



Learning Outcomes for N027 Excavation Marshall - Banksperson

Learning Outcome	Instructor Notes
Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an excavation marshall banksperson	Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, MHASAW, LOLER, PUWER, HSG 47, CDM Regulations, Confined Spaces Regulations (second addition), Risk Assessment, Method Statements and other relevant legislation • Remind learners that excavation marshall / banksperson, have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site)
Have knowledge of the equipment to be used and be conversant with method statements – risk assessments – permits to work	Explain the importance of being conversant with, and importance of risk assessments, method statements and permits to work. Stress that they have to be used in alliance with all relevant legislation
Identify and maintain PPE appropriate for use	Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, hard hat etc
Conduct pre- excavating checks	Explain the importance of pre-excavating checks and legal implications. Explain in detail what should be checked including the surrounding area, excavating area, plans, drawings, CAT & Genny, Gas Detector (Micro Clip) and tools and equipment to be used etc
Agree communication signals and emergency procedures	Explain the importance of communication between the excavation marshall / banksperson and the machine operator. Explain and demonstrate what hand signals will be used. Explain in detail the emergency procedures, how to contact the emergency services and the implications of striking a power cable (various voltage) or a high-pressure pipe (gas or water)
Safe position of excavation marshall - banksperson	Demonstrate and explain the importance of standing in a safe position in full view of the machine operator but also in full view of the excavation. Emphasise the importance of the machine operator isolating the machine to prevent any movement when the excavation marshall – banksperson is checking the excavation



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Define and identify the different types of underground services	Explain that to help with identification of underground services a colour coding system is in operation, and those older services may differ. Emphasise the colour coding system as follows: Gas = Yellow ducts or pipes, Electricity = Black or red ducts and cables, Water = Blue or grey ducts blue pipes, Sewer pipes = Black ducts with various colour pipes, Telecommunications = Grey, white, green, black or purple ducts, light grey or black cable, Street Lighting = Black or orange ducts, black cables in England and Wales, Purple ducts and cables in Scotland, Orange ducts and black or orange cables in Northern Ireland
Identify risks that excavations can present and how people may be affected	Explain that different services present different risks to excavation marshall – banksperson. Electricity – electric shock, explosion from arcing current, fire etc. Gas – Asphyxiation, fire, explosion, escape of gas along channels. Water – Injury from high pressure water jet or stones etc. being displaced by high pressure water jet, flooding, secondary risk from water contact with electricity. Crushing injuries from collapsed excavations, various diseases that could be contracted
Carry out exploratory tasks	Explain and demonstrate the correct procedure for searching and uncovering the required service or pipe. Demonstrate safe digging practices and explain the importance of using isolated tools for this purpose. Explain the need for safe and secure access and egress routes. Explain how lifting and looking into inspection chambers, manholes or drains could assist in locating the direction of cables or pipes. Demonstrate and explain the advantage a cable avoidance tool when used correctly can pin point the required services, but also the misuse or lack of knowledge could lead to a service – mains strike and have a fatal outcome. Explain different types of equipment that could be used to expose services – mains i.e. water, air, suction etc
Identify the risks of excavating near to underground services, and the safe digging practices that should be adopted	Explain the potential risks to health when excavating near to live cables or pipes. Identify the potential of penetrating cables or pipes and the likelihood of electric shock, burns, explosions, high pressure water jets and the stones carried by the force, Explain HSG 47 and safe digging practices including trial holes
Carry out all end of shift and safe storage procedures	Explain and demonstrate procedures to be adopted including: Replacement of barriers and all segregation equipment. The importance of covering an exposed excavation if possible to prevent injury. Clean tools thoroughly after use to avoid damage and prevent personal contamination. Kept in a safe and secure place

The learning outcomes listed should not be considered in isolation and may be added to in order to accurately reflect the learner's duties and working environment