

RPA Safety Services Ltd.

HSG47

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RPA Safety Services Ltd.

Introducing RPA Safety Services

RPA Safety Services

Independent chartered safety advisers, providing competent occupational safety support for the geotechnical sector

Representing:

- Construction contractors
- Geotechnical contractors
- Manufacturers

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Background to this presentation

The contents of this presentation are based on numerous incident investigations and passionate discussions with peers and clients.

It also relies on anecdotal evidence from training course attendees:

- Site operatives and supervisors
- Directors and senior managers

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The number one safety issue

If you ask ground workers, street operatives and civil engineers, they generally identify underground services as one of the greatest risks they face

- Have the potential to cause significant harm
- Always present
- Rarely have a complete 'safe system of work'

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Avoiding danger from underground services

What are the consequences of getting it wrong?

Typically in a year

Fortunately there are few fatalities from striking electrical cables

10+ major injuries every year caused by electrical service strikes
20+ 3 day injuries every year caused by electrical service strikes
50+ reported fires or explosions caused by electrical service strikes

Many electrical service strikes remain unreported

Source :Health and Safety Executive

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Strikes often go unreported

2007 – 8	57	}	All construction – source HSE
2008 – 9	45		

Under the RIDDOR regulations, contact with an overhead service is reportable as a dangerous occurrence. While there is no absolute duty to report an underground service strike, the regulations imply as much:

'Electrical short circuit or overload attended by fire or explosion which results in the stoppage of the plant involved for more than 24 hours or which has the potential to cause the death of any person.'

There is pressure not to report. Every supplier questionnaire implies assessment will be based on the number of dangerous occurrences, so every effort is made to find a reason **NOT** to report.

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The cost to organisations and individuals

A Kent-based construction and engineering company has been fined after an employee suffered severe burns when his jack hammer touched an exposed underground electricity cables.

On the 12th October 2010, the company was fined £20,000 and was also ordered to pay costs of £14,532.

The 28 year old operative from Ashford suffered 62 per cent burns to his upper body, face, neck and arms when he inadvertently struck the 11,000 volt cable while working at a construction site in Tovil, Maidstone.

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The cost to organisations and individuals

IN COURT

Firm fail Pcestone Construction appeared in court on 15 November and pleaded guilty to breaching reg.4(3) of the Construction (Design and Management) Regulations 2007, for failing to identify the risks posed by underground cables. It was fined £13,000 and ordered to pay £3870 towards costs.

RECORD
A construction worker has suffered serious burns from a jackhammer when he struck an live power cable while using pneumatic drill.

Worst Allegations that the firm's safety had been cut out to cut groundwork during the of residential project in Maidstone.

On 13 August 2009 firm's employee was struck by a 11kV cable which was being dug by a worker. In order to be needed to back the current agreement. It has been reported that the firm's safety had been cut out to cut groundwork during the of residential project in Maidstone.

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The cost to organisations and individuals

The typical cost of a service strike is £5,000

Striking an oil filled cable is very expensive. The environmental clean-up of this strike was £70,000

This is cost. If a company has a profit margin of 10%, then the real cost of this strike would be more like £700,000

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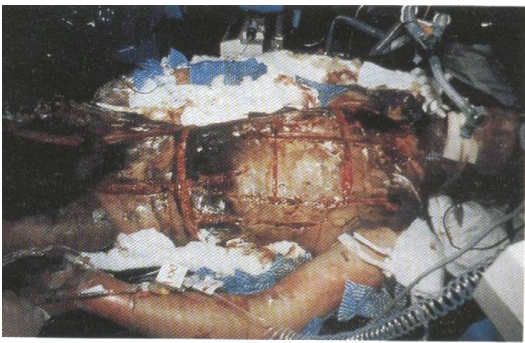
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Moral obligation

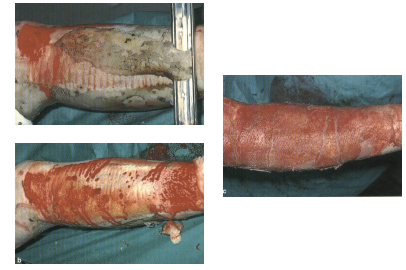
Please be aware the next few slides show very serious injuries, which you may find disturbing.

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Moral obligation

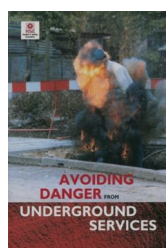


Moral obligation



What can we do?

Develop safe working processes for your business



What can we do?

What status CDM ACoP?

L144 (CDM ACoP)

A quasi-legal document which although non-compliance does not constitute a breach, if the contravention of the act or a regulation is alleged, the fact the code was not followed will be accepted in court as evidence of failure to do all that was reasonably practicable.

A defence would be to prove that something equally as good or better had been done.



CDM Duties

Client shall ensure the team has:

- information that it needs about the site and any existing structures
- the time, money and other resources available for projects

Contractor shall ensure

- clients are aware of their duties
- that they and anyone they employ or engage are competent and adequately resourced

.....and on all sites:

- regulation 4(3)



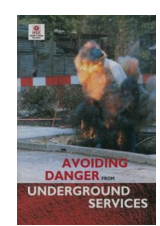
What can we do?

What status HSG47?

An HSG document is issued by the Health and Safety Executive but following the guidance is not compulsory.

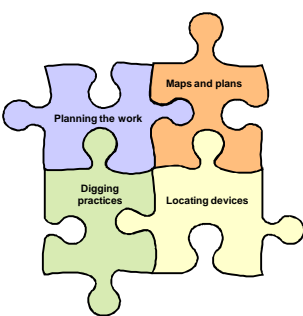
You are free to take other action, but if you do follow the guidance you will normally be doing enough to comply with the law.

Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.



HSG47 Duties

- *Planning of the work*
- *Maps and plans for all sites*
- *Positive identification of services on site, through careful hand digging if necessary*
- *Safe digging techniques*
- *Use of appropriate locating devices*



Dead or Alive?

Plan the work

Notify as required by CDM

Involvement of the CDM Co-ordinator at the correct stage, should ensure the Client accepts their responsibility for the provision of time and resources to get the work done safely. Ground work phases should be included.

Quotes can then be based on pre-construction safety information obtained from maps and plans.

- Safe digging requirements can be established and costed
- The types of detection equipment can be determined and obtained

Correct notification also identifies who is in charge on site, thus strengthening the role of the contractor.

Maps and plans

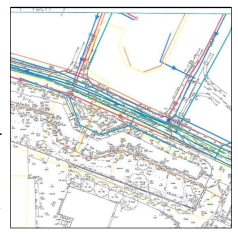
Reasonably practicable?

Maps and plans should be available on site for the use of staff and they must be suitable and sufficient.

They can generally be obtained within 7 working days and in some cases, even faster. Electronic versions, which are now becoming popular, are available almost instantly.

They are generally free or available for a very minimal cost.

We can see no reason why they can't be provided



Safe digging practices

Careful hand digging to find services



Consider alternative digging techniques



Appropriate locating equipment



Appropriate locating equipment

Train staff how to use it



Invest in some training

You would be surprised:

- How many candidates think a CAT is a metal detector
- Few candidates understand a CAT will not find ALL live electrical cables

I'm still stunned by the number of companies who buy signal generators and they never get used

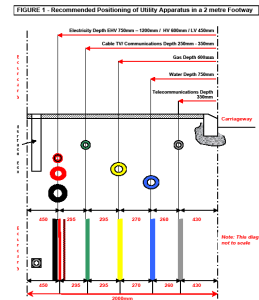
Yet:

- Passive tracing finds only 22% of services
- Passive plus active tracing finds 40% of services
- These combined with threads and sonds find 70%

Invest in some training

Although NJUG have attempted to define how services shall be laid in the ground, there is little to suggest it is followed or even practical

Staff need to understand the real risk they are taking



Invest in some training

And we need to get people to dig with care



Finally a sales plug



IOSH Avoiding Danger from Underground Services

The first avoidance of services course, certified by a recognised external organisation

More than CAT and Gennie training

Teaches staff how to do a dynamic risk assessment

Any questions?