

Best Practice in Avoiding Underground Services

Design, Planning and Site processes to Avoid Underground Services

The tools and documents in this section of the web-site

<http://www.utilitystrikeavoidancegroup.org/> have been prepared by a working group made up of client, designer, contractor and utility service provider representatives from the sponsoring organisations identified below and are freely available

The contribution of the HSE is acknowledged, and users are reminded to refer to the HSE publication HSG 47 (Avoiding Underground Services), which these materials seek to complement.

They have been prepared and made available in an effort to provide leadership from within the industry to improve the risk management of work around underground services and halt the unnecessary injuries and damage caused by the inadvertent damage to underground services, the consequences of which can be devastating.

They do not seek to duplicate, but to signpost best practice (where identified), and provide additional guidance in the avoidance of underground services.

There is a wealth of good practice information available for site works, however particular attention has been given here to the planning and design elements of work in the vicinity of underground services and improving communication between asset owners, clients, designers, planners and contractors

Specific guidance and a toolkit has been provided for clients and designers, guidance on best practice has been provided on designer competence, liaison with service owners and providers, and in relation to proximity of works to underground services, services buried in concrete, and the permit to work process.

The materials seek to follow the established (legal) hierarchy of risk management to Eliminate, Reduce, Inform and Control risks (ERIC), with emphasis on planning, design, diversion and isolation and the behaviours around avoiding underground services.

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Documents included in this section of the web-site are:

GPAUS		Version	Date
01	Cover Sheet, introduction and contents	01	Nov 2013
02	Design and Planning Process to Avoid Underground Services	01	Nov 2013
03	Responsibilities Process Map <i>(including signposting guidance)</i>	01	Nov 2013
04	Opportunities, Responsibilities and checklists for Clients, Designers, Planners and Contractors	01	Nov 2013
05	A Training Framework for Designers and Planners "Designing and Planning to avoid Underground Services and related equipment"	01	Nov 2013
06	Permits to Dig / Permits to Excavate / Permits to work near underground services. Use and Content	01	Nov 2013
07	Proximity Zones for Mechanical equipment <i>"Restrictions when operating mechanical equipment in the vicinity of underground services"</i>	01	Oct 2013
08	Services encased or covered in concrete - introduction	01	Nov 2013
09	Services encased or covered in concrete – Decision Map	01	Nov 2013

Definitions of terms used:

The following definitions expand on, but do not replace, those contained within the Construction, Design and Management Regulations (2007).

Client: the organisation commissioning or instructing design, construction, installation, alterations, maintenance or removal work. The client may be an asset, services or utility owner.

Designer: person or organisation carrying out design, of whatever discipline, including preparation of specifications and selection of plant or materials. A designer may also be a client or contractor.

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Planner: person or organisation planning what work is to be carried out, scheduling, co-ordinating or sequencing. A planner may also decide what method of work is to be adopted, arrange for diversions, isolations and de-pressurisation of services. A planner may be a client, designer or contractor.

Contractor: person or organisation carrying out construction, installation, alteration, isolation, diversion, maintenance, commissioning or removal works. Contractor includes Principal Contractor and any sub-contractor.

Underground service: Any utility service such as gas, electric or water, or any pipeline which transfers a substance above atmospheric pressure, or cable used for the transmission of electricity or data. It is normally below the adjacent ground level, but may emerge into the open or above ground for short sections of its length. It does not include drains, sewers, unsealed pipes or tunnels,.

Underground Services Co-Ordinator: designated individual responsible for co-ordinating information or activity associated with, or likely to affect underground services.

Abbreviations:

USAG	Utility Strikes Avoidance Group
ENA	Energy Networks Association
EUSR	Energy & Utility Skills Register
NJUG	National Joint Utilities Group
IGT	Independent Gas Transporters
DNO	Distribution Network Operator (Electricity)
BIM	Building Information Management
CAT	Cable Avoidance Tool
GENNY	Signal Generator
LV	Low Voltage
HV	High Voltage
EHV	Extra High Voltage
RAMS	Risk Assessments & Method Statements
SSoW	Safe System of Work

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