



# **2013 UTILITY STRIKE DAMAGES REPORT**

PREPARED BY THE USAG DATA  
& REPORTING WORKING GROUP

23 JUNE 2015

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## ABOUT USAG

The Utility Strike Avoidance Group (USAG) is the body established 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.

The primary role of USAG is to 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 awards in 2012 and the USAG Charter currently has over 120 signatories.

### USAG DATA & REPORTING WORKING GROUP

<b>Marcus Edwards</b>	PelicanCorp (UK) Limited, Chair for USAG Data & Reporting Working Group
<b>Stephen Crossland</b>	Balfour Beatty – Services Division (Gas & Water)
<b>Andrew Rhoades</b>	Heathrow
<b>Richard Broome</b>	LinesearchbeforeUdig

## TERMS OF REFERENCE

The primary role of USAG is to provide a forum for employers and industry partners to influence and promote improved standards of health and safety within the utility sector.

This will include:

- 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
- The maintenance of close liaison with other relevant groups within the utility sector
- The maintenance of close dialogue with HSE and other relevant regulatory bodies and stakeholders as necessary
- 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 identification of new and emerging hazards and risks
- The development and promotion of industry wide programmes and initiatives and relevant guidance as necessary to promote training and skills related issues.

## WORKING GROUPS

To deliver the aims above, USAG has three main working groups:

- Toolkit Development
- Data & Reporting
- Training & Education.

These groups are supported by Communication, Website Development and Membership teams who support the overall delivery of the USAG groups.

## HOW TO BECOME INVOLVED

USAG is always looking for additional members/participants so if you would like to become involved please visit our website where you can:

- Download the USAG Charter – this 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, the toolkit includes section for:
  - » Planning
  - » Responsibilities
  - » Training
  - » Permits, Calibration and Daily Inspection
  - » Key Risk Guidance
  - » Personal Protection
  - » Investigation Process and Record.

The website is: [www.utilitystrikeavoidancegroup.org](http://www.utilitystrikeavoidancegroup.org)

# INTRODUCTION

It is recognised that there are many other groups and organisations actively engaged and working hard in the pursuit of elimination of utility strikes and significant improvements have genuinely been made because of this effort and raised awareness. However, in order to support these activities there now needs to be a collective effort across the whole of the industry to make an effective and sustainable step change – there is no “Silver Bullet”. We need to set a baseline to measure this continued improvement from, and also bring attention to the reduction of utility strikes to the wider audience and by doing so collectively prevent injury, damage, disruption and raise the performance standards of our industry.

This first report for information relating to 2013 data will in itself not prevent underground excavation damages, but will be a unique industry asset that will help to identify opportunities to do so and measure the effectiveness of excavation and locating training and/or best practices to aid in the prevention of future underground excavation damages.

## PURPOSE

This report provides results from data collected from all stakeholders contacted (not just those that are USAG members) and will be used to highlight trends in asset damage throughout the UK so that we can all learn why damages occur with the aim to combine our talents and work together to tackle the causes and provide a focus towards the elimination of them over time.

Similar reports are produced annually in other parts of the world including America, Canada and Australia with voluntarily submitted data that generate some real insights to the world of utility damage prevention.

We need to show that the UK is equally committed to improving our practices, to continue to reduce damages and ensure everyone goes home safe each and every day. No such analysis of information on a national scale has ever been attempted and we hope that by working together we can make sure that whilst working on and around underground assets that any unnecessary contact with utilities becomes a thing of the past.

## DATA COLLECTION & CONFIDENTIALITY

The data used within this report was gathered through a six week survey period following requests to USAG Members, associated CECA Members as well as other key stakeholders.

The data request included:

A letter (Appendix 1) introducing the report and what our intentions were.

The sharing of such information is recognised as being of a sensitive nature and to overcome this potential reticence to release data with others we provided a Non-Disclosure Agreement. This is attached in Appendix 2.

And thirdly a Strikes Data Template (Appendix 3) which was in a standard (Excel) format which was circulated to prevent hundreds of hours of manual collation of thousands of records.

## ACKNOWLEDGEMENTS

Thank you to all of those that responded with utility strike information, sharing their sensitive data for the wider good of the construction industry, your support is very much appreciated.

## DEFINITIONS

- Utility Strike: Any service (as defined below) damaged during works involving drilling, excavation/backfilling or heavy loads where sheath or protective wrap has been pierced or damaged, or the service has been severed, crushed or dented. This also applies to services that are damaged if the asset owner hasn't given express written permission to break them out.
- Near miss: A near miss is where a utility strike was narrowly avoided or could have happened due to an avoidable incident but by sheer good fortune didn't occur.
- Services: Any above or below ground cables (telecoms, data, control cables, electricity (all voltages)), pipes (gas, district heating systems (all temps), water, sewer, fuel, oil), ducting and drains including any associated features or unidentified utilities either individually or collectively within containment.



# EXECUTIVE SUMMARY

This inaugural report summarises the key findings of over 5800 utility strikes encountered in the UK during 2013 from 38 participants and provides a reliable benchmark on which to work on to avoid the utility strikes encountered across the UK.

It highlights works and practices that cause the most damages and provides scope and recommendations to:

- Avoid future damages
- Improve the ability to analyse the strike data in future years.

It provides practical useful information and it is recommended that all contributors and interested parties distribute it within their organisations and to the wider industry to both help develop awareness of the conclusions from the 2013 data and to increase the volume of data contributors for future years.

## BACKGROUND

The number of excavations across the UK has been previously estimated to be in the region of 4 million per annum across the streetworks network although it is not known on what basis this statistic was based.

The number of excavations is not a metric that is usually reported in a uniform manner. It is estimated that the total number of excavations represented by the data collected is in the region of 500,000 for 2013 which is felt to be a good sample size for results and conclusions to be drawn from. The specific industries represented by the sample data cover a wide range, including water, gas, electricity and general construction.

The data was collected from 38 industry participants which includes over 5,800 utility strikes. These strikes have been analysed in the following report in the areas below:

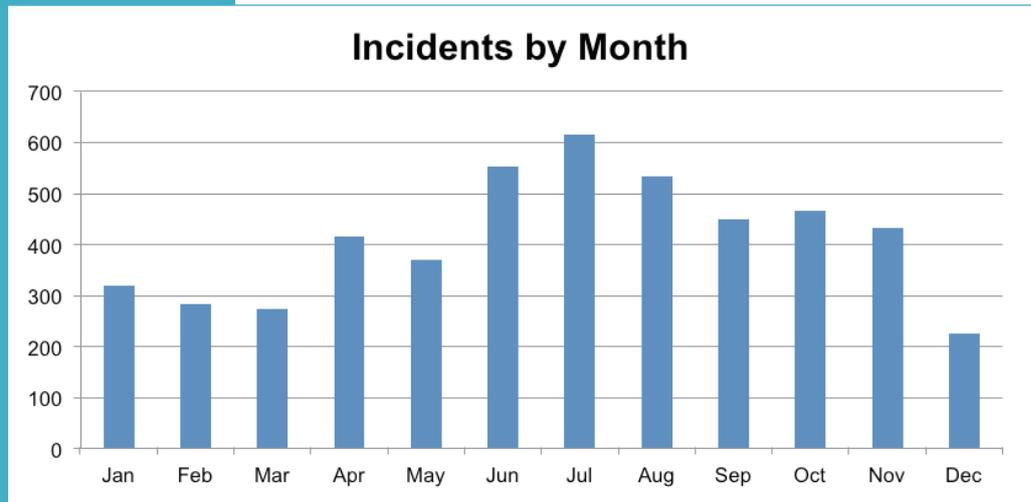
- When the incident occurred
  - » Month
  - » Day
  - » Time
- Where the incident occurred
  - » Location type
- How the asset was damaged
  - » Equipment used
- What asset was damaged
  - » Asset type
- Why the asset was damaged
  - » Incident cause.

Each section shows a graph of the data, a brief commentary on the trends, some recommendations for the 2014 data report to allow better analysis and some guideline industry recommendations based on the 2013 data received.

## FUTURE ANALYSIS

Although the report makes recommendations throughout the document relevant to each section, there are already further areas of analysis that will be asked for in future years including a standard metric to measure volume of works across the industry, assessing the data by its source (i.e. contractor or utility owner) and classifying planned and responsive works. Any suggestions will be warmly received by the Data Reporting Group at USAG.

# USAG 2013 STRIKE ANALYSIS

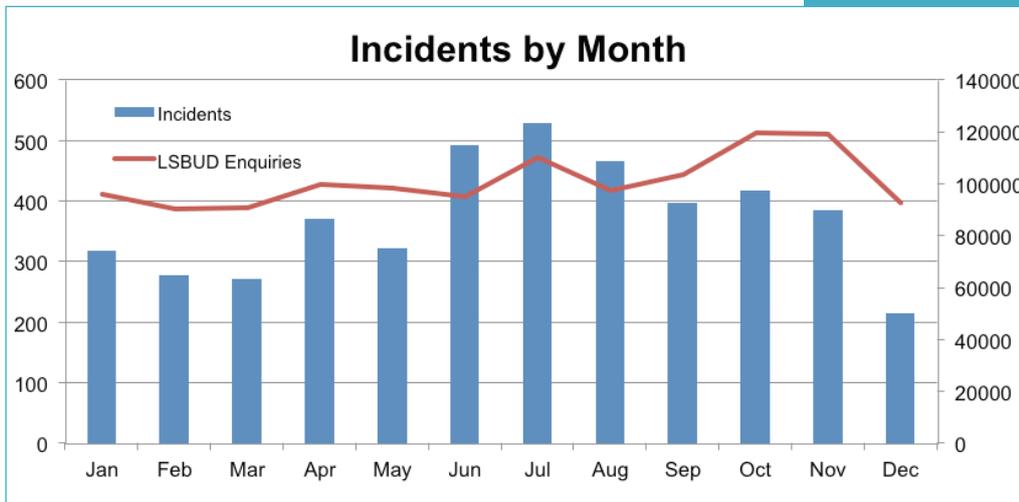


## COMMENTARY

The worst month for volume of strikes is July, with June and August the next highest, so it is clear that the worst three month period is June-August. It is likely that three principle factors could explain this:

- Time of Year – longer daylight hours together with better weather means that more work may have taken place in these months, resulting in higher strikes simply on a pro-rata basis when compared to the other months
- Financial Year end date– for planned work with a new financial year in April (say) will be a time lag to enable design/planning prior to construction start. Included with this factor is meeting end of year targets
- Personnel undertaking the works – there could be a correlation between the number of temporary/ agency staff working to cover holiday periods.

It is important to understand against what background data and information the number of damages can be compared to in order to start considering industry performance. As almost all suppliers of the strike data work in different ways of assessing their total quantum of works undertaken, one source of data of known nationwide pan industry works in the UK is through the LinesearchbeforeUdig service, so the enquiry volume data has been added to the graph below:



## COMMENTARY

As the graph shows, there is a correlation between the two sets of data, particularly in the periods from January to May and September to December where there is a direct correlation. An interesting observation is that in the period between June and August, while there is still some element of correlation, the number of strikes jumps above the scale for the only period during the year.

There could be many reasons for this but the initial indication may be that the types of personnel undertaking the works is a more significant factor than first thought.

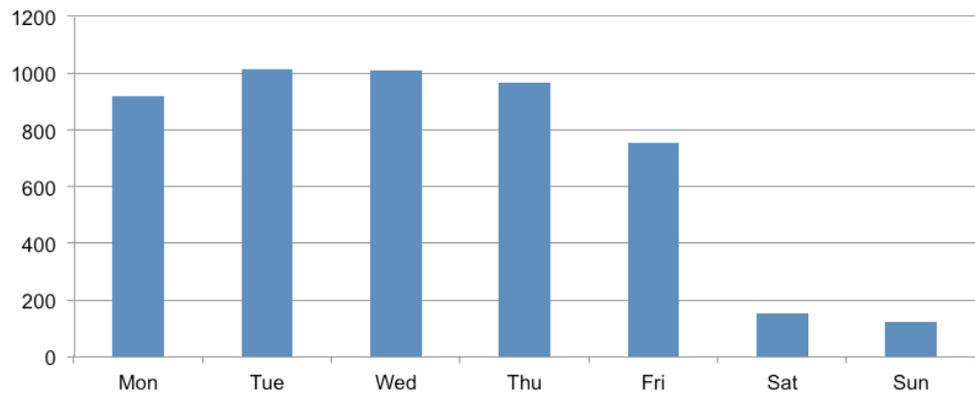
## RECOMMENDATIONS FOR 2014 DATA REPORT

- In order to make the results shown more relevant, include the indicative man hours worked per month to show whether there is simply more work done and the same percentage of incidents or whether certain months have highest proportions of incidents
- Review other sources of data (in addition to LinesearchbeforeUdig) for works undertaken
- Ask contributors, particularly larger contributors, for their analysis and potential explanations from their data provided.

## GUIDELINE INDUSTRY RECOMMENDATIONS

Be aware of months that may be higher risk and ensure that guidance is in place to mitigate any of the factors above.

### Incidents by weekday



#### COMMENTARY

No significant trend was shown other than the expected reduction of strikes over the weekend when the work is also significantly reduced. There seems to be a minor peak through the middle of the week (Tues & Weds) with a tail off towards the latter part of the week. This could be as a result of more setting up works at the beginning of the week and backfilling/closing down sites towards the end of the week.

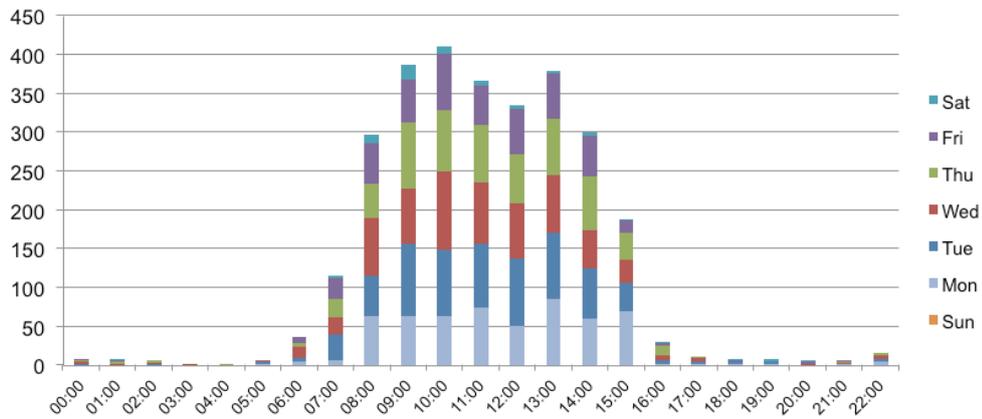
#### RECOMMENDATIONS FOR 2014 DATA REPORT

- Compare against types of assets damaged or severity of strikes against each day
- Compare the day against the location.

#### GUIDELINE INDUSTRY RECOMMENDATIONS

- Consider individual working practices as to higher risk days of utility strikes.

## Incidents by Time of day



### COMMENTARY

The peak time for incidents is 10:00hrs with the period between 0900 and 1300 being when the majority of utility strikes occur. This is not altogether surprising due to 'typical' working days.

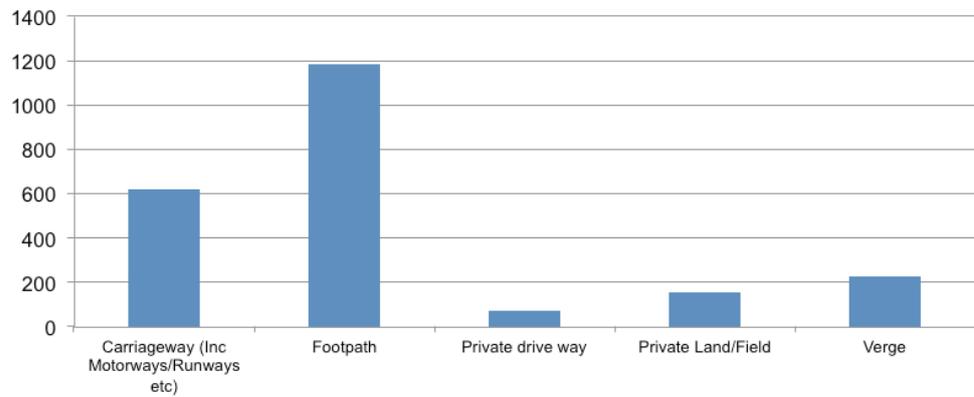
### RECOMMENDATIONS FOR 2014 DATA REPORT

- Compare against types of assets damaged or severity of strikes at each period
- Compare the time of strike against the location.

### GUIDELINE INDUSTRY RECOMMENDATIONS

- Consider individual working practices as to higher risk times of utility strikes.

## Incidents by Location Type



### COMMENTARY

Footpaths is clearly where most of the strikes have occurred from the collected data. Much of the excavation works undertaken across the industry is within the footpath to effect the installation or repair of utilities which is where the majority of them are located; a relatively small area with a relatively congested amount of utilities.

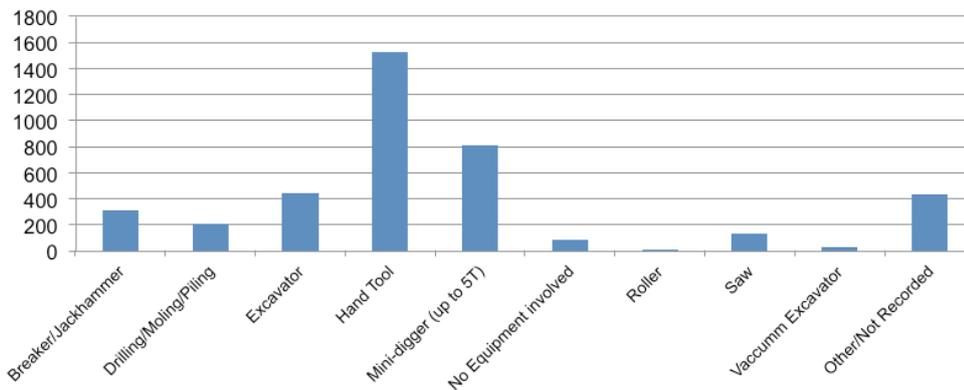
### RECOMMENDATIONS FOR 2014 DATA REPORT

- Analyse what was struck in each location, particularly for carriageways and footpaths
  - » By type of equipment
  - » By type of asset damaged.

### GUIDELINE INDUSTRY RECOMMENDATIONS

- Consider individual working practices as to higher risk areas of utility strikes.

## Incidents by Equipment used



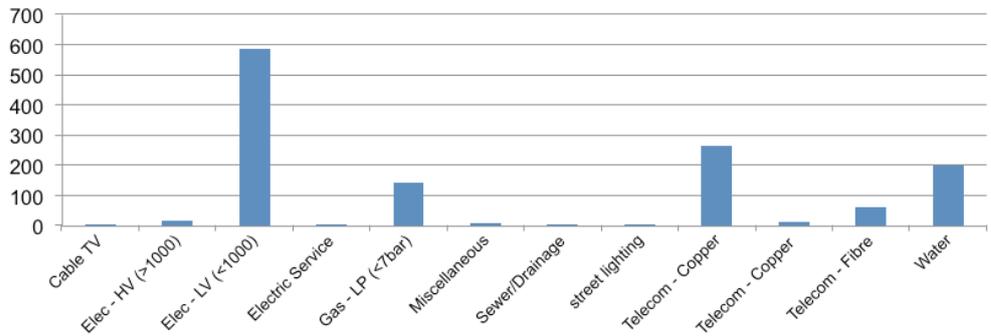
### COMMENTARY

Hand Tools and Mini-diggers have been shown to represent the top two highest numbers of equipment being used when a strike event occurred in 2013. This is likely to be aligned with them being the most used pieces of equipment across the industry but could also be as a result of other factors using the equipment.

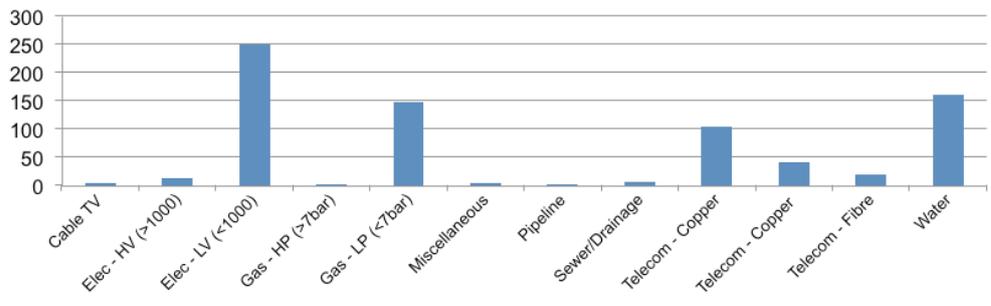
Many large companies use the mini-digger as the preferred equipment type as it is better suited to excavate in the footpath due to its size and manoeuvrability to take off the top of the footpath construction. Many reasons that could be put forward why the mini-digger is a 'high-hitter' is potentially due to shallow services or mis-use of the mini-digger where it is being used after the surface has been removed rather than continuing the dig by hand.

The results were then further analysed to assess the comparison of what damages the two highest sources of damage, hand tools / mini diggers affected (overleaf).

### Types of Assets Damaged with Hand Tools



### Types of Assets Damaged with Mini Diggers



#### COMMENTARY

Further analysis of strikes vs the Type of Equipment used shows that from the reported data Hand Tools and Mini Diggers cause damages in similar proportions to the same assets; predominantly Electric (Low Voltage), Water, LP Gas and Telecoms which is not unexpected.

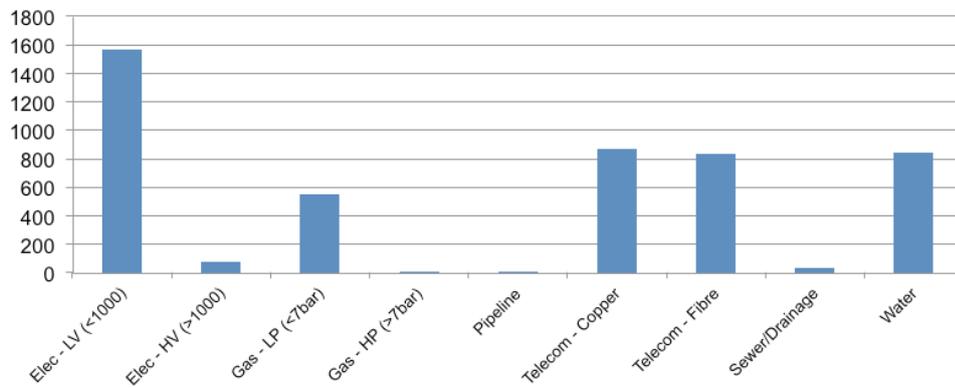
#### RECOMMENDATIONS FOR 2014 DATA REPORT

- Further comparisons of equipment used (particularly hand tools and mini diggers but perhaps other sources)
  - » Against asset damaged
  - » Against severity of damage (including interruption of supply)
- Review results with USAG Training and Education Group.

#### GUIDELINE INDUSTRY RECOMMENDATIONS

- Consider individual working practices as to higher “risk” equipment used.

## Incidents by Asset Damaged



### COMMENTARY

The highest volume of strikes is Low Voltage electricity cables (<1000V); the majority of which are likely to be street lighting cables. These types of cable are mainly located in footpaths, are rarely identified on plans, are often not live and are often shallow.

Copper and Fibre strikes could also be very common because they are also very shallow and together with LV cables can also be very difficult to locate on site.

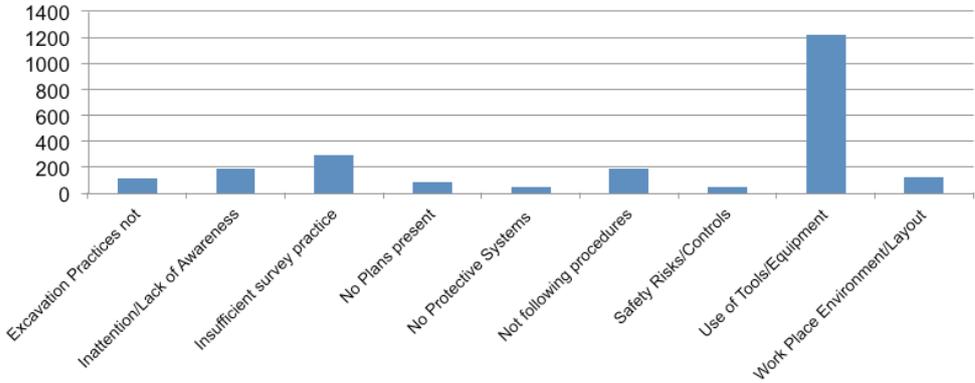
### RECOMMENDATIONS FOR 2014 DATA REPORT

- Separate street lighting from LV cables
  - » Bar chart to show split of each section (LV electric grouped into LV and SLCs)
- Water- split into service pipe or main
- Telecoms- include overheads
- Material of asset hit (gas and water)- metallic or non-metallic.

### GUIDELINE INDUSTRY RECOMMENDATIONS

- More street lighting cables to be on site plans
- More visibility of telecoms and fibre plans
- Undertake PAS128 "Type B" surveys with multi-frequency radar
- Develop Locator training.

### Incidents by Cause of Damage

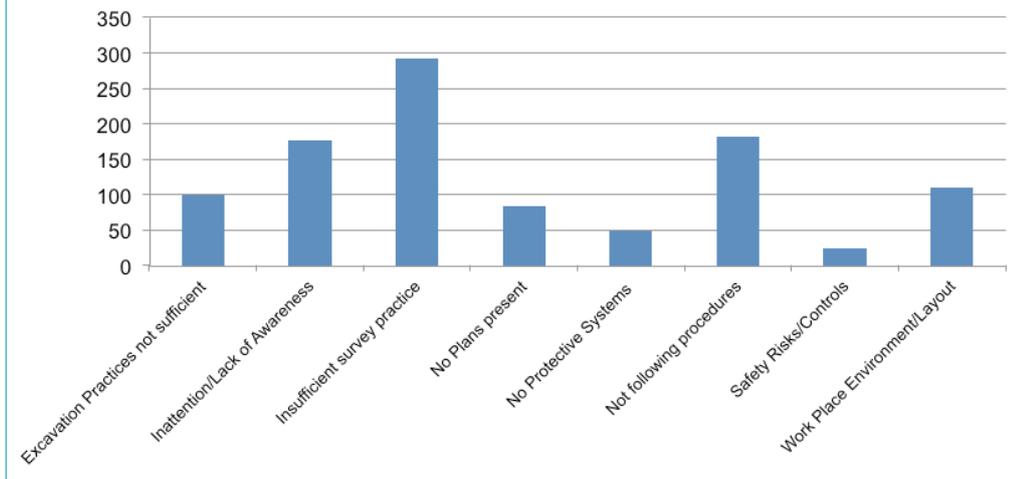


#### COMMENTARY

This section is opinion/judgement based and that must be considered against the other sections which are based on fact. For example, use of tools/equipment may be stated as the cause of damage where the actual cause was that operative was not following procedures. As such although we have included it here to show the figures that were collated we have removed it in the next graph to highlight the causes that are without ambiguity.

The incorrect Use of Tools/Equipment represents 52% of the strikes reported, which requires more analysis as to why this is happening and introduces the potential issue of a behavioural problem. Taking this source of information out produces the following graph:

## Incidents by Cause of Damage



### COMMENTARY

This graph has the “Use of Tools/Equipment” removed to help understand other areas that could be significant contributing factors.

Insufficient Survey Practices should also focus minds on this vital task before proceeding with any actual works.

### RECOMMENDATIONS FOR 2014 DATA REPORT

Need to ensure that the data covers WHY the damage occurred rather than HOW or WHAT:

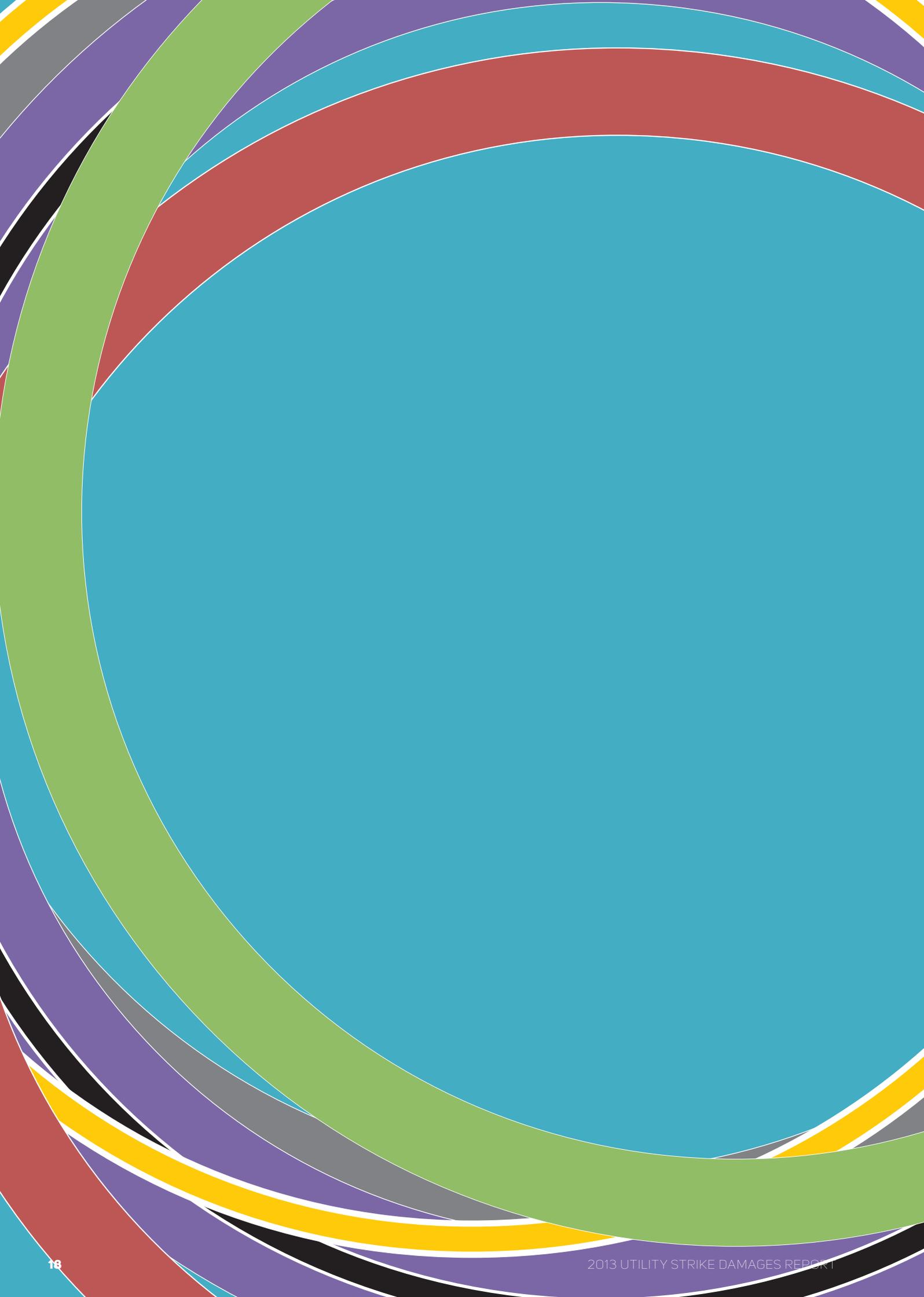
- Remove the option for use of tools/equipment.

Simplify and define categories for cause of damage:

- Pre works
  - » Presence of plans for asset damaged, (correlate with Emergency works)
  - » Accuracy of plans
  - » Locating practices
  - » Location practices not sufficient
  - » Inaccuracy of location equipment
- Post works
  - » Not following procedures
  - » Clearance not maintained
  - » Marks lost on ground
  - » Backfilling/trench support
  - » Workplace environment.

### GUIDELINE INDUSTRY RECOMMENDATIONS

- Awareness of potential issues and ensure that accurate analysis of WHY asset damages occurred is accurately recorded.





## CONCLUSION

This inaugural report, based on 5800 utility strikes, provides some useful observations and potential recommendations to help promote safer working practices. We recognise that there is much more work to do in this field and look forward to developing the report to address these aspirations. Thank you for reading it and for all those that helped contribute to its success.

# APPENDICIES

## 1. LETTER TO INDUSTRY

RE: Underground Asset Damage Report request for information

The Utility Strike Avoidance Group (USAG) is a collaborative group of over 100 utilities, asset owners, industry groups and contractors that seek to ensure the highest standards of safety and best practice when carrying out essential work on the vital services for our homes and businesses. In particular it will help those carrying out work avoid disrupting supplies through accidental strikes on utilities in the ground. As part of its renewed drive towards the elimination of risk the USAG Steering Group has set up some specific Working Groups to start to tackle key focus areas that will assist the utilities industry as a whole.

It is recognised that there are many other groups and organisations actively engaged and working hard in the pursuit of elimination of utility strikes and big improvements have genuinely been made because of this effort and raised awareness. However, in order to support these activities there now needs to be a collective effort across the whole of the industry to make an effective and sustainable step change – there is no Silver Bullet. We need to set a baseline to measure this continued improvement from, and also bring attention to the reduction of utility strikes to the wider audience and by doing so collectively prevent injury, damage, disruption and raise the performance standards of our industry.

One of the USAG groups identified to assist with this is the Data & Reporting Working Group. The initial intention of this Data & Reporting Working Group is to produce an annual Underground Asset Damage Report. This report will provide results from data collected from all stakeholders, and not just those that are USAG members, and will be used to highlight trends in asset damage throughout the UK. No such report currently exists in the UK. It is hoped through your support of this work that you will provide your information using the attached template to start to help us tackle some of the issues. The resultant report based on all the collated feedback will be distributed publicly, so that we can all learn why damages occur with the aim to combine our talents and work together to tackle the causes and provide a focus towards the elimination of them over time.

Similar reports are produced annually in other parts of the world including America, Canada and Australia with voluntarily submitted data that generate some real insights to the world of utility damage prevention.

We need to show that the UK is equally committed to improving our practices, to continue to reduce damages and ensure everyone goes home safe each and every day. No such trawl of information on such a national scale has ever been attempted and we hope that by working together we can make sure that whilst working on and around underground assets that any unnecessary contact with utilities becomes a thing of the past.

The sharing of such information is recognised as being of sensitive nature and to overcome this potential reticence to release your data with others we have drafted a Non-Disclosure Agreement which will hopefully be sufficient to enable you to complete the required template. This invitation to share previously uncirculated and confidential data is a first; but this data is industry data for use by the industry, for the overall betterment of our industry and the community.

This first report for information relating to 2013 data will in itself not prevent underground excavation damages, but will be a unique industry asset that will help to identify opportunities to do so and measure the effectiveness of excavation and locating training and/or best practices to aid in the prevention of future underground excavation damages.

This request for information and any data voluntarily received will be strictly governed by the attached Non-Disclosure Agreement. Please also find attached a data structure template which can be used or, as an alternative, please provide your 2013 related utility damage information in another suitable format.

Please provide as much relevant data as you hold and return via the email address below: [data@utilitystrikeavoidancegroup.org](mailto:data@utilitystrikeavoidancegroup.org) .

The deadline date for return of information will be 28.11.2014 and your efforts to keep to this deadline will be most appreciated, as it will enable the finalised report to be compiled and made available prior to the end of this year.

Kind Regards,

Data & Reporting Working Group  
Utility Strike Avoidance Group

## 2. NON-DISCLOSURE AGREEMENT

Between:

Energy Network Association (“ENA”) whose registered office is at Dean Bradley House, 52 Horseferry Road, London, SW1P 2AF, on behalf of the Utility Strikes Avoidance Group (“USAG”)

and

Company Name, Company Number, Registered Address (“The Data Provider”)

(each a “Party” and together the “Parties”).

USAG and The Data Provider wish to exchange information relating to the current and potential future joint arrangements that the Parties are considering, relating to the USAG Data & Reporting Group (“Project”).

The Parties are entering into this Agreement (“Agreement”) for their mutual benefit in order to define their respective rights and obligations in relation to the disclosure of Confidential Information by any Party (the “Disclosing Party”) to any other Party (the “Receiving Party”) in connection with the Project.

### 1 Definitions

In this Agreement:

1.1 “Confidential Information” means:

1.1.1 Information which by its nature is confidential, is designated by the Disclosing Party as confidential or which the Receiving Party knows or ought to know is confidential and which is disclosed by or on behalf of the Disclosing Party to the Receiving Party, or otherwise is in the possession of the Receiving Party, in connection with the Project; in each case whether disclosed before, on or after this Agreement including information which is disclosed orally, in writing, or by any other means including (without limitation) printed, other graphic or documentary form, electronic format, visually by way of model or demonstration and, in each case, any copy thereof.

1.2 Notwithstanding Clause 1.1 above, Confidential information shall not include information which:

1.2.1 entered or subsequently enters the public domain without breach of this Agreement or any other obligation of confidentiality by the Receiving Party;

1.2.2 the Receiving Party can demonstrate was already in its possession or known to it by being in its use or being recorded in its files or computers or other recording media prior to receipt from the Disclosing Party and was not previously acquired from the Disclosing Party under any obligation of confidentiality;

1.2.3 is disclosed to the Receiving Party by a third party without breach by the Receiving Party or such third party of any obligation of confidentiality owed to the Disclosing Party;

1.2.4 the Receiving Party can demonstrate is independently developed or discovered by or for it not as a result of any activities relating to the Project;

1.2.5 is disclosed by the Receiving Party with the prior written permission of the Disclosing Party;

1.2.6 subject to clause 3, is required to be disclosed in accordance with FOIA, if applicable, or otherwise is required to be disclosed by law, regulation or order of court or any other governmental or other regulatory authority.

1.3 “FOIA” means the Freedom of Information Act 2000.

1.4 “Group” means in relation to a Party that Party and every subsidiary undertaking or parent undertaking of such Party and any subsidiary undertaking of such parent undertaking from time to time and for the purposes of this definition “subsidiary undertaking” and “parent undertaking” shall have the meanings given to them by section 1162 Companies Act 2006;

1.5 “Purpose” means any discussions and negotiations between or within the parties concerning or in connection with the Project;

## **2 Restrictions on Disclosure and Use**

In consideration of the mutual exchange and disclosure of Confidential Information, and subject always to the requirements of Clause 3, each of USAG and The Data Provider undertakes as Receiving Party:

- 2.1 to keep the Confidential Information confidential at all times;
- 2.2 to use it only for the Purpose and not for any other purpose including (without limitation) not to make any commercial use of it and not to use the same for the benefit of itself, its Group or any third party other than pursuant to a further written agreement with the Disclosing Party;
- 2.3 to ensure that the Confidential Information, when used for the Purpose, is sufficiently anonymised such that the identity of the Disclosing Party and the fact that the Confidential Information was made available by the Disclosing Party cannot be ascertained by any other person;
- 2.4 not to disclose, without the Disclosing Party's prior written consent:
  - 2.4.1 the fact that the Confidential Information has been made available to the Receiving Party or any other person; or
  - 2.4.2 the fact of discussions or negotiations between the Receiving Party and the Disclosing Party in relation to the Project; or
  - 2.4.3 any proposed or possible terms or conditions which are applicable in relation to the Project;
- 2.5 to take reasonable security precautions (at least as comprehensive as the precautions the Receiving Party takes to protect its own confidential information) to keep confidential the Confidential Information;
- 2.6 Subject to the conditions set out in Clause 2.2 above, not to disclose Confidential Information to any person except in confidence as is necessary for the Purpose to such of its directors, employees and professional advisers and the directors and employees of the members of its Group who need access to the Confidential Information solely for the Purpose and provided that all such persons to whom Confidential Information is so disclosed are informed of the terms of this Agreement and either (i) are obliged by their contracts of employment or service, or by a professional duty of confidence not to disclose the same or, as the case may be, or (ii) enter into legally binding confidentiality agreements on equivalent terms to this Agreement;
- 2.7 to be responsible for the performance of Clauses 2.1, 2.2, 2.3 and 2.4 above on the part of its directors, employees and professional advisers to whom Confidential Information is disclosed pursuant to Clause 2.6 above;
- 2.8 not to copy, reproduce, summarise or reduce to writing any part of any Confidential Information except as may be reasonably necessary for the Purpose; and
- 2.9 not to reverse engineer, decompile or disassemble any software disclosed by the Disclosing Party.

## **3 Notification of Unauthorised Disclosure**

The Receiving Party shall notify the Disclosing Party immediately upon discovery of any unauthorised use or disclosure of Confidential Information by the Receiving Party or any person to whom it discloses pursuant to this Agreement, or any other breach of this Agreement by the Receiving Party or such other person, and will co-operate with the Disclosing Party in every reasonable way to help the Disclosing Party regain possession of the Confidential Information and prevent its further unauthorised use.

**4 Return of Confidential Information**

- 4.1 Upon receipt of the Disclosing Party's request in writing, and in any event upon the termination of this Agreement, the Receiving shall, and shall procure that any persons to whom it discloses Confidential Information pursuant to this Agreement shall, return to the Disclosing Party all documents and materials containing Confidential Information, (including any copies, reproductions, summaries and reductions to writing thereof) or, at the Disclosing Party's option, destroy and certify the destruction of the same.
- 4.2 Notwithstanding the completion of the Purpose or the return or destruction of documents as contemplated in Clause 4.1 above or the termination of this Agreement, the Receiving Party shall continue to be bound by the undertakings set out in Clause 2.

**5 Termination**

This Agreement may be terminated by either party in writing.

**6 Property in Confidential Information**

All Confidential Information is and shall remain the property of the Disclosing Party notwithstanding anything added thereto by the Receiving Party. By disclosing information to the Receiving Party, the Disclosing Party does not grant any express or implied right to the Receiving Party to or under any of the disclosing Party's patents, copyrights, trademarks, or trade secret information. No warranty or representation, express or implied, is given as to the accuracy, efficiency, completeness, capabilities or safety of any materials or information provided under this Agreement.

**7 General**

- 7.1 Neither Party shall assign or transfer any of its obligations under this Agreement without the prior written consent of the other Party.
- 7.2 This Agreement constitutes the entire understanding between the Parties related to the disclosure and protection of the Confidential Information disclosed under it.
- 7.3 This Agreement shall be construed in all respects in accordance with English law and the Parties hereby submit to the exclusive jurisdiction of the English Courts.

In witness whereof this Agreement has been duly executed on the date first written above.

Signed for and on behalf of the Utility Strikes Avoidance Group

Name of signatory: Marcus Edwards

Title of signatory: USAG Data & Reporting Chair

Signed for and on behalf of The Data Provider

Name of signatory:

Title of signatory:

### 3. STRIKE DATA TEMPLATE

The data elements have been clearly outlined in the below Data Categories Appendix.

	A	B	C	D	E	F	G	H
1	 <b>Utility Strike Avoidance Group</b>							
2	Date of Incident	Time of day	Location Type	Asset Damaged	Service interruption (Y/N)	Cause of Damage	Equipment used	Excavator Group
3	10/12/2013	10:30	Carriageway (Inc Motorways/Runw)	Elec - LV (<1000)	Y	Excavation Practices not sufficient	Breaker/Jackhammer	Contractor
4								
5								
6								
7								
8								

## 4. DATA CATEGORIES

### Location Type

TYPE	DESCRIPTION
Carriageway	A constructed surface used by motor vehicles or airplanes
Footpath	A constructed surface used for walking by pedestrians
Garden	A privately owned area of land next to a house
Private drive way	A vehicular access to a house
Private land/field	An enclosed area of land predominantly in agricultural use
Unmade ground	An unconstructed/temporary surface used for vehicular access or parking
Verge	A grassed area located adjacent to footpath or carriageway
No location recorded	Incident location not reported

### Asset Type

TYPE	DESCRIPTION
Elec - LV (<1000)	An electrical service cable carrying a load of up to 1000v
Elec - HV (>1000)	An electrical service cable carrying a load above 1000v
Gas - LP (<7bar)	A gas pipe which operates up to a pressure of 7 bar
Gas - HP (>7bar)	A gas pipe which operates over a pressure of 7 bar
Pipeline	A pipe that conveys fuel e.g. oil
Telecom - Copper	A telecommunication cable
Telecom - Fibre	A telecommunication fibre optic cable
Sewer/drainage	A pipe that conveys waste, surface or combined water flows
Water	A water pipe that conveys potable or raw water.

### Cause of Damage

TYPE	DESCRIPTION
Excavation practices not sufficient	No or inadequate development/ implementation/ enforcement of safe system of work
Inattention/lack of awareness	Followed company procedures but adjudged as human error
Insufficient survey practice	Not fully marked up/maintained survey
No plans present	Excavation carried out with utility plans not on site
No protective systems	No or inadequate guards or protective systems or PPE
Not following procedures	Identified that Company Procedures were not being fully followed by individual or by group
Safety risks/controls	Unaware of hazards present or PPE not being used
Use of tools/equipment	Inappropriate/misuse of plant, tools or equipment
Workplace environment/layout	Congested or restricted motion or inadequate or excessive illumination

Equipment Type

TYPE	DESCRIPTION
Breaker/Jackhammer	A hand held pneumatic or electro mechanical tool used to break up hard surfaces eg concrete, pavements, road surfaces
Drilling/Moling/Piling	Method of construction being used
Excavator	Tracked or wheeled mechanical plant above 5T using a bucket or similar attachment fixed to a boom to carry out excavation activity
Hand Tool	A hand held tool used to excavate eg graft, spade, shovel
Mini-digger (up to 5T)	A small excavator less than 5T
No equipment involved	Reported incident caused by no equipment eg falling spoil/material
Roller	Plant used to compact backfill material
Saw	Plant used to cut through footpath/carriageway surface eg Stihl saw, road saw
Vacuum Excavator	Plant used to remove granular material from trenches and around pipes and cables by use of powerful suction
Other/not recorded	Incident with either bespoke/non-standard equipment or no equipment reported

Excavator Group

TYPE	DESCRIPTION
Contractor	N/A
Developer	N/A
Government	N/A
Occupant/farmer	N/A
Other	N/A
Utility	N/A





**2013 UTILITY STRIKE DAMAGES REPORT**

PREPARED BY THE USAG DATA  
& REPORTING WORKING GROUP

23 JUNE 2015