



# **PIABC LEVEL 2 AWARD IN CLAY TECHNOLOGY**

**Qualification Number: 603/5149/4**

## **Qualification Specification**

Updated: 15 January 2020

## PURPOSE

PIABC Level 2 Award in Clay Technology is a regulated qualification which provides learners with basic introduction knowledge of clay as a material and the processing methods. The qualification is intended for non-manufacturing or newcomers to the industry.

## OUTCOMES

In setting out a clearly-defined level of learner achievement, this qualification will:

1. Enhance the knowledge and job satisfaction of *learners* and provide them with an introduction to the clay manufacturing industry and allow progression to higher level qualifications, as well as job movement throughout the clay sector and other related areas of the clay manufacturing industry.
2. Provide *employers* with an open and transparent basis for judging the suitability of learners for employment and promotion.

Specific outcomes for the qualification are listed under the individual unit description.

## ENTRY REQUIREMENTS

There are no entry qualifications or age limits required for this qualification. However, centres must ensure that learners have the potential and opportunity to gain the qualification successfully.

## STAFFING

It is expected that staff involved with the delivery of the course will be appropriately qualified and/or experienced in clay technology. The PIABC Limited approval process requires prospective centres to provide details of the staff involved in delivery and assessment including their qualifications and relevant training/employment experience, plus staff development arrangements. Whilst these details are passed on to the external moderator appointed by PIABC Limited, it is the centre's responsibility to ensure tutors' qualifications are both bona fide and appropriate to the level of the qualification.

## PROGRESSION

Success in this qualification prepares learners for progression in the clay manufacturing industry to a position where they can assume some level of responsibility or gain further qualifications (e.g. PIABC Level 3 Certificate in Clay Technology).

## QUALIFICATION DESCRIPTION

The qualification comprises four mandatory units and follows PIABC Limited's principles for designing units and qualifications and contains the features listed as follows;

- Unit reference number, title, guided learning hours, grading structure and assessment guidance.
- Each unit consist of:
  - Learning Outcomes that show what the learners will be able to understand, know or demonstrate.
  - Assessment Criteria that show what the learners can do or produce in order to show that they have met the Learning Outcome.
- To successfully complete the qualification, learners need to successfully pass a multiple choice question examination.

## QUALIFICATION LEVEL

This is a level 2 qualification. When work for this qualification is assessed, it is important to realise that evidence will be sought which demonstrates these features:

### LEVEL 2 DESCRIPTOR

#### Summary

The descriptors set out the generic knowledge and skills associated with the typical holder of a qualification at Level 2. The level descriptors are framed as outcomes and each category starts with a stem statement (“the holder can...”) which then links into the outcomes associated with each level of the framework.

#### Knowledge descriptor (the holder...)

- Has knowledge and understanding of facts, procedures and ideas in an area of study or field of work to complete well-defined tasks and address straightforward problems.
- Can interpret relevant information and ideas.
- Is aware of a range of information that is relevant to the area of study or work.

#### Skills descriptor (the holder...)

- Select and use relevant cognitive and practical skills to complete well-defined, generally routine tasks and address straightforward problems.
- Identify, gather and use relevant information to inform actions.
- Identify how effective actions have been.

*Source: Qualification and Component Levels - Requirements and Guidance for All Awarding Organisations and All Qualifications. Version: Ofqual/15/5774. Ofqual 2015.*

## QUALIFICATION STRUCTURE

Learners must achieve 7 credits - this equates to achieving all 4 mandatory units. Indicative learning hours are shown below; however these will vary for each individual.

PIABC Unit Ref.	Ofqual Unit Ref.	Unit Title	Level	Unit GLH	Self Study Hours	Total Unit Time (hrs)	Credit
CT201	F/617/8262	Introduction to clay manufacturing industry	2	1	4	5	1
CT202	L/617/8264	Introduction to raw materials & clay preparation	2	3	20	23	2
CT203	R/617/8265	Introduction to forming & setting	2	3	16	19	2
CT204	Y/617/8266	Introduction to drying & firing	2	3	15	18	2
<b>Qualification Level</b>			<b>2</b>				
<b>Total Guided Learning Hours (GLH)</b>				<b>10</b>			
<b>Total Self Study Time</b>					<b>45</b>		
<b>Total Qualification Time (TQT)</b>						<b>66</b>	
<b>Total Credit</b>							<b>7</b>

## **PROGRAMME ORGANISATION**

It is anticipated that courses leading to this level 2 qualification will take approximately 10 hours of guided learning hours (GLH), which is the average hours a learner may require guidance and support from teaching, learning and assessment professional to achieve the qualification. A learner will also be expected to carry out additional self study, reading and other work to prepare for assessment – both graded and non-graded. It is anticipated that the qualification will require a minimum of 66 hours of total qualification time for satisfactory completion for an average learner.

The organisation of the qualification is at the discretion of the centre and will take into account the aims, aspirations and experience of the learners.

Centres are encouraged to choose the most suitable curriculum model for their learners. Whilst the sequential delivery of parts of the unit is a possibility and may provide the most straightforward way of determining completion, it may be that some degree of integration of elements will occur, or that other methods of delivery are more appropriate to meet the needs of learners. It should be noted however that the whole unit and all the learning outcomes will be assessed.

Centres must ensure that adequate arrangements are in place for supporting learners. This could be either through separate tutorial sessions or through the use of time within structured study sessions. Centres using on-line or other forms of open learning must ensure that appropriate tutorial support is provided for learners.

In relevant circumstances, centres are recommended to provide information and guidance to their learners on the availability and type of employment the programme may lead to and on the progression routes available for further education and training in clay technology.

## **GUIDANCE ON LEARNING AND TEACHING STRATEGY, METHODS AND ASSESSMENT**

As clay technology is a practical subject, based on theoretical principles, as far as possible, it is important that the course is taught by relating the underlying theory to practical examples and applications. Three factors which will help in this regard are:

1. The use of staff with direct experience in the clay and related industries.
2. Practical and commercial examples should be used to show the link between theory and practice. DVD illustrations of processes could also be used as part of the teaching regime. A further and invaluable source of information is the Internet and there are web sites which demonstrate important aspects of clay processing and use and learners should be encouraged to research this material.
3. Practical experience of workplace operations working and handling clay through visits.

## UNIT CONTENT

### INTRODUCTION TO CLAY MANUFACTURING INDUSTRY

PIABC Unit No: CT01

Ofqual Unit Ref. No: F/617/8262

Unit Level: 2

Guided Learning Hours: 1

Total Unit Time (Hours): 5

Unit Credits: 1

<b>Learning Outcomes</b> The Learner will:		<b>Assessment Criteria</b> The Learner can:	
1.	Understand the key aspects of the clay building products industries	1.1	Outline the main sectors of the clay building products industries.
2.	Understand the clay building products manufacturing processes	2.1	Outline the main processes of the clay building products industries.
3.	Understand the common management systems used in the clay building products industry	3.1	Outline the principle elements of common management systems.
4.	Identify the main stakeholders in the clay building products industry	4.1	List key internal and external stakeholders.
5.	Understand factors involved in controlling quality and typical quality checks undertaken during the manufacture of clay building products	5.1	Outline difference between quality control and quality assurance.
		5.2	List factors that influence the quality of clay building products.
		5.3	Outline typical quality checks used on the production line and typical finished product tests for bricks, clay pavers, pipes and roof tiles.
6.	Understand how clay building products are packaged and distributed	6.1	Outline the manual and automated packaging methods used.
		6.2	Outline the different types of packaging used.
		6.3	Outline transport methods for a range of packed products.

## INTRODUCTION TO RAW MATERIALS & CLAY PREPARATION

PIABC Unit No: CT02

Ofqual Unit Ref. No: L/617/8264

Unit Level: 2

Guided Learning Hours: 3

Total Unit Time (Hours): 23

Unit Credits: 2

<b>Learning Outcomes</b> The Learner will:		<b>Assessment Criteria</b> The Learner can:	
1.	Understand the raw material processes involved in the manufacture of clay building products	1.1	List the data required when conducting assessment and evaluation of a potential extraction site.
		1.2	Outline how raw materials are extracted from reserves.
		1.3	List methods used for transportation of raw materials.
2.	Understand the key functional properties of clay used in the clay building products industries	2.1	Outline the functional properties of raw materials.
3.	Understand the types of clay used in the clay building products industries	3.1	List types and properties of clay from a variety of geographical locations.
4.	Understand the additives used in the manufacture of building products	4.1	List additives used in the manufacturing process
		4.2	Outline how additives affect the production process
5.	Understand how the raw materials are prepared for use in the manufacturing process	5.1	Outline how raw materials are affected by stockpiling, blending and weathering.
		5.2	Outline how raw materials are prepared for forming.

## INTRODUCTION TO FORMING AND SETTING

PIABC Unit No: CT03

Ofqual Unit Ref. No: R/617/8265

Unit Level: 2

Guided Learning Hours: 3

Total Unit Time (Hours): 19

Unit Credits: 2

<b>Learning Outcomes</b> The Learner will:		<b>Assessment Criteria</b> The Learner can:	
1.	Understand the forming processes used in the manufacture of clay building products	1.1	Outline the forming processes used in the manufacture of clay products.
		1.2	Outline how product design influences the forming method
2.	Understand the decorative finishes used in the manufacture of bricks	2.1	Outline methods of applying decorative finishes methods
3.	Understand the setting processes used in the manufacture of clay building products	3.1	Outline the wet setting and dry setting processes used in the manufacture of clay building products.

## INTRODUCTION TO DRYING AND FIRING

PIABC Unit No: CT04  
Ofqual Unit Ref. No: Y/617/8266  
Unit Level: 2

Guided Learning Hours: 3  
Total Unit Time (Hours): 18  
Unit Credits: 2

<b>Learning Outcomes</b> The Learner will:		<b>Assessment Criteria</b> The Learner can:	
1.	Understand the drying process	1.1	State the effects of drying clay.
		1.2	Outline how the drying process is controlled.
		1.3	List types of dryers used in the clay building products industry.
2.	Understand the firing process	2.1	Outline the effects of firing on clay building products.
		2.2	Outline how the firing variables are controlled.
		2.3	List kilns types used in the clay building products industry.

## ASSESSMENT AND GRADING

This qualification is assessed by a multiple-choice examination of 30 minutes. This examination is graded pass or fail only; learners need to achieve a pass mark of 80%.

A learner will be able to re-sit examination, but the time and location will be at the discretion of their centre.

This qualification is graded pass or fail only.

The pass threshold for this qualification is not subject to change.

## QUALIFICATION CERTIFICATION

To achieve the full qualification, PIABC Level 2 Award in Clay Technology (QN: 603/5149/4), learners need to successfully gain the 7 credits by completing the four mandatory units.

## REGULATORY INFORMATION

Subject/sector area:	4.2 Manufacturing Technologies
Qualification operational start date:	01 October 2019
Qualification review date:	31 October 2022
Applicable age ranges (years):	18+

## GLOSSARY

<b>Term</b>	<b>Definition</b>
Learning outcome	This describes what a learner needs to know, understand or do as a result of the process of learning.
Assessment criteria	These are the requirements learners are expected to meet to demonstrate that a learning outcome has been achieved.
Centre	The organisation that is approved by PIABC for the purposes of preparing learners for assessment.
Guided Learning Hours (GLH)	Guided Learning Hours, which is the average hour a learner, may require guidance and support from teaching, learning and assessment professional to achieve the qualification.
Total Qualification Time (TQT)	This is an indication of the minimum length of time it would take the average learner to complete their qualification.

## FURTHER INFORMATION

Please contact PIABC Limited directly at:

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