



ACE Safety Academy Ltd – Scheme of Work

Module Code	Utility	Course Duration	2 Days
Qualification Title	HSG47, HSG48, Cable Avoidance Tool and Utility		

Aims and Objectives

To give employees the knowledge of the safe system of work as specified within HSG47.
 To be able to implement the safe system of work required to enable excavation works or working near underground services in a safe manner.
 To understand what the difference is between human factors and human failure and managing the influences on human performance [HSG48].
 To generate an understanding of the structures shown on drawings and the concept of scale and explain how pipe-work and cables are represented.
 To attain the knowledge required to use a cable locator and GENNY safely and to understand the functional checks and various modes of the equipment.

Day / Times	TOPIC [Including Key Skills / Basic Skills]	RESOURCES	COMMENTS
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Day One

08.30 – 12.30	<p>HSG 47</p> <ul style="list-style-type: none"> ➤ Session Introduction and Registration [Aims & Objectives] ➤ What is HSG47 including specific requirements of additional legislation ➤ Introduction to utility drawings, understand why mistakes are made and how to read the drawings correctly interpreting the way different pressure/voltages are shown on drawings and the NJUG colour coding system that is used within the utility sector ➤ Understanding cable avoidance techniques employed to avoid danger/damage to underground apparatus, including the recommendations imposed by HSG47 and further restrictions imposed, by the various Statutory Utility Companies, on persons working near SU assets ➤ Written Assessment ➤ Session closure and feedback 	<p>PowerPoint Presentation, Flipchart & Pens</p> <p>Learner CD ROM</p> <p>HSG47</p> <p>Full set of utility drawings including the key or legend to the drawings</p> <p>CAT & GENNY</p>	<p>Classroom based approach</p> <p>To understand and relate to HSG47 and associated SSoW</p> <p>Written Assessment comprising of 15 questions [multi-choice & written]. A pass will be awarded if the learner achieves a minimum of 80% of the full marks</p>
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<p>13.00 – 16.30</p>	<p>HSG 48</p> <ul style="list-style-type: none"> ➤ Session Introduction and Registration [Aims & Objectives] ➤ What are human factors and how to identify if these problems exist in my organisation ➤ Understanding human failure, the human contribution to accidents, causes of human failure and breaking the rules ➤ Managing human performance, effective shift communication, focusing on behavior and health and safety culture ➤ Human factors when analysing incidents, accidents and near misses ➤ Checklist approach for human factors in the workplace ➤ Developing solutions to human factor problems ➤ Session closure and feedback 	<p>PowerPoint Presentation, Flipchart & Pens</p> <p>Learner CD ROM</p> <p>HSG48</p> <p>[Group activities]</p>	<p>Classroom based approach</p> <p>To generate an understanding of HSG48 and the background behind human failure and performance</p> <p>The importance of communication systems and how to develop a positive health and safety culture within an organisation</p>
<p>Day Two</p>			
<p>08.30 – 12.00</p>	<ul style="list-style-type: none"> ➤ Session Introduction and Registration [Aims & Objectives] ➤ Identify the foreseeable hazards of striking underground utility services ➤ Demonstrate the understanding of how the correct use of utility drawings reduces the risk of striking underground services ➤ Explanation of the associated structures shown on drawings and the concept of scale ➤ Identify different utility drawings and explain how pipe-work and cables are represented ➤ Interpret cable and pipe symbols used on utility drawings ➤ Identify situations when further assistance may be required and how to achieve the obtaining of help and assistance in these situations 	<p>PowerPoint Presentation, Flipchart & Pens</p> <p>Learner CD ROM</p> <p>Underground utility service drawings</p> <p>[Group activities]</p>	<p>Classroom based approach</p> <p>To understand the main hazards that are associated with striking underground utility services</p> <p>To allow the learner to absorb the information contained in utility drawings</p> <p>To generate the ability to read the drawings confidently and accurately</p>

<p style="text-align: center;">13.00 – 16.30</p>	<ul style="list-style-type: none"> ➤ Practice interpreting underground utility service drawings ➤ Written Assessment ➤ Session closure and feedback <p>C&G + Practical</p> <ul style="list-style-type: none"> ➤ Session Introduction and Registration [Aims & Objectives] ➤ Why use cable locators, pinpointing plant, underground locations and the consequences of not locating underground services ➤ Cable locators – diagram and description of parts, what can be detected and the depths that a CAT can detect to ➤ The various modes of a CAT and GENNY – Power Mode, Radio Mode and GENNY Mode, description of the modes and diagrams showing usage [video inclusive]. Direct connection to the GENNY, use of the extension lead, use of the signal clamp and mains plug connection ➤ GENNY used in Induction Mode, 2 person sweep and Null sweep ➤ Tracing – finding direction, finding the route and marking, signal loss and excavating ➤ Using as an operational survey tool, tracing services, energising surface indicators, search, pin-point, Sonde and mouse ➤ Practical Assessment [conducted externally] ➤ Written Assessment ➤ Session closure and feedback 	<p>PowerPoint Presentation, Flipchart & Pens</p> <p>Learner CD ROM</p> <p>CAT & GENNY</p> <p>[Group activities both internal & external]</p>	<p style="text-align: center;">Classroom based approach</p> <p style="text-align: center;">To establish with the learners the different modes of a CAT & GENNY</p> <p style="text-align: center;">Explanation into primary checks and the detailed usage of an operational survey tool. Practical assessment will demonstrate that theoretical knowledge has been retained as well as allowing the learners to develop and show new skills and ability has been achieved]</p>
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