

COSCCOO12

Prepare for and carry out physical testing in construction



Overview

This unit is about making preparations to carry out physical testing, carrying out the tests in the most appropriate way, and collecting, checking and verifying the results and presenting them in a suitable format.

You will need to confirm the specification and methods ensuring that all agreements have been obtained and that suitable equipment is available. You will need to check the equipment, brief the people involved and ensure that all arrangements are in place and conform to specified requirements.

You will need to carry out the tests in accordance with agreed procedures, consulting others where relevant and also implement changes to allow for changing circumstances that may arise. You will also need to record the data and ensure any restoration needed is carried out. You will need to collect, check and verify the data, and present it, including any commentary in a suitable format and also advise people how to interpret the data.

Performance criteria

Prepare for physical testing

You must be able to:

- P1 review the physical test specification, plan and schedule to understand and confirm their purpose and viability
- P2 check and confirm, before starting the test, that people who will be affected have given their agreement
- P3 how to arrange for suitable test equipment to be brought to the site and kept safely and securely (application)
- P4 check test equipment so that it is accurate before it is used for taking measurements
- P5 prepare a testing method statement and brief the people who will be involved in the test about what they are expected to do, the details of the test, the site and the equipment
- P6 check and confirm that signs, arrangements for personal safety, equipment and site access conform to good practice, legislation and regulations

Carry out physical testing

You must be able to:

- P7 conduct physical tests in a way which balances accuracy and cost and keeps disruption to a minimum
- P8 conform to safe working practices during testing
- P9 consult with experts when specialist information is needed which is relevant to the test
- P10 test, using processes and methods which meet the specification
- P11 set reference controls and maintain them
- P12 modify test processes and methods to suit the conditions and to allow for contingencies after consultation with line manager
- P13 record test results clearly and accurately and store it securely for later analysis
- P14 restore areas which have been opened up for access so that subsequent processes can take place

Present test results

- You must be able to:*
- P15 collect together the recorded test results to allow an accurate analysis to be made
 - P16 check and verify the test results to maintain accuracy and integrity
 - P17 present the results clearly and in a format which is suitable for the people who need to use the findings
 - P18 advise users on how to interpret the test results

Knowledge and understanding

You need to know and understand:

Prepare for physical testing

- K1 how and why to review the physical test specification, plan and schedule to understand and confirm their purpose and viability (analysis)
- K2 how to check and confirm, before starting the test, that people who will be affected have given their agreement (application)
- K3 arrange for suitable test equipment to be brought to the site and kept safely and securely
- K4 how to check test equipment so that it is accurate before it is used for taking measurements (application)
- K5 how to prepare a testing method statement and brief the people who will be involved in the test about what they are expected to do, the details of the test, the site and the equipment (application)
- K6 how to check and confirm that signs, arrangements for personal safety, equipment and site access conform to good practice, legislation and regulations (application)

Carry out physical testing

You need to know and understand:

- K7 how to conduct physical tests in a way which balances accuracy and cost and keeps disruption to a minimum (application)
- K8 how to conform to safe working practices during testing (application)
- K9 how to consult with experts when specialist information is needed which is relevant to the test (application)
- K10 how and why to test, using processes and methods which meet the specification (analysis)
- K11 how to set reference controls and maintain them (application)
- K12 how to modify test processes and methods to suit the conditions and to allow for contingencies after consultation with line manager (application)
- K13 how to record test results clearly and accurately and store it securely for later analysis (application)
- K14 how to restore areas which have been opened up for access so that subsequent processes can take place (application)

Present test results

You need to know and understand:

- K15 how to collect together recorded test results (application)
- K16 how to check and verify the test results to maintain accuracy and integrity (application)
- K17 how to present the results (application)
- K18 how and why to advise users on how to interpret the test data (synthesis)

Additional Information

Scope/range

Prepare for physical testing

1. Test:

- 1.1. Materials
- 1.2. components and systems
- 1.3. natural environment

2. Test equipment:

- 2.1. as defined by relevant legislation
- 2.2. code of practice as accepted by recognised authorities in the field

3. Arrangements for personal safety:

- 3.1. personal safety equipment and clothing
- 3.2. safe use of access equipment (including ladders, tower scaffolds, hydraulic hoists - as required under health and safety legislation)
- 3.3. industry codes of practice and regulations applying to test location and/or tests being conducted
- 3.4. as identified by risk assessments

Carry out physical testing

4. Tests:

- 4.1. materials
- 4.2. component and systems
- 4.3. natural environment

5. Safe working practices:

- 5.1. personal safety equipment and clothing
- 5.2. safe use of access equipment (including ladders, tower scaffolds, hydraulic hoists - as required under health and safety legislation)
- 5.3. industry codes of practice and regulations applying to test location and/or tests being conducted
- 5.4. as identified by risk assessments

6. Processes:

- 6.1. as defined by relevant legislation
- 6.2. code of practice as accepted by recognised authorities in the field

7. Methods:

- 7.1. visual
- 7.2. approximate estimated
- 7.3. detailed assessment of specified features

8. Results:

- 8.1. written
- 8.2. graphical
- 8.3. electronic
- 8.4. samples e.g. cores

Present test results

9. Tests:

- 9.1. materials
- 9.2. components and systems
- 9.3. natural environment

10. Results:

- 10.1. written
- 10.2. graphical
- 10.3. electronic
- 10.4. samples e.g. cores

11. Present:

- 11.1. orally
- 11.2. in writing
- 11.3. graphically
- 11.4. electronically
- 11.5. samples e.g. cores

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