

COSCP004 – SQA Unit Code H90H 04

Contribute to the setting out of sites in engineering surveying operations



Overview

This unit is about contributing to the setting out of construction sites. You will need to set out secure and accurate reference markers on site. You will need to assist with the setting out of dimensional controls, setting out points, lines and profiles and record the result to meet quality standards.

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Performance criteria

You must be able to:

- P1 obtain the **survey documents** required for setting out work
- P2 interpret **survey documents** to identify the setting out location
- P3 conform to **safe working practices** on site
- P4 assist with the setting out of a site to required accuracy using appropriate **setting out information**, techniques and **resources**
- P5 assist with the setting out of **dimensional controls**, setting out points, lines and profiles accurately
- P6 assist with the setting out of **secure** and accurate **reference markers** on site using techniques such as pegging and nailing and appropriate **marking tools**
- P7 revise work procedures to allow for different **circumstances and conditions**
- P8 check quality of your work and confirm results with your supervisor

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Knowledge and understanding

You need to know and understand:

- K1 how to obtain the **survey documents** required for setting out work (application)
- K2 how and why to interpret survey documents to identify the setting out location (analysis)
- K3 how to conform to **safe working practices** on site (application)
- K4 how to assist with the setting out of a site to required accuracy using appropriate **setting out information**, techniques and **resources** (application)
- K5 how to assist with the setting out of **dimensional controls**, setting out points, lines and profiles accurately (application)
- K6 how to assist with the setting out of **secure** and accurate **reference markers** on site using techniques such as pegging and nailing and appropriate **marking tools** (application)
- K7 how to revise work procedures to allow for different **circumstances and conditions** (application)
- K8 how to check quality of your work and confirm results with your supervisor (application)

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Scope/range	1	Survey documents
	1.1	diagrams
	1.2	drawings
	1.3	maps
	1.4	graphical information
	2	Safe working practices:
	2.1	personal safety
	2.2	equipment and clothing
	2.3	safe use of access equipment
	2.4	health and safety practice and regulations
	2.5	industry codes of practice
	2.6	regulations applying to the survey site
	2.7	signage
	2.8	site access and working areas
	2.9	traffic management
	2.10	line services and equipment
	3	Setting out information:
	3.1	distance
	3.2	angles
	3.3	areas
	3.4	volumes
	3.5	dimensions
	3.6	levels
	4	Resources
	4.1	instruments (e.g. theodolite, total station, levels, moisture meters, lasers, Global Navigation Satellite Systems (GNSS))
4.2	tools (e.g. cable avoidance tools, hand tools, mechanical tools, electronic tools, staff, prism, tape measure, set square, optical square, spirit level)	
4.3	equipment (e.g. profile boards/batter boards, traveller, stakes, pegs, steel pins, nails, line levels, string, batteries, personal protective equipment, vehicles, compass, ranging rods, survey	

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- arrows)
- 4.4 site data and information
- 5 Secure
 - 5.1 suitable placed
 - 5.2 clearly identified
 - 5.3 protected from movement or removal
- 6 Reference markers
 - 6.1 datum
 - 6.2 bench mark
 - 6.3 ground stations
 - 6.4 base lines
 - 6.5 benchmarks
 - 6.6 elevated target positions
 - 6.7 land marks
- 7 Marking Tools
 - 7.1 marking crayon
 - 7.2 spray paint
 - 7.3 sticks
 - 7.4 tacks
 - 7.5 nails
 - 7.6 stakes
- 8 Dimensional controls:
 - 8.1 lines
 - 8.2 levels
 - 8.3 angles
 - 8.4 distances
 - 8.5 curves
- 9 Circumstances and conditions:
 - 9.1 land
 - 9.2 water

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- 9.3 obstacles
- 9.4 climatic variation
- 9.5 "live" conditions (construction sites including public areas e.g. roads, motorways, railways, civil engineering works and all infrastructure projects)
- 9.6 planned circumstances
- 9.7 emergency circumstances
- 9.8 vandalism

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