



**QQI**

Quality and Qualifications Ireland  
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

## Component Specification NFQ Level 4

### Concreting 4N2849

#### 1. Component Details

<b>Title</b>	Concreting
<b>Teideal as Gaeilge</b>	Coincréitiú
<b>Award Type</b>	Minor
<b>Code</b>	4N2849
<b>Level</b>	4
<b>Credit Value</b>	10
<b>Purpose</b>	The purpose of this award is to equip the learner with the requisite skills and knowledge to transport, lay, compact and finish concrete under various conditions.
<b>Learning Outcomes</b>	Learners will be able to:  <ol style="list-style-type: none"><li>1 Investigate the key issues of health and safety regarding the hazards of working with cement and concrete</li><li>2 State the reasons for ensuring that all plant used for the concreting process are checked and maintained</li><li>3 Outline the procedures necessary for the preparation of formwork and footings prior to concreting</li><li>4 Explain the theory and terminology in relation to the various types of mixes such as mix ratio, strength, setting times, curing, segregation and slump/silt testing</li></ol>

- 5 Outline the reasons, methods and plant used for compacting concrete and the problems that occur if not correctly carried out
- 6 State the purpose of steel reinforcement and expansion and kicker joints
- 7 Explain what radon gas is and how it can be prevented from entering a building
- 8 Operate plant used in the concreting process including a diesel mixer, powerfloat, vibrating plate compactor and vibrating plate engine
- 9 Prepare a hardcore base, blind and compact by roller/vibrating plate for a concrete floor slab
- 10 Demonstrate the various types of concrete finishes and the proper methods of protecting it from bad weather
- 11 Calculate the volumes of concrete required for ground floor slabs, walls, beams and columns
- 12 Carry out the proper procedures for concreting formwork including oiling, mixing, placing and finishing concrete
- 13 Demonstrate the proper methods for concreting a floor slab including setting up the screed, blinding, laying DPM, mixing, pouring, vibrating, floating and finishing
- 14 Demonstrate the proper methods for concreting a path including the preparation of the hardcore base, mixing, pouring, rolling, adding colour hardener and finishing of concrete.

## Assessment

### General Information

All assessment should be planned in accordance with the programme assessment strategy developed as part of the programme submission for validation. See **Policies and Criteria for Validation of Programmes**. Assessment should be undertaken consistently and reflect current assessment guidelines. See [www.qqi.ie](http://www.qqi.ie).

All FET assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence consistent with the **minimum intended programme learning outcomes**.

The techniques set out below are considered the optimum approach to assessment for this component. In exceptional circumstances providers may identify alternative assessment techniques through the provider's application for programme validation which are reliable and valid but which are more appropriate to their context.

Assessment of a number of components may be integrated across programmes for delivery, provided that the learning outcomes of each minor award are assessed.

Group or team work may form part of the assessment, provided each learner's achievement is separately assessed.

All providers are required to submit an assessment plan as part of their application for programme validation. Assessment Plans will include information relating to scheduling and integration of assessment. See current FET validation guidelines at [www.qqi.ie](http://www.qqi.ie).

## Assessment Techniques

In order to demonstrate that they have reached the standards of knowledge, skill and competence identified in all the learning outcomes, learners are required to complete the assessment(s) below.

The assessor is responsible for devising assessment instruments (e.g. project and assignment briefs, examination papers), assessment criteria and mark sheets, consistent with the techniques identified below and QQI's assessment requirements.

Programme validation will require providers to map each learning outcome to its associated assessment technique. All learning outcomes **must** be assessed and achieved in accordance with the **minimum intended module learning outcomes** set out in the validated programme.

Project	70%
Examination - Theory	30%

## Description

### Project

*A project is a response to a brief devised by the assessor. A project is usually carried out over an extended period of time. Projects may involve research, require investigation of a topic, issue or problem or may involve process such as a design task, a performance or practical activity or production of an artefact or event.*

## Examination - Theory

*An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.*

*A theory-based examination assesses the ability to recall, apply and understand specific theory and knowledge.*

### Recognition of Prior Learning (RPL)

To support the development and implementation of RPL with regard to access, granting credit/exemptions and achievement of awards/parts of awards, providers should refer to **QQI's Statutory Guidelines for Quality Assurance**, the **Policies and Criteria for Validation of Programmes** and the **Principles and Operational Guidelines for the Recognition of Prior Learning in Further and Higher Education and Training** available at [www.qqi.ie](http://www.qqi.ie)

### Grading

Pass	50% - 64%
Merit	65% - 79%
Distinction	80% - 100%

### Specific Validation Requirements

The provider must have all of the following in place to offer this award:

Water Pump

1. Vibrating Poker
2. Con Saw
3. Vibrating Compaction Plate
4. Diesel Concrete Mixer
5. Petrol Concrete Mixer
6. Electric Concrete Mixer
7. Kango Hammer and Range of Attachments
8. Power Float
9. Optical Site Level, Tripod and Staff
10. Hydraulic Flag/Pavior Splitter
11. Steel Container
12. Power Washer
13. Skill Saw 100v
- 14.

### Supporting Documentation

1. Current Health and Safety Authority construction regulations and codes of practice.

### Access

To access programmes leading to this award the learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.

## Transfer

Successful completion of this component award enables the learner to transfer to programmes leading to other certificates where this component is a mandatory or an elective requirement.

## 2. FET Award Standards

QQI award standards are determined within the National Framework of Qualifications (NFQ), <http://www.nfq-qqi.com>. QQI determines standards for the education and training awards that it makes itself and that are made by providers to whom it has delegated authority to make an award. Providers offering programmes leading to QQI awards **must** have their programme(s) validated in accordance with current validation policy (see [www.qqi.ie](http://www.qqi.ie)).

Award standards are designed to be consistent with the NFQ's award classes i.e. major, special purpose, supplemental and minor awards. They are expressed in terms of **learning outcomes** i.e. concise statements of what the learner is expected to know or be able to do in order to achieve a particular award. Learning outcomes for FET awards are contained within the associated specifications:

AWARD CLASS	STANDARDS	AWARDS
Major Award	Certificate Specification	Certificate (Levels 1 to 5) Advanced Certificate (Level 6)
Supplemental Award	Supplemental Specification	Supplemental Certificate (Level 3 to 6)
Special Purpose	Specific Purpose Specification	Specific Purpose Certificate (Levels 3 to 6)
Minor Award	Component Specification	Component Certificate (Levels 1 to 6)

Award standards are thresholds, they describe standards of knowledge, skill or competence to be acquired, and where appropriate, demonstrated, by a learner before an award may be made.

Award standards will be reviewed from time to time as necessary. Minor changes may be made by the QQI executive outside the review cycle where necessary. Changes to standards are published on QQI's website. Providers with validated programmes and providers with delegated authority to make awards are responsible for monitoring relevant standards and making necessary responses to changes.

## 3. FET Credit

Every FET certificate and component specification includes an FET credit value (Table 1). FET credit is quantified in multiples of 5 FET credits (up to 50 hours of learner effort). Learner effort is based on the time taken by typical learners at the level of the award to achieve the learning outcomes for the award. It includes all learning time involved including: guided learning hours, self-directed learning and assessment.

**Table 1: FET Credit Values**

NFQ Level	Major Awards Credit Values	Default Credit Values Minor Awards	Other Permitted Minor Award Credit Values	Special Purpose and Supplemental Award Credit Value Ranges
1	20	5	10	
2	30	5	10	
3	60	10	5,20	>5 and <60
4	90	10	5,15,20	>5 and <90
5	120	15	5,10,30	>5 and <120
6	120	15	5,10,30	>5 and <120

### Guide to Level

Independence is the hallmark of this level. Learning outcomes at this level correspond to a growing sense of responsibility for participating in public life and shaping one's own life. The outcomes at this level would be associated with first-time entry to many occupational sectors.

Strand	Sub-strand	Nature of learning
Knowledge	Breadth	Broad range of knowledge
	Kind	Some theoretical concepts and abstract thinking, with significant depth in some areas
Know How & Skill	Range	Demonstrate a moderate range of practical and cognitive skills and tools
	Selectivity	Select from a range of procedures and apply known solutions to a variety of predictable problems
Competence	Context	Act in familiar and unfamiliar contexts
	Role	Act with considerable amount of responsibility and autonomy
	Learning to Learn	Learn to take responsibility for own learning within a supervised environment
	Insight	Assume partial responsibility for consistency of self-understanding and behaviour

*Extract from 'Determinations for the Outline National Framework of Qualifications': NQAI*