

# Quarries Skills Certification Scheme

## Candidate Pack for the Training and Assessment Programme – 180 Degree Excavator

Please read this document carefully. Further information and clarification may be obtained from the QSCS Unit phone 01 607 0500

### Guidance Notes for Candidates

The following documents are also attached;

- Part 1 – Application
- Part 2 – Skills Self-Analysis
- Part 3 – Endorsement of Operating Competence
- Part 4 – Practical Test Criteria

### Aim of Programme

The plant training and assessment programme enables trained quarry plant operators to gain recognition for their achievements by way of certification, and provide an opportunity for participants to demonstrate their skills, knowledge and attitudes associated with plant operations, which provides suitable certification.

### Candidate Profile

Candidates for this programme must:

- Have at least six months full time experience operating as a trainee 180 excavator operator in a quarry in accordance with the 1st Schedule of the Safety, Health and Welfare at Work (Quarries) Regulations 2008 – S.I. No. 28 of 2008. The six months experience must be within the last two years.
- Has undertaken Safety Awareness Training including the following: Employees duties/responsibilities, Health and Hygiene, traffic management, site specific hazards / safety
- Be at least 18 years of age

Note: The above items must be verified by the current or previous employer (Part 1 of this pack)

### Application Requirements

- Sections A, B and E of Part 1 need to be completed by the applicant with sections C and D completed by the employer.
- Section E must list at least six months full time quarry experience operating as a trainee 180 excavator operator.
- Part 2 - Skills Self-analysis and Part 3 - Endorsement of Operating Competence must be completed and submitted along with Part 1 to the chosen Approved Training Organisation prior to or on the day of attending the one-day training and assessment programme. Failure to do so will result in the Candidate being unable to complete the programme.
- **Candidates must bring with them on the day:- a passport sized photograph and their safety helmet, safety boots, reflective 'hi-viz' jacket and gloves.**

### One Day Programme Content

### Induction

Registration and induction will be undertaken at the start of the day. Candidates **must** present Parts 1, 2 and 3 if not already submitted.

## **Corrective Training**

Candidates will undertake a minimum 3 hour corrective training session with the course instructor. Corrective training cannot give skills and knowledge not held, but allows the experienced operator to eliminate 'bad habits' gained on site.

Please note that the instructor has the right to refuse the Candidate access to the test if they have dangerous operating skills that contravene any part of the Safety, Health and Welfare regulations.

## **Theory Test**

On completion of any corrective training, Candidates are allowed 45 minutes to undertake a multi-choice question paper. Questions will be based on subjects about:

- Legislation and regulations
- Employer and employee responsibilities
- Safe working practices
- Machine components and functions
- Correct operating techniques
- Pre-use checks and basic maintenance
- Road travel (where permitted)
- Types and characteristics of materials and loads
- Site safety
- Shut down and securing procedures

Subjects that the questions will be based on will be covered during the corrective training.

To be successful on the theory test, Candidates must achieve a minimum of 70% of the total available marks. Candidates who achieve a minimum of 85% will be awarded a credit.

## **Practical Test**

On the test the Candidate will demonstrate tasks with the excavator. The tasks to be undertaken, equipment required and a sample grading sheet are contained in Part 4 of this pack – Practical Test criteria. Part 4 of this pack details the equipment and resources needed for the test and the tasks the Candidate will be expected to carry out with an excavator.

The grading sheet is divided into essential items and scored marks. Scored marks allow a limited number of minor errors to be made. To succeed, the Candidate must achieve all essential items and not exceed the maximum score. Candidates who score no marks as well as all the essential marks will be awarded a credit.

The practical test has a maximum time that all tasks must be completed within.

## **Feedback and Certification**

If a Candidate meets the required standard, the approved training organisation will send the relevant assessment documentation to SOLAS for certification and registration. The QSCS card is printed and posted to the Provider for distribution. A FETAC certificate will be awarded as a result of a pass on the one-day programme.

Candidates who achieve a credit in the theory test **and** practical test will be awarded an overall credit.

Candidates who are referred will receive written feedback from the assessor, and may be advised to undertake further corrective training and/or site experience.

If a Candidate is successful in the theory but not the practical part of the test, then they may re-attempt just the practical part. If the Candidate has not been successful in the theory part of the test, they may not attempt the practical test.

This concession may only occur if the Candidate returns to the same approved training organisation within nine months of completion of the programme. If they choose to go to a different organisation, they will have to do both the practical and theory parts again.

## Assessment Requirements

Should a Candidate have any particular assessment requirements i.e. need a translator or reader/writer or any other form of special needs, the approved training organisation **must** be informed well in advance of attending the one day programme so that the appropriate help may be sourced.

Information regarding a Candidate's particular requirements will be treated with the strictest confidence by the approved training organisation.

## REMINDER

Candidates must bring with them on the day:

- **Passport sized photograph** .....
- **Safety helmet** .....
- **Safety boots** .....
- **Reflective 'hi-viz' jacket** .....
- **Gloves** .....
- **Contents of the Candidate Pack are fully completed and signed by the Candidate and their employer** .....   
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Further information and clarification may be obtained from the QSCS Unit phone 01 607 0500

Part 1

# Quarries Skills Certification Scheme

## Application Details

### Section A Applicant Details

Surname ..... Forenames.....  
Address .....  
.....  
..... Date of Birth.....  
Tel: ..... PPS Number .....

### Section B Applicant Declaration

I confirm that the information detailed in this application, and any submitted information is valid, genuine and correct.

Please sign

### Section C Employer Details

Employer/Company Name.....  
Address .....  
.....  
..... Postcode.....  
Tel: ..... Are you self-employed?    Yes  No

### Section D Employer Confirmation (including self-employed)

*The named individual signing this section must be in a supervisory or managerial position, nominated by the employer organisation.*

We/I the employer confirm that:

- the applicant has as least six months full time quarry experience operating as a Trainee 180 excavator operator within the last two years
- The applicant has undertaken Health and Safety Awareness Training including the following: Employees duties/responsibilities, Health and Hygiene, Traffic Management, site specific hazards / safety
- the information detailed in this application, and any submitted information is valid, genuine and correct.

Please sign

Name ..... Position .....

<b>Section E</b>	<b>Applicant Experience</b>
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**Please briefly list work carried out with a 180 excavator for at least six months, including dates and location of work.**

Dates from/to	Machine make & model	Location and brief details of work done
<i>Example</i> 9 Jan 12 - 22 May 12	<i>JCB 3CX</i>	<i>Barron Quarries, Newcastle, Co. Dublin. Excavating,, loading tippers and dumpers, spreading sub-base stone</i>

*(continue on a separate sheet if needed)*

## Part 2

# Quarries Skills Certification Scheme

## Skills Self-Analysis 180 Degree Excavator

### Introduction

The aim of this form is to allow applicants to measure their knowledge and experience on the safe use of 180 degree excavators against the questions below. This is to ensure that all those attending the Experienced Worker One-day Programme are aware of the programme content, and have sufficient skills and knowledge to comfortably meet the required standards.

### Instructions to the Applicant

Please take your time and answer all questions honestly, as dishonest answers mean that you may be unsuccessful on the course programme.

On completion, add up the total number of questions you have scored as 'yes' and refer to the Assessment Grading which will analyse your knowledge and experience

### Assessment Questions

Please answer **all** questions as indicated:

Note: the term 'correctly' means conforming with manufacture's instructions, legislation, regulations and industry best practice.

Question	Yes	No
1. can you identify and use all the controls correctly?	<input type="checkbox"/>	<input type="checkbox"/>
2. can you extract information from the operator's handbook?	<input type="checkbox"/>	<input type="checkbox"/>
3. do you correctly carry out all pre-use and running checks?	<input type="checkbox"/>	<input type="checkbox"/>
4. can you correctly configure the excavator for quarry and road travel?	<input type="checkbox"/>	<input type="checkbox"/>
5. have you travelled over differing types of terrain including rough, undulating ground?	<input type="checkbox"/>	<input type="checkbox"/>
6. can you travel up and down steep substantial slopes correctly ?	<input type="checkbox"/>	<input type="checkbox"/>
7. are you able to manoeuvre in confined and restricted areas?	<input type="checkbox"/>	<input type="checkbox"/>
8. can you set the excavator correctly to dig below or level ground?	<input type="checkbox"/>	<input type="checkbox"/>
9. do you know how to read and interpret working/digging charts correctly?	<input type="checkbox"/>	<input type="checkbox"/>
10. can you recognise and interpret site markings and contract information?	<input type="checkbox"/>	<input type="checkbox"/>
11. do you know why materials must be segregated when excavating	<input type="checkbox"/>	<input type="checkbox"/>
12. do you know the minimum distance material should be kept from an excavation and why?	<input type="checkbox"/>	<input type="checkbox"/>
13. do you know what the recommended minimum distance is when working near overhead power lines?	<input type="checkbox"/>	<input type="checkbox"/>
14. can you explain the purpose of the stabilisers and when they should be used?	<input type="checkbox"/>	<input type="checkbox"/>

cont'd

- |                                                                                                                      |                          |                          |
|----------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|
| 15. can you excavate and grade materials to given tolerances?                                                        | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. have you loaded vehicles correctly and without delay?                                                            | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. have you changed buckets using correct manual handling methods?                                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. can you use all the functions of a 4 in 1 bucket?                                                                | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. do you know the correct procedure when placing or unloading the excavator onto or from a vehicle bed or trailer? | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. can you shut down and secure the excavator correctly after work?                                                 | <input type="checkbox"/> | <input type="checkbox"/> |

Yes total \_\_\_\_\_

### Assessment Grading

#### If you have scored 15 - 20

You appear to have a good level of understanding of 180 excavator operations to comfortably participate on the experienced operator course programme.

#### If you have scored 10 – 14

Your understanding of 180 excavator operations is limited and we advise that you acquire further knowledge before attending the experienced operator course programme. Remedial training and further site experience is advised.

#### Less than 10

Your supposed understanding of 180 excavator operations is very limited and we strongly advise you not to attend the course until you have undertaken remedial or full training.

Candidate Surname ..... Forenames.....

Signature ..... Date .....

Part 3

# Quarries Skills Certification Scheme

## Endorsement of Operating Competence 180 Degree Excavator

Applicant Name.....

This endorsement of operating competence must be completed by an existing or previous employer. This part can only be completed by a supervisor or line manager of the employer.

The endorsing individual should only initial the statements where they can confirm that the applicant can carry out the work. Some endorsements may require the initials of more than one endorser. Copies of this form may be made if there are more than two endorsers signing.

Each statement must be initialled by the endorser. The applicant can only be considered competent providing **all** statements are signed by one or more endorsers in the Endorsers details section.

I consider that the above named applicant is able to competently:	Initials
1. Check, inspect and maintain an excavator for efficient and safe use under quarries conditions	
2. Strip, remove and segregate material, and carry out re-instatements	
3. Load a variety of vehicles i.e. dumpers, dump-trucks, tippers etc	
4. Set and excavate and level for a variety of excavations	
5. Lift and place loads in relation to quarry works	
6. Park, shut down, secure and leave the excavator in a safe condition	
7. Follow given instructions and manufacturers requirements when working with the excavator	

**Endorsers Details**

Full Name: .....Date:.....

Company name and address: .....

.....

.....Postcode: ..... Contact Tel no: .....

Position: .....Signature.....

Relationship to Applicant.....



## Practical Test Specifications and Grading Sheet 180 Degree Excavator

### Equipment and Resources

1. Serviceable 180 excavator of at least 6 tonnes operating weight, which meets current legislation, fitted with a quick hitch and general purpose excavating bucket on the backhoe and a clamshell type (*4 in 1*) front loader bucket, with the operator's manual.
2. A vehicle(s) for loading. For front loader use, this must be a rear tipping vehicle having a capacity equivalent to 5 full bucket loads of the excavator being used for the test. A forward tipping dumper may be used for backhoe use. The operator must be competent and possess the relevant QSCS registration card.
3. An area of ground, clear of hazards which must include:
  - uneven, rough terrain
  - a slope(s) not less than 18% (1:5.5) incline
  - a flat area to allow excavations up to 2.0 metres deep
  - a stockpile of material for loading purposes
4. A replacement backhoe bucket for changing purposes.
5. Cones/materials etc to create restrictions for travelling and manoeuvring.
6. Appropriate marking, sighting and lining equipment to ensure excavation levels and centres.

### Tasks

- . Candidates need to:
1. Carry out full pre-start and running checks as required by the manufacturer.
  2. Prepare the excavator for travel.
  3. Travel to the excavating area. The route must include:
    - travelling up and down the incline(s)
    - passing through a restriction being no more than the width of the excavator plus 800mm, in a forward and reverse direction
    - travelling over rough, uneven terrain
  4. Excavate an area, 10 metres in length by the width of the bucket. The depth of the excavations must be 0.75 metre deep +/- 75mm.
  5. On completion of task 4, reinstate and compact the earthworks back to level using the applicable functions of the front loader bucket.
  6. On completion of task 5, form a ramp from a stockpile of suitable material. The incline of the ramp should be approximately 18%, and minimum 3 Metres wide
  7. Load material from the stockpile into the vehicles to capacity using the front loader, one load and the backhoe for the second load. There must be a minimum of six full bucket loads using the backhoe. (the vehicle may be partially loaded using the backhoe whilst excavating the trench)
  8. Remove the existing backhoe bucket and attach the replacement.

### Time

- The Candidate must complete all tasks within 1.5 hours

### Notes

- Verbal questions may be used for task 1, but **only** on items not able to be checked due to heat of the engine, i.e. coolant, oil level etc.
- The incline must be either one ramp with sufficient manoeuvring area on top **or** two ramps with a level area at the top to halt the excavator.

### Candidates will be assessed under the following headings

1. Carry out pre-start and running checks (verbal questions correctly answered if engine hot)
2. Mount and dismount correctly
3. Maintain full observation
4. Keep clear of all hazards whilst travelling
5. Set the excavator correctly for travel
6. Ensure excavation conforms to the stated sizes and tolerances
7. Reinstate the excavated area back to the original contours
8. Avoid contact with the vehicle
9. Correctly carry out shut down and securing procedures
10. Conform with legislation and manufacturer's instructions