

COSVR57 (SQA Unit Code - H1RT 04)

Survey degraded concrete structures



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 surveying the concrete structure for defects that require repairs

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Performance criteria

You must be able to:

- P1 interpret the given information relating to the work and resources to confirm its relevance
- P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- P3 select the required quantity and quality of resources for the methods of work
- P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P5 comply with the given contract information to carry out the work efficiently to the required specification
- P6 complete the work within the allocated time, in accordance with the programme of work

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Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

Performance Criteria 2

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why and when **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

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You need to know and understand:

Performance Criteria 5

Meet the contract specification

K15 how **methods of work**, to meet the specification, are carried out and **problems** reported

K16 how **maintenance** of tools and equipment is carried out

You need to know and understand:

Performance Criteria 6

Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

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Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, specifications, schedules and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 safe use of personal protective equipment (PPE) and access equipment to carry out the activity, in accordance with legislation and/or organisational requirements
- 3 safe use and storage of tools and equipment

Performance Criteria 3

- 4 selection of resources associated with own work
 - 4.1 materials and components
 - 4.2 tools and equipment

Performance Criteria 4

- 5 protection of the work and its surrounding area from damage
- 6 minimise damage and maintain a clean work space
- 7 disposal of waste in accordance with legislation

Performance Criteria 5

- 8 demonstration of work skills to measure, mark out, protect, prepare, test, record and report
- 9 use and maintain hand tools, portable power tools and ancillary equipment
- 10 survey the degraded concrete by visual, mechanical and chemical means, to given working instructions
 - 10.1 identify defective concrete
 - 10.2 test the defective concrete
 - 10.3 record and report results

Performance Criteria 6

- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

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Scope/range related to knowledge and understanding

Disposal of waste

- 1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
 - 2.1 fires, spillages, injuries

Hazards

- 3 those identified by method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 drawings, specifications, schedules, manufacturers' information and regulations

Legislation and official guidance

- 5 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

Maintenance

- 6 operative care of hand tools and/or portable power tools and ancillary equipment

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 position and prepare survey equipment
 - 7.2 use the equipment to detect/sample dust, decay/damage, cracking, carbonisation, reinforcement corrosion, cover reinforcement
 - 7.3 record and report results
 - 7.4 use hand tools, power tools and equipment
 - 7.5 work at height
 - 7.6 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with surveying degraded concrete

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Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

Problems

11 those arising from information, resources and methods of work

11.1 own authority to rectify

11.2 organisational reporting procedures

Programme

12 types of progress charts, timetables and estimated times

13 organisational procedures for reporting circumstances which will affect the work programme

Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

Resources

15 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist

15.1 hammer, dust sampler, phenolphthalein, cover meter

15.2 hand and/or powered tools and equipment

16 methods of calculating quantity, length and area associated with the method/procedure to survey the concrete structure

Security procedures

17 site, workplace, company and operative

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