



Best Practice in Avoiding Underground Services (BPAUS)

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 contractors, asset owners and utility service providers that form part of the Utility Strike Avoidance Group (USAG).

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. The aim is to improve the risk management of work on and around underground services and reduce the number and severity of utility strikes. In turn this will reduce the number of injuries, damage to assets and disruption to customers and other affected stakeholders including businesses and road users.

They do not seek to duplicate, but to signpost industry best practice and provide additional guidance in the avoidance of damage to underground services whilst working on and around these key assets.

There is a wealth of good practice information available from USAG member companies, but particular attention has been given here to the planning and design elements of work. This toolkit should be supported by improved communication between all of the parties involved from planning to delivery.

The toolkit is comprised of specific guidance including:

- Training and competence
- Safe working practices
- Risk assessment
- Planning and design
- Safe use of equipment



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

BPAUS		Version	Date
01	Cover Sheet, introduction and contents	02	Dec 2018
02	Design and Planning Process to Avoid Underground Services	02	Dec 2018
03	Responsibilities Process Map <i>(including signposting guidance)</i>	02	Dec 2018
04	Opportunities, Responsibilities and checklists for Clients, Designers, Planners and Contractors	02	Nov 2019
05	A Training Framework for Designers and Planners “Designing and Planning to avoid Underground Services and related equipment”	02	Nov 2019
06	Permits to Dig / Permits to Excavate / Permits to work near underground services. Use and Content	02	Nov 2019
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 (2015).

Client: organisations or individuals for whom a construction project is carried out. The client may be an asset owner, utility provider or developer or a site.

Designer: are those, who as part of a business, prepare or modify designs for a building, product or system relating to construction work. A designer may also be a client or contractor.

Contractor: are those who do the actual construction work and can be either an individual or a company. 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, culverts, manholes, inspection chambers, storage tanks, unsealed pipes or tunnels.



Abbreviations used within the toolkit:

USAG	Utility Strike Avoidance Group
ENA	Energy Networks Association
EUSR	Energy & Utility Skills Register
SWUK	Street Works UK
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