



## **Component Specification**

### **Crop Establishment Equipment**

**Level 5**

**5N1744**

## 1. Introduction

The Further Education and Training Awards Council is the single national awarding body in further education and training in Ireland. It is responsible for determining the standards for named awards at levels 1 to 6 on the National Framework of Qualifications. All named awards are devised in line with the National Qualifications Authority of Ireland's determinations and guidelines.

## 2. The National Framework of Qualifications

The National Framework of Qualifications comprises 10 levels ranging from initial learning (level 1) to the most advanced levels of learning (level 10).

At each level there are one or more award types. An award type is a grouping of awards that share similar features. The National Qualifications Authority of Ireland has determined Award Type Descriptors for each award type. See [www.nqai.ie](http://www.nqai.ie). The Award Type Descriptor identifies the key strands and sub-strands of knowledge, skill and competence for that award type.

## 3. Guide to Level

Learning outcomes at this level include a broad range of skills that require some theoretical understanding. The outcomes may relate to engaging in a specific activity, with the capacity to use the instruments and techniques relating to an occupation. They are associated with work being undertaken independently, subject to general direction.

<b>Strand</b>	<b>Sub-strand</b>	<b>Nature of learning</b>
Knowledge	Breadth	Broad range of knowledge
	Kind	Some theoretical concepts and abstract thinking, with significant depth in some areas. Some underpinning theory
Know How & Skill	Range	Demonstrate a broad range of specialised skills and tools
	Selectivity	Evaluate and use information to plan and develop investigative strategies and to determine solutions to varied unfamiliar problems
Competence	Context	Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts
	Role	Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups
	Learning to Learn	Learn to take responsibility for own learning within a managed environment
	Insight	Assume full responsibility for consistency of self- understanding and behaviour

*Extract from 'Determinations for the Outline National Framework of Qualifications': NQAI ([www.nqai.ie](http://www.nqai.ie))*

#### **4. Award Specifications**

FETAC determines the standards for all awards in partnership with relevant stakeholders. This award was developed in line with the Council policy on Standards Development published in September 2005.

Standards are published in the form of Award Specifications. A Specification is devised in respect of each named award. Each Specification provides a comprehensive description of the features, characteristics and standards of the award.

A **Certificate Specification** is published for each named **major award**.

A **Component Specification** is published for each named **minor award**. Please note that each component (i.e. minor award) is associated with one or more Certificates (i.e. major, special purpose or supplemental award). See [www.fetac.ie](http://www.fetac.ie).

A **Specific Purpose Specification** is published for each **special purpose award**.

A **Supplemental Specification** is published for each **supplemental award**.

Standards 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 that award.

Learning outcomes for all awards (i.e. major, special purpose, supplemental awards) are contained within the associated Component Specifications.

## 5. Component Details

<b>Title</b>	Crop Establishment Equipment
<b>Teideal as Gaeilge</b>	To be confirmed by FETAC (TBC)
<b>Award Type</b>	Minor
<b>Code</b>	5N1744
<b>Level</b>	5
<b>Credit Value</b>	10
<b>Purpose</b>	The purpose of this award is to equip the learner with the knowledge, skill and competence to select, operate and maintain crop establishment equipment in accordance with recommended safe practice.
<b>Learning Outcomes</b>	Learners will be able to: <ol style="list-style-type: none"><li>1 Assess ploughing, and sub soiling equipment including type, purpose, individual components, and power requirements</li><li>2 Assess cultivation equipment including, tined harrows, disc harrows, rotavators, power harrows, and sowers including type, purpose and power requirements</li><li>3 Assess minimum tillage equipment including, tined harrows, disc harrows, and sowers including type, purpose and power requirements</li><li>4 Outline the effects of soil type, soil conditions, crop requirements, power availability, and time of year on selection of crop establishment machine</li><li>5 Describe the advantages and disadvantages of each type of crop establishment machine on soil structure</li><li>6 Explain economic considerations associated with the purchase, operation and maintenance of crop establishment equipment</li><li>7 Operate a plough in appropriate conditions and according to manufacturers instructions</li><li>8 Operate a cultivator in appropriate conditions and according to manufacturers instructions</li><li>9 Operate a sower in appropriate conditions and according to manufacturers instructions</li><li>10 Operate crop establishment equipment effectively and in</li></ol>

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accordance with safety requirements.

## Assessment

### General Information

Details of FETAC's assessment requirements are set out in [Assessment Guidelines for Providers](#).

All FETAC assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence.

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 FETAC's Provider Guidelines for Programme Validation](#).

### 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 FETAC's assessment requirements.

Programme validation will require providers to map each learning outcome to its associated assessment technique. [See FETAC's Provider Guidelines for Programme Validation](#).

All learning outcomes **must** be assessed.

Skills Demonstration	60%
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Examination - Theory	40%
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### Description

#### Skills Demonstration

*A skills demonstration is used to assess a wide range of practical based learning outcomes including practical skills and knowledge. A skills demonstration will require the learner to complete a task or series of tasks that demonstrate a range of skills.*

The assessor will devise a skills demonstration based on learning outcomes 7 -10. The learner must complete the 20 tasks set out in the

list below.

**Weighting Factor:**

Where a critical fault occurs the entire skills demonstration must be terminated.

0 marks for termination of skill demonstration due to a critical fault or failure to complete the task.

1 mark for completing the task with 3 or more minor faults

2 marks for completing the task with less than 3 minor faults

3 marks for exceeding the criteria for the task with no minor faults

Examples of critical faults: compromises safety, animal welfare, the environment

Examples of minor faults: Incorrect sequence, too slow, requires guidance

The learner must achieve at least 40 of the 60 marks available, to pass this assessment. The learner must pass this assessment to achieve the award

List of tasks:

Operating a plough

1 Assesses compatibility of tractor with plough

2 Identifies plough parts

3 Sets plough

4 Carries out safety assessment for ploughing

5 Ploughs safely to a minimum depth of 18 cm, ensuring complete inversion of sods and burial of trash while maintaining reasonable straightness and correctness for ins and outs

6 Demonstrates knowledge of cleaning, servicing and storage

Operating cultivation equipment

7 Assesses compatibility of tractor with cultivator

8 Checks attachment of machine to tractor

9 Checks machine for wear/broken parts

10 Carries out safety assessment for cultivating

11 Checks gearbox/chain case oil

12 Sets machine and cultivates a stated area including a headland to a given depth, producing a coarse tilth at optimum work rate

13 Cultivates a second area to produce a fine tilth

14 Demonstrates knowledge of cleaning, servicing and storage

Operating a sower

15 Assesses compatibility of tractor with sower

16 Checks attachment of sower to tractor

17 Checks coulter assembly, delivery tubes, distance between coulters or row widths, track eradicators, seed and fertiliser metering mechanism

18 Carries out safety assessment for sowing

19 Drills an area sufficient to carry out a field check of the application rate at a given depth with seed, or seed and fertiliser

20 Demonstrates knowledge of cleaning, servicing and storage

Overall Marks 60

### **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.*

The assessor will devise a theory based examination to assess learning outcomes 1 to 6

Overall Marks 40

<b>Recognition of Prior Learning (RPL)</b>	Learners may be assessed on the basis of their prior knowledge and experience. Providers must be specifically quality assured to assess learners by this means. To do so they must complete B10, see Provider's Quality Assurance Guidelines and be included on the Register of RPL approved providers. See RPL Guidelines at <a href="http://www.fetac.ie">www.fetac.ie</a> for further information and registration details.
<b>Grading</b>	Pass                      50% - 64% Merit                      65% - 79% Distinction              80% - 100%
<b>Specific Validation Requirements</b>	There are no specific validation requirements for this award
<b>Supporting Documentation</b>	None
<b>Access</b>	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.
<b>Transfer</b>	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.