

Best Practice in Avoiding Underground Services

Client, Designer and Contractor Opportunities, Responsibilities and Checklists

Clients – Opportunities and Responsibilities

Who is a Client?

“client” means a person who in the course or furtherance of a business—

- (a) seeks or accepts the services of another which may be used in the carrying out of a project for him; or*
- (b) carries out a project himself; (CDM Regulations 2007)*

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

What can a client add?

As a client you set the tone, the way in which you incentivise your supply chain, the amount of time you allow them to dedicate to service location and avoidance and the information that you provide them can make all the difference. Those people involved in tendering work can have a special influence by ensuring that the management of the risks associated with underground services is considered during the tendering process and that expectations are clearly set at this stage through robust questioning and provision of responses.

What are clients’ responsibilities?

As a client you have a responsibility to take reasonable steps to ensure the competence of the organisations and people that you appoint, that the right information is available, that sufficient time and resources are provided and that there is a plan in place.

The following checklist provides a simple guide to help clients review whether they are following best practice.

If it is not possible to confirm that an item has been carried out, this should provide a prompt to identify what further action should be taken as appropriate.

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Client Checklist (items 1-12)

- 1 You have defined and provided a clear scope of works which includes requirements for the management of work that may disturb underground services
- 2 Underground services location is included within the scope of works and the price
- 3 You have clearly defined responsibilities for the coordination and management of the information associated with avoiding underground services within your organisation
- 4 You have clearly defined communication processes which include designers, planners and construction teams and which clearly define any change management processes.
- 5 Your tender process requires relevant submissions to provide information clearly explaining how they will manage the risks associated with underground services, This requirement applies to all tiers of your supply chain.
- 6 Sign up to the USAG charter is encouraged for all your supply chain members
- 7 You can demonstrate that your appointed designers and planners are competent to understand and consider the risks associated with underground services
- 8 You have established a clear communication process to contact service owners to obtain information and advice, including local knowledge where appropriate, with a minimum acceptable standard for information e.g utility drawings are in colour, have cross sections included, are no older than 3 months etc.
- 9 You have obtained all relevant necessary and available services information in conjunction with your designers.
- 10 You have allowed your supply chain sufficient time to allow for positive service identification
- 11 You have a clear process in place to ensure that the right information is provided to the right people at the right time, be they designers, planners, contractors
- 12 You have, or there is, an underground services coordinator designated to manage and control the flow of information
- 13 When working on private land obtain all necessary information and permissions e.g. easements and wayleaves.

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Designers (including Planners) – Opportunities and Responsibilities

Who is a designer?

“designer” means any person (including a client, contractor or other person referred to in these Regulations) who in the course or furtherance of a business—

(a) prepares or modifies a design; or

(b) arranges for or instructs any person under his control to do so, relating to a structure or to a product or mechanical or electrical system intended for a particular structure, and a person is deemed to prepare a design where a design is prepared by a person under his control;

(CDM Regulations 2007)

Designers include those who plan works or select materials etc.

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.

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.

What can a designer/planner add?

Designers (and planners) are in a unique position to reduce the risks that arise during construction and associated work. Good design will eliminate, substitute or as a minimum reduce and advise on risks that have not been mitigated. A good designer will coordinate and communicate with their construction colleagues regularly to identify the best, safest design and will provide clear information on risks identified during design and how they were mitigated. Good design prevents injuries.

What are designers’/planners’ responsibilities?

Designers are responsible for ensuring that clients are aware of their duties, seek to eliminate hazards and reduce risks in their designs, to co-operate with others and to provide information about significant risks. They are required to avoid foreseeable risks as far as is reasonably practicable, following the hierarchy of risk management.

The following checklist provides a simple guide to help designers / planners review whether they are following bestpractice.

If it is not possible to confirm that an item has been carried out, this should provide a prompt to identify what further action should be taken as appropriate.

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Designers / Planners Checklist (items 1-11)

- 1 You have a clear scope of works that includes requirements for the management of work near to underground services
- 2 You understand the responsibilities for the coordination and management of the information associated with avoiding underground services.
- 3 You are competent to understand the risks associated with damaging underground services and how to eliminate or reduce those risks through design
- 4 You understand the process for obtaining information and advice from service owners and have obtained all the necessary and available information to inform your design
- 5 You have contacted service owners at concept / pre-design stage to identify whether service isolation or diversion are reasonable and have documented these contacts and discussions
- 6 The information that you have from the service owners is in the best available format e.g.. in colour, including cross sections where applicable, less than three months in age and where reasonable include local knowledge
- 7 You have taken reasonable steps to design to avoid service locations. This should include considering routings, diversions, pre-start removal of services and how works are to be sequenced
- 8 Your design takes account of 'protection/ safety / plant operating proximity zones' for safe excavation around underground services where this cannot be avoided within your design
- 9 You have captured and shared information, to identify service clashes and potential diversions, using BIM or other appropriate techniques.
- 10 You have identified the underground services coordinator and have an effective working relationship, undertake regular reviews and have included this function within your design review process.
- 11 You have a clear communication process in place for the provision of information from you to the construction team, effective hand over meetings are in place and a clear and robust process is in place to capture changes including design changes.

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Contractors – Opportunities and Responsibilities

Who is a contractor?

“contractor” means any person (including a client, principal contractor or other person referred to in these Regulations) who, in the course or furtherance of a business, carries out or manages construction work; (CDM Regulations 2007)

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

What can a contractor add?

The standards that you set around information, instruction, training, competence, tools and equipment, planning, communication, change management and leadership will define your future safety performance. You are responsible for ensuring your supply chain are competent and that you have set clear expectations with regard to meeting your standards.

What are contractors’ responsibilities?

You are responsible for planning, managing and monitoring work under your control.. You are responsible for the competence of your workforce and for ensuring the competence of your supply chain and for Controlling the work in a way which ensures that, so far as is reasonably practicable, it is carried out without risks to health and safety.. This requires excellent communication, organisation, supervision and leadership.

The following checklist provides a simple guide to help contractors review whether they are following best practice.

If it is not possible to confirm that an item has been carried out, this should provide a prompt to identify what further action should be taken as appropriate.

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Contractors' checklist (items 1-18)

- 1 You have clearly defined and communicated roles and responsibilities for the management of risks associated with underground services
- 2 You have a clearly defined and established communication route to your designers, planners, clients and ultimately the relevant service owners for the provision of information, communication and support.
- 3 You have accounted for the management of risks associated with underground services within your price and made this clear to your client.
- 4 You have ensured that your supply chain have accounted for the management of risks associated with underground services within their price.
- 5 You have clearly assessed the competence of your supply chain with relation to the management of risks associated with underground services
- 6 You have signed the USAG Charter and have conducted internal audits to ensure compliance with its requirements
- 7 You have allowed sufficient time in your programme for the positive identification of underground services.
- 8 You are working with the designer(s) to assist with the formulation of designs which eliminate risk. Where designs fall short of your expectation to eliminate, substitute or reduce and provide information on risks you actively challenge the relevant designer
- 9 You have captured and shared information, to identify service clashes and potential diversions using BIM or other appropriate techniques
- 10 You have identified the underground services coordinator and have an effective working relationship. Where you fulfil this role you have formally appointed this function.
- 11 You are satisfied that a clear communication process is in place for the provision of relevant information on underground services including information and advice.

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- 12 You understand the process to be adopted when conditions on site change or where design changes are required.
- 13 You have obtained confirmation that all services requiring diversion or isolation have been diverted or isolated appropriately and evidence recorded.
- 14 All underground services which could potentially be disturbed have been positively identified.
- 15 Where any service is encased or surrounded in concrete work is to stop until a safe system of work is identified.
- 16 No service buried in concrete is to be disturbed/exposed unless isolated or pressure relieved (or other specific controls authorised and put in place)
- 17 Workforce understand that if they are in doubt that a service is live, or that safe working practices are not taking place they must STOP and obtain instructions.
- 18 Safe Systems of Work (SSoW) are being followed and monitored by competent supervisors and managers

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