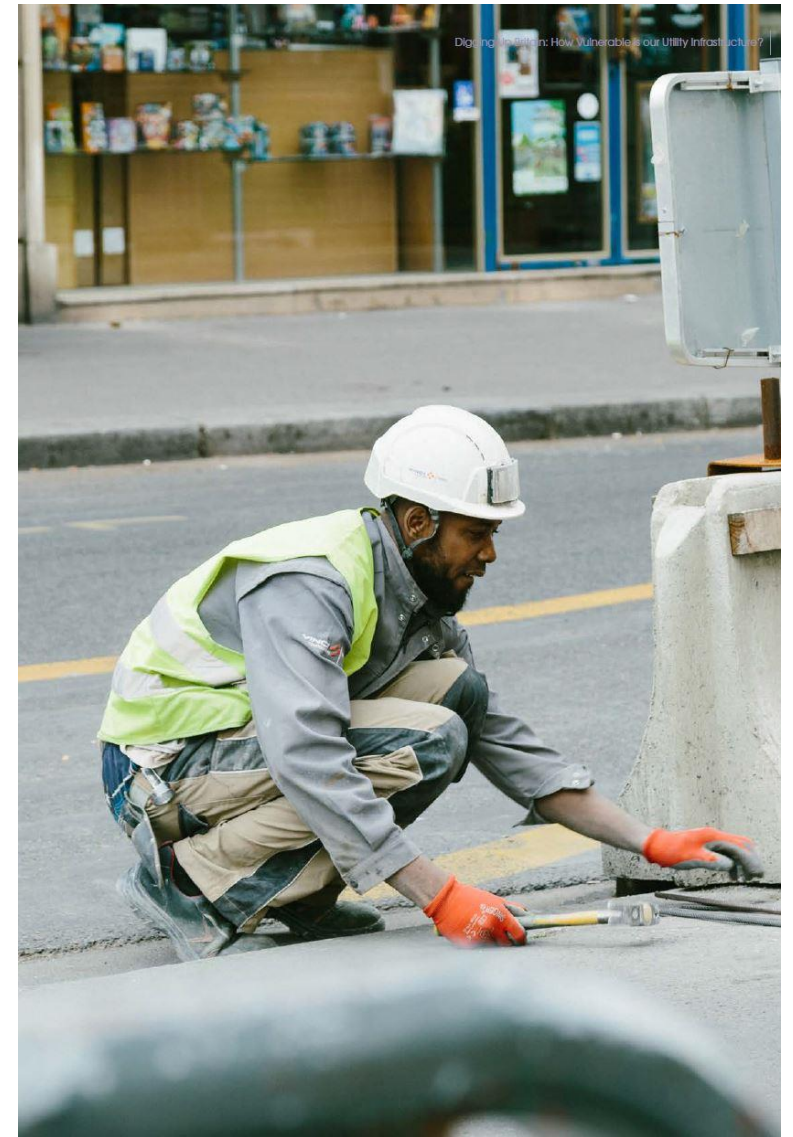
* A University of Birmingham study in 2015 calculated the average actual cost of an asset strike as 29 x the cost of repair



Understanding how to use the data created most effectively

Mitigating the risk of third party works and intercepting damage events before they happen:

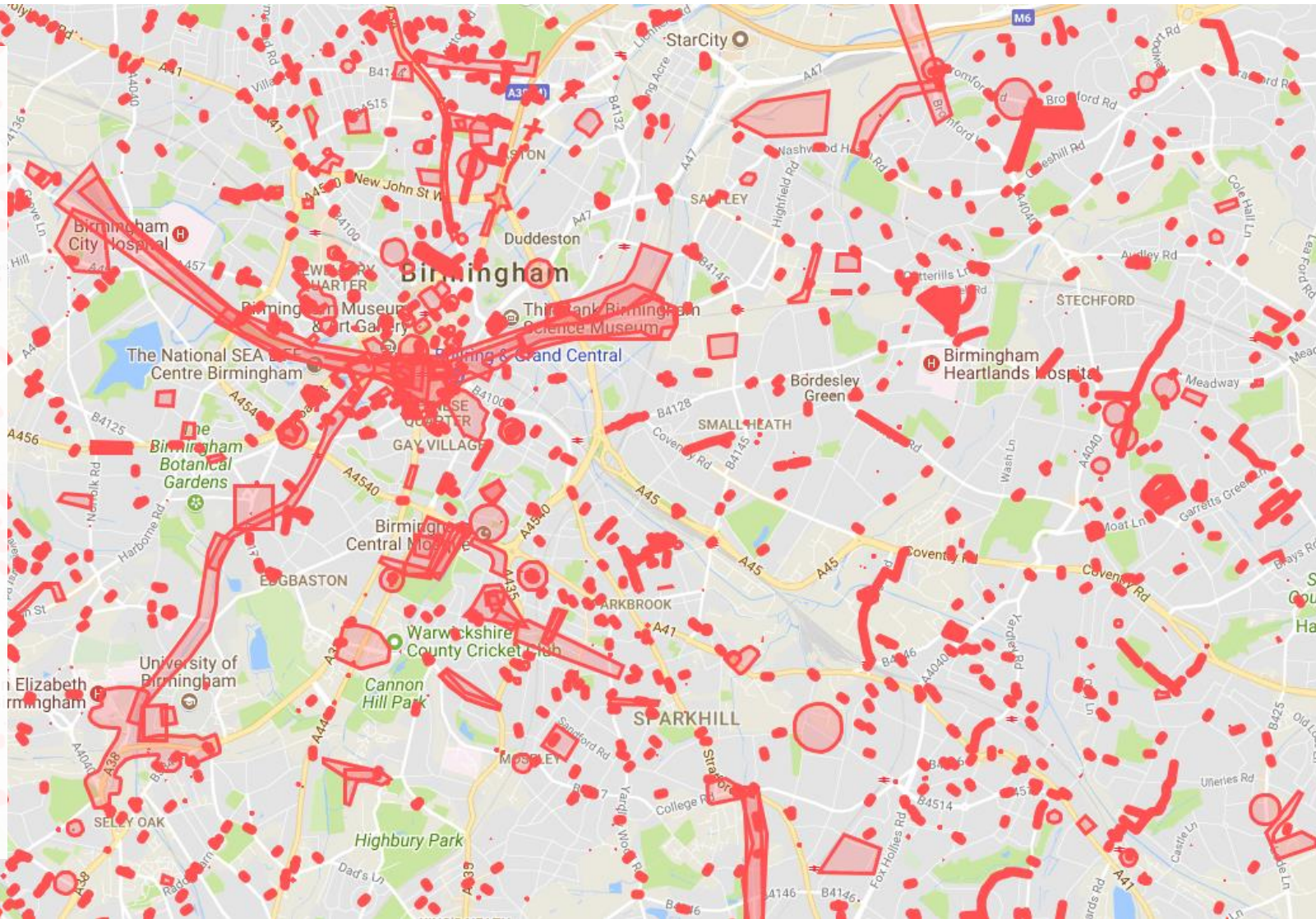
- Using LSBUD data to
 - Understand **work near your network**
 - **Who** is planning work?
 - **What** are they planning to do?
 - **Where** are they planning to dig?
 - **When** are they planning to do it?
 - Apply **escalation** procedures and **alerts** triggered by:
 - **Asset type**
 - **Nature of work**
 - **Location of work**
 - **Respond automatically** with appropriate plans and guidance
 - **Intervene** when high risk activities are planned.



Escalations and analysis of big data

Helping you understand which works pose the biggest risk to your assets and your customers

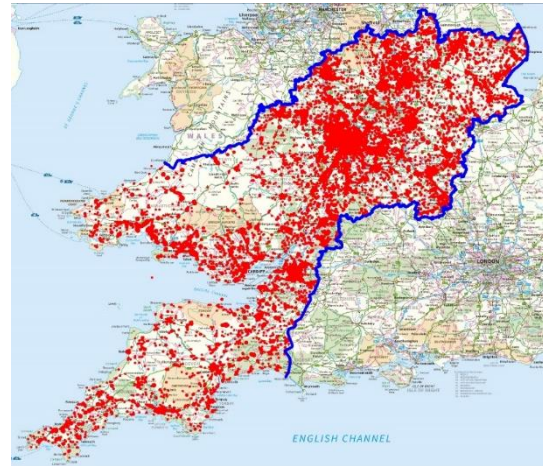
- Using automated systems to understand risk
- Mitigating risk by focusing on the highest risk enquiries
- Continual learning to make the system work more effectively
- Helping your customers work more safely and efficiently



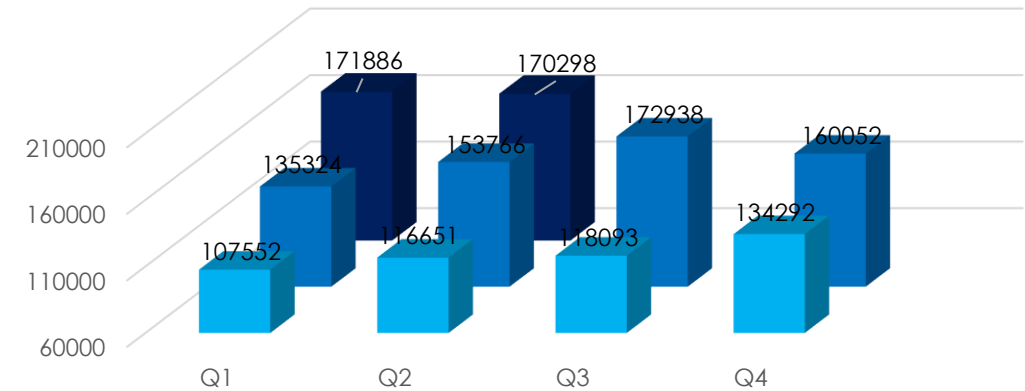
Managing a rising number of searches: WPD and SGN




- 60,000 enquiries pcm
- Fully Automated
- Authorisation
- Payment
- Escalation
- Avg 4 minute response



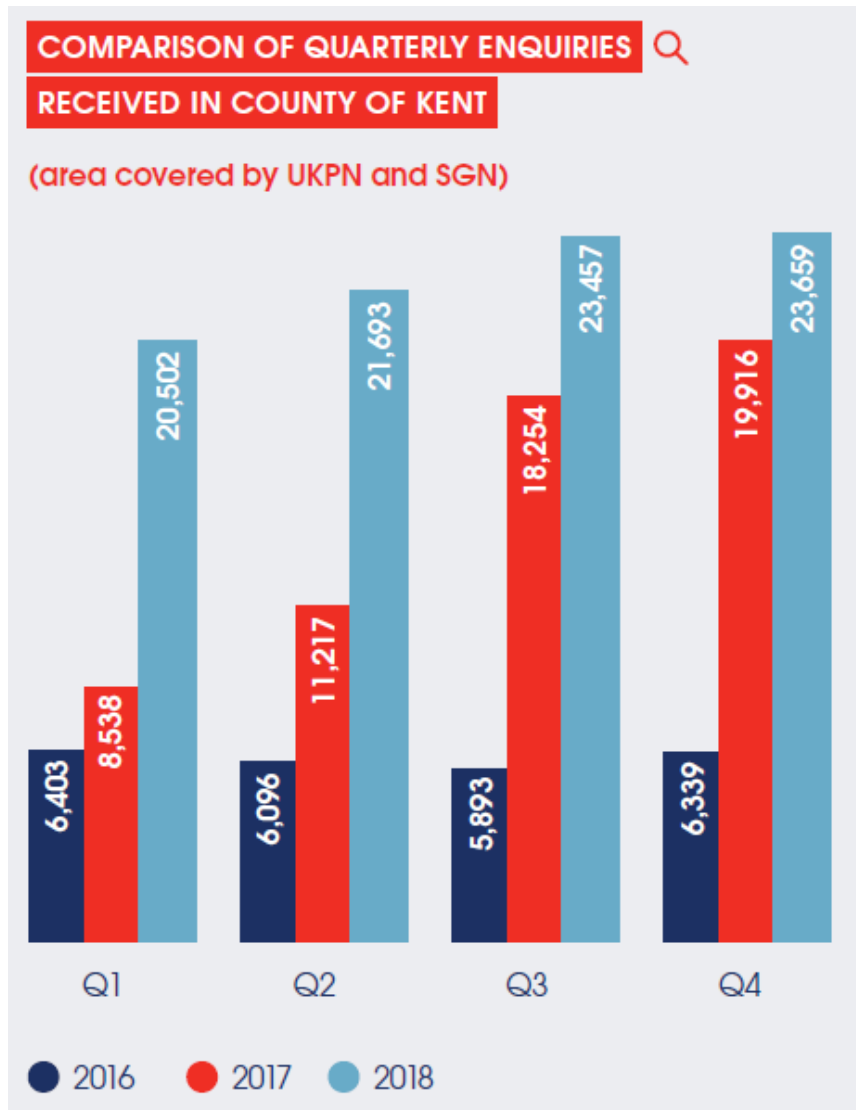
Quarterly WPD enquiries received



 SGN	Enquiries Received	Average Response Time
Before joining LSBUD	2,500 p/month (30,000 p/a)	15 days
Since joining LSBUD	50,000+ enquiries p/month	4 minutes



Rising search numbers; a focus on Kent



There's safety in the herd. The more companies sharing their data through LSBUD's service, the more searches everyone's assets appear on - ensuring the assets and those digging near them are safer.



Reducing Damage (SGN Stakeholder Engagement Submission 2018)

Keeping the gas flowing safely

Feedback from our stakeholders continues to support our emphasis on protecting our network and preventing all forms of damage, both physical and cyber. Improving our response to emergency incidents when they do occur will help to minimise any impact on our customers. To further reduce this impact, we are finding new, smarter ways of working, innovating to reduce disruption and supply interruptions.

Stakeholder input
Stakeholders told us preventing damage to our network is an important objective for our focus. They also want us to communicate and partner better with other utilities. Information and data sharing are very important to our stakeholders. They told us they would like to be able to access data about our network more easily.

Preventing damage to our network
We've continued with our cross-business Damage Prevention Group to introduce and co-ordinate activities and initiatives to support reduction of damages to our network.

P Partnership with Scotland's Rural Colleges (SRUC)
Through our partnership with SRUC we continue to focus on helping the farming and rural community with advice on what to do when working near our pipelines. The training we developed is now being delivered across all six rural colleges. We have delivered training to 59 agriculture students, 10 lecturers and four Regional Health and Safety Advisors. We also surveyed the students who completed the module and 100% agreed the information provided had enhanced their knowledge, protecting them and the gas pipelines.

"SRUC are very pleased to be able to work with SGN in developing and delivering the Pipeline Damage Prevention Module."

E Online visibility of our pipes
We've now been using Line Search Before You Dig (LSBUD) for over a year and have been promoting its use with our stakeholders including agricultural colleges, local authorities, National Association of Agricultural Contractors and the National Farmers Union Scotland (NFUS). Enquiries have increased from 2,500 a month to 47,300 and response time reduced from 15 days to two minutes. We have seen a corresponding decrease in damage caused to our network as shown below.

E Cyber security
Our stakeholders have told us ensuring security of their gas supply is very important to them and this includes protection from the possibility of cyber attack. We highlighted last year we were making significant investment in cyber security to reduce the risk of disruption of the gas supply to our customers. Recognising the vital role we play in maintaining a safe and reliable network we've increased this investment further this year, agreeing in November to spend an additional £10m, as part of the £145m voluntary contribution returned to consumers. We've partnered with the National Cyber Security Centre (NCSC) and the Department for Business, Energy & Industrial Strategy (BEIS) in our approach to security. This includes a new security operation centre to improve our ability to protect, detect and respond to cyber incidents. Over the past year, we've achieved ISO27001 security framework accreditation for our Gas Control Centre and SGN Smart business. We've detected 6,170 malicious web traffic issues and managed 36 security incidents. Our security programme has been recognised as an industry leader. In 2017, we achieved, Winner of the Cyber Security Project of the Year at the UK IT Industry Awards. We're also one of the first UK utility companies to achieve Cyber Essentials accreditation.

Continual downward trend in damage to our network

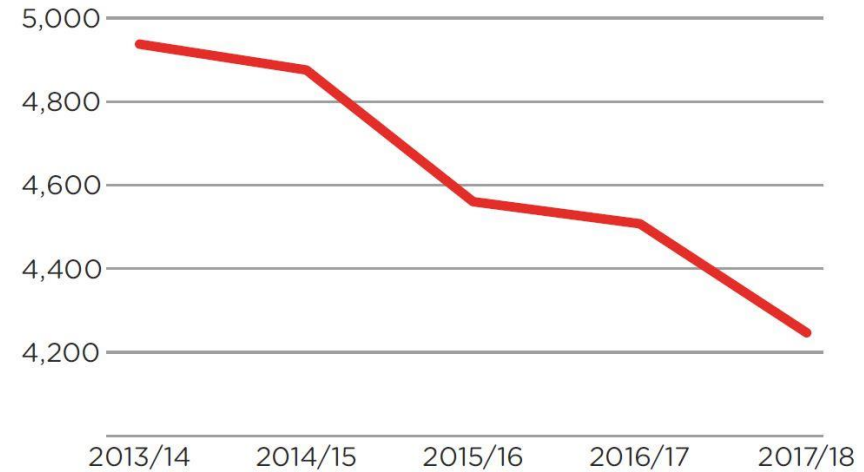
Year	Damage
2013/14	4,950
2014/15	4,900
2015/16	4,550
2016/17	4,500
2017/18	4,250

Part 2

E Online visibility of our pipes

We've now been using Line Search Before You Dig (LSBUD) for over a year and have been promoting its use with our stakeholders including agricultural colleges, local authorities, National Association of Agricultural Contractors and the National Farmers Union Scotland (NFUS). Enquiries have increased from 2,500 a month to 47,300 and response time reduced from 15 days to two minutes. We have seen a corresponding decrease in damage caused to our network as shown below.

Continual downward trend in damage to our network





Case study

Preventing leakage from damaged pipes

Stakeholders have told us damage prevention is important to keep the gas flowing safely and to reduce our environmental impact.²

In response, during 2017 we introduced a tailored self-service website, 'line search before you dig' (LSBUD), to provide instant on-line access to our mapping data. After a year in operation we saw an increase in enquiries from 2,500 a month to 47,300 and response time reduced from 15 days to two minutes. We experienced a significant 43% drop of in unplanned interruptions caused by third parties in the first year of use, from 9,834 events in 2017 to 5578 in 2018. We have also focused on educating the farming community through our partnership with Scotland's rural colleges. We developed training about pipeline safety which is now being delivered across all six rural colleges, educating future landowners about pipe risk.

Overall, we have seen a 7% decrease in damage (unplanned interruptions) caused by third parties since 2015 through the work of our Damage Prevention Group, with a corresponding reduction in carbon emissions from gas escapes. Supporting data tables are available in the GD1 Experience appendix, section 2.2.8.



Using LSBUD data to understand damages better

These extracts are taken from Wales & West Utilities' presentation at the 2019 Damage Prevention Day, explaining the link between LSBUD search data (we provide WWU with a daily data feed), planning application data and damages data.



Questions

