### PAS 128:

## Improving Utility discovery and effective Site Remediation?

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### At a glance

Atkins is one of the world's leading design, engineering and project management consultancies.

We have the depth and breadth of expertise to respond to the most technically challenging and time-critical infrastructure projects and the urgent transition to a low carbon economy.

In 2013 Atkins is celebrating 75 years in business.



### Introduction & Agenda

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- The problem and the need for a standard
- What is in place at the moment?
- Current practice / standards in the United States
- PAS 128
  - What it is
  - What it purports to do
  - What are the implications?
  - What are the benefits?
- Questions

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### PAS 128 & Utility Management The current state of play

- Atkins is part of the Steering Group that includes key players in the utility and utility detection industry
- Draft document has been circulated for public consultation
- Expected to be published early 2014

### Why is there a need for a standard?

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- Most projects encounter existing underground utilities
  - Highway / infrastructure works
  - New build development projects
  - Refurbishment projects
- Projects may require
  - New Connections / supplies
  - New substations and associated works
  - Diversionary works
  - Protection
  - Lowering

### Why is there a need for a standard?

- Not holding sufficient information can lead to
  - Costly delays
  - Abortive work
  - Damage to third party assets
  - Health and Safety Risks
- There is a lack of agreed best practice or published standards for the detection, recording and exchange of utility data.

### What standards exist at present in the UK?

- There are various guidance notes / codes of practice for utility detection practitioners, however there is no agreed industry standard for the recording and exchange of information that is universal across the sector.
- The Survey Association's Essential Guide to Utility Surveys
- HSG47 Avoiding Danger from Underground Services

### What about elsewhere?

- In the United States, ASCE have published a standard guideline (ASCE 38) for the collection and depiction of subsurface utility data.
- The standard uses the principle of SUE (Subsurface Utility Engineering) and enables classification of the accuracy or "quality" of existing subsurface utility data.
- There is a resultant burgeoning market in the U.S. for utility detection services, as developers aim to achieve higher accuracy of utility information through the latest technologies and utility discovery techniques.
- The result is an informed project manager who can take necessary steps to manage risks imposed by existing utility constraints.

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PAS 128 A new standard PAS 128

- Builds on the standards used in the US (ASCE 38) as well as in Canada and more recently, Australia
- Utilises range of utility discovery surveys and techniques, taking inspiration from ASCE 38 and The Survey Association's guide
- Introduces a methodology for locating and recording buried services information and classifying its accuracy / quality, through
  - Classifying "Survey Categories"
  - Classifying "Detection Methods"
  - Ascribing Survey Quality and Confidence Levels

### Survey Category Types

- Range of survey techniques deployed
- Depends largely on the level of confidence required in the data
- Ranges from desktop (utility records collection) through to on site intrusive exposure of services (verification)
  - Desktop
  - Site reconnaissance
  - Detection TSA
  - Verification

#### **Confidence Levels**

- Derived from the type of survey carried out
- Enables a standard and commonly understood reliability rating for the data
- Will ascribe a confidence level post survey, depending on the methodology and other on site variables

### **Outputs / Deliverables**

- Computer Aided Drawing
- Building Information Modelling
- Metadata
- Common standards and methodology will lead to more efficiency in the market as everybody understand what each other is doing
- Increased confidence will lead to more certainty in decision making in utility conflict management
- Better decision making will lead to lower industry costs in diversions and remediating sites

### **Implications for House Builders**

What does it mean for developers and their contractors?

- Developer Savings in managing the utilities more effectively
- De-risking the utility aspect
- Significantly more program certainty and associated cost benefits
- Common standards and methodology will lead to more efficiency in the market as a result of a common understanding
- Assists HSG 0047 in directing proper utility discovery
- Could be used increasingly as a tool to manage best standards in utility discovery for Health & Safety management, and possibly in court

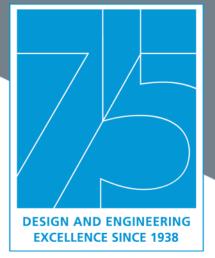
In Summary

- Lack of standard approach in the UK
- ASCE have set the bar in the US
- PAS 128 is being drafted
- Benefits include more certainty from a cost, planning and Health and Safety perspective
- De-risking the utility aspect of a project
- More effective and productive utility conflict management and negotiations



### Any questions?

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